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# Service Manager

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# Service Manager

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# Chapter 1

# Understanding Service Manager

Service Manager is a service call dispatch, tracking and billing system designed specifically for the service industry. The Service Dispatch system is fully integrated with the Inventory, Accounts Receivable and General Ledger modules. The major features of Service Manager are as follows:

**Multiple parts warehouses**
The Inventory module allows you to create and maintain parts at as many different locations as required. For example, each service truck can be a separate inventory location. Transactions are provided to transfer parts between inventory locations. At service call closure time, the system automatically relieves inventory based on parts used. There, a complete and accurate description of the items at each inventory location can be obtained at any time.

**Service agreement processing**
Service Manager provides for the establishment of Service Agreements for customer equipment. The Service Agreement basic screen allows for the entry of the type of services included in the contract, the cycle billing period if applicable, the length of the contract and any pro-rated billing days at the beginning of the contract.

The Service Agreement detail screen provides for the specification of the equipment to be serviced, the cycle billing rate for each item of equipment and the service-at location. Regular service intervals may also be specified for each item of equipment on a service agreement. The equipment entered on the agreement may have different service-at locations.

The Service Agreement notes section allows the assignment of two notes to each agreement – a dispatch note and a billing note. The dispatch note gives service dispatchers pushbutton access to a custom paragraph of information to aid in dispatching service calls. The billing note provides a free-form text paragraph to describe or summarize agreement billings.
Services provided by the Service Manager system include Agreement Expiration and Service Due reports, automated Cycle Billing and accrual of deferred income for prepaid agreements.

**Usage meters**
Most service agreements incorporate a time limit. For example: Company XYZ will provide a full service contract (e.g. extended warranty) for 1 year for your commercial freezer for the sum of $200.00. Of course, the time limit is this example is one year. Certain segments of the service industry incorporate both a time limit and a usage limit. For example: Company ABC will provide full coverage for your office copier for 1 year or 120,000 copies, whichever comes first, for the sum of $750.00. A copier "click counter" is one type of usage meter. Other examples include odometers on vehicles and operating hour meters on stationary equipment. Service Manager supports both time only and time/usage agreement formats.

**Overage charges**
Overage charges are surcharges added to a service agreement's base bill. They are calculated for each usage count over and above that included in the service agreement.

**Service call dispatch and maintenance**
Service Manager provides for the opening of both Service Agreement and "Time and Materials" calls. Information related to the type of call, call priority, equipment to be serviced and the reason for servicing is entered when the call is opened. An open call inquiry and report are provided.

Once a call has been opened, it may be dispatched. Dispatching can occur either in advance (to accommodate scheduled maintenance calls) or at the time the call is to be handled. At dispatch time, a service representative is assigned to the call. An option is provided to print service requests (i.e. service tickets) at the time a call is dispatched.

The system provides a facility for suspending dispatched calls. For example, this may be required if the service representative does not have the parts necessary to fix the equipment. At service billing time, the system consolidates all call suspension information into a single service bill.

When a service call is closed, the system captures the closure data related to the call. This includes the travel time, travel miles and the time on-site. Based on pre-defined control files and the bill type specified, the system automatically calculates the billing for travel and on-site time. This may be overridden by the operator or billing clerk if necessary. The system also accepts a pre-defined failure reason and action code which are subsequently used for service history reports.

A separate screen is provided for the entry of parts usage information. This information is used by the service billing system for Time and Materials calls. Provision is made for C.O.D. calls which may be paid in cash. An option to generate a zero balance invoice for C.O.D. calls is provided.

The system automatically relieves inventory based on parts used. It also updates the Parts Usage, Customer Call and Customer Equipment History files based on the call

closure information.

**Item pricing**
Service Manager contains a family of related functions to automatically calculate sell prices for inventory items used on service calls. *Item pricing* consists of a highly flexible set of software tools to mark-up costs or mark-down list prices. Virtually *any* pricing arrangement between a service supplier and a service customer can be specified and automated using Item Pricing's features.

**Service billing**
Service Manager performs cycle billing for service agreements and call billing for Time and Materials and other types of service calls.

Cycle billing is performed based on the billing frequency specified at the time the service agreement is established. Contract rates are prorated at the beginning and end of the contract.

Call billing selection is performed for closed service calls. The service rates and parts pricing may be overridden at billing selection time. Additional charges may be added, if necessary. Standard Service Manager invoices are produced for all cycle and call billings.

**THE KEY TO UNDERSTANDING**
Of great aid to the understanding of any subject is learning the meaning of the key words used to describe the subject. In this chapter, we take a look at the key words used to discuss service management software systems – specifically, Service Manager.

If you already understand these terms, it will take you only a few minutes to read through them. If you are not familiar with them, please take the time here to increase your understanding.

**Service Call**
The basic unit of reference in the service environment is the service call. A service call is defined as a single incidence of service for a particular customer. Each service call may contain multiple steps and those steps carry a corresponding call status: open, dispatched, suspended, completed and closed.

**Opening a service call**
Opening a service call refers to that step in the process where the call is recorded into the system. This may occur in advance of the time when the service is to be performed (e.g. scheduled maintenance) or at the time the customer calls to report a problem. With Service Manager, calls may be opened for existing customers who have equipment under warranty or service agreements, or for new customers.

**Dispatching a service call**
Once a call has been opened, a service representative must be assigned to respond to the call. The step related to the assignment of a service representative(s) is referred to as call dispatching. The dispatching step, like the opening step, may occur in

advance of the time when the service is to be performed, at the time the problem is reported or at the time the service rep calls in for their next assignment.

**Completing a service call**
After the service call has been dispatched, the service representative assigned to the call will report to the customer's service location to perform the requested service. Normally, the service will be performed and the call will be completed. "Call complete" represents a technical milestone … the site work is complete but the paperwork required for billing the call and/or posting it to the call history file has not yet been entered. That step is called closing the call. If a call cannot be completed (e.g. if a critical part is not available) it is assigned a status of suspended.

**Closing a service call**
Closing a service call is an administrative milestone. During call closure, Service Manager obtains the information needed for service billing such as the service rep's on-site time, parts used and other costs/charges. Before giving a call the status of closed, someone familiar with service operations and billing should completely review the call. They should examine the customer's reason for the call, the service rep's diagnosis of the problem, the work performed, the labour hours expended and the parts used.

**Suspending a service call**
There are instances when service call cannot be completed while the service rep is on site. At such times, the call is suspended. A suspended call may be re-dispatched as many times as necessary. When the call is ultimately completed, all of the information for each suspension will be automatically consolidated for billing purposes.

**Bill type**
Service Manager determines the amount of the service bill, if any, based on the bill type specified for the call. The bill type is an innovative software device that lets you control how invoice charges are calculated. Service Manager always records all cost elements non service calls: labour time, parts used and other costs. The bill type, which you define, controls how those costs are translated into charges. The bill type tells the system whether to bill flat charges for travel time, on-site time and parts. It also specifies the rates to be used for those items that are billable. A bill type maintenance transaction allows the user to define as many different billing types as are needed to satisfy service requirements.

**Service charges**
When a call is closed, other service charges may also be specified. These charges can have any narrative description the user wishes to assign. Taxes and discounts may also be applied. Provision is made for the collection of C.O.D. payments either by cash or credit card. The user may specify whether or not a zero balance invoice is to be generated for C.O.D. calls.

**Interface to Accounts Receivable & Inventory Control**
When service calls are invoiced, Service Manager automatically creates the

transactions necessary to interface Accounts Receivable and Inventory Control. A separate menu function initiates the actual interface operation. When the transactions are posted, Service Manager prints a Sales Journal, Cash Receipts Journal (for C.O.D. calls) and Inventory Transaction Register. Customer accounts are updated and inventory is relieved from the appropriate warehouse (e.g. truck).

**Service invoicing**
The service billing process allows the user to preview the invoices that will be generated by the system when the invoicing run is performed. Invoice line items may be adjusted if necessary at this time, Invoices are produced for all selected calls and the user may direct the service billing package to print any of the standard invoice formats.

**Zero balance service call invoices**
A service call may result in a zero (0) invoice amount for a variety of reasons. The equipment serviced may be under warranty; it may be covered under a full service (i.e. extended warranty) agreement or the service may be a callback to correct a previous technician's error or replace a recently installed defective part. The user has the option of printing or not printing zero balance service invoices. Regardless of the printing decision for zero balance calls, all other calls will be printed. All costs for all calls are always accumulated and posted to the appropriate history files.

**Service agreements**
In many instances, service work is performed for customers who have equipment that is covered by a service agreement. A service agreement is defined as an agreement between the servicer and the customer which specifies the items to be serviced, the duration of the service and the charges for the service.

**Equipment/Service identifier**
With Service Manager, each item on a service agreement may contain a unique equipment identifier (e.g. serial number). The agreement duration, service charges, preventative maintenance intervals and service call checklists are also specified.

**Cycle billing**
Service Manager provides for either the prepayment or cycle billing (i.e. recurring billing) of a service agreement. With cycle billing, a periodic service charge and frequency are specified when the agreement is established. A service agreement invoice (cycle bill) will be generated for the amount specified each time the frequency interval occurs.

**Agreement expiration report**
An agreement expiration report is provided to alert the service organization of impending expirations. This report is a marketing tool that pinpoints where to exert sales effort before it is too late. An agreement can be renewed under the same or different conditions.

**Service due report**
The service due report is a dispatcher's tool. The report identifies preventive

maintenance tasks the service provider is contractually obligated to perform during any selected time period. An option to the report allows the user to automatically open service calls for all of the service that is due. Another option prints the service due report in postal code order. This makes the dispatchers job of "weaving" preventive maintenance calls in with emergency calls extremely easy.

**Management information**
The availability of information is essential if the service environment is to be successfully managed. Service Manager provides a series of immediate on-line inquiries and off-line batch reports to satisfy the need for management information.

**Service history**
Immediate inquiries are provided to obtain a customer's call history and the service history for a particular item of equipment. The status of any call or any service representative can be obtained immediately.

**Service reports**
The system produces service requests for individual calls and a service schedule for all open calls. Call status reports by call type, bill type and service rep are produced. A number of historical reports related to parts usage, equipment failure reasons, service rep productivity, etc. are also available.

## ONLINE INQUIRY INFORMATION

In the service dispatch environment, it is imperative to have customer information readily available. Service Manager provides online inquiries in the following areas:

Service Agreement Inquiry
Service Call Inquiry
Service Rep Inquiry
Customer Call History Inquiry
Customer Equipment Inquiry

## SERVICE REPORTS

Service Manager provides the full range of reports necessary to manage and control the service environment. Included in the reporting package are the following:

Service Request Forms
Service Check Lists
Invoices
Service Calls by Status
Service Calls by Call Type
Service Calls by Billing Type
Service Calls by Service Rep
Service Calls by Failure Reason
Parts Usage History Report
Service Rep Productivity Report

Copier Service History
Copier Performance Report
Service Due Report
Agreement Expiration Report
Work-in-Progress Report
Service Agreement Analysis
Bill Type Analysis
Customer Analysis
Model Analysis
Customer Call History
Model Selection Report
Warranty Change-of- Status
Service Schedule

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# Chapter 2

# Getting Started

We assume at this point that you have installed this package on your computer according to the Service Manager Installation Guide. If you have not done so, refer to that document and install the Service Manager software on your computer.

It is also assumed that you have familiarized yourself with the main features of this package by reading the chapter in this manual titled Understanding Service Manager. If you have not done so, read that chapter, then, return to this chapter.

**Organization of the User Manual**
The following chapters describe in detail the applications available in the Service Manager system. In each application, you are shown how to select the program, what the program does and how to enter the data required for the application. Examples of data entry are given for almost every data field on the screen. The actual keys pressed are shown together with the appearance of the screen after the sample data has been entered.

The first Service Manager applications described are presented in the order in which you use them when installing the system. The remaining Service Manager applications are presented in the order in which they appear on the Service Manager Menu

**Preparing to set-up your system**
Before you begin to enter data from your former service system you should thoroughly familiarize yourself with this system. You should read the manual and follow the examples in each section. The manual is designed so that you can get "hands-on" experience immediately by entering fictitious data according to the instructions for each application. The data required to introduce you to the system's features and requirements is provided and sample reports are also shown so that you can compare your output with that in the manual. After you are fully familiar with the system, you must determine what data needs to be extracted from your former service system and

what additional data needs to be provided. The information necessary for the initial data base must be gathered and sorted to accommodate entry into the system. Once this is done, you are ready to begin setting up the Service Manager system. If you have existing customers for which customer records exist, you must enter these customers into the Accounts Receivable system prior to setting up Service Manager. Likewise, the equipment and parts inventory must be entered into the Inventory Management system if the service system is to use this data. If you intend to distribute service costs to the General Ledger, valid accounts must be established in the GL Chart of Accounts prior to setting up Service Manager.

**Homework**

Service Manager will be installed with the least amount of frustration if the majority of the work is done on paper before sitting down at the computer console. **There is no substitute for planning.**

Read the sections on Control Information, Service reps, Bill types, Call/Service types, Failure Codes, Actions Codes, Service Locations, Checklists, Notes, Item pricing, Manufacturer's codes, Equipment categories, warranty programs and Model Data.

Most of the information that you use to set up the Service Manager control file is required during entry. If you do not have (e.g. default sales accounts for service calls) then you have to exit the control file entry, set up the missing data and then go back and re-enter the Service Manager control file. If you want to use the Auto mark-up feature on miscellaneous parts used on a call, then you must set up at least one pricing (markup) schedule before entering the control file.

You must specify a parts location code for each sales rep … this must be a valid warehouse in Inventory.

You must set the labour cost per hour for each sales rep in three categories – regular/OT/special.

In order to set up a service location for a customer, the customer must exist in Accounts Receivable.

**The Service Manager Data Files**

In order to use the Service Manager package, you first need to enter into the computer certain data about your current service management state-of-affairs.

There are twenty (20) different data files which you should consider before beginning to use Service Manager on a regular basis. Most of the files are optional. They can be created immediately to enhance your application from day-one, they can be filled in on a "time available" basis, or they can be skipped altogether. Required files are marked as such below. One of the twenty files is only required if you plan to track equipment usage such as for copier "click-counter" readings. That file (the Overage

Data File) is marked as such below. Here is a brief explanation of the twenty files:

**Service Manager Control File (Required)**
This file is used to store a special type of standard cost --called the Service Manager base cost. A Service Manager base cost may be assigned to an inventory item to override the item's average cost or replacement cost during an automatic sell price calculation. The application of the Service Manager base cost feature is described fully in Chapter 14, *Item Pricing*.

**Service Rep File (Required)**
This file contains a record for each service representative. The system uses these records at service dispatch time and produces various reports by service rep.

**Bill Type File (Required)**
The system maintains a bill type record for each unique type of service billing that is performed. The data you enter into a bill type record controls the automatic calculation of service charges. The bill type is a powerful automation tool. It is important to study its features and options carefully since it directly affects your company's revenue.

**Call/Service Type File (Required)**
This file contains a record for each unique call type that you define. The call type records contain information for call priority, response time, etc., and each service call is assigned a call type. A number of the Service Manager inquiries and reports are based on the call type specified.

**Failure Code File (Optional)**
This file contains a series of user defined failure codes that may be assigned to each service call. The failure codes are saved by the system in the service call history files, and are useful for service analysis purposes.

**Action Code File (Optional)**
This file contains a series of user defined action codes which correspond to the failure codes defined above and likewise may be assigned to each service call. The action codes are saved by the system in the service call history files, and are also useful for service analysis purposes.

**Service Location File (Optional)**
This file is used if you have customers with a single billing address, but multiple service-at locations. It contains a record for each unique service at location, and links each location record to its "parent" billing record in Accounts Receivable.

**Check List File (Optional)**

This file is used to maintain lists of service procedures for the service reps to perform while site. Service check lists may be related to a class of equipment, a special piece (i.e. serial number) of equipment, or a specific service site. This file IS optional.

**Notes File (Optional)**
This file is used to maintain note text that can be assigned to agreement cycle billing invoices, agreement dispatch notes, service call billing invoices, and service call internal notes. This file is optional.

**Special Customer Price File (Optional)**
This file is used to record *and automate* special pricing arrangements for a specific customer and a specific inventory item. Its use is described fully in Chapter 14, *Item Pricing*.

**Pricing Schedules File (Optional)**
This file is used to store mark-up and discount schedules defined by you to automate the calculation of inventory item (i.e. service part) sell prices. The maintenance of this file is described fully in Chapter 14, *Item Pricing*.

**Service Manager Base Cost File (Optional)**
This file is used to store a special type of standard cost --called the Service Manager base cost. A Service Manager base cost may be assigned to an inventory item to override the item's average cost or replacement cost during an automatic sell price calculation. The application of the Service Manager base cost feature is described fully in Chapter 14, *Item Pricing*.

**Manufacturer's Codes File (Optional)**
This file maintains a list of manufacturer's codes and descriptions that can be assigned to equipment models. By using this capability, you can ultimately select reports on equipment by specific manufacturer.

**Equipment Category File (Optional)**
This file maintains a list of equipment category codes and descriptions that can be assigned to equipment models. By using this capability, you can ultimately select reports on equipment by category (e.g. all heaters, toasters, compressors, fax machines, control panels, etc.).

**Warranty Programs File (Optional)**
This file maintains a list of warranty program codes and specifications that can be assigned to equipment models. By using this capability, you can save hundreds – if not thousands – of clerical hours related to tracking, servicing and marketing to equipment covered under manufacturer's warranties.

**Model Data File (Optional)**
The system maintains a model record for each unique type of equipment that you service. The model information is used when building service agreements. It also keeps statistical information such as Mean Time Between Failures, Mean Time To Repair, and Mean Dollars To Repair. These figures are used to generate the Model Analysis Report.

**Overage Charge File (Optional)**
NOTE: This file is only needed when tracking equipment usage.
This file contains information regarding service agreements for equipment with usage meters (e.g. click counters on office copier, odometers on vehicles or operating hour meters on stationary engines). The file contains the various monthly limits on usage meter readings with the appropriate surcharges applied to reading over the limit.

**Service Tickets File (Optional)**
Service Manager contains a mini report writer that allows you to easily and quickly create custom service tickets (i.e. work orders). This file maintains the formats of the custom work orders you create.

**Customer Equipment File (Optional)**
This file maintains a record for each piece of field equipment. It is your master data base describing which customers own what make and model of equipment. This file is optional and can therefore be filled in as you begin to use Service Manager.

**Agreement File (Optional)**
This file maintains the data base for service agreements between you and your customers. We speak of it loosely as "a" file, but it is actually three files: header (or basic data) file, equipment record file, and optionally a note file.

**Building the data files**
You are now ready to build the data files required in your Service Manager package. First study the chapter titled *General Rules* in this manual. Then, start the menu according to the instructions in the chapter title *The Menu*.
Follow the succeeding chapters to:

1. Build the Service Manager CONTOL file (Required).
2. Build the SERVICE REP file (Required).
3. Build the BILL TYPE file (Required).
4. Build the CALL/SERVICE TYPE file (Required).
5. Build the FAILURE CODE file (Optional).
6. Build the ACTION CODE file (Optional).
7. Build the SERVICE LOCATION file (Optional).
8. Build the CHECK LIST file (Optional).
9. Build the NOTE file (Optional).
10. Build the SPECIAL CUSTOMER PRICE file (Optional).

11. Build the PRICING SCHEDULE file (Optional).
12. Build the SERVICE MANAGER BASE COST FILE (Optional).
13. Build the MANUFACTURER CODES file (Optional).
14. Build the EQUIPMENT CATEGORY file (Optional).
15. Build the WARRANTY PROGRAMS file (Optional).
16. Build the MODEL DATA file (Optional).
17. Build the OVERAGE CHARGE file (Optional).
18. Build the SERVICE TICKETS file (Optional).
19. Build the CUSTOMER EQUIPMENT file (Optional).
20. Enter SERVICE AGREEMENTS (Optional).

**Regular Use**

After the data files have been set-up, you may enter all of your existing service agreements using the Service Agreement Maintenance transaction. Once these agreements have been entered, Service Manager will handle all subsequent cycle billings.

When you begin using Service Manager, you will probably have some open service calls from your manual system or the computer system you are replacing. You may either enter these calls into the Service Manager system or begin using the automated system after all current open calls have been completed.

Many users who are installing Service Manager for the first time begin by only entering closed calls in the system. They continue to open, dispatch, and complete service tickets as they had been doing before the Service Manager- RealWorld installation. This gives the administration and accounting personnel a chance to learn and adjust to the system *before* the dispatching and service management personnel are asked to use it on a daily basis.

By entering closed calls first, a firm foundation can be established for entering data, billing and posting service calls. If additional service data base or set-up is required it will become evident at this time. When the dispatching functions are incorporated later, they will proceed more smoothly and confidently since the “downstream” functions will all be working.

**Setting up a “Test” Company**

During the first several months using the system, questions will arise regarding the exact result of some action you are planning to take. We highly recommend that you define a "dummy" or "test” company and copy all of your company's files into it. Then, whenever you have doubts about what you are planning to do, simply log into your test company and do a trial run. You can test drive your ideas without the risk of permanently changing your "real” company's accounting/service data base.

See Appendix 5 for detailed instructions to set-up and maintain a set of test company

files. Caution: Make sure you set the display and report names for your test company different from your real company so that there is no chance of confusion either while you are working or when you are reading reports.

**User Manual Appendices**

Appendix 1 contains most of the error messages that can occur in Service Manager. (The Service Manager Installation Guide contains an appendix listing a few additional error messages that can occur.)

Appendix 2 includes instructions for using the Service Manager file utilities. They are used to repair a corrupted (fouled up) data file or to export and import a healthy file in order to “repack” its contents and reclaim wasted space.

Appendix 3 includes some technical notes, which you should ignore unless you understand data processing well. They are included for the reference of your technical software support person.

Appendix 4 explains how to initialize (clear out) your Service Manager data files. You may never need this function, but it is included just in case. This function should only be used by an experienced data processing person.

Appendix 5 explains how to set up a "dummy" or "test" company. This is a very valuable aid to learning the system during the first several months of operation. The explanation includes initial set-up as well as future updating of the test company's files from your "real" system.

Appendix 6 covers useful application hints for the Accounts Receivable package when used in conjunction with Service Manager.

Appendix 7 describes useful application hints for the Inventory Management package when used in conjunction with Service Manager.

Appendix 8 describes useful application hints for the Synchronics® Serialized Inventory Management package when used in conjunction with Service Manager.

In each chapter, you are told in more detail what the package does, how to select the function from the menu and how to enter the required data. Examples of data entry are given for almost every possible entry on the screen.

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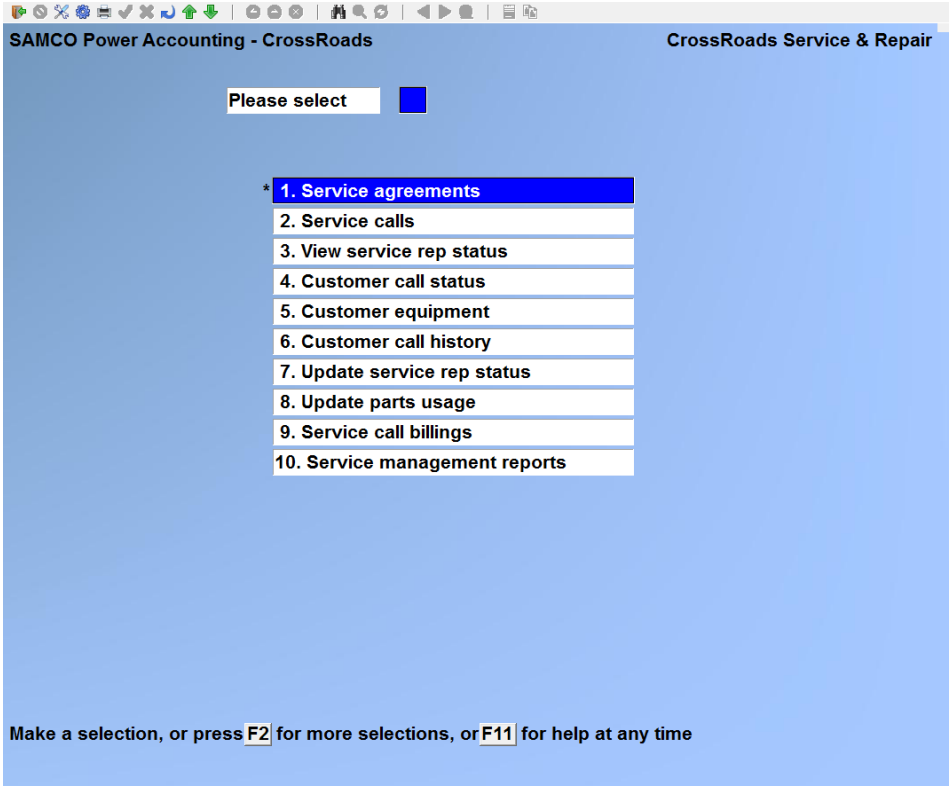
# Chapter 3

# Using Service Manager – The Menu

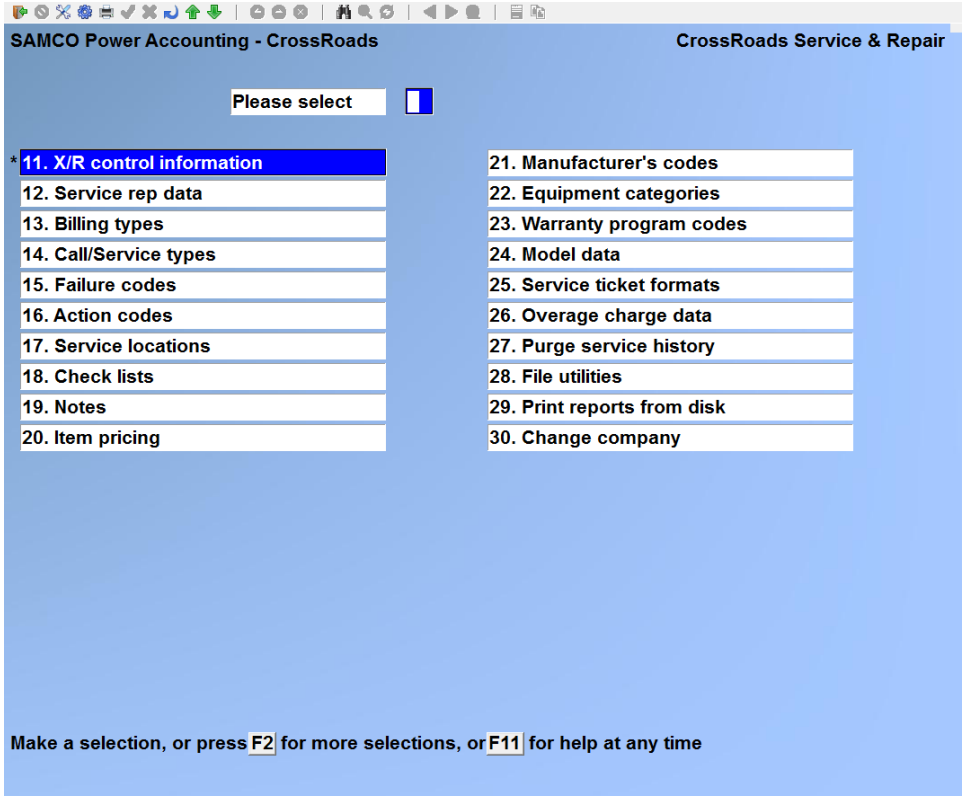
**Introduction**
These are the Service Manager menus. Use them to select the Service Manager functions you wish to run.

**CrossRoad Menu – page one**
The functions that you will be using most often (such *as Maintain service agreements, Process service calls, View service rep status,* etc.) are on the first screen of the *Service Manager* menu.




## Service Manager Menu – page two

To get to page 2 of the *Service Manager* menu, press **[F2]** when the first page is showing. The following screen appears:




To use one of the functions on a menu, type the number of the function and press [**ENTER**]. To toggle between the pages of the menu, use **[PgUp]** and **[PgDn]**.

**To end use of the Cross Roads menu**
Press [**TAB**] from page 1 of the *Service Manager* menu.

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# Chapter 4

# Guide to Daily Operations

The following checklists are provided as examples of how you might use Service Manager to perform various daily and periodic tasks.

While we attempt to present the tasks in a logical order, you should adjust the checklist as necessary to meet your own needs. You may wish to consult with your accountant for advice on organizing your own checklists to ensure the efficiency and security of your business operations.

## DAILY OPERATIONS CHECKLIST

**EACH DAY**

___ Enter new customer equipment records using *Customer equipment*.

___ Enter new agreements using A*greements*.

___ Enter new service calls using *Service calls*.

___ Print a *Work-in-Progress* report to review all incomplete service calls.

___ Review calls in greater detail by printing a report of calls selected by *Status, Bill type, Call type, Service rep* and/or *Failure code*.

___ Review rep assignments by printing a *Service schedule*.

**EACH DAY AS NEEDED**

___ Inquire into current service activity using *Call status summary*.

___ Inquire into past service activity using

the *Customer call history* report

___ Review past and future inventory needs by printing the *Parts usage history* report

___ Inquire into the location equipment for product recalls, safety checks, etc., using the *Model selection report*.

___ Dispatch service reps using either *Service calls* or *Update rep status*.

___ Complete service calls using either *Service calls* or *Update rep status*.

___ Add parts to service calls using either *Service calls* or *Update parts usage*.

___ Close calls using *Service calls*.

___ Review closed calls after printing the *Closed call edit list*.

___ If there are any closed calls that will be billed to a 3rd party, select them for billing manually and assign the 3rd party account using *Select a call*.

___ Perform a pre-invoice review of service calls after printing a *Billing edit list*.

___ Print service call *invoices*.

___ Post service call invoice transactions using Post invoices to A/R & I/C.

## PERIODIC/MONTHLY OPERATIONS CHECKLIST

**EACH PERIOD** **EACH PERIOD AS NEEDED**

___ Print a *Service due* report to preview the next month's preventive maintenance obligations, and as an option, automatically open service calls for the required work.

___ Print an *Agreement expiration* report for the next one to three months into the future to use as a guideline for your agreement renewal marketing efforts.

___ Print a *Warranty change-of-status* report for the next one to three months into the future to use as a guideline for your extended warranty service agreement marketing efforts.

___ Manually update any agreements that were renewed by your customers using *Agreements*.

___ Select agreements for billing automatically and manually using *Cycle billings*.

___ Preview agreement invoices by printing a *Cycle billing edit list*.

___ Print cycle billing *invoices*.

___ Post agreement cycle billing invoice transactions using *Post invoices to A/R*.

___ If you're using the accrual method of agreement income recognition, run the *Process income accruals* function.

___ Print the Service Manager service analysis reports to examine the profitability of your business by *Service rep, Service agreement, Bill type, Customer* or *Model* of equipment.

___ Print the *Copier service history* report and the *Copier performance* report for the period.

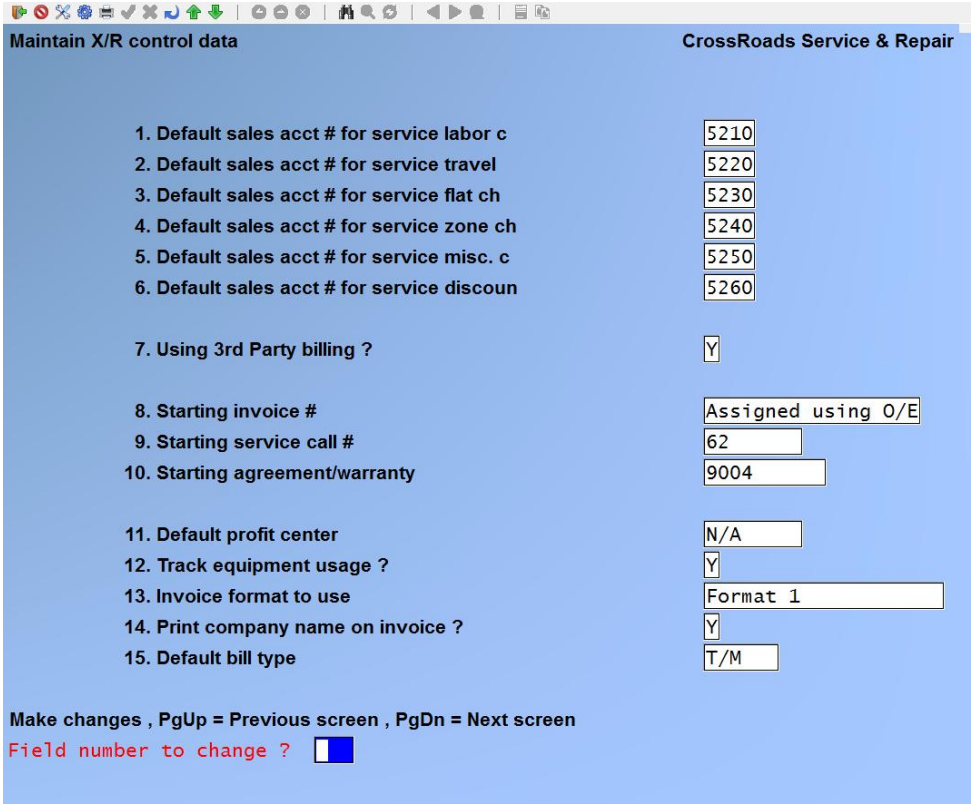
_____

# Chapter 5

# S/M Control Information

**Introduction**
The S/M Control file contains basic information that establishes the "set-up" of your Service Manager, management system. The data contained in this file links Service Manager to the accounting packages and allows you to specify certain service management options. The Control information function is used to set up the S/M Control File.

**To begin**
From page 2 of the S/M main menu select *S/M Control information*.




Fields 1 through 6 are default sales account numbers for the various components of a service call and they must be specified. Notice that a sales account number for parts sales is not included. The General Ledger sales account number for any part that is included on a service call is taken from that part's Inventory Control item record.

NOTE: In Fields 1 through 6 and 15, when you enter an account # which is not a valid GIL account #, a question will appear, asking if you now want to add this account to the Valid GIL Accounts file.
If you answer Y, a prompt will display, allowing you to add the account description for the new account. Type the description then, press [**ENTER**]. The account is added to the Valid GIL Accounts file and the cursor moves to the next field on the screen. If you answer N, the ACCOUNT # field clears for entry of another account #.

**Default sales acct # for service labor c(harges)**
Enter the General Ledger sales account number that is to be used for the distribution of service related labor charges. If multiple profit centers are used, a profit center suffix will be taken from the Bill Type record and appended to the labor account each time a distribution posting is performed.

**Default sales acct # for service travel (charges)**
Enter the General Ledger sales account number that is to be used for the distribution of service related travel charges. These are the charges that may be added in fields

16 through 21 on the *Service Rep Status* screen. If multiple profit centers are used, a profit center suffix will be taken from the Bill Type record and appended to the labor account each time a distribution posting is performed.

**Default sales acct # for service flat ch(arges)**
Enter the General Ledger sales account number that is to be used for the distribution of service related flat charges. These are the charges that may be specified in the Bill Type record. If multiple profit centers are used, a profit center suffix will be taken from the Bill Type record and appended to the labor account each time a distribution posting is performed.

**Default sales acct # for service zone ch(arges)**
Enter the General Ledger sales account number that is to be used for the distribution of service call zone charges. These are the charges that may be specified in the Bill Type record. If multiple profit centers are used, a profit center suffix will be taken from the Bill Type record and appended to the labor account each time a distribution posting is performed.

**Default sales acct # for service misc(ellaneous charges)**
Enter the General Ledger sales account number that is to be used for the distribution of service call miscellaneous charges. These are the charges that may be added at field 5 on the *Service Call* Summary screen. If multiple profit centers are used, a profit center suffix will be taken from the Bill Type record and appended to the labor account each time a distribution posting is performed.

**Default sales acct # for service discount(ts)**
Enter the General Ledger sales account number that is to be used for the distribution of discounts extended to service customers. If multiple profit centers are used, a profit center suffix will be taken from the Bill Type record and appended to the labor account each time a distribution posting is performed.

**Use 3rd party billing**
If you bill any portion of your service calls to someone other than the party for whom service was performed (e.g. an equipment manufacturer covering warranty work, an insurance company, a property management firm), enter a **Y** here. Otherwise, enter an **N**.

**Starting invoice #**
If you have not specified a starting invoice number in your Order Entry system, enter a 1 to 6 digit number here. The value entered sets the starting number for invoices, and is the next invoice number that will be assigned. When service invoices are being entered, the number is automatically incremented by one for each new invoice.

**Starting service call #**
Enter a 1 to 8 digit number here. The value entered sets the starting number for service calls, and is the next service call number that will be assigned. When service

calls are opened, the number is automatically incremented by one for each new service call.

**Starting agreement/warranty (#)**
Enter a 1 to 10 digit number here. The number entered sets the starting number for service agreements and warranties, and is the next agreement/warranty number that will be assigned. As service agreements are entered, the number is automatically incremented by one for each new agreement.

**Default profit center**
An entry in this field is allowed only if the Company File specifies that profit centers are to be used. If you are using profit centers, enter a number here. The default profit center is used by Service Manager as the default value when defining *bill type* records.

**Track equipment usage ?**
If you service equipment that contains a usage meter such as the "click counter" found on most office copiers, then enter a **Y** here. Otherwise accept the default of **N**. A choice of **Y** adds data fields to both the service agreements and service calls that allow you to record usage meter readings. It also enables an additional back screen function for defining overage charges.

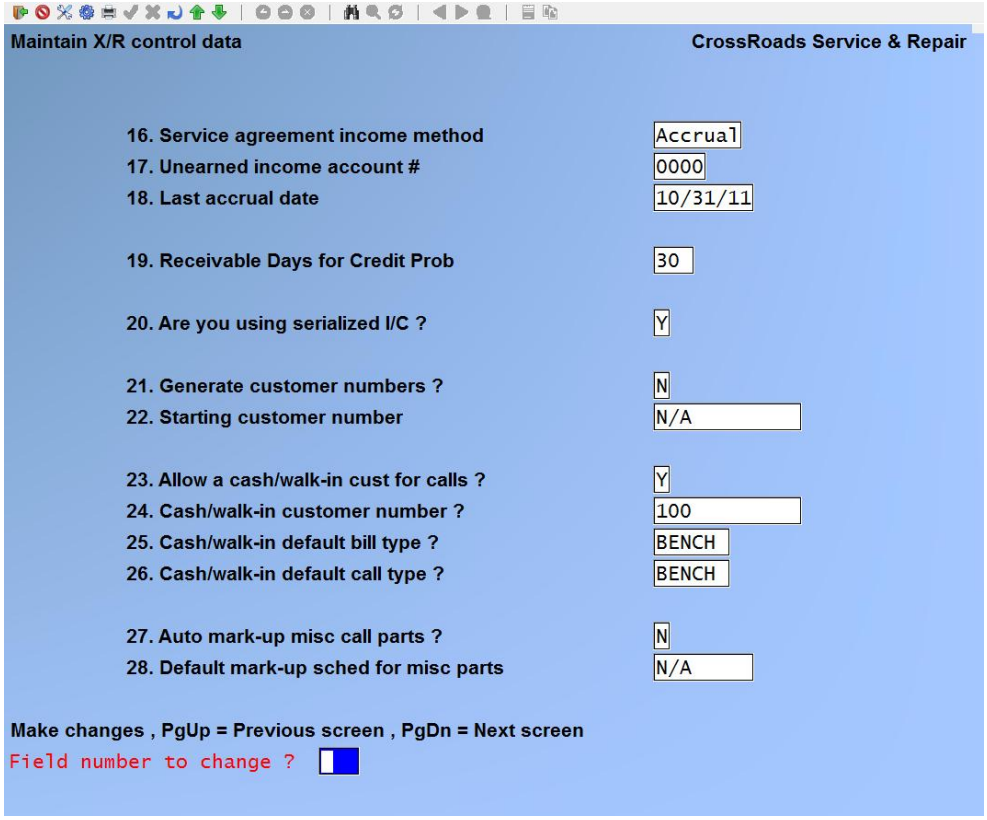
**Invoice format to use**
Enter a code to specify the invoice format you are using:

| | | |
|---|---|---|
| 1 = V6.0 Format 1 | 2 = V6.0 Fmt 2 – Double line | 3 = V6.0 Fmt 2 – Triple line |
| 4 = V5.0 Format 1 | 5 = V5.0 Fmt 2 – Double line | 6 = V5.0 Fmt 2 – Triple line |
| 7 = V4.0 Format 1 | 8 = V4.0 Fmt 2 – Double line | 9 = V4.0 Fmt 2 – Triple line |

If you are using RealWorld's Order Entry package, the invoice format to be used by O/E must be specified in the O/E control file. This field is only applicable to Service Manager invoices.

**Print company name on invoice ?**
This choice is valuable if you have multiple companies. By answering **Y** here, you can use the same invoice forms for more than one of your companies. This saves the expense of having invoices printed separately for each company. If you are not using this feature, enter **N**.

**Default bill type**
Enter the ID of the form to be used for printing invoices. You must set up your bill types before you can set this field.




**Service agreement income method**

This field controls the method used to process service agreement income. You will be prompted to enter either A for Accrual or C for Cash as the processing method. If you choose Cash, then all service agreement invoices will be posted directly to Sales. The sales account for posting will be the general ledger account number specified in the service agreement. Also, if you choose Cash, fields 16 and 17 will be filled in automatically by the system as not applicable (N/A).

If you choose Accrual, then service agreement invoices that cover multiple months (e.g. annual, semi-annual, quarterly cycle bills) will be posted to an unearned income account. Each month thereafter – when you run the *Process Income Accruals* function – any agreement income earned during that month will be transferred from the unearned income account to the sales account specified in the service agreement. The monthly accrual transactions are calculated, created and posted by Service Manager automatically – but you must initiate the action by running the accruals process each month. (See Chapters 17 and 18, *Maintain Service Agreements*).

If you choose the Accrual method, monthly cycle bills are still posted directly to the general ledger account specified in the service agreement; they are not deferred for later posting to sales.

**Unearned income account #**

If you specified the Accrual method of income processing, then enter the General Ledger account number that is to be used for posting unearned income from annual, semi-annual, and quarterly cycle billings. If multiple profit centers are used, a profit center field will be appended to the labor account each time a distribution posting is performed.

**Last accrual date**
Enter the last date through which you have manually processed income accruals. Yu must enter this date in MMDDYY format and the day entered must be the last day of the month. You need only enter this date during installation and startup of your system – in future months, Service Manager will maintain the date automatically.

**Receivable days for credit prob(lem)**
Enter up to three digits (0 to 999) to specify the number of days "grace period" before triggering a customer credit alert. Whenever a service call is opened, Service Manager checks the customer's credit status three (3) ways. One of the three ways checks for any customer invoices that are overdue. Service Manager will take the due date for any outstanding invoices, add field 18 (Receivable days for credit problem), and compare the result with the current date. If the invoice is overdue beyond the grace period, the dispatcher will be alerted that a credit problem exists and he/she will have to override the problem in order to continue opening the call.

**Are you using serialized I/C ?**
If you are using the SYNCHRONICS® serialized Inventory Control package, answer Y, otherwise answer N.

**Generate customer numbers ?**
When someone calls in for service who has never done business with your firm, Service Manager permits your dispatchers to add an Accounts Receivable customer file for the new customer. The Accounts Receivable information can be added during the entry of the service call itself --a feature referred to as adding a customer "on-the-fly". To become more familiar with this feature, see Chapter 19, *Process Service Calls*.

Field 22 allows you to specify whether or not you want Service Manager to automatically generate the next customer account number when you add customers "on-the-fly". If you do not want Service Manager to generate customer numbers, press [ENTER] to accept the system default of N. If you would like Service Manager to automatically generate the next customer account number, enter Y.

**Starting customer number**
If you entered Y for field 21, you must enter a starting customer number here, up to 6 numeric digits. If you entered N for field 21, this field will be set to N/A.

**Allow a cash/walk-in cust for calls ?**
If you enter a Y in this field, you will activate a set of Service Manager features

designed to facilitate carry-in, “depot” service customers. A Y in this field also causes the prompts for fields 25 through 27 to appear on the screen. A complete description of the cash/walk-in features can be found in Chapter 19, Process Service Calls. Briefly, this feature permits the opening of carry-in service calls to one default A/R customer account. When each call is opened, the carry-in customer’s name and address may be entered directly on the call screen where the service-at location information is normally displayed. This feature is useful for small appliance, electronic shops or similar firms that do not want to establish an A/R customer record for each carry-in repair.

**Cash/walk-in customer number ?**
Enter the A/R account number that you have set up for your cash/walk-in business.

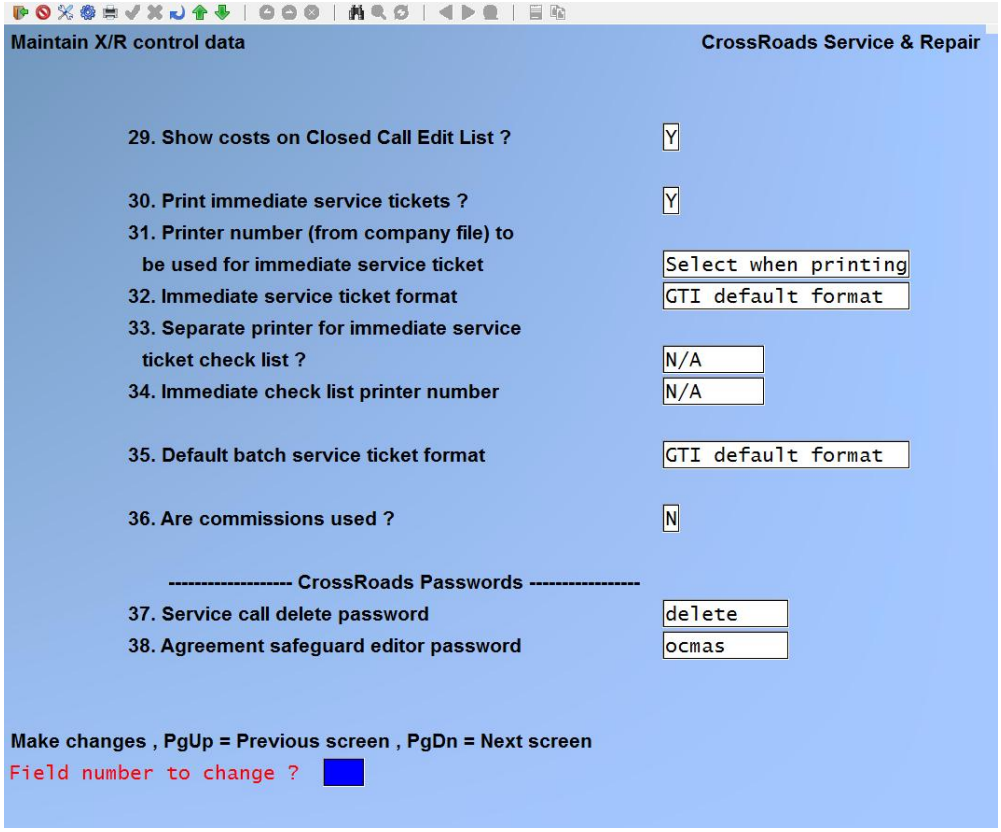
**Cash/walk-in customer default bill type ?**
Enter the bill type code you want Service Manager to use as the default setting for cash/walk-in service calls. This saves time when entering the call, however it can be overridden if necessary. Note: This field is not error checked for validity, so you must enter a correct code for this function to operate properly.

**Cash/walk-in customer default call type ?**
This field is similar to field 25. Enter the call type code you want Service Manager to use as the default setting for cash/walk-in services calls. Note: This field is not error checked for validity, so you must enter a correct code for this function to operate properly.

**Auto mark-up misc call parts ?**
If you want Service Manager to automatically calculate the sell price for miscellaneous (asterisked *) items) at the time that you add them to a service call, enter Y, otherwise enter N.

**Default mark-up sched for misc parts ?**
If you answered Y in field 27, then you must specify the mark-up pricing schedule you want Service Manager to use when it automatically calculates sell prices for miscellaneous items.

Enter the eight (8) character code to identify a mark-u schedule or press [**F1**] to display each mark-up schedule in turn. When the mark-up schedule you want to assign is displayed, press [**ENTER**].




**Show costs on closed call edit list ?**
This field helps you to keep cost data restricted to a limited number of employees. If you answer N, then service call cost data will only be printed on the billing edit list -- a function which is located elsewhere on the Service Manager menu .-thus permitting separate password protection.

**Print immediate service tickets ?**
Service Manager has the ability to print service requests (i.e., service "tickets") either in batches, or individually at the time a call is opened or dispatched. If you desire the option of printing individual service requests immediately at the time of opening or dispatching a service call, then answer Y, otherwise answer N. Note that this feature can be turned on or off at any time in the future wid. no ill effects.

**Printer number (from company file) to be used for immediate service ticket**
If you entered N in Field 29, the system will automatically enter N/A here. If you entered Y in Field 29, enter the printer ID number which will be used as the default when printing service tickets.

**Immediate service ticket format**
If you entered N in Field 29, the system will automatically enter N/A here. If you entered Y in Field 29, then you can specify the service ticket format you want Service Manager to use when it prints immediate service tickets. You have three ways to

choose. You can press [**F1**] to view each custom ticket format in turn. When me one you want is displayed, press [**ENTER**]. You can press [**F2**] to designate the standard Giant Technology ticket format that's printed by a dedicated program. Or, you can leave this space blank and press [**ENTER**] to make your format selection at the time of printing.

**Separate printer for immediate service ticket check list ?**
If you entered N in Field 29, the system will automatically enter N/A here.
If you enter Y in Field 29, and you did not designate the standard GTI ticket format in Field 32, then you must decide Y or N here. If you did pick the standard GTI format, this field is automatically N/A.
Perhaps a word on the rational for this field will be helpful. Most users, who have defined a custom service ticket, print it on pre-printed forms. Therefore, the free-format check list that usually follows the service ticket cannot be printed on the same device. The standard GTI ticket format is a plain paper design. Since the design allows the check list to follow right along, no option for a separate printer is required.

**Immediate check list printer number**
If this field is not N/A because of decisions you made in fields above, then you have two choices here. You can either specify the printer number in the company file (1 through 14) to be used to print immediate service requests: or you can leave this field blank and make your selection at the time of printing.

**Default batch service ticket format**
This field allows you to specify the default service ticket format you want Service Manager to use when it prints service tickets as a batch report. Note that since this is a default value, you can override it at the time of printing. You have three ways to complete this field. You can press [**F1**] to view each custom ticket format in turn. When the one you want is displayed, press [**ENTER**]. You can press [**F2**] to designate the standard GTI ticket format that’s printed by a dedicated program. Or, you can leave this space blank and press [**ENTER**] to make your format selection at the time of printing.

Note: At the time of printing service tickets in batch mode you will be asked if you want to designate a separate printer for the check list. This question was automated for immediate tickets in the interest of saving time.

**Are commissions used ?**
Answer [**Y**] if you wish to track commissions for your sales reps.

**Service call delete password**
If you supply a password here, Service Manager users will be required to enter that password if they attempt to delete an active service call from the system. You may enter a password of your choice, up to 10 alphanumeric characters, or leave this field blank and press [ENTER] to accept the default of N/A (not applicable, no password protection). Note that 10 alphanumeric characters is the same format as a standard

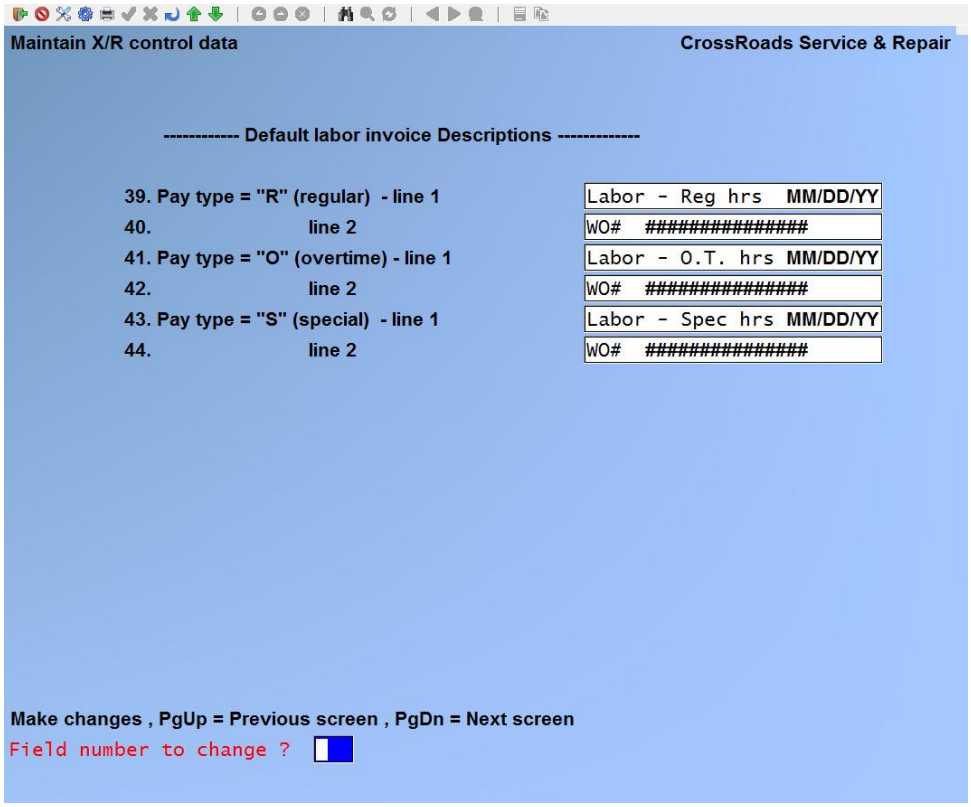
RealWorld password – you may want to assign one you're already using for normal system entry.

**Agreement safeguard editor password**

If you supply a password here, Service Manager users will be required to enter that password if they attempt to activate the *Agreement Safeguard Editor* with the command CTL/FS (see Chapters 22 and 23). You may enter a password of your choice, up to 10 alphanumeric characters, or leave this field blank and press [ENTER] to accept the default of N/A. Note that 10 characters is the same format as a standard RealWorld password -- you may want to assign one you're already using for normal system entry.

**Default labor invoice descriptions:**

Fields 39 through 44 are related. They allow you to define the way you want labor records described to your customers on your invoices. Since these are set-ups for defaults, they may be overridden for any given service call. This gives you unlimited flexibility when required, while still enabling you to define a "standard" for your company that will save keystrokes for the majority of your service calls.




Just like inventory item descriptions that you'll use for service parts, the labor invoice descriptions can be up to 2 lines of 25 characters each. Since a labor record can be for regular, overtime or special hours, there are three (3) pairs of default descriptions

for you to set up.

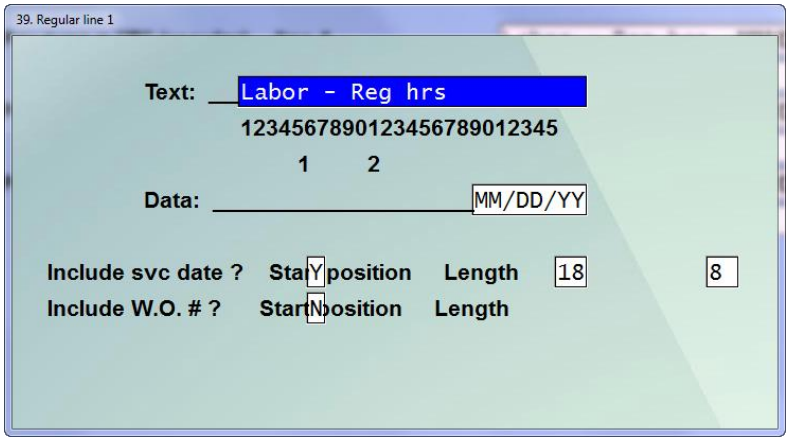
You have almost unlimited choices in how you setup these descriptions. You may use simple text like "Labor --regular hours" or you may elect more elaborate descriptions that include live data. Service Manager allows you to embed symbols representing the service date and/or work-order-number. At the time the invoice is printed, the symbols are replaced with the actual labor dates and work-order-numbers. To help you get started quickly, Giant Technology has defined two formats that you can use by simply pressing [**F1**] or [**F2**] while you are positioned at Field 39.

The [**F1**] key sets your default descriptions equal to the GTI standard format which has been enhanced as of Version 6.2A. It includes the labor date embedded in the first line of description, and the work-order number embedded in the second line of description.

The **[F2]** key sets your default descriptions to the Giant Technology standard format *prior to* Version 6.2A (i.e., Version 6.2 and previous). It only has description on the first line and that line only includes simple text.

We advise that you start with one of the standard formats provided and experiment with this setup function after you've had some experience printing sample invoices.

**Pay type = "R" (regular) - Line 1**
When you enter this field a "dialog box" appears:




**Text**
If you press [**F1**] or [**F2**], all six fields 39 thru 44 will be automatically completed for you.

```
Enter your own default labor description,  or
F1 = Default to "Standard" format for all labor descriptions
F2 = Default to  Ver. 6.2  format for all labor descriptions
```

If you wish to specify your own labor invoice descriptions, type the text portion into the field 39 text area, which is the first line of description for labor records that occur during “regular hours”.  After you type your text and press [ENTER], the dialog box is refreshed and includes your entry.

**Include svc date ?**
Answer **Y** or **N**. If you *do* want to include the service date in your regular hours labour description line-1, enter **Y**. If you do not want to include the service date enter **N**.

**Service Date Start Position**
You are now asked where to position the service date. Always allow one or more spaces between your text (e.g. Labor -Reg Hrs) and the date. The text in our example ends at character position 15 so we would place the service date starting position at 18.

**Service Date Length**
You are now asked to choose the length of the service date – and you are given two (2) choices. If you choose 5 (i.e. 5 characters long) the date format will be “MM/DD". If you choose 8 (i.e. 8 characters long) the date format will be "MM/DD/YY".

**Include W.O. # ?**
Answer **Y** or **N**. If you *do* want to include the work order number in description line-1, enter Y. If you do not want to include the work order number enter N. If line-1 is already full, you should wait until line-2 to embed the work order number.

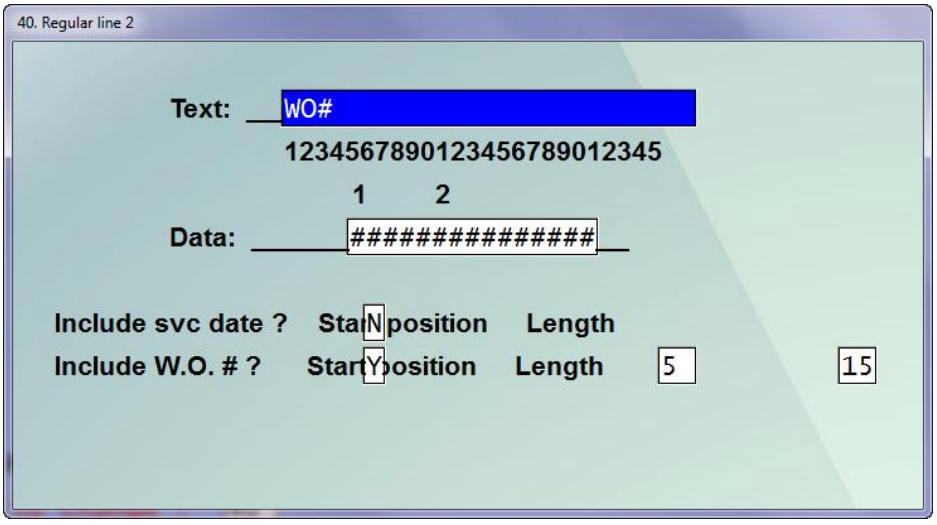
**Work-Order-Number Start Position**
You are now asked where to position the work order number. Always allow one or more spaces between your text (e.g. Work Order #) and the number. The text in our example ends at character position 18 so we would place the service date starting position at 19.

**Work-Order-Number Length**
You are now asked to choose the length of the work order number that you want printed. Note that the Service Manager work order number field is configured at 15 characters long – long enough to satisfy our most demanding customers. If your work order numbers are less than 15 characters long, you may use this field to truncate the printout. This will provide additional text space for description.

Note that the display for Field 39 shows the text and the date symbol together on one

line and in their proper places. The text is displayed in normal intensity and the "MM/DD/YY" symbol is in low intensity. This serves as a reminder that it will be replaced at print time with the actual date. The screen now advances to Field 40 and appears as follows.

**Pay type = "R" (regular) - Line 2**
When you enter this field a "dialog box" appears:




**Text**
If you press [**F1**] or **[F2]**, all six fields 39 thru 44 will be automatically completed for you.

If you wish to specify your own labor invoice descriptions, type the text portion into the field 39 text area, which is the first line of description for labor records that occur during "regular hours". After you type your text and press [ENTER], the dialog box is refreshed and includes your entry.

**Include svc date ?**
Answer **Y** or **N**. If you *do* want to include the service date in your regular hours labour description line-1, enter Y. If you do not want to include the service date enter N.

**Service Date Start Position**
You are now asked where to position the service date. Always allow one or more spaces between your text (e.g. Labor - Reg Hrs) and the date. The text in our example ends at character position 15 so we would place the service date starting position at 18.

**Service Date Length**
You are now asked to choose the length of the service date --and you are given two (2) choices. If you choose 5 (i.e. 5 characters long) the date format will be "MM/DD".

If you choose 8 (i.e. 8 characters long) the date format will be "MM/DD/YY".

**Include W.O. # ?**
Answer Y or N. If you *do* want to include the work order number in description line-1, enter Y. If you do not want to include the work order number enter N. If line-1 is already full, you should wait until line-2 to embed the work order number.

**Work-Order-Number Start position**
You are now asked where to position the work order number. Always allow one or more spaces between your text (e.g. Work Order #) and the number. The text in our example ends at character position 18 so we would place the service date starting position at 19.

**Work-Order-Number Length**
You are now asked to choose the length of the work order number that you want printed. Note that the Service Manager work order number field is configured at 15 characters long – long enough to satisfy our most demanding customers. If your work order numbers are less than 15 characters long, you may use this field to truncate the printout. This will provide additional text space for description.

Note that like the display for Field 39, the display for Field 40 shows the text and work-order-number symbol together on one line and in their proper places. The text is displayed in normal intensity and the "##########" symbol is in low intensity. This serves as a reminder that it will be replaced at print time with the actual work order number.

**Pay type = "O" (overtime) and "S" (Special)**
Field pairs 41. & 42. and 43. & 44. are completed in the same manner as Fields 39. and 40. described above. Refer to the previous paragraphs for directions and examples. As you have no doubt observed by now, the flexibility provided by mixing text and symbols on the same line, and allowing you to control the length of data elements requires a little planning on your part. However, the pre-defined formats automatically set up with **[F1]** and **[F2]** (while in Field 39.) provides a short cut.

If data already existed in the S/M Control file before you selected this function, the screens appear with all of the existing data. In that case, use *Field number to change ?* and enter data as described above.

At the "Field number to change ?" prompt, make any necessary changes and press **[ENTER]** to continue.

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# Chapter 6

# Service Rep Data

**Introduction**
When you are installing your Service Manager service management system, you must describe your service representatives by means of this function. The most important elements are the unique identifier and the hourly labor costs for each rep (regular, overtime, and special rates). Without this information, many of the management reports will not be useful.

In addition to specifying labor costs, this function also allows you to assign auxiliary warehouses (such as service vehicles) to each service rep. This feature supports tracking inventory usage by individual service rep.

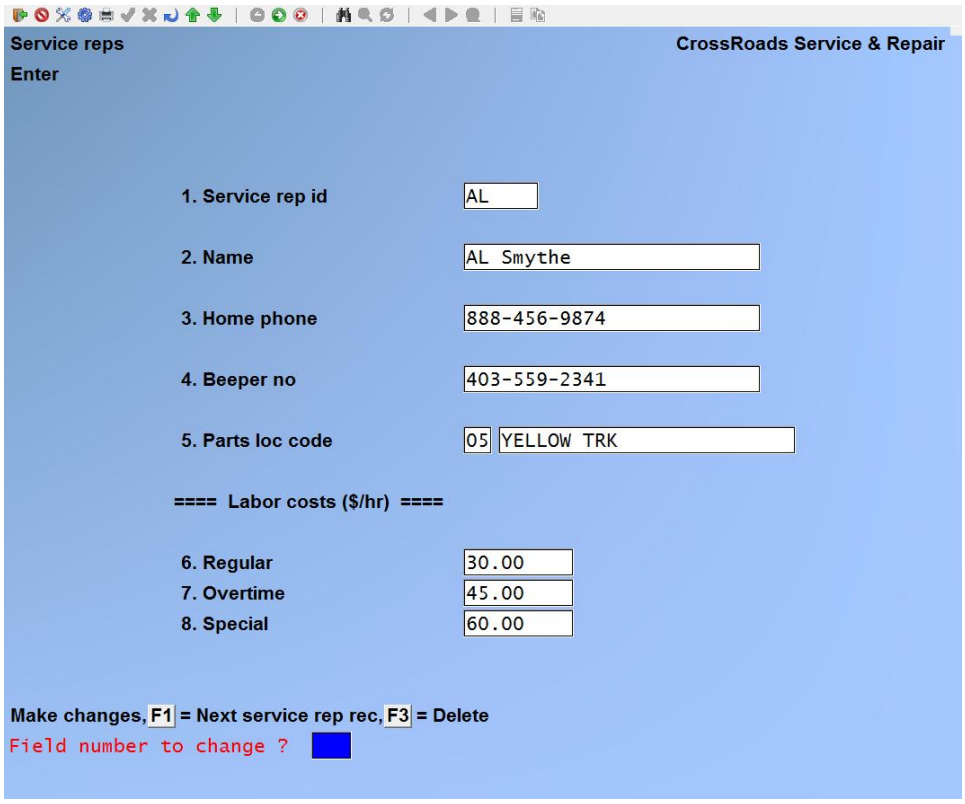
**To begin**
From the second page 2 of the S/M main menu, select *Service rep data → Enter*. On the screen displayed you can add, change and delete service reps.

From this entry screen you can work with both new and existing service rep records. If service rep data has already been entered for the service rep identifier you specify, it will appear and be available for changes or deletion. If the service rep identifier you specify is new, you will automatically be placed in enter mode.

**Entering Service reps**

Enter the following information for each service rep:

*See next page for illustration.*




**Service rep id**
Enter a service rep identifier, up to 6 alphanumeric characters, or press [**F1**] to scroll through the service reps on file.

**Name**
Enter the service rep's name, up to 25 alphanumeric characters.

**Home phone**
Enter the home phone number for the service rep, up to 12 characters.

**Beeper number**
Enter the beeper number (or vehicle call number) for the service rep, if applicable, up to 12 characters. If this field is not being used press [**ENTER**] to skip it.

**Parts loc code**
If you have specified multiple warehouses in the Inventory Control system, you may enter the I/C warehouse code where this service rep will normally draw his/her parts. When a service call is closed, the I/C warehouse code entered here will be displayed as the default inventory location for relieving the parts used. If this feature is not used, enter a 1 or 2 character code here. If you don't enter an I/C warehouse code in this field, Service Manager will set the default location to be the main (or central) Inventory Control warehouse.

**==== Labor costs ($/hr) ====**

**Regular**
Enter your hourly cost (in dollars and cents) for this service rep working regular hours. The cost figure entered here will be assigned to those work orders where the time worked is specified as **"R"** (regular hours). It will also be used to calculate profit margins in the *Service Analysis* and *Service Rep Productivity* reports. You may include the rep's base hourly wage plus any fringe or overhead costs you wish to add.

**Overtime**
Same as field 6. above, except used for **"O"** (overtime hours).

**Special**
Same as field 6. above, except used for **"S"** (overtime hours).

**Changing Service rep data**
To change one or fields for a service rep, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Deleting a Service rep**
To delete a service rep, bring up the code that you want to delete and press [**F3**] to delete.

**Printing a Service rep file list**
From the second page 2 of the S/M main menu, select *Service rep data → Print*. On the screen that appears, enter the range of service reps to include on the list. Follow the screen instructions.

*See next page for sample report.*

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## SERVICE REP FILE LIST

Service rep id range: "First" to "Last"

| Service rep id | Name | Phone no | Beeper no | Labor costs Reg | OT | Spec | Parts loc | |
|---|---|---|---|---|---|---|---|---|
| AL | AL Smythe | 888-456-9874 | 403-559-2341 | 30.00 | 45.00 | 60.00 | 05 | YELLOW TRK |
| BB | Blair Bothner | 888-987-4561 | 403-987-5634 | 20.00 | 30.00 | 40.00 | 15 | GREEN TRK |
| BJ | Brent Johnson | 987-985-6542 | 403-987-5236 | 30.00 | 45.00 | 60.00 | 46 | BLACK TRK |

3 service reps on file

-- End of report --

# Chapter 7

# Billing Types

**Introduction**
When you install your Service Manager service management system, you must establish a Bill Type record for each unique type of billing that you perform. Many service companies offer their clients a choice from among several billing methods. Examples might include:

**Time & Material Billing:** Standard hourly rates for labour, and standard markups for materials used.

**Special Time & Material Billing:** Negotiated rates and markups given to preferred customers in return for the volume of service work they commit to you.

**Full Service Agreement:** A fixed or "blanket" amount, paid on a periodic basis, that covers all parts and labour required to maintain a specific piece of equipment.

**Partial Service Agreement:** A fixed or "blanket" amount, paid on a periodic basis that covers some portion of required maintenance. It may include parts but not labour; labour but no parts; or parts and labour for everything except, a major component.

**Equipment Inspection:** A fixed or "blanket" amount, paid on a periodic basis that covers preventive maintenance inspections. Emergency repairs, or major problems identified during an inspection would usually revert to a Time & Material billing arrangement.

**Warranty:** Warranty work is best treated as a Bill Type, in much the same way that a *Full Service Agreement* would be defined.

The above are merely examples. A major feature of the Service Manager system is the flexibility provided by the Bill Type concept.

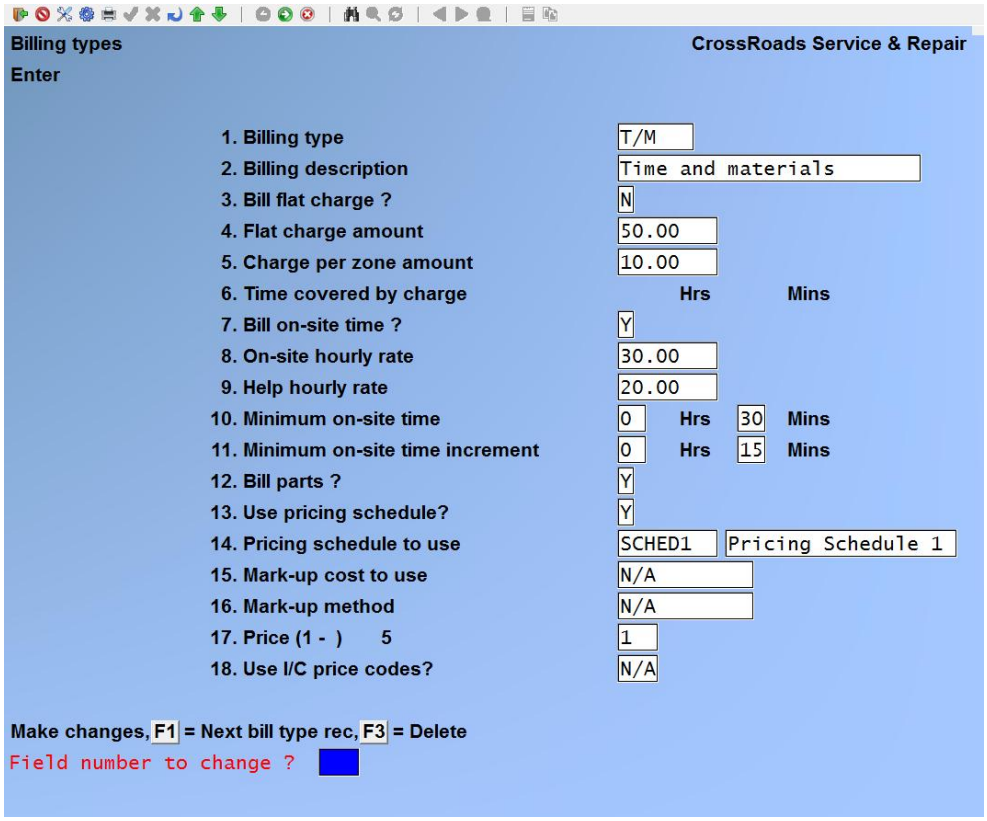
You are not limited in the number of unique Bill Types that you may define. By simply naming your Bill Types, and answering a list of 19 questions, you complete the definition. From that point forward, each time you assign that Bill Type to a service call, the system knows which components of the "service ticket" should be billed, and specifically how to handle the billing of travel, labour and parts.

**To begin**

From the second page of the S/M main menu, select *Billing types → Enter*. On the screen displayed you can add, change and delete billing types.

## Entering Billing types

Enter the following information for each billing type:




From this screen you can work with both new and existing Billing type records. If billing type data has already been entered for the Billing type identifier you specify, it will appear and be available for changes or deletion. If the Billing type identifier you specify is new, you will automatically be placed in enter mode.

## Billing type

Enter a billing type identifier, up to 6 alphanumeric characters, or press [**F1**] to scroll through the billing types on file.

**Billing description**
Enter a description of the billing type, up to 25 alphanumeric characters.

**Bill flat charge ?**
If any portion of this billing type falls under the definition of a flat charge, enter Y, otherwise enter N. Flat charges may be used to cover travel time (e.g. to get the service rep to the client's door) or they may include some amount of on-site time.

**Flat charge amount**
If you answered Y to "Bill flat charge?", enter the flat charge amount in dollars and cents here. You may enter any amount up to $9,999.99.

**Charge per zone amount**
If you divide your service territory into various travel zones, enter your charge per zone here. When service calls are billed, the system multiplies the charge per zone amount by the number of the customer's zone, to arrive at the total zone charge.

Most service companies that charge travel by zone use this feature in one of two ways. The first method involves drawing concentric circles --like a bulls-eye --around some central point. The innermost circle is considered travel zone zero (0), so only the flat charge applies there. The first circle from the centre is zone one (1), the next is zone two (2), and so on until the entire service region is covered. Using this method, the charge per zone is usually a small, reasonable, surcharge such as $5, $10, $20 ... whatever makes sense for the distance and travel-time involved.

The second method of applying this feature is used when the cost of travel to different parts of the service region varies greatly, and is not dependent on anything so structured as concentric circles. For example, let's say we service three outlying counties --A, B, and C. For travel to A, we need to charge $18, for travel to B $27 and for travel to C $40. We would simply assign to customer locations in these counties, travel zone numbers of 18, 27 and 40 respectively, and indicate a charge per zone amount here of $1.00 (one dollar). For more information on travel zones see Chapter 11, *Service Locations*.

The charge per zone amount is typically small; however this field will accept any amount (in dollars and cents) up to $9,999.99.

**Time covered by Charge**
If your flat charge covers any portion of on-site time, enter the amount of time

covered here. You may enter hours covered (1 to 99) or you may press [**ENTER**] to skip the hours field. You may now enter the minutes covered by the flat charge (1 to 59) or you may press [**ENTER**] to skip the minutes field.

**Bill on-site time ?**
If labour hours for on-site time are to be charged for this unique billing type press [**ENTER**] to accept the system default of Y, otherwise enter N, [**ENTER**].

**On-site hourly rate**
If you answered Y to "Bill on-site time?", enter the hourly rate you charge for on-site labour time here. The system will use this rate to calculate the labour portion of the invoice. The hourly rate entered here is considered the rate for a normal (ie., non-helper) mechanic or technician.

**Helper hourly rate**
If you assign helpers or apprentices on service calls, enter the hourly labour rate for on-site helper time; otherwise repeat the amount you entered for field 8.

**Minimum on-site time**
If you require a minimum on-site time charge for the Bill Type being defined, enter the time here in hours and minutes. To calculate on-site labour charges, the system will multiply the minimum on-site time by the on-site hourly rate to obtain the minimum charge.

**Minimum on-site time increment**
If you have a minimum on-site time increment for the Bill Type being defined, enter it here. To calculate on-site labour charges, the system will take the actual on-site time and “round it upwards” to the next time increment specified here. For example, if you specified a 15 minute minimum increment, actual on-site time of 2 hours and 52 minutes would be billed as 3 hours. The system default for this field is 1 minute. If you press [**ENTER**] twice, you will select the system default and on-site labour charges will be calculated to the exact minute.

**Bill parts ?**
If parts used during the service call are to be billed for the Bill Type being defined, press [**ENTER**] to accept the system default of Y; otherwise type an N followed by [**ENTER**].

NOTE: Fields 13 through 18 refer to functions and data described in detail in the chapter on *Item Pricing*. Please read that chapter before making long lasting decisions on your bill type structure.

**Use pricing schedule ?**
If you plan to assign a pricing schedule (either a mark-up or mark-down type) to this

Bill Type then type Y, otherwise accept the default value of N.

**Pricing schedule to use**
If you answered Y at field 13, above, then you must specify a pricing schedule here. If you answered N at field 13, this field will be marked not applicable, N/A.
Enter the eight (8) character code to identify the pricing schedule you wish to use, or press Fl to display each mark-up schedule in turn. When the pricing schedule you want to assign is displayed, press [**ENTER**].

**Mark-up cost to use**
Enter the one character code of the cost you want Service Manager to use if you specified a mark-up schedule in field 14, above. The available cost codes are displayed across the bottom message area of the screen. If you specified a discount pricing schedule (Ie., a mark-down schedule) in field 14, then this field will be marked N/A.

**Mark-up method**
Type **I** for individual parts mark-up or **A** for aggregate mark-up. If field 14. Contains a mark-down pricing schedule, this field will be marked N/A. When you choose the individual (I) mark-up method, the cost for each part is matched against the mark-up schedule, a mark-up multiplier is chosen for that individual part and multiplied times its cost to arrive at its sell price. If you choose the aggregate (A) mark-up method, the costs for all parts are first summed and that aggregate cost is matched against the mark-up schedule. A mark-up multiplier is chosen on the aggregate cost and then used to mark up each part to arrive at selling prices.

**Parts price level (1/2/3)**
If you answered Y to "Bill parts?", you must enter the pricing level to be used for parts billing. This is an entry of I, 2, or 3 which equates to the Price Code you specified in the Item Maintenance transaction of your Inventory Control system.

**Use I/C price code ?**
Answer Y if you want Service Manager to use I/C price codes in its item price determination. Answer N if you want Service Manager to ignore the IIC price codes. This field will be marked NIA if you answered Y to field 13, "Use pricing schedule?".

**Default profit centre**
If you have not specified the use of profit centres in your Company file, this field will not appear on this screen. If you are using profit centres, the default entry for this field will be set equal to the entry you made in the *Service Manager Control Data* file.

You have two choices. You may accept the default profit centre by pressing [**ENTER**].

Alternately, you may enter a number here that specifies a separate profit centre for the Bill Type being defined.

If you so choose you may enter a unique profit centre for each type of service billing you perform. When service bills are posted, the charges and costs related to the billing will be distributed to the specified profit centre(s).

**Changing a Billing type**
To change one or fields for a billing type, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Deleting a Billing type**
To delete a billing type, bring up the code that you want to delete and press [**F3**] to delete.

**Printing a Billing types list**
From the second page 2 of the S/M main menu, select *Billing types → Print*. On the screen that appears, enter the range of billing types to include on the list. Follow the screen instructions. See the end of this chapter for a sample of the Billing Types List.

Date:05/21/13 Time:11:51:49 CrossRoads Service & Repair User: SSI Report #3364 Page 0001

**BILLING TYPE FILE LIST**

Billing type range: "First" to "Last"

| Bill type | Description | - Flat chg opts - Flat chg / Zone chg | Time / covered | -- On-site options -- Labor/hr / Help/hr | Minimum time / Minimum incr | -------- Parts options --------- Use prc sched? / Markup cst/meth | Price (1 - 5) / Use IC prc codes | Profit center |
|---|---|---|---|---|---|---|---|---|
| CB-NC | Call back - no charge | | | | | | | |
| COMP | Compressor | | | 100.00<br>75.00 | 1:00<br>0:15 | | | |
| FULL | Full coverage | | | | | | | |
| I-3806 | Installation contract | | | | | | | |
| INSPEC | Inspection and prev main | | | 75.00<br>45.00 | 2:30<br>0:15 | N<br>N/A | 1<br>N | |
| LABOUR | Labour coverage-no parts | 50.00<br>10.00 | 0:30 | 75.00<br>45.00 | 1:00<br>0:15 | | | |
| T/M | Time and materials | | | 30.00<br>20.00 | 0:30<br>0:15 | SCHED1<br>None | 1<br>N/A | |
| WARR | Warranty | | | | | | | |

8 billing types on file

-- End of report --

## Bill Type Application Notes

Bill types can be used to achieve a variety of end results, particularly when used in combination with other features of Service Manager such as agreement processing and reporting. The paragraphs below describe some of the ways in which the bill type can be used.

## Tracking Call-Backs

Generally speaking, call-backs are inconvenient wastes of time for both you and your customer. By defining “call-back” bill types, you can keep track of call-backs that occur by service rep, by customer or by agreement.

Let's describe two situations. In our first example, our service rep fixed the customer's equipment but it didn't stay fixed. The customer called in with the same complaint....making a call-back necessary. Regardless of the reason, we'll have to absorb the costs of the call-back. In our second example, we dispatch one of our

service reps to fix two separate pieces of equipment --A and B --at the same site. Our rep gets so wrapped up in repairing item A, that he forgets about B and leaves the site without even looking at it. This time, when our customer calls in to have us return and repair B, he realizes that he· has to pay for it, but he is inconvenienced and refuses to pay our flat travel charge.

Both of these very typical situations can be handled easily. Define two new bill types: CBINe (Call-Back, No Charges) and CB/WC (Call-Back with charges). "Call-BackINo Charge" will look like a full service, or a warranty bill type. "C.all-Back with Charge" will look like a time and material bill type, but perhaps it won't have a flat travel charge. If you assign these new bill types where they apply, then at any future date you can analyze call-backs by service rep, by service agreement, or by customer. It should help you eliminate the source of your call-back problems.

**Splitting Work by Profit Centres**

Once again, let's use two examples. Service company A is a communications firm that performs work on antennas and radios. Service company B repairs computers in the field with dispatched technicians, or in the shop for carry-in customers. Both companies want to have a clear picture of revenue and costs for two different kinds of work.

This is easy to accomplish using the profit-centre feature in RealWorld's General Ledger, and using separate bill types in Service Manager. First, define the two profit centres in the GIL package. Next, expand all of your relevant bill types into 2 bill types --so that you can assign the individual profit centres. For example, if company B had previously defined a T & M (Time & Materials) bill type, they should now define a T & M/F ("Field") and a T & M/S ("Shop"). Each of the new bill types would reference their assigned profit centres....allowing for both separate and consolidated analysis of all revenue streams and all cost streams.

**Job Cost Applications**

Almost every service organization is involved in new installations of equipment or systems as well as repair of existing ones. If the new installations can be sold on a time and material contract, then the entire project can be handled like a service call. However, many --if not most -new installations must be competitively bid with a fixed price that includes the new equipment and all labour and miscellaneous costs required to install it properly.

Most job costing packages that can keep track of new installations are far too complicated. However, by using standard features in Service Manager, there are two easy methods for performing job cost. Method I should be used for projects that will be completed in a short period of time and have simple billing arrangements. Method II can be used for projects that will extend beyond one month and/or have more

complex progress billing.

Job Cost Method I

First perform the following steps to set-up your system:

- Define a General Ledger sales account for sales of new installation contracts
- Define a miscellaneous inventory item which will be used to bill fixed price contracts (e.g. *INST for installation)

Next perform the following steps for each installation contract in turn:

- Define a bill type specifically for each new installation contract. Let's name our sample bill type "1-3806". We recommend using an "I" for Installation (or a "P" for Project) followed by a unique contract number. Define this bill type to have no charges (Le., no flat charges. no zone charges, no hourly charges, no parts charges). By assigning a unique bill type for each contract, we give Service Manager the identifier it needs to do the job cost reporting.
- As work is performed, or material is committed to the new installation, enter a service call. Show all labour and all parts used on the call, but remember they win all have zero charges. You may show the entire installation project on just one single call or, you may enter multiple calls. If you use one call, the Work-in Progress Report will do nicely as a job cost summary.
- When you're ready to bill the installation, simply put the "*INSTALLATION" inventory item onto the call. For the sell price, fill in the amount of the contract, but leave the cost at zero (the costs are already accumulated). Note that when you first put *INSTALLATION on the call, it will be automatically entered with a sell price of zero (0). Go back to sell price field and enter your billing amount. Service Manager will remind you that the bill type specifies "no charges", but it will let you override the caution to enter an amount.
- The Closed Call Edit List and the Billing Edit List provide a detailed job cost breakdow41.
- After the installation call has been invoiced and posted, you can print the Bill Type Analysis Report for bill type 1-3806. When printed in detail mode, this report provides a recap of all billing, as well as a cost breakdown by labour, material, and other categories.

Job Cost Method II

Method II differs from Method I in the way that billing is accomplished.

- Define a General Ledger sales account for sales of new installation contracts
- Do not define a miscellaneous inventory item as it is not required when using Method II
- Define a generic bill type for installation contracts. Suggestions include INSTAL or PROJ. Once again, specify this bill type to produce no charges (i.e. no flat charges, no zone charges, no hourly charges, no parts charges).

- Create an agreement for each new installation contract. Use the unspecified ("U") billing frequency and assign the previously defined "INSTAL" or "PROJ" bill type. You need not put equipment detail records onto the agreement, but you should use the billing note to document the progress billing arrangement.

  Sample agreement billing note for an installation contract:

  $2,500.00 Deposit at contract signing
  $2,500.00 When wiring complete
  $1,500.00 When panel installed
  $1,000.00 On occupancy
- As work is performed, or material is committed to the project, enter a service call. Once again, all costs will show … but no charges will be generated.
- To perform progress billing, simply enter the amount to be billed into the Sales Amount filed on the basic screen of the agreement and select the agreement for billing. The amount you entered in the sales amount field will be invoiced and the sale will be posted to the General Ledger account specified in the agreement.
- After calls have been closed, invoiced and posted, you can print the Agreement Analysis report for this installation contract. Similar to the Bill Type Analysis report, this report provides a recap of billing and job costs for the specified agreement.

One final note, whether you use Method I, II or both, you can use the profit centre feature of bill types to provide separate financial reporting for your installation business and your service call business.

# Chapter 8

# Call/Service Types

**Introduction**
To comply with the data base requirements of the Service Manager system, you must establish a library of call type and service type records to codify certain aspects of the service calls that you handle. Call types and service types share the same record structure and hence both are maintained with this function.

The call type is assigned to each call at the time the call is opened (i.e. originally entered or logged into the system) and is used to determine the priority of the service call.

The service type is assigned at the time the service call is closed. Its default value is the call type, but that value may be overridden. A typical reason for using a service type that is different from the call type on the same call is: When the actual nature of the service call changes from the time the call was opened until it is completed. For example, a call may be opened as an emergency maintenance problem, and turn out to be a customer operator error --cured with a short training session.

Of the five (5) data fields associated with call/service types, two (2) data fields – call priority and call response time – are used primarily during call dispatching decision. Three (3) data fields – repair performed? PM performed? and Response time analysis? – are used to assist in closing the call or to aid historical analysis reporting.

**Important note:** Several usage/copier performance reports will work only if you define *Call/service types* exactly like the ones listed below, and make sure that the .~ appropriate service type is assigned to each call at the time the call is closed.

If you're not familiar with *Service management reports* see Chapter 31.

| | |
|---|---|
| Call/Service type code: | **EM*** |
| Description: | **Emergency maintenance** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **Y** |
| P.M. performed ? | **N** |
| Use for response time analysis ? | **Y** |
| Assign to: | **All emergency service calls.** |

| | |
|---|---|
| Call/Service type code: | **PM*** |
| Description: | **Preventive maintenance** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **N** |
| P.M. performed ? | **Y** |
| Use for response time analysis ? | **N** |
| Assign to: | **All preventive maintenance service calls.** |

| | |
|---|---|
| Call/Service type code: | **OE* or DS*** |
| Description: | **Order Entry or Deliver Supplies** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **N** |
| P.M. performed ? | **N** |
| Use for response time analysis ? | **N** |
| Assign to: | **All supplies delivery calls.** |

| | |
|---|---|
| Call/Service type code: | **CC*** |
| Description: | **Courtesy call** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **N** |
| P.M. performed ? | **N** |
| Use for response time analysis ? | **N** |
| Assign to: | **All non-service related calls.** |

| | |
|---|---|
| Call/Service type code: | **RS*** |
| Description: | **Rescheduled Service** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **Y** |
| P.M. performed ? | **N** |
| Use for response time analysis ? | **Y** |
| Assign to: | **All service calls that require a return visit** |

| | |
|---|---|
| | **due to logistic problems. For example: missing a part or a tool.** |
| Call/Service type code: | **IN*** |
| Description: | **Installation** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **N** |
| P.M. performed ? | **Y** |
| Use for response time analysis ? | **N** |
| Assign to: | **All new installations of products or systems.** |
| Call/Service type code: | **DI*** |
| Description: | **De-installation or Removal** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **N** |
| P.M. performed ? | **N** |
| Use for response time analysis ? | **N** |
| Assign to: | **All de-installations of products or systems.** |
| Call/Service type code: | **OH*** |
| Description: | **Overhead call** |
| Priority: | ***** |
| Response time: | ***** |
| Repair performed ? | **N** |
| P.M. performed ? | **N** |
| Use for response time analysis ? | **N** |
| Assign to: | **All non-customer service calls.** |

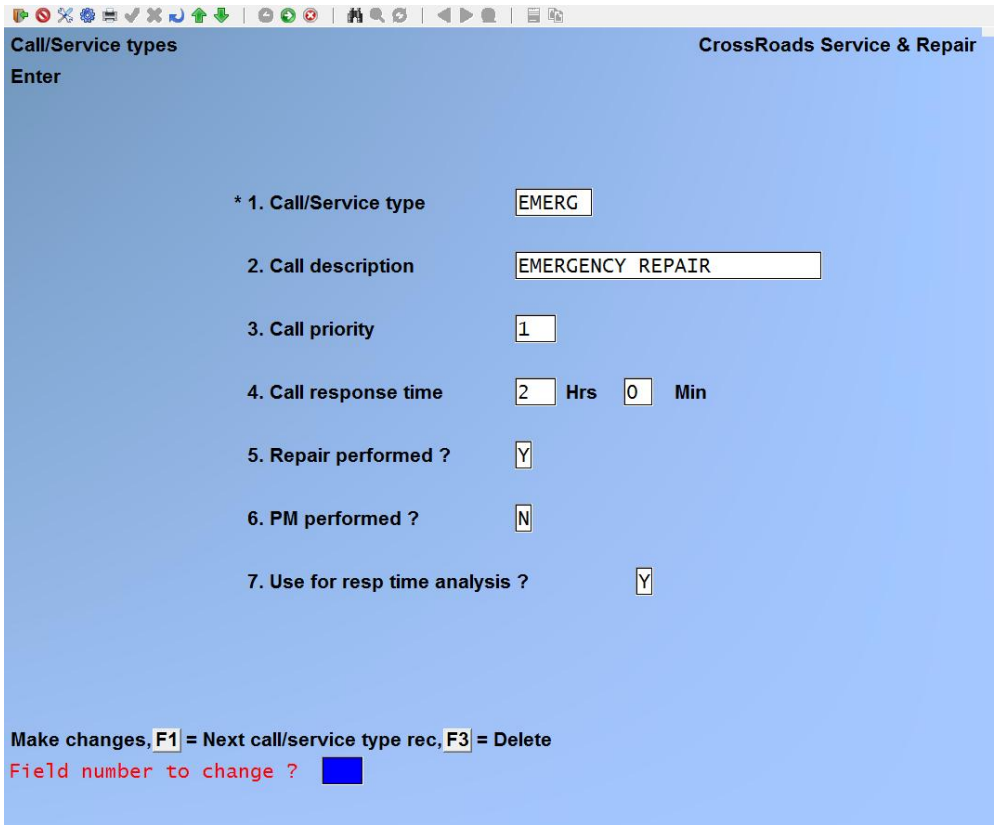
"*" indicates a field or portion of a field you can fill in any way you choose. All other fields must be filled in as shown for the *Copier performance* report to function.

To explain the "wild card" concept with an example: EM-01, EM-02 and EMERG all fit the spec EM* and therefore would all be interpreted as emergency maintenance calls. The first 2 characters provide the "clue" that Service Manager needs to sort the reports, while still providing users with the flexibility to define multiple emergency maintenance call types.

**To begin**
From the second page of the S/M main menu, select *Call/Service types → Enter*. On the screen displayed you can add, change and delete Call/Service types.

## Entering Call/Service types

Enter the following information for each Call/Service type:




From this screen you can work with both new and existing Call/Service type records. If data has already been entered for the Call/Service type identifier you specify, it will appear and be available for changes or deletion. If the Call/Service type identifier you specify is new, you will automatically be placed in enter mode.

1. **Call/Service type**
   Enter a Call/Service type identifier, up to 6 alphanumeric characters, or press [F1] to scroll through the Call/Service types on file.

2. **Call description**
   Enter a description of the Call/Service type, up to 25 alphanumeric characters.

3. **Call priority**
   Enter the priority you wish to assign to this type of call. Call priorities are user defined and can be up to three alphanumeric characters.

4. **Call response time**

If there is a guaranteed or "policy" response time associated with this type of call, enter the hours and minutes here. The system will include this information on the service dispatch screens and reports.

5. **Repair performed ?**
   If you normally perform emergency maintenance (i.e. corrective repair) under this call/service type, then enter Y. If you normally do not perform emergency or corrective repair under this call/service type, then enter N.

6. **PM performed ?**
   If you normally perform preventive maintenance (i.e. corrective repair) under this call/service type, then enter Y. If you normally do not perform preventive maintenance under this call/service type, then enter N.

7. **Use for response time analysis ?**
   Response time measures your customer's waiting period from the date and time a service call is opened (i.e., reported) until a service rep appears onsite. In order to achieve accurate representations of average response time, you will not want all service calls included in the calculation. For example, you would not normal Ly include preventive maintenance calls, courtesy calls, or calls to deliver supplies in your response time analysis. This field gives you the ability t,) automatically control which calls are included or excluded from response time calculations. If you want calls of this service type to be included in calculations of average response time, type Y; if you want them excluded, type N.

**Changing Call/Service type**
To change one or fields for a Call/Service type, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Deleting a Call/Service type**
To delete a Call/Service type, bring up the code that you want to delete and press [**F3**] to delete.

**Printing a Call/Service types list**
From the second page 2 of the S/M main menu, select *Call/Service types → Print*. On the screen that appears, enter the range of Call/Service types to include on the list. Follow the screen instructions.

*See next page for sample report.*

Date:05/21/13 Time:11:54:58 CrossRoads Service & Repair User: SSI Report #3365 Page 0001

## CALL/SERVICE TYPE FILE LIST

C/S type range: "First" to "Last"

| Call/Svc type | Description | Priority | Response Time | Repair Performed | PM Performed | Use for response time analysis ? |
|---|---|---|---|---|---|---|
| BENCH | BENCH REPAIR | 3 | 72.00 | Y | N | N |
| E/P | EMERGENCY + P.M. | 1 | 2.00 | Y | Y | Y |
| EMERG | EMERGENCY REPAIR | 1 | 2.00 | Y | N | Y |
| PM | PREVENTATIVE MAINTENANCE | 5 | 120.00 | N | Y | N |
| R/P | REPAIR & PREV. MAINT. | 3 | 8.00 | Y | Y | Y |
| REPAIR | NORMAL REPAIR | 3 | 8.00 | Y | N | Y |

6 call/service types on file

-- End of report --

# Chapter 9

# Failure Codes

**Introduction**
When you are installing your Service Manager system, you may establish a file of failure codes and action codes (see Chapter 10). You can use these codes to provide a quick reference to the major problem found, and the action taken on each service call. The failure code and action code are assigned when the call is *closed*. Their use is optional. However, the Service Manager system produces reports sorted by failure/action codes that may be valuable to you in analyzing your service market.

**To begin**
From the second page of the S/M main menu, select *Failure codes → Enter*. On the screen displayed you can add, change and delete Failure codes.

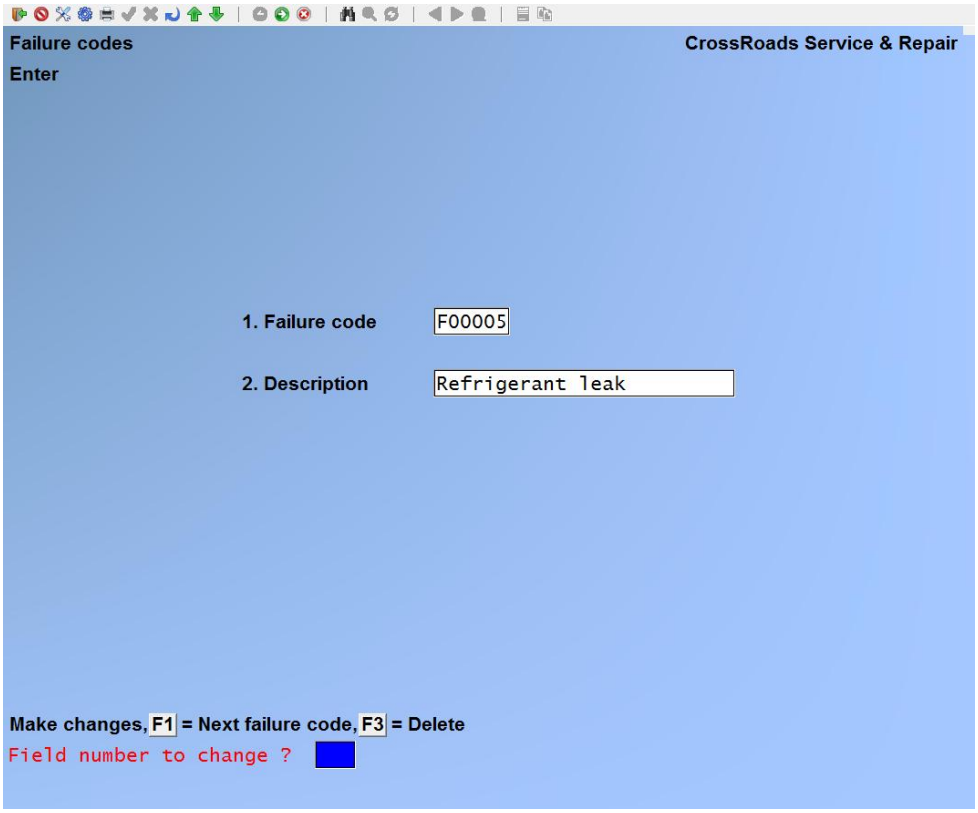
**Entering Failure codes**

Enter the following information for each failure code:

From this screen you can work with both new and existing Failure code records. If data has already been entered for the Failure code you specify, it will appear and be available for changes or deletion. If the Failure code you specify is new, you will automatically be placed in enter mode.

1. **Failure Code**
   Enter a Failure Code, up to 6 alphanumeric characters, or press [**F1**] to scroll through the Failure Codes on file.

2. **Description**
   Enter a description of the Failure Code, up to 25 alphanumeric characters.




## Changing Failure Code description

To change the description of a Failure Code, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

## Deleting a Failure Code

To delete a Failure Code, bring up the code that you want to delete and press [**F3**] to delete.

## Printing a Failure Code list

From the second page 2 of the S/M main menu, select *Failure Codes → Print*. On the screen that appears, enter the range of Failure Codes to include on the list. Follow the screen instructions.

Date:05/21/13 Time:11:57:49 CrossRoads Service & Repair User: SSI Report #3366 Page 0001

**FAILURE CODE FILE LIST**

Failure code range: "First" to "Last"

| Failure code | Description |
|---|---|
| F00001 | Failed relay |
| F00002 | Failed compressor |
| F00003 | Broken drive belt |
| F00004 | Seized bearing |
| F00005 | Refrigerant leak |
| F00006 | Failed thermostat |
| F00007 | Failed regulator |
| F00008 | Clogged filter |
| F00009 | Leaking condensate line |
| F00010 | Failed fan motor |
| F00011 | Failed capacitor |
| F00012 | Failed condensor |

12 failure codes on file

-- End of report --

# Chapter 10

# Action Codes

## Introduction

When you are installing your Service Manager system, you may establish a file of Failure Codes (see Chapter 9) and Action Codes. You can use these codes to provide a quick reference to the major problem found, and the action taken on each service call. The failure code and action code are assigned when the call is *closed*. Their use is optional. However, the Service Manager system produces reports sorted by failure/action codes that may be valuable to you in analyzing your service market.

### To begin

From the second page of the S/M main menu, select *Action Codes → Enter*. On the screen displayed you can add, change and delete Action Codes.

### Entering Action Codes

Enter the following information for each action code:

From this screen you can work with both new and existing Action code records. If data has already been entered for the Action code you specify, it will appear and be available for changes or deletion. If the Action code you specify is new, you will automatically be placed in enter mode.

1. **Action Code**
   Enter an Action Code, up to 6 alphanumeric characters, or press [**F1**] to scroll through the Action Codes on file.

2. **Description**
   Enter a description of the Action Code, up to 25 alphanumeric characters.

## Changing Action Code description

To change the description of an Action Code, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**Enter**]. Proceed with your change.

## Deleting an Action Code

To delete an Action Code, bring up the code that you want to delete and press [**F3**] to delete.

## Printing an Action Code list

From the second page 2 of the S/M main menu, select *Action Codes → Print*. On the screen that appears, enter the range of Action Codes to include on the list. Follow the screen instructions.

Date:05/21/13 Time:13:29:51 CrossRoads Service & Repair User: SSI Report #3367 Page 0001

**ACTION CODE FILE LIST**

Action code range: "First" to "Last"

| Action code | Description |
|---|---|
| A00001 | Replaced faulty part |
| A00002 | Replaced refrigerant |
| A00003 | Cleaned filter |
| A00004 | Replaced filter |
| A00005 | Repaired faulty part |
| A00006 | Defrosted unit |
| A00007 | Regular lube and filter |

7 action codes on file

-- End of report --

# Chapter 11

# Service Locations

## Introduction

When you add customers to your Accounts Receivable system using the *Maintain customer data* function, they are automatically available to you as service customers. The Service Manager system assumes that the customer's "bill-to" address is also a "service-at" location. If this is the case, it is not necessary to use this service location function – however, we highly recommend that you do use it. There are three (3) situations for which the service location function is available.

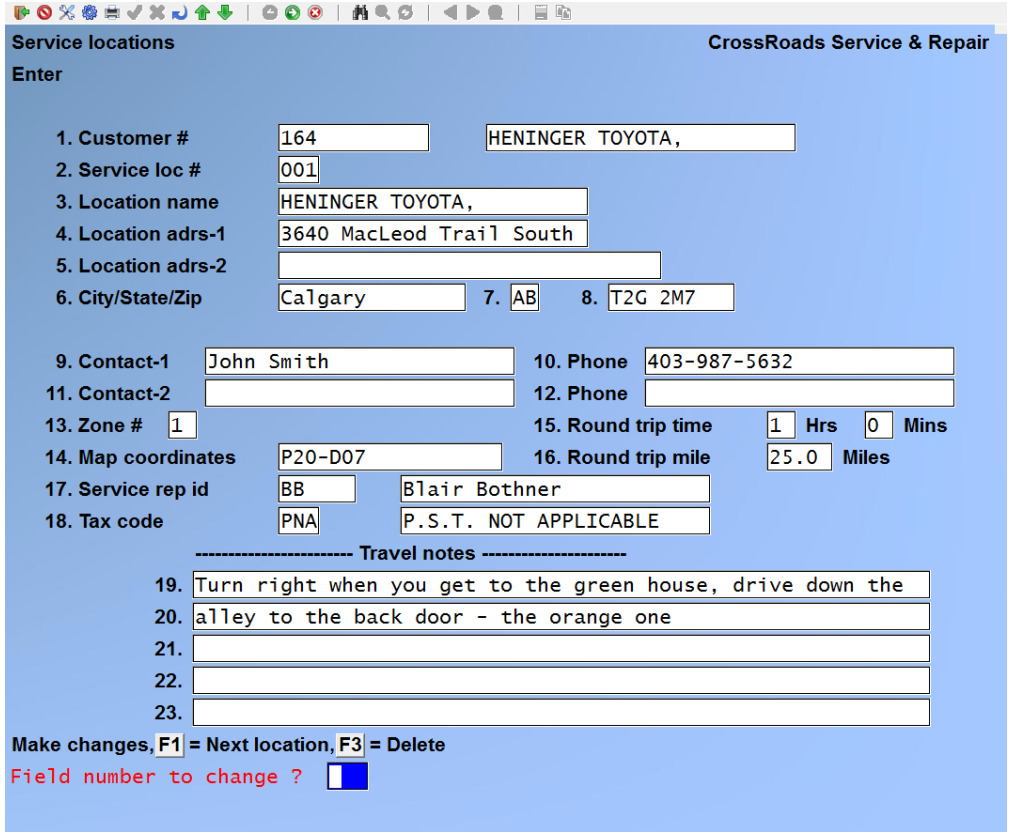
1. If your customer's bill-to and service-at address is the same, but you want to use this function to record pertinent service-related information that is not captured in the Accounts Receivable system. Such information might include the contact person's name, travel time and mileage, travel zone, map coordinates, detailed travel directions, I.D. of the assigned service rep, etc. All of the data you input here will be printed on the service ticket and may be useful to your technicians when actually performing the service call.
2. If your customer's bill-to and service-at addresses are different, you use this function to relate the two locations.
3. If your customer has a central bill-to address, but multiple service-at locations (e.g. a chain of stores or restaurants) you use this function to link them all together.

## To begin

From the second page of the S/M main menu, select *Service Locations → Enter*. On the screen displayed you can add, change and delete Service Locations.

## Entering Service Locations

Enter the following information for each Service Location:




From this screen you can work with both new and existing Location code records. If data has already been entered for the Customer/location code you specify, it will appear and be available for changes or deletion. If the Customer/location code you specify is new, you will automatically be placed in enter mode.

**Customer #**

For an existing vendor: Enter the customer number or use one of the options:

| | |
|---|---|
| **[F1]** | To view the next customer on file |
| **[Sh]+[F1]** | To view the previous customer on file |
| [?] | To search and select the customer from the Find customer pop-up window |
| **[ENTER]** | To leave the customer number blank. You can then look up the customer by name. |

**Service loc(ation) #**

The service location number is a 3 character alphanumeric field that uniquely identifies (or codes) the service-at location you are about to) define. It could simply be sequential numbers such as 1, 2, 3, etc. It could ~ also be used for the customer's

own branch numbers, portions of zip codes, or compass directions N, S, E, W, NE, etc.

The location number 000 (i.e., all zeroes), however, is reserved by the Service Manager system for internal use--it is automatically assigned to the customer's bill-to address. You may use any alphanumeric combination of 3 characters.

**Location name**
Enter the name portion of this service-at address, up to 25 alphanumeric characters.

**Location adrs-1**
Enter the first address line for this service-at location, up to 25 alphanumeric characters.

**Location adrs-2**
Enter the second address line for this service-at location, up to 25 alphanumeric characters.

**City/State/Zip**
Enter the city or town for this service-at location, up to 15 alphanumeric characters. Enter the state for this service-at location, up to 2 alphanumeric characters.

**State/Province**
Enter the state/province for this service-at location, up to 2 alphanumeric characters.

**Zip/Postal code**
Enter the zip code for this service-at location, up to 10 alphanumeric characters.

**Contact-1**
Enter the name of one of the customer's contact persons at this location who is to be used for service-related problems. Enter up to 25 alphanumeric characters including descriptions if desired (e.g. John Reginio . Car OR Mary Jones .. Home).

**Phone**
Enter the telephone number for this service-at location, up to 25 alphanumeric characters. Space exists for extensions, country codes, etc. EXAMPLE: Type 301-997·7777.

**Contact-2**
Enter the name of another of the customer's contact persons at this location who is to be used for service-related problems. Enter up to 25 alphanumeric characters including descriptions if desired (e.g. John Reginio .. Car OR Mary Jones .. Home).

**Phone**
Enter the telephone number for this service-at location, up to 25 alphanumeric

characters. Space exists for extensions, country codes, etc. EXAMPLE: Type 301-997·7777.

**Zone #**
If you charge for travel time by concentric travel zones, enter the zone # for this service-at location, up to 2 numeric digits (00 to 99).

**Map co-ordinates**
Enter the map name, page # and coordinate # for this service-at location, up to 18 alphanumeric characters. EXAMPLE: Type BALTCTY PI6·G03.

**Round trip time**
If you bill for travel time to and from your service calls, you can enter the round trip travel time between your office or depot and this service-at location. Enter the time in hours (0 to 99) and minutes (0 to 59).

**Round trip mile**
If you bill for travel mileage to and from your service calls, you can enter the round trip travel mileage between your office or depot and this service-at location. Enter the mileage in up to 3 whole numbers and one decimal place (e.g.999.99).

**Service rep ID**
For a variety of reasons, you may wish to assign a primary service rep to this location. Perhaps the assignment is based on geographic territories; or maybe one service rep is particularly knowledgeable in servicing the equipment at this location; or maybe the customer has built up a rapport with a service rep and asks for him or her by name. Whatever the reason, you may enter the service rep's identifier, or you can press [**F1**] to display each service rep1s identifier in turn.

**Tax code**
Enter up to 3 alphanumeric characters that equate to a tax code defined in the Accounts Receivable system.

**Travel notes**
The next five lines are for entering travel directions for this service-at location. Enter each line up to 60 alphanumeric characters.

## Changing Service Location data

To change the Service Location data, bring up the customer/location code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**Enter**]. Proceed with your change.

## Deleting a Service Location

To delete a Service location, bring up the customer/location code that you want to delete and press [**F3**] to delete.

## Printing a Service Location list

From the second page 2 of the S/M main menu, select *Service Locations → Print*. On the screen that appears, enter the range of customers to include on the list. Follow the screen instructions.

```
Date:05/21/13  Time:15:27:04                    CrossRoads Service & Repair              User: SSI  Report #3368   Page 0001

                                              SERVICE LOCATION FILE LIST

Customer # range: 164         to 164

Customer      Name/                      Service     Loc name/              Contact 1/              Contact 2/
no            address                    loc no      address                Phone 1/                Phone 2/
                                                     Travel notes           Map coords              Rnd trip        Rep ID
                                                                                                     Time/Miles      Zone #

164           HENINGER TOYOTA,             001 HENINGER TOYOTA,              John Smith
              3640 MACLEOD TRAIL SOUTH,        3640 MacLeod Trail South      403-987-5632
              CALGARY         AL T2G 2M7                                                             01:00           BB
                                               Calgary         AB  T2G 2M7   P20-D07                  25.0            01

                                               Turn right when you get to the green house, drive down the
                                               alley to the back door - the orange one

                                           002 HENINGER TOYOTA BODYSHOP      Al Cruise
                                               407 - 36TH AVENUE S.E.
                                                                                                     01:30           AL
                                               CALGARY         AB                                     45.0            02

                                               Travel note 1
                                               Travel note 2
                                               Travel note 3


       2 Locations printed


                                                    -- End of report --
```

# Chapter 12

# Check Lists

**Introduction**
The Service Manager system includes the valuable feature of maintaining check lists to guide technicians in performing service work. Check lists may be compiled for general types of equipment, for manufacturer's model numbered equipment or for a specific custom installation. The system allows complete flexibility in the naming of the check lists, the content of the lists and the way in which you relate check lists to either equipment or installations. The paragraphs that follow explain some of the uses and benefits of check lists.

**Preventive Maintenance:** The most common use of the check lists is to compile a list of preventive maintenance procedures that must be performed periodically. The lists need only be keyed into the system once for a particular equipment model number or class. When a service agreement is written for that type of equipment, the service check list is merely assigned to it. From that point forward, whenever a preventive maintenance call is opened against the agreement, the check list will be printed out automatically along with the service request.

**Quality Assurance:** Some users of the Service Manager system require their service reps to initial each line item on the check list as the service work is performed. In addition, they sometimes require physical measurements to be recorded onto the check list: pressures, pressure drops, temperatures, flow rates, level reading, etc. The check list is then turned in and placed in the customer's file as part of the service history.

**Service Marketing:** Users of the check list feature -- particularly those using it for quality assurance – include it in their service marketing and sales efforts. They point out to their customers that their service agreement includes a carefully thought-out check list; that it will be followed exactly, signed-off by their technician and filed for future reference.

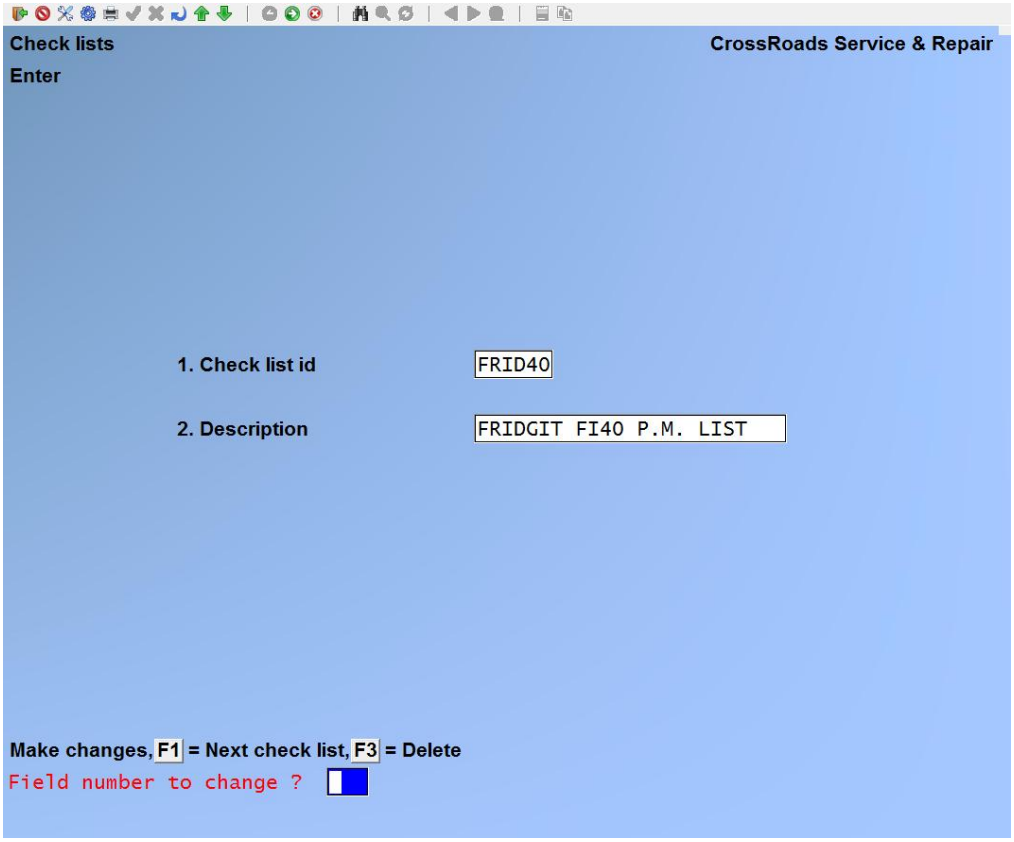
**Non-technical Instructions:** A check list can contain more than just technical instructions. It can include travel or access directions; customer relation information (such as: see Joe Doaks for approval before starting work); or information describing certain details of the preventive maintenance contract. Anything that will help your technicians perform better can be written into a service check list and automatically printed out when the service call is opened or dispatched.

### To begin

From the second page of the S/M main menu, select *Check lists Locations → Enter*. On the screen displayed you can add, change and delete Service Locations.

### Entering Check Lists

Enter the following information for each Check List:

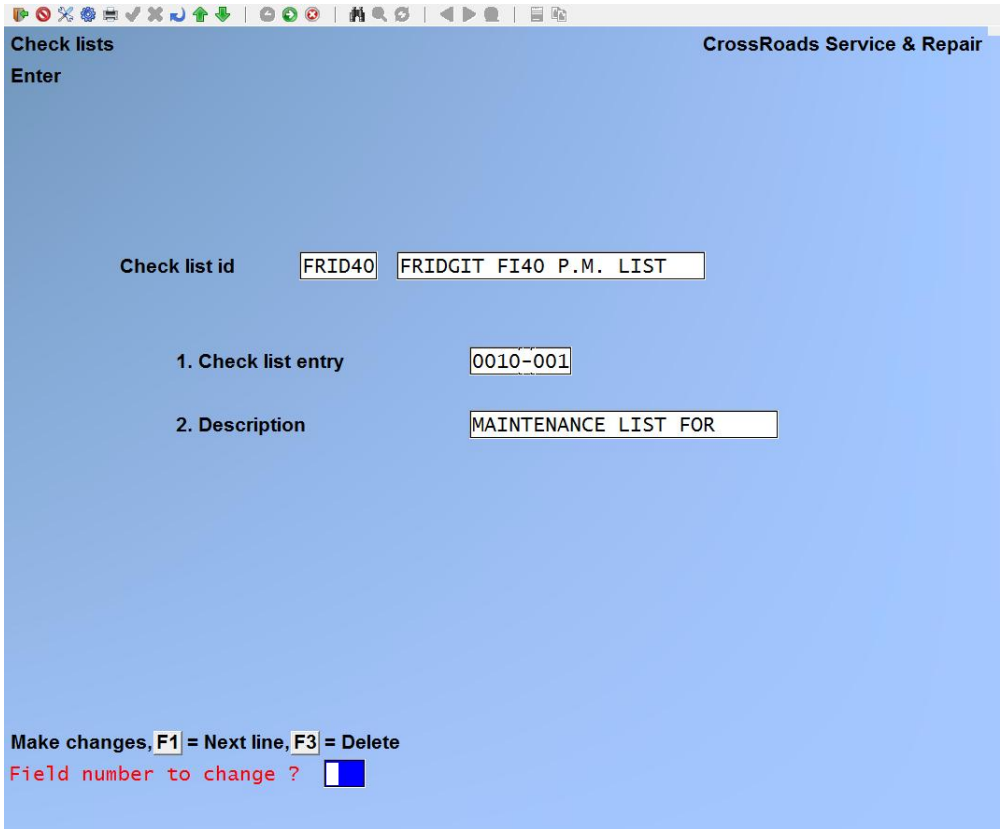



From this screen you can work with both new and existing Check list records. If data has already been entered for the check list code you specify, it will appear and be available for changes or deletion. If the check list code you specify is new, you will automatically be placed in enter mode.

### Check List ID
Enter a check list identifier, up to 6 alphanumeric characters, or press [**F1**] to view the check list identifies on file.

### Description
Enter the description of the check list being added, up to 25 alphanumeric characters.

The system will display the screen for entering individual entries for building the check list. The screen will appear as follows:




### Check list id
The identifier and description of the check list you are working in.

### Check list entry
Enter an identifier for the check list line item. The format of the identifier is "Name-subname"; four (4) alphanumeric characters, followed by three (3) alphanumeric characters. This format (AAAA-AAA) makes it easy to identify preventive maintenance items by task-subtask, assembly- sub-assembly, etc.

### Description
Enter up to 25 alphanumeric characters to describe this check list entry. (e.g. Lubricate compressor)

### Changing Check list data
To change Check list data, bring up the check list that you want to change and proceed with your change.

### Deleting a Check list or check list entry
To delete a Check list or a check list entry, bring up list or entry that you want to delete and press [**F3**] to delete.

### Printing Check lists
From the second page 2 of the S/M main menu, select *Check Lists → Print*. On the screen that appears, enter the range of Check lists to print. Follow the screen instructions.

Date:05/21/13 Time:15:32:29 CrossRoads Service & Repair User: SSI Report #3370 Page 0001

**CHECK LIST FILE LIST**

Check list range: FRID40 to FRID40

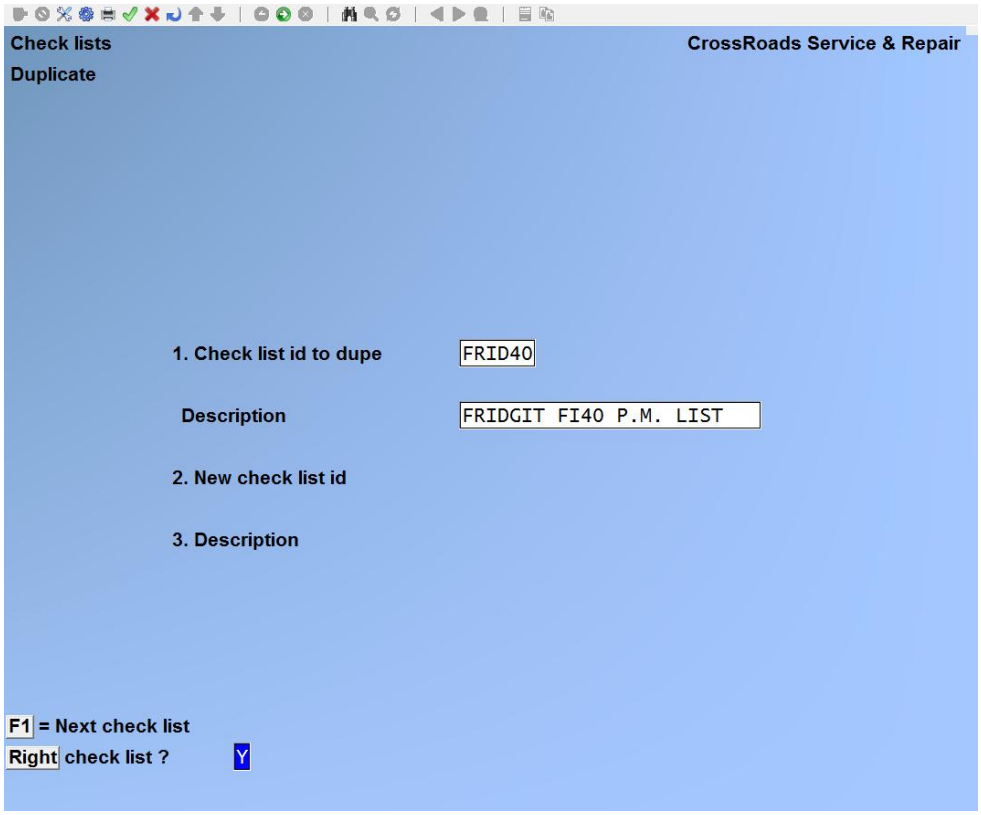
| Check list | Check list entries | Description |
|---|---|---|
| FRID40 | | FRIDGIT FI40 P.M. LIST |
| | 0010-001 | MAINTENANCE LIST FOR |
| | 0010-002 | FRIDGIT FI40 FREEZER |
| | 0020-001 | DEFROST STORAGE AREA |
| | 0020-002 | REMOVE AIR FILTER |
| | 0020-003 | CLEAN AIR DUCTS |
| | 0020-004 | INSTALL NEW AIR FILTER |
| | 0020-005 | CHECK/REPLACE DRIVE BELT |
| | 0020-006 | CLEAN CONDENSATE LINE |
| | 0020-007 | LUBE COMPRESSOR MOTOR |
| | 0020-008 | LUBE FAN MOTOR |
| | 0030-001 | CHECK FAN SPEED CONTROLS |
| | 0030-002 | CHECK THERMOSTAT RESPONSE |
| | 0040-001 | RESTART UNIT |
| | 0040-002 | CHECK TEMPERATURE |

1 check lists printed

-- End of report --

## Duplicating/renaming check lists

From the second page 2 of the S/M main menu, select *Check Lists → Duplicate/Rename*. On the screen that appears, enter the range of Check lists to print. Follow the screen instructions.




### Check list id to dupe

Enter the check list identifier that you wish to duplicate, or press [**F1**] to view each check list in order. As each check list and description is displayed, you are asked "RIGHT CHECK LIST? Y". If you enter **N**, the screen will be initialized to enter another check list identifier. If you press [**ENTER**] to accept **Y**, the cursor is positioned at field 2 for entry of the new check list identifier and description.

### Description

The system automatically displays the description on file for the checklist to duplicate.

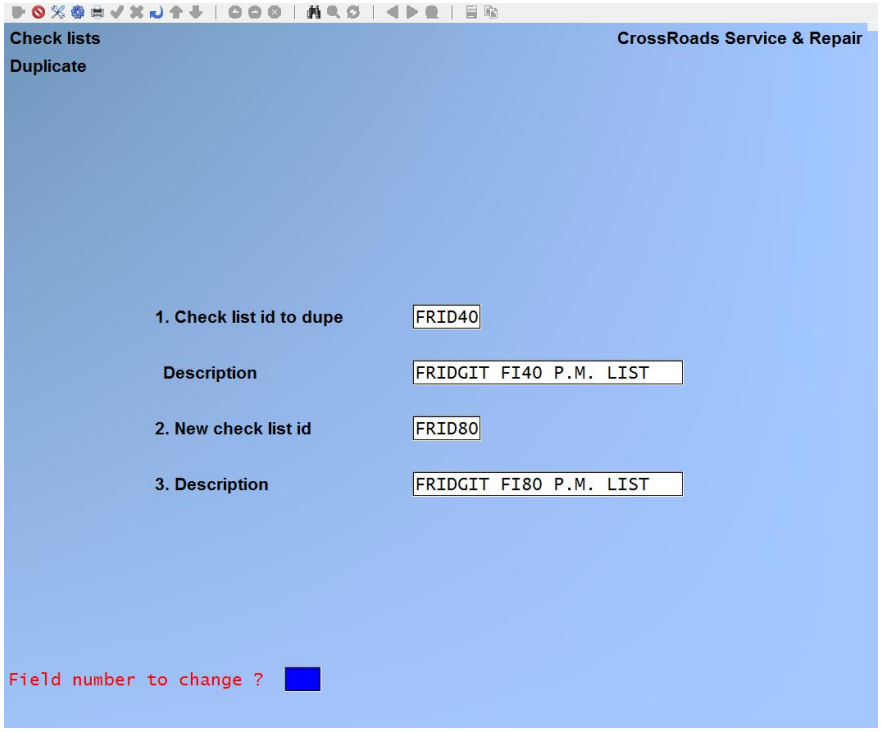
### New check list id

Enter the new check list id, up to six alphanumeric characters.

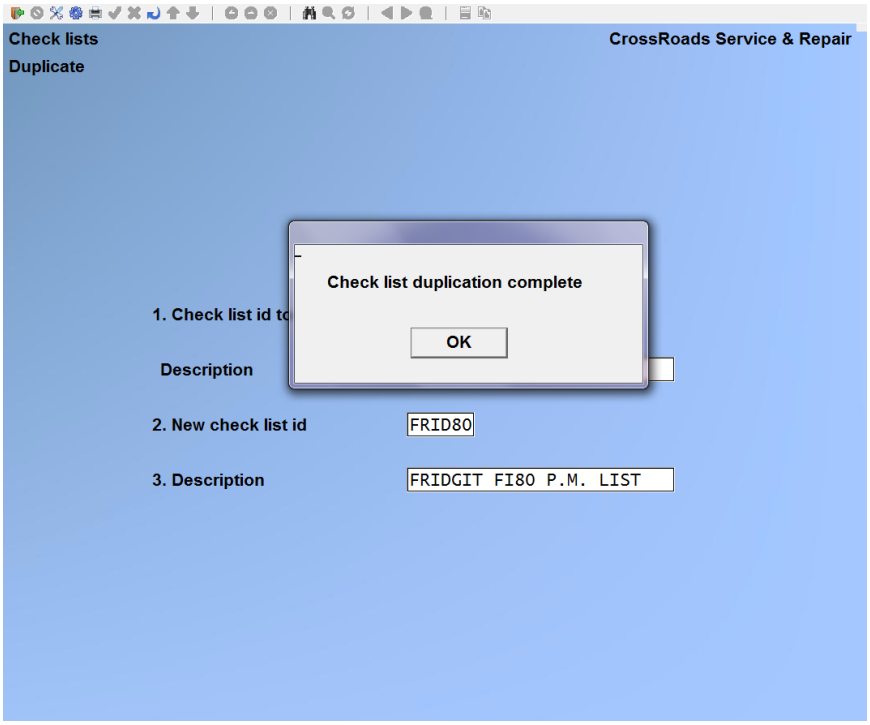
### Description

Enter the description of the check list about to be created, up to 25 alphanumeric

characters.




At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.



Press [**ENTER**] and the screen will redisplay for entry of another check list to be renamed or duplicated. If no more check lists are going to be renamed, press [**Tab**] at the CHECK LIST TO DUPE field. The *Check lists* menu reappears.

---

# Chapter 13

# Notes

**Introduction**

The Maintain Notes function is used to create and manage a library of “canned” text notes that may be appended to service agreements and/or service calls. Both agreements and calls will accept up to two notes. Service agreements will accept a Billing Note and/or a Dispatch Note. Service calls will accept a Billing Note and/or an Internal Note. Since notes are free-form paragraphs of text, you can use them as descriptions of work performed, coverage provided, or special conditions that exist.

Here are a few examples:

- Add a **billing note** to a service call to describe a set procedure such as a preventive maintenance list or a routine overhaul.
- Add an **internal note** to a service call to describe a customer service problem or dispute that you want to be part of the service history --but you want limited to your company's eyes only.
- Add a **billing note** to a service agreement to describe the nature of the coverage provided under the agreement.
- Add a **dispatch note** to an agreement in order to alert your dispatcher to any unusual conditions that exist --such as approvals required prior to sending a technician to the customer's site.

The processing of notes varies with the type of note and the document to which it is appended.

- Billing notes are always printed on the customer's invoice.
- Agreement billing notes are printed on agreement cycle billing invoices. Therefore agreement billing notes are most useful for describing to customers the coverage provided (e.g., extent of coverage, parts included or excluded, days and hours service is performed, response time, etc.). Service call billing notes are printed on the service call invoice. In addition, service call billing notes are posted to the service call history. Since they are often used as the "work performed" paragraph on the invoice, their inclusion in the customer

history provides a verbal description that supplements the data history.

- Internal notes are handled differently. Internal notes that are appended to service calls are printed on closed call and billing edit lists and are posted to the customer service history. They are intended to document confidential information about a service call that will be used for internal purposes only.
- Dispatch notes that are appended to service agreements are made available to the dispatcher whenever a service call is being opened. They are useful for describing unusual conditions or prerequisites to service that are special for the agreement (e.g., third party approvals such as property ...) management firms, work permits required, special tools needed, etc.).

There is one more feature of Service Manager note handling that is important. The function described in this chapter, Maintain Notes, allows you to create and manage individual notes numbered 001 to 999. The size of each note is 20 lines of 60 characters each. Once created, these notes can be assigned to agreements or calls by number (001 to 999).

However, as an alternative to assigning a library note to an agreement or call, you may append a custom note --designated as note #000 (Ie., note zero). When given the option of appending a note to an agreement or call, if you type the number of a library note, it will be appended. If you enter the number zero (000), a note screen will be opened for you, allowing you to create a custom note at that moment.

**To begin**
From the second page of the S/M main menu, select *Notes Locations → Enter*. On the screen displayed you can add, change and delete Service Locations.

**Entering Notes:**
From this screen you can work with both new and existing Notes. If data has already been entered for the note you specify, it will appear and be available for changes or deletion. If the note you specify is new, you will automatically be placed in enter mode. Enter the following information for each Note:

**Note #**
Enter a note number, up to three numeric digits in the range 001 to 999 (number 000 is reserved for specifying a "non-library" or custom note, or press [**F1**] to view each note number and description already entered.

**Description**
Enter the description of the note being added, up to 30 alphanumeric characters.

Notes CrossRoads Service & Repair
Enter

1. Note # 1

2. Description Holiday Hours - 2011

Make changes, F1 = Next note, F3 = Delete
Field number to change ?

Press [**ENTER**]; the system displays the entry screen for your note. Type your note:

Notes CrossRoads Service & Repair
Note # 001 Desc: Holiday Hours - 2011

| | |
|---|---|
| 1. | FRI, December 23 - Close at 12:00 |
| 2. | SAT, December 24 - Closed |
| 3. | SUN, December 25 - Closed |
| 4. | MON, December 26 - Closed |
| 5. | TUE, December 27 - Closed |
| 6. | WED, December 28 - Regular hours |
| 7. | THU, December 29 - Regular hours |
| 8. | FRI, December 30 - Regular hours |
| 9. | SAT, December 31 - Closed |
| 10. | SUN, January 1 - Closed |
| 11. | |
| 12. | |
| 13. | |
| 14. | |
| 15. | |
| 16. | |
| 17. | |
| 18. | |
| 19. | |
| 20. | |

Field number to change ?

When you have finished typing in the note, press [**F1**] to immediately advance to the bottom of the screen, or press [**Enter**] to advance one line at a time.

### Changing a Note

To change a Note, bring up the Note that you want to change and proceed with your change.

### Deleting a Note

To delete a Note, bring up the note that you want to delete and press [**F3**] to delete.

### Printing Notes

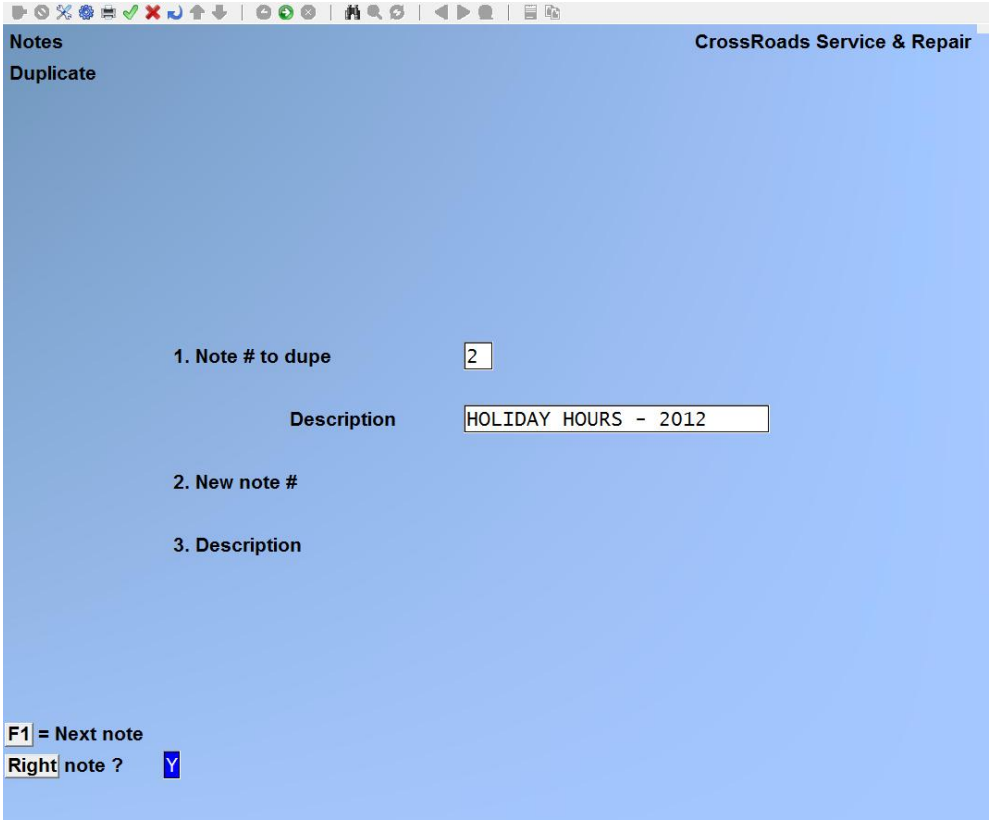
From the second page 2 of the S/M main menu, select *Notes → Print*. On the screen that appears, enter the range of Notes to print. Follow the screen instructions.

```
Date:05/21/13  Time:15:45:32                CrossRoads Service & Repair          User: SSI  Report #3371   Page 0001

                                            NOTE FILE PRINT-OUT

Note # range: "First" to "Last"

Note #: 01  Holiday Hours - 2011

FRI, December 23 - Close at 12:00
SAT, December 24 - Closed
SUN, December 25 - Closed
MON, December 26 - Closed
TUE, December 27 - Closed
WED, December 28 - Regular hours
THU, December 29 - Regular hours
FRI, December 30 - Regular hours
SAT, December 31 - Closed
SUN, January   1 - Closed
```

```
Note #: 02  HOLIDAY HOURS - 2012

FRI, December 23 - Close at 12:00
SAT, December 24 - Closed
SUN, December 25 - Closed
MON, December 26 - Closed
TUE, December 27 - Closed
WED, December 28 - Regular hours
THU, December 29 - Regular hours
FRI, December 30 - Regular hours
SAT, December 31 - Closed
SUN, January   1 - Closed
```

### Duplicate/renumber notes

From the second page 2 of the S/M main menu, select *Notes → Duplicate/Renumber*. On the screen that appears, enter the range of Check lists to print. Follow the screen instructions.

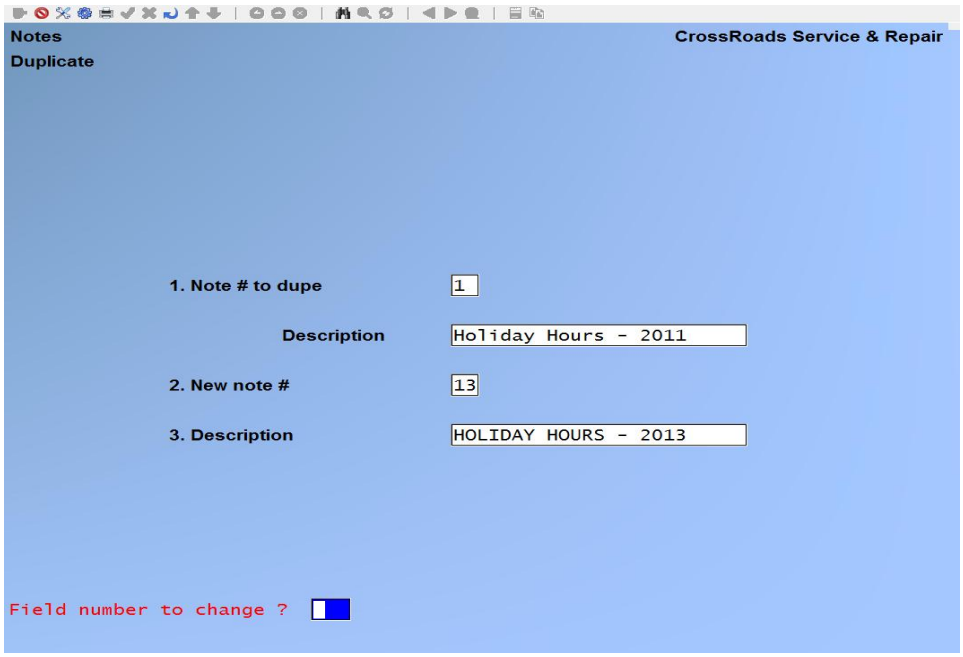



**Note # to dupe**
Enter the number of the note that you wish to duplicate, or press [**F1**] to view each check list in order. As each note and description is displayed, you are asked "RIGHT NOTE? " Y". If you enter N, the screen will be initialized to enter another note identifier.

**Description**
The system automatically displays the description on file for the checklist to duplicate.

The cursor is positioned at field 2 for entry of the new note identifier and description.

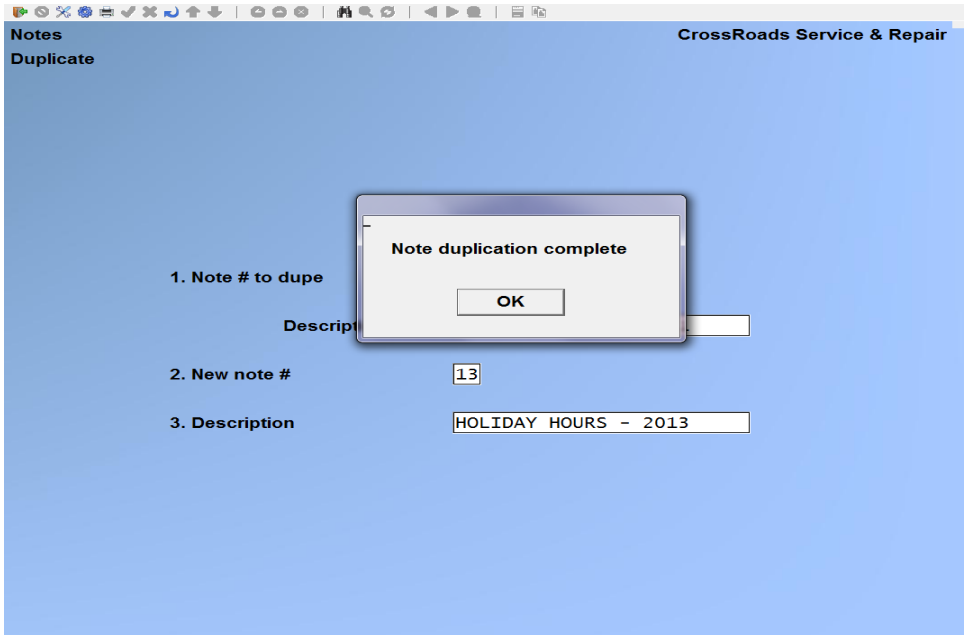
*See next page for illustration.*




**New note #**
Enter the new note #, up to three numeric characters.

**Description**
Enter the description of the note about to be created, up to 30 alphanumeric characters.

At *Field number to change ?* type the number associated with the field that you want to change and press [**Enter**]. Proceed with your change.



Press [**Enter**] and the screen will redisplay for entry of another note to be renumbered or duplicated. If no more notes are going to be renumbered, press [**Tab**] at the CHECK LIST TO DUPE field. The *Check lists* menu reappears.

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# Chapter 14

# Item Pricing

## User Warning

This chapter addresses the automatic setup and calculation of sell prices. By its nature it is both important and rather complex. The prices at which you sell goods and services directly affect your revenue, profits and competitive position. For those critical reasons, economists and marketing experts have devoted entire books to the subject of price strategy! While this chapter touches on pricing strategy, its primary topic is how to *automate* complex price calculations and options. It uses a step-by-step narrative style to describe the broad spectrum of features contained in Service Manager to achieve total price automation. Whether you use all, or only a few of the features provided, we do recommend a careful reading of this important chapter.

This chapter is divided into three (3) discreet sections:

1. **Understanding Item Pricing** introduces the concepts and features supported by the software. It provides the foundation necessary for successful implementation.

2. **Defining Item Pricing** is the section that explains which buttons to push in order to either set up the various data records, or run the supporting programs. This section of the chapter is the "nuts and bolts" description of Item Pricing functions as they appear on your computer screen.

3. **Using Item Pricing** is the part of the chapter that "pulls it all together". It answers the implementation questions that require coordination among separate software functions or files. The *Using* section explains how to use features in Accounts Receivable, Inventory Control, the Service Manager Bill Type and Service Manager Item Pricing in order to achieve a specific end result.

## Understanding Item Pricing

### Introduction

The *Item Pricing* functions in Service Manager are used to setup and calculate sell prices for inventory items. They break down into two groups: those functions that support standard RealWorld features, and those that are unique to Service Manager. Before explaining the actual functions and their data entry procedures, we will spend considerable time explaining how and why item pricing functions are used to implement pricing strategies. The paragraphs below begin with a discussion of Service Manager' features that support standard RealWorld pricing options.

### Starting Simple – Price Levels 1, 2, 3

RealWorld's Inventory Control package supports three (3) prices for each inventory item stocked and sold. Price levels 1, 2 and 3 are defined to represent the highest, middle and lowest prices respectively for an item:

| Price Level | Description | Example | Discount from list |
|---|---|---|---|
| Price - 1 | Highest Price | $200.00 ea. | 0% |
| Price - 2 | Mid-Range Price | $180.00 ea. | 10% |
| Price – 3 | Lowest Price | $160.00 ea. | 20% |

*Why are there three (3) Price Levels?*

For instance, a service company many sell a repair part for $200.00 (i.e. at Price level 1) when it is used for repair on a Time and Material emergency service call. The same part may sell for $180.00 (Price level 2) when it is used for scheduled preventive maintenance is the customer has a service contract. Finally, the same part may sell for $160.00 (Price level 3) when it is supplied to a high volume customer, a personal friend, a charity or another service operator.

*Use the Bill Type to select a Price Level*

In other words, the standard off-the-shelf Inventory Control package allows up to three separately defined prices for each item – and Service Manager supports all three. The easiest way to control the selection of Price -1, 2, or 3 within Service Manager is to use Bill Type. In the Service Manager Bill Type record you can specify the price level you wish to use whenever parts (i.e. inventory items) are added to a service call. For example, your Time & Material Bill Type record can specify that you do charge for parts … and that you charge Price – 1.

*Use only as many Price Levels as you need*

Two points should be noted. First, it is not necessary to specify all three (3) price levels in the Inventory Control item records. Service Manager users who normally sell service parts at the same price level only set Price – 1. The lack of a discounted Price – 2 and Price – 3 is not necessarily a disadvantage since discounts can always be applied – where appropriate – at the time of sale.

*Price versus Cost*

Secondly, a part's price may be overridden or adjusted (as well as discounted) at the time the part is added to a service call. To appreciate this point it is important to understand the different times of data posting for an item's cost and for its sell price. A stocked item's cost (as opposed to a miscellaneous item's cost) is established in the accounting journals at the time the item is received into inventory. When the receiving transaction is posted, the item's cost is set into concrete -- it can only be changed by a formal adjusting transaction that produces a financial audit trail. A stocked item's cost should not be changed arbitrarily at the time of entering the sale. Changes to cost data are restricted to ensure the integrity of the valuation of inventory. Financially speaking, the asset value of a firm's inventory is a very important number for evaluating the businesses' worth … it must be tamper-proof!

On the other hand, an item's sell price is not established in the accounting journals until the item is sold and the sales transaction is posted. For this reason, the item's price may be overridden or discounted as needed when the item is being added to a service call. The "concrete" surrounding the sell price does not set firmly until the service call is invoiced and posted.

## Accounts Receivable Customer Discounts

Similar to the three (3) price levels, *AIR customer discounts* is a standard feature of RealWorld that is also supported by Service Manager. You are permitted to enter a discount percentage in each customer's record in RealWorld's Accounts Receivable package. If Service Manager encounters a customer discount it will apply that discount percentage *across the board* to all charges on the service call (Le., labour charges, parts charges, flat, zone and travel charges). As inventory items are added to the call, the discount percentage and the adjusted extended sell price are displayed.

This powerful A/R customer discount feature – since it does apply *across the board* -- should only be used when you want to mark-down all charges on all service calls for an individual customer by using a specified percentage.

## Item Price Codes

Item price codes is a third standard feature of RealWorld that is also supported by Service Manager. Price codes allow for the automatic adjustment of an inventory item's price according to a user-defined formula. The price adjustment is calculated at the time of sale (i.e. at the time the item is added to a service call). RealWorld provides eight different types of price codes. They are fully described in RealWorld's Inventory Control User Manual -we list them briefly here:

Price Code

| Type | Description |
|---|---|
| 1 | Discount price-I by quantity ordered. |
| 2 | Discount price-I by customer type. |
| 3 | Discount price-l by quantity ordered within customer type. |
| 4 | Mark up price-l by quantity ordered. |
| 5 | Mark up price-I by customer type. |
| 6 | Mark up price-I by quantity ordered within customer type. |
| 7 | Pick price-I, price-2, or price-3 by quantity ordered. |
| 8 | Pick price-I, price-2, or price-3 by customer type. |

When an inventory item is added to a service call, Service Manager checks the item's record to determine if a price code has been specified. If a price code is assigned, Service Manager calculates the price code algorithm exactly as RealWorld's Order Entry package performs the calculation.

Several paragraphs earlier, we mentioned that *customer discounts* entered in Accounts Receivable are applied *across the board* to all charges on a service call: parts, labour, travel, etc.

If you desire to discount only inventory items --or only *certain* inventory items --you have the option of entering a discount percentage (on a per item basis) at the time the item is added to a service call. Service Manager will calculate and display the item's extended price after applying the discount you have specified.

## Individual Item Discounts

Several paragraphs earlier, we mentioned that *customer discounts* entered in Accounts Receivable are applied *across the board* to all charges on a service call: parts, labour, travel, etc.

If you desire to discount only inventory items – or only *certain* inventory items – you have the option of entering a discount percentage (on a per item basis) at the time the item is added to a service call. Service Manager will calculate and display the item’s extended price after applying the discount you have specified.

## Review of RealWorld Supported Pricing Functions

So far we have discussed the following topics regarding item pricing:

- Inventory Control supports three (3) price levels: Price-1, 2, and 3.

- The item price level to use (1, 2, or 3) can be user-specified in a Service Manager Bill Type record.

- Accounts Receivable customer discounts are honored by Service Manager, regardless of price level.

- Price codes specified in Inventory Control are calculated by Service Manager exactly as they are calculated by RealWorld's Order Entry package.

- Individual items may be user discounted at the time they are added to service calls.

All of the features described in the paragraphs above provide considerable pricing flexibility … but they all represent Service Manager' support of standard RealWorld price options. In addition, *Item Pricing* features exist that are specific to service companies' needs and are only contained within Service Manager. The paragraphs that follow address important concepts that are necessary for your complete understanding of the Service Manager' *Item Pricing* features.

**Mark-up from Cost – versus – Mark-down from List Price**

It seems that most service companies fall into one of two categories: Those that calculate an item's price by marking up its cost; or those that calculate a sell price by discounting a suggested list price.

Those that mark-up from costs generally install and service engineered systems. They purchase components at varying market prices, mark them up to arrive at a sell price, integrate the components into a working system, then install and service the system at their customer's site.

Those that discount a suggested list price generally sell and service standard products. Products that are nationally recognized by model number and carry a stable suggested list price set by their manufacturer. CrossRoad's Item Pricing supports both mark-up and mark-down methods of calculating sell prices.

**Multi-Level Mark-Up Schedules**

Many service companies use sophisticated mark-up strategies that take into account the item's cost level to determine how much mark-up to apply.

Service Manager permits you to define multi-level mark-up schedules just as you see illustrated. You have complete control over the "from-to" cost levels, the mark-up multiplier to use, and the price rounding factor. Mark-up schedules may be assigned to a Service Manager *Bill Type* record in order to automate the mark-up calculation.

For example:

| Item Cost Range | | Mark-Up |
|---|---|---|
| From | To | Multiplier |
| .01 | 50.00 | 3.20 |
| 50.01 | 250.00 | 2.90 |
| 250.01 | 500.00 | 2.50 |
| Etc. | Etc. | Etc. |

## Real Time – versus – Batch Calculation

Service Manager gives you the ability to calculate item prices using two different time frames. First, you can calculate sell prices in real-time, dynamically, at the moment the item is added to a service call. Alternately, you can use *Item Pricing* to calculate each item's price levels (1, 2, and 3) in batch mode and store the results in the item's inventory record. When an item is added to a service call, Service Manager (via Bill Type) can be instructed to use price level 1, 2, or 3 that had been previously calculated in batch mode.

Regardless of whether the pricing calculations are performed in batch modes or real-time mode, they may be either mark-up or mark-down calculations.

## Individual – versus – Aggregate Mark-up

Service Manager offers two options for calculating prices by marking-up costs. The *individual* mark-up method takes each item's unit cost and applies the mark-up schedule you have specified to arrive at that item's unit sell price.

The *aggregate* mark-up method takes the total extended cost of all items on the service call and applies the mark-up schedule you have specified to arrive at a total extended sell price for all items. You specify whether you want the individual or the aggregate method of mark-up calculation in the Service Manager *Bill Type* record.

## Pricing Services

Many businesses exist to provide the valuable service of publishing suggested list prices for products or commodities. The price data they sell is often available on diskettes as well as in a printed form. For example, *Trade Service Publications* provides price data for electrical and mechanical contractors. *NAGS* (National Auto Glass Service) provides suggested pricing for foreign and domestic auto glass.

If you are a subscriber-to a pricing service that supplies its data electronically, SAMCO Software can help you get that data into your system.

## "Exception Triggers"

When calculating item prices, Service Manager performs user-defined algorithms for each inventory item. The repetitive nature of the calculation is necessary to ensure consistent sell prices. However, there are three (3) ways the user can enter data that "triggers" Service Manager to calculate a sell price in an exceptional way. One trigger is called *Special Customer Pricing*. The second trigger is referred to as *Service Manager Base Cost*. The third is *Miscellaneous Item Mark-Up*. All three (3) subjects are described in detail below.

## Special Customer Pricing

The Special Customer Pricing feature of Service Manager permits you to assign a unique selling price to an inventory item for a specific customer. This feature is valuable when special arrangements are required in order to be competitive. One example is the sale of supplies in the copier service industry. The market for copy paper, toner, fuser oil, etc. is extremely competitive --requiring many service companies to negotiate prices individually with each customer.

When an item is added to a service call, Service Manager first checks to see if a special customer price has been established. If a special customer price exists, that price is used regardless of what pricing method has been specified for the call overall. In other words, the existence of the special customer price becomes a trigger mechanism that forces Service Manager to take an exception to the general rule.

## Service Manager Base Cost

When Service Manager is set up to calculate sell prices by marking-up costs, the user must specify which cost to use. RealWorld supports up to three (3) item costs: average cost, replacement cost, and standard cost...Service Manager supports a fourth --the S/M Base Cost. The three costing methods supported by RealWorld are treated in detail in RealWorld's Inventory Control user manual, here we will only discuss their key points.

### *Standard Cost --Seldom Used by Service Companies*

The standard cost method is generally not used by service companies. However, it is fully supported by CrossRoad's *Item Pricing* functions. When standard cost is used, the cost of each item is set by management and not changed by market conditions affecting the sale or receipt of items. Standard cost can only be changed by a definite management decision and user action.

### *Replacement Cost and Average Cost*

Standing out in sharp contrast to standard costs are the more frequently encountered

market costs. As time passes, market costs may vary a lot or a little. Costs may vary in fluctuating up and down patterns or they may exhibit a steady trend up -or down -- over time. To help monitor fluctuations, RealWorld calculates and stores a replacement cost as well as an average cost for each stocked inventory item. The replacement cost is the cost of the item the last time the item was purchased. An item's average cost is equal to the total cost of that item on-hand divided by the quantity on-hand.

*Example #1 - - Normal Purchases*
Let's say Company XYZ purchased 10 widgets at a cost of $100 each last month. This month they purchased 30 widgets, but the cost has jumped up to $120 each. The average cost for a widget is $115. The replacement cost is $120. Two rules describe this behavior:

1. If costs are escalating over time, the replacement cost will usually be higher than the average cost.

2. If costs are dropping over time, the replacement cost will usually be lower than the average cost.

If you use Service Manager to calculate sell prices by marking-up costs, you have a choice to make. You must choose which cost you want Service Manager to use in its mark-up calculation. You may specify either standard cost (if you are one of the rare service firms that use it), average cost, or replacement cost. Here are guidelines for which cost to use:

*If Your Costs Generally Increase Over Time*
If your costs increase over time, replacement cost will usually be higher than average cost. Therefore specify replacement cost for the mark-up calculation if you want to "play-it-safe" and work with the highest cost (and highest price!). Specify average cost if you want your prices to be profitable, but more competitive.

*If Your Costs Generally Decrease OverTime*
If your costs decrease over time, average cost will usually be higher than replacement cost. This situation calls for specifying average cost for the mark-up calculation if you want to "play-it-safe", and replacement cost if you wish to have more competitive (i.e. lower) sell prices.

At this point you are probably wondering "What does this have to do with the Service Manager Base Cost?". The answer is *everything!* You must understand the routine methods of cost mark up before you can appreciate Service Manager' Base Cost as an "exception trigger".

*Example #2 - -Special Purchases*
Let us suppose that - - in general - - Company XYZ experiences increasing inventory item costs and that we are in charge of pricing strategies. In order to play-it-safe we

specify mark-up calculations using replacement costs. If we use our previous WIDGET example we know that our average cost is $115 each and our replacement cost is $120 each. XY's mark-up calculation will be based on the "play-it-safe", higher figure of $120.

Let us now pretend that our WIDGET supplier becomes overstocked and approaches us with an attractive volume purchase price: if we buy 300 WIDGETS right now we can get them for $70 each.

If we take the deal, RealWorld's Inventory Control Package will show the replacement cost to be $70 and the new average cost will be $75.30. If we allow Service Manager to use either of those costs in its mark-up calculation, we will pass all or our hard earned extra profit on to our customers via a lower sell price; to many firms, that makes no sense … and we happen to be one of them! We have tied up our money and taken a risk by purchasing 300 WIDGETS. Now we feel we have a justified right to extra profits.

*When Should You Use Service Manager' Base Cost Function?*

On the other hand … using replacement cost in our mark up calculations works just fine for all of our other inventory items where we haven't made high volume purchases. We want Service Manager to use replacement cost to calculate the sell price of everything except WIDGETS! For the Widget price calculation, we'd like to make an exception and tell Service Manager to use the cost that we normally would have paid had we not made a bulk purchase to get such a great deal.

The answer to the dilemma described above is the Service Manager (S/M) Base Cost. You can think of the S/M Base Cost as specialized standard cost figure that is only used for mark-up calculations. For the example given we would set the S/M Base Cost for a WIDGET equal to $120. Suppose we then run a sell price calculation by marking up replacement cost. As Service Manager steps its way through the calculation for each inventory item, it first checks to see if a S/M Base Cost has been entered. If one exists, Service Manager takes exception to the rule to use replacement cost and instead uses the S/M Base Cost as its cost for performing the mark-up calculation *for that one item*.

The S/M Base Cost works as an "exception trigger" in a fashion that is similar to Special Customer Pricing. If a S/M Base Cost exists, it is used in preference to the cost specified for the rest of the run.

## Miscellaneous (*) Item Mark-up

Samco's Inventory Control package recognizes two types of inventory items: stocked and non-stocked (or miscellaneous) items. A stocked item is one which is received into a warehouse and held for some time before being sold. A non-stocked, or miscellaneous item, is one which is purchased on the-spot and immediately

transferred to a customer *without* being received into a warehouse. Miscellaneous items are identified by their inventory item number always beginning with an asterisk (*).

Examples:

| Item Type | Item Number | Item description |
|---|---|---|
| Stocked | V7803-45X | Drive Belt, 78" Long x 3/8" Wide |
| Miscellaneous | *DR-BELT | Drive Belt, Miscellaneous |

When a stocked item is added to a service call, Service Manager has access to both the pricing data and the cost data. Answer mentioned in earlier paragraphs, RealWorld updates the cost information - - for stocked items - - at the time the item is received. Since a non-stocked item - - by definition - - is not received into a warehouse, Service Manager does not have access to its cost. The cost and price data must be entered when the miscellaneous part is added to the service call.

The need to enter the cost of a buyout item (e.g. a non-stocked item purchased from a supply house for a specific service job), and then hand calculate a mark-up to arrive at the sell price is tedious, time consuming, and error prone. Using *Item Pricing* features, you can have Service Manager calculate and enter the sell price automatically.

In the Service Manager *Control Information* file, you can select whether or not you want to automatically mark-up miscellaneous call parts. If you answer yes, you are then asked to specify the mark-up schedule you want Service Manager to use for the mark-up calculation. Once these are specified, they act as an "exception trigger" whenever a miscellaneous item (i.e. an item whose item number begins with an asterisk "*" ) is added to a service call.

The exceptional action taken by Service Manager is this: instead of advancing to the unit price field, as would happen with a normal inventory item, Service Manager jumps down the screen to the unit cost field … after the cost is entered, Service Manager jumps back up the screen to the unit price field and fills in the automatically calculated unit sell price. In addition to calculating and entering the sell price, Service Manager also displays the name of the markup schedule used to calculate the sell price.

## Review of Service Manager-Specific Pricing Functions

We have just discussed the features of *Item Pricing* that go beyond the mere support of standard Samco features. The following features exist only in Service Manager, and were created to satisfy the specific needs of the service industry addressed by the

Service Manager software product:

- Calculating sell prices by marking up costs.
- Multi-level mark-up schedules.
- Calculating sell prices by discounting a suggested list price (Price-I).
- Real time price calculations.
- Batch calculation of inventory item pricing.
- Individual and aggregate mark-up of item costs.
- Service Manager support of published prices from commercial pricing services.
- The concept of a 'price exception trigger".
- Trigger #1 - - Special customer pricing.
- Trigger #2 - - Service Manager base cost.
- Trigger #3 - - Miscellaneous (*) Item Mark-Up.

Up to this point, this chapter has dealt with concepts - - the what and the why of *Item pricing* features. The rest of this chapter deals with how to use Service Manager' *Item Pricing* features.

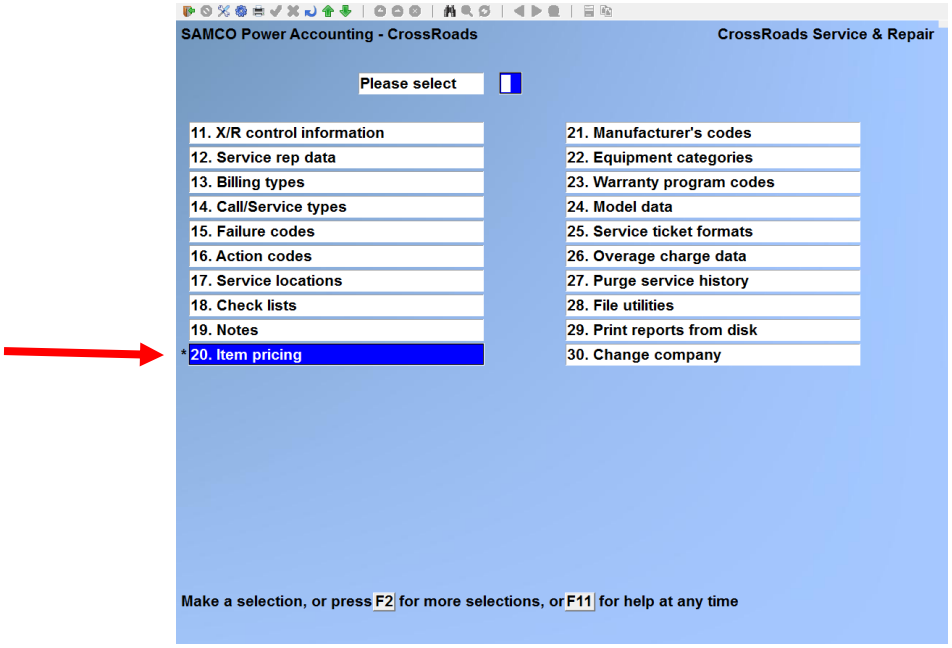
## Defining Item Pricing

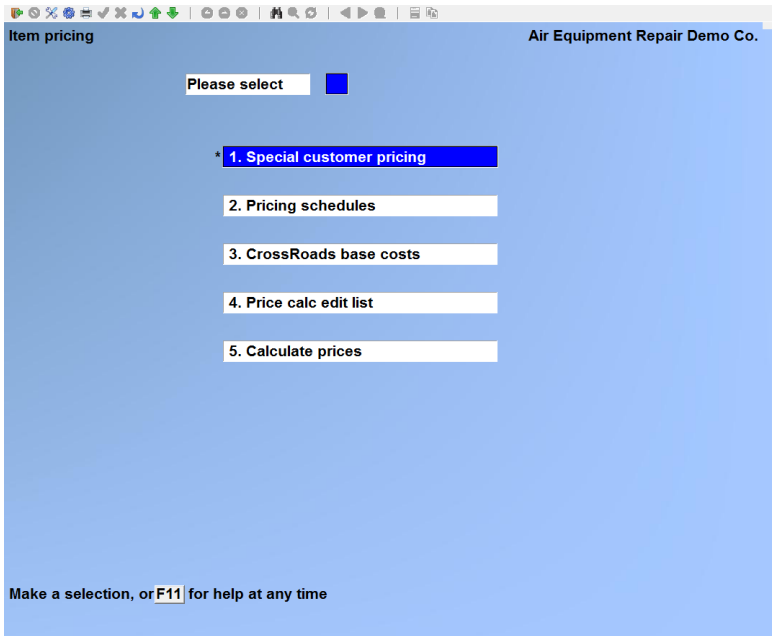
### Introduction

This section describes the menu selections, functions and data entry required to complete the Item pricing data base and to run programs that accomplish pricing objectives.

### To begin

From the second page of the S/M main menu select *Item Pricing*:



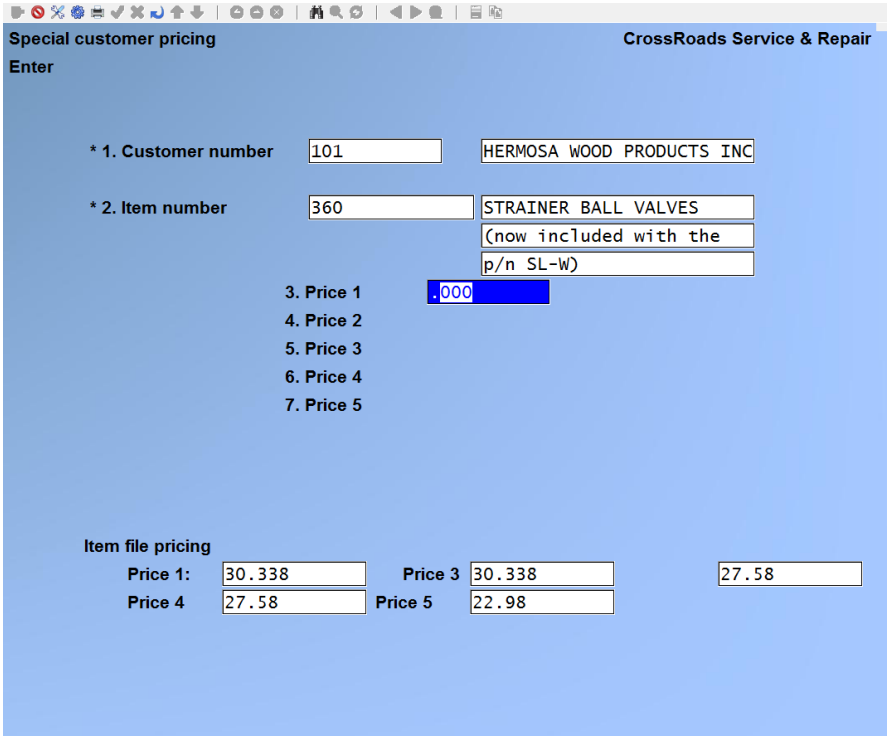
## Special customer pricing

The *Special customer pricing* function permits you to set specific sell prices for specific customers for specific inventory items. In other words, if you have agreed to sell WIDGETS to company ABC Inc. for $97.00 each - - and that is not the price you charge to other customers - - you can set that special price relationship using the function described below. The special customer price acts as an "exception trigger" and overrides all other price directives.

When you add an inventory item to a service call, Service Manager will examine the special customer price file *first*. If an entry is found that matches the customer and the item, then the corresponding special price will be used for that service call. In addition, Service Manager will display a note stating that the price was taken from the special customer price file.

### ENTER

From the *Item Pricing* menu, select *Special customer pricing → Enter*. On the screen displayed, you can add, change and delete customer prices:




1. **Customer number**

   **For a new special customer price:**

   Specify the customer for whom you will add a special price record. You have

several options for specifying the customer:

- Enter a valid customer, up to 12 characters.
- Press [**F1**] to scroll through the customer list in account number order.
- Press [**ENTER**] to advance to the customer name field. You may then press [**F1**] to browse through the customer list in alphabetic order by customer name.
- Press [**ENTER**] to advance to the customer name field. Type in as much or as little of the customer name as you choose and then press [**ENTER**]. Service Manager will search for the first customer name that matches your input. You may then press [**F1**] to examine subsequent customers in alphabetic sequence.

**Note:** While positioned at the customer number field, you may press [**F2**] to specify all customers.

When you have displayed the customer you desire, press [**ENTER**].

**For a new special customer price:**

Identify the customer for whom you are going to inquire or change special pricing. You may use all of the search options described above.

2. **Item number**

You have several options for identifying the inventory item that will be assigned a special customer price:

- Enter a valid item number.
- Press [**F1**] to scroll through item list in item number order.
- Press [**ENTER**] to advance to the item description field. You may then press [**F1**] to browse through the inventory item list in alphabetic order by item description.
- Press [**ENTER**] to advance to the item description field. Type in as much or as little of the item description as you choose and then press [**ENTER**]. Service Manager will search for the first item description that matches your input. You may then press [**F1**] to examine subsequent items in alphabetic sequence.

When you have displayed the inventory item you desire, press [**ENTER**]. If you select an inventory item for which a special customer price already exists, you are permitted to change the individual prices, or delete the pricing record entirely by pressing [**F3**].

**Hint:** If you want to browse through all special customer pricing records, there is a quick method to use. First press [**F1**] at field 1 to call up the customer with the lowest (i.e. "first") customer number. Press [**ENTER**]. Now, with the cursor at field 2, press [**F2**] to display the first (or next) special pricing record on file. Service Manager will automatically advance the customer number as required.

3. **Price 1**

   Enter the special customer price level 1. The range of values is $ .001 to $9,999,999.999.
   **Note:** WFor your reference, the item's inventory file pricing levels will be displayed across the bottom of the screen.

4. **Price 2**
5. **Price 3**

   Enter the special customer prices for levels 2 and 3. If you only intend to use one pricing level (i.e. Price 1), then you should repeat the value for Price 1 in fields 4 and 5. If you do intend to use multiple price levels, then each subsequent price level must be equal to or lower than the preceding price level.

**PRINT**

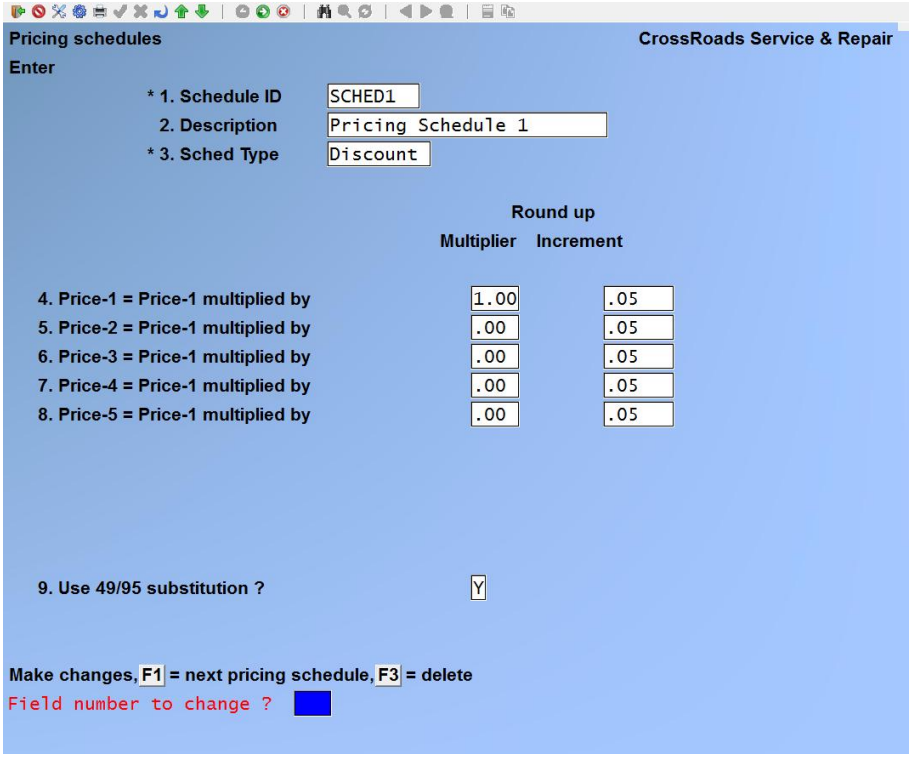
From the *Item Pricing* menu, select *Special customer pricing → Print*. On the screen that appears, enter the range of customers and items to include on the list. Follow the screen instructions.

**Pricing Schedules**

This function is used to define either mark-up or mark-down pricing schedules. Once defined, pricing schedules may be assigned to a Service Manager Bill Type record.

**ENTER**

From the *Item Pricing* menu, select P*ricing schedules → Enter*. On the screen displayed, you can add, change and delete customer prices:




## Schedule ID

### For a new schedule:

Enter a unique schedule identifier, up to 8 alphanumeric characters.

### For an existing schedule:

Enter the ID of the pricing schedule you're interested in, or press [**F1**] to display the next pricing schedule.

Once an existing pricing schedule is displayed, you can change these fields:

| | |
|---|---|
| 2. | Description |
| 4. thru | Cost range data |
| 14. | Price-2 Multiplier |
| 15. | Price-3 Multiplier |
| 16. | 49/95 Substitution Flag |

## Description

Enter the description of the pricing schedule, up to 25 characters.

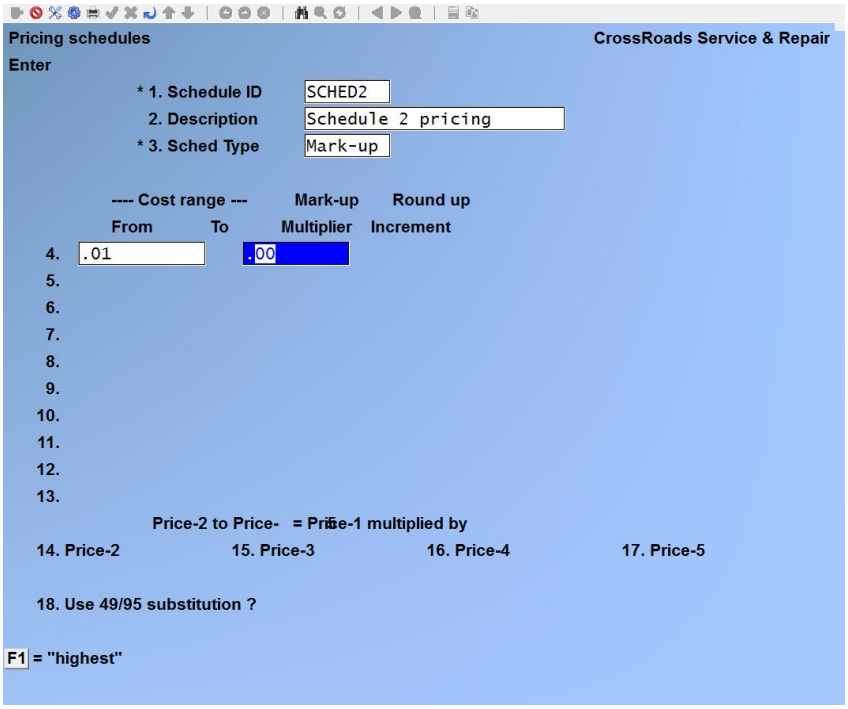
## Sched Type

Type [**M**] to specify a schedule that will calculate sell prices by marking up costs.

Type [**D**] to specify a schedule that will calculate sell prices by discounting Price-1 in the item's inventory control record.

**Note:** The bottom part of a type [M] pricing schedule screen is significantly different than that of a type [D] pricing schedule screen.

**If an <u>[M] type pricing schedule</u> is specified, the screen will display:**




Continue entering the following data:

### Cost range data

Service Manager fills in the lower limit of the first cost range data pair by supplying a cost of one penny (.01). Fill in the high range of the first cost gradient by entering a cost from $0.02 to $9,999,999.99 or simply press [**F1**] for highest value.

### Mark-up multiplier

Enter the mark-up multiplier for this cost range. Any number between .01 and

999.999 is acceptable.

**Round-up increment**

Enter the amount by which you want the mark-up calculation to be rounded up. You may specify one penny (.01) for exact calculation, or you may select a nickel (.05), a dime (.10), a quarter (.25), fifty cents (.50) pr even dollar amounts (1, 5, 10, 25, 50, or 100).

Fill in fields 5 through 13 in the same way as field 4. You may use [**F1**] to specify the highest value at any time - - you do not have to use all 10 cost gradients (fields 4 thru 13) to define a mark-up schedule.

**Price-2 Multiplier**

Service Manager will calculate Price-2 by multiplying a factor times Price-1. According to RealWorld standards, Price-2 must be equal to or less than Price-1. There, your entry must be in the range of .01 to 1.00.

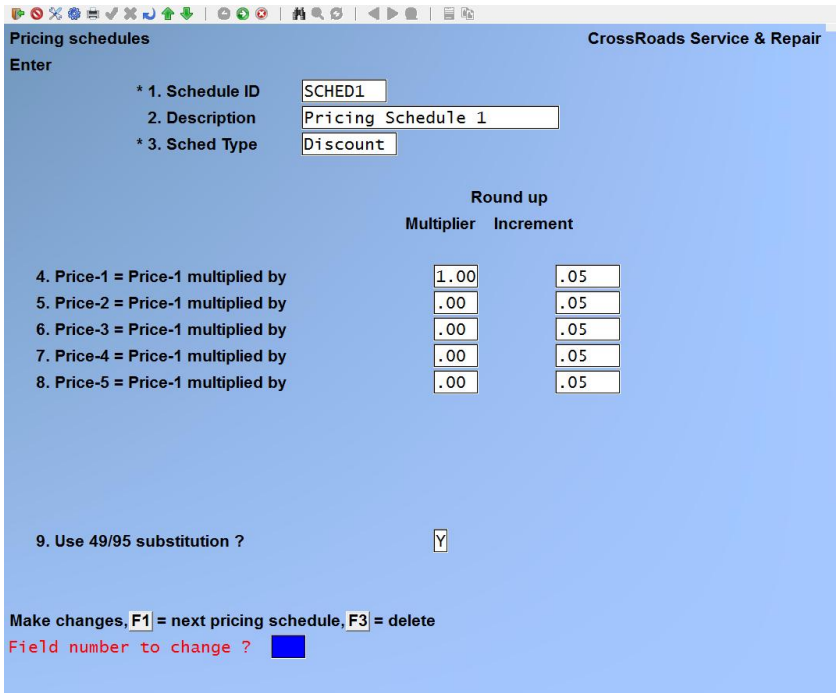
**Price-3 Multiplier**

This field is identical to field 14, above, except it is used to calculate Price-3.

**Use 49/95 substitution?**

If you answer N in this field, the sell price will be established arithmetically by marking up the cost and rounding up the result. If you answer **Y** in this field, any sell price that is calculated as an even dollar amount - - say $10.00 - - will be reduced by five cents (.05) to, using our example, $9.95. Likewise, any sell price that is calculated as an even half-dollar amount - - say $3.50 - - will be reduced by one penny (.01) to, using our example, $3.49. This option - - sometimes referred to as "dime store pricing" - - is especially important if you've specified fifty cents or even dollar amounts as your round up increment.

**If an <u>[D] type pricing schedule</u> is specified, the screen will display:**




Continue entering the following data:

### Price-1 Multiplier

Service Manager will calculate a new Price-1 by multiplying a factor times the Price-1 stored in the Inventory Control item record. Your multiplier must be in the range of .01 to 1.00. **Note:** Users who want to keep the Price-1 value in the inventory item record intact should enter a value of **1.00** (i.e. no change) as the Price-1 multiplier.

### Round-up increment

Enter the amount by which you want the mark-up calculation to be rounded up. You may specify one penny (.01) for exact calculation, or you may select a nickel (.05), a dime (.10), a quarter (.25), fifty cents (.50) pr even dollar amounts (1, 5, 10, 25, 50, or 100).

Fill in fields 5 through 8 in the same way as field 4. These fields are identical to field 4, except they are used to calculate prices 5 through 8. The number of price fields presented here is directly related to the number of price levels specified in I/C control information.

### Use 49/95 substitution?

If you answer N in this field, the sell price will be established arithmetically by marking up the cost and rounding up the result. If you answer **Y** in this field, any sell

price that is calculated as an even dollar amount - - say $10.00 - - will be reduced by five cents (.05) to, using our example, $9.95. Likewise, any sell price that is calculated as an even half-dollar amount - - say $3.50 - - will be reduced by one penny (.01) to, using our example, $3.49. This option - - sometimes referred to as "dime store pricing" - - is especially important if you've specified fifty cents or even dollar amounts as your round up increment.

**Changing a Pricing Schedule**
To change one or more fields for a Pricing Schedule, bring up the schedule that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Deleting a Pricing Schedule**
To delete a Pricing schedule, bring up the schedule that you want to delete and press [F3] to delete.

**Printing a Pricing Schedule**

From the *Item Pricing* menu, select P*ricing schedules → Print*. On the screen displayed:

Enter the starting and ending range of pricing schedules you with to print.

Enter your selection for the type of pricing schedules you with to print:

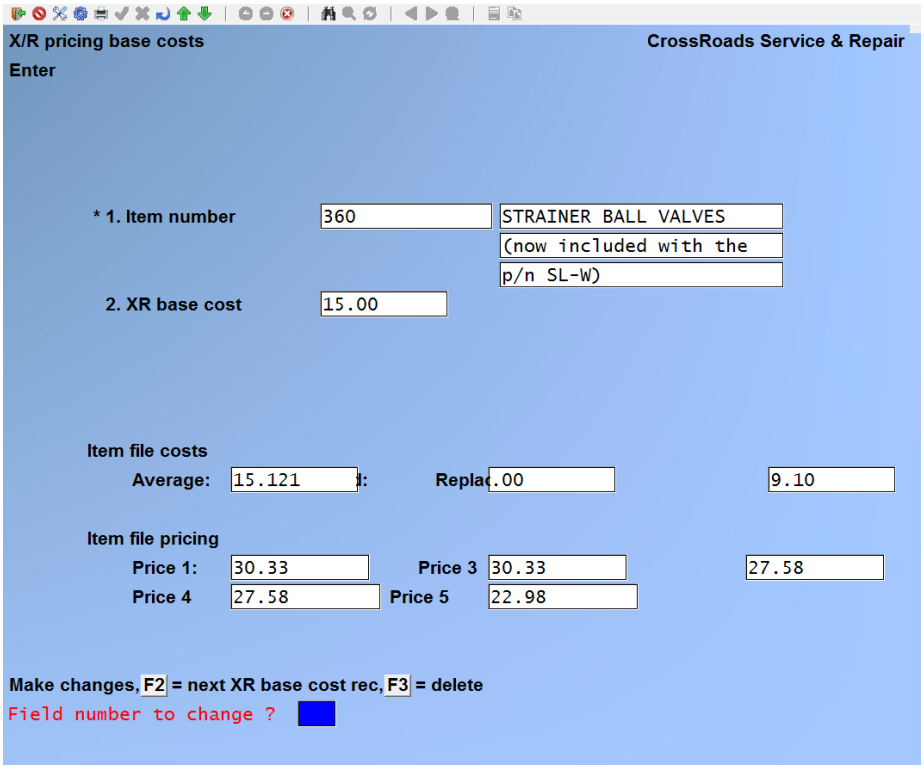
| | | |
|---|---|---|
| **M** | = | Mark-up schedules only |
| **D** | = | Discount schedules only |
| **[F1]** | = | All schedules |

**Service Manager Base Cost**

This function permits you to set a specific Service Manager (S/M) Base Cost value for any inventory item. As described elsewhere in this chapter, the S/M Base Cost is a special cost number that takes precedence over any other cost (standard, average or replacement) during a price mark-up calculation. The S/M Base Cost is used to establish a management basis for price calculations when the average and/or replacement costs do not constitute a valid cost basis. The most frequent use of S/M base Cost is to override an average or replacement cost that is lower than normal due to unusual conditions - - such as a bulk purchase of goods at lower than normal costs.

**ENTER**

From the *Item Pricing* menu, select *Service Manager Base Costs → Enter*. On the screen displayed, you can add, change and delete item base costs:




## Item number

### For a new S/M base cost:

You have several options for identifying the inventory item that will be assigned a special customer price:

- Enter a valid item number.
- Press [**F1**] to scroll through item list in item number order.
- Press [**ENTER**] to advance to the item description field. You may then press [**F1**] to browse through the inventory item list in alphabetic order by item description.
- Press [**ENTER**] to advance to the item description field. Type in as much or as little of the item description as you choose and then press [**ENTER**]. Service Manager will search for the first item description that matches your input. You may then press [**F1**] to examine subsequent items in alphabetic sequence.

When you have displayed the inventory item you desire, press [**ENTER**]. If you select an inventory item for which S/M Base Costs already exist, you are permitted to change the item's S/M Base Cost, or delete the S/M Base Cost record entirely by pressing [**F3**].

## S/M Base Cost

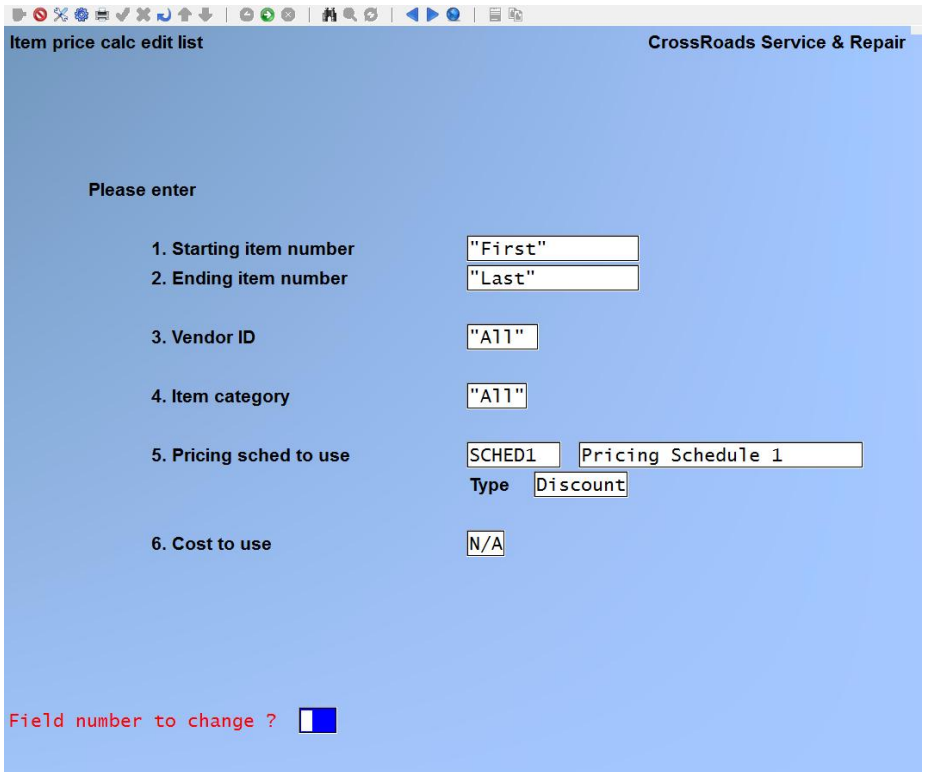
Type a numeric value in the range of $ .001 to $999,999.999.

**PRINT**

From the *Item Pricing* menu, select *Service Manager Base Costs → Print*. On the screen displayed, enter the starting and ending item numbers for which you want to print the S/M Base Cost report.

## Price Calculation Edit List

This edit list function does everything the *Calculate prices* function does except it does not write the prices into the item inventory records - - it merely prints the proposed price changes in report form. It is highly recommended that a price edit list be printed and thoroughly reviewed before running the Calculate prices function.




### 1. Starting item number

Enter the number of the first item you wish to calculate prices for, or press [**F1**] for the first item on file.

### 2. Ending item number

Enter the number of the last item you wish to calculate prices for, or press [**F1**] for

the last item on file, or if you did not use [**F1**] to specify the starting item number, press [**ENTER**] to repeat the starting item number.

**3. Vendor ID**

Enter a six (6) character vendor account number or press [**F1**] to indicate all vendors.

**4. Item category**

Enter a five (5) character item category or press [**F1**] to indicate all categories.

**5. Pricing sched to use**

Enter the eight (8) character code for the pricing schedule you wish to use in calculating prices. Optionally you may press [**F1**] to view each pricing schedule in turn. When the code you with to assign is displayed, press [**ENTER**].

**6. Cost to use**

Type a letter to designate the cost to be used in the pricing calculation. The letter codes that may be used are displayed in the message area at the bottom of the screen.

Make any required changes, followed by [**ENTER**]. Print the report and thoroughly review it prior to running the *Calculate* prices function.

## Calculate Prices

This function works in an identical way to the *Price calculation edit list* **except** this function actually updates the inventory records with the newly calculated item prices.

Prior to running this function, one should **always** perform a test run using the edit list function described above.

Enter the data fields 1 through 6, just as described above. You will asked ***Are you sure ?*** Type [Y] to advance to the printer selection pop up window in order to run the calculation function.

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## CROSSROADS ITEM PRICING CALCULATION EDIT LIST

| Item number | Item description | Avg cost/ Std cost | Repl cost/ XR base | Cost used | | old | new | diff | pct |
|---|---|---|---|---|---|---|---|---|---|
| 1192 | 48 GALLON ACTION PAC BOX. | 104.140 | 104.140 | N/A | LIST | .000 | .000 | .000 | .00 |
| | COMPANY OWNED. | .000 | N/A | | END-USR | .000 | .000 | .000 | .00 |
| | | | | | RE-SELLER | .000 | .000 | .000 | .00 |
| | | | | | DEALER | .000 | .000 | .000 | .00 |
| | | | | | SUP.LIST | .000 | .000 | .000 | .00 |
| 1210 | QUICK COUPLING BODY | 5.220 | 5.220 | N/A | LIST | 10.890 | 10.900 | .010 | .09 |
| | 1/4" FEMALE N.P.T. | .000 | N/A | | END-USR | 10.890 | .000 | 10.890- | 100.00- |
| | *** DO NOT RE-ORDED *** | | | | RE-SELLER | 10.395 | .000 | 10.400- | 100.00- |
| | | | | | DEALER | 10.395 | .000 | 10.400- | 100.00- |
| | | | | | SUP.LIST | 9.900 | .000 | 9.900- | 100.00- |
| 1684 | PRIMARY HD ENGINE INLET | 239.439 | 239.439 | N/A | LIST | 830.770 | 830.800 | .030 | .00 |
| | FILTER (SULLAIR) | .000 | N/A | | END-USR | 540.000 | .000 | 540.000- | 100.00- |
| | | | | | RE-SELLER | 540.000 | .000 | 540.000- | 100.00- |
| | | | | | DEALER | 540.000 | .000 | 540.000- | 100.00- |
| | | | | | SUP.LIST | 301.500 | .000 | 301.500- | 100.00- |
| 1708 | 200' TAPE MEASURE. HIGH | .000 | .000 | N/A | LIST | .000 | .000 | .000 | .00 |
| | VISIBILITY YELLOW. | .000 | N/A | | END-USR | .000 | .000 | .000 | .00 |
| | WINDING STYLE. | | | | RE-SELLER | .000 | .000 | .000 | .00 |
| | | | | | DEALER | .000 | .000 | .000 | .00 |
| | | | | | SUP.LIST | .000 | .000 | .000 | .00 |
| 1881 | KAESER FLOAT-TYPE 1/2" | 36.850 | 37.920 | N/A | LIST | .000 | .000 | .000 | .00 |
| | AUTODRAIN FOR FILTER | .000 | N/A | | END-USR | .000 | .000 | .000 | .00 |
| | HOUSING (USE 4170-08) | | | | RE-SELLER | .000 | .000 | .000 | .00 |
| | | | | | DEALER | .000 | .000 | .000 | .00 |
| | | | | | SUP.LIST | .000 | .000 | .000 | .00 |
| 2820 | TIMKIN BEARING CUP | 5.830 | 5.830 | N/A | LIST | 11.836 | 11.850 | .010 | .12 |
| | | .000 | N/A | | END-USR | 11.836 | .000 | 11.840- | 100.00- |
| | | | | | RE-SELLER | 11.298 | .000 | 11.300- | 100.00- |
| | | | | | DEALER | 11.298 | .000 | 11.300- | 100.00- |
| | | | | | SUP.LIST | 10.760 | .000 | 10.760- | 100.00- |
| 2875 | TIMKIN CONE | 16.816 | 17.080 | N/A | LIST | 28.556 | 28.600 | .040 | .15 |
| | | .000 | N/A | | END-USR | 28.556 | .000 | 28.560- | 100.00- |
| | | | | | RE-SELLER | 27.258 | .000 | 27.260- | 100.00- |
| | | | | | DEALER | 27.258 | .000 | 27.260- | 100.00- |
| | | | | | SUP.LIST | 25.960 | .000 | 25.960- | 100.00- |

## Using Item Pricing

**INVENTORY PRICE LEVELS 1, 2, 3**

**Example #1:**

**Situation:** When you perform time and material work, you simply charge one price level for parts.

**Solution:** First, set Price-1 (list price) in your inventory control item records. Then define a Time & Material *Bill Type* record with the parts fields filled out as follows:

| | |
|---|---|
| 12. Bill parts? | Y |
| 13. Using pricing schedule ? | N |
| 14. Pricing schedule to use | N/A |
| 15. Mark-up cost to use | N/A |
| 16. Mark-up method | Individual |
| 17. Price (1/2/3) | 1 |
| 18. Use I/C price codes ? | N |

Whenever you assign the time and material bill type to a service call, parts will be charged using Price-1 from the parts' inventory item record.

**Example #2:**

**Situation:** You have a special high volume customer for whom you perform time and material work. You charge the going rate for labour but you discount parts by 15%.

There are at least two solutions to this problem:

**Solution A:** This solution is attractive if you provide a 15% parts discount to many customers. First, set Price-1 (list price) in your inventory control item records. Next, set Price-2 equal to 85% of Price-1 - - you can have Service Manager automatically calculate Price-2, but we'll get to that later. Then define a Special Time & Material Bill Type record just like the one described above, except field 17, Price (1/2/3) should be set to 2.

**Solution B:** First, set Price-1 (list price) in your inventory control item records. Next define a type **D** Pricing schedule (let's pretend we've named it D15) where you set the multiplier for Price-1 equal to 1.00, and you set the multiplier for Price-2 equal to .85. Finally, you would define a special Time & Material Bill Type as follows:

| | |
|---|---|
| 12. Bill parts? | Y |
| 13. Using pricing schedule ? | Y |

| | |
|---|---|
| 14. Pricing schedule to use | D15 |
| 15. Mark-up cost to use | N/A |
| 16. Mark-up method | N/A |
| 17. Price (1/2/3) | 2 |
| 18. Use I/C price codes ? | N/A |

Note that "D15" is identified in field 14 as the pricing schedule, and Price-2 is specified in field 17.

ACCOUNTS RECEIVABLE CUSTOMER DISCOUNTS

**Situation:** Assume you perform time and material work for a customer and you've agreed to discount all charges by 20%.

**Solution:** Call up your customer's record in Accounts Receivable and enter **20** in field 21, *Discount percent*. For all future service calls, Service Manager will apply a 20% discount to all service call charges.

ITEM PRICE CODES

The use of RealWorld's price codes allows an almost limitless variety of combinations. Their use is covered in detail in the Inventory Control User's Manual. However, we should point out here that three (3) steps are necessary to use *Price codes* on service calls:

1. Define the *price codes* you wish to use.
2. Assign the *price codes* to the inventory items.
3. Specify in a Service Manager *Bill Type* that you are using I/C *price codes*.

INDIVIDUAL ITEM DISCOUNTS

**Situation:** You are performing a service call which involves the replacement of a major piece of equipment (e.g. an air conditioner compressor, a copier drum, etc.) and you have negotiated with your customer to discount <u>only</u> the major piece of equipment.

**Solution:** While adding the major piece of equipment to the service call, enter your agreed-upon discount into field 7. *Discount percent*.

SINGLE LEVEL MARK-UP

**Situation:** Assume that you have a simple method of arriving at a sell price … you simply mark-up your costs by a factor of 3.0.

There are at least two solutions to this problem: one involves a real-time price calculation, one involves a batch calculation.

**Solution A:** First, you should define a type M pricing schedule (call it M3) which has only one cost range. In other words, field 4 contains a "from" value of $ .01 and a "to" value of $9,999,999.99. Set the mark-up multiplier to 3.0. The rest of the screen can be filled in as you desire.

Next you should define a *Bill Type* record in which you assign the mark-up schedule you've just created. The parts billing section of the bill type would appear as follows:

| | |
|---|---|
| 12. Bill parts? | Y |
| 13. Using pricing schedule ? | Y |
| 14. Pricing schedule to use | M3 |
| 15. Mark-up cost to use | Replacement |
| 16. Mark-up method | Individual |
| 17. Price (1/2/3) | 1 |
| 18. Use I/C price codes ? | N/A |

Note that we have chosen to use replacement cost as our cost basis. The choice is up to you.

**Solution B:** Solution A would calculate each item's sell price in real-time (i.e. at the time the part is added to the service call). Solution B involves calculating a 3x mark-up sell price for every inventory item - - in *batch mode* - - and storing it permanently in each item's inventory record. When an item is added to a service call, Service Manager will not calculate the sell price, it merely fetches it from the inventory file.

First define a type M pricing schedule (again, we'll call it M3) exactly as described above.

Next, you should calculate all inventory prices using the M3 mark-up schedule you've just created. First run and review the Price calculation edit list. Then run the calculate prices function.

Finally, you should define a bill type record in which you specify that you are using Price-1. Your pricing schedule will calculate Price-1 in batch mode, and Service Manager will simply retrieve Price-1 when required.

MULTI-LEVEL MARK-UP

Multi level mark-up strategies are more sophisticated than single level mark-ups in the way that they relate an item's cost to its sell price. However, the way you would use them (either in real-time or batch mode) is the same. There are simply more cost gradients, mark-up multipliers, and round-up factors.

AGGREGATE MARK-UP

**Situation:** Some service companies mark-up their costs to arrive at a sell price in the aggregate. In other words, they do not mark-up individual item's costs. They simply add up the cost of all parts used on the service call and apply a mark-up to arrive at the sell price for all parts. If you mark up parts costs as an aggregate number, the following paragraph describes the procedure.

**Solution:** First, you should define a type **M** pricing schedule to be used for the aggregate mark-up calculation - - let's assume we call it **MA**.

Next you should define a *Bill Type* record in which you assign the mark-up schedule you've just created. The parts billing section of the bill type would appear as follows:

| | |
|---|---|
| 12. Bill parts? | Y |
| 13. Using pricing schedule ? | Y |
| 14. Pricing schedule to use | MA |
| 15. Mark-up cost to use | Replacement |
| 16. Mark-up method | Aggregate |
| 17. Price (1/2/3) | 1 |
| 18. Use I/C price codes ? | N/A |

**Note**: We have assigned "**MA**" as the pricing schedule to use … we have designated replacement cost, but that choice is yours to make … we've also specified the aggregate mark-up method, which is the real reason for defining this bill type.

PRICING SERVICES

**Situation:** Let's assume that you have contracted with a commercial pricing service to supply you with up-to-date list prices for your inventory items. You receive the data each month in a printed form and on diskette. You don't use the diskette, but you take the printed copy and manually update each inventory item. You'd like a better way to do it.

**Solution:** For a small charge (call for a price quotation), Giant Technology will supply a program that will read the latest prices from a diskette, automatically update your prices, and print an audit trail report to document the changes. Once the update is complete, you may use all of the Item Pricing features described in this chapter.

SPECIAL CUSTOMER PRICING

**Situation:** If you negotiate item prices (usually for supplies or repeat-use items) on a customer-by-customer basis, you can use the special customer pricing feature of Service Manager to automate your invoicing.

**Solution:** Use the special customer pricing feature to assign Price-1, 2, and/or 3 to customer-item pairs to meet your needs. The special price assigned will override any other prices to ensure that your customers are charged according to your negotiated arrangements.

SERVICE MANAGER BASE COST

**Situation:** Let's assume you use a mark-up schedule to calculate sell prices - - it doesn't matter whether you use real-time or batch mode. It also doesn't matter which cost you've specified to use: standard, average or replacement. Let's further assume that you just bought a ton of WIDGETS at a great price (your cost). How do you continue to use your mark-up calculation without passing on all of your profits to your customers in the process?

**Solution:** As soon as possible, establish a Service Manager Base Cost for WIDGETS equal to te last price you paid for them (i.e. before you made the great deal). In the future, every time the sell price for WIDGET is calculated, Service Manager will us the Base Cost figure instead of the cost you've designated - - for all other parts.

MISCELLANEOUS ITEM MARK-UP

**Situation:** Let's assume that many of the parts you use on service calls are purchased at supply houses on an as-needed basis. What is the easiest way to process these buyout items?

**Solution:** Use Service Manager to automatically mark-up the costs of these buyout items to calculate a sell price. First, define type **M** mark-up schedule to use with miscellaneous or buyout items - - let's call it **MISC**. Next, you should call up the Service Manager *control information* file and indicate that you want Service Manager to automatically calculate the mark-up for miscellaneous call parts. While you're in the *control information* file, you should specify the mark-up schedule you've just created – MISC – as the one to use for miscellaneous parts.

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# Chapter 15

# Manufacturer's Codes

**Introduction**

A later chapter in this manual will describe how to define to Service Manager the various models of equipment your firm services on a routine basis. One of the fields (i.e., pieces of information) you will be able to assign to a model of equipment is the name of its manufacturer. The function described in this chapter allows you to standardize on the names and codes you will use throughout your company to designate equipment manufacturers.

This function is optional, but highly recommended. Various Service Manager reports may be selected for printing *by manufacturer*. If you take the time to establish manufacturer's codes now you will have the capability to print reports *by manufacturer* for all of your service call history. If you do not establish these codes now, you can always do so in the future, however only service calls entered *after* the codes are established will be selectable *by manufacturer*.

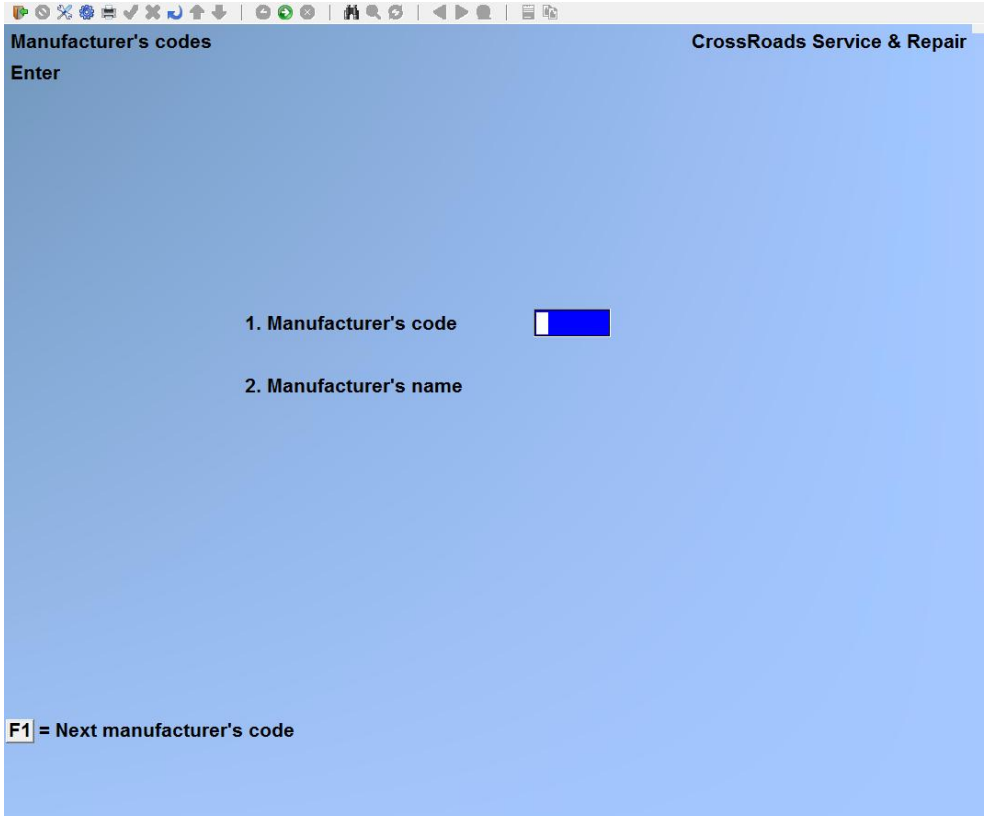
**To begin**

From the second page of the S/M main menu, select *Manufacturer's Codes → Enter*. On the screen displayed you can add, change and delete Manufacturer's Codes.

**Entering Manufacturer's Codes**

Enter the following information for each Manufacturer's code:

*See next page for illustration.*




From this screen you can work with both new and existing Manufacturer's code records. If data has already been entered for the Manufacturer's code you specify, it will appear and be available for changes or deletion. If the Failure code you specify is new, you will automatically be placed in enter mode.

1. **Manufacturer's Code**
   Enter a Manufacturer's Code, up to 6 alphanumeric characters, or press [**F1**] to scroll through the Manufacturer's Codes on file.

2. **Description**
   Enter the manufacturer's name, up to 25 alphanumeric characters.

### Changing Manufacturer's Code description

To change the description of a Manufacturer's Code, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

### Deleting a Manufacturer's Code

To delete a Manufacturer's Code, bring up the code that you want to delete and press [**F3**] to delete.

## Printing an Manufacturer's Code list

From the second page 2 of the S/M main menu, select *Manufacturer's Codes → Print*. On the screen that appears, enter the range of Manufacturer's Codes to include on the list. Follow the screen instructions.

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**MANUFACTURER'S CODE FILE LIST**

| Manufacturer code | Description |
|---|---|
| FRI | Frigidaire |
| HAVAC | HVACS 'R US |
| NUCOM | NU-COMFORT |

3 manufacturer codes on file

-- End of report --

# Chapter 16

# Equipment Categories

**Introduction**

A later chapter in this manual will describe how to define to Service Manager the various models of equipment your firm services on a routine basis. One of the fields (i.e., pieces of information) you will be able to assign to a model of equipment is its "category". The function described in this chapter allows you to standardize on the names of equipment categories you will use throughout your company.

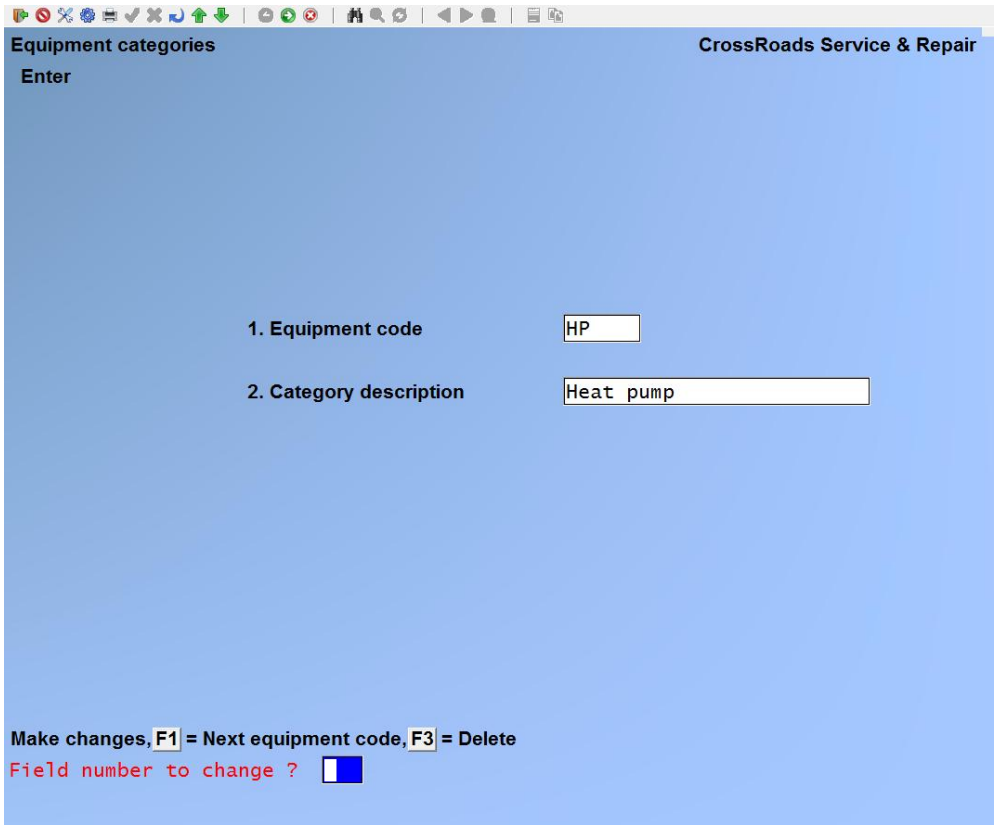
This function is optional, but highly recommended. Various Service Manager reports may be selected for printing *by equipment category*. If you take the time to establish equipment categories now you will have the capability to print reports *by equipment category* for all of your service call history. If you do not establish equipment categories now, you can always do so in the future, however only service calls entered *after* the categories are established will be selectable *by equipment category*.

**To begin**

From the second page of the S/M main menu, select *Equipment Category → Enter*. On the screen displayed you can add, change and delete Action Codes.

**Entering Equipment Categories**

Enter the following information for each equipment category; from this screen you can work with both new and existing Equipment category records. If data has already been entered for the Equipment code you specify, it will appear and be available for changes or deletion. If the Equipment code you specify is new, you will automatically be placed in enter mode.




1. **Equipment Code**
   Enter an Equipment Code, up to 6 alphanumeric characters, or press [**F1**] to scroll through the Equipment categories on file.

2. **Category Description**
   Enter the category description for the equipment code specified, up to 25 alphanumeric characters.

## Changing Equipment Category description

To change the description of an Equipment Category, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

## Deleting an Equipment Category

To delete an Equipment Category, bring up the code that you want to delete and press [**F3**] to delete.

## Printing an Equipment Category list

From the second page 2 of the S/M main menu, select *Equipment Category → Print*. On the screen that appears, enter the range of Equipment Category codes to include on the list. Follow the screen instructions.

Date:05/21/13 Time:16:19:09 CrossRoads Service & Repair User: SSI Report #3375 Page 0001

**EQUIPMENT CATEGORY CODE FILELIST**

Equipment category code range: "First" to "Last"

| Equipment code | Description |
|---|---|
| HP | Heat pump |
| RT | Rooftop Unit |
| WT | Window unit |

3 equipment category codes on file

-- End of report --

# Chapter 17

# Warranty Program Codes

**Introduction**

A later chapter in this manual will describe how to define to Service Manager the various models of equipment your firm services on a routine basis. One of the fields (i.e., pieces of information) you will be able to assign to a model of equipment is its "warranty program code". The function described in this chapter allows you to establish warranty program codes that completely specify to Service Manager how each model of equipment is covered by warranties from either the original equipment manufacturer or your firm.

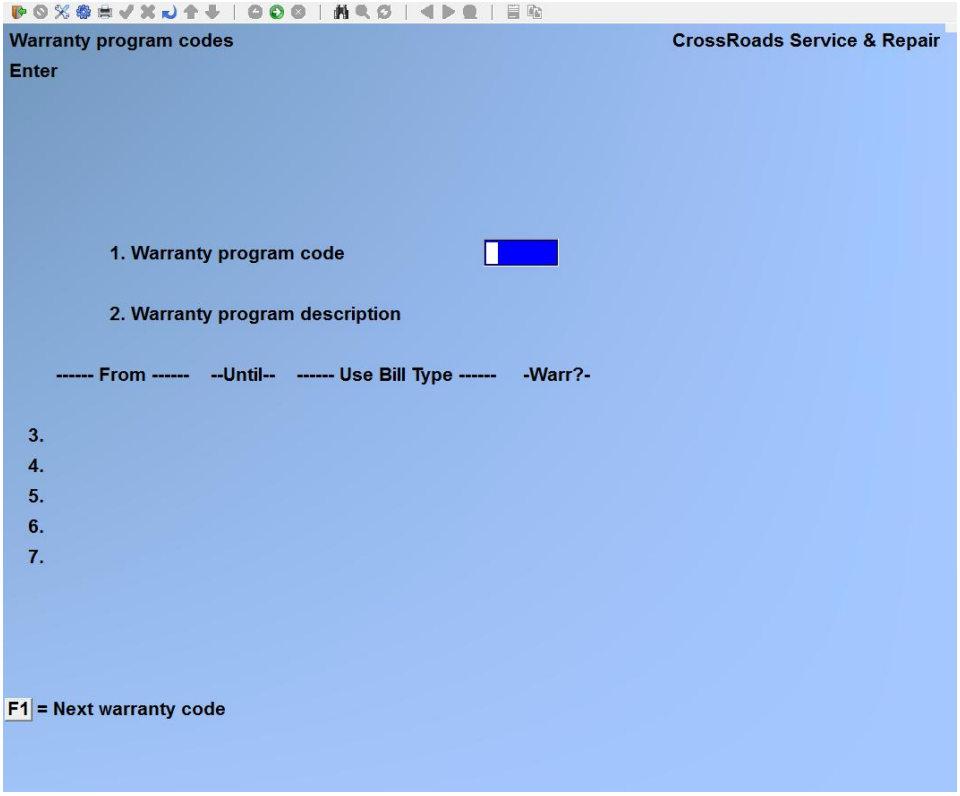
This function is optional, but highly recommended. Various Service Manager reports may be selected for printing *by warranty program*. If you take the time to establish warranty programs now you will have the capability for all of your data. If you do not establish warranty programs now, you can always do so in the future, however only data entered *after* the categories are established will be selectable by category.

**To begin**

From the second page of the S/M main menu, select *Warranty Program Codes → Enter*. On the screen displayed you can add, change and delete warranty program codes.

**Entering Warranty program codes**

Enter the following information for each warranty program; from this screen you can work with both new and existing warranty program codes. If warranty program data has already been entered for the code you specify, it will appear and be available for changes or deletion. If the Warranty program code you specify is new, you will automatically be placed in enter mode.




1. **Warranty program code**
   Enter a warranty program code, up to 6 alphanumeric characters, or press [**F1**] to scroll through the warranty program codes on file.

2. **Warranty program description**
   Enter a description for the warranty program code, up to 25 alphanumeric characters.

You may now enter up to five (5) distinct warranty coverage phases in order to completely specify a warranty program. For each phase of coverage you will specify the start-of-phase or "from date", the end-of-phase or "until date" and the Service Manager *bill type* to be used for service calls processed during that phase.

3. **Warranty phase # 1**
   For all warranty phases, Service Manager automatically supplies the "from date" entry. In warranty phase #1 the "from date" supplied by Service Manager is *Warranty Start Date*. With the cursor automatically positioned at the "until date" you can type a numeric entry ranging from 1 to 998 (999 is treated as a special case meaning "indefinite future" --it is used to signal that you are finished entering warranty phases). You may then enter a code for unit of time: D, W, M, or Y (days, weeks, months, or years). Finally, you will enter a bill type to be used for service call processing during this distinct phase of coverage. You may type the bill type code directly, or use [**F1**] to browse through each

bill type in turn, pressing [**ENTER**] when the one you wish to select is displayed.

4. **Warranty phase # 2**
   Once again, Service Manager automatically supplies the "from date" entry. In warranty phase #2 through #5, however, the "from date" supplied by Service Manager is set equal to the date you entered in the previous phase *plus* one (1) day. With the cursor automatically positioned for you, enter another "until date" and bill type code exactly as described above for warranty phase #1.

5. **Warranty phase # 3**
   This warranty phase should be completed exactly as described above for warranty phase # 2.

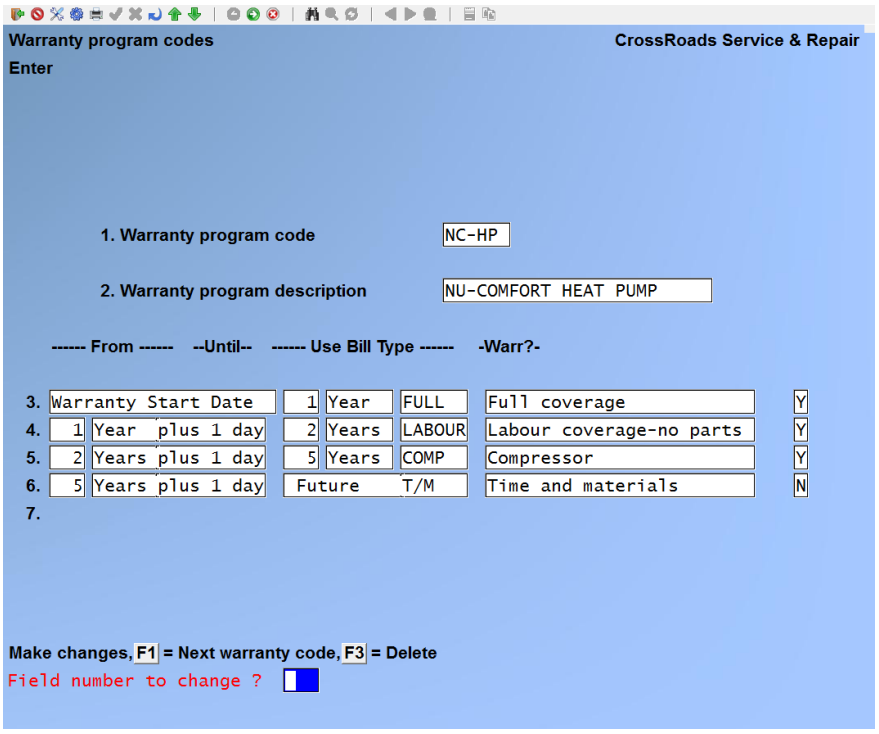
6. **Warranty phase # 4**
   For the example we are illustrating here (see descriptive paragraphs below), this will be our last warranty phase entry...we only need four (4) phases to completely describe our sample program. Therefore we will use the special case entry of "999" for our “until date" to indicate indefinitely into the future. We then enter a bill type just as described above for all other phases of coverage.

7. **Warranty phase # 5**
   As mentioned, we did not need this additional phase of warranty coverage to specify the warranty program we have chosen as an example. However, if it is needed, it is completed exactly as indicated above --with the exception that Service Manager will automatically supply *indefinite future* as the “until date”.

**Some Notes about the Sample warranty program included below:**

For the sample warranty program illustrated below, we are using the following scenario:

> A heat pump manufacturer named "Nu-Comfort" supports its heat pump models with a standard warranty consisting of three (3) distinct phases. At least one real-life manufacturer of air conditioning equipment actually uses a warranty program of this type and if current ... trends continue, we will probably see lengthier and more complex arrangements.




During the first year of use, the units are fully covered, meaning all parts and labor. We have entered the bill type to handle this first year as "FULL" (NU-COMFORT FULL WARRANTY). Note that it is up to us as Service Manager users to ensure that the bill type record "FULL" really does reflect full coverage of parts and labor.

At the end of the first year of use, the "Nu-Comfort Standard Heat Pump Warranty" degrades to coverage for labor only. Thus during the time between the end of the first year of use, and the end of the second year of use, we have entered the bill type "LABOUR" (NU-COMFORT PARTS WARRANTY). Once again it is up to us to ensure that the bill type record "LABOUR" is filled out to charge for labour, but not to charge for parts.

At the end of the second year of use, the "Nu-Comfort Standard Heat Pump Warranty" degrades further to covering only the heat pump's compressor. Thus during the time between the end of the second year of use, and the end of the fifth year of use, we have entered the bill type "COMP" (NU COMFORT COMPRESSOR WARRANTY). And once again it is up to us as users of the software to ensure that the bill type record "COMP" reflects the true warranty status.

The strengths of this Service Manager feature are its flexibility to adapt to real-life situations and the clerical work it performs for users. It will handle a simple warranty such as "90 Days Parts Only" or a relatively complex multi-year offering as we illustrated.

And by assigning a warranty program to one Service Manager model equipment record, all pieces of equipment in the field of that model type are automatically covered. Since dates in warranty programs are specified as “start plus” they can be resolved to real-time for an individual piece of equipment by simply entering the date of installation (assuming that is the warranty start date).

**Changing a Warranty Program Code**

To change one or fields for a warranty program code, bring up the code that you want to change. At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Deleting a Warranty Program Code**

To delete a warranty program code, bring up the code that you want to delete and press [**F3**] to delete.

**Printing a Warranty Program Code list**

From the second page 2 of the S/M main menu, select *Warranty Program Codes → Print*. On the screen that appears, enter the range of warranty program codes to include on the list. Follow the screen instructions.

Date:05/21/13 Time:16:25:44 CrossRoads Service & Repair User: SSI Report #3376 Page 0001

**WARRANTY PROGRAM CODE FILE LIST**

Warranty code range: "First" to "Last"

| Warranty code | Description | From | Until | Bill Type code | Description | Warranty coverage? |
|---|---|---|---|---|---|---|
| NC-HP | NU-COMFORT HEAT PUMP | Warranty start date | 1 years | FULL | Full coverage | Y |
| | | 1 years plus 1 day | 2 years | LABOUR | Labour coverage-no parts | Y |
| | | 2 years plus 1 day | 5 years | COMP | Compressor | Y |
| | | 5 years plus 1 day | Future | T/M | Time and materials | N |

1 warranty codes on file

-- End of report --

# Chapter 18

# Model Data

**Introduction**

The Maintain Model Data function is used to create a record of data for each individual model of equipment for which you provide service. Maintain Model Data is a "setup" function. With it, you define data that you can draw on at a later time. In normal use, you will draw on the model data when you create and/or price service agreements.

When you take the time to create a model number record, you benefit in a number of ways. First, you can select that model for inclusion in any number of agreements and be confident that the data will be consistent. All of the following data can be specified just once in the model record, and reused over and over again in agreements:

- the model number itself
- the model description
- preventive maintenance schedule
- checklist ID
- overage code (for metered equipment such as copiers)
- multiple meter IDs (for color copiers)
- service prices classified according to bill type and billing frequency

In addition, the model number record provides the vehicle for Service Manager to calculate and store average repair information. For each model that you service, the following parameters are kept:

- MTBF – mean time (days) between failures
- MTTR – mean time (man-hours) to repair
- M$TR – mean total cost to repair
- mean labour cost to repair

- mean parts cost to repair
- mean other cost to repair

In summary, the model data record provides a shorthand method for producing consistently accurate service agreements, plus the capacity for calculating and storing average repair cost data.

**To begin**

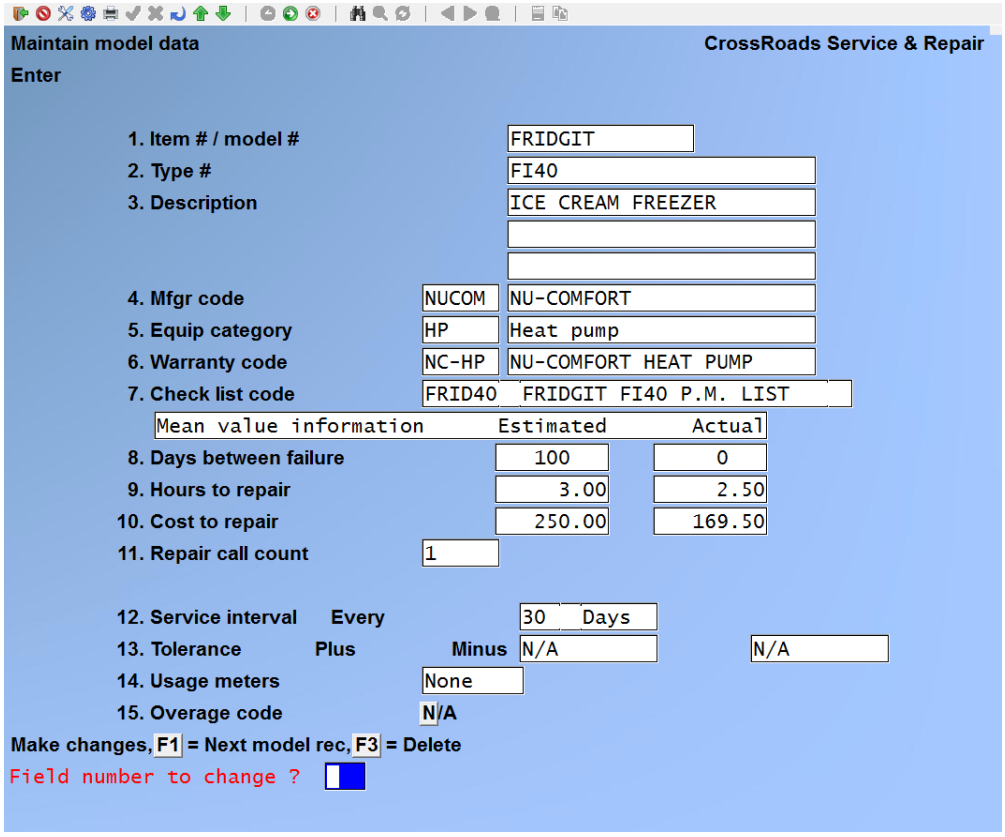
From the second page of the S/M main menu, select *Model Data → Enter*. On the screen displayed you can add, change and delete model data.

When you setup a model, you enter three "sets" of data addressed in the sections:

1. Entering Model data
2. Entering Bill type(s) for a model
3. Entering usage meter data for a model

## Entering Model Data

Enter the following information for each model of equipment:



From this screen you can work with both new and existing Model records. If data has already been entered for a model of equipment you specify, it will appear and be available for changes or deletion. If the Model data code you specify is new, you will automatically be placed in enter mode.

**Item # / model #**
When building a model data record, you have the option of using an Inventory Control item number and item description for the model number and description. If you are going to base the model record you are entering on an inventory item, you have two options. You may enter the inventory item number if you know it, or you may use the [**F2**] key to browse through each inventory item number and description in turn, pressing [**ENTER**] when the inventory item of interest is displayed.

If you are not basing this model record on an inventory item, then enter a model number of your choice, up to 15 alphanumeric characters. If you are not adding a model record, but simply inquiring with the possibility of making a change, you may press [**ENTER**] to skip the model number field and search existing model records by typing a portion of the model description.

**Description**
If you have used an inventory item as your base for your entry, you will not be permitted to change the description.

If you have not used an inventory item as your base, enter the model number description here. You may enter up to two (2) line of 25 alphanumeric characters.

**Days between failure (estimated)**
Enter your (or the manufacturer's) estimate of the average number of days this model of equipment will operate continuously without a failure. You may enter up to four digits (0 to 9999).

**Hours to repair (estimated)**
Enter your (or the manufacturer's) estimate of the average number of hours (elapsed real time) required to repair this model of equipment under normal conditions. You may enter any number from 0 to 9999 (i.e. from approximately half-a-minute to one year).

**Cost to repair (estimated)**
Enter your (or the manufacturer's) estimate of the average total cost to repair this model of equipment under normal conditions. Total cost to repair should include all labour, parts and any other costs (such as travel or subcontracted costs) incurred during an average failure incident. Enter your cost estimate, from 0 to 9999.

**Repair call count**
This field contains a running count of the total number of repair service calls (as opposed to preventive maintenance service calls) made for this model. As actual

mean failure data is compiled, this fields tells you the number of calls upon which the "actual" data is based. During add mode, this field is of course not applicable (N/A).

The repair call count is maintained by the system - - no change is allowed.

**Service interval … every**
Fields 8 and 9 permit you to specify a preventive maintenance service interval and the scheduling tolerance allowed. In field 8, you specify the service interval itself. You first enter a number of up to 3 digits (1 to 999); followed by a unit of time (days, weeks, months or years).

**Tolerance … Plus … Minus**
To facilitate optimized scheduling, enter plus and minus tolerances that define a "window" during which preventive maintenance can be performed. The field sizes and the method of entering tolerance limits are identical to the service interval.

**Check list code**
If there is a check list associated with this equipment model number, enter the check list identifier you established using the Maintain check lists transactions, or press[**F1**] to scroll through the check lists on file.

If you are not familiar with Check lists, see Chapter 12 Check lists.

**Overage code (only if *Track equipment usage ?* is "Y" in Control Information)**

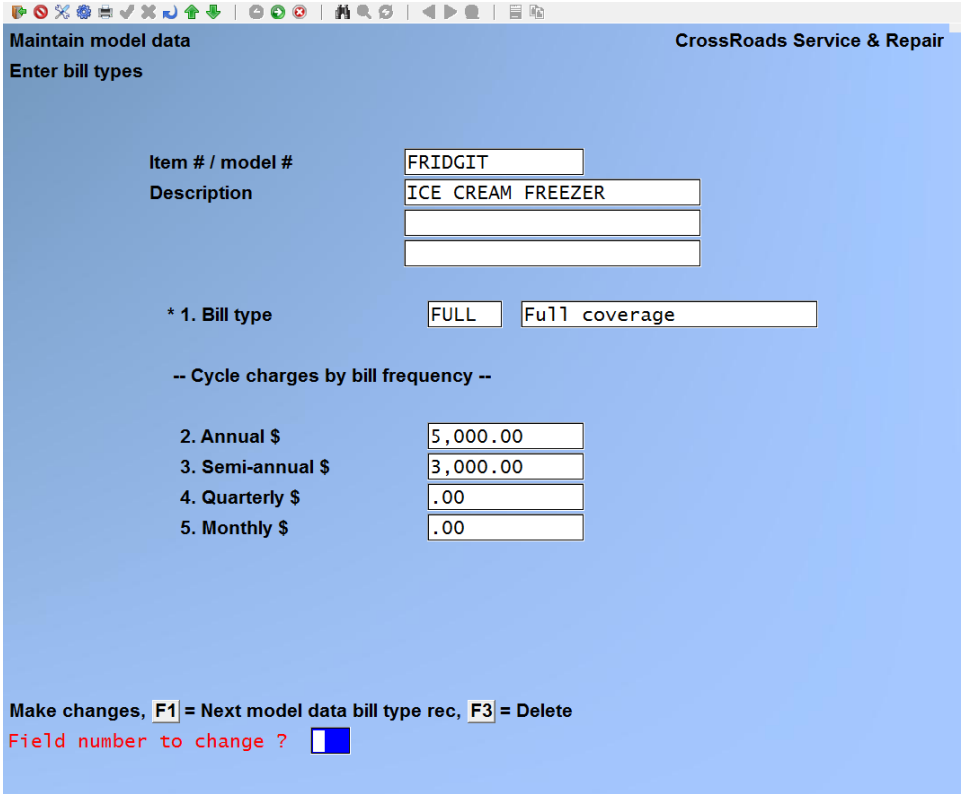
If this model of equipment does not contain a usage meter, or if overage charges are not used, or if this equipment contains multiple meters - - such as colour copiers - - then press [**ENTER**] and the system will default to **N/A**. If you are not familiar with overage codes, see Chapter 20, *Overage Codes*.

If this model of equipment possesses a single usage meter, and if there are overage (i.e. millage) charges associated with the use of this equipment, you may enter a default overage code here. Enter an overage code that you established using the Maintain overage codes transaction, or press [**F1**] to scroll through the overage codes on file.

At *Field number to change ?* make any desired changes, then press [**ENTER**]. You are then asked, "*Maintain Bill Types for this Model? Y*". Press [**ENTER**] to maintain bill types. The following screen appears:

**Entering Bill types for a model**

Enter the following information for each model of equipment:




## 1. Bill type

If you are changing an existing bill type record, you may display it by entering its bill type, or by using [**F1**] to browse through the bill type records on file for this model number.

If you are adding, you can enter as many bill types as necessary for this model. Enter a bill type you established using the *Maintain bill types* transaction of press [**F2**] to display each bill type in turn.

## 2. Annual $

Enter the amount that is charged on an annual basis to service this model of equipment. You may enter any number from 0 to $9,999,999.99.

## 3. Semi-annual $

Enter the amount that is charged on a semi-annual basis to service this model of equipment. You may enter any number from 0 to $9,999,999.99 or press [**F1**] to default to one half (1/2) of the annual amount.

## 4. Quarterly $

Enter the amount that is charged on a quarterly basis to service this model of equipment. You may enter any number from 0 to $9,999,999.99 or press [**F1**] to default to one quarter (1/4) of the annual amount.

## 5. Monthly $

Enter the amount that is charged on a monthly basis to service this model of equipment. You may enter any number from o to $9,999,999.99 or press [**F1**] to default to one twelfth (1/12) of the annual amount.

At *Field number to change ?* make any desired changes, then press [**ENTER**]. The screen is re-displayed for entry of the next bill type. When no more bill types are to be added, press [**TAB**]. If you have not set up the Service Manager control file to track equipment usage meters – such as copier "click counters ' - - the data screen is redisplayed for entry of the next model.

## Entering usage meter data for a model

If you are set up to track equipment usage meters you will be asked the question "**Maintain meter IDs for this model ?** Y". For all equipment with none, or only one usage meter, answer **N**. Upon entering **N**, the data screen is redisplayed for entry of the next model. Answer **Y** only if this model has multiple usage meters - - for example, if the model is a colour copier.

Enter the following information for each model of equipment:

1. **Meter ID**
   If you are changing existing meter data, you may display it by entering its meter ID, OR BY USING [F1] to scroll through the meter IDs on file for this model number. If you are adding new meters, you can enter as many as necessary for this model. Enter up to five (5) alphanumeric characters.

2. **Meter description**
   Enter up to 25 alphanumeric characters to describe the meter ID above.

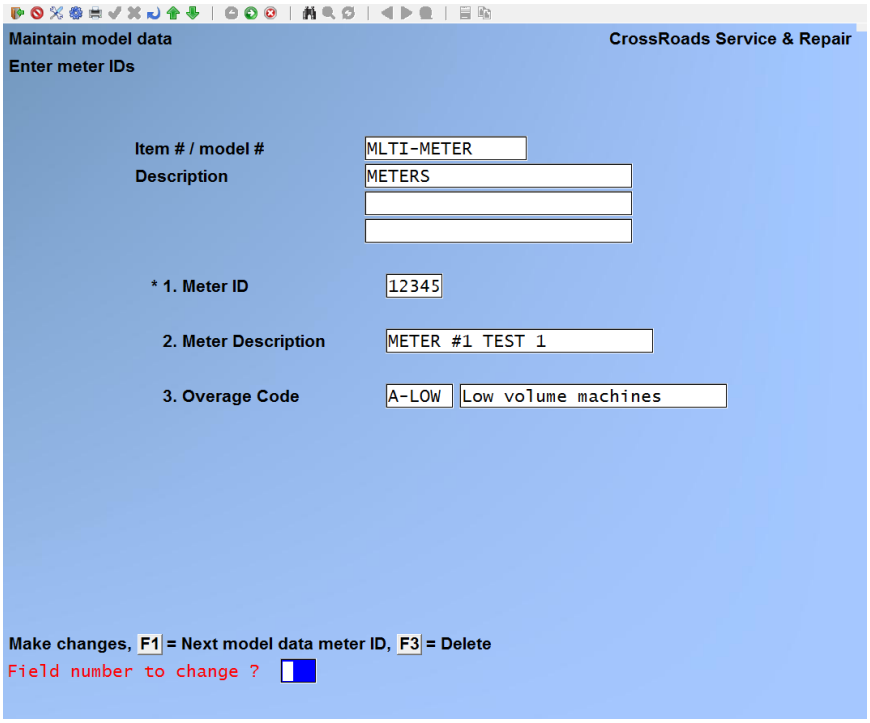
The following Sample Meter Identifiers and Descriptions are offered to help you become familiar with multi-meter specifications:

For a ten (10) meter machine:

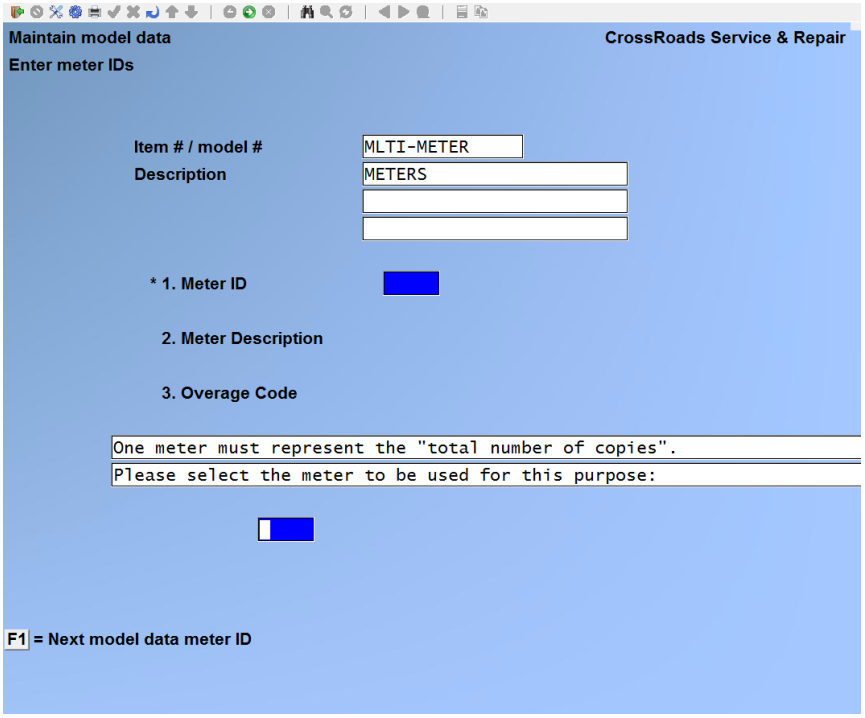
| | |
|---|---|
| M-01 | Total scans |
| M-02 | Total pages |
| M-03 | 3 Colour pages |
| M-04 | Blk & Wht pages |
| M-05 | 2 pass (RGB) pages |
| M-06 | 1 pass (YMC) pages |
| M-07 | 6 Colour pages |
| M-08 | 3 Colour slides |
| M-09 | 6 Colour slides |
| M-10 | Total photo scans |

For a fifteen (15) meter machine:

| | |
|---|---|
| M-01 | Total scans |
| M-02 | Total pages |
| M-03 | 3 Colour pages |
| M-04 | Blk & Wht pages |
| M-05 | 2 pass (RGB) pages |
| M-06 | 1 pass (YMC) pages |
| M-07 | 6 Colour pages |
| M-08 | 3 Colour slides |
| M-09 | 6 Colour slides |
| M-10 | Total photo scans |
| M-11 | 35mm Graphic scans |
| M-12 | 35mm Photo scans |
| M-13 | Total black scans |
| M-14 | Black graphic scans |
| M-15 | M-13 + M-14 |

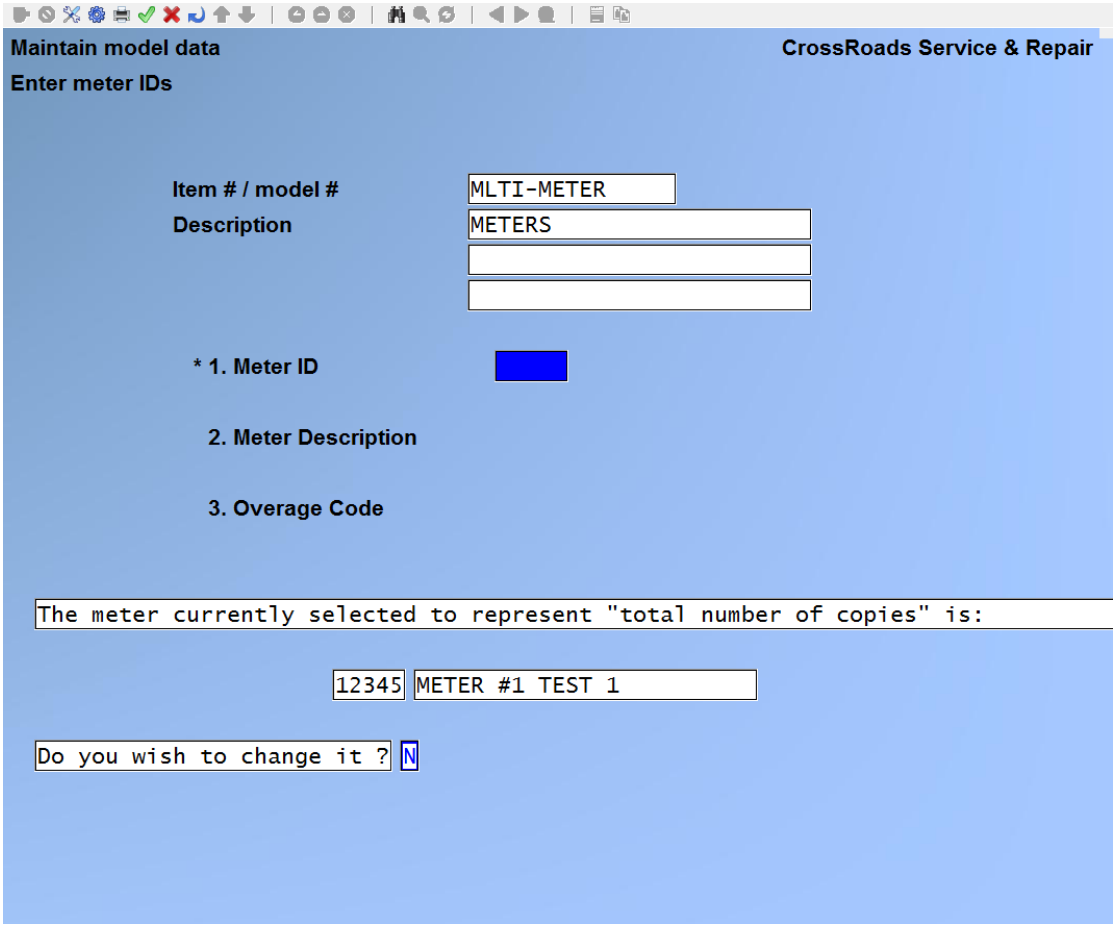



Make any desired changes, the press [**ENTER**]. The screen is redisplayed for entry of the next meter ID. When no more meter IDs are to be added, press [**TAB**]. If you have entered more than one meter for this model, the screen will display:



You may enter the meter ID that represents “total copies” or you may use the [**F1**] key to scroll through the defined meters on file until the one you wish to designate is displayed.

When you are in change mode (as opposed to add mode) when you exit the meter ID screen, and, for example, you had previously a meter as the “total copies” meter, the screen displays:




Answer **Y** or **N**, then supply the data required to end the transaction.

### Printing a Model Data list

From the second page 2 of the S/M main menu, select *Manufacturer’s Codes → Print*. On the screen that appears, enter the range of Model Data Codes to include on the list. Follow the screen instructions.

```
Date:05/21/13  Time:16:44:22                    CrossRoads Service & Repair              User: SSI  Report #3377   Page 0001
```

## MODEL DATA LIST

```
Model # range: "First"        to "Last"

Model #          Description line-1       Check list  Check list description    MTBF (est)  MTTR (est)  M$TR (est)  Service interval
                 Description line-2 & 3   Over code   Over code description     MTBF (act)  MTTR (act)  M$TR (act)  Plus tolerance
                 Type number              Meter flg   Annual break-even cost      (days)     (man hrs)  Repr calls  Minus tolerance
                 Mfgr code & description              Eqp cat code & description           Wty pgm code & description

ANY              TEST                      N/A                                        0           .00         .00    N/A
                                           A-LOW     Low volume machines              0           .00         .00    N/A
                 123                       1                 N/A                                              0      N/A
                 FRI    Frigidaire                   N/A                                   N/A

** No bill type detail on file for this model **

FRIDGIT          ICE CREAM FREEZER         FRID40    FRIDGIT FI40 P.M. LIST         100          3.00      250.00     30  Days
                                           N/A                                        0          2.50      169.50    N/A
                 FI40                      N                    912.50                                        1      N/A
                 NUCOM  NU-COMFORT                   HP     Heat pump                     NC-HP  NU-COMFORT HEAT PUMP

                 Bill type  Description                Cycle charges:       Annual     Semi-annual      Quarterly        Monthly
                   FULL     Full coverage                                  5,000.00       3,000.00            .00            .00
                   T/M      Time and materials                                  .00            .00            .00            .00

MLTI-METER       METERS                    FRID40    FRIDGIT FI40 P.M. LIST          0           .00         .00    N/A
                                           N/A                                        0           .00         .00    N/A
                 MODEL WITH TWO OR MORE    M                 N/A                                              0      N/A
                 FRI    Frigidaire                   HP     Heat pump                     NC-HP  NU-COMFORT HEAT PUMP

                 Bill type  Description                Cycle charges:       Annual     Semi-annual      Quarterly        Monthly
                   INSPEC   Inspection and prev main                       1,200.00         600.00         300.00         100.00
                   T/M      Time and materials                                  .00            .00            .00            .00
                 Meter ID   Description              Over code        Description
                   12345    METER #1 TEST 1          A-LOW            Low volume machines            (Used for total copies)
                   12346    METER #2                 A-LOW            Low volume machines
                   12347    METER #3                 A-LOW            Low volume machines
                   12348    METER #4                 A-LOW            Low volume machines

NU-COMFORT HP03  HEAT PUMP RES 3 TON       N/A                                        0           .00         .00    N/A
                                           N/A                                        0           .00         .00    N/A
                 HP03                      N                 N/A                                              0      N/A
                 NUCOM  NU-COMFORT                   N/A                                   N/A

                 Bill type  Description                Cycle charges:       Annual     Semi-annual      Quarterly        Monthly
                   FULL     Full coverage                                     550.00         300.00         160.00          60.00
                   LABOUR   Labour coverage-no parts                          300.00         175.00         100.00          40.00
```

# Chapter 19

# Service Tickets

**Introduction**

By the term "service tickets", we mean a document - - one or more sheets of paper - - used by service personnel to record work to be done in the field or in-house at a bench. Some firms use terms such as "work orders", "service request forms" or "service invoices" to mean the same thing. Once assigned to a service rep(s), the service ticket is often completed in the field to reflect work done, and then signed by the customer.

As shipped, Service Manager contains a program for printing service tickets according to a plain paper, generic format. The function described in this chapter supplements the standard format. If allows users of Service Manager to design their own service ticket formats – perhaps to print on pre-printed forms - - and to specify that their custom format be used by Service Manager when printing service tickets.

When you create service ticket formats of your own design, you may specify which pieces of service call information (data fields) to show on your service ticket, and exactly how to arrange the information on the ticket.

Usually, you would follow these steps to create a new service ticket design:

1. Use the function *Print grid* to print a character-by-line grid on top of your new service ticket design.

2. Use the *Enter* (ticket formats) function to describe the general appearance of your service ticket, and then to choose the fields that you want on the service ticket along with the position where you want them to print.

3. Use *List specifications* to document your new service ticket layout and to highlight any problems in your design.

4. Use *Print sample ticket* to test your new service ticket.

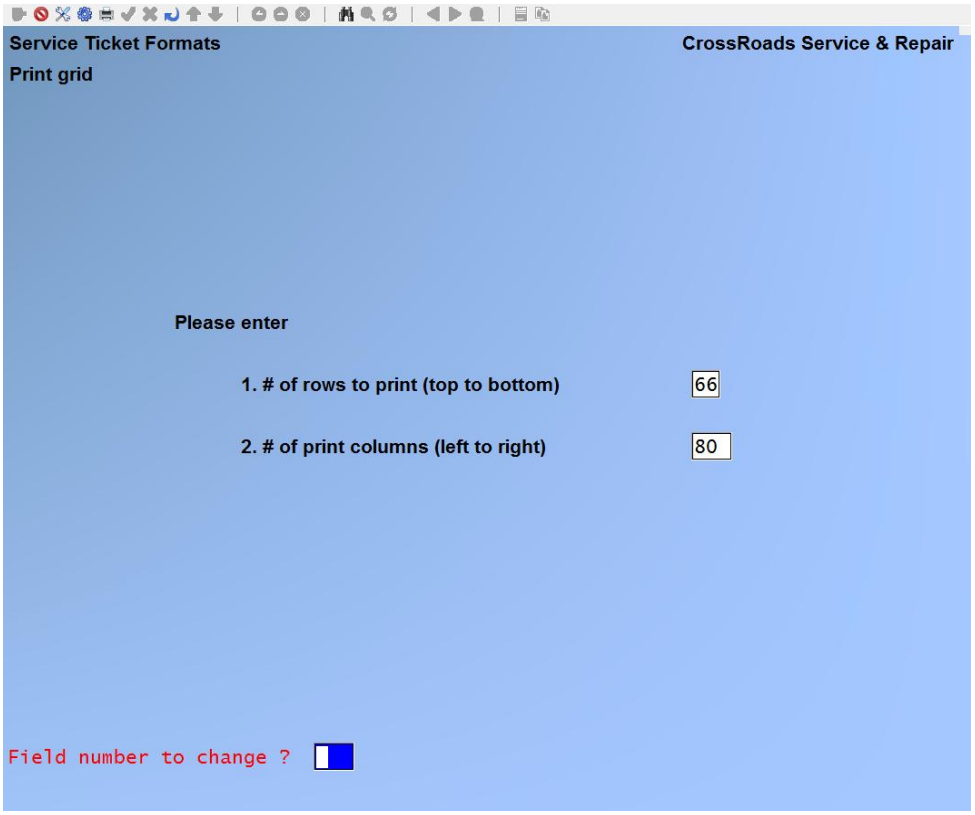
After your new design is looking as you intended, you can assign it for printing service calls either in “immediate mode” (see the chapter on setting up the Service Manager control information), “batch mode’ (selected at the time of printing) or both.

When you want to create another service ticket, if it is similar to an existing one that you have already designed, you can use *Duplicate and rename* to copy the existing one to a new service ticket layout. Then use *Enter* (service tickets) to edit your copy to create a new design.

### Printing a location grid

From the second page of the S/M main menu, select *Service ticket formats→ Print grid*.

Although *Print grid* is not the first item on the menu, it is normally the first function to use when you begin designing a new service ticket. A location grid consists of column and row markers printed on top of one of your service tickets so that you can use it as a design aid while programming the detailed layout of the service ticket.




Use the location grid as a worksheet to help you to establish the exact location, in terms of row and column, of each field and piece of text that you intend to print on your new service ticket format. Mark the positions of your fields and text on the grid,

and then later, you can use it as a guide when entering the service ticket layout.

Enter the following information:

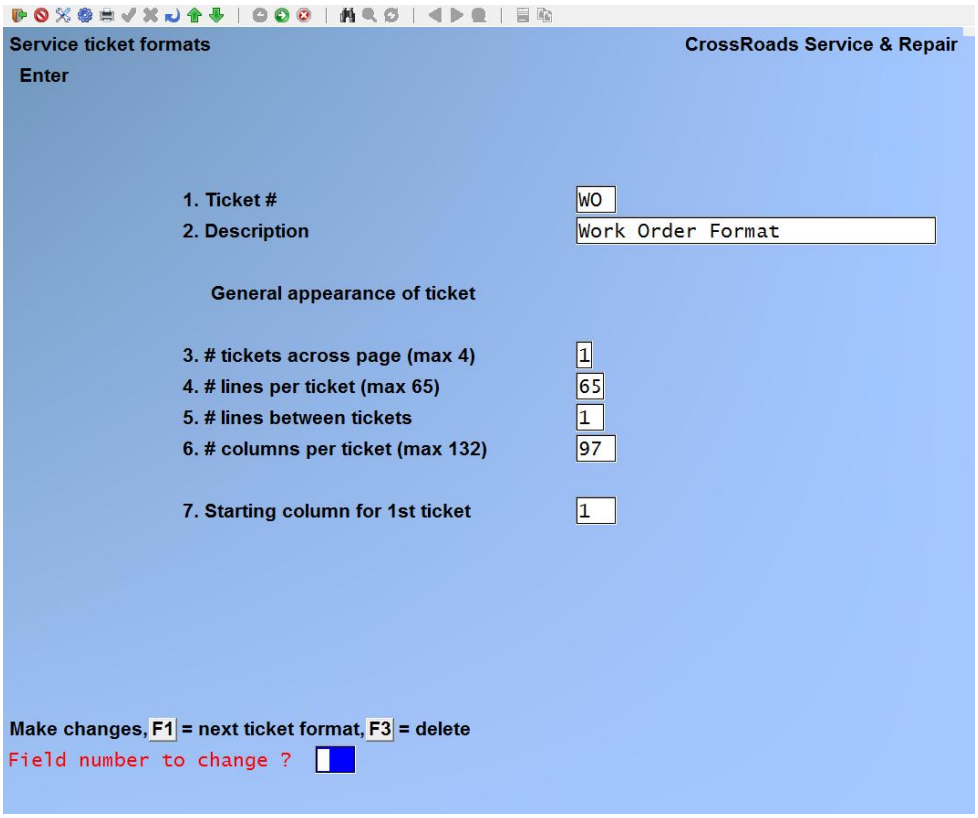
1. **# of rows to print (top to bottom)**
   Enter the number of rows (up to 99) you want to print on the grid, or press [**F1**] to specify 66 rows for standard 8.5 x 11.0 inch paper.

2. **# of print columns (left to right)**
   Enter the number of columns (up to 132) you want to print on the grid, or press [**F1**] to specify 80 columns for standard 8.5 x 11.0 inch paper.

Then, insert your service ticket form in the printer and follow the screen instructions.

### Entering (service ticket formats)

This function allows you to enter all of the specifications needed to define the size of your service tickets, the number of service tickets across the printer sheet, and which service call data fields you want to print on the service ticket. To aid you in answering some of the questions in the following screens, have at hand the location grid which you have printed over top of your service ticket design. From the second page of the S/M main menu, select *Service ticket formats→Enter*.



On this screen, you identify a specific service ticket format with a number and a description, as well at its general appearance.

From this screen you can work with both new and existing service ticket formats. If a service ticket format has already been entered for the service ticket format # you specify, it will appear and be available for changes or deletion. If the service ticket format # you specify is new, you will automatically be placed in enter mode.

Enter the following information:

1. **Ticket #**
   Enter up to 6 alphanumeric characters to define a unique overage type, or press [F1] to scroll through the overage records already on file.

2. **Description**
   Enter a description for the overage type being added, up to 25 alphanumeric characters.

3. **# tickets across page (Max 4)**
   Enter the number of service tickets to print across the page, up to 4 tickets.

4. **# lines per service ticket**
   Enter the number of lines (rows) to print on a service ticket up to 65. Note: 1 line per 8.5 x 11 inch page is reserved for inter-ticket printing.

5. **# lines between tickets**
   Enter the number of lines (rows) to skip between service tickets. (For most service ticket formats this will be 1 line.)

6. **# columns per service ticket (Max 132)**
   Enter the number of columns (at 10 characters per inch) to print for a service ticket, up to 132 columns.

7. **Starting column for 1st ticket**
   Enter the starting column for the first service ticket. This column number will determine how far from the left the printing will start on you service ticket print sheet.

8. **Starting column for 2nd ticket**
   This field only appears if you specified (in field 3, above) that more than one service ticket is to be printed across the sheet.

   Enter the starting column for the second service ticket. This column number must be at least the starting column for the first service ticket, plus the number of columns per service ticket (field 6, above), plus 1.

9. **Starting column for 3rd ticket**
   This field only appears if you specified (in field 3, above) that more than two service tickets are to be printed across the sheet.

   Enter the starting column for the third service ticket. This column number must be at least the starting column for the second service ticket, plus the number of columns per service ticket (field 6, above), plus 1.

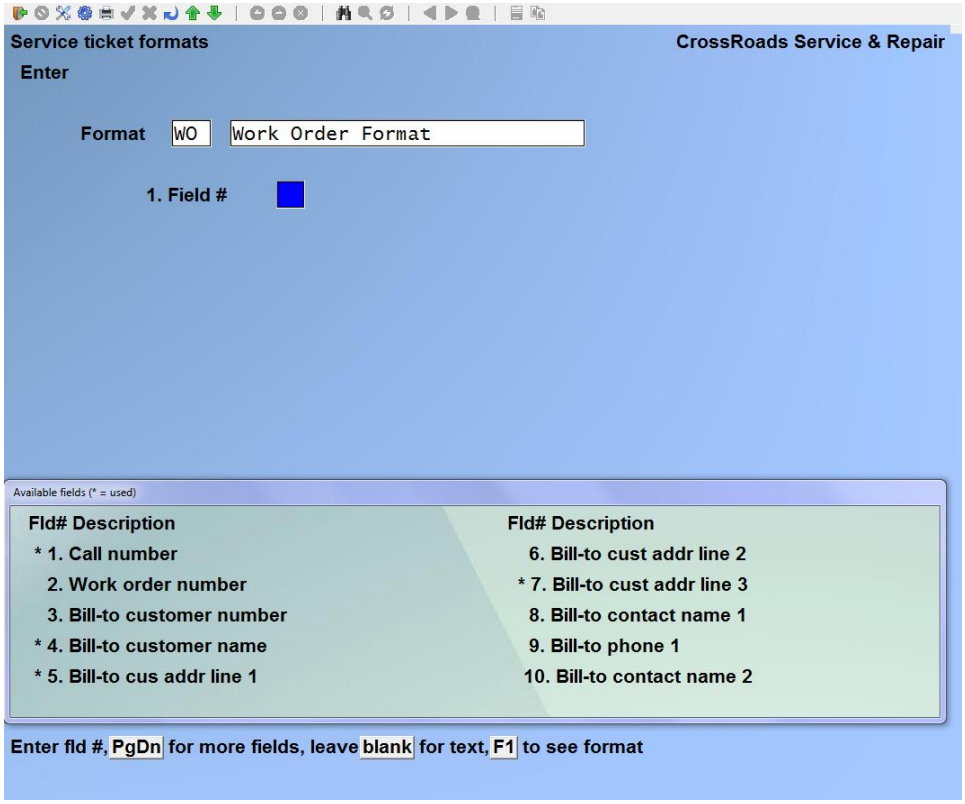
10. **Starting column for 4th ticket**
    This field only appears if you specified (in field 3, above) that four service tickets are to be printed across the sheet.

    Enter the starting column for the fourth service ticket. This column number must be at least the starting column for the third service ticket, plus the number of columns per service ticket (field 6, above), plus 1.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**] to proceed with your change or press [**F3**] to delete the entire record.

When you are finished making changes, press [**ENTER**].

At *View/change ticket format ? N* Type Y, [**ENTER**] to proceed with additions/changes to the service ticket format.



Enter the following information:

1. **Field #**
   Enter the field that you want to select for the service ticket or use one of the options referred to at the bottom of the display:

   [**ENTER**] To enter a piece of text - - explained later in this chapter.

   [**F1**] To see a picture of your service ticket format on the screen, also explained later in this chapter.

   [**PgDn**] To scan through the list of data fields available to you.

   You will "build" each custom service ticket format from a combination of text and data. The test is, of course, static. You specify a text string and where you want it placed on the form, and that is where it will be printed.

   Data fields are different than text in many ways. Consider the following:

   - There are fifty-nine (59) pre-defined data fields available for your use. They are shown ten-at-a-time in a display window at the base of the ticket format *Enter* screen. Press [**PgUp**] or [**PgDn**] to view alternate groups of ten (10) fields. For your reference, a directory of all 59 is listed on the next page.

   - Like text fields, you specify *where* you want data fields placed on your form. Unlike static text, however, the data fields are "live". That means their size may vary as their live value varies … adapting to this is taken care of as you enter specifications for each data field.

   - There are three (3) types of data fields you may encounter: alphanumeric, numeric and date.

**Alphanumeric** fields may contain any mixture of letters, numbers, and special symbols. When you invoke an alphanumeric field, you are shown its maximum length and asked how much of it you want printed. You are also asked how to justify it in the space provided.

**Numeric** data fields may contain numbers, decimal points, commas and a minus sign of parentheses to denote negative value. When you invoke a numeric field, you are asked to specify the number of places to reserve on the right and the left of the decimal point (if there is one), whether or not to use commas to delineate thousands, whether to print zero or blank if the value is indeed zero, and which symbol to use for a negative value.

**Date** fields contain the option to print in any one of five (5) styles that consume from

5 to 18 characters. When you have made a choice, a sample of that style will be displayed for your review.

## Available Data Fields

1. Call number
2. Work order number
3. Bill-to customer number
4. Bill-to customer name
5. Bill-to cust addr line 1
6. Bill-to cust addr line 2
7. Bill-to cust addr line 3
8. Bill-to contact name 1
9. Bill-to phone 1
10. Bill-to contact name 2
11. Bill-to phone 2
12. Service-at location number
13. Service-at location name
14. Service-at loc addr line 1
15. Service-at loc addr line 2
16. Service-at loc addr line 3
17. Service-at contact name 1
18. Service-at phone 1
19. Service-at contact name 2
20. Service-at phone 2
21. Bill type code
22. Bill type description
23. Call type code
24. Call type description
25. Priority code
26. Response time promised
27. Manufacturer's ID
28. Manufacturer's name
29. Model number
30. Model description line 1
31. Model description line 2
32. Model description line 3
33. Serial number
34. Equipment type number
35. Equipment tag number
36. Equipment category code
37. Equipment category desc
38. Equipment dealer name
39. Equipment dealer city
40. Equipment dealer state
41. Equipment date-of-purchase
42. Reason
43. Remark
44. Agreement number
45. Purchase order number
46. Terms code
47. Terms description
48. Travel zone number
49. Map coordinates
50. Travel note line 1
51. Travel note line 2
52. Travel note line 3
53. Travel note line 4
54. Travel note line 5
55. Service rep ID
56. Service rep name
57. Open date
58. Open time
59. Dispatch date
60. Dispatch time

2. **Row**
   Specify the row in which to print this text field.

3. **Column**
   Specify the starting column in which to print this text field.

4. **Text**
   **Note:** When you are positioned at this field, you will be given a working space of forty (40) characters. Underneath the blank working space will be a column indexing grid keyed to the starting column number you supplied in field 3, above. At this field, enter the exact text you want to appear on the service ticket. If, in the future, you require more than forty (40) character positions, define another text file adjacent to this one.

5. **Suppress ?**
   Answer [Y] if you want the text to be suppressed (not printed) when some data field (that you will specify next) is zero or blank. If you want this text to always print, answer [N].

At *Field number to change ?* press [**ENTER**] to bring up a blank screen for the next entry - - which in our example, is also a text field.

**Print sample ticket**

From the second page of the S/M main menu, select *Service ticket formats→ Print sample ticket*. On the screen that appears, enter the ticket format to be printed. Follow the screen instructions.

### Duplicate/rename

From the second page of the S/M main menu, select *Service ticket formats→ Duplicate/rename*. On the screen that appears, enter the format ID to copy from and the format ID to copy to. Follow the screen instructions.

### List specifications

From the second page of the S/M main menu, select *Service ticket formats→ List specifications*. On the screen that appears, enter the range of ticket specification lists to print. Follow the screen instructions.

Date 05/21/13 Time 16:55:32 CrossRoads Service & Repair User: SSI Report #3378 Page 0001

**SERVICE TICKET LAYOUT EDIT LIST**

| #-lines per-ticket | #-cols per-ticket | #-tickets across-page | Beg-col 1st-ticket | Beg-col 2nd-ticket | Beg-col 3rd-ticket | Beg-col 4th-ticket |
|---|---|---|---|---|---|---|
| 65 | 97 | 1 | 1 | | | |

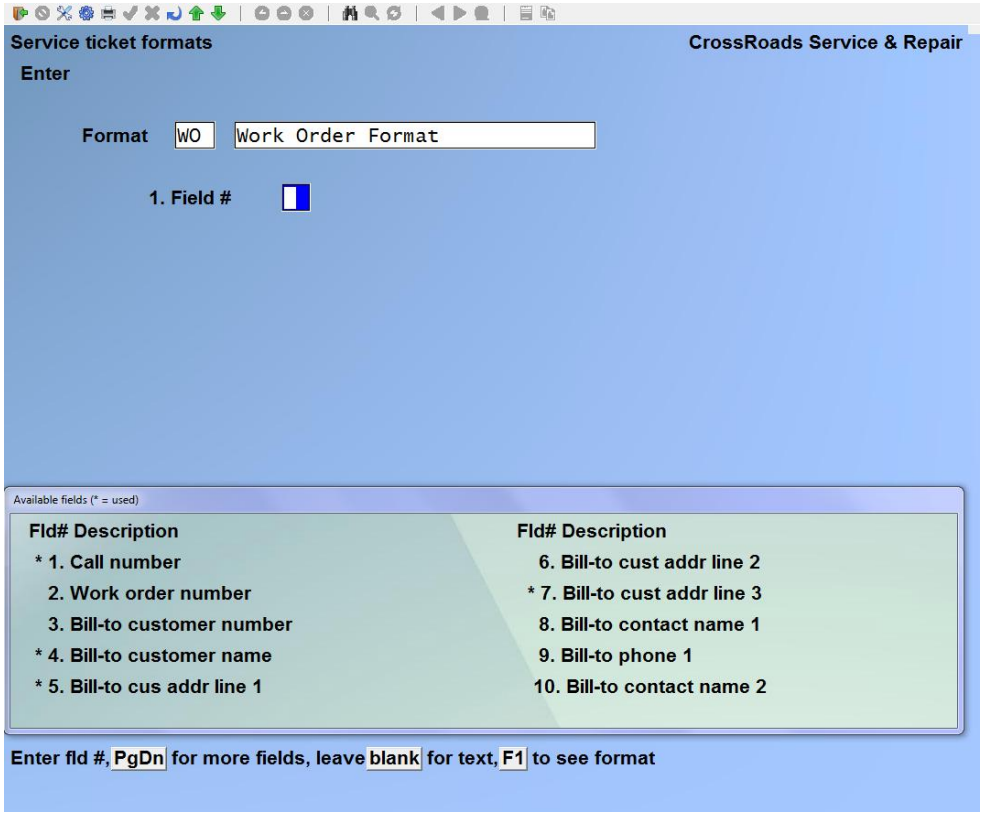
Ticket #WO Work Order Format
========== Work Order Format

| Fld-# | Description | Row | Col | Length | Type | Format |
|---|---|---|---|---|---|---|
| 57 | Call open date | 1 | 3 | 8 | Date | 09/30/99 |
| 19 | Service-at contact name 2 | 1 | 16 | 15 | Alpha | Justify left |
| 20 | Service-at phone 2 | 1 | 31 | 14 | Alpha | Justify left |
| 45 | Purchase order number | 1 | 46 | 10 | Alpha | Justify left |
| 4 | Bill-to customer name | 1 | 57 | 25 | Alpha | Justify left |
| 1 | Call number | 1 | 66 | 8 | Alpha | Justify left |
| 1 | Call number | 1 | 87 | 8 | Alpha | Justify left |
| | ** TEXT ** | 2 | 22 | 28 | Text | S E R V I C E R E Q U E S T |
| 5 | Bill-to cus addr line 1 | 2 | 57 | 25 | Alpha | Justify left |
| | ** TEXT ** | 2 | 60 | 5 | Text | Call: |
| 30 | Model description line 1 | 2 | 86 | 11 | Alpha | Justify left |
| 7 | Bill-to cust addr line 3 | 3 | 57 | 25 | Alpha | Justify left |
| 31 | Model description line 2 | 4 | 86 | 11 | Alpha | Justify left |
| 13 | Service-at location name | 5 | 57 | 25 | Alpha | Justify left |
| 14 | Service-at loc addr line 1 | 6 | 57 | 25 | Alpha | Justify left |
| 29 | Model number | 7 | 42 | 14 | Alpha | Justify left |
| 16 | Service-at loc addr line 3 | 7 | 57 | 25 | Alpha | Justify left |
| 33 | Serial number | 8 | 70 | 15 | Alpha | Justify left |

## Service Ticket Tutorial

To learn the use of the service ticket format function, we will develop a WO service ticket.

To begin, print out a service ticket using the GTI format. Next, print a "grid" over top of the service ticket and you are ready to begin. The first element we will use is text:




1. **Field #**
   Press [**ENTER**] at field 1:

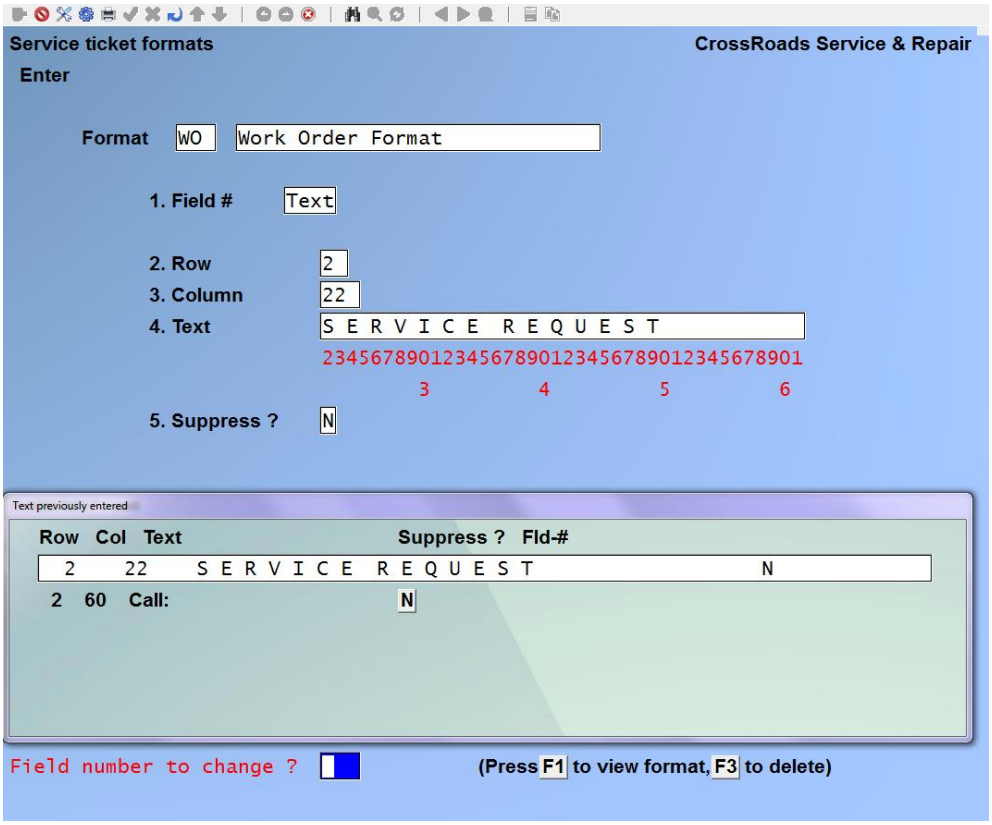
2. **Row**
   Specify the row in which to print this text field.
   Type: **2**

3. **Column**
   Specify the starting column in which to print this text field.
   Type: **22**

4. **Text**
   **Note:** When you are positioned at this field, you will be given a working space of forty (40) characters. Underneath the blank working space will be a column indexing grid keyed to the starting column number you supplied in field 3, above.

At this field, enter the exact text you want to appear on the service ticket. If, in the future, you require more than forty (40) character positions, define another text file adjacent to this one.
Type: **S E R V I C E  R E Q U E S T**

5. **Suppress?**
   Answer [Y] if you want the text to be suppressed (not printed) when some data field (that you will specify next) is zero or blank. If you want this text to always print, answer [N].
   Type: **N**

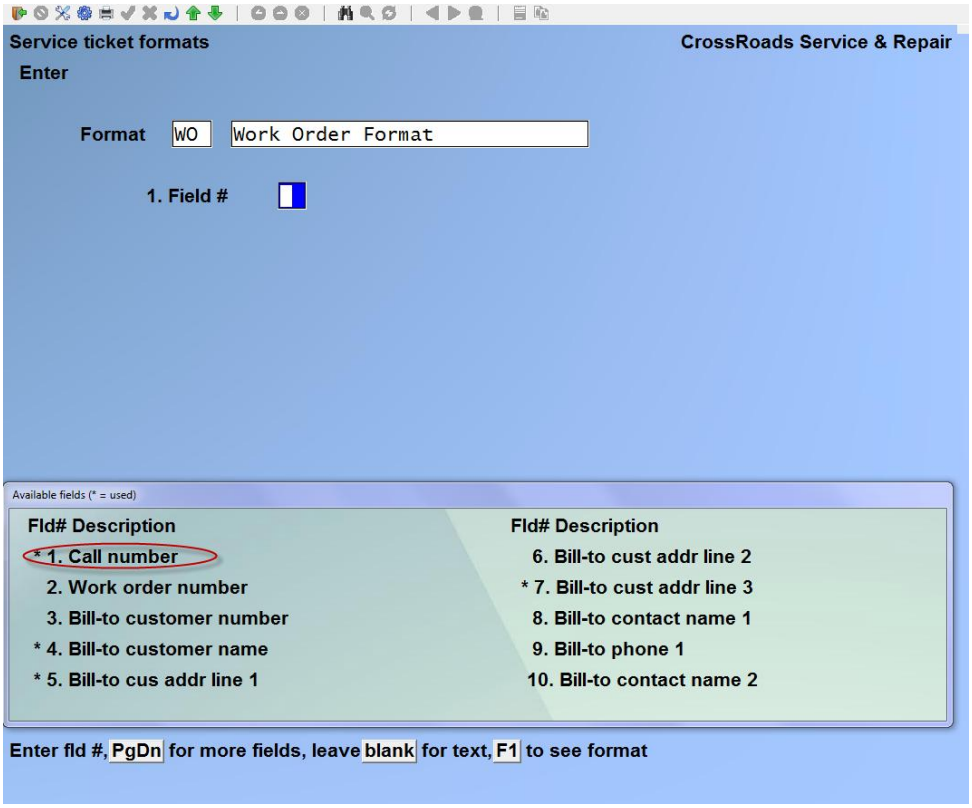



At *Field number to change ?* press [**ENTER**] to bring up a blank screen for the next entry – - which in our example is also a text field.

Enter another text field with the following data:

1. Field # **Text**
2. Row **2**
3. Column **60**
4. Text **Call:**
5. Suppress? **N**

The next field required for our example is the call number data field, an alphanumeric field. When you are positioned at a blank screen type **1** at **"FIELD NUMBER"**:




2. **Row**
   Specify the row in which to print this data field.
   Type: **2**

3. **Column**
   Specify the starting column in which to print this text field.
   Type: **66**

4. **Length to print**
   **Note:** When you are positioned at this field, you will be shown the maximum size - - in characters - - that this field takes in storage. In this case, the maximum is eight (8).

   Specify any number of characters from one (1) to the maximum. For our example, we will take all 8. However, alphanumeric character positions are numbered from the left starting with "1". If we were faced with a 12 character field containing ABCDEFGHIJKL, and we specified 6 characters, we would actually get ABCDEF …

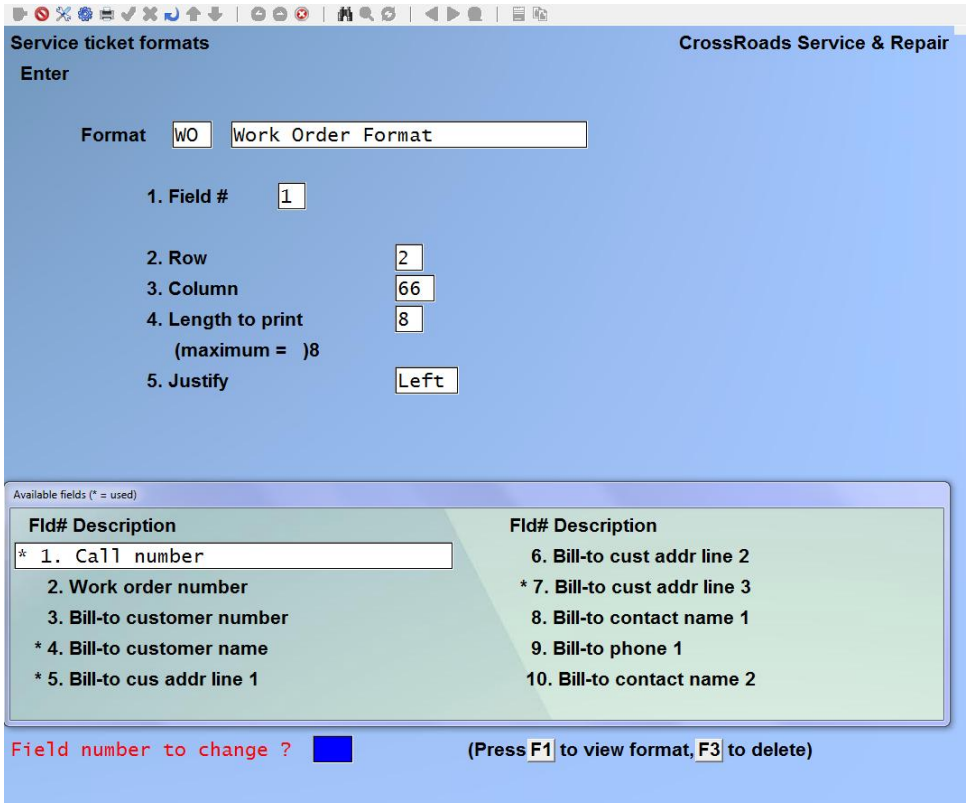
the rest of the field would not print.

**Type: 8**

5. **Justify**
   The term "justify" describes how to position the data characters in the space provided. When "left justified" the data will be positioned so that the first non-blank character is aligned with the left-hand margin of the space. When "right justified" the data will be aligned with the right-hand margin. Justification of "none" will cause the data to be printed exactly as it is retrieved from storage.

   **Type: L**

The result is:




At *Field number to change ?* press [**ENTER**] to bring up a blank screen for the next entry. Continue entering specifications to complete the WO ticket format. You will eventually reach the field for the service call open date. Enter the following data:

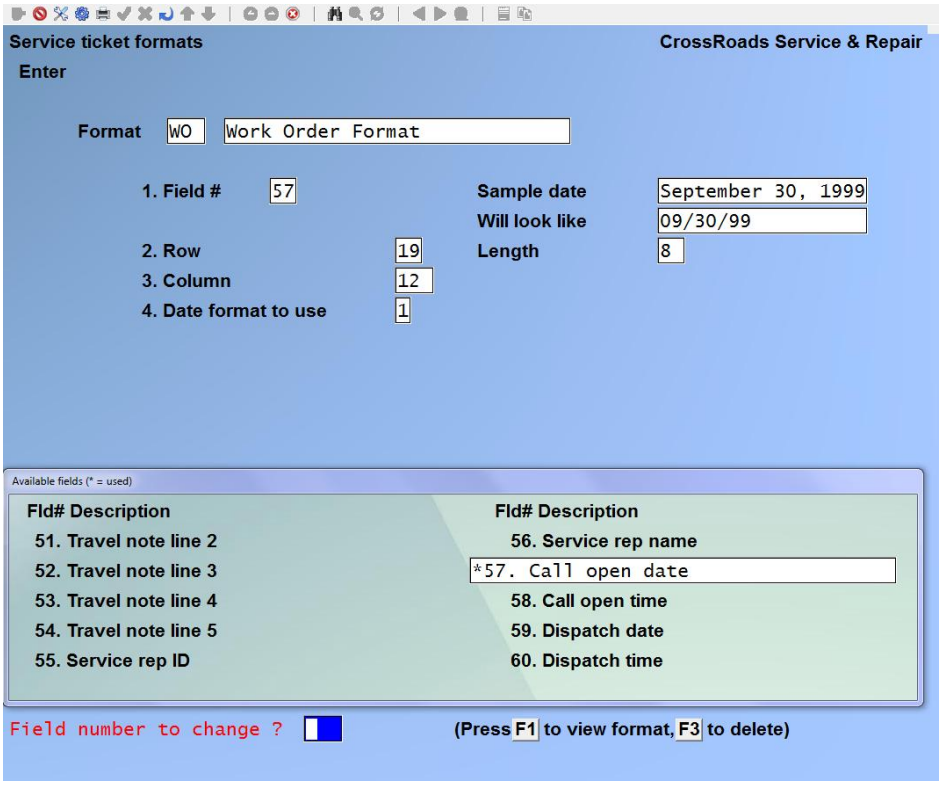
1. **Field #**
   When you are positioned at this field, press **[PgDn]** until you can see the predefined date field *Call Open Date* displayed. Enter the field number here.
   Type: **57**

2. **Row**
   Specify the row in which to print this text field.
   Type: **19**

3. **Column**
   Specify the starting column in which to print this text field.
   Type: **12**

4. **Date format to use**
   **Note:** When you are positioned at this field, you will be shown the five alternate date styles at the base of the screen:
   1 = MM/DD/YY  2 = MM/DD  3 = DD-MM-YY  4 = DD-MMM  5 = Month fully spelled
   Type: **1**

You will now see:




At *Field number to change ?* press [**ENTER**] to bring up a blank screen for the next entry.

To END this function, press [**Tab**] at the menu selection.

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# Chapter 20

# Overage Charge Data

## Introduction

(If you answered N to *Track equipment usage* in the Service Manager control file, skip this chapter entirely as this selection will not be available.)

The Overage File maintenance transactions used to create overage levels and overage charge amounts for billings related to metered equipment such as office copiers. When you are entering the equipment on a service agreement, the system will prompt for an overage code. The overage levels and level charges specified for that code will then be used in the Agreement cycle billing transaction to generate the proper bill amount.

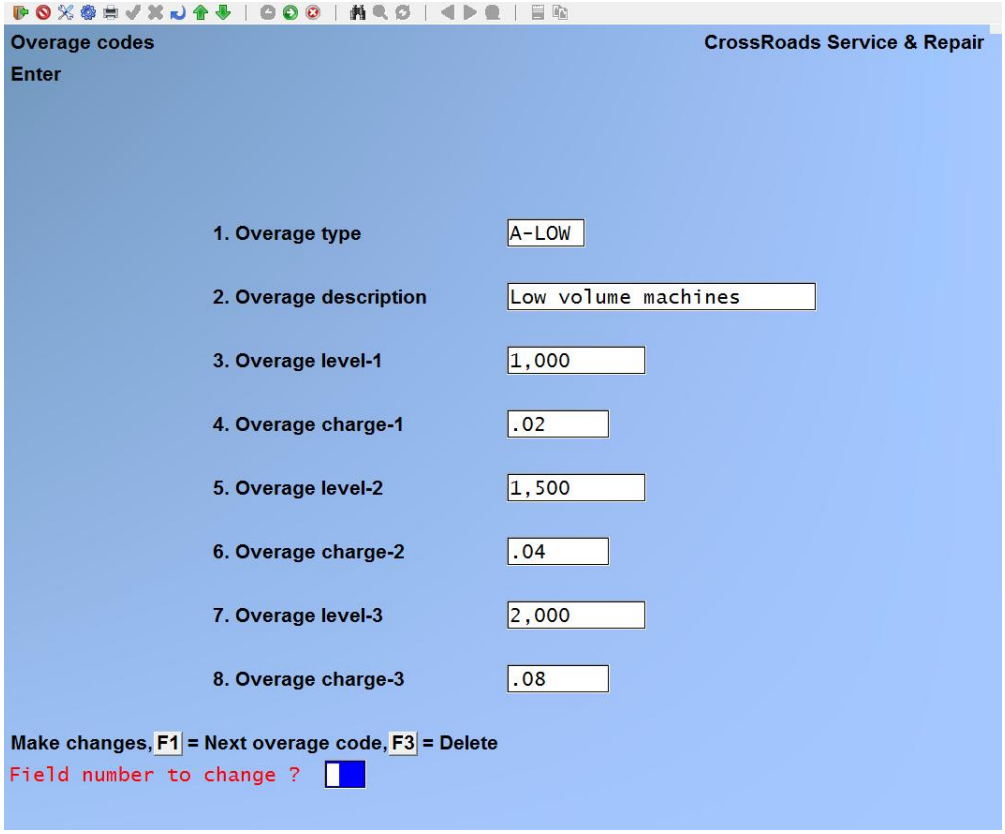
## To begin

From the second page of the S/M main menu, select *Overage charge data→ Enter*. On the screen displayed you can add, change and Overcharge charge types .

## Entering Overcharge charge types

Enter the following information for each Overage charge type; from this screen you can work with both new and existing Overage charge types. If data has already been entered for the overage charge type you specify, it will appear and be available for changes or deletion. If the overage charge type you specify is new, you will automatically be placed in enter mode.

*See next page for illustration.*




**Overage type**
Enter up to 6 alphanumeric characters to define a unique overage type, or press [**F1**] to scroll through the overage records already on file.

**Overage description**
Enter a description for the overage type being added, up to 25 alphanumeric characters.

**Overage level**
Enter the base overage level, up to 5 numeric digits.

**Overage charge**
Enter the amount to be charged for each usage over the base level. The system will multiply the number of over uses by the amount specified here to arrive at the overage charge. Enter the amount in dollars and cents in the range of 0.0001 to 999.0000.

**Overage level-2**
Enter the next overage level, if applicable, up to 5 numeric digits. This entry must be in the same format as and greater than the overage level specified.

**Overage charge-2**

Enter the amount to be charged for each usage over the overage level-2. The system will multiply the number of over uses by the amount specified here to arrive at the overage charge. Enter the amount in dollars and cents in the range of 0.0001 to 999.0000.

**Overage level-3**
Enter the next overage level, if applicable, up to 5 numeric digits. This entry must be in the same format as and greater than the overage level-2 specified.

**Overage charge-3**
Enter the amount to be charged for each usage over the overage level-3. The system will multiply the number of over uses by the amount specified here to arrive at the overage charge. Enter the amount in dollars and cents in the range of 0.0001 to 999.0000.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Changing Overage charge data**
To change Overage charge data, bring up the overage type that you want to change and proceed with your change.

**Deleting Overage charge data**
To delete an Overage charge data type, bring up the overage type that you want to delete and press [**F3**] to delete.

**Printing Overage charge data list**
From the second page of the S/M main menu, select *Overage charge data→ Print*. On the screen that appears, enter the range of Overage charge types to print. Follow the screen instructions.

*See next page for sample report.*

Date:05/22/13 Time:11:35:07 CrossRoads Service & Repair User: SSI Report #3380 Page 0001

## OVERAGE CHARGE FILE LIST

Overage type range: "First" to "Last"

| Type | Description | Level-1 On amt over | Level-1 Charge | Level-2 On amt over | Level-2 Charge | Level-3 On amt over | Level-3 Charge |
|---|---|---|---|---|---|---|---|
| A-LOW | Low volume machines | 1,000 | .0200 | 1,500 | .0400 | 2,000 | .0800 |
| B-MED | Medium volume machines | 10,000 | 1.0000 | 15,000 | .0200 | 20,000 | .0400 |
| C-HIGH | High volumn machines | 50,000 | .0050 | 75,000 | .0100 | 100,000 | .0200 |

3 overage types on file

-- End of report --

# Chapter 21

# Customer Equipment

**Introduction**

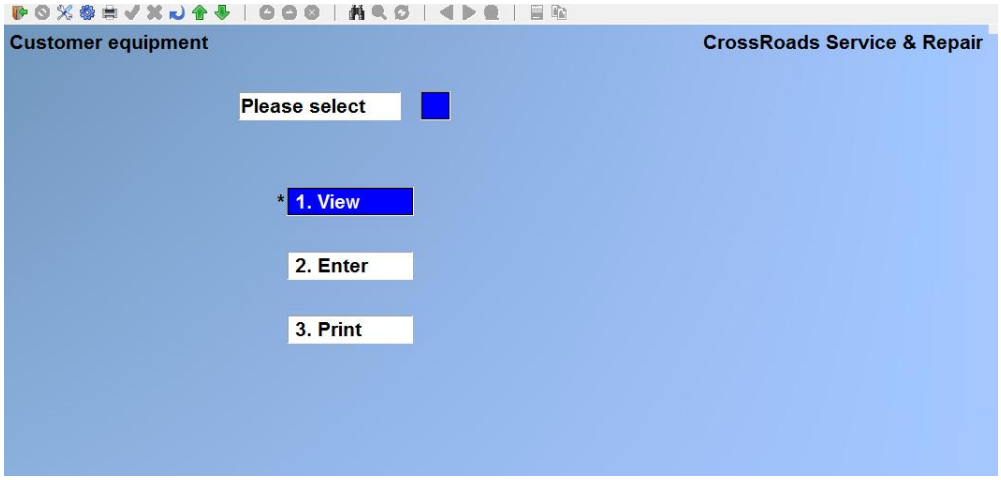
The Customer equipment file is a primary file of the Service Manager system. It contains the data necessary to answer the questions: "Who owns what? and Where is it located?". This chapter describes the functions used to view this file, enter records into it and print its contents. In the Customer equipment file, one record of information exists for each piece of equipment that you service. Information stored includes the customer number (i.e. Who owns the equipment?), the service location number (i.e. Where is the equipment – physically?) and the equipment model, serial and tag numbers. Also included are key dates, warranty information, the preventive maintenance scheduling cycle, etc. An accurate, up-to-date customer equipment file won't magically appear overnight, but you should develop the office procedures and attitudes that will initially build and constantly improve the contents of this important file. It facilitates all of the following functions:

- Opening new service calls with the minimum number of keystrokes
- Entering new service agreements or adding to existing ones
- Automatically tracking warranty coverage and expiration
- Scheduling preventive maintenance work
- "Finding" equipment by model number for product recalls or add-on marketing
- Storing "seller dealer" information for warranty forms

The customer equipment file is considered a permanent reference file. Its purpose is to fully document the equipment in the field, attaching warranties and service agreements as appropriate but treating them as separate items. In other words, the warranty coverage will someday "run out". The agreement will someday expire and the customer may choose not to renew it. However, unless the equipment is physically destroyed, the equipment file entry documenting its existence should survive as a permanent record.

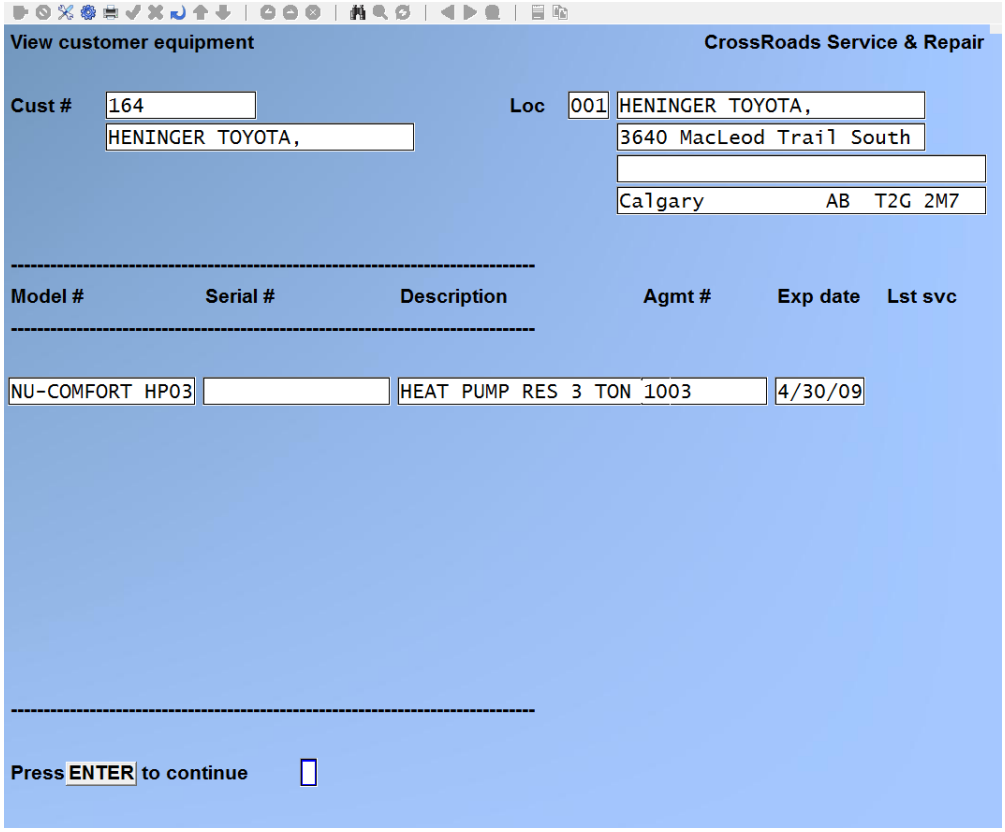
**To begin**

From the first page of the S/M main menu, select *Customer equipment*. On the screen displayed you can view or enter customer equipment or print a list of customer equipment on file.




**Viewing Customer equipment**

Select View on the Customer equipment menu:




**Cust #**
Enter the customer number up to 12 alphanumeric characters or press [**F1**] to scroll through the customers on file or press [**ENTER**] to search by customer name. You may enter any portion of the customer's name and press [**ENTER**]. The system will display the first customer record that matches the characters entered. Follow the instructions at the bottom of the screen.

**Loc:**
Enter either the customer's service-at location number, up to 3 alphanumeric characters or press [**F1**] to scroll through the locations on file.

The system will display the equipment data. Press [**ENTER**] to continue.

After you have reviewed the equipment information, press [**ENTER**]. The system will position the cursor back at the service-at location field. You may press [**F1**] to display the next locations for this customer or press [**TAB**] to return to the customer number field.

## Entering Customer equipment

This function is used to enter, modify and delete customer equipment records. Note, however, that equipment cannot be deleted if it is included on a service agreement.

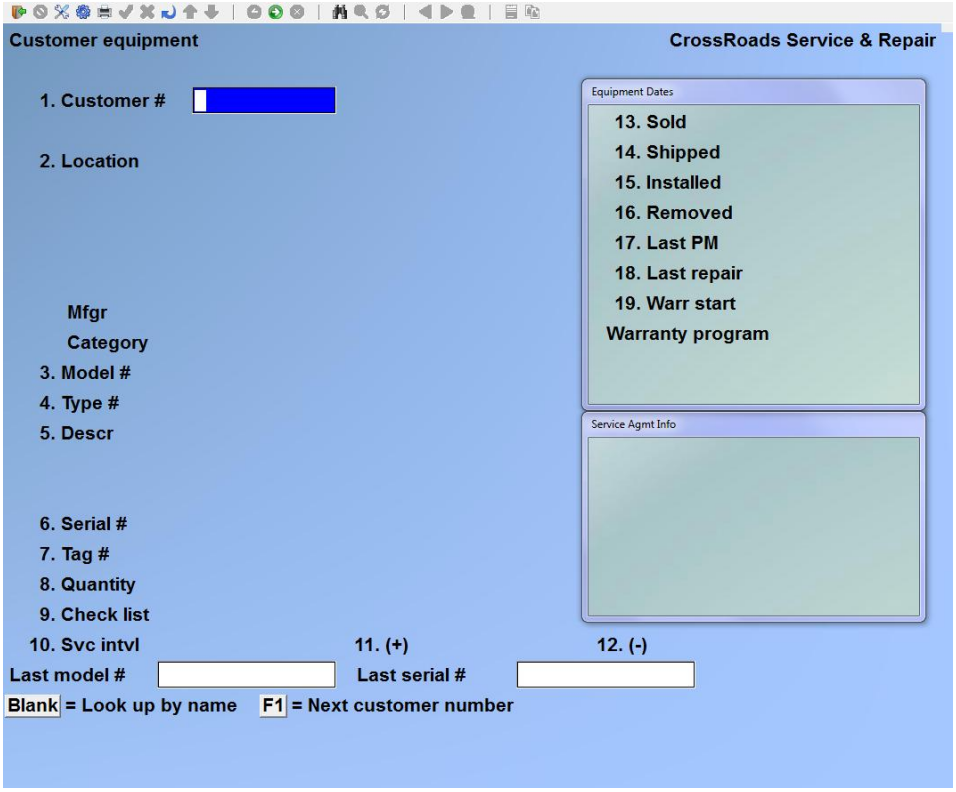
Select Edit on the Customer equipment menu:

From this screen you can work with both new and existing equipment records. If you are changing or inquiring into an existing equipment record, you must first display it.

- Press [**F1**] at field 1 to display each customer number/customer name pair in order of customer number, or
- Press [**ENTER**] at field 1 to advance to the customer name space. You may now either use [**F1**] to enter a portion of the customer name to search for a match.
- When the customer number and name are established, use [**F1**] at field 2. *Location* to view each existing equipment record in turn. Equipment records will be displayed in the order of Location number/Model number. By using the [**F1**] key to display the record of interest, the screen will already be set up in "change/inquire" mode.

If you plan to add new equipment record, used the following procedure:

- Identify the customer in Field 1 by using number or name searches.
- Identify the customer service location for the new equipment record at Field 2. To do so, either press [**F2**] until the location you want is displayed or enter the correct location number. The cursor will advance to Field 3, and you will automatically be in "add" mode.




## Customer

Enter the customer number up to 12 alphanumeric characters or press [**F1**] to scroll through the customers on file or press [**ENTER**] to search by customer name. You may enter any portion of the customer's name and press [**ENTER**]. The system will display the first customer record that matches the characters entered. Follow the instructions at the bottom of the screen.

## Location

Enter either the customer's service-at location number, up to 3 alphanumeric characters or press [**F1**] to scroll through the locations on file.

## Model #

You may use four alternate means to specify a model of equipment that has been previously defined to the system.

- Enter the model number of the equipment record being added, up to 15 alphanumeric characters
- Use [**F1**] to scroll through the list of defined model numbers on file
- Press [**ENTER**] to search by model name. You can enter any portion of the model name and press [**ENTER**]. The system will display the first model record that matches the characters entered. Follow the instructions as the bottom of the screen.
- Press [**ENTER**] to search by model name and use [**F1**] to scroll through the

list of defined models on file alphabetically, by description.

If you have entered a model number that has already been defined in your model data file, the description will automatically be filled in and you will be asked "RIGHT MODEL? Y". Press [**ENTER**] to accept the model data and advance to the serial number field. Assigning pre-defined model designations to customer equipment is the suggested method of working. If you're unsure of the how to set up models, see Chapter 18, *Model Data*.
If you have entered the number for a new model of equipment, the following message will appear. "MODEL NOT ON FILE, DO YOU WISH TO ADD IT? Y". Press [**ENTER**] to add the model and advance to the description field. As you enter the data for *this* equipment record, a data record will automatically be set up in the model file. For a complete explanation of equipment models, see Chapter 18, *Model Data*.

**Type #**
If this model of equipment carries a type number, enter it here, up to 25 alphanumeric characters. If you specified a pre-defined model number, the type number will be supplied by Service Manager.

**Descr**
Enter the description of the equipment or service being added to the service agreement, up to 2 lines of 25 alphanumeric characters each. If you specified a pre-defined model number, the description will be supplied by the system.

**Serial #**
There are three choices for the serial # field.

- You may enter a unique identifier for the equipment being added to the service agreement, up to 15 alphanumeric characters. This may be a serial number, a code, or anything else that uniquely identifies the item being serviced.
- You may leave this field blank. That's a signal to Service Manager that there is only one of this model at this site, but you do not know its serial #. If you enter a unique serial number, or leave the field blank, then you must enter a "III in the next field, quantity.
- Enter an asterisk (".") in the serial number field. The asterisk is a signal to Service Manager that there are more than one of the specified model at this site, and that you do wish to track them individually by serial number. You will then be permitted to enter a quantity greater than I.

**Tag #**
A *Tag number* is an identifier that you and your customer use to specify a particular

piece of equipment. It can be thought of as a serial number issued by *you* rather than by the manufacturer. In many ways it works like a serial number --for instance, you can search by *Tag number* when you open a service call.

**Quantity**
If you entered an asterisk (*) for the serial #, you may specify a quantity greater than 1. For all other entries to the serial # field, the quantity defaults to one.

**Checklist**
If there is a service check list associated with this item of equipment, enter the check list identifier you established using the *Maintain check list* transaction or press [**F1**] to scroll though the check lists on file. The system will automatically print the check list you assign whenever a Service Request is printed for this equipment.
If the equipment model number had already been defined using the *Maintain model data* function, then this field will be filled in automatically and the cursor will advance to the next field. If you are not familiar with check lists, see Chapter 12 *Maintain Check Lists*.

**Svc intvl (service interval)**
If this piece of equipment will be scheduled by you for preventive maintenance at certain intervals, enter the number of time units and the type of time units between servicing. The system allows from 1 to 999 days, weeks, months, or years. Service Manager uses this information to produce the *Service due* report and to provide a "Service Due Alert" on the screen during the call open function.
If the equipment model number had already been defined using the *Maintain model data* function, then this field will be filled in automatically and the cursor will advance to the next field.

**(+) Tolerance – Plus**
If you have entered a service interval in Field 10 above, you may also enter a plus and minus date tolerance to aid in optimized scheduling of preventive maintenance service calls. Data is entered into this field in exactly the same manner as Field 10. If you skipped Field 10, this field will be *N/A*.
If the equipment model number had already been defined using the *Maintain model data* function, then this field will be filled in automatically and the cursor will advance to the next field.

**(-) Tolerance – Minus**
For an understanding of this field, see Fields 10 and 11 above. Data is entered into this field in exactly the same manner as Fields 10 and 11.
If the equipment model number had already been defined using the *Maintain model data* function, then this field will be filled in automatically and the cursor will

advance to the next field.

**Sold date**
This is an optional information-only field that allows you to enter the date on which the unit was initially sold. It may be used as a marketing tool to help determine when the unit should be replaced.

**Shipped date**
This is an optional information-only field that allows you to enter the date on which the unit was shipped to its end-user. It may be find use as a marketing tool, or as a tracking parameter.

**Installed date**
This is an optional information-only field that allows you to enter the date on which the unit was initially put into place at your end-user's site.

**Removed date**
This is an optional information-only field that allows you to enter the date on which the unit was de-installed. It is used in situations where it is important to know that the unit was installed at this site at one time --but it is no longer present. It is an alternative to deleting the customer-equipment record when equipment is de-installed.

**Last PM date**
If you are adding existing equipment to the Service Manager system for the first time, enter the date on which the equipment last received preventive maintenance (PM) service. This date will be used as the basis for calculating the next service due date under the Service Manager system; in the future, this field will be automatically maintained by the Service Manager service history function.
If you do not know the last PM service date, leave the field blank and press [**ENTER**].

**Last repair date**
If you are adding existing equipment to the Service Manager system for the first time, enter the date on which the equipment last received corrective maintenance. This date will be used by Service Manager to calculate MTBF data; in the future, this field will be automatically maintained by the Service Manager service history function.
If you do not know the last REPAIR service date, leave the field blank and press [**ENTER**].

**Warranty start date**
This is an optional --but very important --field if you plan to track warranty coverage. It allows you to enter the date on which warranty coverage went into effect for this

unit. This field is used by Service Manager when it evaluates the warranty program assigned to this equipment. If you want Service Manager to track warranty coverage for you automatically --you must fill in this field!

**Warranty program (display only field)**
If a warranty program has been assigned to the displayed model number of equipment (see Chapter 17, *Warranty Programs,* and Chapter 18, *Model Data),* the warranty program code and description are displayed here. Otherwise this space is blank.

**Service agrmt info (display only window)**
If a piece of equipment on display is covered on a service agreement, data pertinent to that agreement is displayed here. Otherwise this space reads *NO AGREEMENT*. The agreement information displayed includes the agreement number, the bill type and description and the dates for the start and end of agreement coverage.

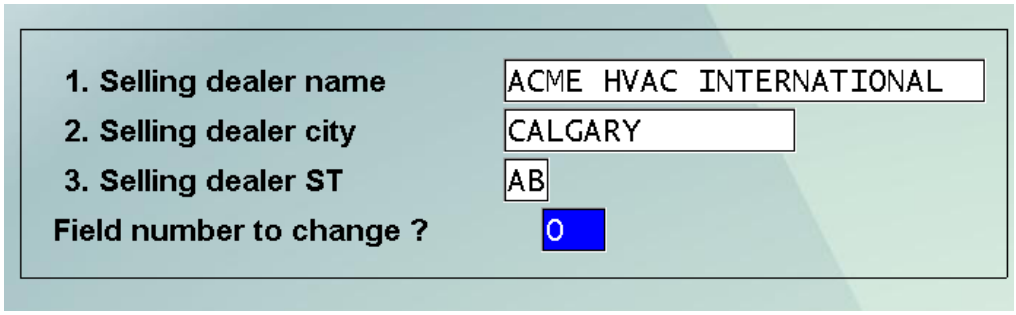
At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

Use the [**F2**] option to add "Selling Dealer Information".

If you are in change/inquire mode press [**F3**] to delete the equipment record displayed.
If you are in add mode, press [**ESC**] to abort the record.
When all changes have been made, press [**ENTER**] and the data screen for entry of the next equipment record is redisplayed.

**Entering dealer information**

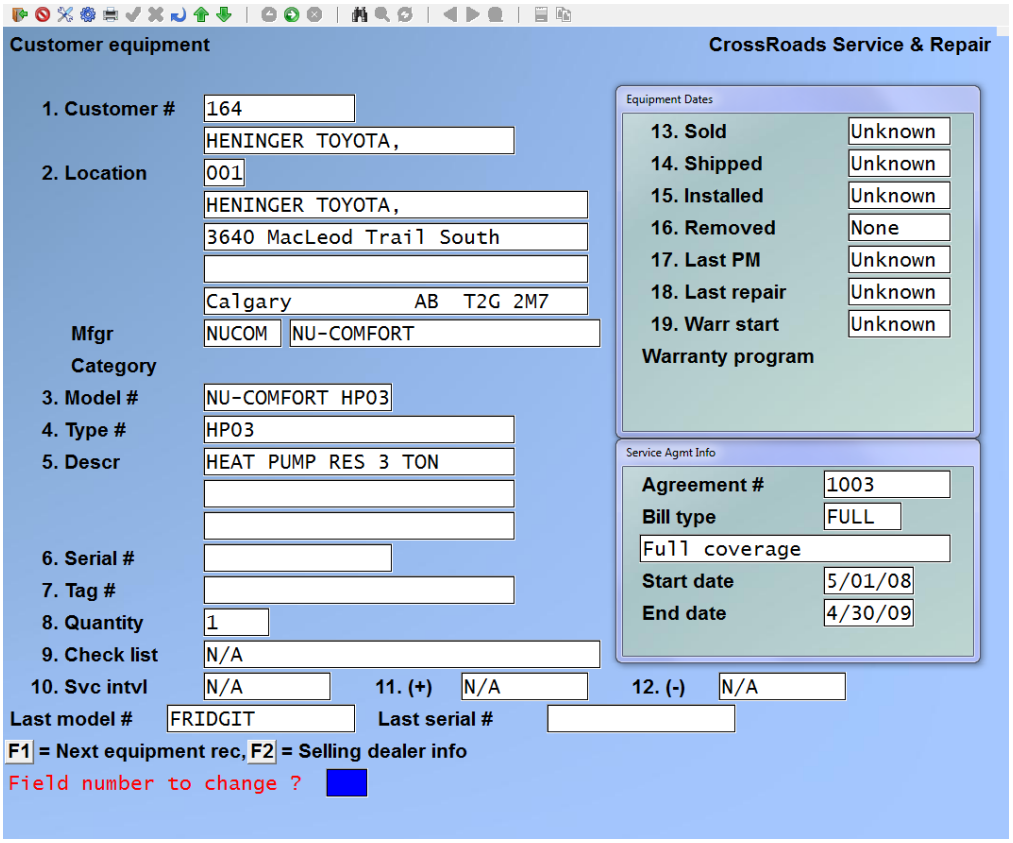
If you are going to print **National Appliance Retail Dealer's Association (**NARDA) warranty claim forms, you should enter the information for the dealer who sold the equipment. This information is optional. Press [**F2**] to display the Selling dealer information window.




1. **Selling dealer name**
   Enter up to 25 alphanumeric characters. The dealer's name will print on the

NARDA forms exactly as it appears here.

2. **Selling dealer city**
   Enter up to 15 alphanumeric characters. The dealer's city will print on the NARDA forms exactly as it appears here.
3. **Selling dealer state**
   Enter the 2 character code for the dealer's state or province.




At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

## Printing Customer equipment lists

Select Print on the Customer equipment menu. On the screen that appears, enter the range of customers whose equipment is to appear on the list. Follow the screen instructions.

*See next page for sample report.*

```
Date:05/22/13  Time:11:47:40                    CrossRoads Service & Repair              User: SSI  Report #3381   Page 0001
```

## CUSTOMER EQUIPMENT LIST

```
Model #         Description line-1            Quantity  Service interval  Warr strt  Date sold  Check list Check list description
                Description line-2 & 3       Agreement  Plus tolerance      Last PM  Shipped
                Type #                                  Minus tolerance   Last repr  Installed
                Serial #                                Tag number                   Removed
------------------------------------------------------------------------------------------------------------------------------
Location:       ** Not on file **                        Cust: 164            HENINGER TOYOTA,
                                                                              3640 MACLEOD TRAIL SOUTH,
                                                                              CALGARY          AL  T2G 2M7


FRIDGIT         ICE CREAM FREEZER                   1     30  Days        Unknown   Unknown   FRID40    FRIDGIT FI40 P.M. LIST
                                           1003          N/A              Unknown   Unknown
                FI40                                     N/A              Unknown   Unknown
                                                         No tag number              N/A

     1  record this location

------------------------------------------------------------------------------------------------------------------------------
Location: 001   HENINGER TOYOTA,                         Cust: 164            HENINGER TOYOTA,
                3640 MacLeod Trail South                                      3640 MACLEOD TRAIL SOUTH,
                Calgary          AB  T2G 2M7                                  CALGARY          AL  T2G 2M7

NU-COMFORT HP03 HEAT PUMP RES 3 TON                 1    N/A              Unknown   Unknown   N/A
                                           1003          N/A              Unknown   Unknown
                HP03                                     N/A              Unknown   Unknown
                                                         No tag number              N/A

     1  record this location

     2  records this customer



                                                  -- End of report --
```

# Chapter 22
# Maintain Service Agreements

**Introduction**
Service Manager provides agreement processing for equipment with or without usage meters (i.e., "click counters", such as found on office copiers).

The Service Manager system has two primary focal points: management of service calls, and management of long-term service agreements. This chapter addresses service agreements for metered equipment. By service agreement, we mean an extended term contract between you and your customer, whereby you agree to service one or more pieces of equipment for agreed upon pricing and terms. A service agreement may also be written to provide non-equipment related services --such as alarm monitoring or equipment leasing.

When you enter a service agreement into your system, you are describing to the software the nature of your contract, the pricing, and the terms. After an agreement is entered, the system "knows" how to handle everything from initial dispatching to the final billing of service calls, as well as the cyclic or recurring billings for the agreement.

In order to provide flexibility and ease-of-use, Service Manager service agreements' are structured into three (3) sections:

- Basic Customer Data
- Equipment and/or Service Record(s)
- Free Form Notes

**Basic Customer Data**:
Each service agreement you enter contains one basic screen of reference information. It includes customer I.D., dates, times, bill types, etc.

Note: Bill types, a very important feature of the Service Manager system, must be assigned in the basic data screen of every agreement. If you are unfamiliar with bill types, please see Chapter 7, *Maintain Bill Types*.

**Equipment/Service Records**:
Each agreement will next include one or more equipment/service records – one record for each piece of equipment or type of service under contract. The equipment/service record completely defines what equipment you are agreeing to service or what service you are agreeing to provide. It includes model and serial number, date of installation, preventive maintenance schedule, etc.

**Free Form Notes**: Since software designers cannot foresee every possible variable that might enter into a service agreement, we have provided a feature that permits you to enter two types of free formed notes:

1. Dispatch notes which are used for special instructions that would be helpful to a dispatcher when opening a call.

2. Billing notes which will print on each cycle billing invoice that is sent for the agreement.

Notes are optional, but they are useful to describe agreement coverage, special exclusions, unusual scheduling requirements, on-site approval procedures – just about anything that doesn't fit anywhere else.

Service agreement processing – what this chapter is all about – consists of seven (7) major functions:

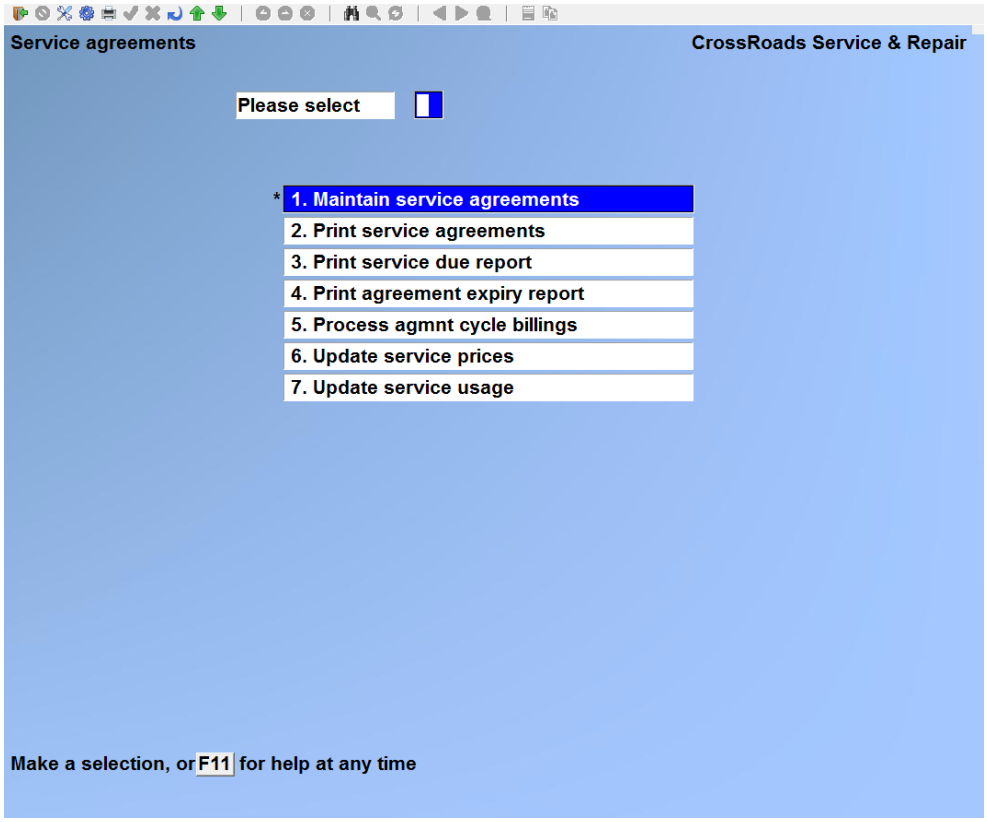
- Maintain service agreements
  Add, change or delete service agreements
- Print service agreements
- Print service due report
  The service due report is a scheduling tool. It tells you -- in advance – the upcoming preventive maintenance activities you are contractually obligated to perform during a selected time period. When the service due report is run, the user may also request that a service call be opened automatically for each P.M. obligation. Another option prints the service due report in zip code order.
- Print agreement expiry report
  The agreement expiration report is a marketing tool. It gives you advance warning of the agreements that will expire in the future – so that you can take steps to renew them now. The output of the agreement expiration report can be merged with word processor letters to perform direct mail campaigns. Often this is the most effective method for renewing service agreements.
- Process agreement cycle billings

This function is usually run monthly. It produces invoices for all service agreements due that month regardless of the cycle of each individual contract. In other words, the invoices for any given month may include contracts that are paid monthly, quarterly, semi-annually, annually or on a non-time dependent schedule (i.e. an unspecified frequency).

- Update service prices
- Update service usage

**To begin**

From the first page of the S/M main menu, select *Service agreements:*




## Maintain service agreements

There are two parts to each service agreement:

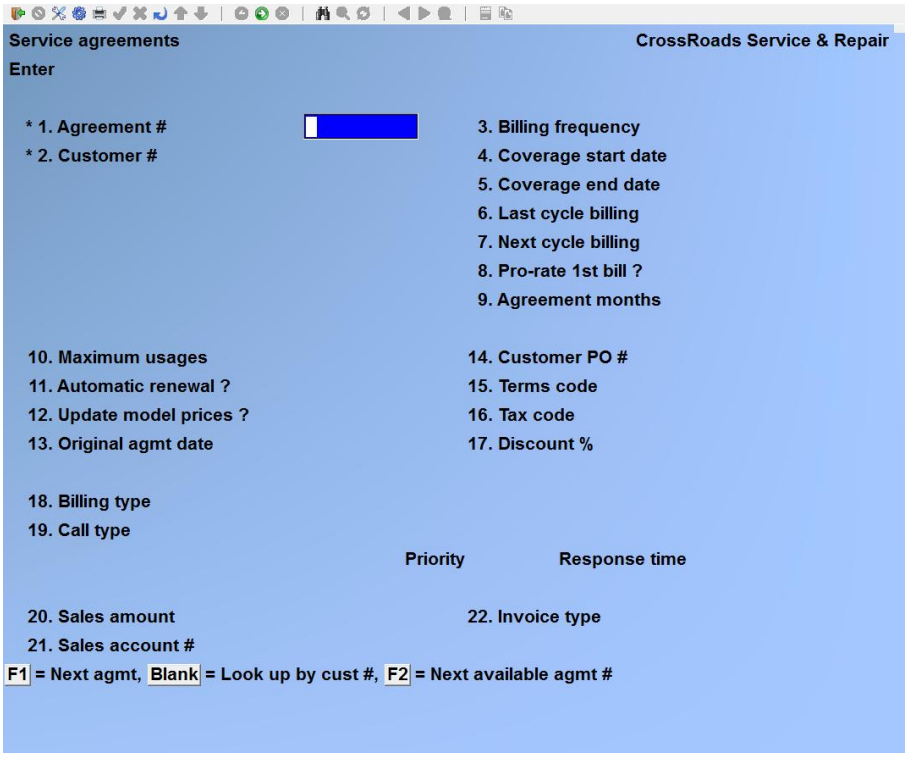
- Agreement header
  The agreement header typically includes information that relates to the agreement in general (for example, agreement number, customer, usage and renewal information and billing details).

- Equipment for the Agreement

Each piece of equipment covered by the agreement is defined and typically includes the location of the equipment, the model #, type, description, serial #, etc. For equipment that is still under warranty, you may also include the selling dealer's information.

If you plan to add new service agreements, you have two available options that will automatically put you into "add-a-record" mode:

- Type an agreement number that currently does not exist. Enter up to ten (10) alphanumeric characters.
- Press [**F2**] to have Service Manager automatically assign the next available agreement number.




## Service Agreements - ENTER

### 1. Agreement #

Enter a service agreement number, up to 10 alphanumeric characters, or press [**F1**] for the next system assigned number. System assigned numbers are all numeric digits.

### 2. Customer #

Before a service agreement can be established, there must be a valid customer record

created using the *Customer file maintenance* transaction in your Accounts Receivable system. Enter a valid customer number, up to 12 alphanumeric characters.

If you do not know the customer number, you have two choices. You may press [**F1**] to have the system display the name and number of each customer in turn. When the customer whom you want to specify is displayed, press [**ENTER**].
Alternately, you may leave the customer number field blank and press [**ENTER**]. The system will then position the cursor at the beginning of the customer name field. You may enter any portion of the customer's name, and press [**ENTER**]. The system will display the first customer record that matches the characters entered, and ask if this is the "RIGHT CUSTOMER?
You may then answer Y or N, or press [**F1**] to display the next customer record in turn. These procedures are actually very user friendly. Simply follow the instruction~ at the bottom of the screen.

**3. Billing frequency**
The billing frequency field tells the system how often to generate an invoice for this service agreement. Either accept the system default of M (for monthly) or enter one of the valid choices that are displayed at the bottom of the screen.

**4. Coverage start date**
The system displays the current date. Press [**ENTER**] to accept the current day or enter a different start date.

**5. Coverage end date**
Enter the date that the contract will end. If you intend to adjust the billing cycle to a certain day of the month, you will probably want to anticipate by assigning a consistent coverage end date now. See paragraphs 7 and 8 for a full discussion of this topic.

Note that when you enter the coverage end date, Service Manager calculates and displays the *Agreement (length in) months*.

**6. Last cycle billing**
If you are adding information about an existing agreement to Service Manager, enter the last cycle billing date for the existing agreement. The system will use this date as the basis for calculating the first cycle bill date under the Service Manager system. If you are entering a new agreement, do not enter a date in this field, simply press [**ENTER**].

**7. Next cycle billing**
If you are adding information about an existing agreement to Service Manager, enter the next cycle billing date for the existing agreement. The system will use this date to produce the first cycle bill date under the Service Manager system.

If you are entering a new agreement, enter the date on which the first cycle bill will be due. When entering a new agreement, it is advisable to select your next cycle billing date (which for a new agreement is really the first cycle billing date) in a way that fits your overall billing practice. For example, the most common practice is to choose the first day of the month following the start of coverage. If coverage starts on 11/22/YY, then the next bill date is 12/01/YY. If you do this, Service Manager will give you the option of including a prorated bill for the last nine (9) days of November in with December's bill. For consistency, using this example, you should have assigned a coverage end date of 11/30/YY +1. In this example, coverage begins 11/22/YY; the first monthly invoice is printed on 12/01/YY and optionally, would include not only the bill for December but also a bill for the nine (9) remaining days of November; coverage would end on 11/30 of the following year; the agreement will be ready for renewal on 12/01 of the following year.

**8. Prorate 1st bill ?**

The system performs cycle billing, which is to generate bills periodically, for the service agreements you establish. If the agreement coverage begins during the month, there are three options.

For example (assuming a one year contract length and a monthly billing frequency):

- If you choose to end the agreement exactly one year later to-the- day. Example: start on 11/15/YY, end on 11/14/YY +1, and next cycle bill on 11/15/YY. With this selection, Service Manager will automatically default to N for the *Prorate 1st bill ?* field.

- If you choose to adjust your dates in order to normalize the agreement to a particular day of the month for billing purposes. Example: start on 11/15/YY, end on 11/30/YY +1 and next cycle bill on 12/01/YY. Service Manager automatically defaults to Y for *Prorate 1st bill ?* and if you accept the default of Y, then it will display that 16 days will be pro-rated in the 1st bill. This means that the 12/01/98 cycle bill will include the normal amount for the month of December, 12lJn 16 days in November. After the 1st bill, the agreement will be set up for first of the month billing.

  - If you choose to adjust your dates in order to normalize the agreement to a particular day of the month for billing purposes. Example: start on 11/15/YY, end on 11/30/YY +1 and next cycle bill on 12/01/YY. Override the Service Manager automatic default of Y for *Prorate 1st bill ?* and change it to N to not prorate bill the odd days. For example, start on 11/28/YY, end on 11/30/YY +1 and next cycle bill on 12/01/YY. If we override the Service Manager default and enter N to *Prorate 1st bill ?* we give 3 days of free coverage to the client.

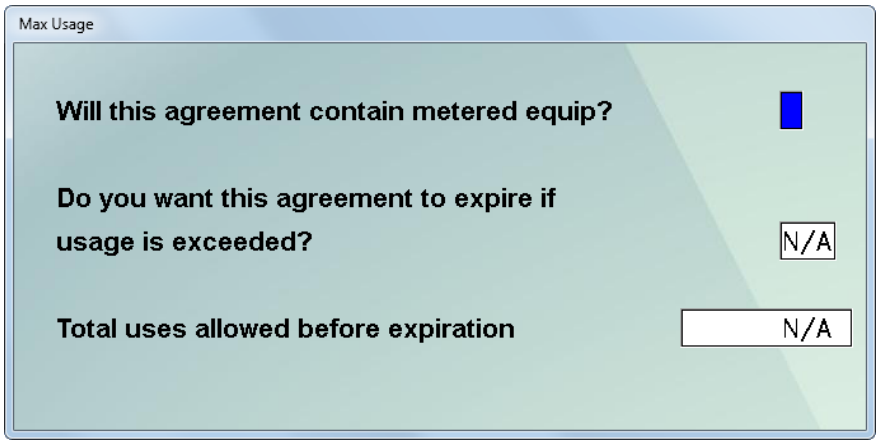
## 9. Agreement months

This field is automatically calculated from the date entered in the coverage start and end dates. Service Manager will sometimes round up or down one month when you don't want it to (depending on whether or not you prorate the odd days, a 12 month contract may be displayed as 11, 12 or 13 months). For this reason, you are permitted to adjust this field up or down by 1 month.

## 10. Maximum usages

If you are not tracking metered usage, skip this option; it will not be displayed on the entry screen.

If you are tracking metered usage, (Service Manager → F2 → S/M control information; *Track equipment usage ?* flag is Y), when you add a new agreement or change an existing agreement, the system will display the pop-up Max Usage window:




*Will this agreement contain metered equip ?*
Answer Y or N. Only answer N if no pieces of equipment on this agreement contain a meter. Answer Y if even just one piece of equipment on this agreement contains a meter.

*Do you want this agreement to expire if usage is exceeded ?*
If you want this agreement to expire when a certain number of uses (e.g. photo-copies) are performed, then answer Y, otherwise answer N.

*Total uses allowed before expiration*
This field is only active if you answered Y to the previous question. If you want this agreement to expire when a certain number uses is performed; enter that number here. Note that maximum number of uses has nothing to do with overage charges. Maximum usage is only used to determine whether or not an agreement has expired.

## 11. Automatic renewal ?

Enter Y if you want the system to automatically renew and continue to invoice the

agreement at the end of the original contract period.

**12. Update model prices ?**

If you answered Y to *Automatic renewal ?* this field is used to determine the cycle charges for the renewed agreement. Enter Y if you want the system to update the agreement prices automatically from the model data record. Answer N if you want to leave the prices as they are or if you want to change them manually.

**13. Original agmt date**

When an agreement is entered for the first time, this field reads the same as the *Coverage start date*. When an agreement is automatically renewed, this field will not be changed by Service Manager, it simply continues to track the original date of coverage. This is a read-only field with no user changes permitted.

**14. Customer PO #**

If your customer has provided a purchase order number for this service agreement, you may enter the PO number, up to 15 alphanumeric characters. The number is for informational purposes only.

**15. Terms code**

The system displays the default terms code from the customer record in Accounts Receivable. You may accept this code, enter another valid terms code or use [**F1**] to scroll through the terms codes on file.

**16. Tax code**

The system displays the default tax code from the customer record in Accounts Receivable. You may accept this code, enter another valid tax code or use [**F1**] to scroll through the tax codes on file.

**17. Discount %**

The system displays the discount from the customer record in Accounts Receivable. You may accept this discount or override the default by typing in the desired discount. The system will apply the discount percentage entered here to the service agreement invoice when it is generated.

**18. Billing type**

Before a service agreement can be created, you must set up a valid billing type record using *Maintain bill types*. If you are not familiar with bill types, refer to Chapter 7, *Maintain Bill Types*.

You may enter a valid Bill type or use [**F1**] to scroll through the bill types on file. Press [**ENTER**] to accept the bill type when it is displayed. The profit center, if entered in the corresponding bill type that you select, will be used as the default profit center for billing purposes.

**19. Call type**

Before a service agreement can be established, you must set up a valid call type record using the *Maintain call type* function in your Service Manager system. If you are not familiar with call types, please see Chapter 8, *Maintain Call/Services Types*.

Enter a valid call type or use [**F1**] to scroll through the call types on file. Press [**ENTER**] to accept the call type when it is displayed.

**20. Cycle bill amount/sales amount**

If you specified a billing frequency of U (for an unspecified billing interval) this field will be called *Sales amount* and you may enter a dollar amount in this field. Whenever a U type frequency is selected for billing, the amount specified in this field will be billed. For all other billing frequencies, this field is call *Cycle bill* amount. It is a read only field, automatically updated by Service Manager.

**21. Sales acct #**

Enter the General Ledger account number that should be used to debit the amount to be cycle billed. This will normally be a sales account although a holding account or customer deposit account may be specified.

If you have specified the accrual method of processing for service agreement income in your Service Manager control file, you still have to assign a sales account here. Under the accrual method, agreement sales for multi-month billings will be at first be posted to the unearned income account specified in the Service Manager control file. However, when that income is recognized later, it will be posted to the sales account specified here.

**22. Invoice type**

If you are not tracking metered usage, skip this option as it will not be displayed on the entry screen.

If you are tracking metered usage, you have set the *Track equipment usage ?* flag in the Service Manager control to Y. When adding a new agreement or changing an existing agreement, the system will prompt for *invoice type*:

If you enter R (Regular billing) then the metered counts for each piece of equipment included on this agreement is accounted for individually.

If you enter C (Combined billing) then the metered counts for all pieces of equipment included on this agreement are added together before processing.

For example, suppose agreement #35 runs for 12 months or 360,000 uses. The agreement includes three (3) pieces of equipment and they are to be combined. As long as all three pieces of equipment combine do not exceed 360,000 copies, the agreement is still in effect. Even if two pieces of equipment had only 25,000 uses each, and the third had 300,000 all by itself.

At *Field number to change ?* type the number associated with the field that you want

to change and press [**ENTER**]. Proceed with your change.

At *Maintain equipment for this agreement ?* press [**ENTER**] for the agreement line items entry screen.

**Service Agreements – AGREEMENT LINE ITEMS**

The agreement number, customer number and name, bill frequency and bill type are displayed at the top of the screen for your reference. In addition, the total cycle charge is displayed as a read-only field on the lower right side. This number is updated as you add agreement line items.

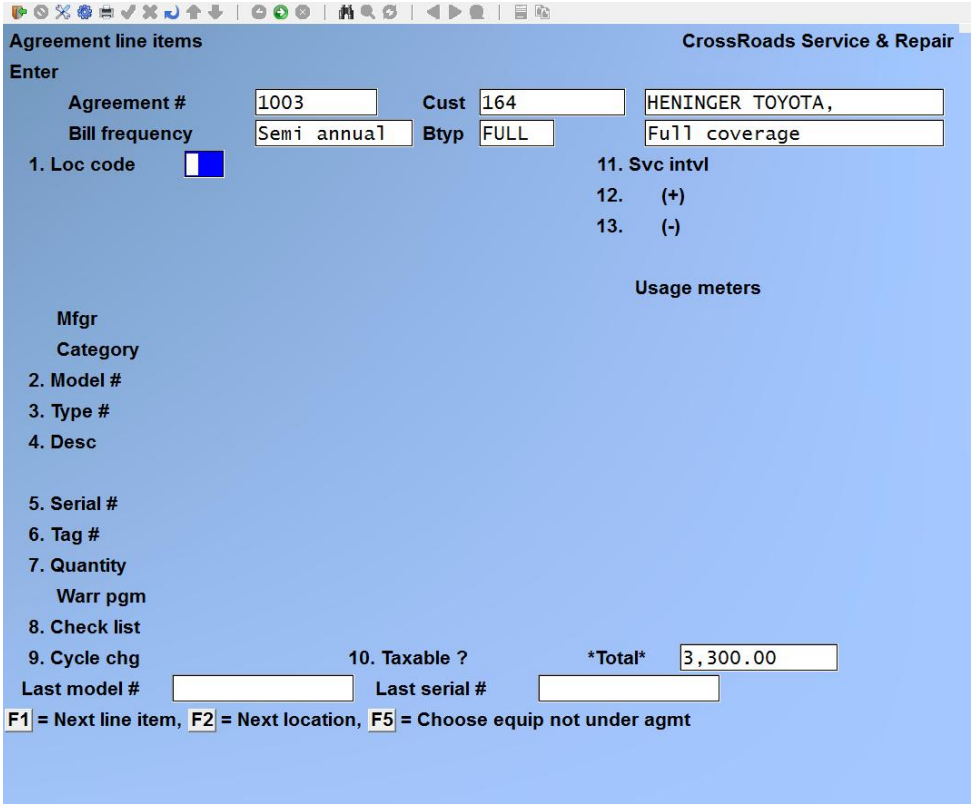
From this screen you can work with both new and existing agreement line items. If you plan to change or inquire into an existing agreement line item, press [**F1**] at Field 1 to display each agreement line item in turn. When the agreement line item of interest is displayed you can make your changes.

If you plan to add new agreement line items, follow one of the following procedures:

1. Press [**F5**] to call up a search window listing all equipment that is not currently on a service agreement...and is therefore free to be added to this agreement. When the search window is displayed, use the Up/Dwn arrow keys to highlight the piece of equipment of interest, and press [**ENTER**] to select it. This is the preferred method, but it depends on your first having set up customer equipment records. If you're not sure how to do that, see Chapter 21, *Customer Equipment*.

2. Type into Field 1 a valid location number, or press [**F2**] to display each location in turn. When the location of interest is displayed, select it by pressing [**ENTER**]. With the service location established, you have several options for assigning an equipment model number. Press [**F1**] at Field 2 to browse through model numbers, or type in a valid model number, or leave the model number field blank to look up the model by description.

When you are in add mode, enter the following data:




## 1. Loc code

Enter either a valid service-at location which you have previously established using the *Maintain service locations* function or press [**F2**] to display the next valid service-at location for this customer or press [**ENTER**] if this customer has only one service-at location. When the desired location is displayed, press [**ENTER**].

## 2. Model #

You may use four alternate means to specify a model of equipment that has been previously defined to the system.

First, you may enter the model number of the equipment being added to the service agreement, up to 15 alphanumeric characters.

Second, you may use [**F1**] to scroll through the list of defined model numbers on file until you find the one that you want to select.

Third, you may press [**ENTER**] at the model number field in order to move the cursor to the model description field. Now you may enter any portion of the model description followed by [**ENTER**] to perform a search. When a model number and its description are displayed, you may accept if or press [**F1**] to display each additional model sorted alphanumerically by description.

Fourth, you may press [**ENTER**] at the model number field in order to move the cursor

to the model description field. Now you may use [**F1**] to scroll through the list of defined model numbers displayed in alpha-order by their description. Continue to browse until the one you want to select is displayed. Then, press [**ENTER**].

If you have entered a model number that has already been defined in your model data file, the description will automatically be filled in and you are asked *Right model ? Y*. Press [**ENTER**] to accept the model and advance to the serial number field.

If you have entered the number for a new model of equipment, you are asked *Model not on file, do you wish to add it ? Y*. Press [**ENTER**] to add the model and advance to the description field. As you enter the data for this equipment record, a data record will automatically be set up in the model file. For a complete explanation of equipment models, see Chapter 18 *Model Data*.

**3. Type #**

Type numbers are often used to designate options attached to basic model numbers. If this model of equipment carries a type number, enter it here, up to 25 alphanumeric characters. If you specified a pre-defined model/type number, the type number will be supplied by Service Manager.

**4. Desc**(ription)

Enter the description of the equipment or service being added to the service agreement, up to 2 lines of 25 alphanumeric characters each. If you specified a pre-defined model #, the description will be supplied by the system.

**5. Serial #**

There are three choices for the serial # field.

First, you may enter a unique identifier for the equipment being added to the service agreement, up to 15 alphanumeric characters. This may be a serial number, a code or anything else that uniquely identifies the item being serviced.

Second, you may leave this field blank. That's a signal to Service Manager that there is only one of this model at this site, but you do not know its serial #. If you enter a unique serial number or leave the field blank, then you must enter "1" in the Quantity field.

Your third alternative is to enter an asterisk (*) in the serial number field. The asterisk is a signal to Service Manager that there are more than one of the specified model at this site and that you do not wish to track them individually by serial number. You will then be permitted to enter a quantity greater than "1".

**6. Tag #**

A *Tag number* is an identifier that you and your customer use to specify a particular piece of equipment. It can be thought of as a serial number issued by *you* rather than

by the manufacturer. In many ways it works like a serial number --for instance, you can search by *Tag number* when you open a service call.

It should be noted, however, that tag numbers do not have to be unique across the entire system --they only need to be unique at each customer's service location. Tag numbers --unlike serial numbers --can be changed at any time.

**7. Quantity**

If you entered an asterisk ("*") for the serial #, you may specify a quantity greater than 1. For all other entries to the serial # field, the quantity defaults to one.

**8. Check list code**

If there is a service check list associated with this item of equipment, enter the check list identifier you established using the *Maintain check list* transaction, or press Fl to display each check list identifier in turn. The system will automatically print the check list you assign whenever a Service Request is printed for this equipment.

If this model has already been defined using *Maintain model data,* the cycle charge (appropriately multiplied by the quantity) will be filled in automatically and the cursor will advance to Field 7.

**9. Cycle charge**

Enter the amount to be billed for this line item each time a service invoice is generated. The amount entered should be consistent with the billing frequency you specified on the preceding screen.

If this model has already been defined using *Maintain model data,* the cycle charge (appropriately multiplied by the quantity) will be filled in automatically and the cursor will advance to Field 7.

**10. Taxable ?**

If the amount specified in the cycle charge field above is taxable at the political jurisdiction for this location code, enter a Y in this field. Otherwise, enter N.

**11. SVC INTVL (Service interval)**

If this piece of equipment will be scheduled by you for preventive maintenance at certain intervals, enter the number of time units and the type of time units between servicing. The system allows from 1 to 999 days, weeks, months or years. Service Manager uses this information to produce the *Service due* report and to provide a “Service Due Alert” on the screen during the call open function.

If the equipment model number had already been defined using the *Maintain model data* function, then this field will be filled in automatically and the cursor will advance to the next field.

**12. (+)** Tolerance – Plus

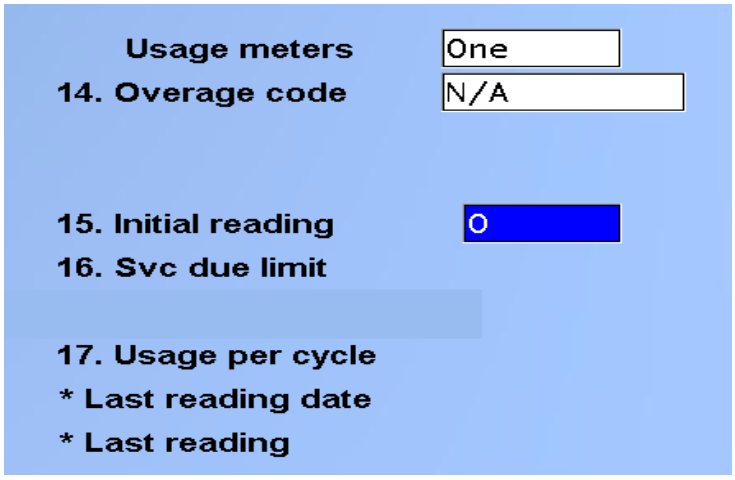
If you have entered a service interval in Field 11 above, you may also enter a plus and minus date tolerance to aid in optimized scheduling of preventive maintenance service calls. Data is entered into this field in exactly the same manner as Field 11. If you skipped Field 11, this field will be N/A. If the equipment model number had already been defined using the *Maintain model data* function, then this field will be filled in automatically and the cursor will advance to the next field.

**13. (-)** Tolerance – Minus

If you have entered a service interval in Field 11 above, you may also have entered a plus tolerance in Field 12 to aid in optimized scheduling of preventive maintenance service calls. You can enter a minus tolerance into this field in exactly the same manner as Field 12. If you skipped Field 11, this field will be N/A. If the equipment model number had already been defined using the *Maintain model data* function, then this field will be filled in automatically and the cursor will advance to the next field.

**Usage meters**

This is a display-only field that shows the total number of meters for the model of equipment specified.




**14. Overage code**

Enter either a valid overage code, which you have previously established using the *Maintain overage codes* function, or press [**F1**] to display the first and each succeeding overage code in turn. After the proper overage code is displayed, press [**ENTER**]. If you do not intend to bill overage charges for this agreement, you may skip this field by pressing [**ENTER**].

**15. Initial reading**

Enter a number in the range of 0 to 9,999,999 that represents the meter reading at the start of coverage for this agreement.

**16. Service due limit**

Enter a number in the range of 0 to 9,999,999 that represents the number of usages between preventive maintenance calls. Fields 11 and 17 are related. For example: “Service this machine every 2 months (plus or minus one week) or every 25,000 usages - - whichever occurs first.”

**17. Usage per cycle**

This is the field used to trigger overage charge calculations. Enter a number between 0 and 9,999,999 that represents the number of free or "allowed" copies during each billing cycle.

At the end of each billing cycle, Service Manager will calculate *total copies* by subtracting the meter reading at the *start* of the billing cycle from the meter reading at the *end* of the billing cycle. *Credits* are then subtracted from total copies to arrive at *net copies*.

The *Usage limit per cycle* (this field) is then subtracted from *net copies* to compute *over uses*. Finally, if over uses is greater than zero (0), Service Manager retrieves the assigned overage code file and calculates the monetary overage charge. Using an example in calculator tape form:

Ending Reading 200,000 Less Starting Reading 120,000
Equals Total Copies 80,000 Less Credits 200 Equals
Net Copies = 79,800 Less Uses per Cycle 50,000
Equals Over Uses 29,800 Times Overage Rate x .01
Equals Overage Charge $ 298

**In order to achieve the desired results, the maximum usage, the cycle charge, the overage code and the usage limit per cycle must all be consistent.**

After completing ***17. Usage per cycle***, while the screen is displayed:

Agreement line items — CrossRoads Service & Repair

Enter

Agreement # 9003 Cust 104 A.K. BROWN,
Bill frequency Monthly Btyp T/M Time and materials
1. Loc code 000 — A.K. BROWN, — 3640 - 15A STREET S.E., — CALGARY, ALTA T2G 3N6
Mfgr
Category
2. Model # SNGL-METER
3. Type # MODEL WITH A SINGLE METER
4. Desc
5. Serial # 5487LPUIY45K8
6. Tag #
7. Quantity 1
Warr pgm
8. Check list N/A
9. Cycle chg .00 10. Taxable ? Y *Total* .00
Last model # NU-COMFORT MR10 Last serial #

11. Svc intvl N/A
12. (+) N/A
13. (-) N/A
Usage meters One
14. Overage code A-LOW
Low volume machines
15. Initial reading 102
16. Svc due limit 1,200
17. Usage per cycle 1,000
* Last reading date 12/05/11
* Last reading 2,036

F1 = Next, F2 = Meter usage, F3 = Delete, F5 = Eqp dates, F6 = Dlr info

Field number to change ?

Press [**F2**] to view the usage billing data. The screen will display a pop-up window that contains all of the meter readings posted to date and the overage charge which reflects the current billing conditions. No data entry or change is permitted with this display.

Agreement line items — CrossRoads Service & Repair

Enter

Agreement # 9003 Cust 104 A.K. BROWN,
Bill frequency Monthly Btyp T/M Time and materials
1. Loc code 000 — A.K. BROWN, — 3640 - 15A STREET S.E., — CALGARY, ALTA T2G 3N6
Mfgr
Category
2. Model # SNGL-METER
3. Type # MODEL WITH A SINGLE METER
4. Desc
5. Serial # 5487LPUIY45K8
6. Tag #
7. Quantity 1
Warr pgm
8. Check list N/A
9. Cycle chg .00 10. Taxable ? Y
Last model # NU-COMFORT MR10 Last serial #

11. Svc intvl N/A
12. (+) N/A
13. (-) N/A
Usage meters One
14. Overage code A-LOW
Low volume machines

| | |
|---|---|
| Last reading | 2,036 |
| Start reading | 102 |
| Total uses | 1,934 |
| Less credits | 0 |
| Net usage | 1,934 |
| Incl in agmt | 1,000 |
| Over uses | 934 |
| Overage chg | .00 |

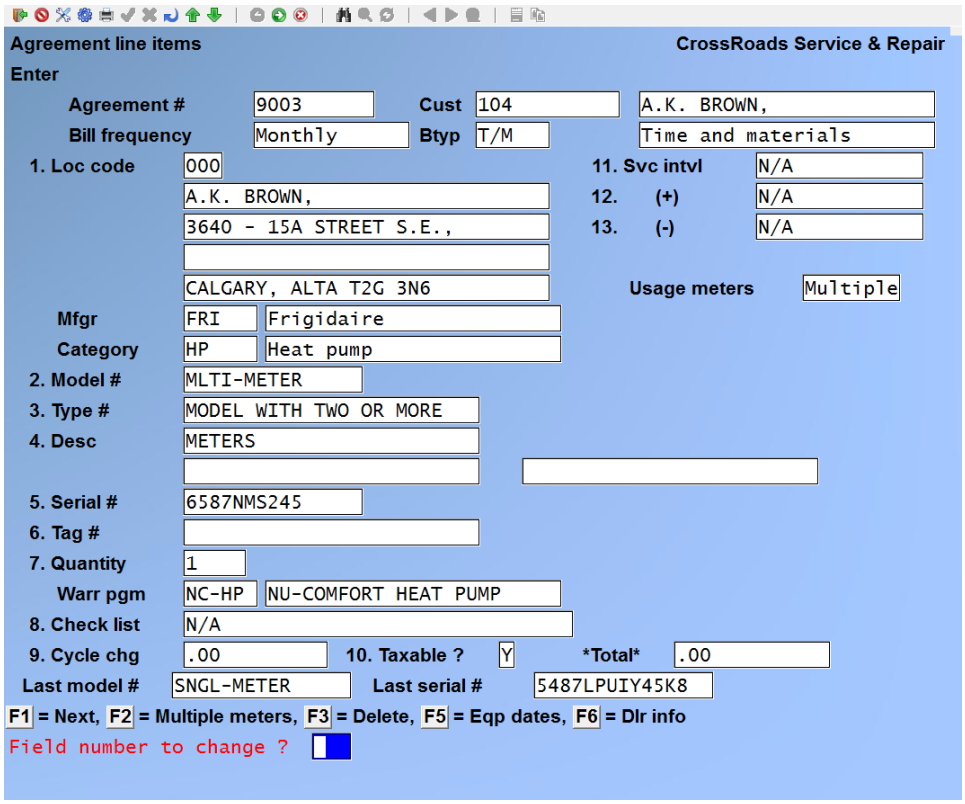
Press ENTER to continue

This screen has two formats, single meter and multiple meter along with several options. When you are finished using the options or making any desired changes, press **[ENTER]**. Upon pressing **[ENTER]**, the data entry screen to add another equipment/service record is displayed. Continue to add equipment/service records until the service agreement is fully defined. Press **[ENTER]** to return to the normal display.

When no more equipment/service records remain to be added, press **[TAB]** at the location code field.

Multiple-meter equipment

As mentioned previously, the equipment records for multi-meter machines are displayed differently than those for single meter machines. Assuming that we have entered the appropriate data for a multi-meter machine, the screen would appear as the one below.




**[F2]** Option to access multiple meters:

From this screen press **[F2]** to access multiple meters. The screen will then show the statistics on the first 10 meters. Subsequent pages display addition groups of 10:

Agreement meters — CrossRoads Service & Repair

Maintain

| | | | | |
|---|---|---|---|---|
| Agreement # | 9003 | Cust | 104 | A.K. BROWN, |
| Bill frequency | Monthly | Btyp | T/M | Time and materials |
| Model # | MLTI-METER | Desc | METERS | |
| Serial # | 6587NMS245 | | | |

| | ID | Description | Initial Reading | Svc Due Limit | Cycle Limit | * Last Reading * Date | Amount |
|---|---|---|---|---|---|---|---|
| 1. | 12345 | METER #1 TEST 1 | 0 | 0 | 0 | None | 0 |
| 2. | 12346 | METER #2 | 0 | 0 | 0 | None | 0 |
| 3. | 12347 | METER #3 | 0 | 0 | 0 | None | 0 |
| 4. | 12348 | METER #4 | 0 | 0 | 0 | None | 0 |
| 5. | | | | | | | |
| 6. | | | | | | | |
| 7. | | | | | | | |
| 8. | | | | | | | |
| 9. | | | | | | | |
| 10. | | | | | | | |

ENTER = Overage codes, F2 = Review charges, ESC = Exit

Field number to change ? 0

From this screen you can perform three (3) functions. First, you can make changes to the data displayed. Second, you can press [**ENTER**] to display overage code data. Third, you can press [**F2**] to review overage charges. If you press [**ENTER**] to display overage code data, you see:

Agreement meters — CrossRoads Service & Repair

Maintain

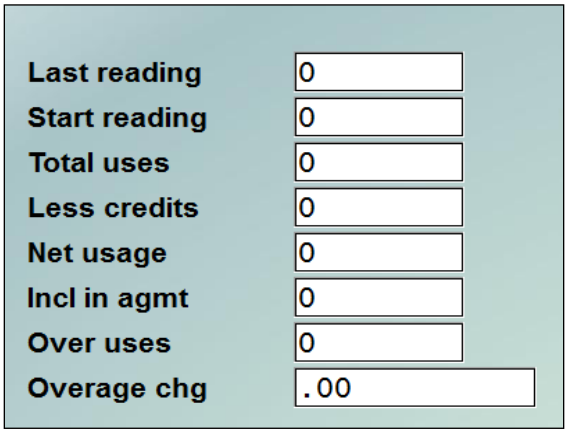
| | | | | |
|---|---|---|---|---|
| Agreement # | 9003 | Cust | 104 | A.K. BROWN, |
| Bill frequency | Monthly | Btyp | T/M | Time and materials |
| Model # | MLTI-METER | Desc | METERS | |
| Serial # | 6587NMS245 | | | |

| | ID | Description | Overage Code | Description |
|---|---|---|---|---|
| 1. | 12345 | METER #1 TEST 1 | N/A | |
| 2. | 12346 | METER #2 | N/A | |
| 3. | 12347 | METER #3 | N/A | |
| 4. | 12348 | METER #4 | N/A | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |

ENTER = Usage information, F2 = Review charges, ESC = Exit

Field number to change ? 0

Make changes, press [**F2**] to review individual meter statistics or press [**ESC**] to exit. If you press [**F2**] the system displays:



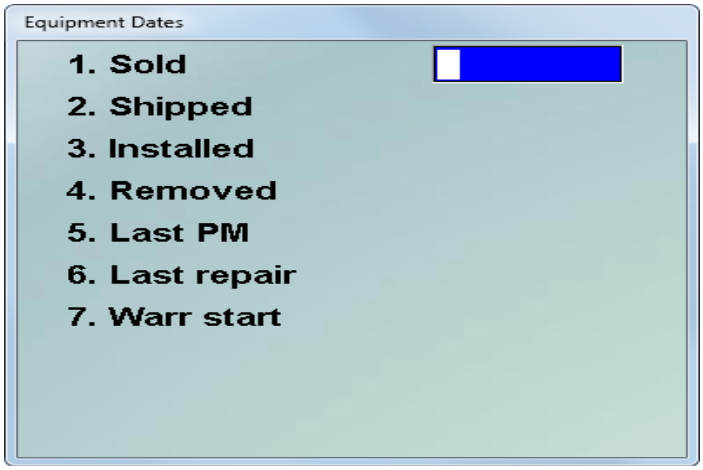

The meter statistics displayed in the "window" pertain to the meter pointed to by the left arrow. You may use the UP/DOWN arrow keys to move the pointer, thus displaying the statistics of all meters. Press [**ESC**] to end.

This completes the basic information for an agreement line item. At this point you have five (5) options:

- Press [**ENTER**] to file this line item and position to enter the next one
- Press [**F1**] to file this line item and immediately view the next one
- Press [**ESC**] or [**F3**] to delete this line item
- Press [**F5**] to enter key dates regarding this line item
- Press [**F6**] to enter selling dealer information regarding this line item

**Entering key dates**

If you press [**F5**], you will activate the key dates window.



Enter the following:

1. **Sold date**
This is an optional information-only field that allows you to enter the date on which the unit was initially sold. It may be used as a marketing tool to help determine when the unit should be replaced.

2. **Shipped date**
This is an optional information-only field that allows you to enter the date on which the unit was shipped to its end-user. It may be used as a marketing tool or as a tracking parameter.

3. **Installed date**
This is an optional information-only field that allows you to enter the date on which the unit was initially put into place at your end-user's site.

4. **Removed date**
This is an optional information-only field that allows you to enter the date on which the unit was de-installed. It is used in situations where it is important to know that the unit was installed at this site at one time – but it is no longer present. It is an alternative to deleting the customer-equipment record when equipment is de-installed.

5. **Last PM date**
If you are adding existing equipment to the Service Manager system for the first time, enter the date on which the equipment last received PM service. This date will be used as the basis for calculating the next service due date under the Service Manager systems; in the future, this field will be automatically maintained by the Service Manager service history function.

6. **Last repair date**
If you are adding existing equipment to the Service Manager system for the first time, enter the date on which the equipment last received corrective maintenance. This date will be used by Service Manager to calculate MTBF data; in the future, this field will be automatically maintained by the Service Manager service history function.

7. **Warranty start date**
This is an optional but very important field if you plan to track warranty coverage. It allows you to enter the date on which warranty coverage went into effect for this unit. This field is used by Service Manager when it evaluates the warranty program assigned to this equipment. If you want Service Manager to track warranty coverage for you automatically, you must complete this field.

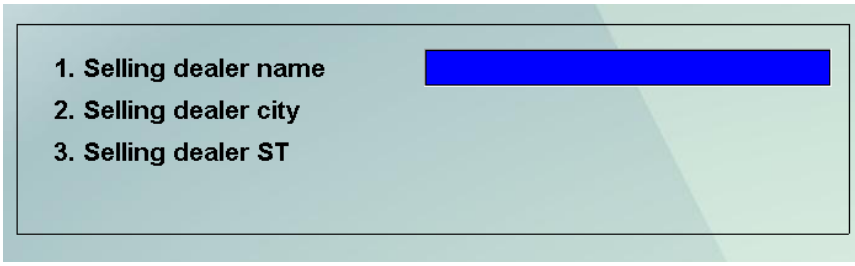
At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

At this point, the five (5) options are again available:

- Press [**ENTER**] to file this line item and position to enter the next one
- Press [**F1**] to file this line item and immediately view the next one
- Press [**ESC**] or [**F3**] to delete this line item
- Press [**F5**] to enter key dates regarding this line item
- Press [**F6**] to enter selling dealer information regarding this line item

**Entering selling dealer information**

If you press [**F6**], you will activate the selling dealer window.




Enter the following:

**Selling dealer name**
Enter this optional, information-only field of up to 25 alphanumeric characters. The dealer's name will print on the NARDA forms exactly as it appears here.

**Selling dealer city**
Enter this optional, information-only field of up to 15 alphanumeric characters. The dealer's city will print on the NARDA forms exactly as it appears here.

**Selling dealer state**
Enter this optional, information-only field of the 2 character code for the dealer's state or province.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change. When you press [**ENTER**], the line item screen is re-displayed and the five (5) options are still available.

When you are finished using any of the options described above or making any desired changes, press [**ENTER**]. The data entry screen to add another equipment/service record is displayed. Continue to add records until the service agreement is fully

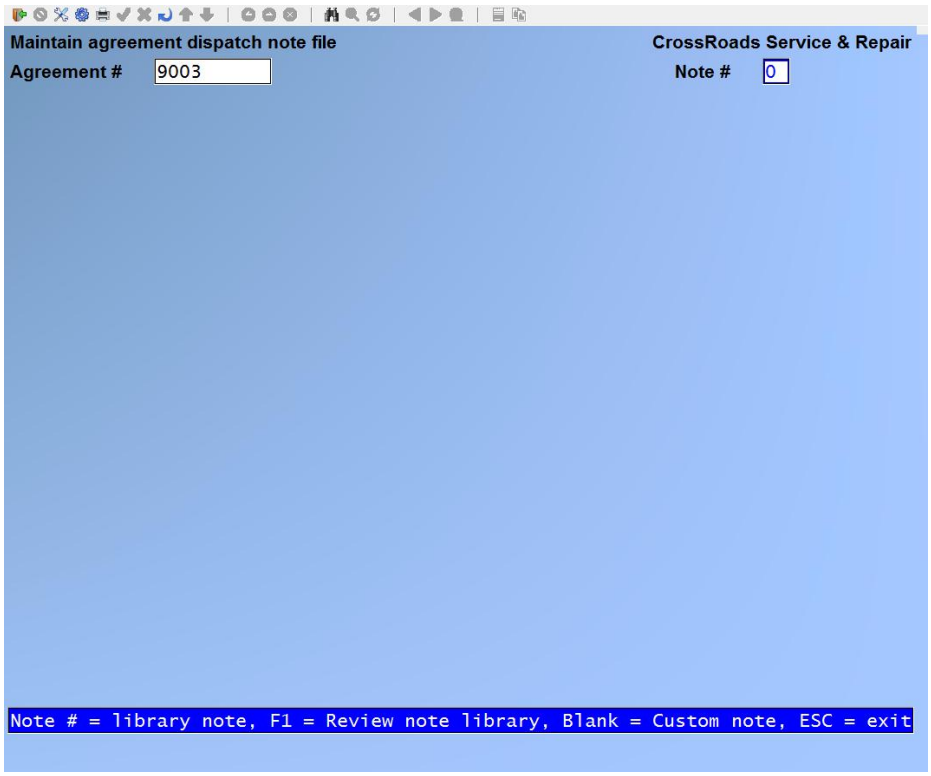
defined. When no more equipment/service records remain to be added, press [**TAB**] at the Location code field.

**Entering notes**

You are now given the opportunity to add two (2) free form notes to the agreement – a dispatch note and a billing note. At the bottom of the screen, the system displays the question:

- *Enter a dispatch note for this agreement ?*

  The dispatch note is used for special instructions that would be helpful to the dispatcher when opening a call. When the dispatch is in the open call screen, he is able to access the dispatch note window to retrieve instructions. If you answer Y, the system displays:




There are two ways of adding notes to an agreement. You can attach a predefined library note or add a custom note.

To add a note that has already been defined using the Maintain Notes function, press [**F1**] to review the note library. The titles of all the notes in the library will be displayed. Press [**F2**] to select a note, and then enter the note # that you want to add to the agreement.

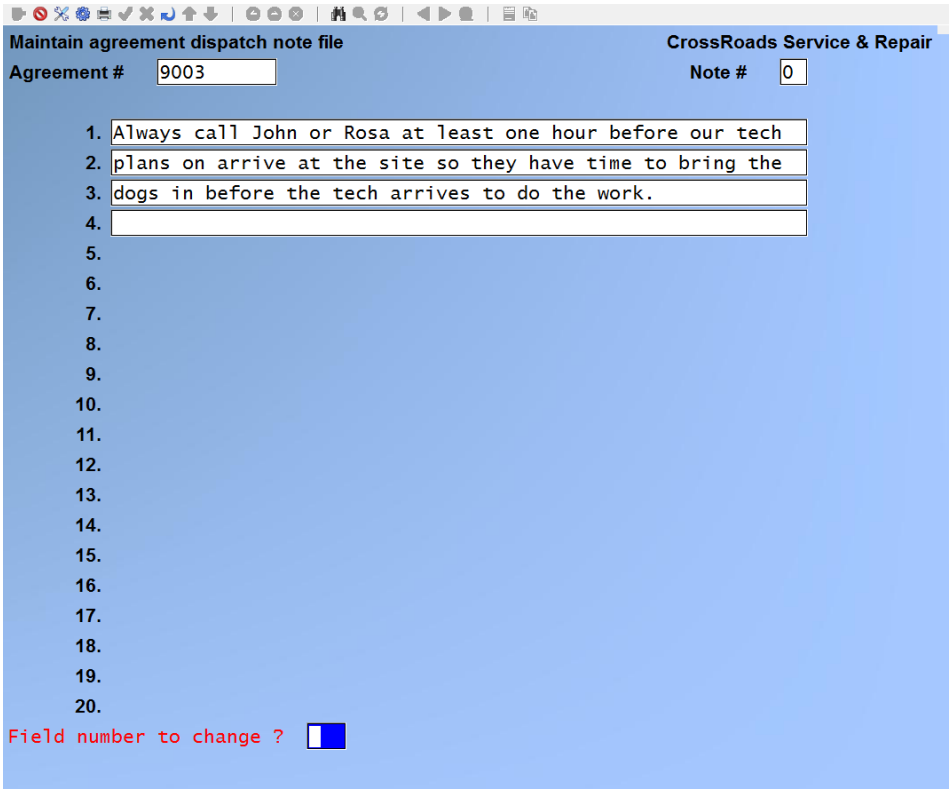
The system will display the description for the note number that you have entered and prompt *Right note ?* If you enter Y, the text for that note is displayed on the screen and you can make any changes that you wish to make.

After all changes have been made, press [**ENTER**] when *Field number to change ?* is displayed.

If you wish to enter a custom note on this agreement, press [**ENTER**] at the note number field. The cursor is positioned at the first line on the screen. You may then enter up to 20 lines of custom note information.

After you have finished typing on a line, press [**ENTER**] and the cursor will drop to the next line. After typing the last line of the note, press [**ENTER**]. When the cursor drops to the next line, you may press [**F1**] to skip the remaining lines on the screen.

The prompt *Field number to change ?* displays at the bottom of the screen. You may now change any lines that have been entered incorrectly. When the note is correct, press [**ENTER**] at *Field number to change ?*

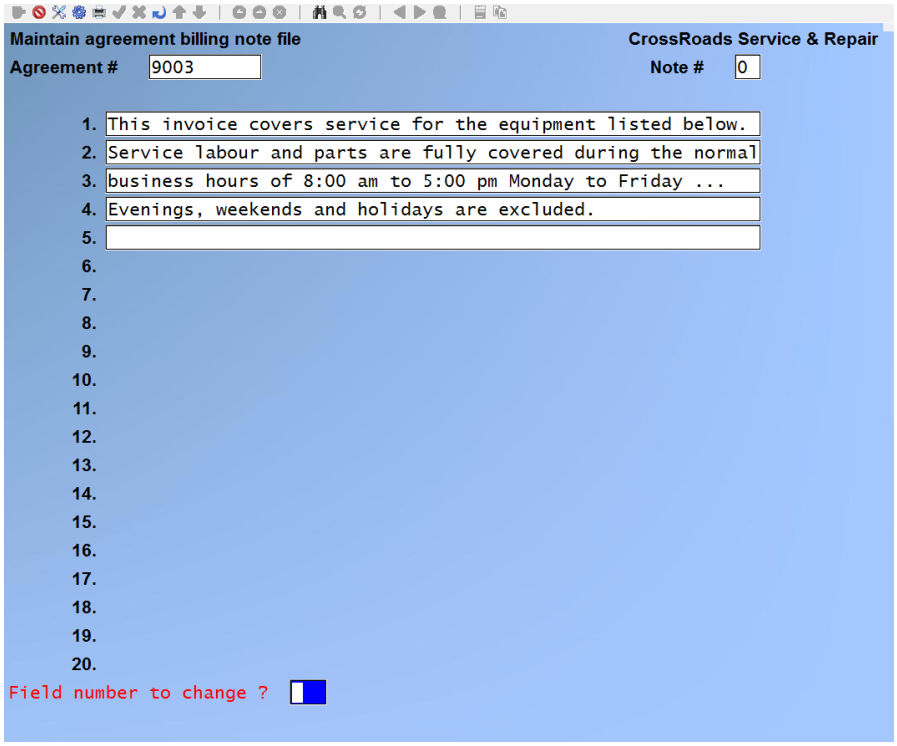



You are now asked *Enter a billing note ?*

Follow the same procedure as you used for the dispatch note.

If you answer N, the system will file the agreement you have just completed and redisplay the first add agreement screen ready for the next agreement.

If you answer Y, you are given options to append a billing note that are identical to those provided for dispatch notes.




If you answer Y to add an agreement billing note – either a library note or a custom note – the system will include the text of the note on the agreement cycle billing invoice each time the invoice is generated.

When you press [**ENTER**] at *Field number to change ?* the system "files" the agreement you have just completed and displays the first agreement entry screen, ready for the next agreement to be enter.

## MANUAL RENEWAL OF SERVICE AGREEMENTS

Due to the file "housekeeping" associated with service agreement renewal, it is highly recommended that you use the auto-renewal feature built into Service Manager. Even if it means doing an auto-renewal and immediately changing the agreement slightly afterward, it is still preferred. However, if it is necessary to manually renew an existing service agreement, complete the following twelve (12) steps in the exact order given below:

**Call up the agreement to be renewed and perform the following on the header screen:**

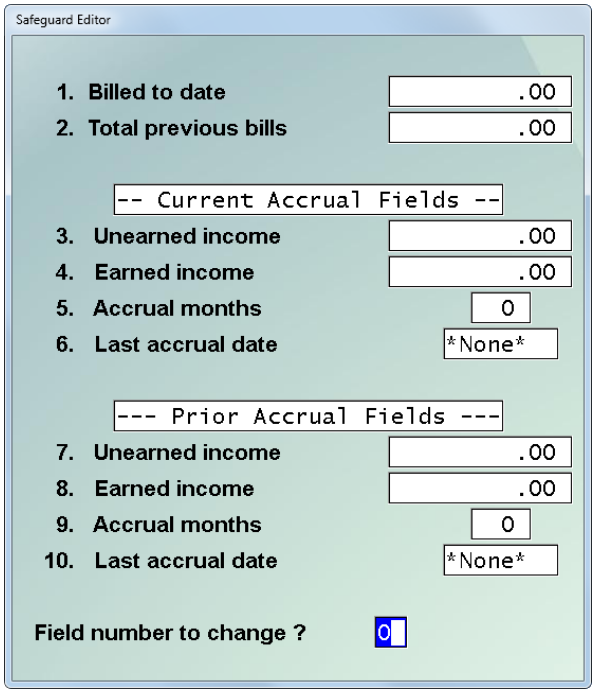
Check dates - - Field 7. *Next cycle billing* date must be equal to or greater than Field 5. *Coverage end date*.

Coverage end date - - Change Field 5 on the agreement header screen to reflect the new *Coverage end date*.

Coverage start date - - Change Field 4 on the agreement header screen to reflect the new *Coverage start date*.

Edit header screen - - Make desired changes to the *Terms code, Tax code, Discount, Bill type, Call type, Sales account number, etc*.

**With the first screen (i.e. header screen) still displayed, press SHIFT + F5 to call up the Agreement Safeguard Editor and enter the password when prompted. The Safeguard Editor pop-up window is displayed:**




Update the previous billings by adding the value of Field 1. *Billed to date* to Field 2. *Total previous bills*.

The *Billed to date* field contains exactly what it says, it is an accumulator of all cycle billings since the beginning of this agreement term. In other words, all cycle billings since the *Coverage start date*. When an agreement is automatically renewed by Service Manager, this field is added to *Total previous bills* and then it is reset to zero in preparation for the next term's billings.
The *Total previous bills* field is an accumulator of all cycle billings since the *Original agmt date*. When an agreement is automatically renewed by Service Manager, the

contents of the *Billed to date* field is added to this field.

Zero out the *Billed to date* field.

Move the value of each of the four current accrual fields to their corresponding prior accrual fields.

The *Current Accrual Fields* all relate to the most recent invoice for this agreement. They are used to control accrual processing for this agreement:

*Unearned income:* This field holds that portion of the *Billed to date* amount that has not yet been earned. As earnings are accrued, their unearned portion (usually all) is added to this field. Note that the sum of this field plus *Earned income* should equal the *Billed to date*. In other words, at any point in time the amount billed to date should be equal to the amount earned plus the amount unearned.

*Earned income:* This field holds that portion of the *Billed to date* amount that has not been earned. As earnings are accrued, they are added to this field. As new invoices are produced, their earned portion is added to this field. Note that the sum of this field plus *Unearned income* should equal the *Billed to date*. In other words, at any point in time the amount billed to date should be equal to the amount earned plus the amount unearned.

*Accrual months:* This field holds the number of months over which the *Unearned income* will be accrued. Each month, as earnings are accrued, this field is decremented. As new invoices are produced, the number of months associated with the invoice (e.g. 3 months for quarterly billing) are added to this field.

*Last accrual date:* This field holds the last date through which income has been accrued for this particular agreement. By design, this date must be the last day of a month.

The *Prior Accrual Fields* all relate to the invoice prior to the most recent invoice for this agreement. Like the *Current Accrual Fields*, they are used to control accrual processing for this agreement and each field has the same meaning as it does for the *Current Accrual Fields*. However, the *Prior Accrual Fields* are only used under one set of circumstances:

- During an auto-renew procedure, when …
- The Current Accrual *Unearned income* field is greater than zero (0).

When Service Manager encounters the above situation, it moves the values in the *Current Accrual Fields* to their corresponding position in the *Prior Accrual Fields*. It then clears Jut the *Current Accrual Fields* in preparation for billing. Finally, when the bill is produced for the renewal term, Service Manager updates the *Current Accrual*

*Fields* with the data corresponding to the new bill.

To further illustrate this situation, consider an agreement that runs from Jan 01 to Dec 31 and is billed quarterly for Jan 01, Apr 01, Jul 01, and Oct 01. Let's say that invoices are produced 15 days in advance of the actual invoice date. This is , very common. Most Service Manager users want to get their invoice in their customer's hands prior to the date on the face of the invoice.

Following this through, the renewal invoice for the next year is produced on Dec 15 - - even though it is dated Jan 01. This means that the accruals for Dec 31 have not yet been run and there is still one month of unearned income in the current accrual fields. In this situation, Service Manager would save the current accruals to "prior" and start the new agreement term off clean in the current accrual fields.

Clear (zero out) the current accrual fields.

**Call up each equipment/service record (i.e. each detail screen) for this agreement and perform the following for each one:**

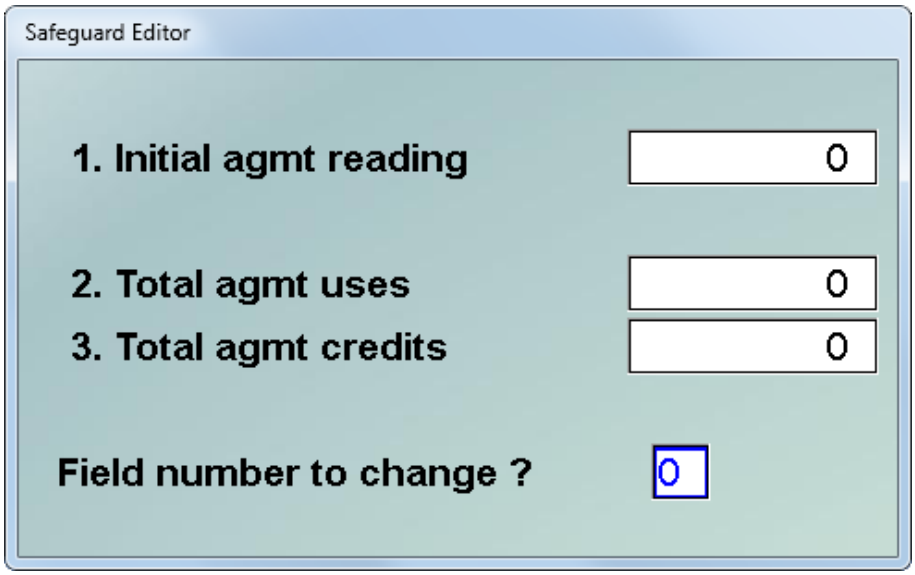
Review each equipment/service record and make any price changes desired.

Make desired changes to the *Tag number, Equipment category, Manufacturer's code, Service interval, etc.*

Review both the Dispatch and Billing notes to incorporate any changes that may have been negotiated into the new contract.

Manually or automatically select the agreement for billing; then print and post the invoice as you normally would

**After the invoice is printed and posted, call up each equipment record that contains a meter. Then, while the detail record is displayed, press SHIFT + F5 to call up the Agreement Safeguard Editor and enter the password when prompted. The Safeguard Editor pop-up window is displayed:**




Update initial reading - - This field holds the meter reading taken at the beginning of this term of the agreement. The agreement's term is the length of time from the *Coverage start date* to the *Coverage end date*. Term should not be confused with billing period which may be from the beginning to the end of a month, quarter, half-year, etc.

> Set this field. *Initial agmt reading* equal to the value of *Last reading*, which is displayed immediately below the Safeguard Editor pop-up window. When agreements are auto-renewed, this field is set equal to the *Last reading* taken just prior to the renewal process.

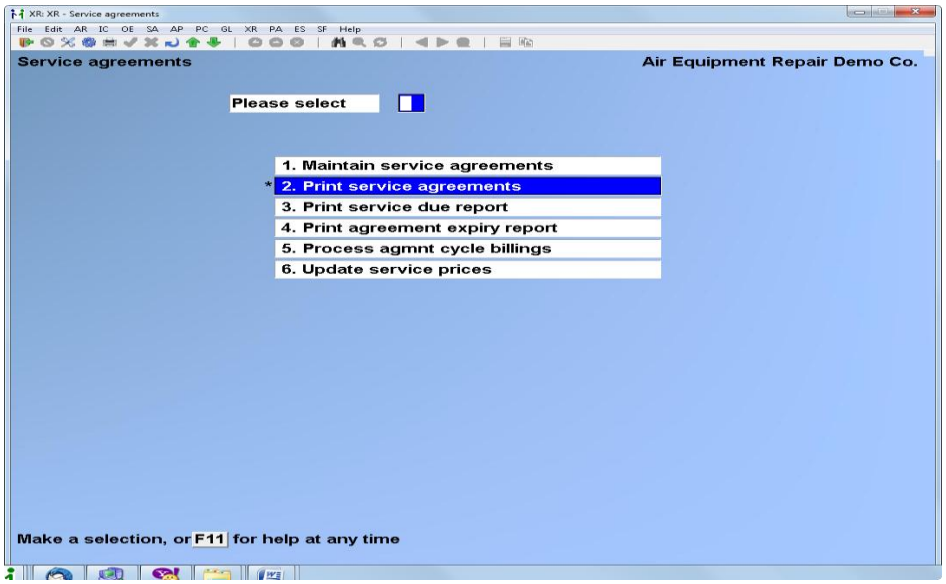
Clear total uses - - The *Total agmt uses* field is used to accumulate all meter "clicks" during the term of this agreement. Since meter exchange transactions are supported, this number may not be simply the difference between the initial and the last meter readings. In fact, because of the possibility of meter exchanges, the current meter reading may actually be lower than the initial meter reading. *Total agmt* uses includes credits. Clear the field *Total agmt uses* by setting it to zero for all meters. When agreements are auto-renewed, this field is set to zero automatically.

Clear total credits - - The *Total agmt credits* field accumulates all meter credits issued during the term of this agreement. The *Total agmt uses* less the *Total agmt credits* equals the net total agmt uses. It is this last number that is used to determine if an agreement has expired due to excessive uses. Clear the field *Total agmt credits* by setting it to zero for all meters. When agreements are auto-renewed, this field is set to zero automatically.

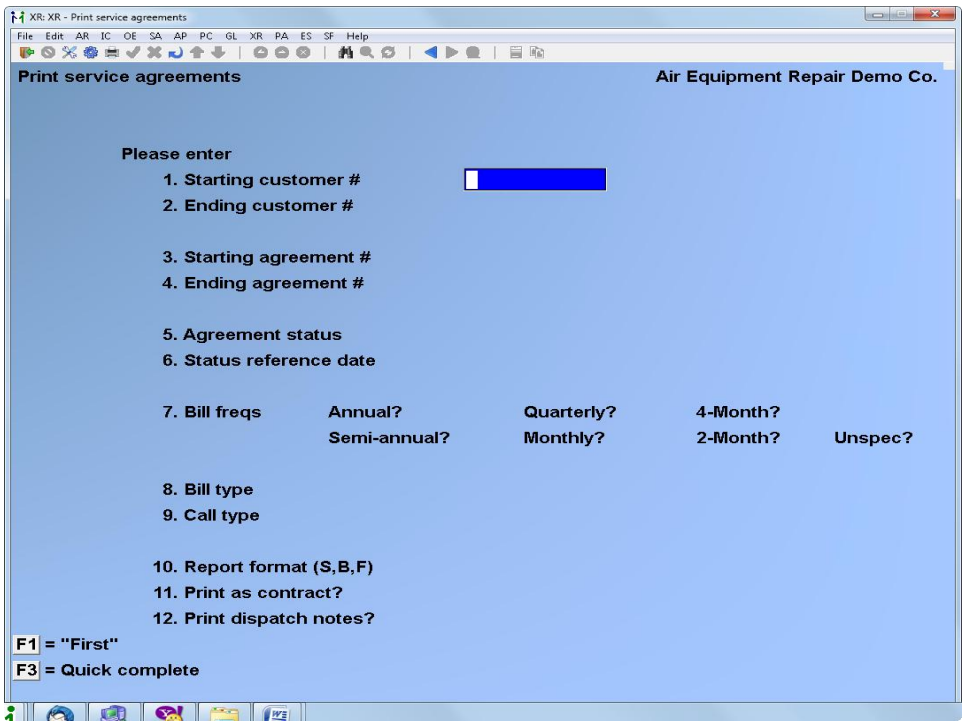
At this point, the agreement data base will be in proper order.

## Print service agreements

From the *Service agreements* menu, select *Print service agreements:*




Then enter the report parameters:




### 1. Starting customer #

Enter up to 12 alphanumeric characters to specify the starting customer number or press [**F1**] for the first customer record.

**2. Ending customer #**
Enter up to 12 alphanumeric characters to specify the ending customer number, press [**F1**] for the last customer record or if you did not use [**F1**] to specify the first customer record, press [**ENTER**] if you want to limit the report to just one customer.

**3. Starting agreement #**
Enter up to 10 alphanumeric characters as the starting agreement number or press [**F1**] for "First".

**4. Ending agreement #**
Enter up to 10 alphanumeric characters as the ending agreement number or press [**F1**] for "Last" or if you did not use [**F1**] to specify the starting agreement number, press [**ENTER**] to limit the report to only one agreement number.

**5. Agreement status**
Type A if you wish to print only those agreements that are "active".
Type I if you wish to print only those agreements that are "inactive".
Type B if you wish to print "both" active and inactive (i.e. "all" agreements relative to activity status).

Note that active/inactive status can only be determined by specifying a reference data. This is entered in the *Status reference date* field.

**6. Status reference date**
Enter the date by which agreements printed will be determined to be either active or inactive. An agreement is active is the status reference date is equal to or greater than the agreement start date and less than or equal to the agreement end date.

**7. Billing freqs (frequencies)**
This field allows you to select agreements for printing by their billing frequencies. Enter Y or N at each frequency to include or exclude that frequency on the report.

**8. Bill type**
You may either enter a valid Bill Type, up to 6 alphanumeric characters or press [**F1**] to scroll through the billing types on file. After the proper Bill type is displayed press [**ENTER**]. If you wish to include all agreements in the report regardless of their bill type, press [**ENTER**] when the field is blank.

**9. Call type**
You may enter a valid Call Type, up to 6 alphanumeric characters, or you may press [**F1**] to scroll through the call types on file. After the proper call type is displayed, press [**ENTER**]. If you wish to include all agreements in the report regardless of their call type, press [**ENTER**] while the call type field is blank.

**10. Report format (S, B, F)**

This field allows you to select one of three (3) formats to print this report. The choices: S = Summary, B = Brief, F = Full, can be thought of as short, medium and long respectively.

**11. Print as contract ? N**

Press [**ENTER**] to accept the default N, or type Y. If you answer N, the service agreements selected will be printed in database reporting format. If you answer Y, the service agreements selected will be printed in a format suitable for attachment to a customer contract form.

**12. Print dispatch notes ? N**

If you press [**ENTER**] to accept the default N, the agreements selected will be printed with their billing notes but without their dispatch notes. If you type Y, the agreements selected will be printed with both their billing and dispatch notes.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change. Follow the instructions on the screen to route this report to a printer, the screen or a file on disk.

## Print service due report

### Introduction

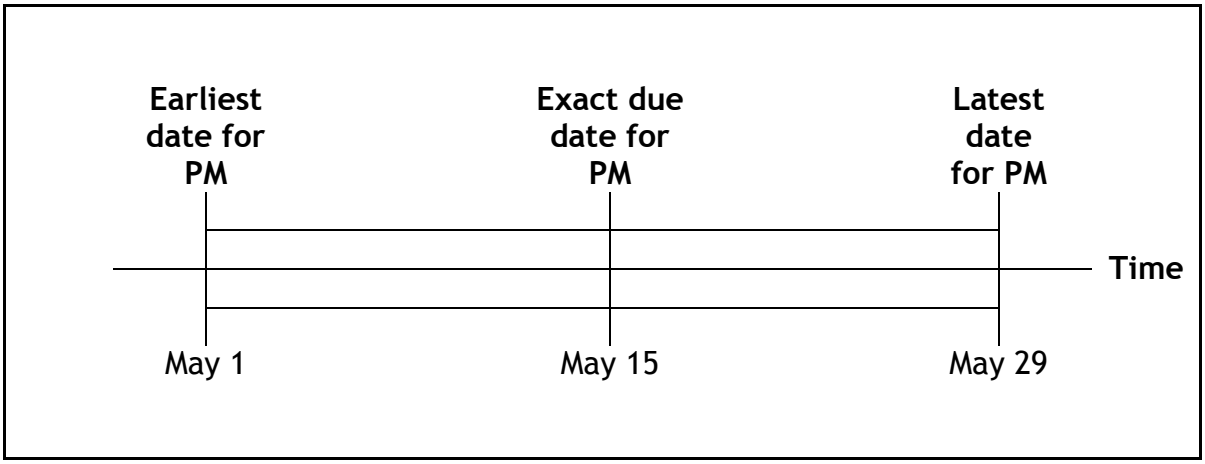
The service due report is a scheduling tool. At any time, you can ask the system to print a schedule of preventive maintenance work that you are contractually obligated to perform. You specify the from/to date range you're interested in and the system prints the customer location and equipment that requires servicing.

Usually dispatchers run the service due report at the beginning of the month and ask for the service due during that month. Having this report, they then work to "weave" the preventive maintenance calls in with the emergency calls in order to complete them by month's end. To facilitate the dispatcher's job, the service due report may be optionally printed in zip code order.

As an option, service calls may be automatically opened for equipment selected for service due. This feature saves a great deal of time for service companies that perform may preventive maintenance calls.

### Definition of terms

Service Manager allows preventive maintenance to be scheduled as an exact date with optional plus and minus tolerances. For example: Perform PM every 3 months plus or minus 2 weeks. Graphically the PM scheduling window can be shown on a date line as:




The service due report uses distinct terminology to describe report selection date as they relate to the PM scheduling window. Using our graphic example and assuming that the PM work has not been done, the terms used are as follows:

| | |
|---|---|
| Past Due | PM service performed after the latest schedule date has passed. If today was June 10th, then our PM would be past due. |
| Late Schedule | PM service performed between the exact date due and the latest scheduled date. If today was May 20th, our PM would be in "late schedule". |
| On Schedule | PM service performed on the exact day specified. It today was May 15th and we were performing the PM service today, it would be "on schedule". |
| Early Schedule | PM service performed between the earliest scheduled date and the exact date due. If today was May 11th, our PM would be in "early schedule". |

Most dispatchers who use Service Manager print the service due report monthly. Many of them print the report three ways at the beginning of the month:

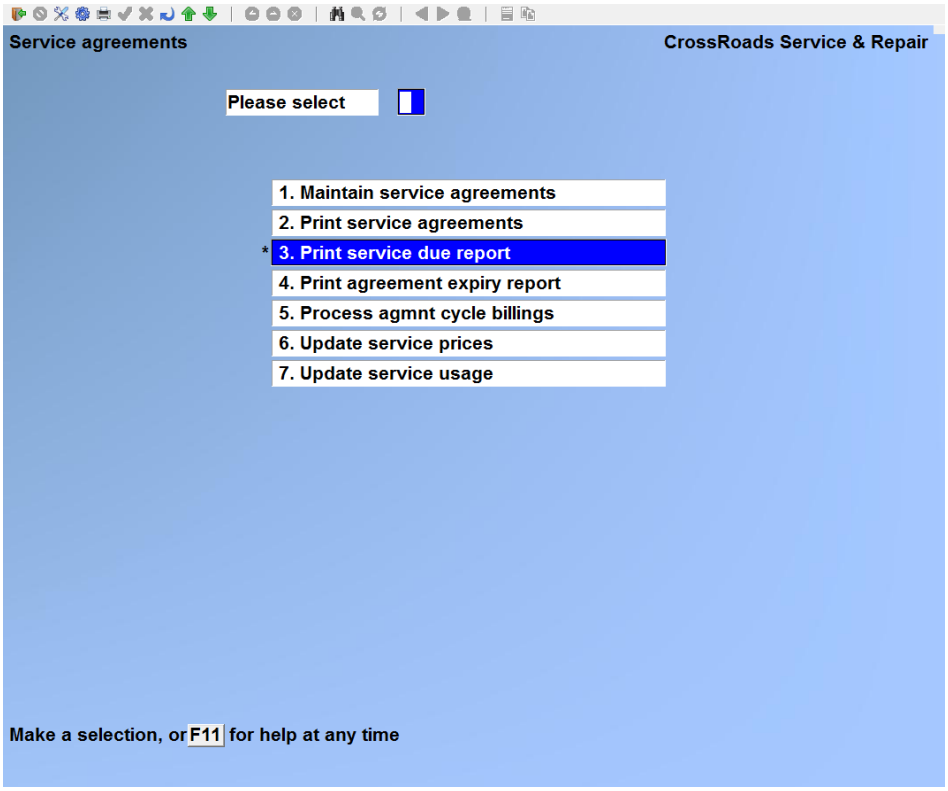
1. Past due only
2. Late schedule only
3. On schedule plus early schedule

In this way, the dispatcher can refer to the list of past due service as high priority until it is completed. Then he can turn his attention to the late schedule list until it is complete. Finally, the dispatcher will work to perform the on schedule and early schedule PM service work.

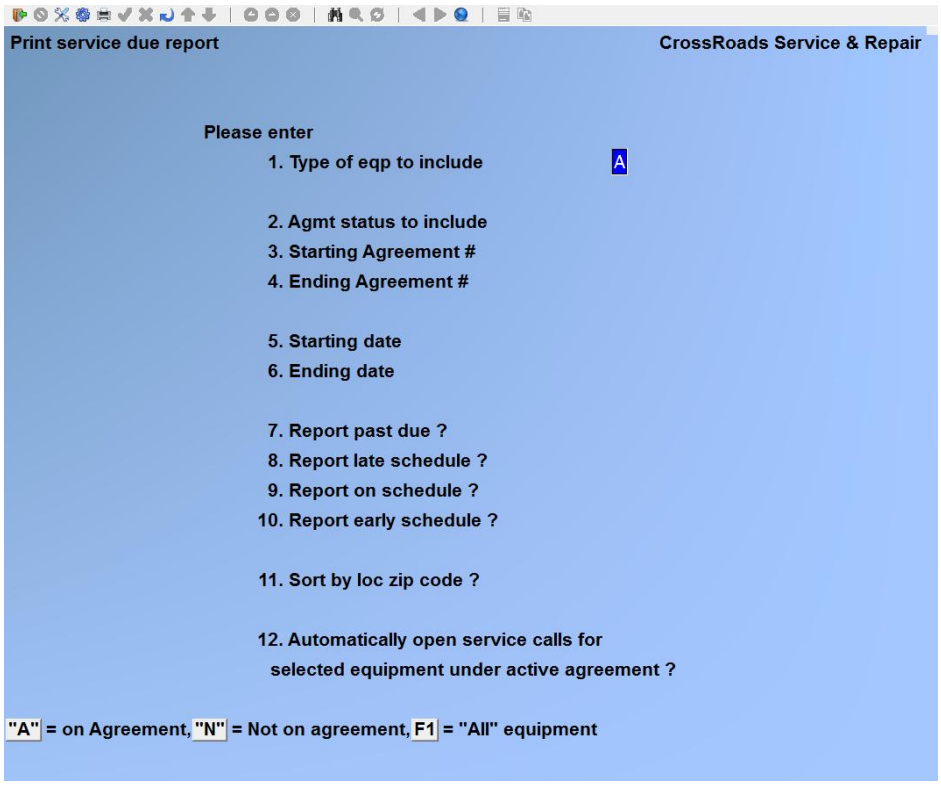
Managers should make a habit of periodically (e.g. once per week) printing the past due list only using it as an exception report. If a significant list of past due work is the norm then something needs to be corrected. Perhaps a more effective dispatcher; perhaps more (or more productive) service technicians.

The sort-by-zip code feature of the service due report is particularly useful for companies that perform a large number (e.g. hundreds) or preventive maintenance service calls per month. The dispatcher can print the report once at the beginning of the month. Then as emergency calls are dispatched throughout the month, the report can be consulted to determine if a nearby P.M. call exists. As the P.M. calls are dispatched they can be crossed off the report. This method insures that a lengthy service due report, containing hundreds of calls, need only be printed once per month.

From the *Service agreements* menu, select *Print service due report:*




Then enter the report parameters:




**Type of eqp to include**
With this report, you can schedule equipment for preventive maintenance whether the equipment is included on a service agreement or not. Type A if you only want to include equipment that is on an agreement that is active during the start and end dates entered below. Type N if you only want to include equipment that is not on an active agreement. Press [**F1**] for "All" equipment.

**Agmt status to include**
Type A if you wish to print only those agreements that are "active".
Type I if you wish to print only those agreements that are "inactive".
Press [F1] if you wish to print "both" active and inactive agreements (i.e. "all" agreements relative to activity status). Note that active/inactive status can only be determined by specifying reference dates. These will be entered later.

**Starting agreement #**
Enter up to 10 alphanumeric characters as the starting agreement number or press [**F1**] for "First".

**Ending agreement #**
Enter up to 10 alphanumeric characters as the ending agreement number or press [**F1**] for "Last" or if you did not use [**F1**] to specify the starting agreement number, press [**ENTER**] to limit the report to only one agreement number.

**Starting date**

Enter the starting date that you want to use to bracket the report or press [**F1**] for "Earliest".

**Ending date**
Enter the ending date that you want to use to bracket the report or press [**F1**] for "Latest" or if you did not use F1 to specify the earliest date, you may press [**ENTER**] to limit the report to one day.

**Report past due ?**
If you answer Y, then all PM servicing that is past due will be reported. If you answer N, past due service will not be reported.

**Report late schedule ?**
If you answer Y, then all PM servicing that falls in the late portion of the schedule window will be reported. If you answer N, late schedule service will not be reported.

**Report on schedule ?**
If you answer Y, then all PM servicing that is on schedule will be reported. If you answer N, on schedule service will not be reported.

**Report early schedule ?**
If you answer Y, then all PM servicing that falls in the early portion of the schedule window will be reported. If you answer N, early schedule service will not be reported.

**Sort by loc zip code?**
Type A if you wish to print only that agreements that are "active".
Type I if you wish to print only those agreements that are "inactive".
Type B if you wish to print "both" active and inactive (i.e. "all" agreements relative to activity status).

**Automatically open service calls for selected equipment under active agmt ?**
If you press [**ENTER**] to accept the system default of N, you will only generate the service due report.

If you type Y, Service Manager will automatically open one service call for each piece of equipment listed on the service due report. In order to perform this function, a Y response will cause the system to prompt:

**Call open date:**
Enter the call open date you wish to assign to all calls that will be automatically generated. Note that in addition to the open date you will specify here, each call will have the phrase "COMPUTER GENERATED CALL" loaded into its *Remark* field, and the *Reason* field will contain "Preventive Maintenance (P.M Schedule: mm/dd/yy to mm/dd/yy)".

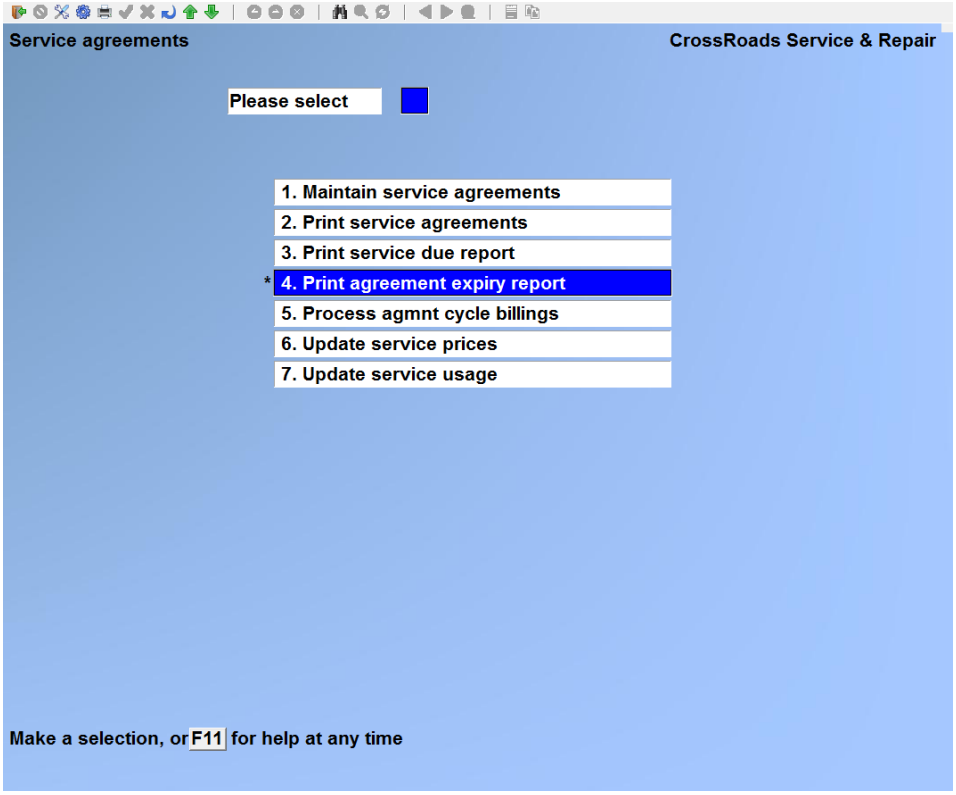
At *Field number to change ?* make any desired changes and press [**ENTER**]. If you answered Y to automatically generate open calls, you will be asked *Are you sure ?* Answer Y or N and then follow the instructions given to route this report to a printer, the screen or a disk file.

## Print agreement expiry report

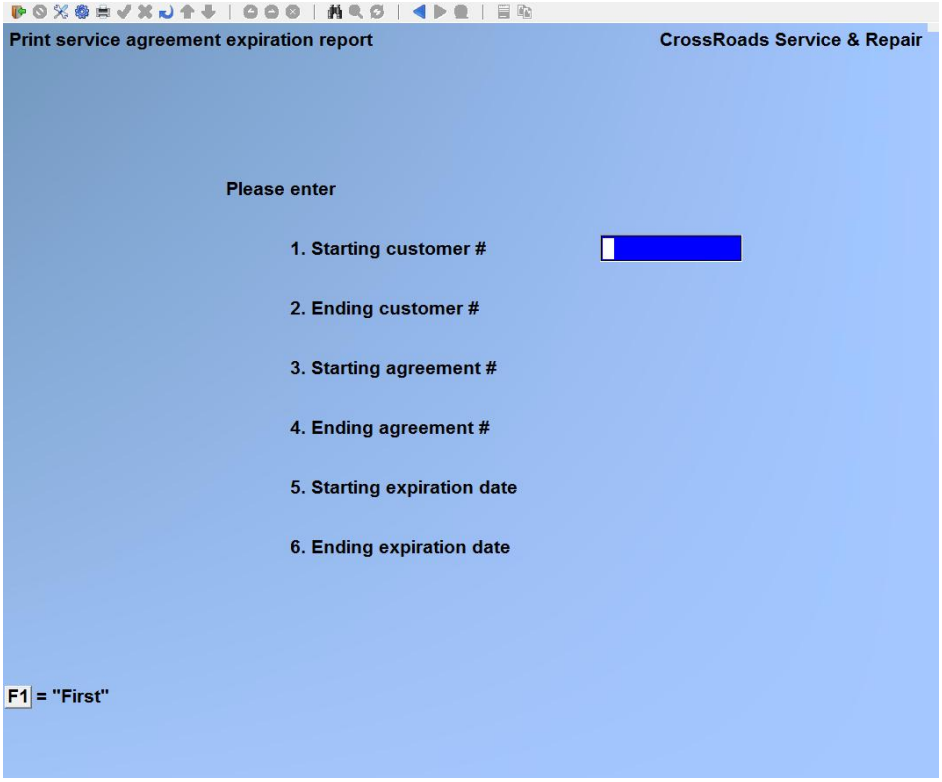
### Introduction

The agreement expiration report is a service agreement marketing tool. The report lists all customers whose agreements are due to expire during the date range specified.

Select *Print agreement expiry report* from the *Maintain service agreements* menu.




Then enter the report parameters:




**1. Starting customer #**

Enter up to 12 alphanumeric characters to specify the starting customer number or press [**F1**] for the first customer record.

**2. Ending customer #**

Enter up to 12 alphanumeric characters to specify the ending customer number, press [**F1**] for the last customer record or if you did not use [**F1**] to specify the first customer record, press [**ENTER**] if you want to limit the report to just one customer.

**3. Starting agreement #**

Enter up to 10 alphanumeric characters as the starting agreement number or press [**F1**] for "First".

**4. Ending agreement #**

Enter up to 10 alphanumeric characters as the ending agreement number or press [**F1**] for "Last" or if you did not use [**F1**] to specify the starting agreement number, press [**ENTER**] to limit the report to only one agreement number.

**5. Starting expiration date**

If you want to print the report for a selected date range, enter the starting date or [**F1**] for "Earliest".

**6. Ending expiration date**

Enter a specific date, press [**F1**] for "Latest" or if you did not use [**F1**] to specify the earliest starting date, press [**ENTER**] if you want to limit the report to just one date.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change. Follow the instructions on the screen to route this report to a printer, the screen or a file on disk.

## Process agreement cycle billings

### Introduction

The process agreement cycle billing functions are used to periodically bill your service agreement customer. Used properly, these functions will save many hours of clerical work each month.

The normal sequence for processing cycle bills involves five steps. We are using the menu selection numbers as a guide:

| | | | |
|---|---|---|---|
| Step # 1. | Menu item | # 1. | Auto select agreements for billing |
| Step # 2. | Menu item | # 4. | Print cycle billing edit list |
| Step # 3. | Menu item | # 5. | Print cycle billing invoices |
| Step # 4. | Menu item | # 6. | Post invoices to A/R |
| Step # 5. | Menu item | # 7. | Process income accruals (only if using accrual for income method) |

In step 1, you give Service Manager an agreement billing cutoff date and let it search your entire agreement file to select all those – but only those – agreements that are due to receive an invoice on or before your cutoff date.

In step 2, you print and review the cycle billing edit list. This is the "dry run" that will show you what your invoices will look like if you make no changes.

After step 2, there are option functions you may want to use:

- You may use function 3 to cancel specific agreements that for some reason (e.g. customer relations problem) should not be billed at this time.

- You may use the change/inquire agreement functions to edit an agreement whose invoice would be in error had it been printed. You will have to use function 3, *Cancel agreement selections* to cancel the agreement from billing before you make the change, and you will have to use function 2, *Select an agreement for billing* after you have made the change. You will then use function 4 to *Print the cycle bill edit list* for that agreement to see if your changes had the desired effect.

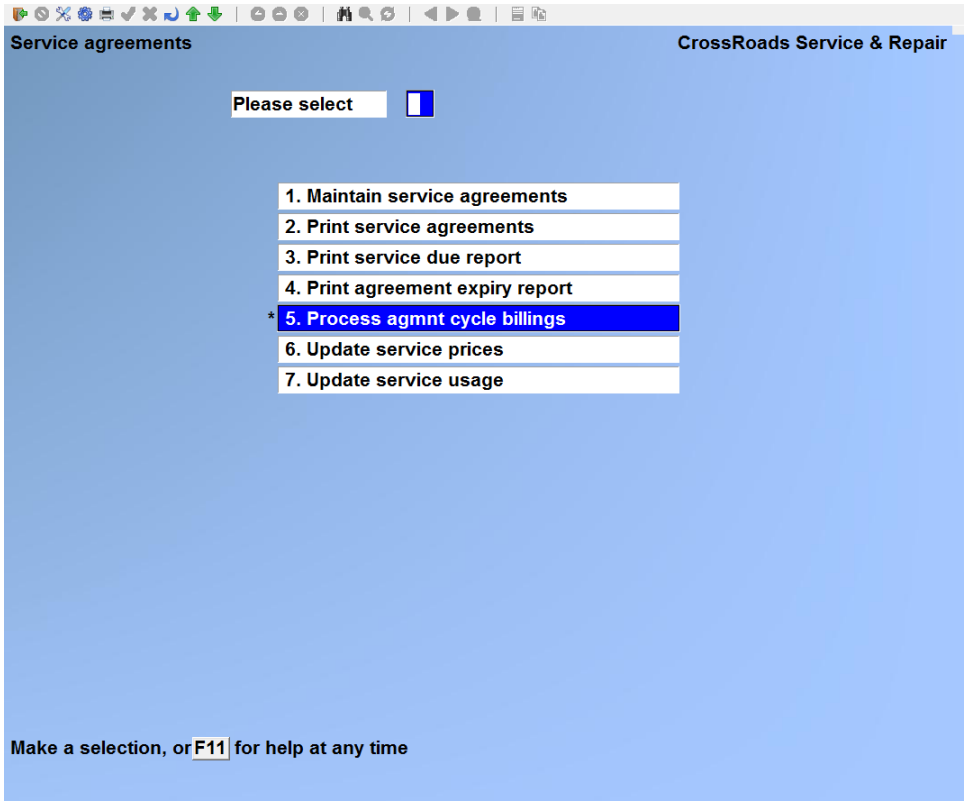
- You may use function 2 to *Select an agreement with an unspecified billing frequency*.

When the cycle billing edit list is in order, you will proceed to step 3 and *Print the cycle billing invoices*.

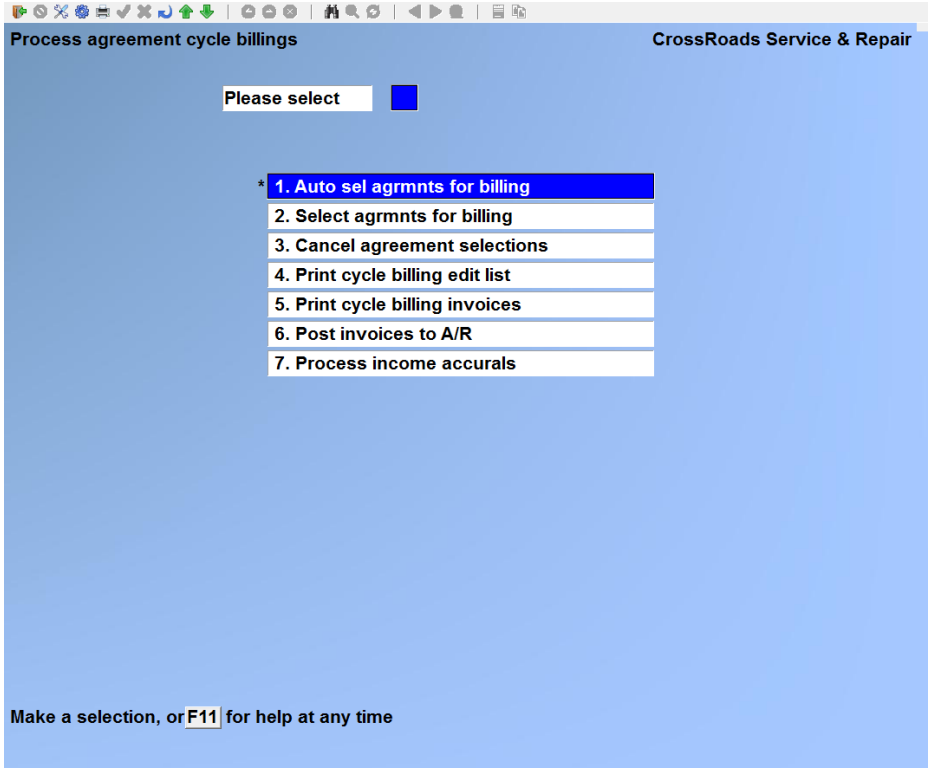
Next, in step 4, you *Post the cycle invoices to Accounts Receivable*.

Finally, if you are using Accrual as the income method in Service Manager control information, in step 5, you *Process income accruals* to recognize earnings from your r previously deferred agreement invoices.

Select *Process agmnt cycle billings* from the *Maintain service agreements* menu.



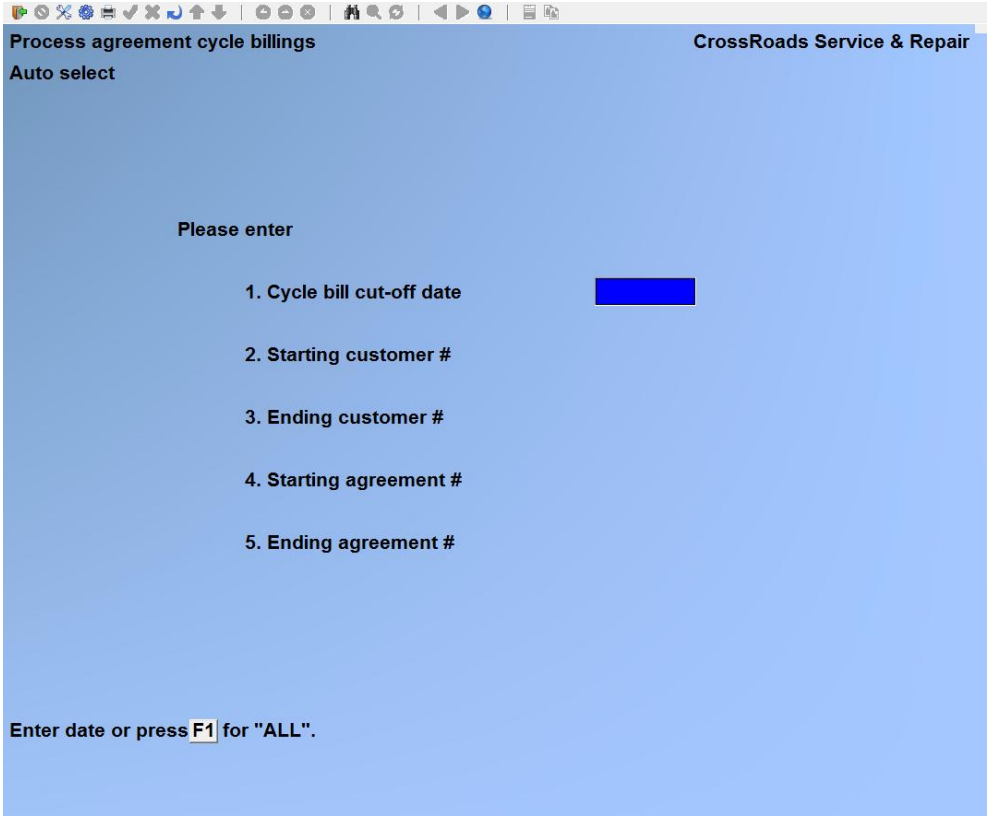

Select from the following functions:




## Auto select agreements for cycle billing

If this option is selected, the system will automatically select for cycle billing all the agreements that are due on/before the specified cutoff date.

Most users of Service Manager choose regular, repetitive, schedules for processing cycle invoices. For example, one firm may print all invoices that are due for the first of the month on the Friday that is closest to the 15th of the previous month. In other words, on or about 10/15/YY they will run the auto-select function with a cutoff date of *11/01/YY*. In that way, the invoices are in their customers hands *well be/ore* the first of the month billing date. To cite another example, firms with a large number of agreements may select and print invoices every Wednesday in order to level the monthly workload.




Follow the instructions at the bottom of the screen to make your selections.

**1. Cycle bill cut-off date**

Enter a cycle bill cutoff date or press [**F1**] for “All”.

**2. Starting customer #**

There may be times that you want to invoice everyone due by the cutoff date chosen. If this is the case, you can select by a range of customers or agreements to be invoiced. Enter up to 12 alphanumeric characters to specify the starting customer number or press [**F1**] for the first customer record.

**3. Ending customer #**

Enter up to 12 alphanumeric characters to specify the ending customer number, press [**F1**] for the last customer record or if you did not use [**F1**] to specify the first customer record, press [**ENTER**] if you want to limit the report to just one customer.

**4. Starting agreement #**

Enter up to 10 alphanumeric characters as the starting agreement number or press [**F1**] for “First”.

**5. Ending agreement #**

Enter up to 10 alphanumeric characters as the ending agreement number or press [**F1**]

for “Last” or if you did not use [**F1**] to specify the starting agreement number, press [**ENTER**] to limit the report to only one agreement number.

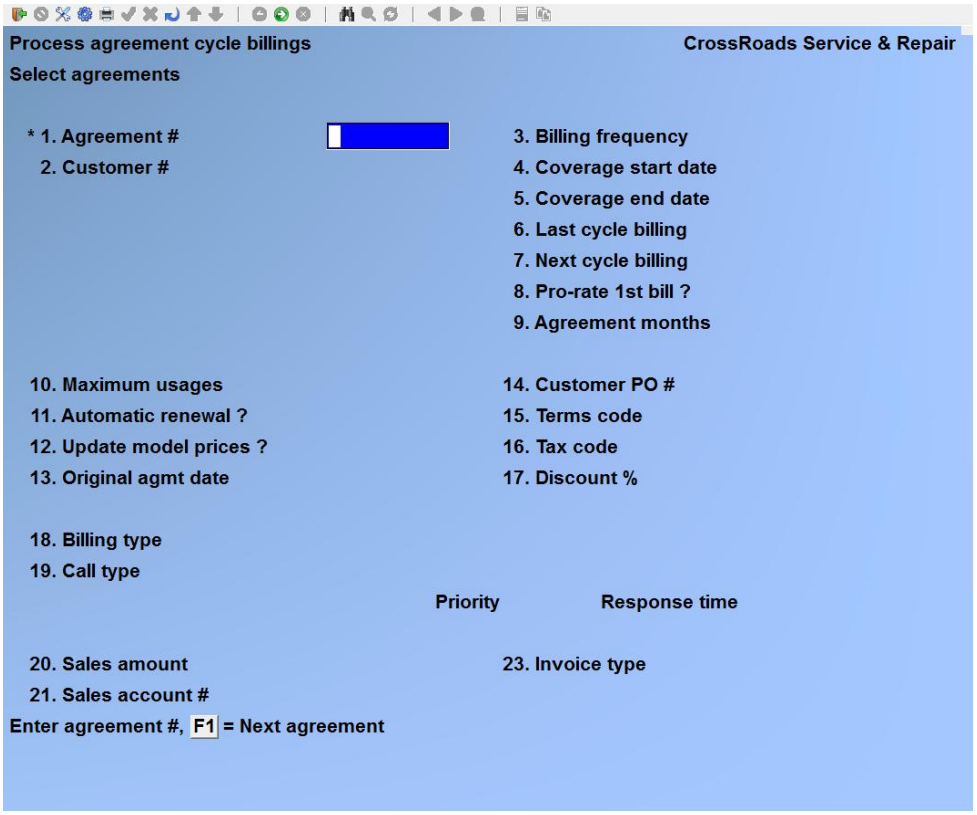
At *Any change ?* make any desired changes and press [ENTER].

The Service Manager system will search the entire service agreement file and select for billing all those contracts that are due for invoicing by the time of your specified cutoff date and the other selections that you specified. This will occur regardless of the cycle frequency specified in the agreement.

**Select agrmnts for billing**

This function is used to select individual service agreements for invoicing. They may be agreements that have an **U**(nspecified) billing frequency or they may be normal cycle agreements with codes **M Q S** or **A.** Whereas function 1. Auto Select Agreements for Cycle Billing is a “bulk” selection, this function requires agreements to be selected one-by-one.

If an agreement is selected that has an unspecified billing frequency, the system will bill whatever amount is contained in the *Sales amount* field on the agreement basic data screen.




## 1. Agreement #

Enter the agreement number of the first contract you want to select for billing or use F1 to scroll through the agreements on file.

The system will fill in the data screen for the agreement number you specify. At the bottom of the screen you are asked *Select this agreement for billing ? Y*. Answer Y or N and follow the instructions on the bottom of the screen. When there are no more agreements to be individually selected for billing, press [**Tab**].

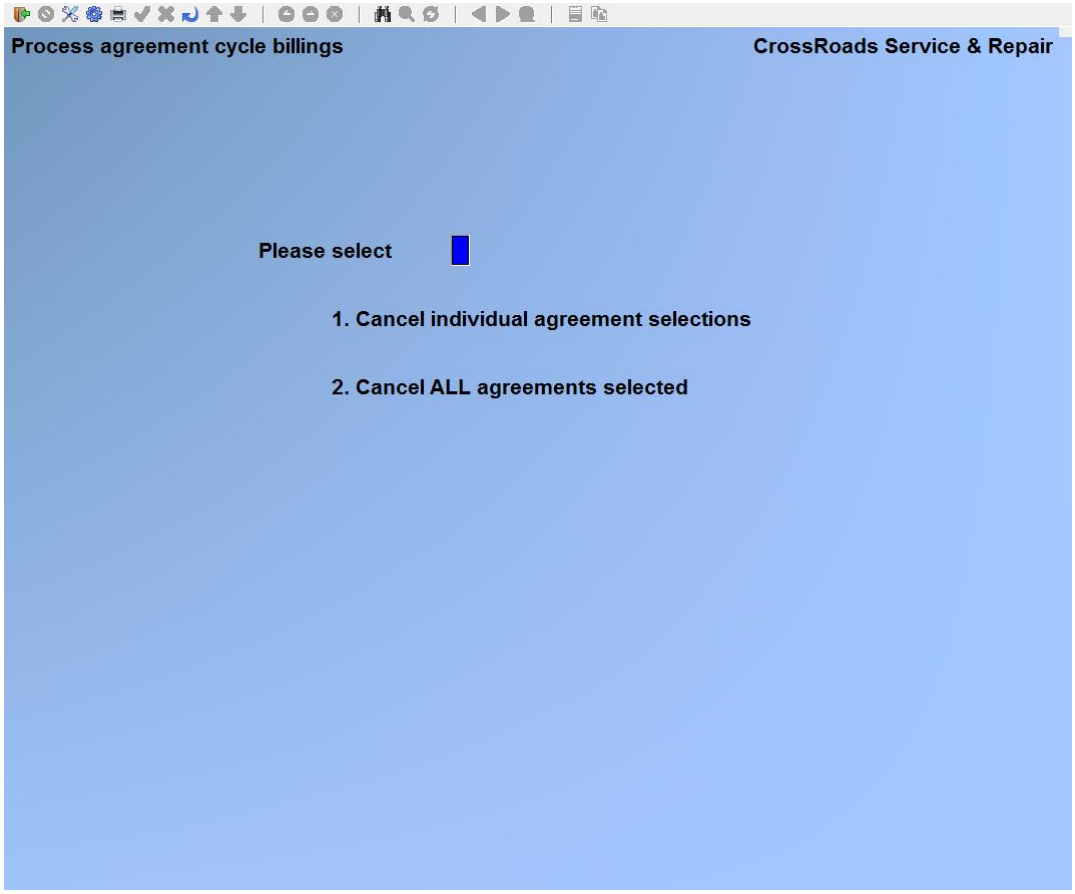
Agreements selected individually will appear with all other selected agreements on the cycle billing edit list. After selections are complete, the edit list should be printed before the cycle invoices are printed.

**Cancel agreement selections**

This function is used to cancel or "unselect" agreements for billing. The function offers two options:

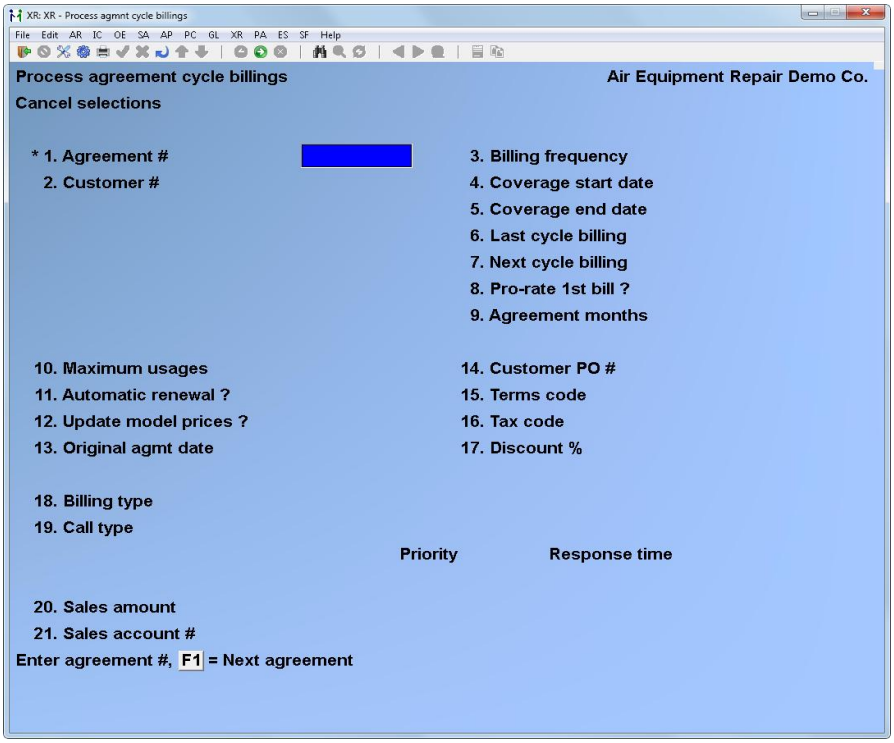
- Cancel individual agreements
- Cancel *all* agreements currently selected

It is most often used to eliminate individual agreements from the list generated by the "bulk" auto select function.



## 1. Cancel individual agreement selections

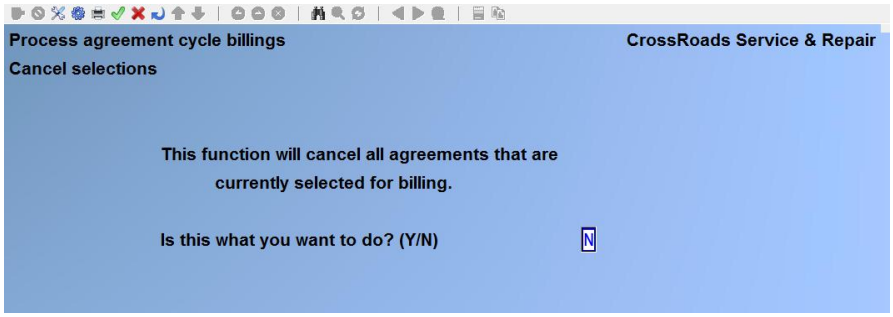
This function is used to "unselect" individual service agreements from invoicing.




Enter the valid number for a service agreement that has been preciously selected for billing but which you no longer want to bill or use F1 to scroll through the agreements that have been selected for billing. The system displays the data for that billing. When prompted *Cancel this agreement from billing ?* answer Y or N and follow the instructions at the bottom of the screen. When you have completed the cancellations, press [TAB].

## 2. Cancel ALL agreements selected

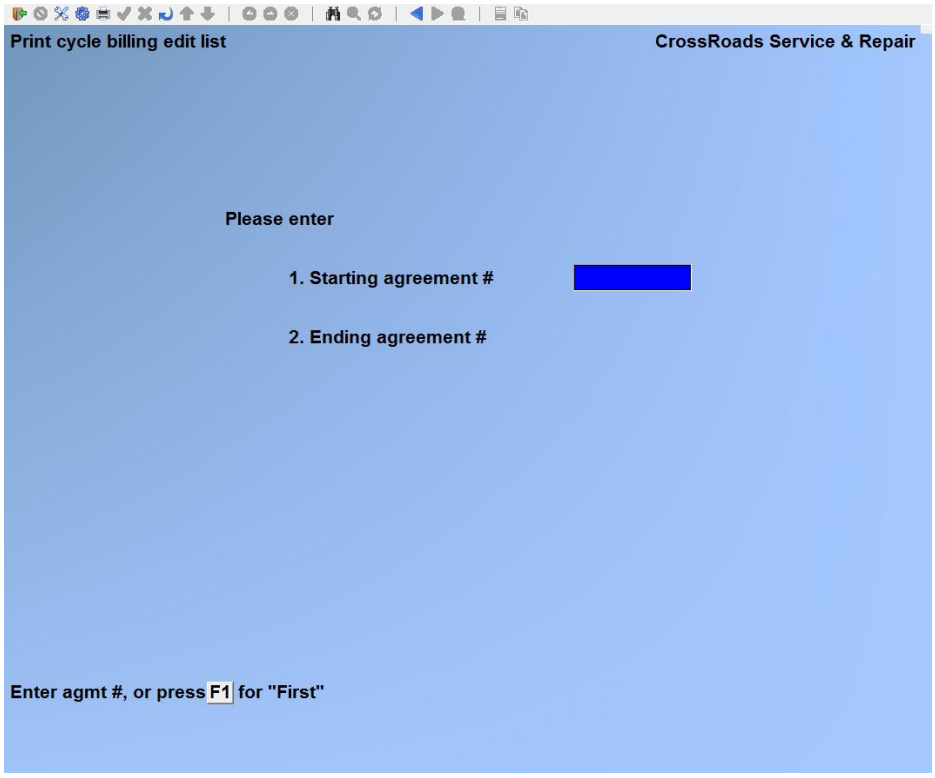
If you select this function, this screen is displayed:




If you answer Y and confirm your answer when prompted *Are you sure ?* the system cancels all selected agreement bills and display a count of the number of agreement billings cancelled.

## Print cycle billing edit list

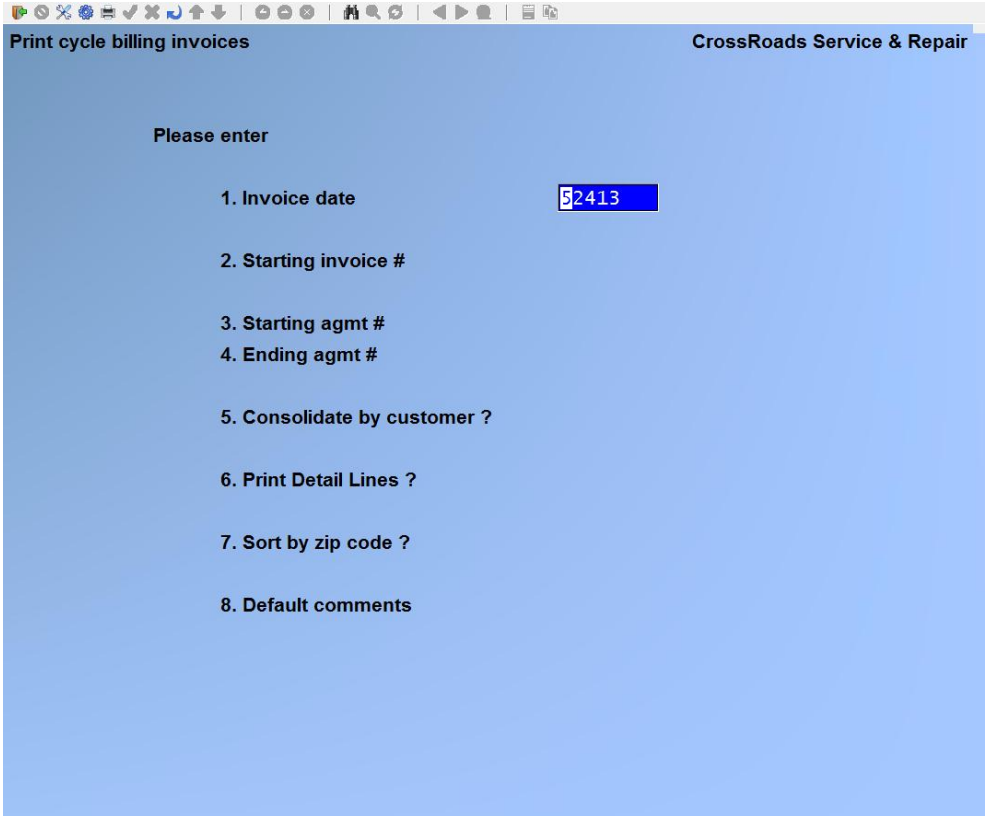
Follow the instructions given to select the range of agreements to print and route the report to a printer, the screen or to disk. After reviewing the edit list, you may want to select additional agreements for billing, cancel agreements from billing or edit certain service agreements to correct errors before reprinting the edit list.




## Print cycle billing invoices

After the billing selections have been verified as correct by reviewing the edit list, print the invoices. All invoices generated in Service Manager will create invoice history in *Billing* (OE) and are retrievable from **O/E -> Invoice History.**

*See next page for illustration.*




Enter the following data:

**1. Invoice date**

Enter the date you want printed on the invoices or press [**ENTER**] to default to the date (today) displayed. The date entered here will be the date of the sales transaction when these invoices are posted to Accounts Receivable. If you are printing invoices ahead of time make sure that you enter the correct date here.

**2. Starting invoice #**

Enter the number to print on the first invoice in this run or press [**ENTER**] to accept the next invoice number in sequence.

**3. Starting agmt #**

Enter up to 10 alphanumeric characters as the starting agreement number or press [**F1**] for "First" (agreement selected).

**4. Ending agreement #**

Enter up to 10 alphanumeric characters as the ending agreement number or press [**F1**] for "Last" (agreement selected) or if you did not use [**F1**] to specify the starting agreement number, press [**ENTER**] to limit the report to only one agreement number.

**5. Consolidate by customer ?**

If you answer Y and if there is more than one invoice for the same customer in this

run, then the multiple invoices will be consolidated onto one invoice document. Two notes must be added for clarity. First, note that we said on invoice document, not one invoice page. Consolidation of many invoices may consume many invoice pages, but it will still give your customer only one invoice to pay. Second, for invoices to be consolidated, even for the same customer, the invoices must carry the same *Terms code* and the same *Tax code*. That is a restriction of the Accounts Receivable package.

If you press [**ENTER**] to accept the system default of N, each agreement bill will be printed on a separate invoice document. The invoices will print in increasing order of the customer number.

Why use this feature? Suppose you rented or leased equipment to a customer and also service that equipment. You have two ways to handle it. You could write one agreement with two line items, one for the rental and one for service. Each time that one agreement was billed out, there would be only one invoice document.

However, if there were significant differences between the two (e.g. different start and end dates, billing frequencies, bill types or General Ledger sales account numbers) you could create two separate agreements to handle the differences. But, to make processing e3asier for your customers, you can consolidate onto one invoice using this feature.

One final comment. If you have a significant number of agreements that will be consolidated and a significant number that won't be consolidated, you should code that condition into the agreement number. For example, number all consolidated agreements as "C12345678" and all individual agreements as "112345678". That way you can perform an auto select run using starting agreement number C00000000 and ending agreement number C99999999. When you print those invoices answer "Consolidate = Y". Follow up with another selection run from 100000000 to 199999999 and answer "Consolidate = N".

**6. Print Detail Lines ?**

If you press [**ENTER**] to accept the system default of Y, each line item on the agreement will be printed on the invoice. If you answer N, Service Manager will print only one generic line on the invoice that comprises the total of all detail lines on the agreement.

For example, consider a quarterly agreement with five (5) pieces of equipment on separate line items of $150 each. If you answered "Print detail = Y", Service Manager will print the 5 separate line items complete with model numbers, serial numbers, etc. If you answered "N", Service Manager would print one invoice line item:

Quarterly contract billing $750.00

**7. Sort by zip code ?**

If you answer Y, the invoices will be printed in increasing order of the zip code of the

addresses to which the invoices are being mailed. If you press [ENTER] to accept the system default of N, the invoices will print in increasing order of the customer number.

**8. Default comments**

Enter any comments that you want printed on all invoices, up to 5 lines of 30 characters each.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

You then see *Please mount invoice forms on printer. Type DONE when ready*. Mount the pre-printed invoice forms on the printer so that the print head is at the top of the form. Adjust the printing pressure according to the thickness of the invoice forms. When you have finished mounting the forms, type *DONE*.

You are asked: *Print alignment ?*. Answer Y to print a test alignment form filled out with lines of X'S and 9's. After the form is printed, you are again asked *Print alignment ?*. If necessary, adjust the invoice forms in the printer to the left, right, up, or down. Check the last copy for readability, and adjust the printing pressure if required. Then answer Y to print another alignment form.

Continue to print alignment forms and make necessary adjustments until the invoice forms are properly aligned and all copies are readable. When the printing setup is correct, answer N to *Print alignment ?*. Follow the instructions given to route the invoices to the proper printer.

When the invoices have been printed, you are asked *Are invoices just printed OK ?* If you answer N, you are asked if you wish to restart invoice printing or return to the *billing* menu.

Answer R (to restart) if the invoices are not useable due to an incorrect billing date, wrong selection or the series of agreements to be billed or inappropriate default comments. If you answer R, you are allowed to re-enter the invoice printing information.

Answer M (to return to the *Billing* menu) if the invoices were not useable due to a printer malfunction that required realignment of the forms, or if incorrect billing information appeared on invoices. If you answer M, you must make the necessary corrections before printing the invoices again.

If you answer Y to *Are invoices just printed ok ?*, the invoices are marked as OK to post and you are then asked to *Please mount regular paper on printer. Type DONE when ready*. Change the paper, then type *DONE*. The *Process agreement cycle billings* menu reappears.

**Post invoices to A/R**

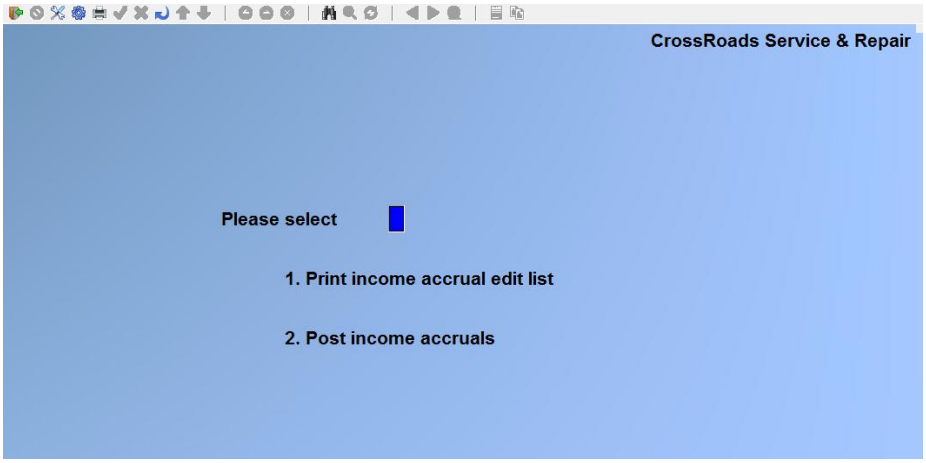
After Service Manager has printed cycle billing invoices and you have designated the printing as "OK", Service Manager creates the corresponding sales transactions. These transactions cannot be edited at this stage, so any file corruption that may occur due to power failure or system malfunction will require painstaking detail to correct. Therefore, you should post these transactions to Accounts Receivable immediately, or --if that cannot be done --they should be posted ASAP.

From the *Process agreement cycle billing* menu, type 6. You are asked *Are invoice ok to post ?*. Answer Y or N and follow the instructions on the screen to direct the printing of the Sales Journal. After printing the Sales Journal, the sales transactions will be posted. All invoices generated in Service Manager will create invoice history in *Billing* (OE) and are retrievable from **O/E -> Invoice History.**

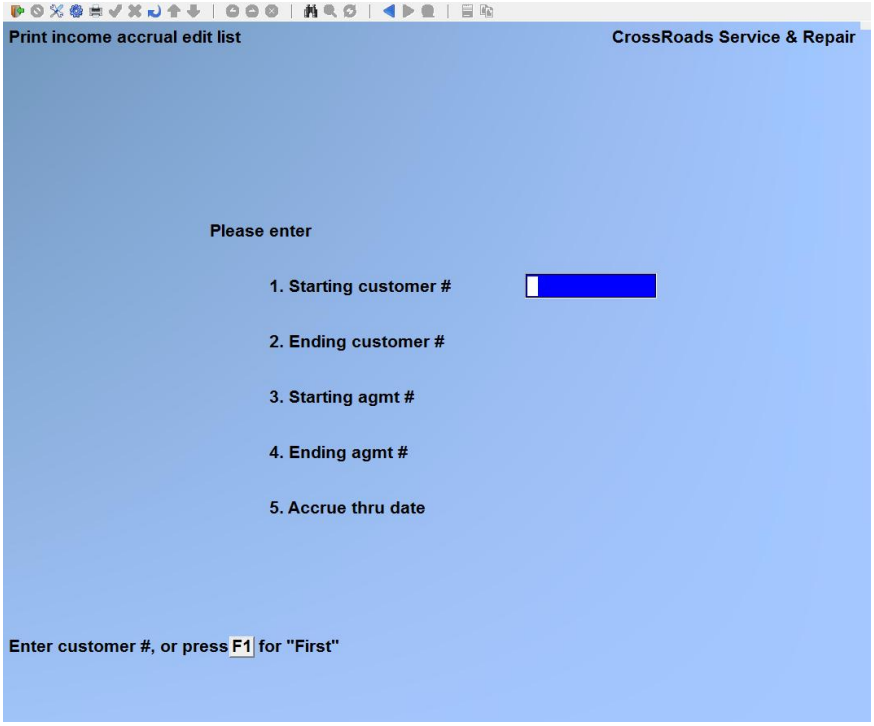
**Process income accruals**

If you have specified the accrual method of processing for service agreement income in your Service Manager control file, you should run the process income accruals functions once each month at the close of the month. Under the accrual method, agreement sales for multi-month billings will be at first be posted to the unearned income account specified in the Service Manager control file. However, when that income is recognized later, it will be posted to the sales account assigned to the agreement.

This menu selection leads to two (2) functions: an edit list preview and the actual posting program:




**Print income accrual edit list**




**Starting customer #**
Enter up to 12 alphanumeric characters to specify the starting customer number or press [**F1**] for the first customer record.

**Ending customer #**
Enter up to 12 alphanumeric characters to specify the ending customer number, press [**F1**] for the last customer record or if you did not use [**F1**] to specify the first customer record, press [**ENTER**] if you want to limit the report to just one customer.
**Starting agreement #**
Enter up to 10 alphanumeric characters as the starting agreement number or press [**F1**] for "First".

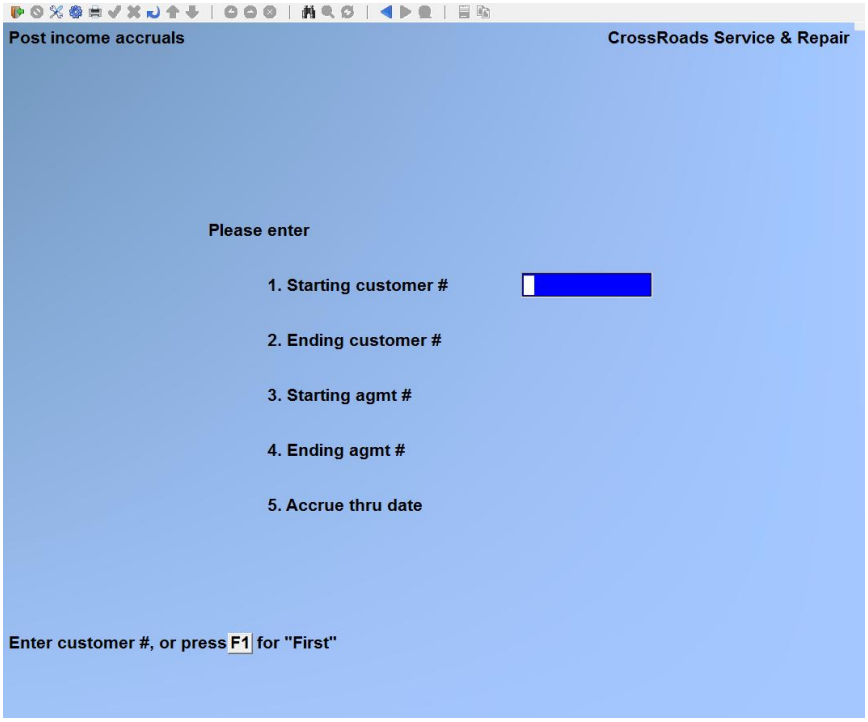
**Ending agreement #**
Enter up to 10 alphanumeric characters as the ending agreement number or press [**F1**] for "Last" or if you did not use [**F1**] to specify the starting agreement number, press [**ENTER**] to limit the report to only one agreement number.

**Accrue thru date**
The system takes the last accrual date from the Service Manager control file, adds one month to it and displays the resulting date here as the default. You may press [**ENTER**] to accept the default date or enter any date of your choosing provided that the date entered is the last day of the month.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change. Follow the instructions on the screen to route this report to a printer, the screen or a file on disk.

**Post income accruals**

This function creates general journal transactions to credit the appropriate sales accounts and debit the unearned income account for the amounts earned on each agreement up to the end-of-month cutoff date specified. The transactions produced by this function are posted to the Accounts Receivable distribution file. First, you are asked *Are income accruals ok to post ?* Answer N to end this function; answer Y to proceed with posting.




**1. Starting customer #**

Enter up to 12 alphanumeric characters to specify the starting customer number or press [F1] for the first customer record.

**2. Ending customer #**

Enter up to 12 alphanumeric characters to specify the ending customer number, press [F1] for the last customer record or if you did not use F1 to specify the first customer record, press [ENTER] if you want to limit the report to just one customer.

**3. Starting agreement #**

Enter up to 10 alphanumeric characters as the starting agreement number or press [F1] for “First”.

**4. Ending agreement #**

Enter up to 10 alphanumeric characters as the ending agreement number or press [F1] for “Last” or if you did not use F1 to specify the starting agreement number, press [ENTER] to limit the report to only one agreement number.

**5. Accrue thru date**

The system takes the last accrual date from the Service Manager control file, adds one month to it and displays the resulting date here as the default. You may press [ENTER] to accept the default date or enter any date of your choosing provided that the date entered is the last day of the month.

At *Field number to change ?* type the number associated with the field that you want to change and press [ENTER]. Proceed with your change. Follow the instructions on the screen to route this report to a printer, the screen or a file on disk.

When printing is completed, the general journal transactions will have been created.

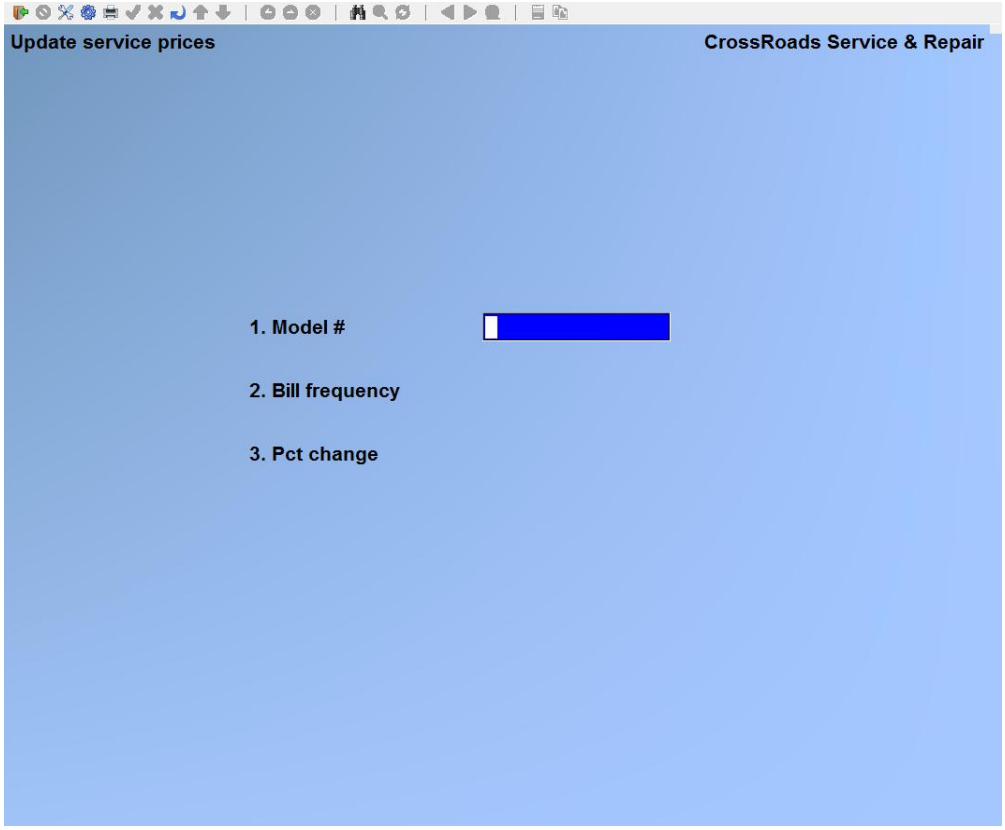
**Update service prices**

**Introduction**

The *Update service prices* function allows you to automatically update the service pricing levels for particular models of equipment. You may specify the specific equipment model, the billing frequency and the amount of the adjustment. The adjustment may be made up (+) or down (-) and may be specified as a percentage of the current price or as an exact dollar amount.

**Caution:** This function represents a powerful tool for maintenance of the Service Manager agreement database. However, be aware that all agreements matching the selection criteria will be changed. Since you may be contractually obligated to current pricing levels until an agreement expires or comes due for renewal – you may not want to use this function. In our experience talking to end-users of Service Manager, this function is most helpful either at initial startup or for users who only offer annual agreement billing frequencies. The auto-renewal and automatic price update options in the agreement basic screen may be a more appropriate too to use.

Select *Update service prices* from the *Maintain service agreements* menu.




Enter the following:

1. **Model #**
   Enter the model number of the equipment whose service price you want to change.

2. **Bill freq**
   Enter the billing frequency that this price change applies to (e.g. Monthly, quarterly, semi-annually, annually) or press [**F1**] for "All".

3. **PCT change**
   Enter either a percentage change (plus or minus) that should be applied to the existing service price or press [F1] to enter a fixed dollar amount of the price change.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change. When you press [**ENTER**], the line item screen is re-displayed and the five (5) options are still available.

**Update service usage**
If you are not tracking metered usage, skip this option; it will not be displayed on the entry screen.

If you are tracking metered usage, you have set the *Track equipment usage ?* flag in the Service Manager control to Y, this function provides the means for entering up-to-date meter readings (i.e., "service usage"). To achieve accurate cost-per-copy charges, meter readings should be updated just before printing cycle billing invoices.

The process of updating meter readings involves four major steps:

1. Entering meter reading transaction
2. Printing the transactions edit list
3. Correcting the transactions
4. Posting the transactions to the service agreement files

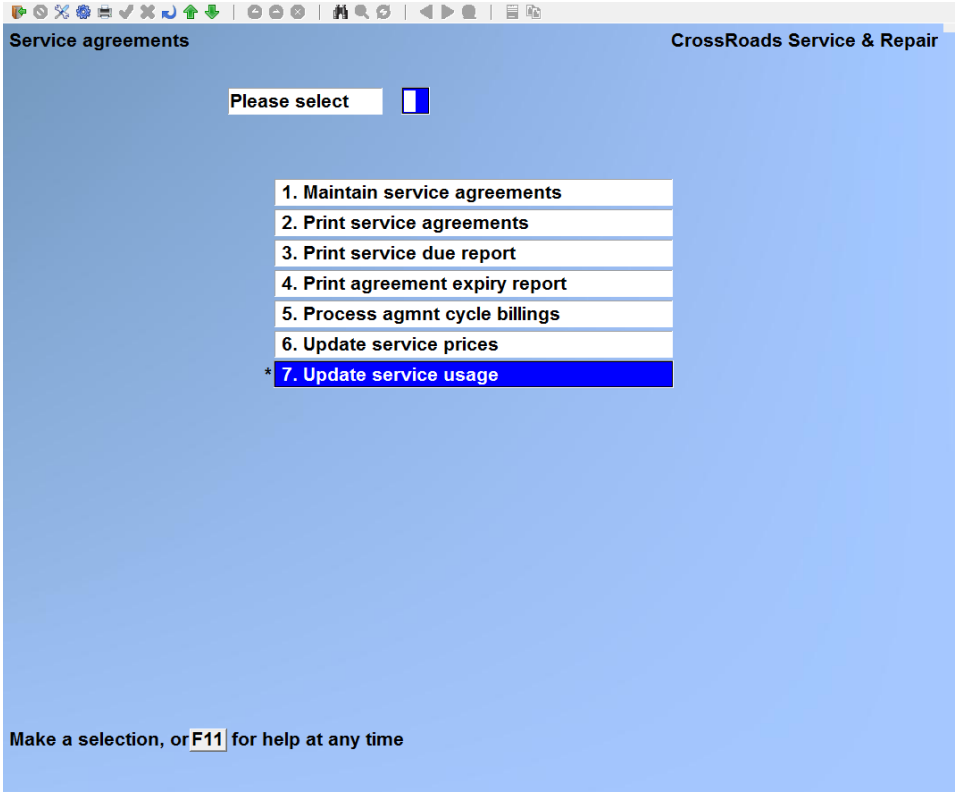
The data entry of meter readings is an error prone task to which Giant Technology has devoted a great deal of study. To the extent possible, we have included error detection logic at every step in the process. However, some errors are not able to be detected until just prior to posting the readings to the agreement files. For this reason we urge all users to religiously print the transaction edit list and review it carefully. Service Manager does catch all detectable meter reading errors, and they are clearly pointed out as erroneous on the edit list.

If you follow the practice of reviewing the edit list, correcting mistakes, and reprinting and correcting the edit list until it is error free, you will avoid the problem of having an "impossible" sequence of meter readings being posted to your agreement files. This is the most important step in the process of producing service agreement invoices with accurate cost-per copy charges.

It should also be noted that meter readings may be updated when entering the information to close a service call. Since most copier service calls result in a meter reading, that data may be taken from the service ticket and entered directly into Service Manager as part of service call processing.

When such is the case, the meter reading will be posted to the service agreement file automatically when the call is invoiced and placed into history. Thus it is important to close and invoice service calls in a timely manner. It is another practice that will insure accurate cost-per-copy ,.) charges on your agreement invoices.

Select *Update service usage* from the *Service agreements* menu.




## 1. Enter usage readings

Three (3) types of meter reading transactions result from using this function. Combined, they provide complete maintenance of equipment meter histories:

R = Reading transaction
C = Credit transaction
X = Exchange meter transaction

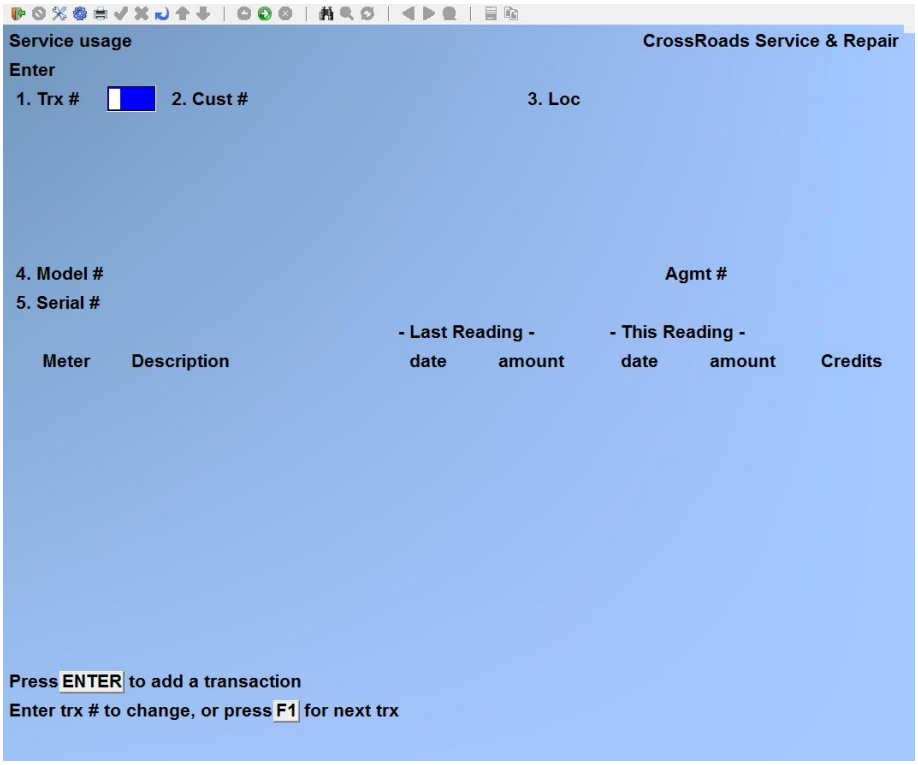
*Reading transactions* are the simplest type. They identify the exact machine, the reading date and the meter reading itself. This is the transaction used for end-of-month phoned-in meter readings.

*Credit transactions* are identical to reading transactions with one additional feature. Credit transactions identify the exact machine, the reading date, the meter reading and a credit count. Enter a credit amount when you want to credit your customer's agreement with a number of uses that were "defective" or that were performed by your technician in the course of performing maintenance.

*Meter exchange transactions* are designed to handle situations that result in discontinuous meter readings. Some examples include: when the meter itself has to be reset or exchanged; when the entire machine (with meter included) must be exchanged' when the machine is swapped temporarily with a loaner. The meter exchange transaction identifies the exact machine, the reading date, the meter

reading for the meter that is being replaced, credit counts if any and a reading for the meter that is being installed. On the *Service usage edit list*, the meter exchange transaction actually prints two (2) transactions in series; first, a reading transaction to “close out” the old meter reading and then an exchange transaction to “set up” the new meter.

To begin entering meter readings, select *Enter usage readings*.




## 1. Trx #

In order to provide maximum error detection, Service Manager assigns the transaction number. Press [**ENTER**].

## 2. Cust #

Enter a valid customer number, up to 12 alphanumeric characters.
If you do not know the customer number, you have two choices. You may press [**F1**] to have the system display the name and number of each customer in turn. When the customer whom you want to specify is displayed, press [**ENTER**].
Alternately, you may leave the customer number field blank and press [**ENTER**]. The system will then position the cursor at the begilll1ing of the customer name field. You may enter any portion of the customer's name, and press [**ENTER**]. The system will display the first customer record that matches the characters entered, and ask if this is the *Right customer ?*.
You may then answer Y or N, or press [**F1**] to display the next customer record in turn. These procedures are actually very user friendly. Simply follow the instruction~ at the bottom of the screen.

### 3. Loc

Enter either a valid service-at location which you have previously established using the *Maintain service locations* function or press [**F1**] to display the next valid service-at location for this customer or press [**ENTER**] if this customer has only one service-at location. When the desired location is displayed, press [**ENTER**].

### 4. Model #

Enter the model number or press [**F1**] to scroll through the models on file for this location until you find the one that you want to select.

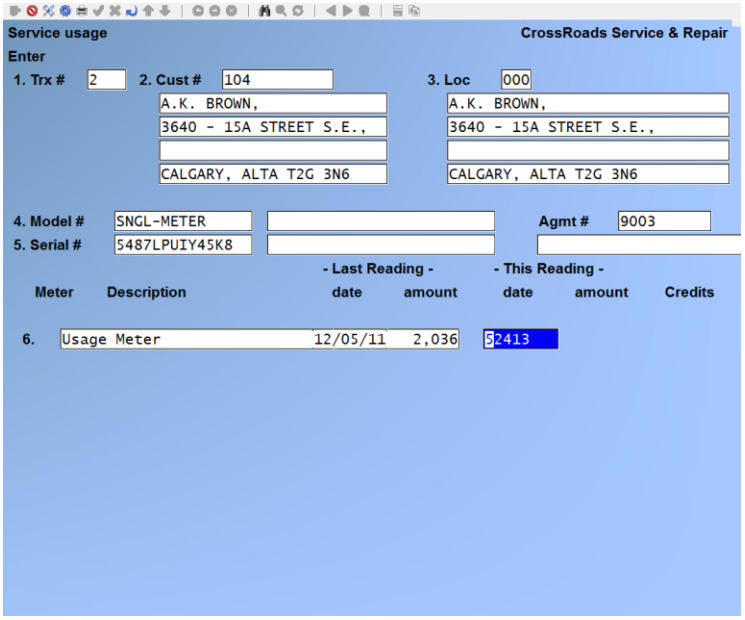
The model description and the agreement # for the model that you specify is displayed automatically. Make sure that your selection is correct before you enter any meter readings.

### 5. Serial #

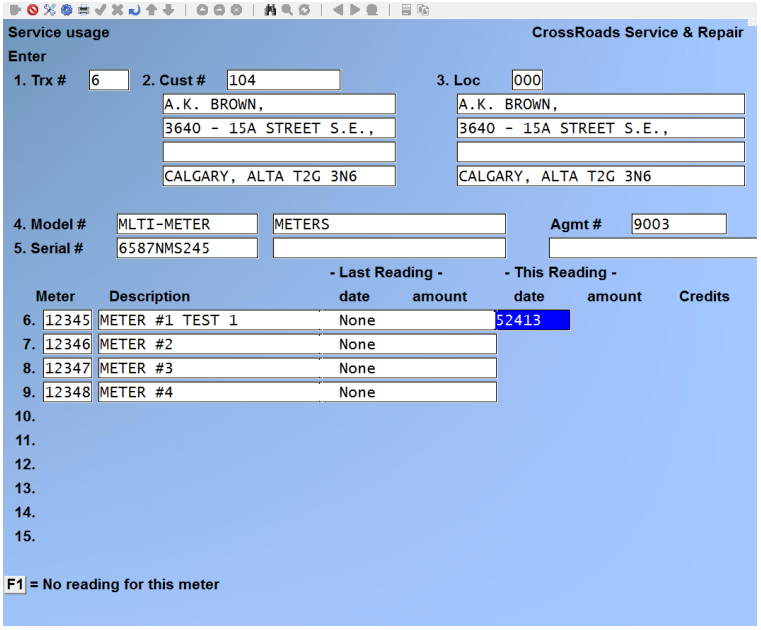
The serial # for the model specified is displayed automatically.

After the model is specified, one of two displays appears.

Single meter:



Multiple meters:




If the model is defined to posses more than 10 meters, there will be multiple pages allocated for entry.

**- Last Reading -**
The date and amount of the last reading processed against this meter displays here.

**- This Reading -**

**6. Reading date**
Press [**F1**] to skip the reading for this meter, press [**ENTER**] to accept today's date or enter the reading date in the format MMDDYY.

**Reading amount**
Enter a number *for this reading* greater than or equal to the last reading, and less than or equal to 9,999,999.

Note: If this is a meter exchange transaction, press [**F1**] before entering the reading. See Exchange Transaction processing below for more detail.

**Credits**
Press [**ENTER**] to accept the default value of zero (0), or enter a number between one (1) and the number you just entered as the latest reading amount.

Continue entering rows of meter readings until complete.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

Meter Exchange Transaction

To enter a meter exchange transaction, at *Reading amount* press [**F1**] before entering a reading. Note that the *New Meter* column is displayed to the right of the meter *Description* column. Enter a number *for this reading* greater than or equal to the last reading and less than or equal to 9,999,999. The number that you are entering is the last recorded reading from the meter that is being replaced.

For *Credits*, press [**ENTER**] to access default value of zero (0) or enter a number between one (1) and the number you just entered as the last reading for the meter that is being replaced.

At *New meter* enter a number between 0 and 9,999,999 for the initial reading of the new meter.

Continue entering rows of meter readings until the screen is completed. It is not necessary to exchange every meter for a multi-meter model from the software point of view.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Print Usage Edit List**

From the *Update service usage* menu, select *Print usage edit list*. Certain errors in the data entry of meter readings can only be detected by reviewing the Edit List. It is recommended that you review the entries on the edit list and make any corrections before posting the usage transactions. Follow the instructions on the screen to route this report to a printer, the screen or a file on disk.

```
Date:05/24/13  Time:10:15:19                    CrossRoads Service & Repair              User: SSI  Report #3406   Page 0001

                                          SERVICE USAGE EDIT LIST

Cust #        Customer name              Agmt #       Loc   Model #          Description                Eqp/svc id
        Meter  Description              Trx #  Type    Read date   Previous reading     Current reading    Credit usage

104           A.K. BROWN,                9003         000   SNGL-METER                                  5487LPUIY45K8

              Usage Meter                  7     R     05/24/13        2,036                2,036                0

    1  usage trx on file


                                                  -- End of report --
```

**Post Usage to Agreement File**

From the *Update service usage* menu, select *Post usage to agreement file*. At *Are*

*usage trx okay to post ?* answer Y to proceed. Follow the instructions on the screen to route this report to a printer, the screen or a file on disk.

```
Date:05/24/13  Time:10:16:52                    CrossRoads Service & Repair                          Report #3407   Page 0001

                                                SERVICE USAGE REGISTER

Cust #          Customer name              Agmt #       Loc   Model #          Description                Eqp/svc id
         Meter  Description              Trx #  Type    Read date   Previous reading     Current reading    Credit usage

104             A.K. BROWN,                9003         000   SNGL-METER                                  5487LPUIY45K8

                Usage Meter                  7     R     05/24/13        2,036                2,036               0

     1  usage trx on file


                                                        -- End of report --
```

# Chapter 23

# Process Service Calls

**Introduction**
The Service Manager system has two primary focal points: management of service calls and management of service agreements. This chapter addresses service calls.

By service call, we mean a visit to a customer's site by one or more technicians in order to perform an inspection, preventative or corrective maintenance procedures or equipment installation.

Service calls are assigned a unique call number and a status. The status changes as the call "moves" through the system – it can take on any one of five codes as follows:

**OPEN**: When a call is initially entered into the system, it is given the open status. A call may be opened because a customer phones in with a problem or because a service agreement includes a schedule of preventative maintenance calls (see *Print service due report, Chapter 22 or 23*). The open status tells you that you have work to do, you have entered the pertinent information about the call into the system, and no one has yet been assigned to perform the service work.

**DISPATCHED**: A call progresses from opened to dispatched when a service technician(s) has been assigned to the call and a schedule data and time has been set. The system will start accumulating labour hours from the start date and time.

**SUSPENDED**: When a service call is suspended, the system recognizes that the required service work is not yet complete but the accumulation of labour hours is temporarily halted. Calls are usually suspended while waiting for spare parts or when your customer has to close the premises before the work is complete.

**CALL COMPLETE**: A service call is considered complete when the technical work is finished and the service technicians are no longer accumulating time against the call.

**CALL CLOSED:** The call closed status represents an administrative milestone,

internal to your organization. When you close a service call, you're telling the system that this call can now be billed. Therefore, you should only close a call after someone has reviewed the billing information and verified that all parts used have been priced, labour hours look correct for the job performed, etc.

Service call processing – what this chapter is all about – provides seven (7) major functions:

**Four Utility Functions**: The first four (4) functions are data base maintenance tools that provide the ability to **1.** Add, **2.** Change/Inquire, **3.** Delete, (these first three (3) are integrated) or **4.** Print Service Calls. The remaining three functions provide extended features.

**Print Closed Call Edit List**: Closed calls are calls that are ready for billing. The closed call edit list is the report you print prior to actual invoicing. It is used to verify the billing information before printing the invoices and posting them to the Accounts Receivable system.

**View Call Status Summary**: This function is a general purpose dispatcher's tool. It allows the dispatcher to quickly review either all or selected service calls. This function provides a "zoom" capability to go from a one line call display to a 6-line display and finally a full page display.

**Print Work-in-Progress Report**: This report gives a listing of all *unbilled* service work. It is a valuable barometer of you business since work-in-progress will ultimately become your receivables and cash.

**Data Entry Screens**: Processing service calls involves entering data into screens with a variety of formats. You may complete call entry by using as few as two (2) different types or formats of screens – or as many as seven (7)!

Throughout this manual, the various call processing screens are referred to as follows:

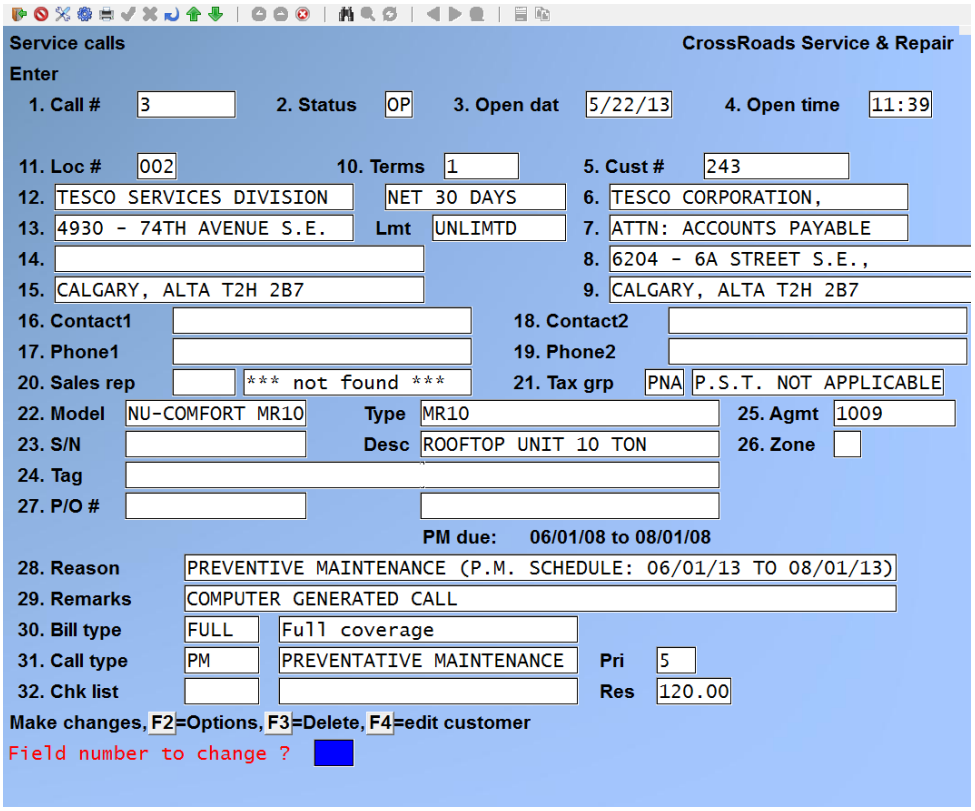
| Seq | Description |
|---|---|
| 1 | Call Open Screen |
| 2 | Service Rep Screen |
| 3 | Parts or Inventory Screen |
| 4 | Call Close Summary Screen |
| 5 | Meter Data Screen |
| 6 | Internal Note Entry Screen |
| 7 | Billing Note Entry Screen |

The following pages describe the 1st or "Call Open" screen. Upon completing the call open screen, you can simply press **[ENTER]** to have Service Manager lead you from screen-to-screen in sequence.

## Enter service calls

From the *Service Manager* main menu select *Service calls*. Next, select *Process service calls*, *Enter*.

This function allows you to work with both new and existing service call records. If service call data has already been entered for the service call number that you specify, it will appear and be available for changes or deletion. If the service call number you specify is new, you will automatically be placed in enter mode.




Enter the following information:

### 1. Call #

To enter a new call, press **[F2]** to assign the next call number specified in the Service Manager control file or enter a number of your choosing – up to 8 alphanumeric characters. If you use the call number generated by the system, it will automatically be incremented by 1 after the successful addition of the call.

To examine or change existing service calls, press **[F1]** to view each one in ascending call number order, **[F3]** for descending call number order or **[F5]** to view the last call that you had displayed or changed.

Note: If you enter a call number of your own choosing, it will be checked for duplicate use among all current calls and all history calls. You will be forced to use a call number that has not been used before.

### 2. Status

The call status codes are system defined and the system will only accept valid status

codes. The system default for call status in add mode is **OP** (OPEN). You may accept **OP** by pressing **[ENTER]** or enter the call status code of DS (OPEN and DISPATCH simultaneously) or you may enter any other status (SP, CC, CL). For example, if you have collected all information about a service call manually, you may enter the data as a closed call.

**3. Open Date**

The system displays the current date as the default call date. You may either accept this date or enter another call opening date.

**4. Open Time**

The system defaults to the current time. Either accept this time or enter a 4 digit time between 0000 and 2359.

**5. Customer #**

Before a service call can be opened, there must be a valid customer record existing in the Customer File in your Accounts Receivable system. Such a record can be created using the *Customer file maintenance* transaction in the Accounts Receivable system or it can be created "on-the-fly" while opening a call for a new customer.

New Customer Processing

If this is a new customer for which an Accounts Receivable record does not exit, there are two ways to proceed. If you specified in your Service Manager control file that you want Service Manager to generate new customer numbers, you may simply press **[F2]**. Service Manager will automatically generate the new account number and display a window for entering the rest of the new customer's information.

The second option is to type in the customer account number you wish to assign. You will be asked if you wish to add this new customer. If you answer **Y**, a window will appear in which you can enter all of the pertinent customer data. The customer data will be automatically transferred to Accounts Receivable to create the necessary entry in the customer file.

Note: To facilitate the dispatcher's task of adding new customers "on-the-fly" (i.e. while adding service calls), you may define a new customer template. The new customer template can dramatically reduce the number of keystrokes your dispatcher must type in order to enter a new customer. It saves time and reduces errors. The new customer template is fully described in Appendix 8, *Accounts Receivable Application Notes*. For more information about having Service Manager generate new customer numbers automatically, see Chapter 5, *Maintain XR Control Data*.

Cash / Walk-in Customer Processing

The Cash / Walk-in customer is designed to facilitate carry-in, "depot" service customers. This feature permits the opening of carry-in service calls to one default AR customer account. It is useful for small appliance, electronic shops or similar firms that do not want to establish an AR customer record for each carry-in repair.

If you want to process a Cash / Walk-in customer, press **[F3]** to default to the Cash / Walk-in customer number specified in the Service Manager control file. Service Manager will automatically fill in this information for the customer fields and allow you to directly enter the carry-in customer's name and address where the service location information is normally displayed.

Existing Customer Processing

If, however, this is an existing customer, there are several methods you can use to identify the customer, the service-at location and the equipment to be serviced. These methods include search by customer account number, customer name, customer address, customer phone number, and equipment / service identifier (i.e. equipment serial number).

Note that all of the searches that follow are "case-insensitive". You needn't worry about upper or lower cast entry – Service Manager raises all character strings to upper case before searching. The flexibility provided in this function can save the dispatcher valuable "telephone time" when customers call in with only partial information.

Search by Customer Number

If you know your customer's number, enter it, up to 12 alphanumeric characters. If you do not know the customer number, you have two choices. You may press **[F1]** to have the system display the name and number of each customer in turn. When the customer whom you want to specify is displayed, press **[ENTER].**

Search by Customer Name

Alternately, you may leave the customer number field blank and press **[ENTER]**. The system will then position the cursor at the beginning of the customer name field. You may enter any portion of the customer's name and press **[ENTER]**. The system will display the first customer record that matches the characters entered and ask if this is the "RIGHT CUSTOMER? Y". You may then answer **Y** or **N**, or press **[F1]** to display the next customer record in turn. These procedures are actually very user friendly. Simply follow the instructions at the bottom of the screen.

Search by Customer Address

To search the customer data base by customer address, type **?A** at the customer number field. The system will open a window for you to enter all or any portion of the customer address. The system will then display the first customer record or service-at location record where the address matches the characters entered and ask if this is the "RIGHT CUSTOMER/LOCATION? Y" You may then answer **Y** or **N** or press **[F1]** to display the next customer/location record in turn. Simply follow the instructions at the bottom of the screen.

Search by Customer Phone Number

To search the customer data base by customer phone number, type **?P** at the customer number field. The system will open a window for you to enter all or any portion of the customer phone number. The system will then display the first customer record or service-at location where the phone number matches the

characters entered and ask if this is the "RIGHT CUSTOMER LOCATION? Y". You may then answer **Y** or **N** or press **[F1]** to display the next customer/location record in turn. Simply follow the instructions at the bottom of the screen.

Search by Equipment/Service Identifier

To search the customer data base by equipment / service identifier, type **?E** at the customer number field. The system will open a window for you to enter all or any portion of the equipment / service identifier. The system will then display the first customer record where the equipment / service identifier matches the characters entered and ask if this is the "RIGHT CUSTOMER LOCATION? Y". You may then answer **Y** or **N** or press **[F1]** to display the next customer/location record in turn. Simply follow the instructions at the bottom of the screen.

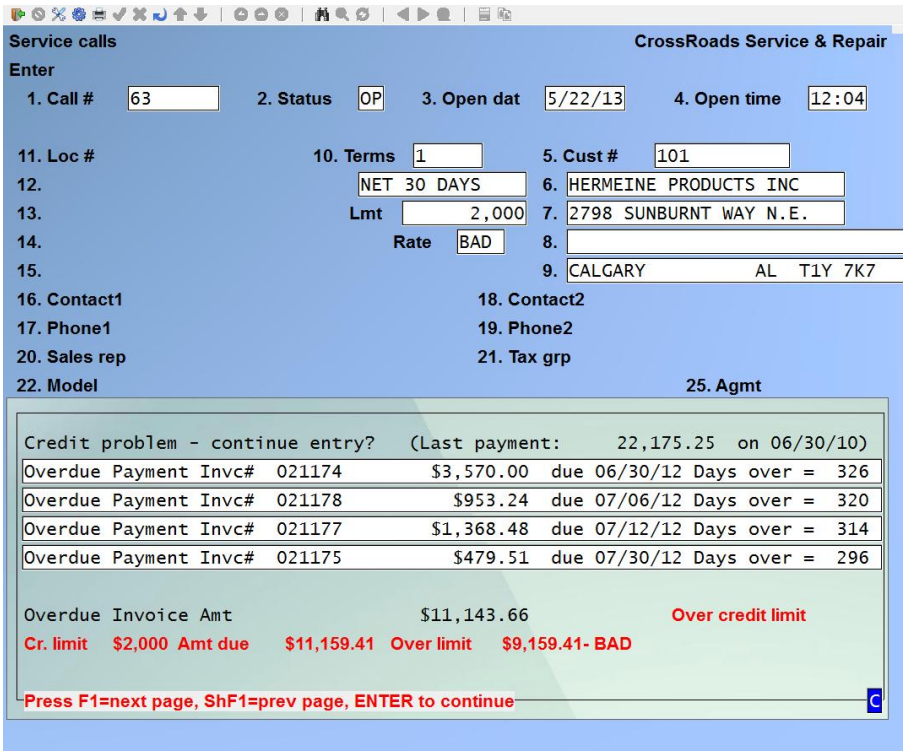
The system will then display the customer name and bill-to address in **fields 6. thru 9.** Note: When the customer has been identified, the customer's terms code, Credit rating and credit limit are displayed. The terms code is particularly useful to identify C.O.D. customers at the time of opening the call.

Automatic Credit Check

After you have identified a valid customer, Service Manager will check the customer's credit three (3) ways:

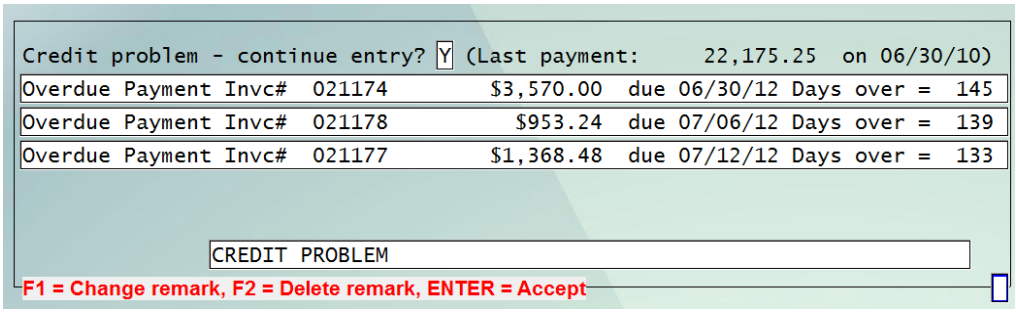
a. Over credit limit?
b. Overdue invoices?
c. Credit rating = HOLD?

If the customer fails any one, two or all of these credit tests, an alarm message containing a complete credit report is displayed in a window at the bottom of the screen. The dispatcher (usually with supervisory approval) must override the credit alarm in order to continue opening the service call. The following screen shows the display presented to the dispatcher when a customer fails the credit check on all three counts:




The first line of the pop up window alerts you to the fact that the customer has a credit problem and reports the last payment amount and receipt date; the lines immediately following list the overdue invoice(s) – oldest first. For each overdue invoice the system displays the invoice number, invoice amount, due date and the days overdue. If there are more invoices than can been displayed at a time, use **[F1]** and **[Shft]** + **[F1]** to scroll through the list. The bottom line tells us the customer's credit limit amount, the "amount due" balance on the customer's account (this amount equals the sum of posted and unposted invoices), the amount by which the customer exceeds their assigned credit limit and lastly, the current credit rating from this customer's Accounts Receivable record. Press **[ENTER]** to continue processing.

Type **N** to stop the entry of the service call; type **Y** to continue. You must now indicate whether to override the customer's credit problem or cancel the call.




This decision is usually made in accordance with company policy or supervisory

approval. Press **[ENTER]** to accept the current, default remark, **[F1]** to change the remark or **[F2]** to delete the remark. You can then proceed with regular entry.

The "Remark" is automatically placed in the *Remarks* field below. You may wish to change the default to something more meaningful to the service technician, such as: "CREDIT PROBLEM… COLLECT $6,599.05 BEFORE STARTING WORK".

Note: When the customer has been identified, the customer's terms code, Credit rating and credit limit are displayed. The terms code is particularly useful to identify C.O.D. customers at the time of opening the call.

**Location**

Data fields 10 through 14 are for the service-at location name and address. Before a service call can be opened, there must be a valid service-at location record in existence if the service is to occur at a location other than the bill-to address. Such a record can be created using the *Maintain service locations* transaction in Service Manager or it can be created "on-the-fly" while opening a call for a new location.

New Location Processing

If this is a new service location for which a service-at location record does not exist, enter the location identifier you wish to assign. You will be asked if you wish to add this new location. If you answer **Y**, a window will appear in which you can enter all pertinent location data. When you complete the data entry, a permanent record will be automatically created for the new location and you will be returned to the call open screen.

Existing Location Processing

There are three ways to specify the service-at location identifier if its record already exists. First, you may press **[F1]** to view each of the customer's service-at locations in turn. When the appropriate location is displayed, press **[ENTER]** to accept it; if the customer has only one service location (e.g. location "000") or if the customer has multiple locations but you wish to specify location "000", simply press **[ENTER]**; if you know the location identifier, you may enter it directly.

On-line Service History

A powerful feature of Service Manager is the ability to access service history while opening a service call. By having information such as the date of the last call, the reason for service and the work performed at one's fingertips, the dispatcher can resolve minor problems and provide better service.

Service call history may be retrieved at three (3) discreet points on the call open screen:

| Field No. | Allows Access to |
|---|---|
| 10 | Customer History – All calls for this *customer* |

| | |
|---|---|
| 15 | Location History – All calls for this *location* |
| 25 | Equipment History – All calls for this *equipment* |

Note that for Customer History and Location History the service calls are sorted first by model #/Serial # and then by date, with the most recent calls shown first. Sorting by model #/serial # as the primary key keeps the service history of each piece of equipment contiguous. When using the online history feature, follow the instructions at the bottom of the screen to scroll through the history window and return to the appropriate field.

Customer Call History

If you press **[F2]** while the cursor is positioned at Field 10, the system will open window at the bottom third of the screen and display a history of all service calls that were made for this *customer*. There is one line of display for each service call performed. Each line reports model number, serial number, service date, call number, bill type, failure code and action code – sorted by model number, serial number and descending service date.

**Contact 1 (Name)**

If a service-at location record had been entered for this customer, the system will display the contact name(s) from that location record. You may accept this name by pressing **[ENTER]** or you may type another name into this field. If you type a name into this field, it will be recorded for this call only … it will not affect the permanent location record.

Location Call History

If you press **[F2]** while the cursor is positioned at Field 15, the system will open a window at the bottom third of the screen and display a history of all service calls that were made for this *customer* at this *location*. There is one line of display for each service call performed. Each line reports model number, serial number, service date, call number, bill type, failure code and action code – sorted by model number, serial number and descending service date.

**Phone 1**

If you entered a service-at location number, the contact phone number from this record will displayed. You may accept this phone number or enter the phone number for the service contact. If you type a phone number into this field, it will be recorded for this call only … it will not affect the permanent location record.

**Contact 2 (Name)**

For a description of this field see field 15. above

**Phone 2**

For a description of this field see field 16. above

**Model #**

There are four ways to handle the model # field. In order of preference:

a. If this customer has equipment defined in the customer equipment file, press **[F1]** to display them in a window. Then use the **[↑]** and **[↑]** keys to highlight the equipment of interest and press **[ENTER]** to select it.
b. Press **[F2]** to add an equipment record to the customer equipment file "on-the-fly". The equipment will add to the call file at the same time.
c. Type in the model #, serial #, description and tag #. The data you enter will be used for this call only.
d. Leave the fields for model-related data blank – possible to be filled in after the service call is completed.

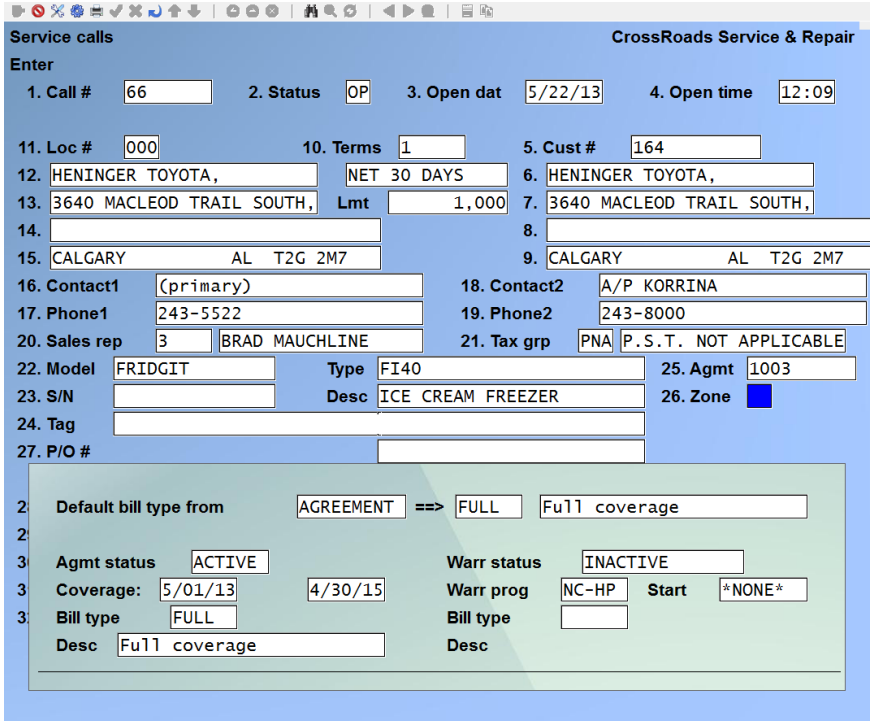
We will only address methods 1 and 2 here. Let's take method 2 first. If you press **[F2]**, the screen will immediately be transformed to the customer equipment "add mode" with the customer # and location # filled in. You can proceed to complete the customer equipment record. When done, you will be returned to the call open screen with the model data filled in.
If you press **[F1]**, Service Manager will open a search window with a listing of all equipment on record for this customer at this location.
Several analysis functions occur automatically after you select a piece of equipment from the search window (i.e. the customer-equipment file).

Agreement Expiration Warning
After you select a piece of equipment, Service Manager checks to see if the equipment is part of a service agreement and if the agreement is active. If it is on an agreement and if the agreement has expired, a warning message is written across the bottom of the screen. For non-usage metered equipment, agreement activity is determined through dates only. For usage metered equipment like copiers, Service Manager also checks if the agreement has expired from an actual meter reading. If the actual meter reading old, Service Manager computes an estimated reading by establishing a usage rate from the last three actual readings and extrapolating to today's date. If the agreement expiration is estimated, that is clearly stated in the message.

Automatic Warranty Tracking vs. Agreement Coverage
Service Manager next displays an information window with a suggested bill type to assign to this call. The suggestion of bill type made by Service Manager is a default only and easily overridden. The display below provides a sample. Notice that the right side of the information window lists warranty status and the left side lists agreement status. At the top of the window is the bill type selected by Service Manager as a default and whether it was selected based on the warranty or agreement.

Preventative Maintenance Schedule
Finally, Service Manager will retrieve the preventative maintenance schedule for the piece of equipment selected and display it on the line below the model description. After comparing the PM schedule date(s) with the current date, the dispatcher may decide to perform the PM as part of the repair call. If that is the case, the dispatcher

should add “Perform P.M.” to the call reason.

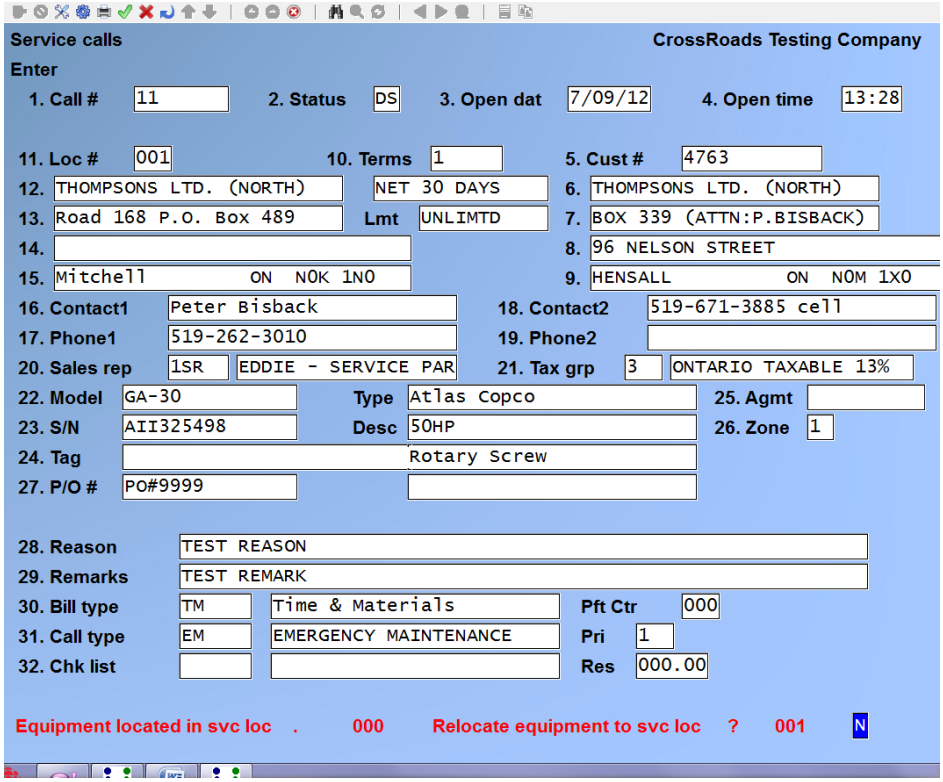



**Serial #**

This field generally contains the equipment serial number issued by its manufacturer but it may contain any 15 alphanumeric characters that uniquely identify the equipment.

If equipment already existed in the customer-equipment file, this field would have appeared automatically when the model number was displayed using **[F1]** (see Field 19). If this field was not filled in automatically, you may either fill in the equipment / service number now or leave this field blank – possibly to be filled in after the service call is completed.

If the model and serial # that you enter is assigned to a location different than the location specified in this service call, the system displays the service location for the equipment and prompts for relocation of same.




Follow the prompts displayed at the bottom of the screen.

## Tag #

This field contains the equipment tag number, up to 25 alphanumeric characters assigned by you or your customer to uniquely identify this piece of equipment *at this site*. Tag numbers are similar to serial numbers but with a few significant differences. First, they're assigned by you – not by the manufacturer. Secondly, they can be duplicated in the system but not at the same customer's site. Tag numbers all a field size of 25 characters but they are usually much shorter and thus more convenient. Finally, like serial numbers, tag numbers can be used at call open times to search for a specific piece of equipment.

If equipment already existed in the customer-equipment file, this field would have appeared automatically when the model number was displayed using **[F1]** (see Field 19). If this field was not filled in automatically, you may either fill in the tag number now or leave it blank – possibly to be filled in after the service call is complete.

## Agmt #

If the equipment model and serial number were entered in Fields 19 and 20, the system will display the agreement number that covers the equipment. You may accept this number by pressing **[ENTER]** or enter the desired agreement number.

## Zone #

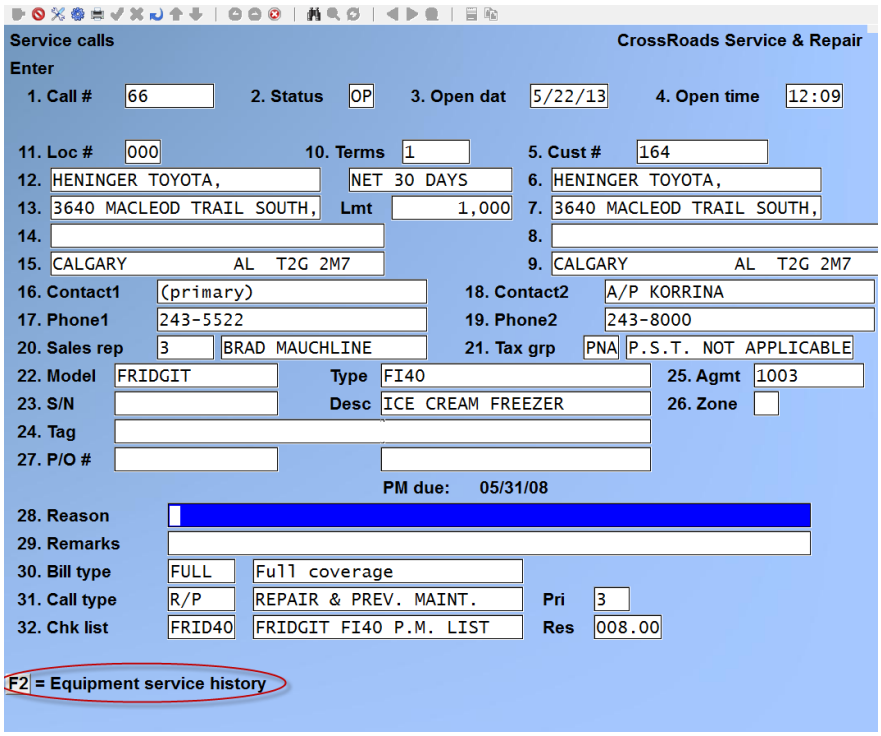
If you use flat charges plus zone adders in your billing type, the zone number entered here will be used to compute additional travel charges. The zone number you entered

in the service-at location record will be displayed here. Either accept it or enter a zone number of up to 2 digits.

**PO #**
If you wish to relate a series of calls to a specific purchase order number or job number, enter a number of up to 15 alphanumeric characters in this field.

**Reason**
Enter the reason for the service call; up to 60 alphanumeric characters. For example: *No cooling; perform PM*

Equipment Service History
If you press **[F2]** while the cursor is positioned at Field 28, the system will open a window at the bottom third of the screen and display a history of all the service calls that were made to maintain the specified equipment model and serial number




A screen will appear listing the calls that specifically refer to the equipment model # / serial # designated. Once again there is one line of display for each service call performed and they are sorted in date order, with the most recent calls shown first. Each line reports service date, bill type, failure description and action description. Follow the instructions at the bottom of the screen to scroll through the history windows and return to Field 26.

**Remarks**
Enter any remarks that you feel are appropriate or helpful to the service rep; up to 60

alphanumeric characters.
The system defaults any "Credit problem" related remarks here. You can override the defaulted remark.

Remarks Field Mask
The first ten (10) characters of the remarks field are given special treatment by the *Call status summary* function (see this chapter) and by the *Print service calls by status* report (see Chapter 32, *Service Management Reports*). The first 10 characters can be used as a "mask" to select service calls.

A couple of examples will illustrate how to use this feature.

> Example #1 Suspended Service Calls Waiting for Parts
> When a service call is suspended, one reason may be waiting for parts. At the time the call status is changed to suspended, enter **WP** (waiting for parts) into the first two characters of the remarks field. As you will see later in this chapter, you can select a display or a printout of all suspended calls that have **WP** in their remarks field.
> When the ordered part is received, the suspended call must be re-dispatched. At the time the part is received, change the remarks field from **WP** to **PR** (parts received). Each morning, the dispatcher can run a report of suspended calls that have **PR** in their remarks field and re-dispatch them to complete the required service.
>
> Example #2 Promised Service Dates
> When a service call is being opened, you can log target service dates into the remarks field for later selection. Suppose we promise service on 10/15. We simply enter 10/15 into the remarks field.
> Each day, the dispatcher can run a report of opened calls that have tomorrow's date in their remarks field. This report serves as a "tickler" to remind the dispatcher to schedule technicians to perform the needed work.
>
> There are, no doubt, many uses that can be made of the remarks field mask … these two examples should spark some applications of the feature specific to your own company's operation.

Note: If this customer represents a credit problem, you may have already used this field to add a collection remark for the technician. In this case, just press **[ENTER]** to keep the remark and continue opening the call.

Dispatch Notes and Billing Notes
If the call being opened references a service agreement and if the agreement contains either a dispatch note or a billing note, the note(s) can be accessed at this time. With the cursor positioned at Field 19, **[F1]** will display the dispatch note and **[F2]** will display the billing note. Follow the instructions at the bottom of the screen to display the notes and return to Field 19.

**Bill Type**
When entering a new service call, if the equipment being serviced is under a service agreement, the system will display the billing type from the service agreement record. You may either accept this billing type or enter a different billing type, up to 6 alphanumeric characters. If you do not know the valid billing types, press **[F1]** to display each billing type in turn. When the bill type you want to assign is displayed, press **[ENTER]**.
Note: If you are changing the bill type on an existing service call, Service Manager will automatically recalculate the sell prices for existing labour, travel or parts. After Service Manager has completed the calculations, you should review all sell prices thoroughly. Example: Let's say you entered a call and assigned a full coverage bill type that priced everything at zero. During the service call you determine that the problem was due to vandalism or neglect and the customer must be billed at T & M rates. When you change the bill type from "Full Coverage" to "Time and Materials", Service Manager will recalculate sell prices for all chargeable elements.

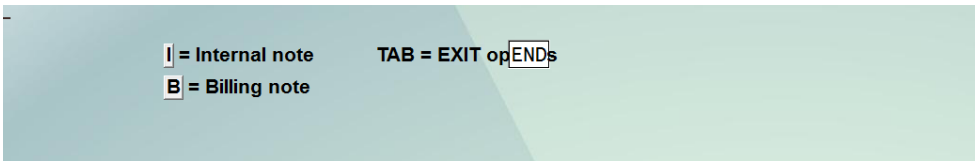
Pft Ctr 1
If you specified in the company information that you are using profit centres, then the profit centre number associated with the bill type you just entered will display here. You may change it or accept it.

**Call Type**
If the equipment being serviced is under a service agreement, the system will display the call type from the service agreement record. You may either accept this call type or enter a different call type, up to 6 alphanumeric characters. If you do not know the valid call types, press **[F1]** to display each call type in turn. When the call type you want to assign is displayed, press **[ENTER]**.

**Chk Lst Code**
If the equipment being serviced is under a service agreement, the system will display the check list code from the service agreement record. You may either accept this code or enter a code up to 6 alphanumeric characters. If you do not know the valid check list codes, press **[F1]** to display each check list code in turn. When the code you want to assign is displayed press **[ENTER]**.

After you have completed entry on the first screen, what you can do next depends on the status of the call (i.e OP for open, etc.). Some or all of the following features may be available depending upon the status of the call.
When you are asked "FIELD NUMBER TO CHANGE?". Make any desired changes then press **[ENTER],** press **[F2]** for options or delete the entire call using **[F3]**.

- If you press **[F2]**, a window of optional commands will appear as follows:




If you press **[I]**, you will be advanced to the *Internal Note* function. If you press **[B]**, you will be advanced to the *Billing Note* function. In either case you will return to this window screen after entering or editing your note. When finished using the *Optional Command* window, press **[ESC]** to return to the call open screen.
Working with internal and billing notes is fully described later on in this chapter and in Chapter 13 *Maintain Notes*.

- If you press **[F3]** to delete the call, you are prompted to confirm the deletion.

- If you press **[ENTER]** you will advance to the next screen in sequence – which in all cases, except for status OP, is the *Service rep update screen* (Labour Screen).

**Note:** If you are set up to print immediate service tickets, when a call status is *OP*, the system prompts *Print immediate service request ?* When the status is changed to DS (dispatch), you will proceed from the call entry screen, to the service rep update screen and on to the parts usage entry screen; then, the system prompts *immediate service request ?*

**Service Rep Status Update**
The Service Rep Status Update transaction is used to assign your service representative to a service call and to set the Service rep status (A=Active, S=Suspended, C=Complete). **The status of each Service Rep assigned to a call must be C=Complete in order to close a call**.

The Service Rep status update transaction may also be entered from the Service Manager menu by selecting *Update rep status*.
Refer to Chapter 27 *Service Rep Status Update* for complete instructions on the functionality and use of this feature.

**Update Parts Usage**
The Parts Usage Update transaction is used to enter parts on a service call. It interfaces with the Inventory module.

The Parts Usage Update transactions may also be entered from the Service Manager menu by selecting *Update parts usage*.
Refer to Chapter 28 *Part Usage Update* for complete instructions on the functionality and use of this feature.

## Service call summary (Summary screen)

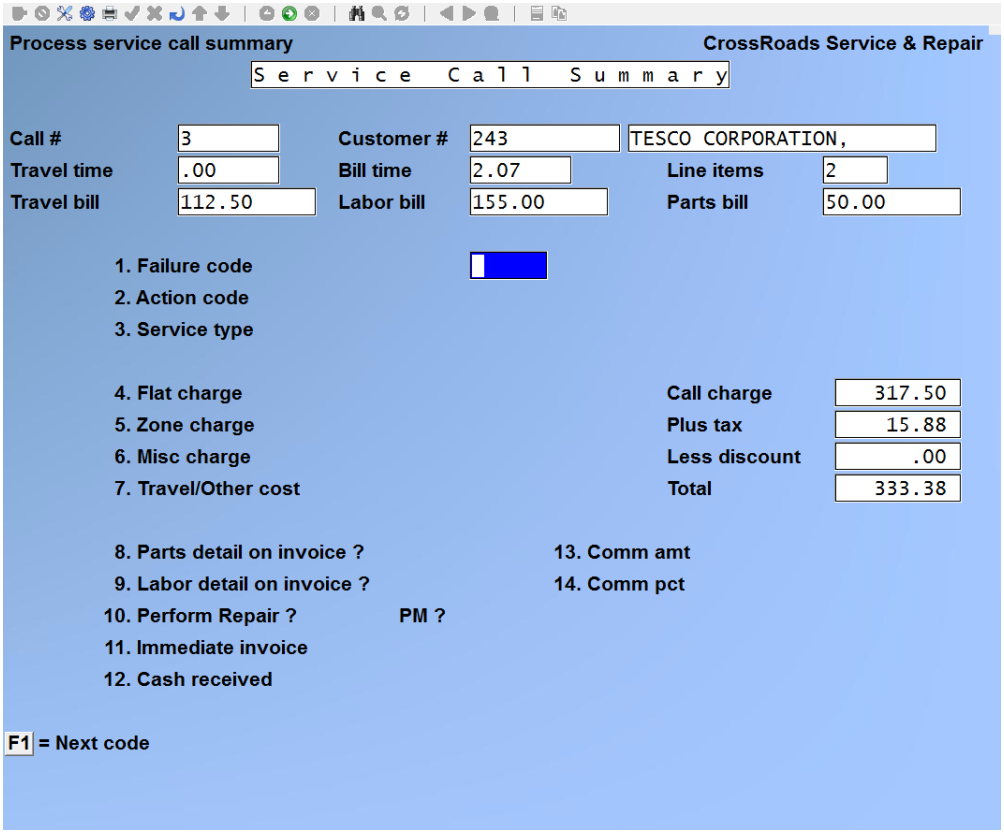
### Introduction

The Service call summary transaction is used to review call billing and to enter the data necessary to close the call.

### To begin

The *Service call summary* transaction is entered from the *Process service calls* function.

1. Change the call status to “Closed” (CL) on the call open screen, which is the first screen displayed in change/inquire mode.
2. Review each service rep. record. Complete all of the data and time fields and be sure that the rep status is “Complete” (C).
3. Review all parts that are on the call for errors and completeness.
4. Finally, when you press [TAB] to indicate that there are no more item numbers to add or review, you will advance to the *Service call summary* transaction.




Enter the following data:

**Failure code**
You may optionally enter a previously defined failure code, or press [**F1**] to scroll through the failure codes on file. When the failure code you wish to use is displayed, press [**ENTER**].

**Action code**
You may optionally enter a previously defined action code, or press [**F1**] to scroll through the failure codes on file. When the failure code you wish to use is displayed, press [**ENTER**].

**Service type**
The default for this field is supplied from the call type that you specified earlier. You may either accept it by pressing [**ENTER**] or enter a different call/service type or press [**F1**] to scroll through the call/service types on file. When the call/service type you wish to use is displayed, press [**ENTER**].

**Flat charge**
If there is a flat charge associated with the Bill Type specified for this call, the flat charge amount is displayed in this field. Press [**ENTER**] to accept the amount displayed or type in the appropriate amount. While in this field, press [**F1**] to change its default tax status if required.

**Zone charge**
If there is a zone charge associated with the Bill Type specified for this call, the zone adder amount is displayed in this field. Press **[ENTER]** to accept the amount displayed or type in the appropriate amount. While in this field, press **[F1]** to change its default tax status if required.

**Misc charge**
If you wish to apply a miscellaneous charge to the service bill, enter the amount and press **[ENTER]**. While in this field, press **[F1]** to change its default tax status if required.

**Other cost**
The system automatically accumulates the call costs related to labour and materials. Use this field to enter any costs related to the call. If there is travel time on the call, Service Manager displays the service rep's hourly cost for travel time in this field.

**Parts detail on invoice ?**
To print an individual line on the invoice for each part used on the call, press **[ENTER]**. To print a single summary line for all parts used on the call, type **N**.

**Labour detail on invoice ?**

To print an individual line on the invoice for each service rep on the call, press **[ENTER]**. To print a single summary line for all service reps who worked on the call, type **N**.

**Perform repair ?  PM ?**
This field is used to update the agreement record and the model file. Your answers here affect the service due report, the calculation of mean time between failure (MTBF), mean time to repair (MTTR) and the mean cost to repair (M$TR). Default values for this field are supplied by the service type record specified for the call.

If corrective repair was performed on this service call, answer **Y** otherwise answer **N**.

At *Perform PM ?* answer **Y** if preventive maintenance was performed, otherwise answer **N**.

**Immediate invoice ?**
If you wish to generate an immediate invoice for the call being closed, type **Y.** When all call date and notes have been entered, you will advance immediately to the invoice print function. Otherwise, **N** for no.

**Cash received ?**
If payment was received for the service work (e.g. payment for a C.O.D. call) enter the amount received.

**Check #**
Enter a reference for the payment (e.g. check #, CASH, etc.).

**Cash recpt date**
This field allows you to control the date used to post the cash receipt transaction. The system defaults this field to today's date. Press [**ENTER**] to accept today's date, enter a date that falls between the call open date and today's date, or press [**F1**] to have this date default to the same date as the invoice.

At *Field number to change ?* make any desired changes, then press [**ENTER**].

**Service Usage Readings**
If you answered yes in the Service Manager control information screen to the question *Track equipment usage ?* AND the customer has a service agreement in place, then you will be asked if you wish to enter meter readings at this time. The question *Enter service usage readings ?* will appear at the bottom of the screen.

Process service call summary — CrossRoads Service & Repair

Service Call Summary

| | | | | | |
|---|---|---|---|---|---|
| Call # | 70 | Customer # | 104 | A.K. BROWN, | |
| Travel time | .00 | Bill time | 1.00 | Line items | 0 |
| Travel bill | .00 | Labor bill | 30.00 | Parts bill | .00 |

| | | | | |
|---|---|---|---|---|
| 1. Failure code | | F00001 | Failed relay | |
| 2. Action code | | A00001 | Replaced faulty part | |
| 3. Service type | | PM | PREVENTATIVE MAINTENANCE | |
| 4. Flat charge | (taxable) | 50.00 | Call charge | 80.00 |
| 5. Zone charge | (taxable) | .00 | Plus tax | 4.00 |
| 6. Misc charge | (taxable) | .00 | Less discount | .00 |
| 7. Travel/Other cost | | .00 | Total | 84.00 |

| | | | |
|---|---|---|---|
| 8. Parts detail on invoice ? | Y | 13. Comm amt | (Not applicable) |
| 9. Labor detail on invoice ? | Y | 14. Comm pct | (Not applicable) |
| 10. Perform Repair ? Y | PM ? N | | |
| 11. Immediate invoice | N | | |
| 12. Cash received | .00 | | |

Enter service usage readings ?

Naturally, this question and the screen that follows a Y answer are relevant only when the service call being closed is for a metered piece of equipment – such as an office copier.

Service call usage — CrossRoads Service & Repair

Enter — Call # 70

| | | | |
|---|---|---|---|
| Cust # | 104 | Loc | 000 |
| | A.K. BROWN, | | A.K. BROWN, |
| | 3640 - 15A STREET S.E., | | 3640 - 15A STREET S.E., |
| | | | |
| | CALGARY AL T2G 3N6 | | CALGARY, ALTA T2G 3N6 |

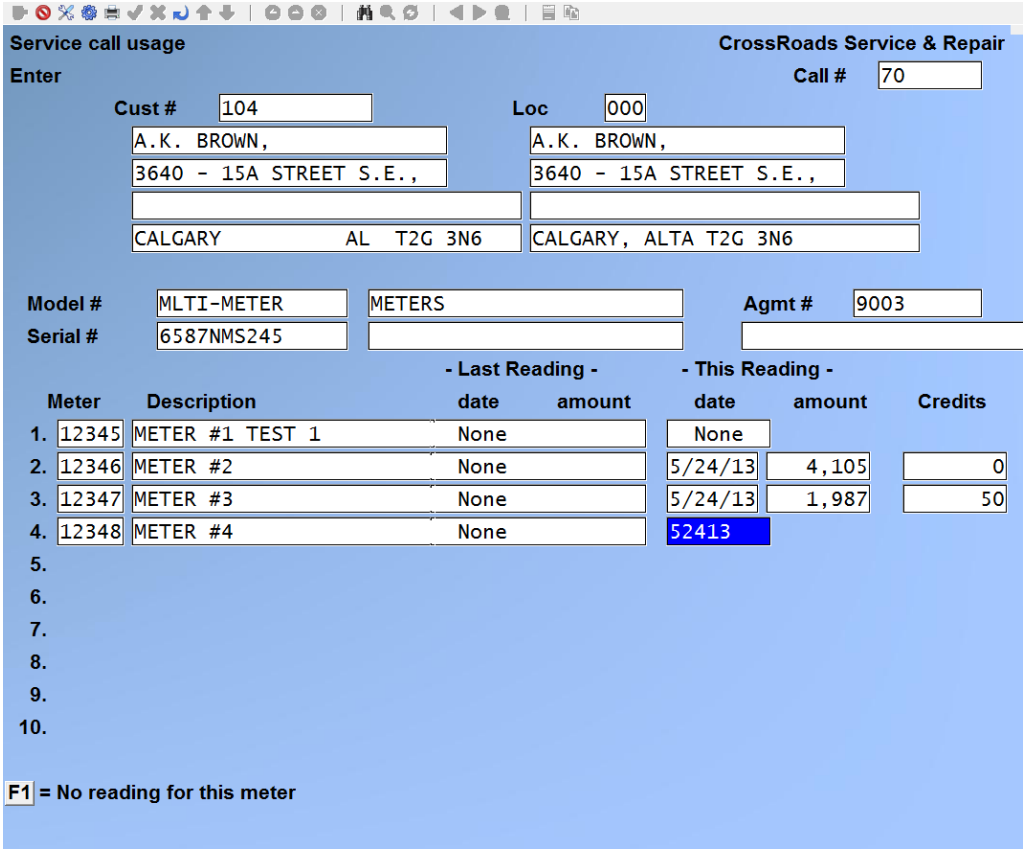
| | | | | |
|---|---|---|---|---|
| Model # | MLTI-METER | METERS | Agmt # | 9003 |
| Serial # | 6587NMS245 | | | |

| | Meter | Description | - Last Reading - date | - Last Reading - amount | - This Reading - date | - This Reading - amount | Credits |
|---|---|---|---|---|---|---|---|
| 1. | 12345 | METER #1 | None | | 52413 | | |
| 2. | 12346 | METER #2 | None | | | | |
| 3. | 12347 | METER #3 | None | | | | |
| 4. | 12348 | METER #4 | None | | | | |
| 5. | | | | | | | |
| 6. | | | | | | | |
| 7. | | | | | | | |
| 8. | | | | | | | |
| 9. | | | | | | | |
| 10. | | | | | | | |

F1 = No reading for this meter

Assume that the sample service call is for a color copier with 10 usage meters. If we

answer Y to the question, the screen will display:




Continue by entering the following data:

**Reading date**
Press [**F1**] to skip the reading entry for this meter, press [**ENTER**] to accept the default date displayed, or enter a date.

The default date is the date on the latest rep record for this call.

If data for multiple meters is being entered, the first date used for "This Reading" entries is accepted as the "sticky" date and becomes the default for the next meter's reading date.

**Reading amount**
To provide a reference point, the system displays the date and amount for the "Last Reading" for each meter. You must enter a number for this reading that is greater than or equal to the last reading, and less than or equal to 9,999,999.

If this is a meter exchange transaction, press [**F1**] before entering the reading to trigger a meter exchange transaction. Note the new data column "New Meter". Enter a number for this reading greater than or equal to the last reading, and less than or

equal to 9,999,999. The number you are entering is the last recorded reading from the meter that is being replaced.

**Credits**
Press [**ENTER**] to accept the default value of zero (0) or enter a number between one (1) and the number you just entered as the latest reading amount.

If this is a meter exchange transaction, press [**ENTER**] to accept the default value of zero (0) or enter a number between one (1) and the number you just entered as the last reading amount for the meter that is being replaced. For **New meter**, enter a number between 0 and 9,999,999 for the initial reading of the new meter.

Continue entering rows of meter readings until the screen is completed. Only enter meter exchange transactions for meters that were physically exchanged in the field.

Make any desired changes, the press [**ENTER**].

**Internal and Billing Notes**

The bottom of the screen displays the question: *"Do you want to enter an internal note ? N"*. Refer to Chapter 13 *Notes* for detail on note processing. Internal notes become part of the call history but do not print on invoices or customer reports.

If you wish to include a predefined note on the call, enter the number of the note that you have previously created using *Maintain Notes*. If you don't remember the number of the note you want to assign, press [**F1**] to review the directory of your note library. When you have the directory listed on the screen, press [**F2**] to assign a note from the directory to the call. Follow the instructions at the bottom of the screen to edit the note – - if required.

If you prefer to enter a custom internal note - - instead of a predefined one - - simply assigned note number zero (0) to the call. Note zero (0) indicates that this is a unique note from beginning to end. When you assign note zero (0), the cursor is positioned at the first line on the screen. You may enter up to 20 lines of 60 characters each of free-form information.

After you have finished typing on a line, press [**ENTER**] and the cursor will drop to the next line. After typing the last line of the note, press [**ENTER**]. When the cursor drops to the next line, press [**F1**] to skip the remaining lines on the screen.

At *Field number to change ?* make any desired changes, then press [**ENTER**]. The free-form note that you have entered is saved in the call history file.

If you answered **N** to adding an internal note or if you completed adding an internal note, the bottom of the screen displays the question: *"Do you want to enter a billing note ? N"*. Refer to Chapter 13 *Notes* for detail on note processing. If you add a

billing note to a service call, it will be printed on the customer's invoice and it will also be placed in service call history. Service call billing notes are most often used as a "work performed" paragraph.

Just like internal notes, billing notes can be assigned from the note library and edited, or they can be custom notes (note zero). To add a billing note, follow the same procedures that were given for adding an internal note. A sample note is illustrated here:

When you complete the process of adding a billing note or if you answered **N** to add a billing note, you are returned to the service call change/inquire screen.

**Printing service requests for specific service reps**

The Print service request function is used to print service tickets for specific service reps. The service tickets are pre-formatted. They contain actual call data that was captured during open or dispatch, as well as fill-in-the-blanks for data that will be collected by the service rep on the call. If a check list was specified, it is printed and appended to the service ticket.
Service requests can be printed in batch mode - - as described - - or individually at the time one is working on a specific service call. To print an immediate service request (i.e. an individual printout), the Service Manager control file must be set up properly. For a discussion of how to set up the data see Chapter 5 *Maintain S/M Control Data*.

From the *Service Manager* main menu select *Service calls*. Next, select *Print service request*.

**Enter the following information:**

In Service Manager control information, if you did not specify a *Default batch service ticket format*, then you will be asked to specify a form now before you enter the other reporting parameters.

**Starting Call #**
Enter the number of the first call for which you would like a service request printed, or press **[F1]** to specify the "First" service call.

**Ending Call #**
Enter the number of the last call for which you want a service request printed, or press **[F1]** to specify the "Last" call, or -- if you did not use **[F1]** to specify the starting call – press **[ENTER]** in order to limit the list to just one call.

**Starting Rep ID**
Enter the starting service rep identifier, up to 6 alphanumeric characters, or press **[F1]** to specify the "First" service rep on file.

**Ending Rep ID**
Enter the ending service rep identifier, up to 6 alphanumeric characters, or press **[F1]** to specify the "Last" service rep on file.

**Starting Date**
Enter the starting date of the series of service requests in MMDDYY format, or press **[F1]** to specify the "Earliest" date.

**Ending Date**
Enter the ending date of the series of service requests in MMDDYY format, or press **[F1]** to specify the "Latest" date.

**Open Calls ?**
If you want service calls with open status included in the printout, press **[ENTER]** to accept the default of **Y**. For an open call to be selected, its *open date* must fall within the starting and ending date range specified above. If you do not want service calls with open status included in the printout, type **N**.

**Dispatched Calls ?**
If you want service calls with dispatched status included in the printout, press **[ENTER]** to accept the default of **Y**. For a dispatched call to be selected, its *latest dispatched date* must fall within the starting and ending date range specified above. If you do not want service calls with dispatch status included in the printout, type **N**.

**Suspended Calls ?**
If you want service calls with suspended status included in the printout, press **[ENTER]** to accept the default of **Y**. For a suspended call to be selected, its *suspended date* must fall within the starting and ending date range specified above. If you do not want service calls with suspended status included in the printout, type **N**.

At *Field number to change ?* make any desired changes, then press [**ENTER**].

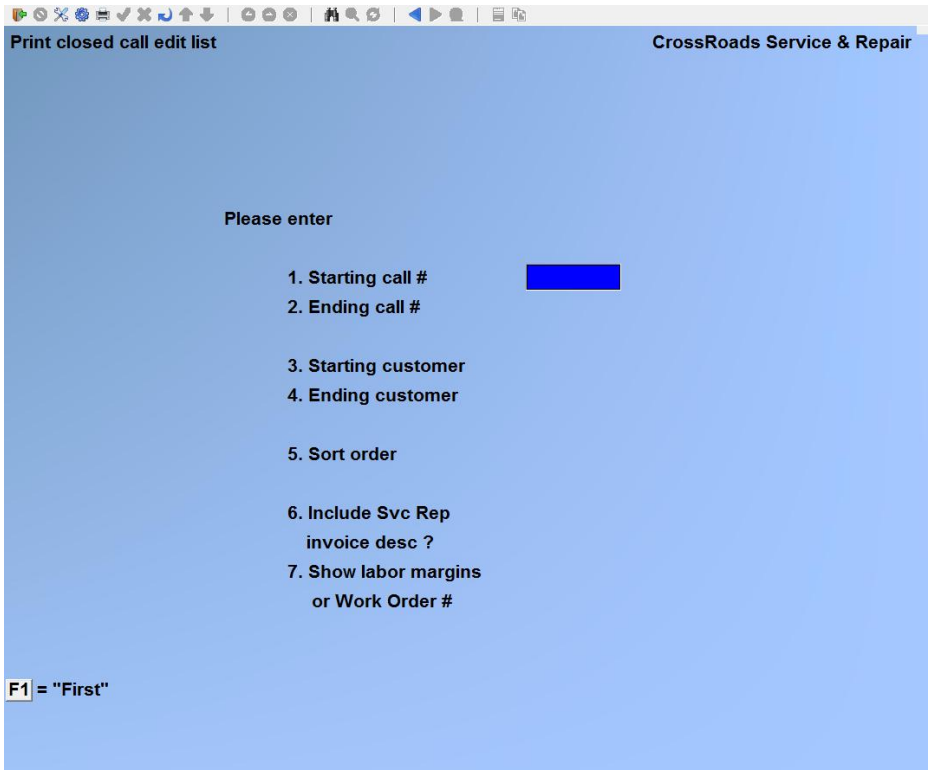
## Printing closed call edit list

### Introduction

The closed call edit list is used to review billing information for selected closed calls. It includes complete detail of what occurred on a service call and is intended for use by the dispatched. For this reason, the report does not include cost data. The billing edit list, which is accessible from selection 9 on the main Service Manager menu, does contain cost data. The two reports – different, though similar – are accessed from different menu selections so that the cost data may be password protected.

### To begin:

From the *Process service calls* menu, select *Print closed call edit list*. You will see:




### Starting Call #

Enter the number of the first closed call you would like to review, or press **[F1]** to specify the "First" closed service call.

### Ending Call #

Enter the number of the last closed call you would like to review, or press **[F1]** to specify the "Last" closed service call, or -- if you did not use **[F1]** to specify the starting call – press **[ENTER]** in order to limit the list to just one call.

**Starting Customer #**
Enter the number of the first customer for whom you want to print a closed call edit list, or press **[F1]** to specify the "First" customer on file.

**Ending Customer #**
Enter the number of the last customer for whom you want to print a closed call edit list, or press **[F1]** to specify the "Last" customer on file or -- if you did not use **[F1]** to specify the starting customer # – press **[ENTER]** in order to limit the list to just one customer.

**Sort Order**
Type **1** to sort the closed call edit list by call number. Type **2** to sort the closed call edit list by customer number. The customer number sort is particularly helpful if you vary different locations for one customer. The customer number sort will show the calls for all locations of any particular customer grouped together.

At *Field number to change ?* make any desired changes, then press [**ENTER**]. Follow the instructions at the bottom of the screen to route the report to a printer, the screen, or a disk file.

**Include Svc Rep Invoice Desc ?**
In you answer **N**, you will not see the labour invoice descriptions printed for your review, but the report will print in a more compact form. If you answer **Y**, the labour invoice descriptions will be printed on the closed call edit list and this will require an extra line of report for each labour record on the call.

**Show Labour Margins or Work Order # ?**
If you answer **M,** as each labour record is printed on the closed call edit list, it will be accompanied with a calculation of gross profit and gross profit margin. Note: Even though you select the profile calculation option, labour costs will not be printed unless you answered yes to *Show costs on closed call edit list ?* in the Service Manager control file. If you answer **W**, each labour record will be printed with its assigned work order number.

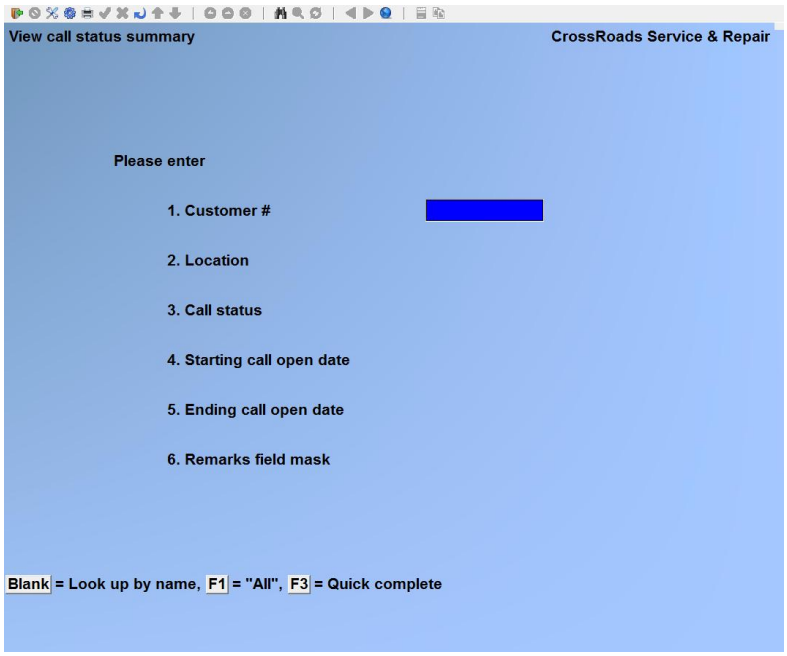
## View call status summary

### Introduction

The view call status summary function allows the dispatcher to display outstanding service calls selected by status and date range. Once selected, calls can be viewed in two (2) modes: A brief 1-line display, or an expanded 6-line format. A call can be selected from either the 1-line or 6-line format and the user can "hot key" that call into change/inquire mode in order to work on it further. When you finish working on a selected call in change/inquire mode, you will be returned to the call status listing, ready to select another call. These functions, when used in sequence, form a "zoom" effect. You may view a service call in 1-line, 6-line or full page format.

### To begin:

From the *Service calls* menu select *View call status summary*. The screen will show:




### Customer #

Use one of the following options to specify the customer(s) in whom you are interested:

- Enter a valid customer number, up to 12 characters.
- Press **[F1]** for all customers
- Press **[ENTER]** to advance to the customer name field and use **[F1]** to browse through the customer list in alphabetic order by name.
- Press **[ENTER]** to advance to the customer name field. Type in as much or as little of the custom name as you choose and then press **[ENTER]**. Service Manager will search for the first customer name that matches your input.

You may then press **[F1]** to examine subsequent customers in alphabetic sequence.

As a further option, you can press **[F3]** to complete the entire screen quickly to select all service calls on file.

**Location**
Enter a specific location number, up to three (3) digits, or press **[F1]** for all locations.

**Call status**
Follow the instructions at the bottom of the screen. You can press [**F1**] to specify all statuses or you can type **OP**, **DS**, **SP**, **CC** or **CL** to specify opened, dispatched, suspended, complete or closed respectively.

**Starting call open date**
Enter the starting date for the calls you wish to view in MMDDYY format or press **[F1]** to specify the earliest.

**Ending call open date**
Enter the starting date for the calls you wish to view in MMDDYY format or press **[F1]** to specify the latest, or -- if you did not use **[F1]** to specify the starting date – press **[ENTER]** to limit the display to one day's calls. .

**Remarks field mask**
Enter up to ten (10) alphanumeric characters to be used as a "mask" for selecting service calls. For example, if you type 09/26/10, only those calls whose remarks field contains 09/26/10 in the first eight character positions will be selected. Optionally, press **[F1]** to select all calls.

View call status summary CrossRoads Service & Repair

| Date | Time | Stat | Call # | Service location | Type | Zone |
|---|---|---|---|---|---|---|
| 06/01/08 | 11:39 | OP | 4 | TESCO SERVICES DIVISION | FULL | 00 |
| 11/23/12 | 12:52 | OP | 37 | HERMOSA WOOD PRODUCTS INC | T/M | 00 |
| 11/23/12 | 12:55 | OP | 38 | PROTRUX, | T/M | 00 |
| 11/23/12 | 12:56 | OP | 39 | NORTHWEST EQUIPMENT LTD., | T/M | 00 |
| 11/23/12 | 12:59 | OP | 40 | ESS-ELL TOOL CO. LTD., | T/M | 00 |
| 11/23/12 | 13:00 | OP | 41 | ESS-ELL TOOL CO. LTD., | T/M | 00 |
| 11/23/12 | 13:15 | OP | 42 | 1031182 ALBERTA LTD., | T/M | 00 |
| 05/22/13 | 12:04 | OP | 63 | HERMEINE PRODUCTS INC | T/M | 00 |
| 05/22/13 | 12:09 | OP | 66 | HENINGER TOYOTA, | FULL | 00 |
| 01/28/09 | 16:05 | DS | 5 | CASH SALE | T/M | 00 |
| 05/06/10 | 15:06 | DS | 9 | TESCO SERVICES DIVISION | FULL | 00 |
| 11/22/12 | 10:34 | CL | 33 | HERMOSA WOOD PRODUCTS INC | T/M | 00 |
| 11/23/12 | 12:33 | CL | 36 | HERMOSA WOOD PRODUCTS INC | T/M | 00 |
| 05/22/13 | 11:39 | CL | 3 | TESCO SERVICES DIVISION | FULL | 00 |
| 05/24/13 | 11:03 | CL | 67 | A.K. BROWN, | T/M | 00 |
| 05/24/13 | 11:09 | CL | 70 | A.K. BROWN, | T/M | 00 |

ENTER to continue, F1 = Select call, F2 = Select full display

You now have three options as indicated on the bottom of the screen. You can press **[ENTER]** to view succeeding screens of calls or to return to the option selection menu.

If you want to select a call in order to change its status (e.g. open to dispatched) press **[F1]**. The system will then allow you to enter the call number you wish to select. Type in a valid call number and press **[ENTER]**. The system will advance to the function Change/inquire service calls and display the call you have selected.

Your third option is to view the calls in expanded format. If you press [**F2**], columns of asterisks will be displayed to bracket the first three calls in the list. As you continue to press [**F2**] the three asterisks will move down the display and finally wrap back to the top.

If you press [**ENTER**], the three calls bracketed by the asterisks will be expanded into a more informative display of 6 lines for each call. While in expanded mode you can press [**ENTER**] to view succeeding screens, you can press [**F1**] to select a call for change/inquire, or you can press [**F2**] to toggle back to the brief display format. If you choose the expanded display, the screen will appear as follows:

View call status summary — CrossRoads Service & Repair

| Call # | Opened | Service location | Contact |
|---|---|---|---|
| 36 | 11/23/12 | HERMOSA WOOD PRODUCTS INC | MOE SAE |
| CL | 12:33 | 2771 SUNRDIGE WAY N.E. | 850-6889 |
| | | | **Model#** |
| | | CALGARY AL T1Y 7K7 | |
| PM | **Reason** | | |
| T/M | **Remark** | CREDIT PROBLEM | |
| 3 | 05/22/13 | TESCO SERVICES DIVISION | |
| CL | 11:39 | 4930 - 74TH AVENUE S.E. | |
| | | | **Model#** NU-COMFORT MR10 |
| | | CALGARY, ALTA T2H 2B7 | ROOFTOP UNIT 10 TON |
| PM | **Reason** | PREVENTIVE MAINTENANCE (P.M. SCHEDULE: 06/01/13 TO 08/01/13) | |
| FULL | **Remark** | COMPUTER GENERATED CALL | |
| 67 | 05/24/13 | A.K. BROWN, | SHAUN FEDECHKO |
| CL | 11:03 | 3640 - 15A STREET S.E., | 237-5540 |
| | | | **Model#** SNGL-METER |
| | | CALGARY, ALTA T2G 3N6 | |
| EMERG | **Reason** | NOISY WHEN IT RUNS | |
| T/M | **Remark** | | |

**ENTER** to Continue, **F1** = Select call, **F2** = Select brief display, **ESC** to Quit

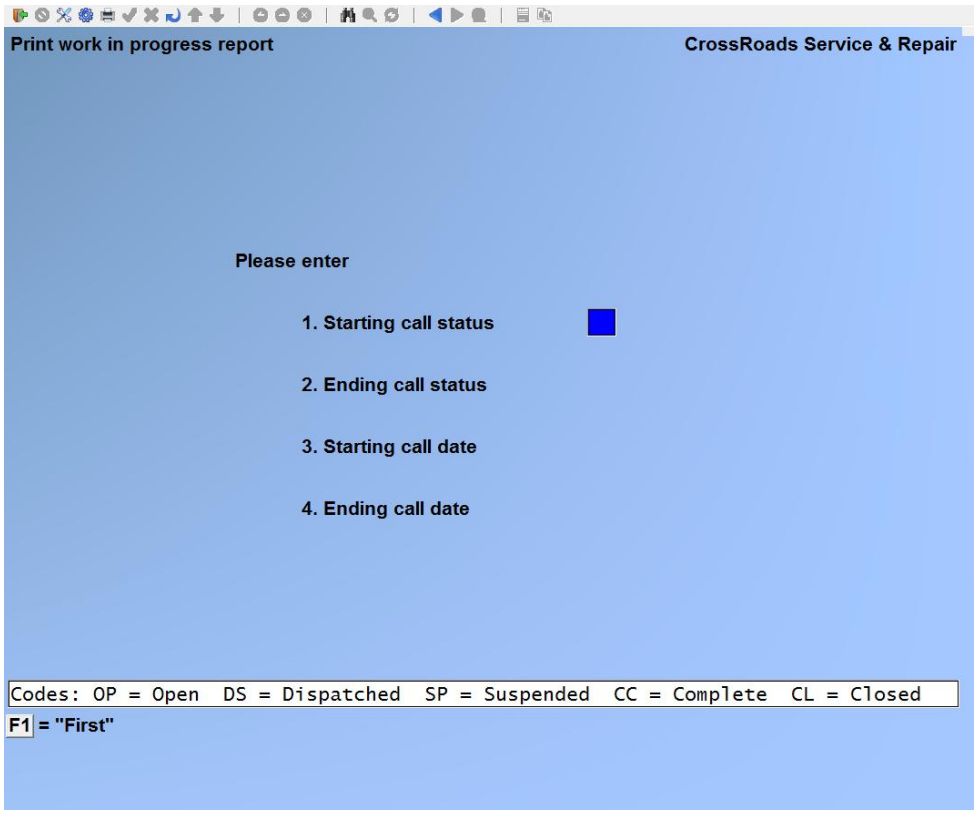
## Print Work in Progress Report

### Introduction

The work in progress report gives a listing of all unbilled calls in the system with cost and billing information broken down by component (i.e. labour, material and other). It is a valuable report for managing cash flow since unbilled calls should be invoiced when completed, turned into receivables and ultimately, cash.

### To begin:

From the *Service calls* menu select *Work in progress report*. The screen will show:




### Starting call status

Enter the starting call status (**OP**, **DS**, **SP**, **CC** or **CL)** or press **[F1]** to specify the first status.

### Ending call status

# Chapter 24

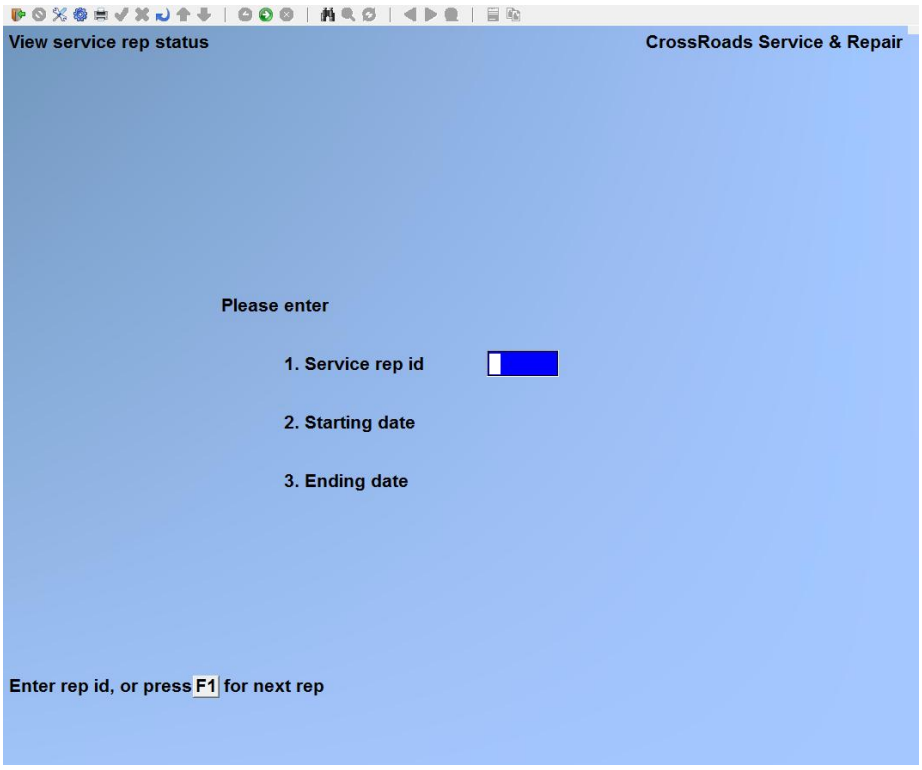
# View Service Rep Status

## Introduction

The Service Rep Inquiry may be used to determine the status or schedule of a specific service representative. The inquiry provides a date range selection so that this information can be obtained for a particular time period.

## To begin

From the first page of the S/M main menu, select *View service rep status:*



**Service rep id**
Enter the identifier of the service representative to be displayed on the inquiry, up to 6 alphanumeric characters, or press [**F1**] to display each service representative in turn.

**Starting date**
You may select this inquiry for specific date, a range of dates, or all dates on file. Enter either a specific starting date in MMDOYY format, or press [**F1**] to specify the "Earliest" date.

**Ending date**
Enter either a specific ending date in MMDDYY format, or press [**F1**] for the "Latest" date.

If you entered a starting date and press [**ENTER**] at this field, the system will assume that the ending date is the same as the starting date, which effectively creates the report for a single date.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change. When you press [**ENTER**], the inquiry will be displayed. Follow the instructions at the bottom of the screen.

# Chapter 25

# View Customer Call Status

## Introduction

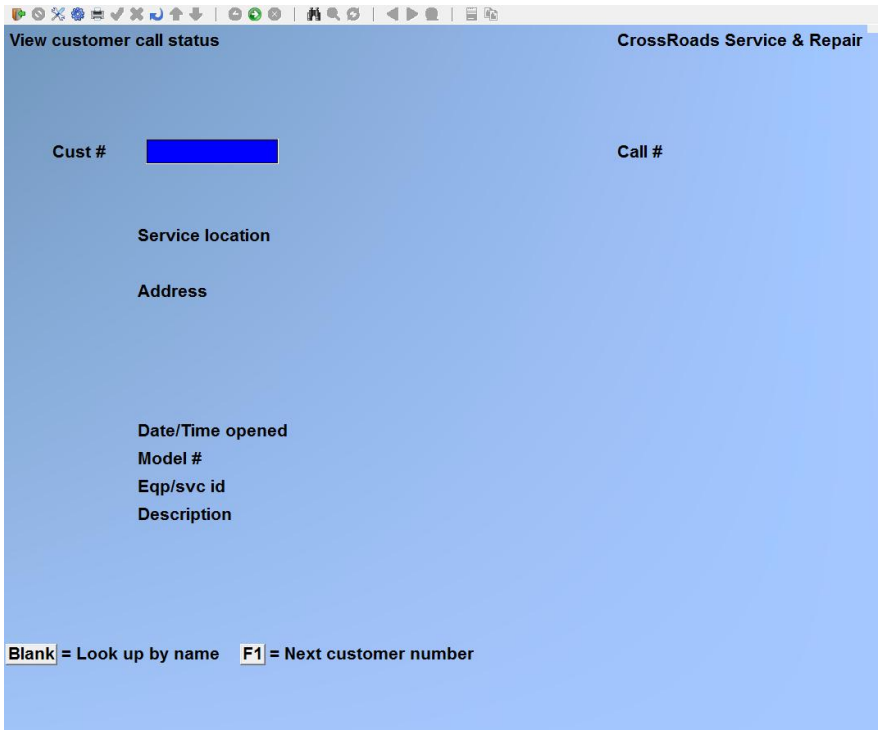
The Customer Call Status displays the service calls for specified customers. You can user this inquiry to display the status of service calls for a particular customer. The program will display all data pertinent to a call.

## To begin

From the first page of the S/M main menu, select *Customer call status:*

## Viewing Customer call status

Enter the following data:



**Customer #**
Enter the customer number, up to 12 alphanumeric characters.

If you do not know the customer number, you have two choices. You may press [**F1**] to have the system display the name and number of each customer in turn. When the customer whom you want to specify is displayed, press [**ENTER**].

Alternately, you may leave the customer number field blank and press [**ENTER**]. The system will then position the cursor at the beginning of the customer name field. You may enter any portion of the customer's name and press [**ENTER**]. The system will display the first customer record that matches the characters entered and ask if this is the *Right customer ?*.

You may then answer Y or N or press [**F1**] to display the next customer record in turn. Simply follow the instructions at the bottom of the screen.

**Call #**
Enter the number of the service call you wish to inquire about. If you do not know the call number, you can press [**F1**] and the first call for the specified customer will display. Each time you press [**F1**] the next call for that customer will be displayed.

The first page of the call display includes the call number, service location, address, date/time opened, model #, equipment/service id and the description.

Press [**ENTER**] for the second page which contains the call detail information and includes the bill type, call type, model #, service rep id, dispatch date and time, start date and time and the end date and time.

Press [**ENTER**] to continue.

Press [**TAB**] three times to return to the Service Manager menu.

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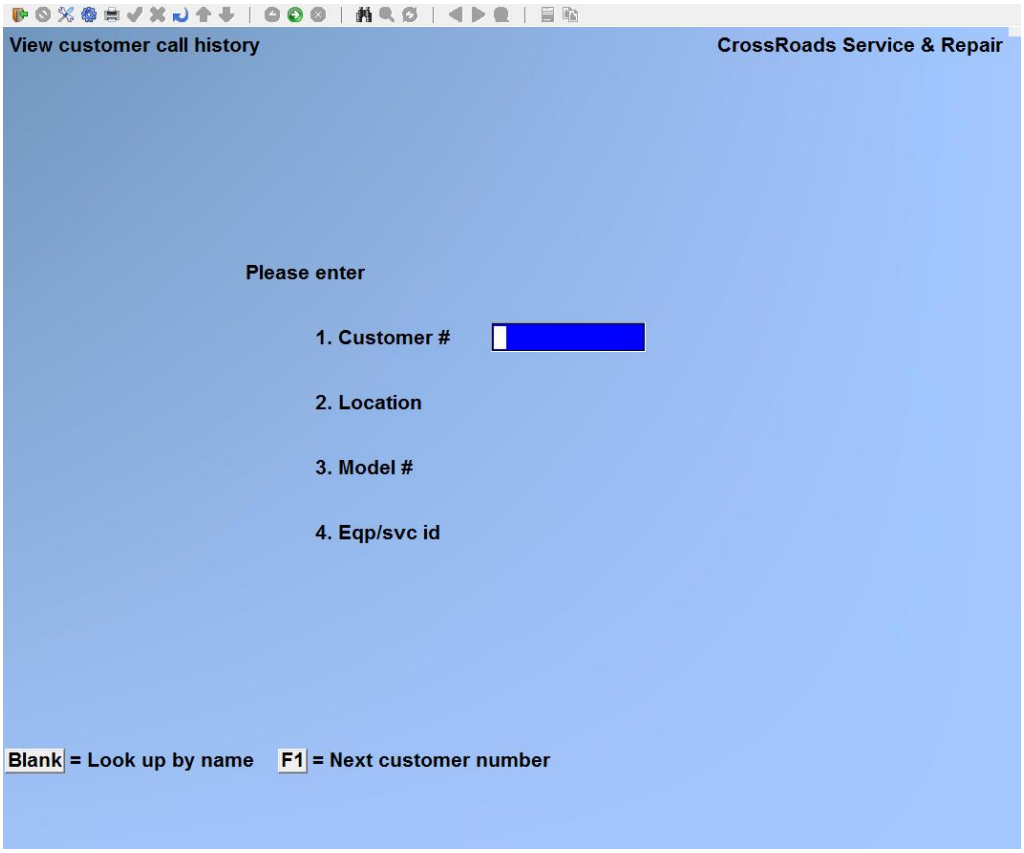
# Chapter 26

# View Customer Call History

**Introduction**
The View Customer Call History Function is used to display a history of the service calls at a specified customer service-at location.

**To begin**
From the first page of the S/M main menu, select *Customer call history:*



**Customer #**
Enter the customer number, up to 12 alphanumeric characters.

If you do not know the customer number, you have two choices. You may press [**F1**] to have the system display the name and number of each customer in turn. When the customer whom you want to specify is displayed, press [**ENTER**].

Alternately, you may leave the customer number field blank and press [**ENTER**]. The system will then position the cursor at the beginning of the customer name field. You may enter any portion of the customer's name and press [**ENTER**]. The system will display the first customer record that matches the characters entered and ask if this is the *Right customer ?*.

You may then answer Y or N or press [**F1**] to display the next customer record in turn. Simply follow the instructions at the bottom of the screen.

**Location**
Enter the location number of the equipment for which you want the call history to be displayed or press [**F1**] to display all locations.

**Model #**
Enter the model number of the equipment for which you want the call history to be displayed. You may enter all or any portion of the model field and the system will retrieve the oldest call that matches the model specified.

If you press [**F1**] at the model field, the system will retrieve the oldest call on file for the customer specified regardless of the model.

**Eqp/svc id**
You may enter all or any portion of the equipment identifier. The system will retrieve the oldest call for the equipment ID specified.

If you press [**F1**] at eqp/svc id field, the system will retrieve the oldest call on file for the customer specified regardless of the eqp/svc id.

# Chapter 27

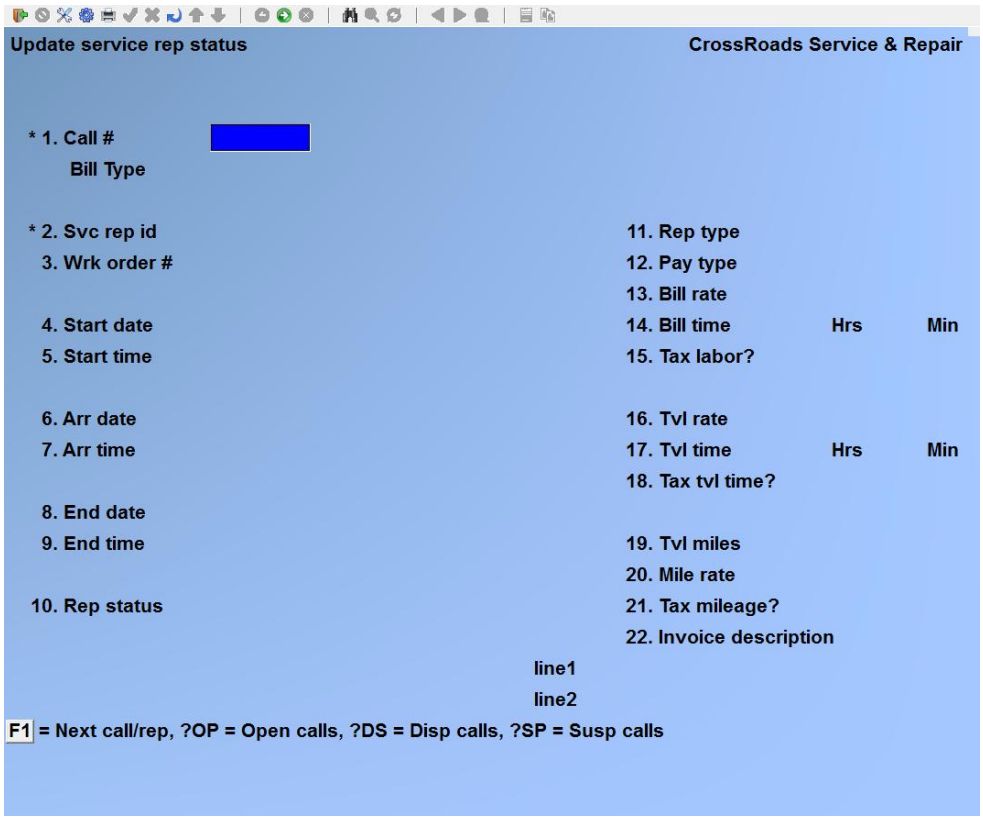
# Update Service Rep Status

## Introduction

The Service rep status update transaction is used to assign your service representatives to a particular status or service call.

## To begin

From the first page of the S/M main menu, select *Update service rep status* or you may enter from the *Service calls* change/inquire function.



**Call #**
If you entered the transaction through the Service Call change/inquire function the call number will be displayed and cannot be changed. If you entered by typing 7 at the *Service Manager* menu, you may enter the call that you wish to update.

You may enter the call number if you know it, or you may use the special inquires ?OP, ?DS or ?SP to search for a particular call or a group of calls. For example, let's say that service rep Tom Underwood calls in to say he's completed his current call and is ready for his next assignment. We could type ?DS at Field 1, Call #. Then we type TU into field 2, service rep id. Service Manager will open a window at the bottom of the screen to display a summary of all calls dispatched to Tom Underwood. We talk over the list with Tom and pick out his current call number. We press [ENTER] to clear the screen, and then type in Tom's current call number. We get the information we need from Tom to complete the rep record...we can even add the parts records now if it is convenient.

When Tom's current call record is completed, enter ?OP into field 1, Call #, and Service Manager opens a window to display a summary of all open calls. We then pick a call to assign to Tom and enter its number into field 1. We then add TU as the service rep id and continue to dispatch the call.

**Svc rep id**
Enter the ID of the service rep whose status you wish to change or press Fl to display the first and each succeeding rep in turn.

NOTE: If you have already dispatched the call, and are now assigning an additional technician(s), the system will ask "DO YOU WISH TO ADD? Nil. Answer Y and continue.

**Wrk order #**
This is an optional field that allows you to associate a work order or ticket number with the call that the rep is being assigned to. Work order numbers can be up to ten alphanumeric characters. When the call invoice is printed, the work order number appears in the upper right corner.

**Start date**
The system displays the current system date as the starting date of the status. Either accept this date by pressing [ENTER] or type the desired start date.

**Start time**
The system displays the current system time as the starting time. Either accept this time by pressing [ENTER] or type the desired starting time.

NOTE: If you are dispatching the call for the first time, you may press Fl and Service Manager will fill in fields 6 through 18 automatically.

**Arr date**
The system assumes that the arrival date is the same as the start date. Either accept this date by pressing [**ENTER**] of type the desired date.

**Arr time**
The system assumes that the arrival time is the same as the start time. Either accept this time by pressing [**ENTER**] or type the appropriate arrive time. Travel time is calculated as the difference between the start time and arrival time.

**End date**
The system assumes that the end date is the same as the arrival date. Either accept this date by pressing [**ENTER**] or type the appropriate end date.

**End time**
The current system time is displayed as the end time. Either accept this time by pressing [**ENTER**] or type the appropriate end time.

**Rep status**
Enter the rep status that applies to the assignment being made. For a particular assignment, the rep may be A (Active), S (Suspended) or C (Complete).

**Rep type**
The system defaults to a rep type of "T" for technician. If "T" is specified, the billing rate to be applied will be the rate specified for technicians or mechanics in the Bill Type record. If "H" (for helper) is entered, the billing rate to be applied will be the rate specified for helps or apprentices in the Bill Type record.

**Pay type**
The system default to a Pay Type of "R" (for regular time). You may accept this default or enter "O" (for overtime) or "S" (for special time). Depending on your entry in this field, Service Manager will use the regular, overtime or special hourly cost from the service rep's record.

**Bill rate**
The system will display the rep hourly billing rate specified in the Bill Type record used for this call. You may accept this rate by pressing [**ENTER**] or type in a new rate to override the default value.

**Bill time – Hrs Min**
The system displays the Bill time for the call which is the difference between the arrival and departure time. You may accept this time by pressing [**ENTER**] or type the desired time. It is important to note that Service Manager will compute the labor costs on a service call using the start, arrival and end dates and times. Service Manager will compute the labor charges on a service call using the bill rate times the bill time. Therefore, you can adjust the hours or the hourly rate that you charge your customer and still have accurate labour costs.

**Tax labor ?**
This field displays the default tax status (from the tax code record) for service labor for this customer. You may accept the default by pressing [**ENTER]** or override the default status by typing Y or N.

**Tvl rate**
If you want to bill for travel time, type in the hourly travel rate to be used for billing; otherwise press [**ENTER**].

**Tvl time – Hrs Min**
The system displays the travel time for the call which is the difference between the starting time and the arrival time. You may accept this time by pressing [**ENTER**] or type the desired time.

**Tax tvl time ?**
This field displays the default tax status (from the tax code record) for travel charges --calculated on a *time* basis --for this customer. You may accept the default by pressing [**ENTER**], or override the default status by typing Y or N.

**Tvl miles**
If you want to bill for travel distance, enter the number of travel miles to be used for billing; otherwise press [**ENTER**].

**Mile rate**
If you enter a mileage rate, the system will multiply this rate by the number of travel miles and bill the resulting product of the multiplication.

**Tax mileage ?**
This field displays the default tax status (from the tax code record) for travel charges – calculated on a *mileage* basis – for this customer. You may accept the default by pressing [**ENTER**] or override the default status by typing Y or N.

**Invoice description**
This field displays a default description of this labor record that will be printed on the invoice (if you choose "Print detail labor = Y"). The default description is based on Field 12, Pay type --regular, overtime, or special. You may accept the default by pressing [**ENTER**], or override the default by typing in a description of your own.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

The system will indicate that the line item has been added to the bill and the data entry portion of the screen will be cleared. The cursor will then be positioned at the item # field ready to accept the next service bill line item.

When you press [**TAB**], you are asked *Update parts usage status ?*. Answer Y or N.

- If you answer N, you are returned to either the service call change/inquire function or the Service Manager main menu depending on how you entered this function.
- If you answer Y, you will enter the Update parts usage transaction.

---

# Chapter 28

# Update Parts Usage

**Introduction**
This function is used to enter parts on a service call. It interfaces with RealWorld's Inventory Control module, or alternately, with the Synchronies Serialized Inventory Control module.

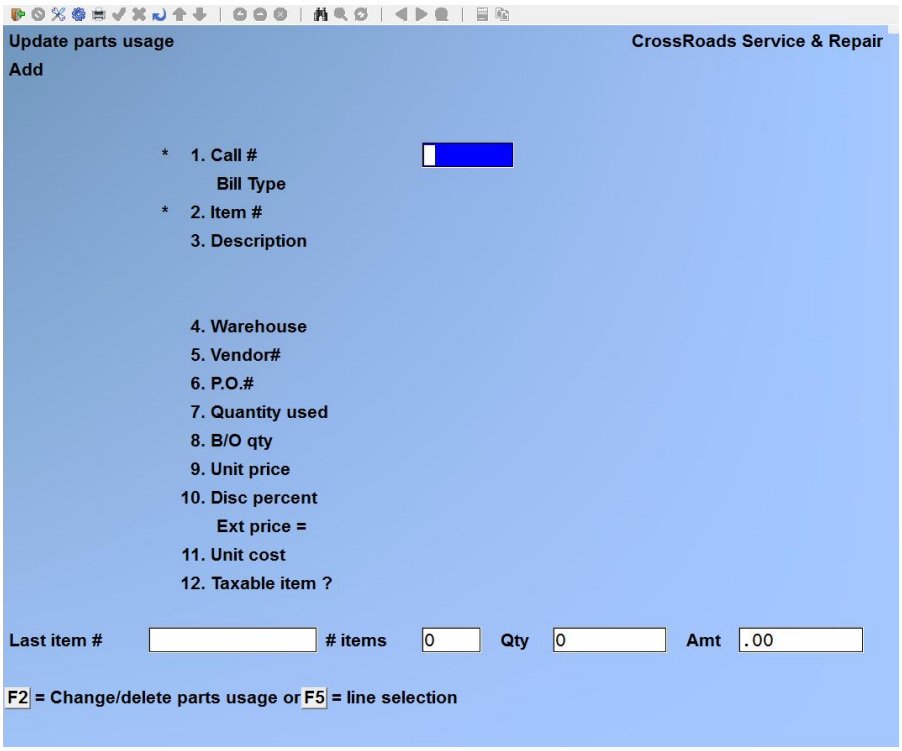
Three types of line items may be added to each service call: stocked parts, non-stocked parts (i.e. miscellaneous or asterisk items), and lines of description.

The Update parts usage function operates in Add modes and Change/delete mode. The mode of operation is always displayed in the upper left comer of the screen, and you can toggle between modes by pressing [**F2**]. Instructions regarding mode changes are displayed at the bottom of the screen. In add mode, when you use the Fl key to browse, you are browsing through the inventory item list. When the inventory item of interest is displayed, you may add it to the service call. In change/delete mode, when you use the Fl key to browse, you are browsing through the list of items that have already been put onto the service call. When the inventory item of interest is displayed, you may change it, or delete it entirely.

**To begin**
From the first page of the S/M main menu, select *Update parts usage* or you may enter from the *Service calls* change/inquire function.

**Entering Parts Usage**
Enter the following information for each action code:

*See next page for illustration.*




The Update parts usage screen is used to enter the components of the service bill other than billable on-site labor, travel and mileage. You may enter stocked parts, non-stocked parts or description lines using this function.

**Call #**

If you entered the transaction through the Service Call change/inquire function the call number will be displayed and cannot be changed. If you entered by typing 8 at the *Service Manager* menu, you may enter the call that you wish to update.

**Item #**

You have several options to use in order to identify specific parts or inventory items used on a service call:

- Enter a valid item number, up to 15 characters
- Press [**F1**] to scroll through the inventory items on file in order by item number
- Press [**ENTER**] to advance to the item description field. You may then press [**F1**] to scroll through the inventory item on file in alphabetic order by item description
- Press [**ENTER**] to advance to the item description field. Type in as much or as little of the item description as you choose and then press [**ENTER**]. Service Manager will search for the first item description that matches your input. You may then press [**F1**] to examine subsequent items in alphabetic sequence.

When you have displayed the inventory item that you are interested in, press [**ENTER**].

**Description Items**

If the first character of the item number equals a minus sign or dash (-), Service Manager interprets the item to be description only. Following the dash, you may add any combination of characters you choose (they are ignored by Service Manager).

After you enter a “dash” item number, you are permitted to enter 2 lines of description of 25 characters each. The description item will be printed on the invoice in the order in which it is entered and you may add as many description items as you choose. This feature can be used to print multiple lines of description to clarify some part on the invoice.

To delete a "dash" item from a service call, use [**F2**] to switch to change/delete mode. Then use [**F1**] to display the dash item of interest. Next, change field 3, the description to all spaces (both lines). Service Manager will ask if you want to delete the item. If you do, simply answer Y.

**Inventory Items**

Except for dash items, all other items added to a service call must have valid item numbers that have been previously defined using the *Item maintenance* transaction in the Inventory Control package. However, a great deal of flexibility is available through the use of *stocked* and *non-stocked* (i.e. miscellaneous (* asterisk) inventory items. If you are unfamiliar with the definition and use of miscellaneous inventory items, please refer to your Inventory Control User Manual.

Briefly, RealWorld's Inventory Control package supports both stocked and non-stocked items. Stocked items are considered normal and receive the most data processing services. Stocked items are items that you physically receive into some form of warehouse facility and store for a finite period of time before they are sold.

Non-stocked items (or as RealWorld refers to them --miscellaneous items) are items that you purchase and sell immediately...without physically receiving them into a warehouse. An example would be items that are purchased from a supply house in order to repair a specific customer's equipment. Non-stocked, or miscellaneous, items are distinguished by the first character in their item number being an asterisk (*). Non-stocked items can be used to add a variety of charges to service calls:

| Sample Item # | Application |
|---|---|
| *FITTINGS | Miscellaneous pipe fittings purchased from a supply house |
| *BACKHOE | Backhoe rental for use on a job |

| | |
|---|---|
| *PARKING | Parking fee |
| *RIGGING | Subcontracted rigging work |

Through the use of stocked, non-stocked, and dash items, all parts, rentals, subcontracts, fees, descriptions, etc. that need to be added to a service call and shown on an invoice can be accommodated.

**Description**
If you entered a valid part number in Field 1 above, the system will display the item description, and the cursor will not stop at this field. If you entered either an asterisk or dash item, you may enter whatever descriptive information you desire in this field, up to 25 alphanumeric characters.

**Warehouse**
The system will display the warehouse location assigned to the service representative who handled this call. You may either accept this location by pressing [**ENTER**], press [**F1**] to display the next warehouse that stocks the item or enter the appropriate location. If no warehouse is specified, the system will relieve inventory at the central warehouse location.

When you enter parts usage for a service call, you can enter backordered parts as well as those already used. For each part backordered, you can enter the vendor #, purchase order # and quantity backordered.

**Vendor#**
If using A/P, enter the vendor code for the vendor that will supply the backordered item.

**P.O.#**
Enter the computer or manual purchase order number for the item backordered.

**Quantity used**
If a part number was entered in Field 1 above, specify the quantity used on this call, up to 4 numeric digits. Optionally, you may press [**F2**] to select an alternate item.

**Alternate Item Selection**
While the cursor is positioned at *Quantity used,* you have the option to press [**F2**], and gain access to a list of up to eight (8) alternate inventory control items. The alternate items must have been previously specified by using the Inventory Control function for that purpose. If you press [**F2**], the screen will show:

**B/O qty**
Enter the quantity of the item on order to complete this call.

**Unit Price**

**Pricing Stocked Items**

When stocked items are added to a service call, the cost of the item is determined from the inventory record. The sell price of a stocked item may be determined in a variety of ways; for a full description of the options available refer to Chapter 14 *Item Pricing*. After an *Item Pricing* function fills in the unit price, it displays the source of the price (or the calculation option used to determine the price) to the right of the price field. You are permitted to change the selling price, but you are not permitted to change the cost (if you did Service Manager distributions and reports would not balance with your General Ledger accounts).

**Pricing Non-Stocked (Miscellaneous) Items**

Since non-stocked (miscellaneous) items are not received into inventory, Service Manager has no automatic way to determine the cost. The cost of non-stocked items must be keyboard-entered at the time the items are added to the service call. However, Service Manager does offer an automatic function for marking up the cost to calculate a sell price.

If you use the automatic mark-up function for miscellaneous items, Service Manager will advance directly to Field 8, unit cost. After you enter the cost, Service Manager will automatically calculate the sell price and display it in Field 6, unit price. Refer to Chapter 5, *Service Manager Control Information* and Chapter 14, *Item Pricing,* for the details to set up the automatic mark -up feature.

The system will display the unit price based on the pricing method you are using. You may either accept this price by pressing [**ENTER**] or type in the appropriate price.

**Disc Percent**

The system displays the discount percentage that was entered in the customer file. You may accept this percentage by pressing [**ENTER**], or type in the desired percentage.

**Ext price =**

The system automatically computes the extended price based on the quantity and unit price specified. No entry is required in this field.

**Unit Cost**

The system displays the unit cost for the item specified from the item master record. If the item being added to the service call is a stocked item, you may not change the item's cost unless two conditions are present. First, you must indicate in your Company File that you allow protected changes; secondly, you must use the [**F2**] key to enter protected change mode.

**Taxable item ?**

The system displays the tax status that is specified in the IIC item file and the AIR tax code file. You may either accept the default tax status or override it. If you answer Y, the item will be taxed at the rate specified in the customer's service location record.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

The system will indicate that the line item has been added to the bill and the data entry portion of the screen will be cleared. The cursor will then be positioned at the item # field ready to accept the next service bill line item.

**Changing/Deleting line items**

To change or delete line items on a service call, enter the *Update Parts Usage* function as described above. You will have entered the function in add mode. Press [**F2**] to switch into change/delete mode. You may now use F1 to browse through the line items on the call.

When the item you are interested in is displayed, press [**ENTER**]. You may now make any required changes to individual fields. If you want to delete this item entirely, change *Quantity Used* to zero (0). You will be asked *Delete this item ? N*. Answer Y to delete the item from the call.

When there are no more line items *on this* call to change or delete, you may exit parts update by pressing [**TAB**] at the item # field or you may return to add mode by pressing [**F2**].

# Chapter 29

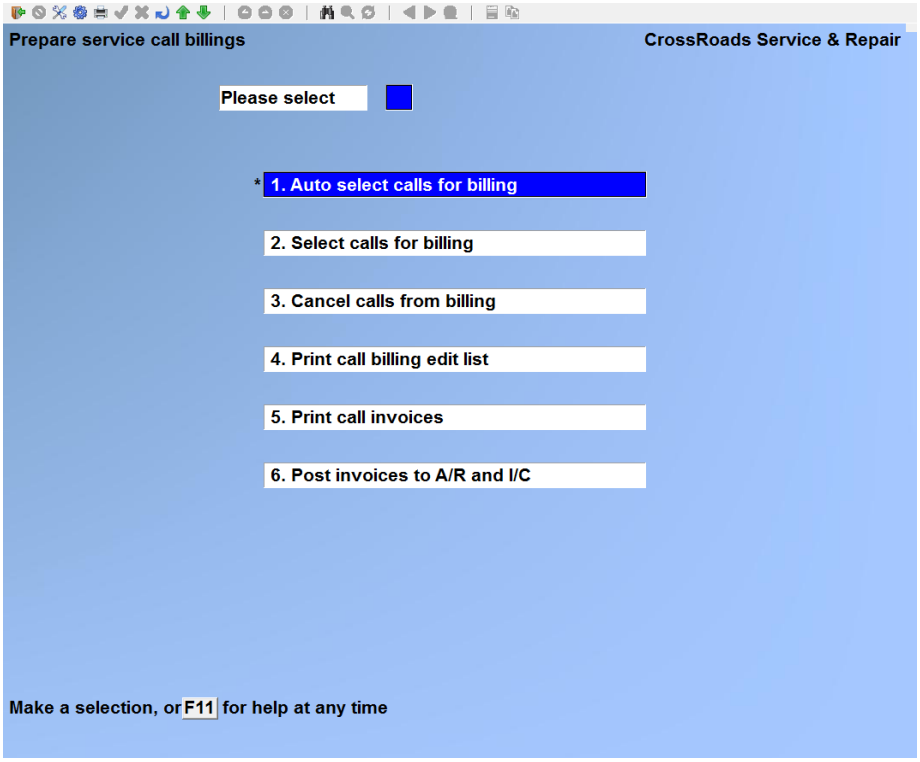
# Prepare Service Call Billings

## Introduction

Prepare service call billings provides six functions. Three of the functions allow you to select and/or cancel service calls for billing. Two functions are provided to print the billing edit list and the actual invoices. Finally, one function is included to post invoices to Accounts Receivable and the Inventory Control systems.

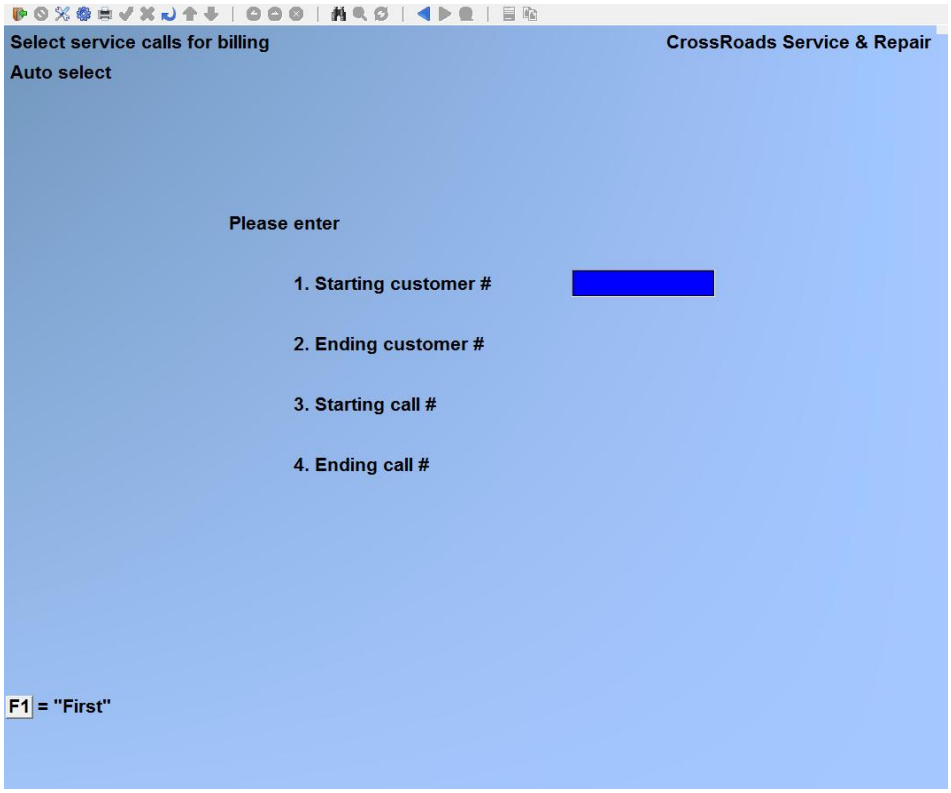
## To begin

From the first page of the S/M main menu, select *Service call billing*. On the screen displayed, select the function that you wish to perform:



## Auto select calls for billing

This function selects for billing all service calls with closed status. You may think of this as a "bulk" automatic selection as opposed to individual manual selection.




### Starting customer #

Enter the number of the first customer for whom you would like to print a closed call edit list or press [**F1**] to specify the "First" customer on file.

### Ending customer #

Enter the number of the last customer for whom you would like to print a closed call edit list or press [**F1**] for the "Last" customer on file, or --if you did not use [**F1**] to specify the starting customer --press [**ENTER**] in order to limit the list to just one customer.

### Starting call #

Enter the number of the first closed call you would like to review, or press [**F1**] to specify the “First” closed call on file.

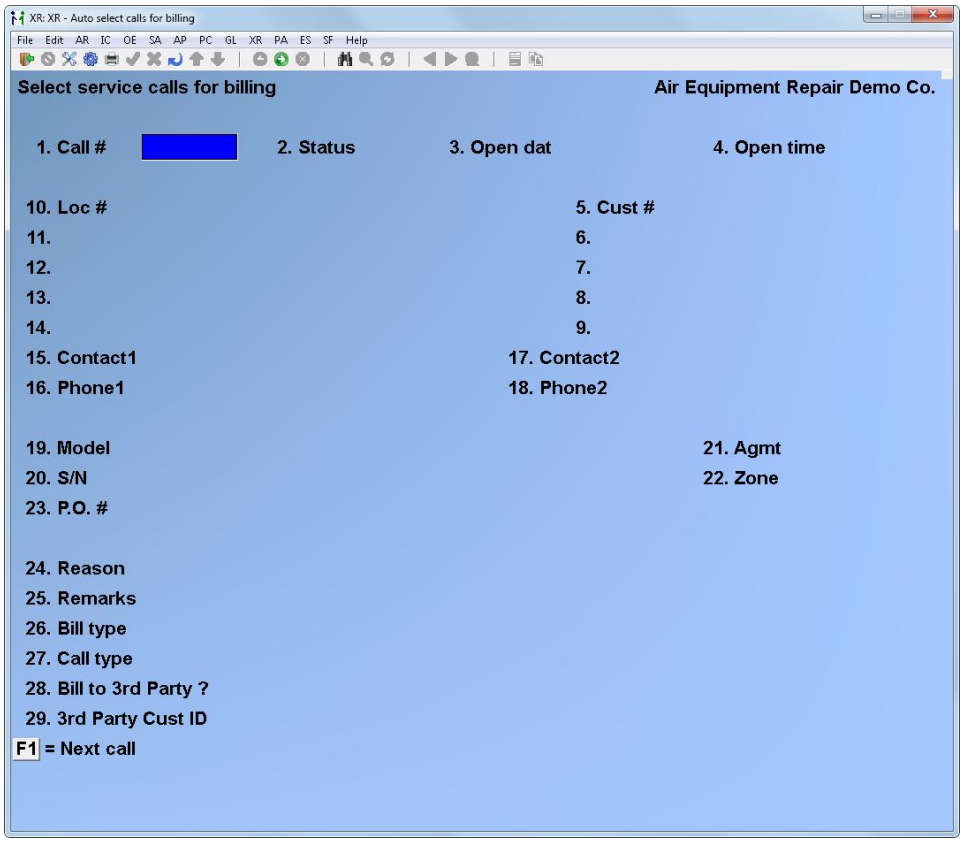
### Ending call #

Enter the number of the last closed call you would like to review or press [**F1**] to specify the “Last” closed call, or – if you did not use F1 to specify the “last” closed call on file -- press [**ENTER**] in order to limit the list to just one call.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Select service calls for billing**

This function allows you to select for billing individual calls that have the closed status. When you select this function, this is the screen you see on your monitor is displayed below: Note that fields 22 and 23 only appear if you have answered yes to the question "USE MULTI-BILLING?" in the Service Manager control file.




**Call #**

The cursor will be positioned at field 1. Call number; enter the number of the call you wish to select or press [**F1**] to display each closed call in turn. When the call you select is displayed, press [**ENTER**].

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

You are then prompted *Select this call ?* If you answer Y, the call will be selected for billing. Press [**ENTER**] and the screen will reappear, ready to accept entry of the next call number. When there are no more closed calls to select for billing, press [**TAB**].

**Third party warranty billing**

In order to bill a third party for service (e.g., warranty), the service call must be

manually selected and the third party identified. To prepare your system for these steps, the following setup should have already been done:

- You must answer yes to the question “Use Multi-billing” in the Service Manager control file.
- You should create a bill type record for the “third party” specifying in it the labour rates and parts prices upon which you and the third party have agreed.
- The third party must be defined in Accounts Receivable as a customer. If the third party is reimbursing you for a warranty call, they most likely will also be a vendor of your with an entry in Accounts Payable. However, since this billing transaction will result in you sending them an invoice, you must identify their A/R account number.

When you have a call displayed on the screen, select field 28. *Bill to 3rd party ?*

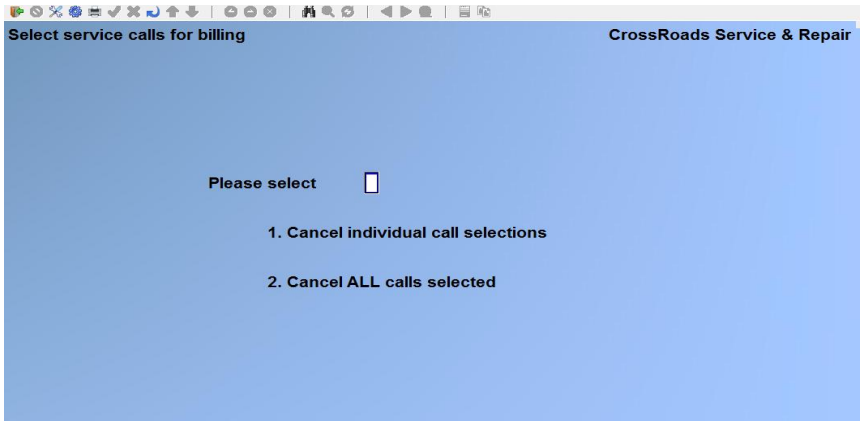
**Bill to 3rd Party ?**
The default value for this field is N to indicate normal customer billing. If you wish to bill this service call to a third party, enter Y.

**3rd Party Cust ID**
If you entered Y in field 28. above, you will be permitted to enter data here, otherwise field 29 will be skipped. Enter the customer account number for your third billing customer, or press Fl to advance to the customer name field. If you advance to the customer name field, you may enter any portion (as much or as little) of the third party customer name in order to search for the proper identifier.

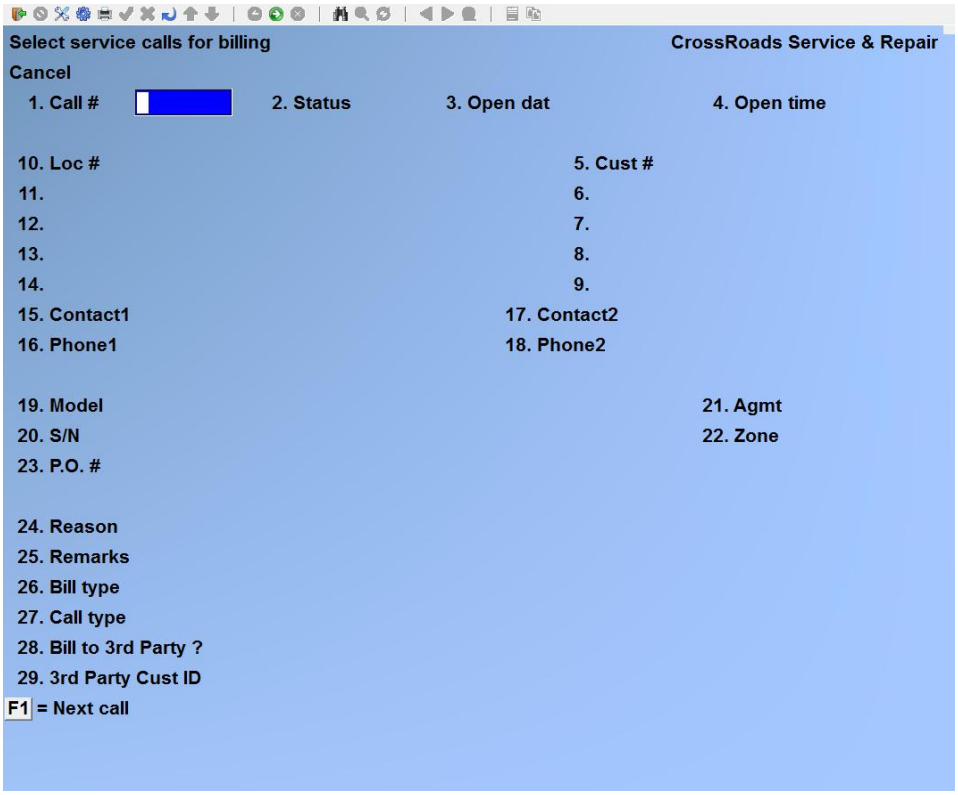
At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

You should proceed with printing the call billing edit list and service call invoices in the normal manner. You will note, however, that Service Manager will print your third party's name/address in the bill-to section of the forms and your original customer's name/address will be printed in the service-at section of the forms.

**“De”-select service calls from billing**
This function allows is used to cancel (i.e. deselect) calls from billing after they had been selected through either function 1 or 2 above. The functions offers two option: cancel individual calls or cancel all service calls currently selected. Most frequently, this function is used to cancel individual calls from the “bulk” list produced by function 1, auto select service calls.




## Cancel individual call selections



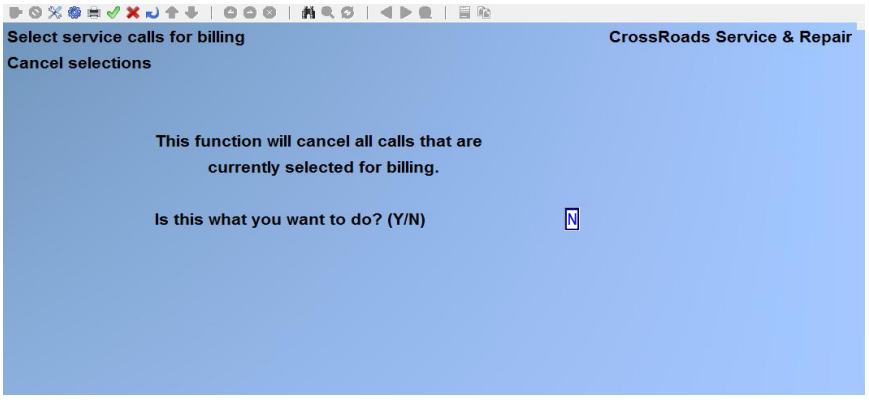

## Call #

The cursor will be positioned at field 1. Call number; enter the number of the call you wish to cancel and [**ENTER**] to display the call data.

At *Are you sure ?* answer Y or N followed by [**ENTER**]. The screen will refresh with the cursor positioned to accept the next call number you wish to cancel.

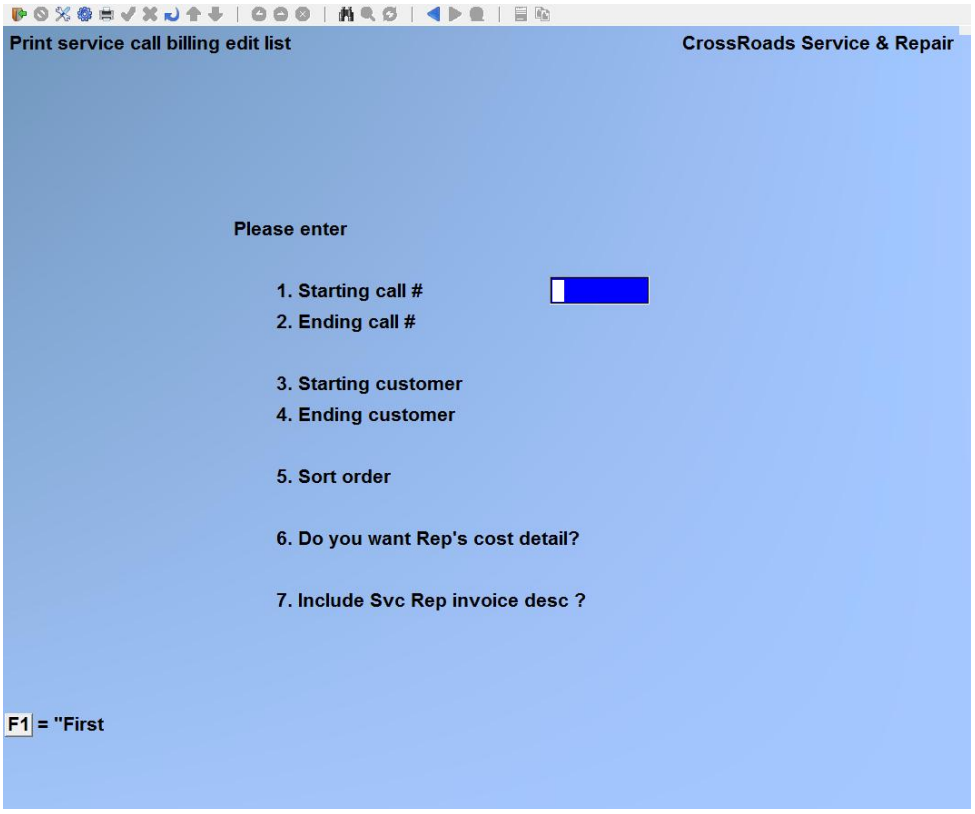
When there are no more selected calls to cancel, press [**TAB**].

## 1. Cancel ALL calls selected




If you answer Y and confirm your answer when asked *Are you sure* ?, the system will cancel all selected calls and display a count of the number of calls cancelled.

**Print service call billing edit list**
Use this function to review the service calls that were selected using *Auto select service calls for billing* or *Select service calls for billing*.




**Starting call #**
Enter the starting call number or press [**F1**] to specify the "First" service call selected for billing.

**Ending call #**
Enter the ending call number or press [**F1**] to specify the “Last” service call selected for billing.

**Starting customer #**
Enter the number of the first customer for whom you would like this report or press [**F1**] to specify the "First" customer on file.

**Ending customer #**
Enter the number of the last customer for whom you would like to this report or press Fl for the "Last" customer on file, or --if you did not use [**F1**] to specify the starting customer --press [**ENTER**] in order to limit the list to just one customer.

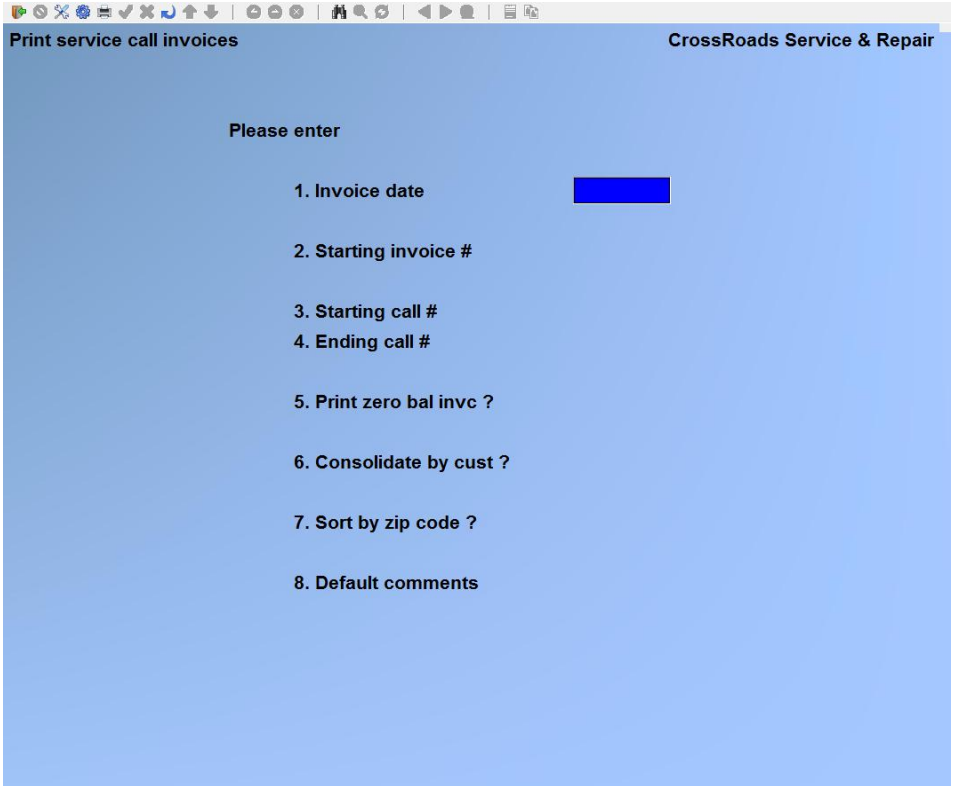
**Sort order**
Type **1** if you want this report printed in order by service call number.
Type **2** if you want this report printed in order by customer number.

**Do you want rep’s cost detail ?**
Type **Y** if you want this report to include cost and gross margin detail for each service rep labor record. Type **N** if you don’t want this information to show on the report.

**Include Svc Rep invoice desc ?**
Type **Y** if you want this report to include the invoice descriptor field for each service rep labor record. Type **N** if you don’t want this information to show on the report. When included, the labor invoice descriptor adds one line for each labor record printed.

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

**Print call invoices**
After the service call billing selections have been verified as correct, print the invoices. From the *Prepare service call billings* menu, select *Print call invoices.*




**Invoice date**
Enter the date you want printed on the invoices, or press [**ENTER**] to default to the current date displayed. The date entered here will be the date of the sales transaction when these invoices are posted to *AIR*.

NOTE: The invoice date is the date that service calls affect inventory valuation in I/C. Therefore, to increase the inventory valuation on a certain date (or decrease it in the case of credit memos), an invoice or credit memo must be printed first, and must be dated on or before the date of the valuation.

**Starting invoice #**
Enter the invoice number to print on the first invoice in this run or press [**ENTER**] for the next invoice number in sequence.

**Starting call #**
Enter the number of the first service call for which an invoice is to be printed or press [**F1**] for the "First" selected service call on file.

**Ending call #**
Enter the number of the last service call for which an invoice is to be printed or press [**F1**] for the "Last" selected service call on file – or if you did not select "First" above, press [**ENTER**] to print only the starting service call.

**Print zero bal invc ?**
Answer Y or N depending on whether or not you want to print service call invoices that have a zero (0) balance due.

**Sort by zip code ?**
If you answer Y, the invoices will be printed in increasing order of the zipcode of the address to which the invoice is being mailed. If you press [**ENTER**] to accept the system default of N, the invoices will print in increasing order of the customer number.

**Default comments**
Enter any comments you want to be printed on the service call invoices--up to 5 lines of 30 characters each.

For example:

| | |
|---|---|
| Default comments | IT'S A PLEASURE TO SERVE<br>YOU.<br>THANKS FOR THE<br>OPPORTUNITY |

At *Field number to change ?* type the number associated with the field that you want to change and press [**ENTER**]. Proceed with your change.

You then see "Please mount invoice forms on printer. Type 'DONE' when ready. Mount the pre-printed invoice forms on the printer so that the print head is at the top of the form. Adjust the printing pressure according to the thickness of the invoice forms. When you have finished mounting the forms, type DONE.

You are asked *Print alignment ?* Answer Y to print a test alignment form filled with lines of X's and 9's. After the form is printed, you are again asked *Print alignment ?* If necessary, adjust the invoice forms in the printer to the left, right, up or down. Then answer Y to print another alignment form.

Continue to print alignment forms and make necessary adjustments until the invoice forms are properly aligned. When the alignment is correct, answer N to *Print alignment ?* The invoices print.

When the invoices have been printed, you are asked *Are invoices just printed OK ?* If you answer N, you are asked if you wish to restart invoice printing or return to the Billing menu.

Answer R (restart) if the invoices were bad due to an incorrect billing date, wrong selection of the series of orders to be billed, or inappropriate default comments. If you answer R, you are allowed to re-enter the invoice printing information.

Answer M (return to Billing menu) if the invoices were bad due to a printer malfunction that required realignment of the forms or if incorrect billing information appeared on invoices. If you answer M, you must make the necessary corrections before printing the invoices again.

If you answer Y to *Are invoices just printed OK ?* the invoices are marked as OK to post and the Print invoices menu reappears for entry of another range of invoices to print.

When through printing invoice, press [TAB] for the invoice date. You are then asked to *Please mount regular paper on printer. Type DONE when ready.* Change the paper, then type DONE. The *Prepare service call billings* menu reappears.

After printing and posting a Service Manager invoice to a customer's account, you can re-print the Service Manager invoice when viewing the customer account in A/R or viewing an invoice in Billing. You can also re-print an invoice or a range of invoices in Billing. While viewing a customer account or the detail for an invoice, follow the prompts at the bottom of the screen (i.e. R = reprint). When multi-invoices are displayed, you must select the invoice to reprint.

**Post invoices to A/R & I/C**

After service call invoices have been printed and you have designated the printing as "OK", Service Manager creates corresponding sales transactions, inventory control transactions and possible cash receipt transactions. These transactions cannot be edited at this stage, so any file corruption that may occur due to power failure or system malfunction will require painstaking detail to correct. Therefore, you should post these transactions to Accounts Receivable and Inventory Control immediately or – if that can't be done – they should be posted ASAP.

From the *Prepare service call billings* menu, type 6. From the menu bar select *Post invoices to A/R & I/C*. You are asked *Are invoices OK to post ?*.

In multi-user environments, if you answer Y, one of three messages may appear:

1. "UNABLE TO PROTECT ORDER FILES-TRY AGAIN LATER". This is because another user is accessing the *Prepare service call billings* function.

2. "UNABLE TO PROTECT INV TRX FILE-TRY AGAIN LATER". This is because another user is accessing the *Process inventory transactions* function in the Inventory Control package.

3. "UNABLE TO PROTECT AIR FILES-TRY AGAIN LATER". This is because another user is accessing the *Process sales and CRIDR memos* function or the *Process cash receipts* function in the Accounts Receivable package.

You must wait for the other user to finish whatever action is preventing you from posting invoices, then try again. If one user is posting invoices, other users may not access the *Process inventory transactions* function in the I/C package, or the *Process sales and Cr/DR memos function* and the *Process cash receipts function* in the A/R package.

There is a period of processing while sales and inventory transactions are created from the invoices. The inventory Transaction Register then prints and the inventory transactions are posted (see Inventory Control User Manual.

Following posting in I/C, the Sales Journal is printed and the sales transactions are posted. If there was cash received with a service call, the Cash Receipts Journal then prints and the cash receipts are posted (see the Accounts Receivable User Manual). Upon completion, the Prepare service call billings menu reappears. Press [**TAB**] to end this function.

# Chapter 30

# Print Service Management Reports

**Introduction**

The service management reports are one of the most important and valuable features of the Service Manager system. Hour-by-hour, day-by-day, your staff inputs service call data into the system. It is this series of reports that consolidates, analyzes and presents that data in a way to help you manage your business better.

The first five reports sort your service calls by status, bill type, call type, service rep and failure code. All five of these reports follow a similar pattern of seven lines of basic call information, followed by one detail line for each service rep record on the call.

- Service calls by status
- Service calls by call type
- Service calls by service rep
- Call history by failure code

The ***Parts Usage History*** report provides you with a complete history of spare parts usage. When you start this report, you specify one or more spare part item number(s), and one or more equipment identifiers. Service Manager then lists each time that part was used for that equipment, along with the failure and action codes pertaining to the call. Total quantities, average cost, and average price is also printed in a summary section.

The ***Print Service Analysis*** selection is actually a series of five (5) profit analysis reports organized by: service rep, service agreement, bill type, customer, and model of equipment (or service). Detailed descriptions of these reports are contained in later paragraphs.

The ***Customer Call History*** report provides a detailed customer service history including all tabular data as well as billing notes and internal notes. This report can

be selected by customer, location, call number, equipment model number, equipment serial number, and date range.

The ***Service Schedules*** report is a printout of dispatch schedules sorted by rep.

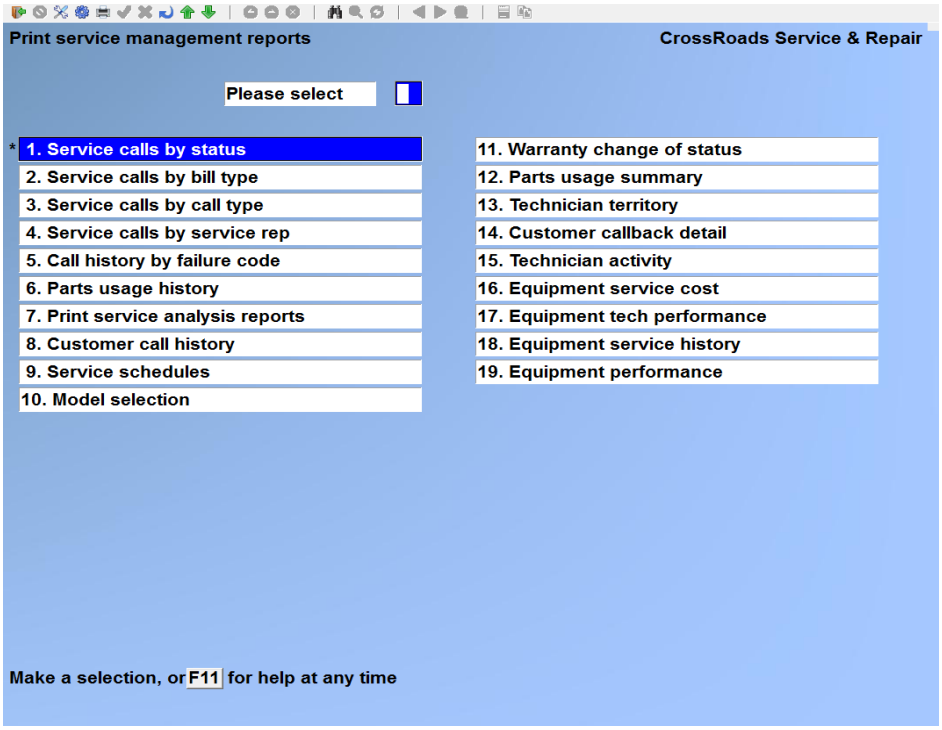
The ***Model Selection*** report gives you the capability of locating specific equipment by manufacturer, warranty program, category or model, type, serial or tag numbers.

The ***Warranty Change of Status*** report allows you to identify equipment – by date – for which warranty coverage will change. It is a marketing tool for service operations that offer extended warranty service agreements.

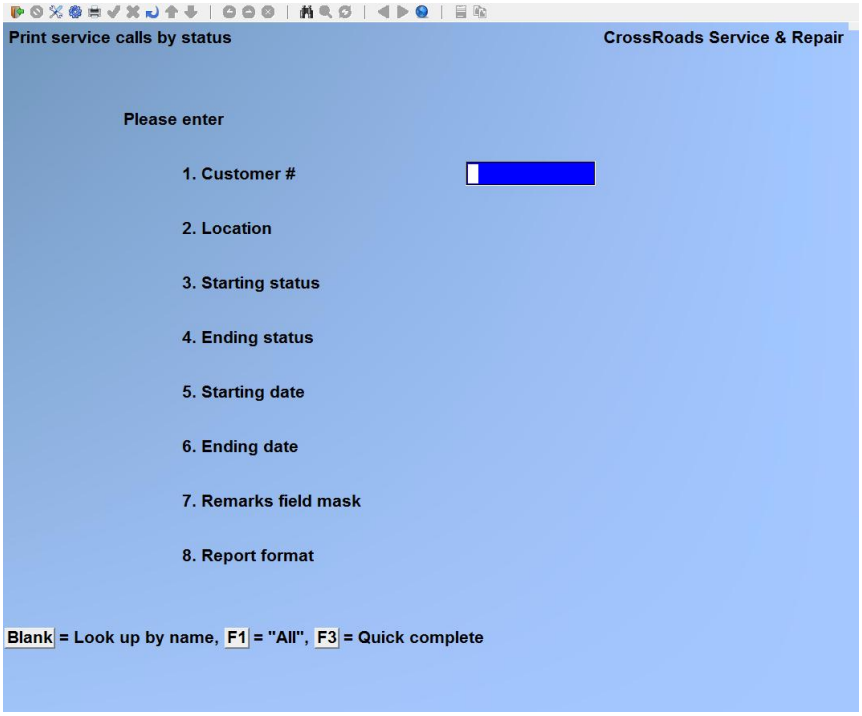
The last two reports are specific to the copier service industry. The first is a concise call-by-call history for each piece of equipment in the field --with pertinent meter usage information included. The second report on Copier performance shows copier usage and service call counts by type of service between any two dates selected.

12. Parts usage summary
13. Technician territory
14. Customer callback detail
15. Technician activity
16. Equipment service cost
17. Equipment tech performance
18. Equipment service history
19. Equipment performance

**To begin**
From the first page of the S/M main menu, select *Service management reports*. Then, select the report that you wish to print:



## Service calls by status




### Customer #

Enter the number of the customer for which you would like this report printed, or press [**F1**] to specify "All" customers, or leave the customer number field blank and press [**ENTER**] to identify the customer by name. Another available option it so press [**F3**] to quickly set all fields with the “maxed out” values (e.g. “First” to “Last”, “All”, etc.).

### Location

Enter the identifier of the location for which you would like this report, or press [**F1**] to specify all locations.

### Starting status

Enter the identifier of the first call status for which you would like a report, or press [**F1**] for the “First” status on file.

### Ending status

Enter the identifier of the ending call status for which you would like a report, or press [**F1**] for the “Last” call status on file or --if you did not use [**F1**] to specify a starting status --press [**ENTER**] in order to limit this report to just one status.

### Starting date

Enter the date for which you would like this report to begin or press [**F1**] to specify the “Earliest” date on file.

**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the “Latest” date on file. If you did not select “First” as your starting date, press [**ENTER**] to print only the starting date.

**Remarks field mask**
Enter up to ten alphanumeric characters to be used as a “mask” for selecting service calls. For example, if you type **09/26/12**, only those calls whose remarks field contains 09/26/12 in the first eight character positions will be selected. Press [**F1**] to select “All” calls.

**Report format**
Full or brief; examples follow.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:14:27:33                    CrossRoads Service & Repair              User: SSI  Report #3382   Page 0001

                                              SERVICE CALLS BY STATUS

                                                  Open call summary

Customer: "All"          Location: "All"          Date range:  "Earliest" to "Latest"           Remarks: "All"

Customer #   Customer name             Contact 1 / Phone 1       Eqp Model / Serial #            Bill type
Call #                                 Contact 2 / Phone 2       Eqp Description                 Call type
  Status     Location Name/Addr        Travel time               Agreement #                     Service type
  Open date                            Travel distance  Zone     Reason / Remarks                Failure code / Action code

243          TESCO CORPORATION,                                  Mod#: NU-COMFORT MR20           FULL   Full coverage
4                                                                S/N : 654987                    PM     PREVENTATIVE MAINTENANCE
         002 TESCO SERVICES DIVISION                             Desc: ROOFTOP UNIT 20 TON       PM     PREVENTATIVE MAINTENANCE
             4930 - 74TH AVENUE S.E.
  OPEN                                                           Agmt: 1009
  06/01/08   CALGARY, ALTA T2H 2B7                     Zone 00   Reas: PREVENTIVE MAINTENANCE (P.M. SCHEDULE: 06/24/08 TO 07/08/08)
  11:39                                                          Remk: COMPUTER GENERATED CALL

101          HERMOSA WOOD PRODUCTS INC  MOE SAE                  Mod#:                           T/M    Time and materials
37                                      850-6889                 S/N :                           BENCH  BENCH REPAIR
         000 HERMOSA WOOD PRODUCTS INC                           Desc:
             2771 SUNRDIGE WAY N.E.
  OPEN                                                           Agmt:
  11/23/12   CALGARY          AL  T1Y 7                          Reas: No reason given
  12:52                                                          Remk: CREDIT PROBLEM

200          PROTRUX,                   RON KLASSEN              Mod#:                           T/M    Time and materials
38                                      216-8789                 S/N :                           EMERG  EMERGENCY REPAIR
         000 PROTRUX,                                            Desc:
             4111 - 17th STREET S.E.,
  OPEN                                                           Agmt:
  11/23/12   CALGARY          AL  T2G 3                          Reas: No reason given
  12:55                                                          Remk: No remarks

300          NORTHWEST EQUIPMENT LTD.,  SID VAN DER MEER         Mod#:                           T/M    Time and materials
39                                      945-1988                 S/N :                           PM     PREVENTATIVE MAINTENANCE
         000 NORTHWEST EQUIPMENT LTD.,                           Desc:
             415 EAST LAKE ROAD,
  OPEN                                                           Agmt:
  11/23/12   AIRDRIE          AL  T4A 2                          Reas: No reason given
  12:56                                                          Remk: No remarks

400          ESS-ELL TOOL CO. LTD.,     BILL DAHL                Mod#:                           T/M    Time and materials
40                                      243-1442                 S/N :                           BENCH  BENCH REPAIR
         000 ESS-ELL TOOL CO. LTD.,     STUART MCMILLAN          Desc:
             UNIT 34,
```

Date:05/22/13 Time:14:29:18 CrossRoads Service & Repair User: SSI Report #3383 Page 0001

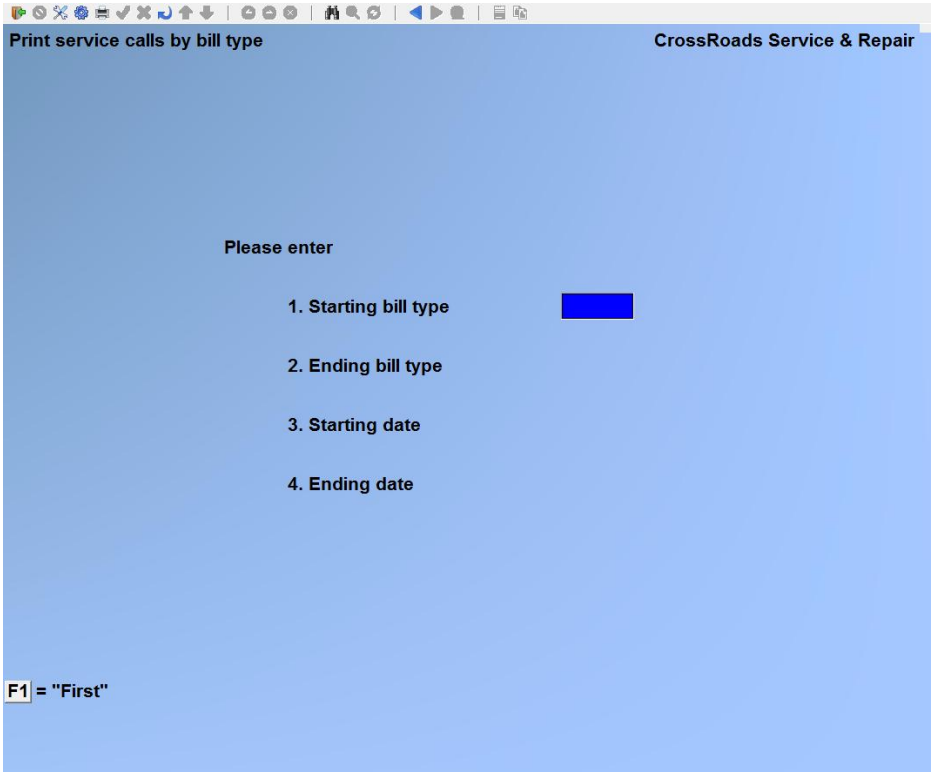
**SERVICE CALLS BY STATUS**

Customer: "All" Location: "All" Date range: "Earliest" to "Latest" Remarks: "All"

| Date | Time | Stat | Call # | Service location | Type | Zone | Reason |
|---|---|---|---|---|---|---|---|
| 06/01/08 | 11:39 | OP | 4 | TESCO SERVICES DIVISION | PM | 00 | PREVENTIVE MAINTENANCE (P.M. SCHEDULE: 06/24/08 TO 07/08/08) |
| 11/23/12 | 12:52 | OP | 37 | HERMOSA WOOD PRODUCTS INC | BENCH | | No reason given |
| 11/23/12 | 12:55 | OP | 38 | PROTRUX, | EMERG | | No reason given |
| 11/23/12 | 12:56 | OP | 39 | NORTHWEST EQUIPMENT LTD., | PM | | No reason given |
| 11/23/12 | 12:59 | OP | 40 | ESS-ELL TOOL CO. LTD., | BENCH | | No reason given |
| 11/23/12 | 13:00 | OP | 41 | ESS-ELL TOOL CO. LTD., | BENCH | | No reason given |
| 11/23/12 | 13:15 | OP | 42 | 1031182 ALBERTA LTD., | BENCH | | No reason given |
| 05/22/13 | 11:39 | OP | 3 | TESCO SERVICES DIVISION | PM | 00 | PREVENTIVE MAINTENANCE (P.M. SCHEDULE: 06/01/13 TO 08/01/13) |
| 05/22/13 | 12:04 | OP | 63 | HERMEINE PRODUCTS INC | E/P | | No reason given |
| 05/22/13 | 12:09 | OP | 66 | HENINGER TOYOTA, | R/P | | No reason given |
| 01/28/09 | 16:05 | DS | 5 | CASH SALE | BENCH | | No reason given |
| 05/06/10 | 15:06 | DS | 9 | TESCO SERVICES DIVISION | EMERG | 00 | No reason given |
| 11/22/12 | 10:34 | CL | 33 | HERMOSA WOOD PRODUCTS INC | BENCH | | No reason given |
| 11/23/12 | 12:33 | CL | 36 | HERMOSA WOOD PRODUCTS INC | PM | | No reason given |

-- End of report --

## Service calls by bill type




**Starting bill type**
Enter the identifier of the first bill type for which you would like a report, or press [F1] for the "First" bill type on file.

**Ending bill type**
Enter the identifier of the ending bill type for which you would like a report, or press [**F1**] for the "Last" bill type on file or --if you did not use [**F1**] to specify a starting bill type --press [**ENTER**] in order to limit this report to just one bill type.
**Starting date**
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file or - - if you did not select "First" as your starting date, press [**ENTER**] to print this report for just one day.

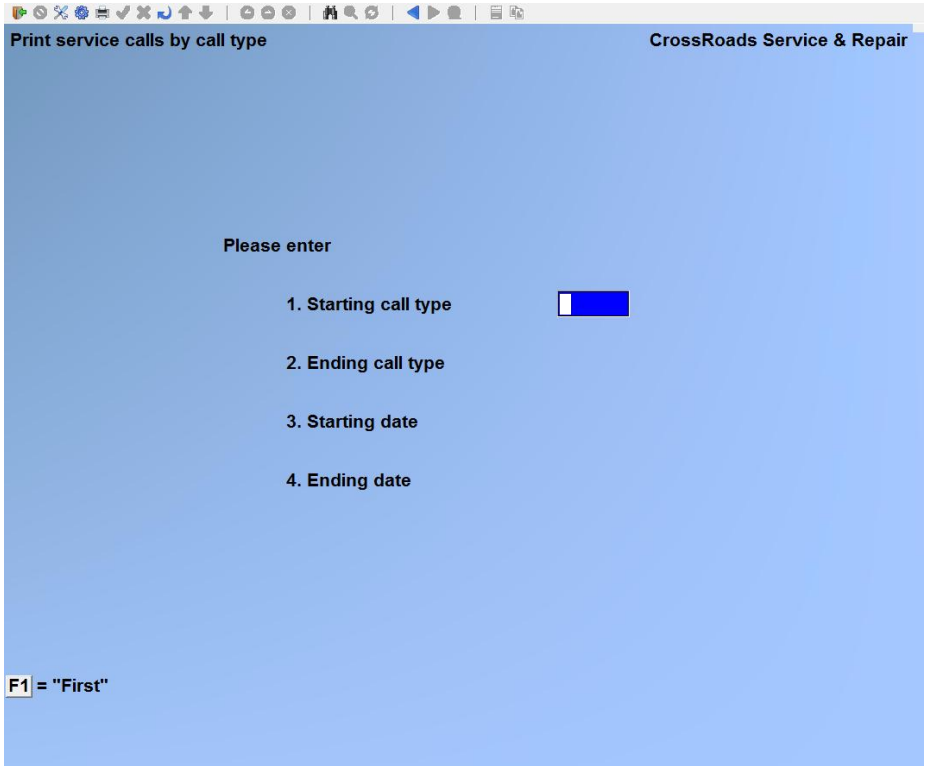
When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:14:32:55                    CrossRoads Service & Repair                User: SSI  Report #3384   Page 0001
```

**SERVICE CALLS BY BILL TYPE**

```
Bill type: FULL      Desc: Full coverage

Billing type range: "First"  to "Last"           Date range:    "Earliest" to "Latest"

Customer #   Customer name              Contact 1 / Phone 1       Eqp Model / Serial #            Bill type
Call #                                  Contact 2 / Phone 2       Eqp Description                 Call type
  Status     Location Name/Addr         Travel time               Agreement #                     Service type
  Open date                             Travel distance  Zone     Reason / Remarks                Failure code / Action code

243          TESCO CORPORATION,                                   Mod#: NU-COMFORT MR10           FULL   Full coverage
3                                                                 S/N :                           PM     PREVENTATIVE MAINTENANCE
         002 TESCO SERVICES DIVISION                              Desc: ROOFTOP UNIT 10 TON       PM     PREVENTATIVE MAINTENANCE
             4930 - 74TH AVENUE S.E.
  OPEN                                                            Agmt: 1009
  05/22/13   CALGARY, ALTA T2H 2B7                     Zone 00    Reas: PREVENTIVE MAINTENANCE (P.M. SCHEDULE: 06/01/13 TO 08/01/13)
  11:39                                                           Remk: COMPUTER GENERATED CALL

243          TESCO CORPORATION,                                   Mod#: NU-COMFORT MR20           FULL   Full coverage
4                                                                 S/N : 654987                    PM     PREVENTATIVE MAINTENANCE
         002 TESCO SERVICES DIVISION                              Desc: ROOFTOP UNIT 20 TON       PM     PREVENTATIVE MAINTENANCE
             4930 - 74TH AVENUE S.E.
  OPEN                                                            Agmt: 1009
  06/01/08   CALGARY, ALTA T2H 2B7                     Zone 00    Reas: PREVENTIVE MAINTENANCE (P.M. SCHEDULE: 06/24/08 TO 07/08/08)
  11:39                                                           Remk: COMPUTER GENERATED CALL

243          TESCO CORPORATION,                                   Mod#: NU-COMFORT MR10           FULL   Full coverage
9                                                                 S/N :                           EMERG  EMERGENCY REPAIR
         002 TESCO SERVICES DIVISION                              Desc: ROOFTOP UNIT 10 TON
             4930 - 74TH AVENUE S.E.
  DISP                                                            Agmt: 1009
  05/06/10   CALGARY          AB                       Zone 00    Reas: No reason given
  15:06                                                           Remk: No remarks
             -------- Service rep --------     - Status -   --- Start ---    --- Arrive ---    ---- End ----
             AL     AL Smythe                  Active      1/03/11   9:00    1/03/11  9:00    1/03/11 11:00
             AL     AL Smythe                  Active      1/15/11   8:00    1/15/11  8:00    1/15/11 12:00

164          HENINGER TOYOTA,           (primary)                 Mod#: FRIDGIT                   FULL   Full coverage
66                                      243-5522                  S/N :                           R/P    REPAIR & PREV. MAINT.
         000 HENINGER TOYOTA,           A/P KORRINA               Desc: ICE CREAM FREEZER
             3640 MACLEOD TRAIL SOUTH,  243-8000
  OPEN                                                            Agmt: 1003
  05/22/13   CALGARY          AL  T2G 2                           Reas: No reason given
  12:09                                                           Remk: No remarks
```

## Service calls by call type




### Starting call type
Enter the identifier of the first call type for which you would like a report, or press [**F1**] for the "First" call type on file.

### Ending call type
Enter the identifier of the ending call type for which you would like a report, or press [**F1**] for the "Last" call type on file or --if you did not use [**F1**] to specify a starting call type --press [**ENTER**] in order to limit this report to just one call type.

### Starting date
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

### Ending date
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to limit this report to just one date.

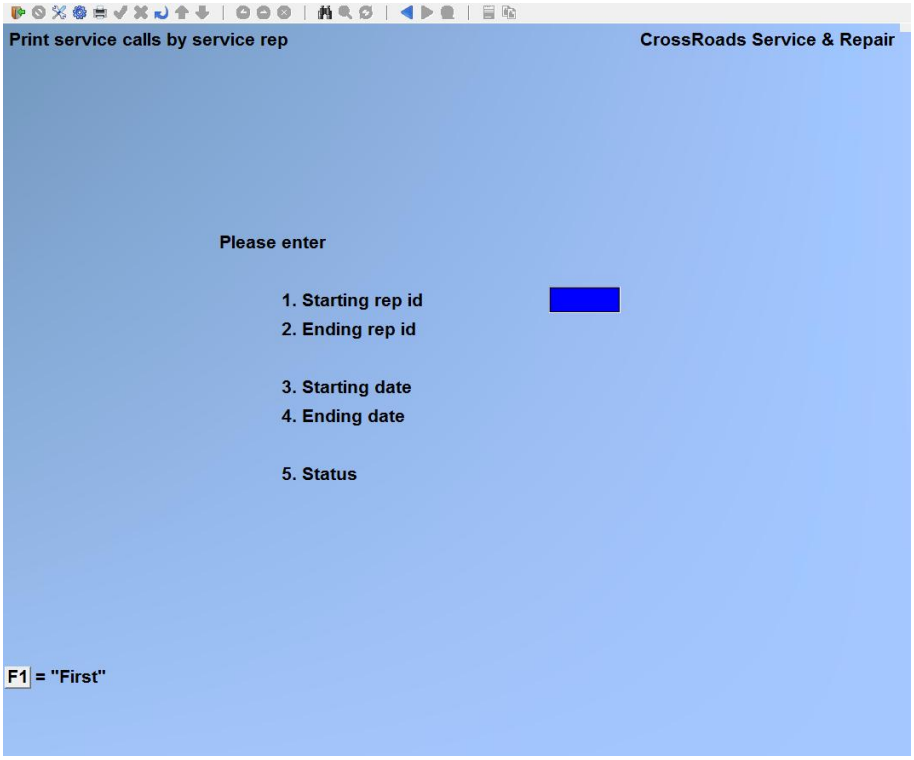
When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:14:34:58                    CrossRoads Service & Repair                User: SSI  Report #3385   Page 0001
```

**SERVICE CALLS BY CALL TYPE**

```
Call type: BENCH     Desc: BENCH REPAIR

Call range: "First"  to "Last"
Date range: "Earliest" to "Latest"

Customer #   Customer name              Contact 1 / Phone 1        Eqp Model / Serial #            Bill type
Call #                                  Contact 2 / Phone 2        Eqp Description                 Call type
  Status     Location Name/Addr         Travel time                Agreement #                     Service type
  Open date                             Travel distance  Zone      Reason / Remarks                Failure code / Action code

100               CASH SALE                                       Mod#:                            T/M    Time and materials
5                                                                 S/N :                            BENCH  BENCH REPAIR
         000      CASH SALE                                       Desc:                            BENCH  BENCH REPAIR
             THANK YOU WE APPRECIATE                                                              F00001 Failed relay
  DISP           YOUR PATRONAGE                                  Agmt:                            A00001 Replaced faulty part
  01/28/09                                                        Reas: No reason given
  16:05                                                           Remk: CREDIT PROBLEM
             -------- Service rep --------     - Status -   --- Start ---    --- Arrive ---    ---- End ----
             AL     AL Smythe                   Completed   1/28/09  16:56    1/28/09 16:56    1/29/09 16:56

101          HERMOSA WOOD PRODUCTS INC  MOE SAE                 Mod#:                            T/M    Time and materials
33                                      850-6889                S/N :                            BENCH  BENCH REPAIR
         000 HERMOSA WOOD PRODUCTS INC                           Desc:                            BENCH  BENCH REPAIR
             2771 SUNRDIGE WAY N.E.                                                               F00001 Failed relay
  CLOSED                                                          Agmt:                            A00001 Replaced faulty part
  11/22/12   CALGARY          AL  T1Y 7                           Reas: No reason given
  10:34                                                           Remk: CREDIT PROBLEM
             -------- Service rep --------     - Status -   --- Start ---    --- Arrive ---    ---- End ----
             AL     AL Smythe                   Completed  11/22/12  11:45   11/22/12 11:45   11/22/12 11:45

101          HERMOSA WOOD PRODUCTS INC  MOE SAE                 Mod#:                            T/M    Time and materials
37                                      850-6889                S/N :                            BENCH  BENCH REPAIR
         000 HERMOSA WOOD PRODUCTS INC                           Desc:
             2771 SUNRDIGE WAY N.E.
  OPEN                                                            Agmt:
  11/23/12   CALGARY          AL  T1Y 7                           Reas: No reason given
  12:52                                                           Remk: CREDIT PROBLEM

400          ESS-ELL TOOL CO. LTD.,     BILL DAHL                Mod#:                            T/M    Time and materials
40                                      243-1442                 S/N :                            BENCH  BENCH REPAIR
         000 ESS-ELL TOOL CO. LTD.,     STUART MCMILLAN          Desc:
             UNIT 34,
  OPEN       1511 HIGHFIELD CRES.S.E.,                            Agmt:
  11/23/12   CALGARY          AL  T2G 5                           Reas: No reason given
  12:59                                                           Remk: No remarks
```

## Service calls by service rep




### Starting rep id
Enter the identifier of the first rep id for which you would like a report, or press [**F1**] for the "First" rep id on file.

### Ending rep id
Enter the identifier of the ending rep id for which you would like a report, or press [**F1**] for the "Last" rep id on file or --if you did not use [**F1**] to specify a starting rep id --press [**ENTER**] in order to limit this report to just one rep id.

### Starting date
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

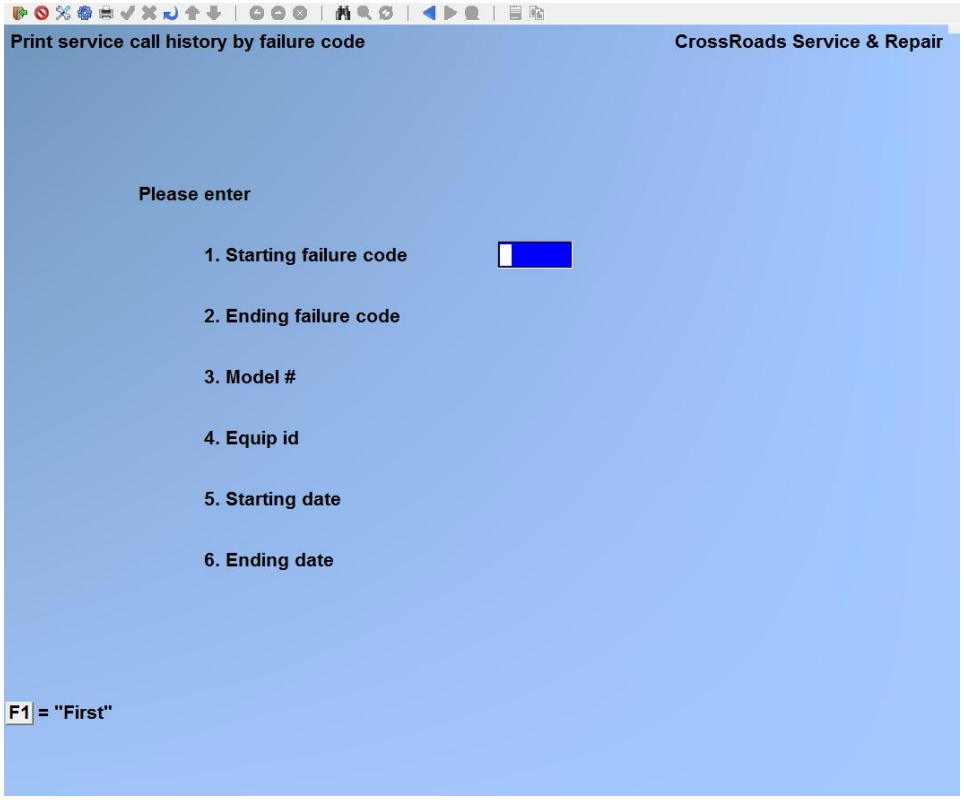
### Ending date
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to limit this report to just one date.

### Status
Enter the identifier of the call status for which you would like a report. Follow the prompts on the screen.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:14:38:45                    CrossRoads Service & Repair              User: SSI  Report #3386   Page 0001

                                        SERVICE CALLS BY SERVICE REP

Service rep id: AL        Name: AL Smythe
Service rep range: "First" to "Last"
Date range: "Earliest" to "Latest"
Status: "All"

Customer #   Customer name             Contact 1 / Phone 1       Eqp Model / Serial #            Bill type
Call #                                 Contact 2 / Phone 2       Eqp Description                 Call type
  Status     Location Name/Addr        Travel time               Agreement #                     Service type
  Open date                            Travel distance  Zone     Reason / Remarks                Failure code / Action code

100               CASH SALE                                      Mod#:                           T/M    Time and materials
5                                                                S/N :                           BENCH  BENCH REPAIR
         000      CASH SALE                                      Desc:                           BENCH  BENCH REPAIR
             THANK YOU WE APPRECIATE                                                             F00001 Failed relay
  DISP           YOUR PATRONAGE                                  Agmt:
  01/28/09                                                       Reas: No reason given
  16:05                                                          Remk: CREDIT PROBLEM
             -------- Service rep --------     - Status -   --- Start ---    --- Arrive ---    ---- End ----
             AL     AL Smythe                   Completed   1/28/09  16:56    1/28/09 16:56    1/29/09 16:56

243          TESCO CORPORATION,                                  Mod#: NU-COMFORT MR10           FULL   Full coverage
9                                                                S/N :                           EMERG  EMERGENCY REPAIR
         002 TESCO SERVICES DIVISION                             Desc: ROOFTOP UNIT 10 TON
             4930 - 74TH AVENUE S.E.
  DISP                                                           Agmt: 1009
  05/06/10   CALGARY          AB                      Zone 00    Reas: No reason given
  15:06                                                          Remk: No remarks
             -------- Service rep --------     - Status -   --- Start ---    --- Arrive ---    ---- End ----
             AL     AL Smythe                    Active      1/03/11   9:00    1/03/11  9:00    1/03/11 11:00
             AL     AL Smythe                    Active      1/15/11   8:00    1/15/11  8:00    1/15/11 12:00

243          TESCO CORPORATION,                                  Mod#: NU-COMFORT MR10           FULL   Full coverage
9                                                                S/N :                           EMERG  EMERGENCY REPAIR
         002 TESCO SERVICES DIVISION                             Desc: ROOFTOP UNIT 10 TON
             4930 - 74TH AVENUE S.E.
  DISP                                                           Agmt: 1009
  05/06/10   CALGARY          AB                      Zone 00    Reas: No reason given
  15:06                                                          Remk: No remarks
             -------- Service rep --------     - Status -   --- Start ---    --- Arrive ---    ---- End ----
             AL     AL Smythe                    Active      1/03/11   9:00    1/03/11  9:00    1/03/11 11:00
             AL     AL Smythe                    Active      1/15/11   8:00    1/15/11  8:00    1/15/11 12:00

101          HERMOSA WOOD PRODUCTS INC  MOE SAE                  Mod#:                           T/M    Time and materials
33                                      850-6889                 S/N :                           BENCH  BENCH REPAIR
         000 HERMOSA WOOD PRODUCTS INC                           Desc:                           BENCH  BENCH REPAIR
```

## Call history by failure code




### Starting failure code
Enter the identifier of the first failure code for which you would like a report, or press [**F1**] for the "First" failure code on file.

### Ending failure code
Enter the identifier of the ending failure code for which you would like a report, or press [**F1**] for the "Last" failure code on file or --if you did not use [**F1**] to specify a starting rep id --press [**ENTER**] in order to limit this report to just one rep id.

### Model #
Enter the specific equipment model # for which you would like a report or press [**F1**] for "All".

### Equip ID
Enter the specific equipment identifier (e.g. serial number) for which you would like a report or press [**F1**] for "All".

### Starting date
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

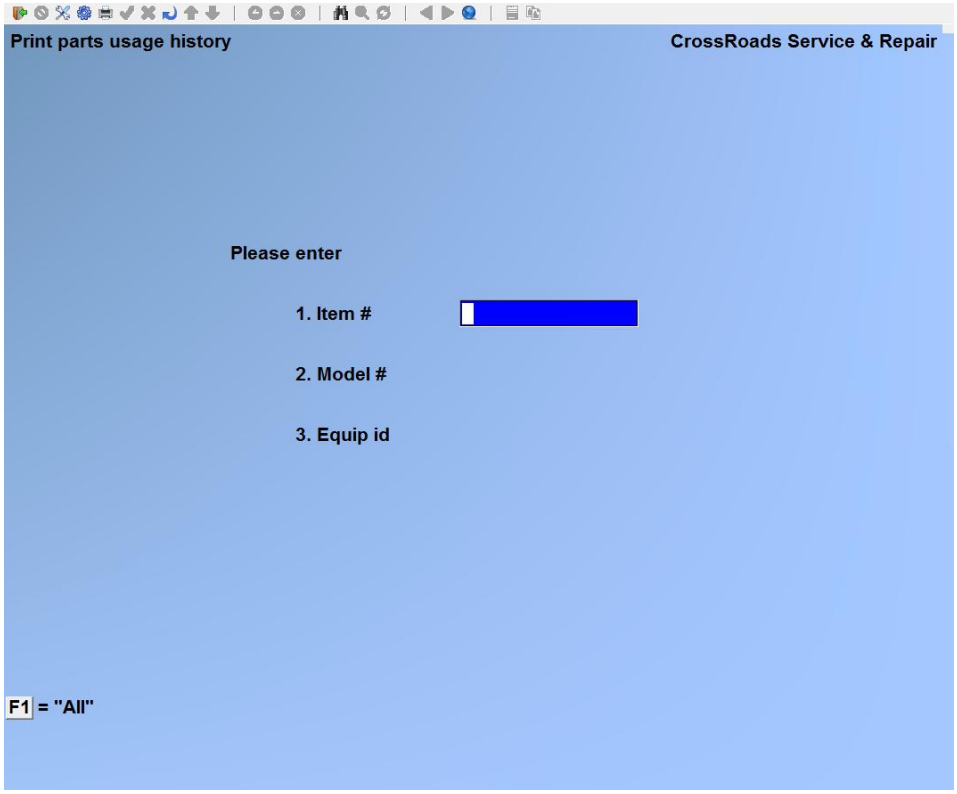
**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to print only the starting date.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:14:41:57                    CrossRoads Service & Repair              User: SSI  Report #3387   Page 0001

                                   SERVICE CALL HISTORY BY FAILURE CODE

Failure code range: "First" to "Last"
Model #:  "All"
Equip id: "All"
Date range: "Earliest" to "Latest"

Customer #   Customer name            Contact 1 / Phone 1       Eqp Model / Serial #            Bill type
Call #                                Contact 2 / Phone 2       Eqp Description                 Call type
  Status     Location Name/Addr       Travel time               Agreement #                     Service type
  Open date                           Travel distance  Zone     Reason / Remarks                Failure code / Action code

243          TESCO CORPORATION,                                 Mod#: FRIDGIT                   INSPEC Inspection and prev main
2                                                               S/N : 312645987                 PM     PREVENTATIVE MAINTENANCE
         002 TESCO SERVICES DIVISION                            Desc: ICE CREAM FREEZER         PM     PREVENTATIVE MAINTENANCE
             4930 - 74TH AVENUE S.E.                                                            F00001 Failed relay
  HISTORY                                                       Agmt: 1009                      A00001 Replaced faulty part
  06/01/08   CALGARY          AB                     Zone 00    Reas: PREVENTIVE MAINTENANCE - (SERVICE DUE: 07/01/08)
  11:39                                                         Remk: COMPUTER GENERATED CALL
             -------- Service rep --------     - Status -   --- Start ---    --- Arrive ---    ---- End ----
             AL     AL Smythe                  History     6/11/08  14:24    6/11/08 14:24    6/11/08 16:54

  Total billed price :                228.75          Total cost:                169.50
```

```
Date:05/22/13  Time:14:41:57                    CrossRoads Service & Repair              User: SSI  Report #3387   Page 0002

                                   SERVICE CALL HISTORY BY FAILURE CODE

Failure code range: "First" to "Last"
Model #:  "All"
Equip id: "All"
Date range: "Earliest" to "Latest"

Customer #   Customer name            Contact 1 / Phone 1       Eqp Model / Serial #            Bill type
Call #                                Contact 2 / Phone 2       Eqp Description                 Call type
  Status     Location Name/Addr       Travel time               Agreement #                     Service type
  Open date                           Travel distance  Zone     Reason / Remarks                Failure code / Action code

243          TESCO CORPORATION,                                 Mod#: NU-COMFORT MR10           FULL   Full coverage
```

## Parts usage history




**Item #**
Enter the specific item # for which you would like a report or press [**F1**] for "All".

**Model #**
Enter the specific equipment model # for which you would like a report, or press [**F1**] for "All". When you restrict this report to a specific model #, parts usage is only reported if the part was installed into the model # specified.

**Equip ID**
You may enter a specific equipment ID (i.e. serial number) if you wish to restrict the report to a particular piece of equipment within the model specified in 6.2 Model #, or press [**F1**] to indicate "All" equipment ID's.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/22/13 Time:14:43:59 CrossRoads Service & Repair User: SSI Report #3388 Page 0001

**PARTS USAGE HISTORY**

Item #: "All"

Model #: "All"

Eqp/svc id: "All"

| Item # | Description | Quantity<br>Svc date | Model #<br>Eqp/svc id | Description | Action code<br>Failure code | Description<br>Description |
|---|---|---|---|---|---|---|
| *DEV | MISC DEVAIR | 1.000<br>06/01/08 | FRIDGIT<br>312645987 | ICE CREAM FREEZER | A00001<br>F00001 | Replaced faulty part<br>Failed relay |

Total quantity 1.000
Average cost 0.00
Average price 0.00

Date:05/22/13 Time:14:43:59 CrossRoads Service & Repair User: SSI Report #3388 Page 0002

**PARTS USAGE HISTORY**

| Item # | Description | Quantity<br>Svc date | Model #<br>Eqp/svc id | Description | Action code<br>Failure code | Description<br>Description |
|---|---|---|---|---|---|---|
| *W | A PART | 5.000<br>06/01/08 | FRIDGIT<br>312645987 | ICE CREAM FREEZER | A00001<br>F00001 | Replaced faulty part<br>Failed relay |
| | | 5.000<br>06/01/08 | NU-COMFORT MR10<br>123987Z147 | ROOFTOP UNIT 10 TON | A00003<br>F00008 | Cleaned filter<br>Clogged filter |

Total quantity 10.000

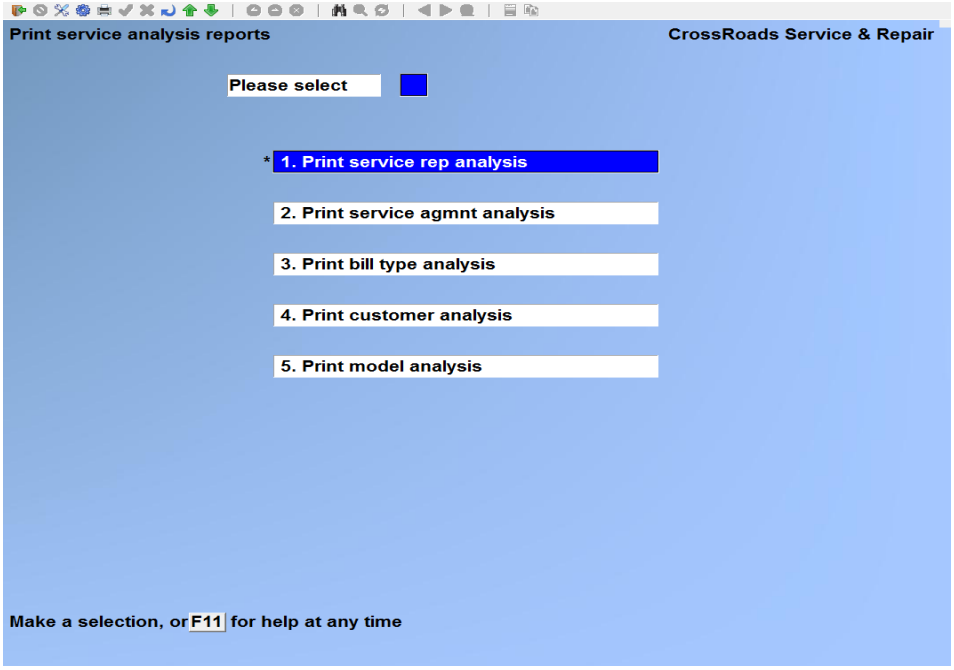
## Service Analysis Reports

There are five service analysis reports. Each one constitutes a profitability analysis very valuable to making top management decision. The five categories include profitability analysis organized by: service rep, service agreement, bill type, specific customer and specific model of equipment. By comparing the productivity and margin analysis of individual service reps, you can determine who are the most and least productive, what the company average is, how much variation exists from rep to rep and rep to rep average, how much room exists for improvement and what, if any, personnel changed need to be made. Similarly, you can compare the numbers for all of the service agreements. Were the agreements that included standard price levels more productive than negotiated agreements? Were certain types of agreements more profitable than other type? Should some agreements be re-priced? Should some agreements be stopped altogether? The service analysis by agreement can give statistical insight to answer all of these questions.

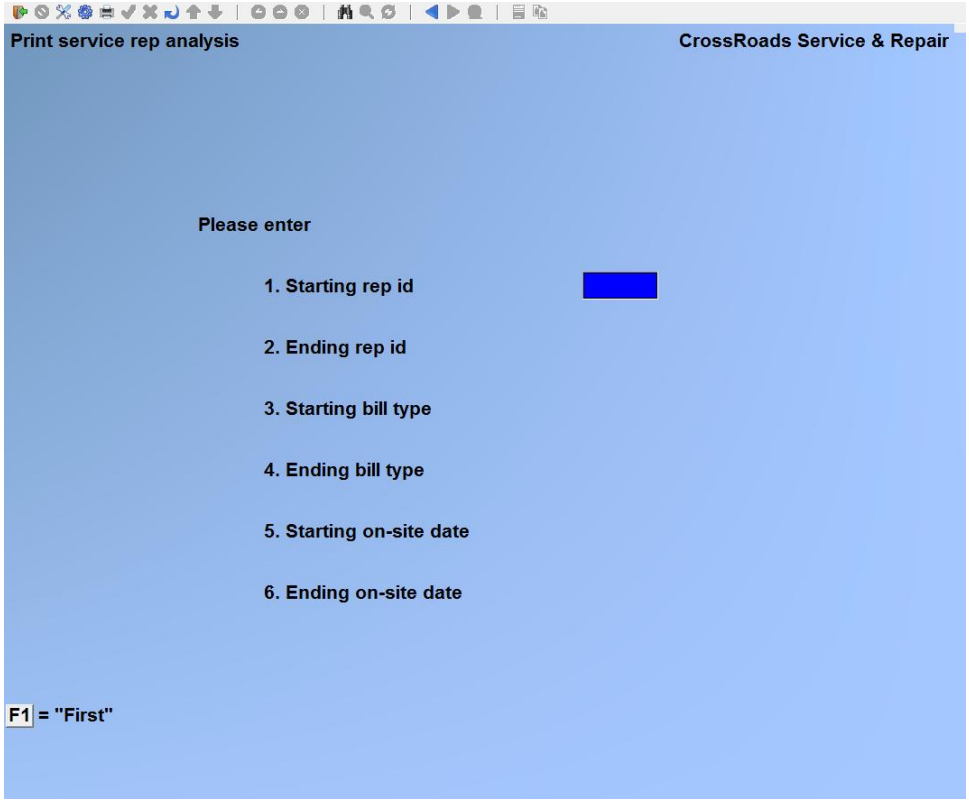
The bill type analysis reports are most valuable in setting future price levels for your standard types of service agreements. They give you the profit margin figures needed to compare billing types to one another, to the average or to let's say, a time and material bill type. Customer analysis reports are particularly useful in getting the "big picture" with regard to an individual account. This report is particularly useful if you have large customers with multiple service locations, multiple agreements and multiple billing types. It combines all of the service data with *new installation* data – so that you can determine the true impact that the account has on your business. Model analysis reports give statistical information such as Mean Time Between Failures (MTBF), Mean Time to Repair (MTTR), and Mean Dollars to Repair (M$TR). An annual break-even cost is calculated for each model of equipment serviced. This cost can then be compared to what is actually being charged for service contracts and will help in setting price levels that will be in line with costs.

**To begin using this function:**

From the *Service management reports* sub-menu, select *Print service analysis reports*. Then, select the report that you wish to print:


Print service analysis reports
CrossRoads Service & Repair
Please select
* 1. Print service rep analysis
2. Print service agmnt analysis
3. Print bill type analysis
4. Print customer analysis
5. Print model analysis
Make a selection, or F11 for help at any time

## Print service rep analysis




### Starting rep id
Enter the identifier of the first rep id for which you would like a report, or press [**F1**] for the "First" rep id on file.

### Ending rep id
Enter the identifier of the last rep id for which you would like a report, or press [**F1**] for the "Last" rep id on file or --if you did not use [**F1**] to specify a starting rep id --press [**ENTER**] in order to limit this report to just one rep id.

### Starting bill type
Enter the identifier of the first bill type for which you would like a report, or press [**F1**] for the "First" bill type on file.

### Ending bill type
Enter the identifier of the ending bill type for which you would like a report, or press [**F1**] for the "Last" bill type on file or --if you did not use [**F1**] to specify a starting bill type --press [**ENTER**] in order to limit this report to just one bill type.

### Starting on-site date
Enter the date for which you would like this report to begin or press [**F1**] to specify

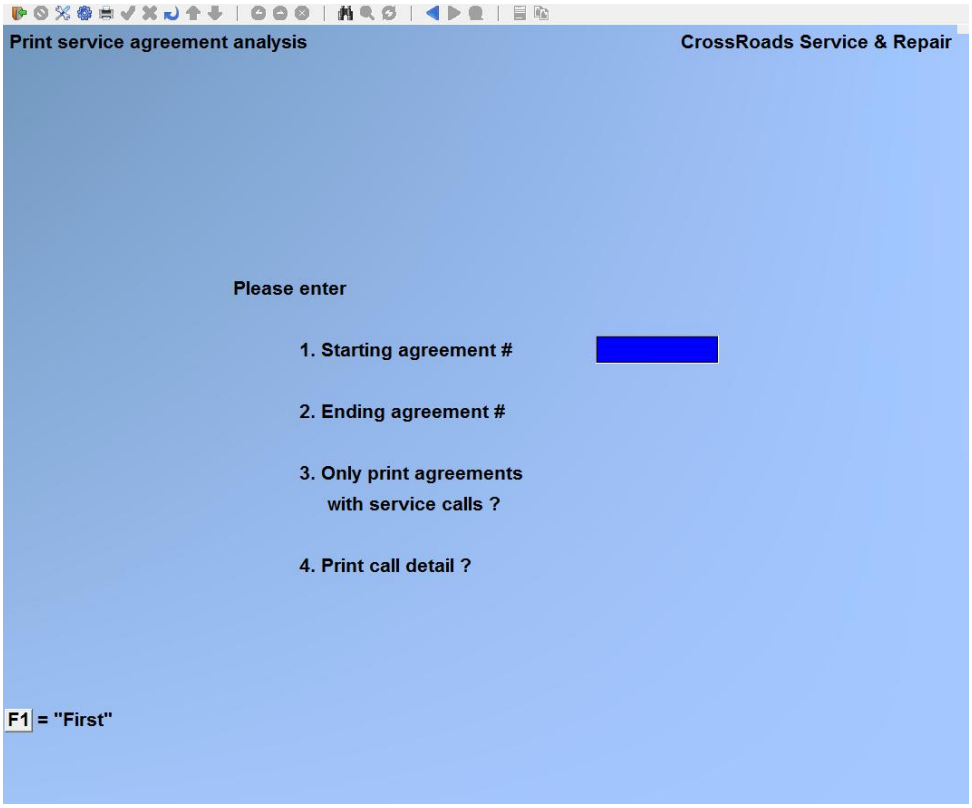
the “Earliest” date on file.

**Ending on-site date**
Enter the date for which you would like this report to end or press [**F1**] to specify the “Latest” date on file, or - - if you did use [**F1**] to specify the starting date -- press [**ENTER**] to limit this report to just one day.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:14:48:24                    CrossRoads Service & Repair              User: SSI  Report #3389   Page 0001

                                        SERVICE REP ANALYSIS REPORT

Rep range:     "First" to "Last"
Bill range:    "First" to "Last"
Date range:    "Earliest" to "Latest"
Svc rep id:    AL        Name: AL Smythe

Bill    Bill description          Svc date  Call #    Agmt #     Cust #       Customer name              Svc location
type   Model #          Eqp/svc id       Description                Fail     Action   Lbr tim   Labor cost    Labor chg   Pft margin

FULL    Full coverage             06/11/08  1         1009       243          TESCO CORPORATION,          TESCO PRODUCTS DIVISION
       NU-COMFORT MR10  123987Z147       ROOFTOP UNIT 10 TON        F00008   A00003      2.00       60.00       168.75      64.44  %

INSPEC  Inspection and prev main  06/11/08  2         1009       243          TESCO CORPORATION,          TESCO SERVICES DIVISION
       FRIDGIT          312645987        ICE CREAM FREEZER          F00001   A00001      2.50       75.00       187.50      60.00  %

Date:05/22/13  Time:14:48:24                    CrossRoads Service & Repair              User: SSI  Report #3389   Page 0002

                                        SERVICE REP SUMMARY

Svc rep id:    AL        Name: AL Smythe

Total calls     Bill type     Bill description          Labor time   Labor cost         Labor charge        Profit margin

          1     FULL          Full coverage                  2.00        60.00               168.75               64.44  %

          1     INSPEC        Inspection and prev main       2.30        75.00               187.50               60.00  %

Totals    2                                                  4.30       135.00               356.25

                                                  -- End of report --
```

## Print service agreement analysis




### Starting agreement #

Enter the agreement number for which you would like this report to begin, or press [**F1**] to specify the "First" agreement on file.

### Ending agreement #

Enter the agreement number for which you would like this agreement to end, or press [**F1**] to specify the "Last" agreement on file, or - - if you did not use [**F1**] to specify the starting agreement - - press [**ENTER**] in order to limit this report to just one agreement.

### Only print agreements with service calls ?

Answer Y if you would like to restrict this report to only those agreements that have service calls logged against them; otherwise answer N.

### Print call detail ?

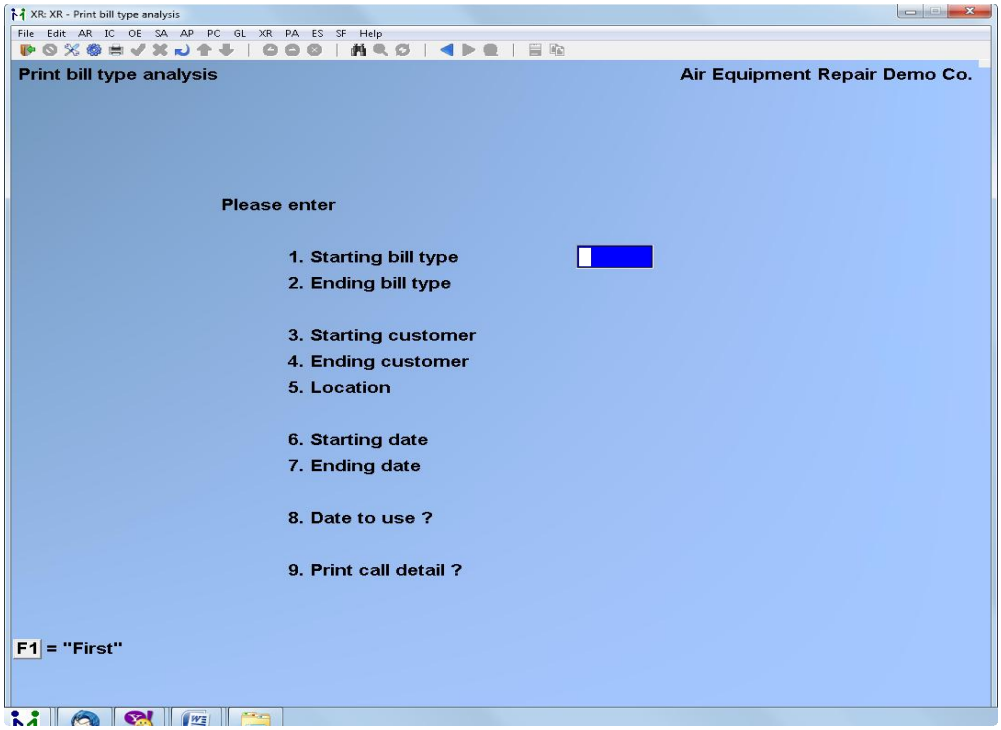
Answer Y if you would like a detail analysis line printed for each service call associated with this agreement. To print this report in summary form without call details answer N.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:14:51:11                    CrossRoads Service & Repair              User: SSI  Report #3390   Page 0001

                                          AGREEMENT ANALYSIS REPORT

Agreement # range:  "First"    to "Last"

Agreement #: 1003          Start date:  05/01/13   End date:  04/30/15

                                       C U S T O M E R   I N F O R M A T I O N

            HENINGER TOYOTA,                PO #:                    Contract amt:   13,200.00    Cust type:  EU
            3640 MACLEOD TRAIL SOUTH,                                Contr billed:        0.00    Bill freq:  S
                                                                     % allocated :        2.88
            CALGARY, ALTA T2G 2M7                                    $ allocated :      380.16

                                     C U R R E N T   A G R E E M E N T   T O T A L S

  Bill   | Call   |  Total billed    Mg | Labor billed    Mg         | Mat'l billed    Mg | Other billed    Mg |   Number
  type   | number |    Total cost       |   Labor cost         Hours |   Mat'l cost       |   Other cost       | of calls

Service call totals :          .00     0           .00     0                   .00     0           .00     0          0
                               .00                 .00          .00            .00                 .00

Allocated analysis  :       380.16   100      [ Includes all svc call billings + time allocated contract amount ]
                               .00
```

```
Date:05/22/13  Time:14:51:11                    CrossRoads Service & Repair              User: SSI  Report #3390   Page 0002

                                          AGREEMENT ANALYSIS REPORT

Agreement #: 1009          Start date:  01/01/11   End date:  12/31/11

                                       C U S T O M E R   I N F O R M A T I O N

            TESCO CORPORATION,              PO #: 123456789          Contract amt:    4,800.00    Cust type:  EU
            ATTN: ACCOUNTS PAYABLE                                   Contr billed:        0.00    Bill freq:  M
            6204 - 6A STREET S.E.,                                   % allocated :      100.00
            CALGARY, ALTA T2H 2B7                                    $ allocated :    4,800.00

                                     C U R R E N T   A G R E E M E N T   T O T A L S

  Bill   | Call   |  Total billed    Mg | Labor billed    Mg         | Mat'l billed    Mg | Other billed    Mg |   Number
  type   | number |    Total cost       |   Labor cost         Hours |   Mat'l cost       |   Other cost       | of calls
```

## Print bill type analysis




### Starting bill type
Enter the identifier of the first bill type for which you would like a report, or press [**F1**] for the "First" bill type on file.

### Ending bill type
Enter the identifier of the last bill type for which you would like a report, or press [**F1**] for the "Last" bull type on file or --if you did not use [**F1**] to specify a starting bill type --press [**ENTER**] in order to limit this report to just one bill type.

### Starting customer
Enter the number of the first customer for whom you would like a report, or press [**F1**] for the "First" customer on file.

### Ending customer
Enter the number of the ending customer for whom you would like a report, or press [**F1**] for the "Last" customer id on file or --if you did not use [**F1**] to specify a starting customer id --press [**ENTER**] in order to limit this report to just one customer number.

### Location
Specify a location to limit the report to a single location, or press [**F1**] for all locations.

**Starting date**
Enter the date for which you would like this report to begin or press [**F1**] to specify the “Earliest” date on file.

**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the “Latest” date on file. If you did not select “First” as your starting date, press [**ENTER**] to print only the starting date.

**Date to use ?**
Answer O to use the call open date as this report’s point-of-reference. Answer I to use the invoice date. If you use the invoice date, then this report will coincide with General Ledger based reports. However, reports that use the call open date may be helpful for analyzing service agreements.

**Print call detail ?**
Answer **Y** if you would like complete call detail. Answer **N** if you would like a summary report.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/22/13 Time:15:03:36 CrossRoads Service & Repair User: SSI Report #3391 Page 0001

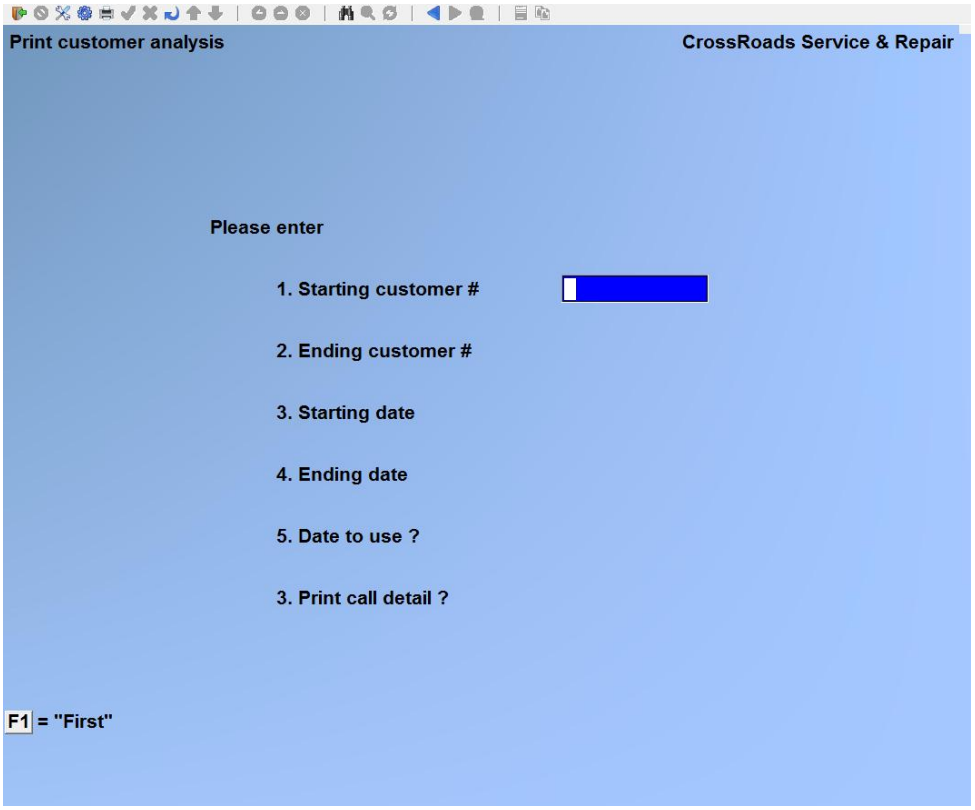
**BILL TYPE ANALYSIS REPORT**

Bill type range: "First" to "Last"
Customer range: "First" to "Last" Location: "All"
INVOICE date range: "Earliest" to "Latest"

| Bill type | Call number | Total billed / Total cost | Mg | Labor billed / Labor cost | Mg | Hours | Mat'l billed / Mat'l cost | Mg | Other billed / Other cost | Mg | Number of calls |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FULL | 1 | 323.75 | 63 | 168.75 | 64 | | .00 | 0 | 155.00 | 66 | N/A |
| | | 117.50 | | 60.00 | | 2.00 | 5.00 | | 52.50 | | |
| FULL | Total | 323.75 | 63 | 168.75 | 64 | | .00 | 0 | 155.00 | 66 | 1 |
| | | 117.50 | | 60.00 | | 2.00 | 5.00 | | 52.50 | | |
| INSPEC | 2 | 253.75 | 33 | 187.50 | 60 | | 41.25 | 52 | 25.00 | 200- | N/A |
| | | 169.50 | | 75.00 | | 2.50 | 19.50 | | 75.00 | | |
| INSPEC | Total | 253.75 | 33 | 187.50 | 60 | | 41.25 | 52 | 25.00 | 200- | 1 |
| | | 169.50 | | 75.00 | | 2.50 | 19.50 | | 75.00 | | |
| Grand Totals | | 577.50 | 50 | 356.25 | 62 | | 41.25 | 40 | 180.00 | 29 | 2 |
| | | 287.00 | | 135.00 | | 4.50 | 24.50 | | 127.50 | | |

-- End of report --

## Print customer analysis




### Starting customer

Enter the number of the first customer for whom you would like a report, or press [**F1**] for the "First" customer on file.

### Ending customer

Enter the number of the ending customer for whom you would like a report, or press [**F1**] for the "Last" customer on file or --if you did not use [**F1**] to specify the starting customer -- press [**ENTER**] in order to limit this report to just one customer number.

### Starting date

Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

### Ending date

Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to print only the starting date.

### Date to use ?

Answer O to use the call open date as this report's point-of-reference. Answer I to use the invoice date. If you use the invoice date, then this report will coincide with General Ledger based reports. However, reports that use the call open date may be helpful for analyzing service agreements.

**Print call detail ?**
Answer **Y** if you would like complete call detail. Answer **N** if you would like a summary report.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/22/13 Time:15:12:58 CrossRoads Service & Repair User: SSI Report #3392 Page 0001

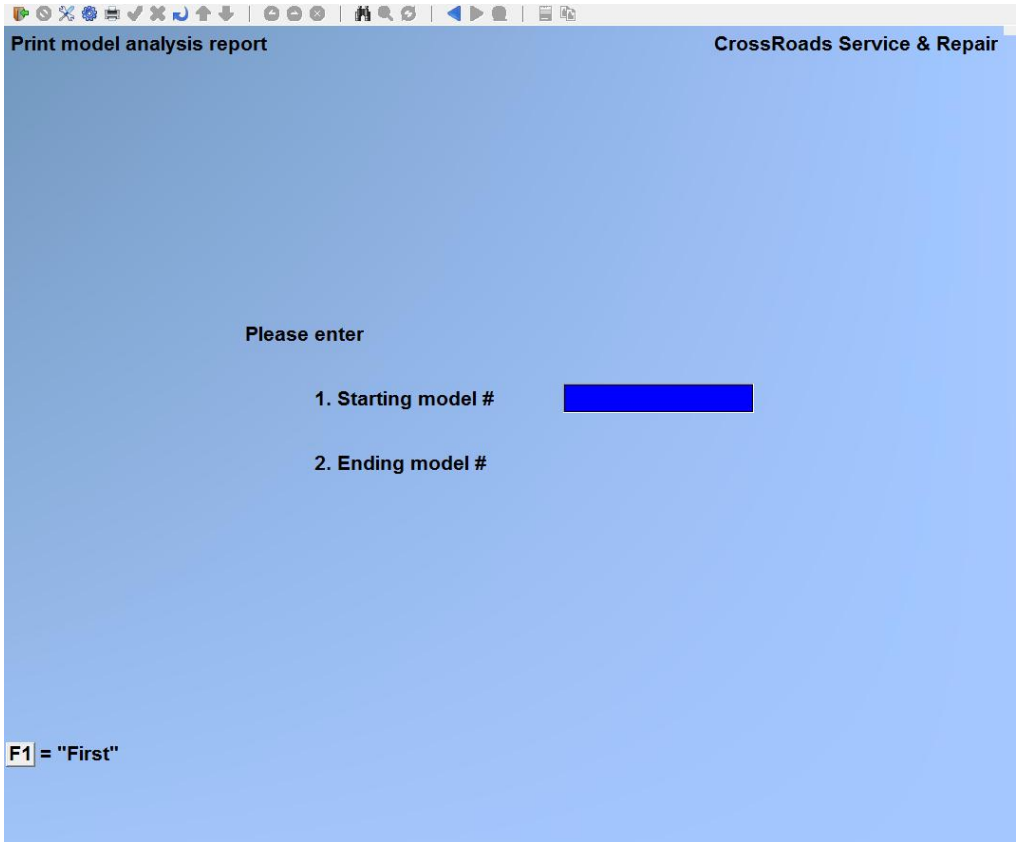
**CUSTOMER ANALYSIS REPORT**

Customer #: "First" to "Last"
OPEN date range: "Earliest" to "Latest"

| Bill type | Call number | Total billed / Total cost | Mg | Labor billed / Labor cost | Mg | Hours | Mat'l billed / Mat'l cost | Mg | Other billed / Other cost | Mg | Number of calls |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 243 | TESCO CORPORATION, | | | | | | | | | | |
| INSPEC | 2 | 253.75 | 33 | 187.50 | 60 | | 41.25 | 52 | 25.00 | 200- | N/A |
| | | 169.50 | | 75.00 | | 2.50 | 19.50 | | 75.00 | | |
| FULL | 1 | 323.75 | 63 | 168.75 | 64 | | .00 | 0 | 155.00 | 66 | N/A |
| | | 117.50 | | 60.00 | | 2.00 | 5.00 | | 52.50 | | |
| INSPEC | Total | 253.75 | 33 | 187.50 | 60 | | 41.25 | 52 | 25.00 | 200- | 1 |
| | | 169.50 | | 75.00 | | 2.50 | 19.50 | | 75.00 | | |
| FULL | Total | 323.75 | 63 | 168.75 | 64 | | .00 | 0 | 155.00 | 66 | 1 |
| | | 117.50 | | 60.00 | | 2.00 | 5.00 | | 52.50 | | |
| Svc call totals: | | 577.50 | 50 | 356.25 | 62 | | 41.25 | 40 | 180.00 | 29 | 2 |
| | | 287.00 | | 135.00 | | 4.50 | 24.50 | | 127.50 | | |

-- End of report --

## Print model analysis




### Starting model #

Enter the number of the first model for which you would like this report, or press [**F1**] for the "First" model # on file.

### Ending model #

Enter the number of the last model for which you would like this report, or press [**F1**] for the "Last" model # on file or --if you did not use [**F1**] to specify a starting model number --press [**ENTER**] in order to limit this report to just one model #.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/22/13 Time:15:20:51 CrossRoads Service & Repair User: SSI Report #3393 Page 0001

## MODEL SERVICE COST REPORT

Model # range: "First" to "Last"

Abbreviations: MTBF - mean time between failure (days)
MTTR - mean time to repair (hours)
M$TR - mean cost to repair (total of MLTR, MPTR, MOTR)
MLTR - mean labor cost to repair
MPTR - mean parts cost to repair
MOTR - mean other cost to repair

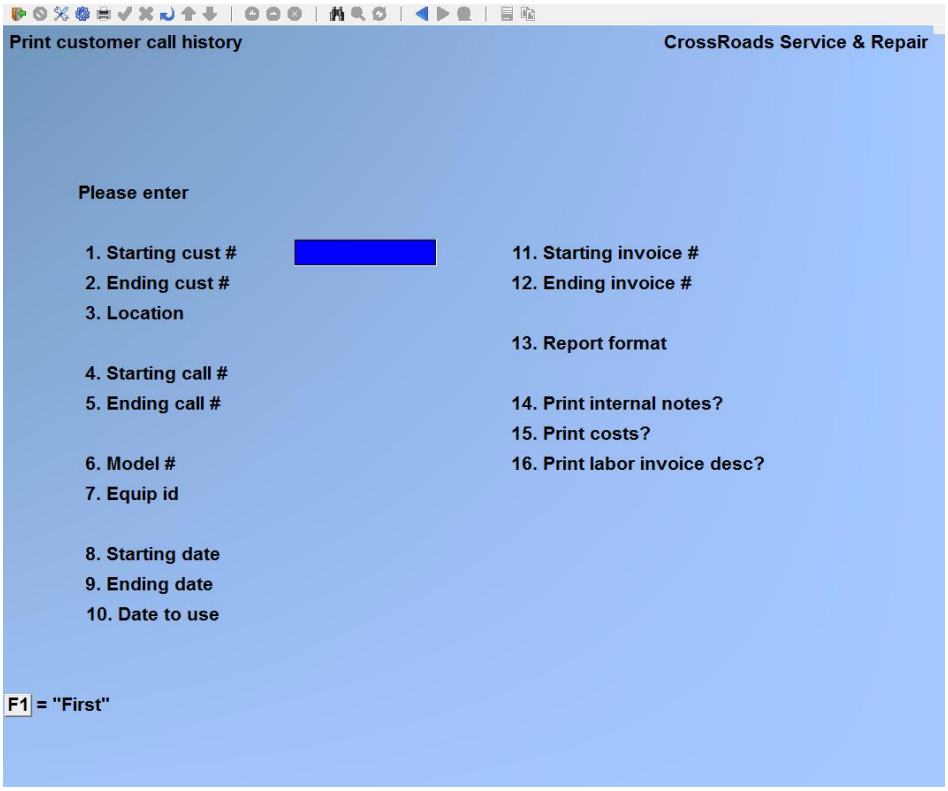
| Model # | Description line-1<br>Description line-2 & 3 | Repair calls | MTBF (est)<br>MTBF (act) | MTTR (est)<br>MTTR (act) | M$TR (est)<br>M$TR (act) | --- Analysis of costs to repair --<br>MLTR (act)<br>% of total | MPTR (act)<br>% of total | MOTR (act)<br>% of total | Est annual cost |
|---|---|---|---|---|---|---|---|---|---|
| ANY | TEST | 0 | 0 | .00 | .00 | .00 | .00 | .00 | N/A |
| | | | 0 | .00 | .00 | N/A | N/A | N/A | |
| FRIDGIT | ICE CREAM FREEZER | 1 | 100 | 3.00 | 250.00 | 75.00 | 19.50 | 75.00 | 912.50 |
| | | | 0 | 2.50 | 169.50 | 44.25 | 11.50 | 44.25 | |
| MLTI-METER | METERS | 0 | 0 | .00 | .00 | .00 | .00 | .00 | N/A |
| | | | 0 | .00 | .00 | N/A | N/A | N/A | |
| NU-COMFORT HP03 | HEAT PUMP RES 3 TON | 0 | 0 | .00 | .00 | .00 | .00 | .00 | N/A |
| | | | 0 | .00 | .00 | N/A | N/A | N/A | |
| NU-COMFORT MR10 | ROOFTOP UNIT 10 TON | 1 | 0 | .00 | .00 | 60.00 | 5.00 | 52.50 | N/A |
| | | | 0 | 2.00 | 117.50 | 51.06 | 4.26 | 44.68 | |
| NU-COMFORT MR20 | ROOFTOP UNIT 20 TON | 0 | 0 | .00 | .00 | .00 | .00 | .00 | N/A |
| | | | 0 | .00 | .00 | N/A | N/A | N/A | |
| SNGL-METER | | 0 | 0 | .00 | .00 | .00 | .00 | .00 | N/A |
| | | | 0 | .00 | .00 | N/A | N/A | N/A | |

7 models on file

-- End of report --

## Customer call history

The customer call history report provides a complete service history. It includes a chronological call-by-call report with both tabular data and service notes. The call history report may be bracketed (i.e. restricted) to specific customers, locations, call numbers, equipment models, equipment serial number, dates or invoice numbers. In addition, the report can be printed in either full or brief (2 lines per service call) format.




### Starting cust #

Enter the number of the first customer for whom you would like a report, or press [**F1**] for the "First" customer on file.

### Ending cust #

Enter the number of the ending customer for whom you would like a report, or press [**F1**] for the "Last" customer id on file or --if you did not use [**F1**] to specify a starting customer id --press [**ENTER**] in order to limit this report to just one customer number.

### Location

Enter the number of the location for which you would like this report or press [**F1**] to select "All" locations.

**Starting call #**
Enter the number of the first call for which you would like to print this report, or press [**F1**] to specify the "First" call on file.

**Ending call #**
Enter the number of the last call for which you would like to print this report, or press [**F1**] to specify the "Last" call on file or --if you did not use [**F1**] to specify the starting call number --press [**ENTER**] in order to limit this report to just one call number.

**Model #**
Enter the specific model number for which you would like a report, or press [**F1**] for "All".

**Equip ID**
Enter the specific equipment identifier (i.e. serial number) for which you would like a report or press [**F1**] for "All".

**Starting date**
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file, or - - if you did not use [**F1**] to specify the starting date - - press [**ENTER**] in order to limit this report to just one day.

**Date to use ?**
The system selects calls for inclusion on the report based on the date range and date type entered.
Specify one of the following:

| | |
|---|---|
| S = Service | Date that service was performed |
| I = Invoice | Date of invoice for the call #s entered |
| O = Open | Date service call was opened |
| C = Closed | Date service call was closed |

| | | |
|---|---|---|
| For example: | Starting date | 05/01/08 |
| | Ending date | 05/31/10 |
| | Date to use | I (invoice) |

For this example, the report will include all calls with an invoice date between May 01, 2008 and May 31, 2010.

**Starting invoice #**

Enter the first service call invoice number for which you would like this report, or press [**F1**] for "First".

**Ending invoice #**
Enter the last service call invoice number for which you would like this report, or press [**F1**] for the "Last" invoice number on file, or – if you did not use [**F1**] to specify the starting invoice number - - press [**ENTER**] in order to limit this report to just one invoice number.

**Report format**
Type either F (full) or B (brief) to specify the report format that you desire. Brief format prints two lines per service call; full format normally consumes one full page - - or more - - per service call.

**Print internal notes?**
If you would like internal notes to print on this report, press [**ENTER**] to accept the default Y. If not, type N.

**Print costs?**
If you would like all costs for labour, parts, etc. to print on this report, press [**ENTER**] to accept the default of Y. If not, type N. If you answer Y to this field after you have specified brief format, only costs and gross margin dollars and % are printed.

**Print labour invoice description?**
This field only applies to full format reports. If you want the report to include the invoice descriptor field for each service rep labour record, Type Y. If you do not want this information to show on the report, Type N. When included the labour invoice descriptor adds one line for each labour record printed.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/22/13 Time:16:07:07 CrossRoads Service & Repair User: SSI Report #3394 Page 0001

## CUSTOMER CALL HISTORY

Customer range: "First" to "Last"
Call # range: "First" to "Last"
Model #: "All"
Equip id: "All"
Date range: "Earliest" to "Latest" Date used:
Invoice range: "First" to "Last"

Call #: 2 Cust #: 243 TESCO CORPORATION, Svc loc: 002 TESCO SERVICES DIVISION
ATTN: ACCOUNTS PAYABLE 4930 - 74TH AVENUE S.E.
Tax code: PNA 6204 - 6A STREET S.E.,
Disc pct: 0.00 CALGARY, ALTA T2H 2B7

Open: 06/01/08 11:39 Close: 05/06/10 14:56 Agmt#: 1009 Po/Job #:

| Rep id | Invoice desc line 1 / Dispatched | Invoice desc line 1 / Started | Ended | Labor time | Chargeable labor | Work Order # |
|---|---|---|---|---|---|---|
| AL | Labor - Reg hrs 06/11/08 | WO# 123456 | | | | |
| | 06/11/08 14:24 | 06/11/08 14:24 | 06/11/08 16:54 | 2.50 | 187.50 | 123456 |
| | | | | 2.50 | 187.50 | |

| Model # / Tag # | Eqp/svc id | Description | Bill/ Call type | Bill/Call description | Fail/ Actn code | Fail/Actn description |
|---|---|---|---|---|---|---|
| FRIDGIT | 312645987 | ICE CREAM FREEZER | INSPEC | Inspection and prev main | F00001 | Failed relay |
| 1234 | | | PM | PREVENTATIVE MAINTENANCE | A00001 | Replaced faulty part |

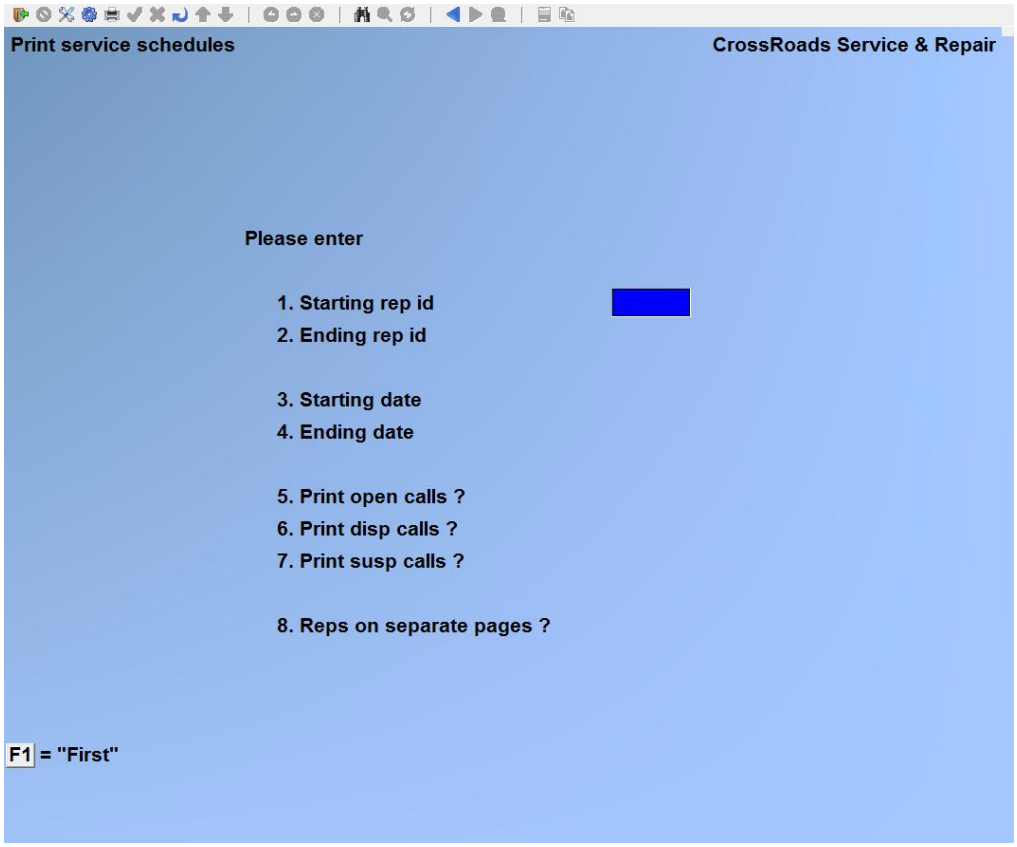
Reason: PREVENTIVE MAINTENANCE - (SERVICE DUE: 07/01/08)

Remarks: COMPUTER GENERATED CALL

### Service Billing Information

| Item # | Description | Whse | Quantity | Unit meas | Unit price | Disc | Ext price | Ext cost |
|---|---|---|---|---|---|---|---|---|
| | Labor charge | | 2.50 | Hrs | | | 187.50 | 75.00 |
| | Travel charge | | | | | | 25.00 | |
| | Misc charge | | | | | | 0.00 | 75.00 |
| *W | A PART | 05 | 5.000 | EA | 0.000 | 0.00 | 0.00 | 0.00 |
| CAE DECALS SU | "CAE 405/250 SU E" | | 5.000 | EA | 8.250 | 0.00 | 41.25 | 19.50 |
| *DEV | MISC DEVAIR | | 1.000 | EA | 0.000 | 0.00 | 0.00 | 0.00 |
| | | | | | Material total: | | 41.25 | 19.50 |
| | | | | | Net total | | 253.75 | 169.50 |
| | | | | | Taxes | | 12.69 | |

## Service schedules




### Starting rep id
Enter the identifier of the first rep id for which you would like a report, or press [**F1**] for the "First" rep id on file.

### Ending rep id
Enter the identifier of the ending rep id for which you would like a report, or press [**F1**] for the "Last" rep id on file or --if you did not use [**F1**] to specify a starting rep id --press [**ENTER**] in order to limit this report to just one rep id.

### Starting date
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

### Ending date
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to print only the starting date.

**Print open calls ?**
If you would like all open calls to print on this report, press [**ENTER**] to accept the default of Y. If not, type N.

**Print dispatched calls ?**
If you would like all dispatched calls to print on this report, press [**ENTER**] to accept the default of Y. If not, type N.

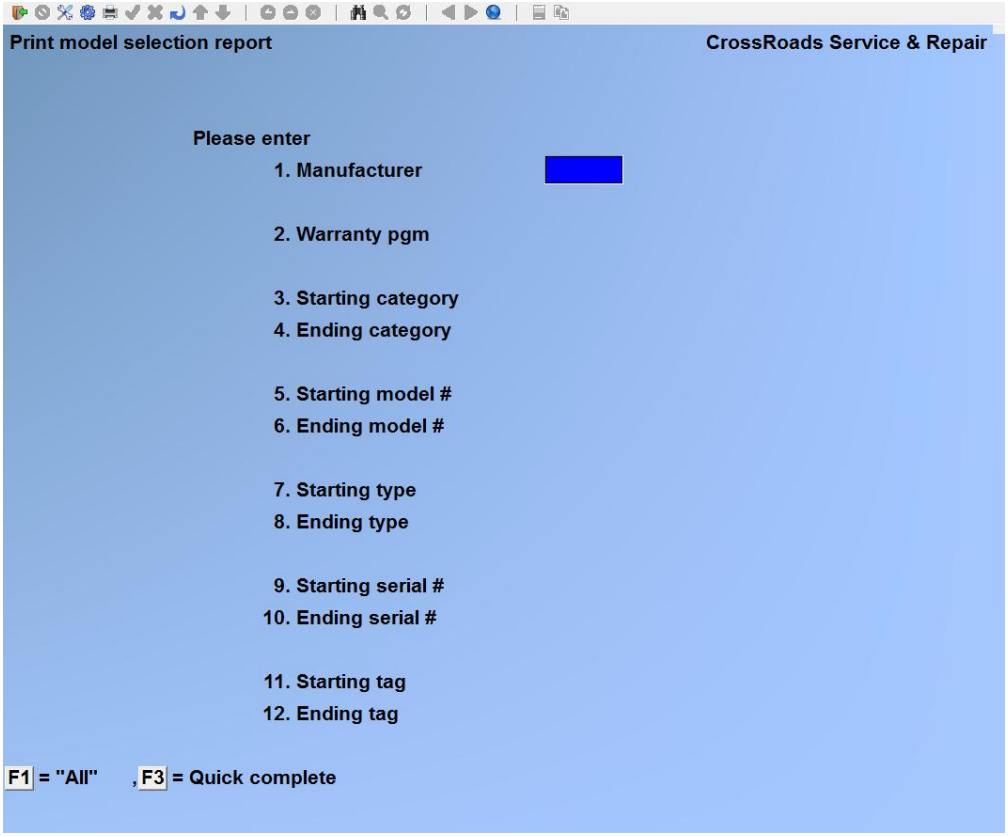
**Print suspended calls ?**
If you would like all suspended calls to print on this report, press [**ENTER**] to accept the default of Y. If not, type N.

**Reps on separate pages ?**
If you prefer a page break to occur between service rep schedules, accept the default of Y by pressing [**ENTER**]. If you prefer a continuous report, type N.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

```
Date:05/22/13  Time:16:17:31                    CrossRoads Service & Repair              User: SSI  Report #3395   Page 0001

                                                SERVICE SCHEDULE

Rep range:  "First" to "Last"
Date range: "Earliest" to "Latest"
Call status selection: OPEN, DISP, SUSP
NOTE: For open calls, default location service rep is shown in (parentheses).

Svc rep id: (  )  Name: (                       )  Open Date:  6/01/08  11:39
Svc call #: 4                                      Disp Date:
Status    : OPEN                                   Susp Date:

Customer #: 243          Svc loc: 002            Bill type: FULL        Desc: Full coverage
            TESCO SERVICES DIVISION              Call type: PM          Desc: PREVENTATIVE MAINTENANCE
            4930 - 74TH AVENUE S.E.                                       Pri : 5      Res : 120.00
                                              Contact name :                          Model:  NU-COMFORT MR20
            CALGARY, ALTA T2H 2B7             Contact phone #:                        Eqp/sv: 654987
                                                                                      Desc:   ROOFTOP UNIT 20 TON
Reason : PREVENTIVE MAINTENANCE (P.M. SCHEDULE: 06/24/08 TO 07/08/08)
Remarks: COMPUTER GENERATED CALL

Svc rep id: (  )  Name: (                       )  Open Date: 11/23/12  12:52
Svc call #: 37                                     Disp Date:
Status    : OPEN                                   Susp Date:

Customer #: 101          Svc loc: 000            Bill type: T/M         Desc: Time and materials
            HERMOSA WOOD PRODUCTS INC            Call type: BENCH       Desc: BENCH REPAIR
            2771 SUNRDIGE WAY N.E.                                        Pri : 3      Res : 072.00
                                              Contact name : MOE SAE                  Model:
            CALGARY          AL  T1Y 7K7      Contact phone #: 850-6889               Eqp/sv:
                                                                                      Desc:
Reason :
Remarks: CREDIT PROBLEM

Svc rep id: (  )  Name: (                       )  Open Date: 11/23/12  12:55
Svc call #: 38                                     Disp Date:
Status    : OPEN                                   Susp Date:

Customer #: 200          Svc loc: 000            Bill type: T/M         Desc: Time and materials
            PROTRUX,                             Call type: EMERG       Desc: EMERGENCY REPAIR
            4111 - 17th STREET S.E.,                                      Pri : 1      Res : 002.00
                                              Contact name : RON KLASSEN              Model:
            CALGARY          AL  T2G 3W5      Contact phone #: 216-8789               Eqp/sv:
                                                                                      Desc:
```

## Model selection




### Manufacturer
Enter the specific manufacturer's code for which you would like a report.

### Warranty pgm
Enter the specific warranty program for which you would like a report, or press [**F1**] for "All".

### Starting category
Enter the specific equipment category for which you would like this report to begin, or press [**F1**] to specify the "First" equipment category code on file.

### Ending category
Enter the specific equipment category for which you would like this report to end, or press [**F1**] to specify the "Last" equipment category code on file, or - - if you did not use [**F1**] to specify the starting category code - - press [**ENTER**] in order to limit this report to just one equipment category.

**Starting model #**
Enter the specific equipment model number for which you would like this report to begin, or press [**F1**] to specify the "First" equipment model # on file.

**Ending model #**
Enter the specific model number for which you would like this report to end, or press [**F1**] to specify the "Last" equipment model # on file, or - - if you did not use [**F1**] to specify the starting equipment model # - - press [**ENTER**] in order to limit this report to just one equipment model #.

**Starting type**
Enter the specific equipment type for which you would like this report to begin, or press [**F1**] to specify the "First" equipment type on file.

**Ending type**
Enter the specific equipment type for which you would like this report to end, or press [**F1**] to specify the "Last" equipment type on file, or - - if you did not use [**F1**] to specify the starting equipment type - - press [**ENTER**] in order to limit this report to just one equipment type.

**Starting serial #**
Enter the equipment serial # for which you would like this report to begin, or press [**F1**] to specify the "First" equipment serial # on file.

**Ending serial #**
Enter the specific equipment serial # for which you would like this report to end, or press [**F1**] to specify the "Last" equipment serial # on file, or - - if you did not use [**F1**] to specify the starting equipment serial # - - press [**ENTER**] in order to limit this report to just one equipment serial #.

**Starting tag #**
Enter the specific equipment tag # for which you would like this report to begin, or press [**F1**] to specify the "First" equipment tag # on file.

**Ending tag #**
Enter the specific equipment tag # for which you would like this report to end, or press [**F1**] to specify the "Last" equipment tag # on file, or - - if you did not use [**F1**] to specify the starting equipment tag # - - press [**ENTER**] in order to limit this report to just one equipment tag #.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

*See next page for sample report.*

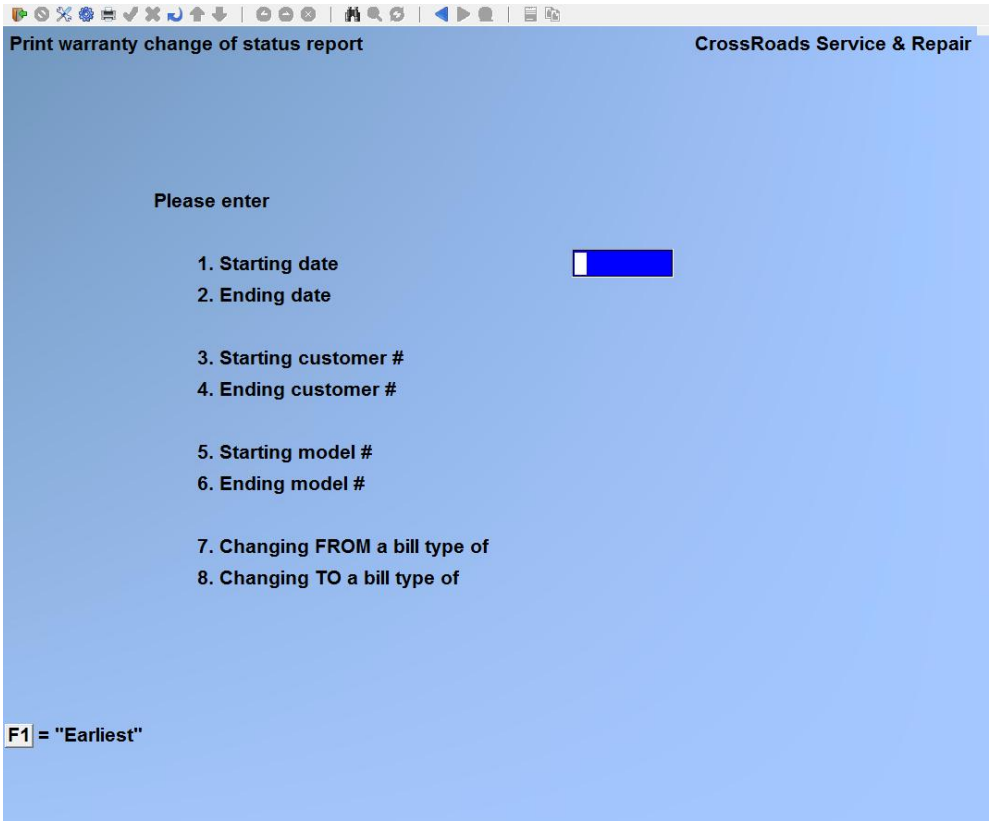
```
Date:05/22/13  Time:16:40:03                    CrossRoads Service & Repair              User: SSI  Report #3396   Page 0001
```

**MODEL SELECTION REPORT**

```
Manufacturer: "All"
Warranty pgm: "All"
Eqp category range: "First"                 to "Last"
Model no. range:    "First"                 to "Last"
Type no. range:     "First"                 to "Last"
Serial no. range:   "First"                 to "Last"
Tag no. range:      "First"                 to "Last"

Eqp-type-#              Eqp-serial-#    Eqp-tag-#               Cust-#      Location-#, Name            Warr-st  *  Agmt-#    *
                                                                                                        *: A=Active, I=Inactive

Model: FRIDGIT          Desc: ICE CREAM FREEZER                                 Mfgr: NUCOM    Cat: HP       Warr: NC-HP
FI40                                                            164         000 HENINGER TOYOTA,                  1003       A
FI40                     12546                                  265         001 KLEYSON TRANSPORT LTD.,           1010       I
FI40                     312645987       1234                   243             ** Location not on file           1009       I
      3 equipment records

Model: MLTI-METER       Desc: METERS                                            Mfgr: FRI      Cat: HP       Warr: NC-HP
MODEL WITH TWO OR MORE    6587NMS245                           104         000 A.K. BROWN,                       9003       I
      1 equipment records

Model: NU-COMFORT HP03  Desc: HEAT PUMP RES 3 TON                               Mfgr: NUCOM    Cat:          Warr:
HP03                                                            164         001 HENINGER TOYOTA,                  1003       A
      1 equipment records

Model: NU-COMFORT MR10  Desc: ROOFTOP UNIT 10 TON                               Mfgr: NUCOM    Cat:          Warr:
MR10                                                            243         002 TESCO SERVICES DIVISION           1009       I
MR10                                                            104         000 A.K. BROWN,                       9003       I
MR10                     123987Z147      B1RT-10T               243         001 TESCO PRODUCTS DIVISION           1009       I
      3 equipment records

Model: NU-COMFORT MR20  Desc: ROOFTOP UNIT 20 TON                               Mfgr: NUCOM    Cat:          Warr:
MR20                      654987          123                   243         002 TESCO SERVICES DIVISION           1009       I
      1 equipment records

Model: SNGL-METER       Desc:                                                   Mfgr:          Cat:          Warr:
MODEL WITH A SINGLE METER 5487LPUIY45K8                         104         000 A.K. BROWN,                       9003       I
      1 equipment records

     10 total equipment records
      6 models printed

                                                                End of report
```

## Warranty change of status

This report is to warranty tracking what the agreement expiration report is to agreement tracking. Customers whose equipment is coming out of warranty are ideal marketing prospects for extended warranty service agreements. This report identifies them for you. Run this report by specifying a date range of interest - - "I'm interested in who will experience a warranty change in the next 3 months". You can then bracket the report by customer or equipment model number. And, you can further constrain the report to specific warranty from/to change combinations.




### Starting date

Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

### Ending date

Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to print only the starting date.

### Starting customer

Enter the number of the first customer for whom you would like a report, or press

[**F1**] for the “First” customer on file.

**Ending customer**
Enter the number of the ending customer for whom you would like a report, or press [**F1**] for the “Last” customer id on file or --if you did not use [**F1**] to specify a starting customer id --press [**ENTER**] in order to limit this report to just one customer number.

**Starting model #**
Enter the specific equipment model number for which you would like this report to begin, or press [**F1**] to specify the “First” equipment model # on file.

**Ending model #**
Enter the specific model number for which you would like this report to end, or press [**F1**] to specify the “Last” equipment model # on file, or - - if you did not use [**F1**] to specify the starting equipment model # - - press [**ENTER**] in order to limit this report to just one equipment model #.

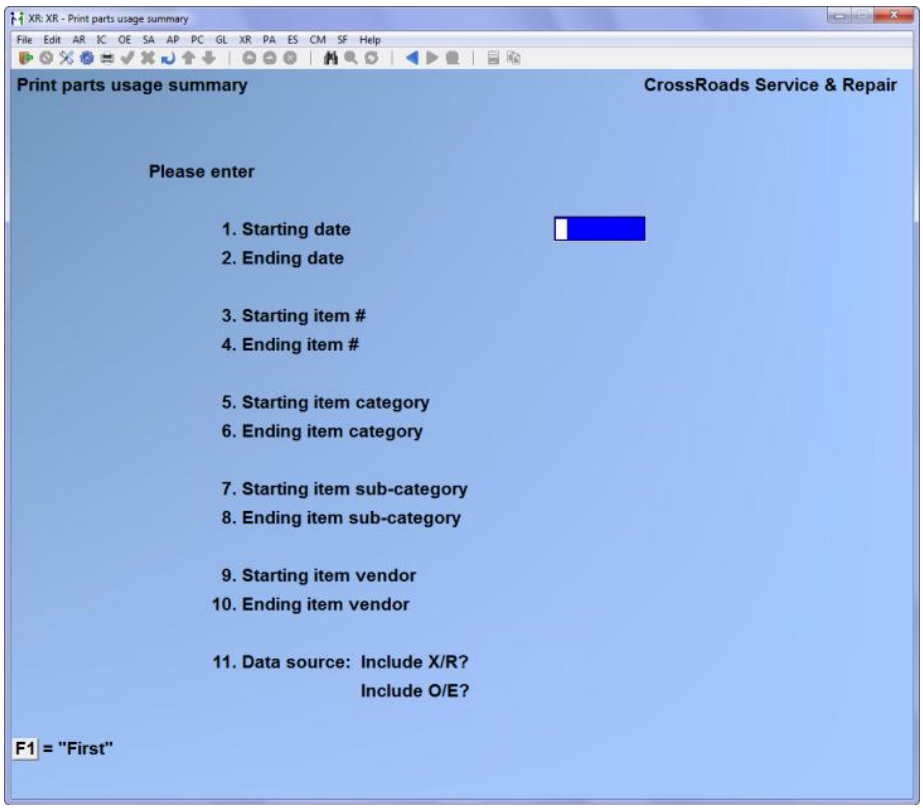
**Changing FROM a bill type of**
Enter the specific “changing from” bill type for which you would like this report, or leave blank to specify “All”.

**Changing TO a bill type of**
Enter the specific “changing to” bill type for which you would like this report, or leave blank to specify “All’.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

## Parts usage summary

The objective of this report is to provide a concise listing of all inventory items (e.g. spare parts or new equipment) sold within a given time frame. Its format is one line per inventory item. Each row contains the item number and full description, the quantity sold during the specified date range, the average unit cost and the extended cost. This report may be selected by ranges of dates, item numbers, item categories and/or sub-categories and vendors. The report can be printed to include only inventory items "sold" on Service Manager work orders, or only items sold through Billing, or both combined. The layout has been designed to facilitate importing this report into a spreadsheet for further analysis or processing.




### Starting date

Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

### Ending date

Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**]

to print only the starting date.

**Starting item #**
Enter the inventory item number on which to begin this report, or press [**F1**] to specify the "First" inventory item on file.

**Ending item #**
Enter the inventory item number on which to end this report or press [**F1**] to specify the "Last" inventory item on file, or - - if you did not use [**F1**] to specify the starting item number - - press [**ENTER**] in order to limit this report to just one inventory item.

**Starting item category**
Enter the specific item category for which you would like this report to begin, or press [**F1**] to specify the "First" item category code on file.

**Ending item category**
Enter the specific item category for which you would like this report to end, or press [**F1**] to specify the "Last" item category code on file, or - - if you did not use [**F1**] to specify the starting category code - - press [**ENTER**] in order to limit this report to just one item category.

**Starting item sub-category**
Enter the specific item sub-category for which you would like this report to begin, or press [**F1**] to specify the "First" item sub-category code on file.

**Ending item sub-category**
Enter the specific item sub-category for which you would like this report to end, or press [**F1**] to specify the "Last" item sub-category code on file, or - - if you did not use [**F1**] to specify the starting sub-category code - - press [**ENTER**] in order to limit this report to just one item sub-category.

**Starting item vendor**
Enter the inventory item vendor for which you would like this report to begin, or press [**F1**] to specify the "First" inventory item vendor on file.

**Ending item vendor**
Enter the specific inventory item vendor for which you would like this report to end, or press [**F1**] to specify the "Last" inventory item vendor on file, or - - if you did not use [**F1**] to specify the starting item vendor - - press [**ENTER**] in order to limit this report to just one inventory item vendor.

**Data source Include S/M ?**
**Include O/E ?**
Answer Y or N to each question to either include or exclude item sales from Service Manager (S/M) or Billing (O/E) respectively.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/23/13 Time:09:47:15 CrossRoads Service & Repair User: SSI Report #3398 Page 0001

**PARTS USAGE SUMMARY**

Date range: "First" to "Last"
Item # range: 360 to "Last"
Item cat range: "First" to "Last"
Item sub-cat range: "First" to "Last"
Item vendor range: "First" to "Last"
Data source: X/R, O/E

| Item-# | Item-desc-line-1 | Item-desc-line-2<br>Item-desc-line-3 | Quantity-sold | Average-cost | Extended-cost |
|---|---|---|---|---|---|
| 360 | STRAINER BALL VALVES | (now included with the p/n SL-W) | 14.000 | 13.73 | 192.22 |
| 1109 | OIL STOP VALVE REPAIR KIT | FOR 14098 VALVE.SULLAIR O.E.M | 1.000 | 28.18 | 28.18 |
| 1149 | SULLAIR THERMOSTAT | ELEMENT FOR MODEL LS-255 300HP SCREW COMP. | 1.000 | 328.74 | 328.74 |
| 1177 | UNIVERSAL COUPLER | 1/4" MALE N.P.T. | 370.000 | 4.58 | 1,696.33 |
| 1179 | UNIVERSAL COUPLER | ** DO NOT RE-ORDER ** USE P/N: 1177 | 91.000 | 4.07 | 370.38 |
| 1210 | QUICK COUPLING BODY | 1/4" FEMALE N.P.T. *** DO NOT RE-ORDED *** | 267.000 | 4.96 | 1,323.71 |
| 1881 | KAESER FLOAT-TYPE 1/2" | AUTODRAIN FOR FILTER HOUSING (USE 4170-08) | 14.000 | 36.14 | 506.02 |
| 3207 | NSK 3207B-2RSTN3-DOUBLE | ROW ANGULAR CONTACT BALL BEARING | 1.000 | 27.61 | 27.61 |
| 3920 | TIMKIN BEARING CUP | | 1.000 | 10.94 | 10.94 |
| 3982 | TIMKIN CONE | | 1.000 | 21.42 | 21.42 |
| 4442 | FILTER ELEMENT (N.L.A.) | *REPLACED BY FSE-35 & 23.4427.04 RETRO-FIT KIT* | 3.000 | 14.19 | 42.57 |
| 4580 | BEARING | | 2.000 | 59.30 | 118.60 |
| 6010 | 1" x 1/4" KUNKLE VALVE | RATED FOR 137 PSI @ 900 CFM. | 1.000 | 287.54 | 287.54 |
| 6203 | BEARING | | 2.000 | 1.18 | 2.35 |
| 6204 | BEARING | | 2.000 | 0.00 | 0.00 |
| 6205 | BEARING | | 4.000 | 8.33 | 33.32 |
| 6206 | SKF 6206-2RSI/C3-MED | DEEP GROOVE BEARING | 1.000 | 9.68 | 9.68 |
| 10462 | PLEATED FILTER MAT | 20 X 25 X 2 | 12.000 | 5.35 | 64.20 |

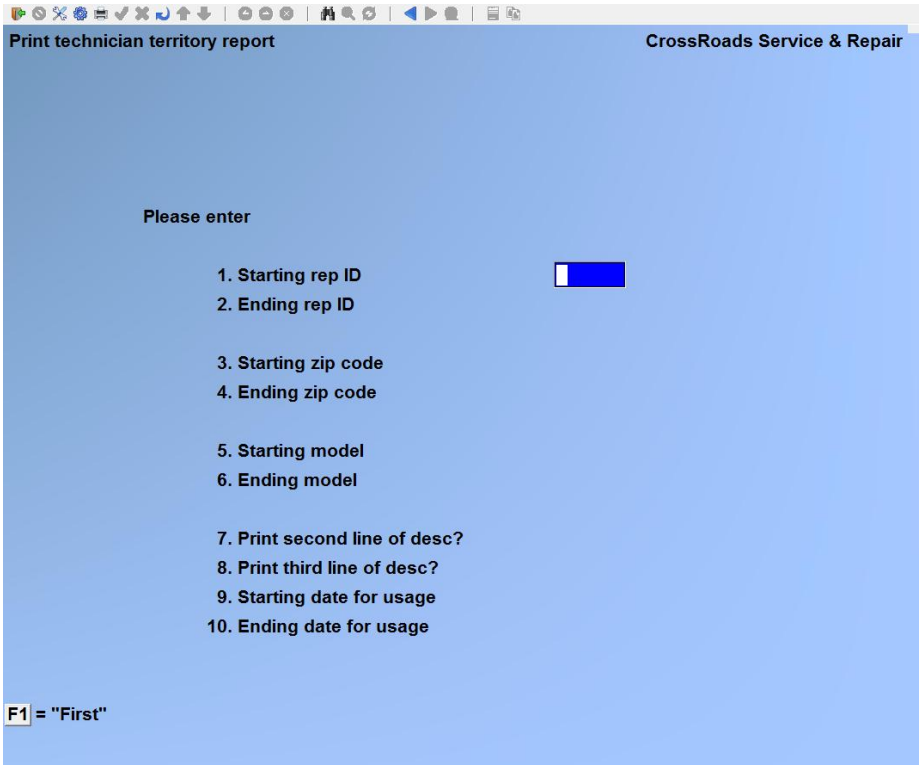
## Technician territory

This report has one primary use and many secondary uses. Primarily, it is designed for users of Service Manager who service equipment with usage meters. Normally, they include equipment such as copiers, commercial compressors and stationary engines. This report shows how many pieces of equipment - - by model number - - are assigned to each service technician, the average monthly usage for the equipment (determined from meter reading history), the total monthly usage for which the technician is responsible, and the totals of all of the latest meter readings (to give an indication of relative age of the equipment).

The report is organized by service rep. To link equipment with the responsible service rep, Service Manager used the default service rep field in the customer service location record. The technician assigned to a customer's service location is assumed to be responsible for all of the equipment at that location. The primary use of this report, therefore, is to periodically measure the "relative workload" among a group of service reps and "level the playing field" by re-assignment of locations.

This report has several secondary uses that can be of benefit even for those who service non-metered equipment. Firstly, the report lists all unassigned equipment

before it lists equipment assigned to a service rep. This helps to pinpoint areas of the location data base that are not complete. Secondly, since the report prints the population of each model of equipment per service rep, it gives some measure of territory loading for non-metered equipment.




**Starting rep id**
Enter the identifier of the first rep id for which you would like a report, or press [**F1**] for the "First" rep id on file.

**Ending rep id**
Enter the identifier of the ending rep id for which you would like a report, or press [**F1**] for the "Last" rep id on file or --if you did not use [**F1**] to specify a starting rep id --press [**ENTER**] in order to limit this report to just one rep id.

**Starting zip code**
Enter the zip code on which to begin this report, or press [**F1**] for the "First" zip code on file.

**Ending zip code**
Enter the zip code on which to end this report, or press [**F1**] for the "Last" zip code on file or --if you did not use [**F1**] to specify a starting zip code --press [**ENTER**] in

order to limit this report to just one zip code.

**Starting model**
Enter the model number on which to begin this report, or press [**F1**] to specify "First" model on file.

**Ending model**
Enter the model number on which to end this report, or press [**F1**] for the "Last" model on file or --if you did not use [**F1**] to specify a starting model --press [**ENTER**] in order to limit this report to just one model.

**Print second line of description ?**
**Print third line of description ?**
Type Y or N. Each model record printed consumes three lines on the report, but the only field on the second and third lines are the second and third lines of description respectively. If you answer N, the report will be considerably more concise.

**Starting date for usage**
Enter the date that you want metered usage calculation to start for this report or press [**F1**] to specify the "Earliest" date on file, [**F5**] for the last 3 months on file, [**F6**] for the last 6 months on file or [**F7**] for the last 12 months on file.
Note: If you press [**F1**] to specify "Earliest", your report data may be distorted for a number of reasons. First, you may have re-assigned technician territories sometime in the recent past … you would probably want to take a look at "usage loading" since the time of re-assignment rather than from the earliest date on file. Second, you should be careful to make your territory assessment based on your customers' "current" activity rather than activity that is historical and outdated. For these reasons Service Manager offers the alternate function keys to easily bracket popular date ranges.

**Ending date for usage**
Enter the date that you want metered usage calculation to end for this report or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to print only the starting date.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/23/13 Time:10:39:16 CrossRoads Service & Repair User: SSI Report #3399 Page 0001

## TECHNICIAN TERRITORY REPORT

Service rep range: "First" to "Last"
Zip code range: "First" to "Last"
Model # range: "First" to "Last"
Print second line of desc? Y
Print third line of desc? Y

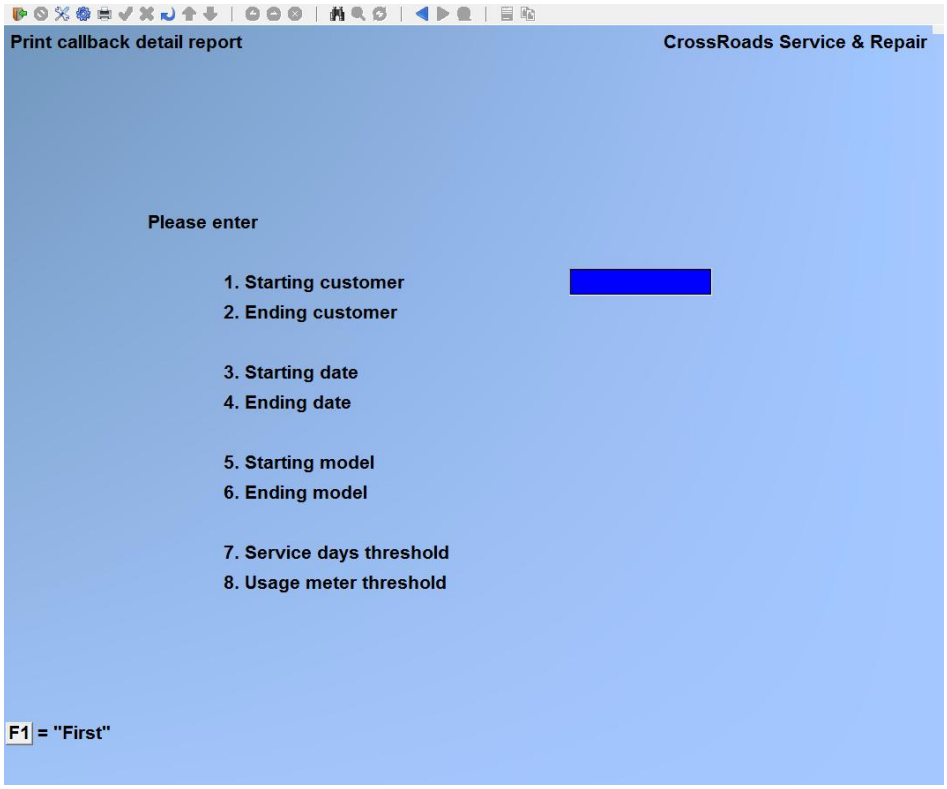
| Svc-rep-# | Zip-code | Model-# | Model-desc-line-1<br>Model-desc-line-2/3 | Model Quantity | Avg-monthly volume | Total Monthly-volume | Total-volume |
|---|---|---|---|---|---|---|---|
| | | FRIDGIT | ICE CREAM FREEZER | 1 | 0 | 0 | 0 |
| | | MLTI-METER | METERS | 1 | 0 | 0 | 0 |
| | | NU-COMFORT MR10 | ROOFTOP UNIT 10 TON | 3 | 0 | 0 | 0 |
| | | NU-COMFORT MR20 | ROOFTOP UNIT 20 TON | 1 | 0 | 0 | 0 |
| | | SNGL-METER | | 1 | 0 | 0 | 0 |
| | T2G 2M7 | FRIDGIT | ICE CREAM FREEZER | 1 | 0 | 0 | 0 |
| | | | Rep-sub-totals | 8 | 0 | 0 | 0 |
| BB | | NU-COMFORT HP03 | HEAT PUMP RES 3 TON | 1 | 0 | 0 | 0 |
| | | | Rep-sub-totals | 1 | 0 | 0 | 0 |
| | | | Grand-totals | 9 | 0 | 0 | 0 |

-- End of report --

## Customer callback detail

This new exception report is designed to identify customers who may be experiencing service problems. When a customer with "problems" is identified, a mini-history of recent service calls is printed as an aid to understanding the problem's extent and diagnosing its cause. The definition as to what constitutes a problem can be specified by the user each time this report is run. The user supplies Service Manager with a time interval in days and (if metered equipment) a usage interval. If we consider a copier for example, running this report would be equivalent to asking the question "Between January and June of this year, tell me all customers that had back-to-back service calls within 20 days or 5,000 copies or less. Any customers whose equipment history fits the report criteria are selected, and a mini-history is printed for all calls for the problem equipment within the specified time period (in our example, between January and June0.

**Note:** If you service non-metered equipment and you want to benefit from this report, you can simply omit the usage parameter.




## Starting customer

Enter the number of the first customer for whom you would like a report, or press [**F1**] for the "First" customer on file.

## Ending customer

Enter the number of the ending customer for whom you would like a report, or press

[**F1**] for the “Last” customer id on file or --if you did not use [**F1**] to specify a starting customer id --press [**ENTER**] in order to limit this report to just one customer number.

**Starting date**
Enter the date for which you would like this report to begin or press [**F1**] to specify the “Earliest” date on file.

**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the “Latest” date on file. If you did not select “First” as your starting date, press [**ENTER**] to print only the starting date.

**Starting model**
Enter the model number on which to begin this report, or press [**F1**] to specify “First” model on file.

**Ending model**
Enter the model number on which to end this report, or press [**F1**] for the “Last” model on file or --if you did not use [**F1**] to specify a starting model --press [**ENTER**] in order to limit this report to just one model.

**Service days threshold**
You have three options for completing this field. First, you can enter the service interval “threshold” in days for which you want customers selected for this report. Second, you can press [**F1**] which means skip the “days” test - - you intend to only use the “usage” test. Third, you can press [**F2**] to instruct Service Manager to ignore both tests and simply print all service calls that match the customer number, date, and model number ranges.

**Usage meter threshold**
You have two options for completing this field. First, you can enter the service interval “threshold” in usage units for which you want customers selected for this report. Second, if you entered a day interval in Service days threshold, you can press [**F1**] here to skip the ‘usage” test and you intend to only use the “days” test.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/23/13 Time:11:10:22 CrossRoads Service & Repair User: SSI Report #3400 Page 0001

**CALLBACK DETAIL REPORT**

Cust-# range: "First" to "Last"
Date range: "First" to "Last"
Model # range: "First" to "Last"
Service days threshold: "None"
Meter usage threshold: "None"

| Cust-#<br>Cust-name<br>Model-#<br>Model-description-1/2/3 | Loc-#<br>Serial-# | Svc-date | Call-# | Service<br>Rep-ID | Meter<br>Reading | Bill<br>Type | Call<br>Type | Failure-description |
|---|---|---|---|---|---|---|---|---|
| 243<br>TESCO CORPORATION,<br>FRIDGIT<br>ICE CREAM FREEZER | 002<br>312645987 | 12/02/11 | 2 | AL | N/A | INSPEC | PM | Failed relay |
| 243<br>TESCO CORPORATION,<br>NU-COMFORT MR10 123987Z147<br>ROOFTOP UNIT 10 TON | 001 | 06/11/08 | 1 | AL | N/A | FULL | PM | Clogged filter |

-- End of report --

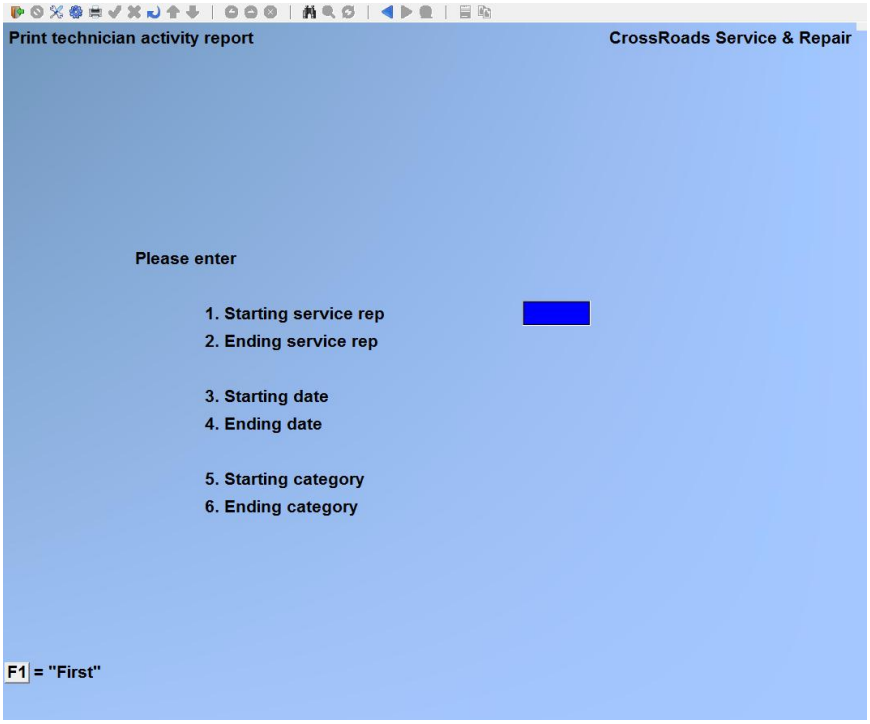
**Technician activity report**

**To receive the full benefit of this report, your Call/Service Types must be configured according to pre-defined formats. See Chapter 8 for details.**

This report analyzes how much of your service technician/s time is spent on each category of equipment they service, and on what type of service calls they perform. The activities are broken down by category of equipment. Within each equipment category, the report is split into two “halves”.

The left half of the report is the totals section. The total number of calls performed is broken down into four groups according to the type of call: installations, de-installations, overhead and service work. Service Manager lists the total time in minutes, spent on actual service calls, as well as the total minutes spent on all calls. The left half of the report is designed to separate service calls from non-service calls. However, non-service calls are broken down as marketing or new business related (installations, and de-installations), and overhead related. Since the primary intent is the service/non-service separation, the time in minutes is only reported for service calls and all calls (i.e. service plus non-service).

The right half of the report is the service call breakdown section used to report on service calls in seven groups: Emergency maintenance, Preventative maintenance, Callbacks, Rescheduled calls, Deliveries, Courtesy calls and Other (not classified) calls. For each of the seven, Service Manager lists the number of calls performed. For callbacks and reschedules, the percentage of total service calls is also reported.




**Starting rep id**

Enter the identifier of the first rep id for which you would like a report, or press [**F1**] for the "First" rep id on file.

**Ending rep id**
Enter the identifier of the ending rep id for which you would like a report, or press [**F1**] for the "Last" rep id on file or --if you did not use [**F1**] to specify a starting rep id --press [**ENTER**] in order to limit this report to just one rep id.

**Starting date**
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file.

**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to print only the starting date.

**Starting category**
Enter the specific model category for which you would like this report to begin, or press [**F1**] to specify the "First" model category code on file.

**Ending category**
Enter the specific model category for which you would like this report to end, or press [**F1**] to specify the "Last" model category code on file, or - - if you did not use [**F1**] to specify the starting model category - - press [**ENTER**] in order to limit this report to just one model category.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/23/13 Time:11:33:21 CrossRoads Service & Repair User: SSI Report #3401 Page 0001

## TECHNICIAN ACTIVITY REPORT

Svc rep range: "First" to "Last"
Date range: "First" to "Last"
Eqp cat range: "First" to "Last"

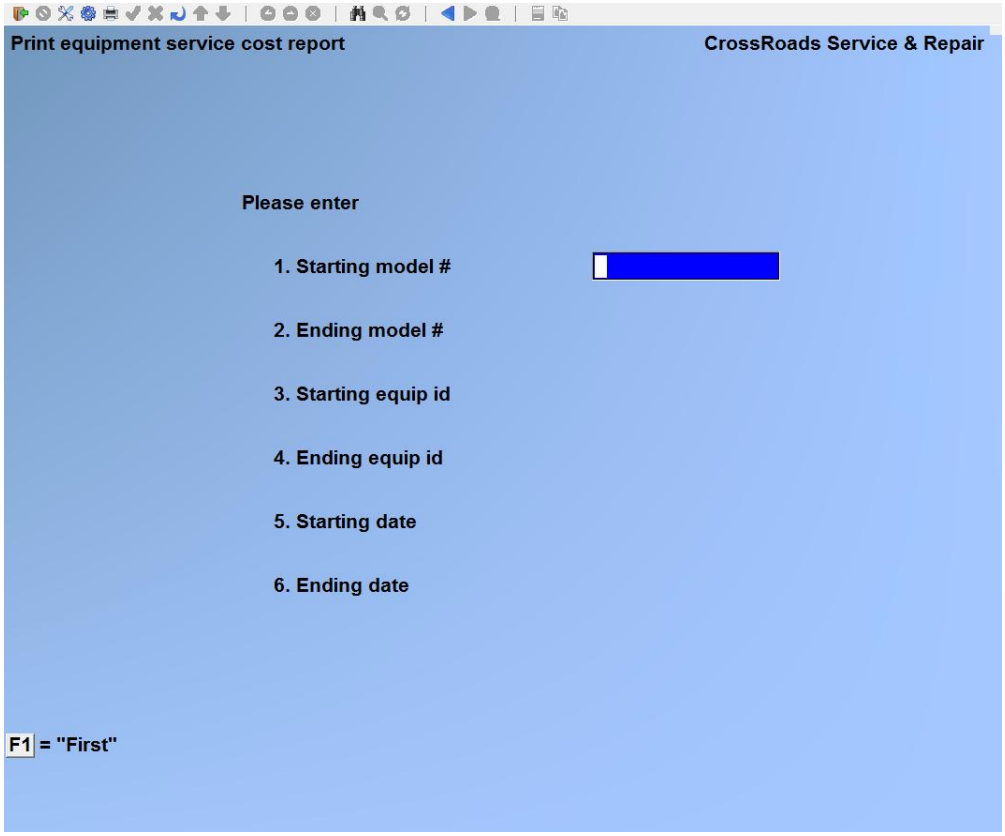
| Rep-ID | Week Ending | Equipment Category | Totals Calls | Inst | DeIn | Ovhd | Svc | Svc-mins | Tot-mins | Service Call Breakdown Emrg | P.M. | CB-# | CB-% | RS-# | RS-% | Del | CC | Oth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | 06/13/08 | | 1 | 0 | 0 | 0 | 1 | 120 | 120 | 0 | 1 | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 |
| | | HP | 1 | 0 | 0 | 0 | 1 | 150 | 150 | 0 | 1 | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 |
| | Week Subtotal | | 2 | 0 | 0 | 0 | 2 | 270 | 270 | 0 | 2 | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 |

-- End of report --

## Equipment service cost

This report is structured as one row of data for each piece of equipment (i.e. each serial number). Even though this report provides a great deal of cost information per copier, its primary function is to calculate the average cost-per for a piece of equipment over a specified time. For copiers, the information provided on this report is:

- Total volume – the meter reading for the end date of the report
- Effective days – number of calendar days between the start and end dates
- Copies this period – copies produced between the start and end dates
- AMCV – average monthly copy volume
- MCBC – mean (average) copies between calls
- M$TR – mean dollars to repair (average cost per call)
- M$/Copy – mean cost per copy (total volume/total cost)
- ML$TR/ML%TR – mean labour cost per call in dollars and %
- MP$TR/MP%TR – mean parts cost per call in dollars and %
- MO$TR/MO%TR – mean "other" cost per call in dollars and %




## Starting model

Enter the model number on which to begin this report, or press [**F1**] to specify "First" model on file.

**Ending model**
Enter the model number on which to end this report, or press [**F1**] for the "Last" model on file or --if you did not use Fl to specify a starting model --press [**ENTER**] in order to limit this report to just one model.

**Starting equip id**
Enter the equipment ID (i.e. serial number) on which to begin this report, or press [**F1**] to specify "First" equipment ID on file.

**Ending equip id**
Enter the equipment ID (i.e. serial number) which to end this report, or press [**F1**] for the "Last" equipment ID on file or --if you did not use [**F1**] to specify a starting equipment ID --press [**ENTER**] in order to limit this report to just one equipment ID.

**Starting date**
Enter the date for which you would like this report to begin. Note that you must enter an exact date; you cannot use F1 to specify the "Earliest" date on file.

**Ending date**
Enter the date for which you would like this report to end. Note that you must enter an exact date; you cannot use [**F1**] to specify the "Latest" date on file.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

**Equipment tech performance**
**To receive the full benefit of this report, your Call/Service Types must be configured according to pre-defined formats. See Chapter 8 for details.**

This report takes measurements that are usually applied to equipment and applies them to your service technicians.

The measurements are:

- MCBF – mean copies between failures
- MCBC – mean copies between calls
- M$TR – mean dollars to repair/cost per call
- M$/Copy – mean cost per copy (total volume/total cost)

Every time a service rep performs a service call, that technician is "given credit" for the number of copies the machine produces until the next service call is performed for the same machine (i.e. copies between calls). This "credit" is applied to that technician's record for the equipment category to which the machine belongs. A similar calculation and "crediting system" is used for copies between failures.

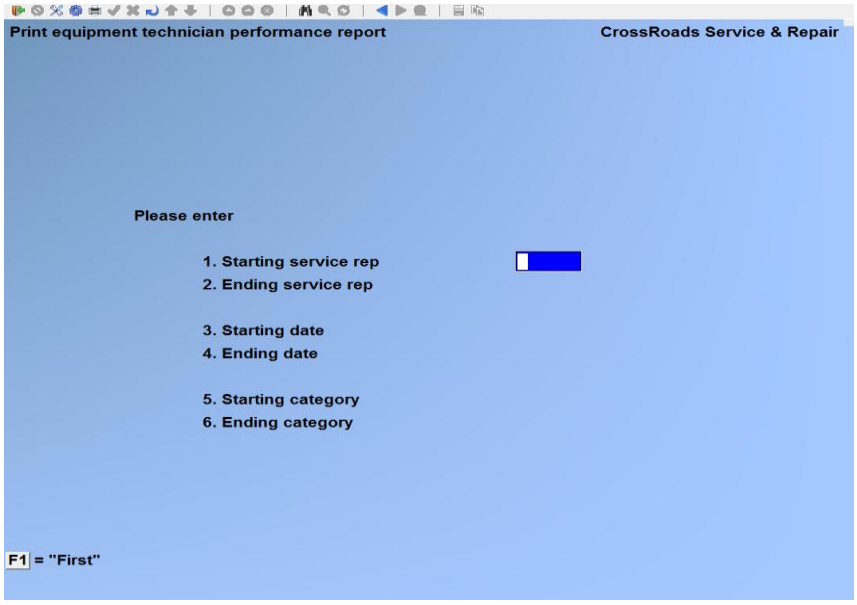
In addition, mean cost to repair is calculated for all calls performed by each technician. Since all copies and all costs are calculated for each technician, it is a

simple matter to calculate cost-per-copy-per-technician.

Since credit for a machine's performance is assigned to the responsible service technician, if there are two or more technicians on a call, Service Manager must pick one as the lead technician. The lead technician is:

- If only one of the technicians is type "T", Service Manager designates that one
- If more than one technician is type "T", Service Manager designates the one with the most on-site time for the call
- If more than one technician is type "T", and all of their on-site times are equal, Service Manager designates the one with the latest End date/time on the call

The arrangement and sort order of the report is designed to analyze the ongoing performance of each technician. First, the report is broken down by technician. Then, for each technician, the report is broken down by category of equipment - - this allows you to see how well (or how poorly) the technician performs for different classes of machine. The equipment category breakdown helps to isolate training needs.




**Starting service rep**
Enter the identifier of the first rep id for which you would like a report, or press [**F1**] for the "First" rep id on file.

## 17.2 Ending service rep

Enter the identifier of the ending rep id for which you would like a report, or press [**F1**] for the "Last" rep id on file or --if you did not use [**F1**] to specify a starting rep id --press [**ENTER**] in order to limit this report to just one service rep.

**Starting date**
Enter the date for which you would like this report to begin or press [**F1**] to specify the "Earliest" date on file. If you specify an exact starting date, it must be a Sunday. If you enter a non-Sunday date, Service Manager will display an error message and replace your date with the nearest Sunday date.

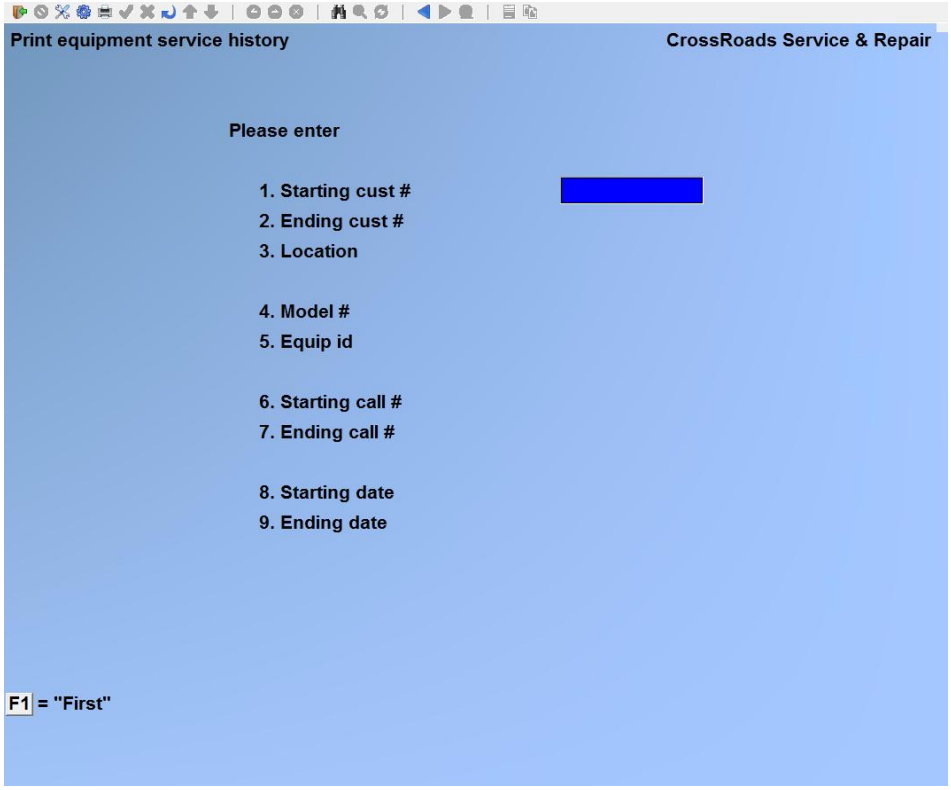
**Ending date**
Enter the date for which you would like this report to end or press [**F1**] to specify the "Latest" date on file. If you did not select "First" as your starting date, press [**ENTER**] to print only the starting date. If you specify an exact ending date, it must be a Saturday. If you enter a non-Saturday date, Service Manager will display an error message and replace your date with the nearest Saturday date.

**Starting equipment category**
Enter the specific equipment category for which you would like this report to begin, or press [**F1**] to specify the "First" equipment category code on file.

**Ending equipment category**
Enter the specific equipment category for which you would like this report to end, or press [**F1**] to specify the "Last" equipment category code on file, or - - if you did not use [**F1**] to specify the starting category code - - press [**ENTER**] in order to limit this report to just one equipment category.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

**Equipment service history**
The objective of this report is to provide a concise service history for each copier in the field. For each copier listed, two lines are printed for each service call performed. For each service call, the 2 lines provide the type of service performed, the meter reading, the number of copies since the last service call, the parts cost, the service technician's ID, the labour hours re2quired to repair the machine, the service tech's start, arrival and end times and the response time.




**Starting customer**
Enter the number of the first customer for whom you would like a report, or press [**F1**] for the "First" customer on file.

**Ending customer**
Enter the number of the ending customer for whom you would like a report, or press [**F1**] for the "Last" customer id on file or --if you did not use [**F1**] to specify a starting customer id --press [**ENTER**] in order to limit this report to just one customer number.

**Location**
Enter the number of the location for which you would like this report, or press [**F1**] to select "All" locations.

**Model #**
Enter the specific model # for which you would like a report, or press [**F1**] for "All".

**Equip ID**
Enter the specific equipment identifier (i.e. serial number) for which you would like a report, or press [**F1**] for "All".

**Starting call #**

Enter the number of the first call for which you would like this report, or press [**F1**] to specify the “First” call on file.

**Ending call #**
Enter the number of the last call for which you would like this report, or press [**F1**] for the “Last” call on file, or - - if you did not use [**F1**] to specify the starting call - - press [**ENTER**] in order to limit this report to just one call.

**Starting date**
Enter the date for which you would like this report to begin, or press [**F1**] to specify the “Earliest” date on file.

**Ending date**
Enter the date for which you would like this report to end, or press [**F1**] to specify the “Latest” date on file, or - - if you did not use [**F1**] to specify the starting date - - press [**ENTER**] in order to limit this report to just one day.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/23/13 Time:14:25:42 CrossRoads Service & Repair User: SSI Report #3402 Page 0001

**EQUIPMENT SERVICE HISTORY**

Customer range: "First" to "Last" Loc # "All"
Model #: "All"
Equip id: "All"
Call # range: "First" to "Last"
Date range: "Earliest" to "Latest"
"*" = estimated reading

| Call # | Failure Code Description / Action Code Description | Svc Type | Start Meter | Copies SL Svc | Parts Cost | Open Date/ Time | Svc Rep | Arrive Date/ Time | Resp Time | End Date/ Time | TTR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Customer: 243 | TESCO CORPORATION, | | Location: 002 | | Model: FRIDGIT | | | Serial #: 312645987 | | | |
| 2 | Failed relay | PM | N/A | N/A | 19.500 | 06/01/08 | AL | 06/11/08 | | 06/11/08 | |
| | Replaced faulty part | | | | | 11:39 | | 14:24 | .00 | 16:54 | 2.50 |
| Customer: 243 | TESCO CORPORATION, | | Location: 001 | | Model: NU-COMFORT MR10 | | | Serial #: 123987Z147 | | | |
| 1 | Clogged filter | E/P | N/A | N/A | 5.000 | 06/01/08 | AL | 06/11/08 | | 06/11/08 | |
| | Cleaned filter | | | | | 11:39 | | 12:55 | .00 | 14:55 | 2.00 |

-- End of report --

## Equipment performance

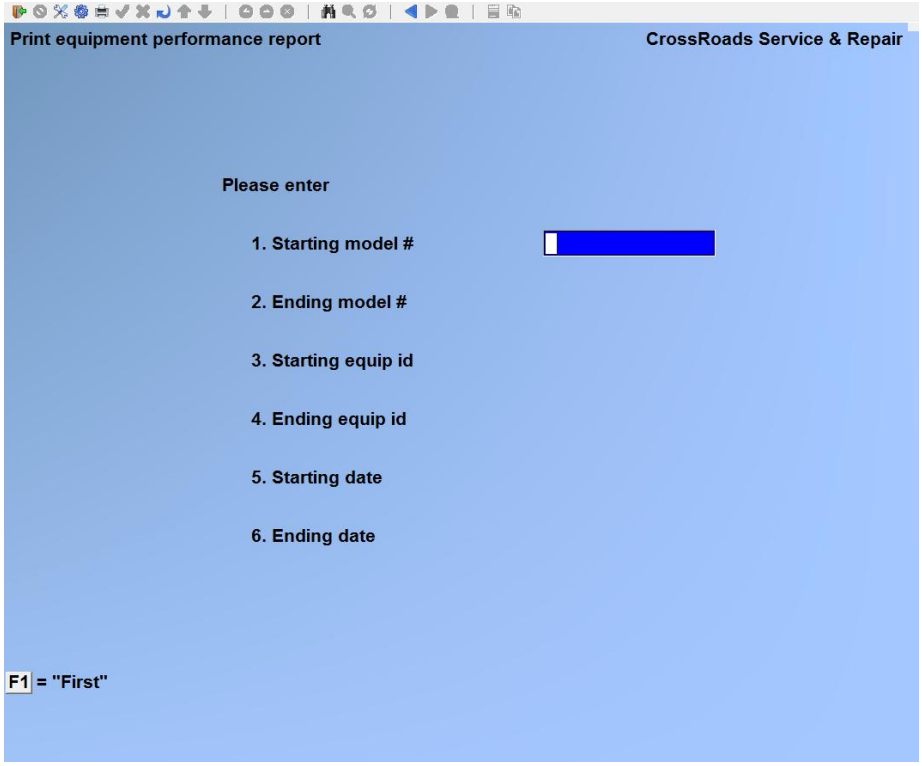
**To receive the full benefit of this report, your Call/Service Types must be configured according to pre-defined formats. See Chapter 8 for details.**

When you run this report, you specify the period of time (from/to date range) for which you want to evaluate performance. You also specify the model number/serial number range of interest. Then for each piece of equipment, this report lists the effective operating days included in the specified period. To calculate effective days, Service Manager takes into account installation dates and removal dates, so these two key data fields must be maintained.

Along with effective days, the report also lists the usage during the period, the AMCV (average monthly copy volume), total service calls made during the period, the number of service calls made by specific call service types and the Call Rate (calls/month). For each piece of equipment, Service Manager lists several operating statistics that pertain to the time period you have specified:

- MTTR [em] – Mean or average time to repair for emergency calls
- MTTR [pm] – Mean or average time to repair for preventive maintenance calls
- MCBF [em] – Mean usage between failures. That is, usage that has occurred between emergency repair calls.
- MCBS [em+pm] – Mean usage between service. That is, usage that has occurred between any two calls that have included equipment service - - be it emergency maintenance or preventive maintenance.
- MCBC [all] – Mean usage between calls. That is, usage that has occurred between any two calls - - no matter what the reason was for the call. Even courtesy calls and calls to deliver supplies are taken into account.

*See next page for illustration*




**Starting model**
Enter the model number on which to begin this report, or press [**F1**] to specify "First" model on file.

**Ending model**
Enter the model number on which to end this report, or press [**F1**] for the "Last" model on file or --if you did not use [**F1**] to specify a starting model --press [**ENTER**] in order to limit this report to just one model.

**Starting equip id**
Enter the equipment ID (i.e. serial number) on which to begin this report, or press [**F1**] to specify "First" equipment ID on file.

**Ending equip id**
Enter the equipment ID (i.e. serial number) which to end this report, or press [**F1**] for the "Last" equipment ID on file or --if you did not use [**F1**] to specify a starting equipment ID --press [**ENTER**] in order to limit this report to just one equipment ID.

**Starting date**
Enter the date for which you would like this report to begin. Note that you must enter an exact date; you cannot use F1 to specify the "Earliest" date on file.

**Ending date**
Enter the date for which you would like this report to end. Note that you must enter an exact date; you cannot use F1 to specify the "Latest" date on file.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen.

Date:05/23/13 Time:15:23:35 CrossRoads Service & Repair User: SSI Report #3403 Page 0001

**EQUIPMENT PERFORMANCE**

Model # range: "First" to "Last"
Equip id range: "First" to "Last"
Date range: 01/01/06 to 05/21/13
"*" = estimated figure

| Serial Number | Eff. Days | Copies This Period | AMCV | Calls This Per. | -- Calls by Service Type -- EM | PM | OE | CC | RC | RS | Call Rate | Mean Resp Time | Mean Trvl Time | MTTR (EM) | MTTR (PM) | MCBF (EM) | MCBS (EM+PM) | ACPC/ MCBC (All) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model: FRIDGIT | | | | | | | | | | | | | | | | | | |
| 312645987 | 9,999 | N/A | N/A | 1 | 0 | 1 | 0 | 0 | 0 | 0 | .0 | .00 | 2.50 | .00 | 2.50 | N/A | N/A | N/A |
| Model: NU-COMFORT MR10 | | | | | | | | | | | | | | | | | | |
| 123987Z147 | 9,999 | N/A | N/A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | .0 | .00 | 1.75 | .00 | .00 | N/A | N/A | N/A |

-- End of report --

# Chapter 31

# Purge Service History

**Introduction**

The Purge Service History function is used to purge (Le., delete) data from the service history file~. This function enables you to remove old or unnecessary service data, and is most often used to "free-up" hard disk space for the storage *(If* more timely information and/or to improve performance.

**CAUTIONARY NOTES**

This function is a *cutting* function, and the old adage "Measure twice and cut once" definitely applies. Please read the following notes carefully.

1. Backup Before Purging: Use of this function will completely erase the specified historical data. Be sure that the data is captured on backup media before proceeding. The files purged when you purge Service Manager history are the *Call history* file (XRCALH), the *Service rep history* file (XRREHM), and the *Parts usage history* file (XRPUHM). These three data files (and their indexes) should be backed up to magnetic media before performing the purge. Each time the system is upgraded to a new version, the data file structures --and thus their respective file utilities --may change. Therefore, the entire system should be backed up and saved every time the software version changes.

2. Archiving Strategy: This function should be used as part of a pre-planned archiving strategy. For example, you may want to retain three (3) years of historical service data on-line at all times --along with your current year's service data. At year end, you would backup the oldest year's historical data on magnetic media and/or hardcopy printout and then, use this function to purge that year's data.

3. Manage Historical Space: Most computer systems become "unpredictable" (read "do bad things to your data") when the hard disk space approaches full. We

recommend spare disk space equal to twice the size of your largest file plus 1MB. Thus if your largest file has a data file of 3MB and an index file of 4MB, you should always have at least 15MB of spare disk capacity.

Since history files are in constant and, usually, rapid growth mode --they bear watching. On a periodic basis, say monthly, you should note the size of your Service Manager history files (and your RealWorld history files as well) and your spare disk space. Get a feel for the dynamics of disk use, and deal with problems before they become emergencies --or worse -- catastrophes.

4. Purge in "Bite-Sized" Pieces: Due to the potentially large number of records involved, and the variety of index structures, the process of purging history can be extremely time consuming --some users have reported a week of continuous purging when they have not been careful in their purge selections! We recommend running overnight with small increments until you get a feel for how fast your system will perform this particular function.

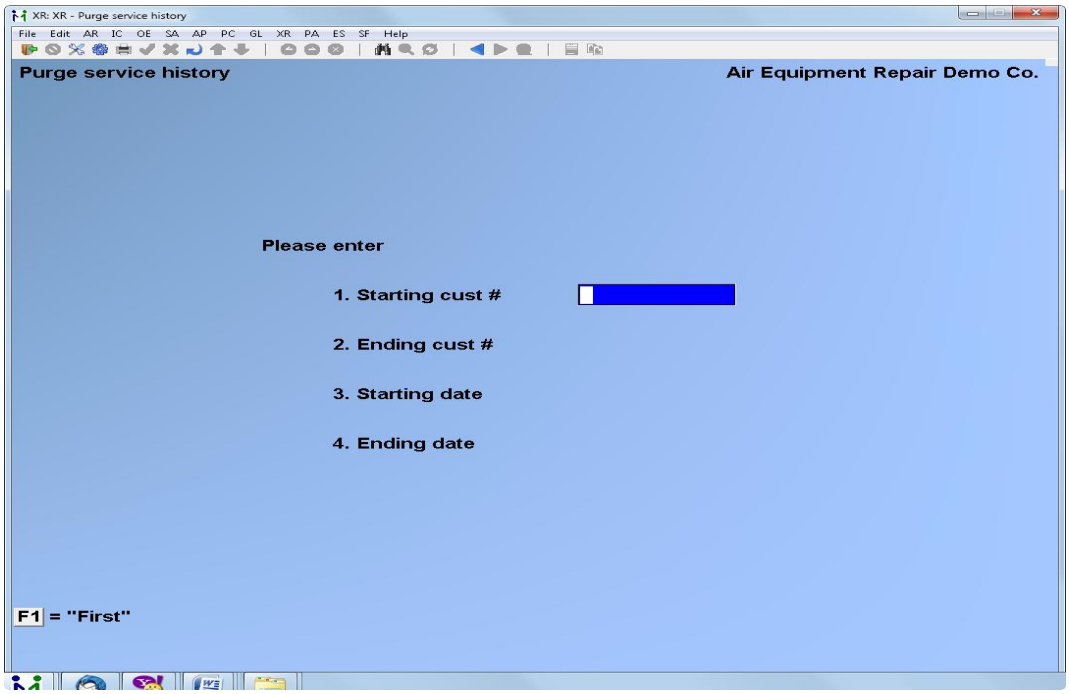
   As an example, let's assume you want to purge all history through the end of 1989, but you want to keep all of 1990 and later. Let's also assume that your customer numbers range from zero (0) to ninety-nine hundred and ninety-nine (9999). You should make a trial run --overnight --of 5% of your data. If that task completes overnight, the next evening you can try 10%, increasing each night until it is still running in the morning; then back off a bit. Perform these midnight runs until your purge objective is reached.

   To set up such a test using our hypothetical situation, start off specifying a history purge for customer number zero (0) to customer number four hundred ninety-nine (499) --5% of the total. For the date range, you would specify [**F1**] for earliest date through 12/31/89 for the ending date. As you continue to purge successive "chunks" of history, keep notes to track what has been purged and what remains to be purged. If you lose your notes or become unsure, you can always use the *Customer call history* report as a measurement tool.

5. Purging Only One Customer: Most of the time you use this function, your objective will be to purge by dates. However, occasionally, when you're sure you will never do business with a particular customer again (business burns down, they retire out of state, etc. you will want to purge all history records for one customer. Simply use that customer number for "starting cust #" and "ending cust #", and press [**F1**] for "earliest" to "latest" date.

6. Purging vs Initializing: The purge history function described here is a surgical instrument – that's one of the reasons it's time consuming. If you goal is simply to wipe out all history, you should use XRINIT on the three (3) files noted above.

**To begin**
From the second page 2 of the S/M main menu, select *Purge service history*.




**Enter the following information:**

**Starting customer #**
Enter the number of the first customer for which you would like to purge historical data., or press [**F1**] to specify the "First" customer on file.

**Ending customer #**
Enter the number of the last customer for which you would like to purge historical data, or press [**F1**] for the "Last" customer on file, or --if you did not use [**F1**] to specify me starting customer --press [**ENTER**] in order to purge just one customer.

**Starting date**
Enter the date for which you would like to begin to purge historical data, or press [**F1**] to specify the "Earliest" date on file.

**Ending date**
Enter the date for which you would like the purge of historical data to end, or press [**F1**] to specify the "Latest" date on file, or -- if you did not use [**F1**] to specify the starting date – press [**ENTER**] in order to purge just one day.

When asked *Field number to change ?* make any desired changes then press [**ENTER**]. Follow the warning instructions at the bottom of the screen to either purge the data

or cancel your request. _____

# Chapter 32

# File Utilities

## Introduction

This function will allow you to:

- "Recover" the data files that have become corrupted (fouled up).
- Recover disk space by rebuilding data files with purged or deleted records that are still taking up space.
- Export your data into a format that can be used by many popular spreadsheet, word processing and data base programs.

## Corrupted data files

Data file corruption does not occur very often, but you do need to be aware of it just in case one of your data files does become corrupted. This can occur for only a handful of reasons. The most common being:

1. The power to your computer gets turned off when you are using your Samco applications.
2. Your hard disk has developed a defect.

Corrupted data files can't be used reliably afterward, and any attempt to use them causes unusual error messages and you are removed from running the Samco applications.

If this occurs, or if you begin to get unusual results while using your software and

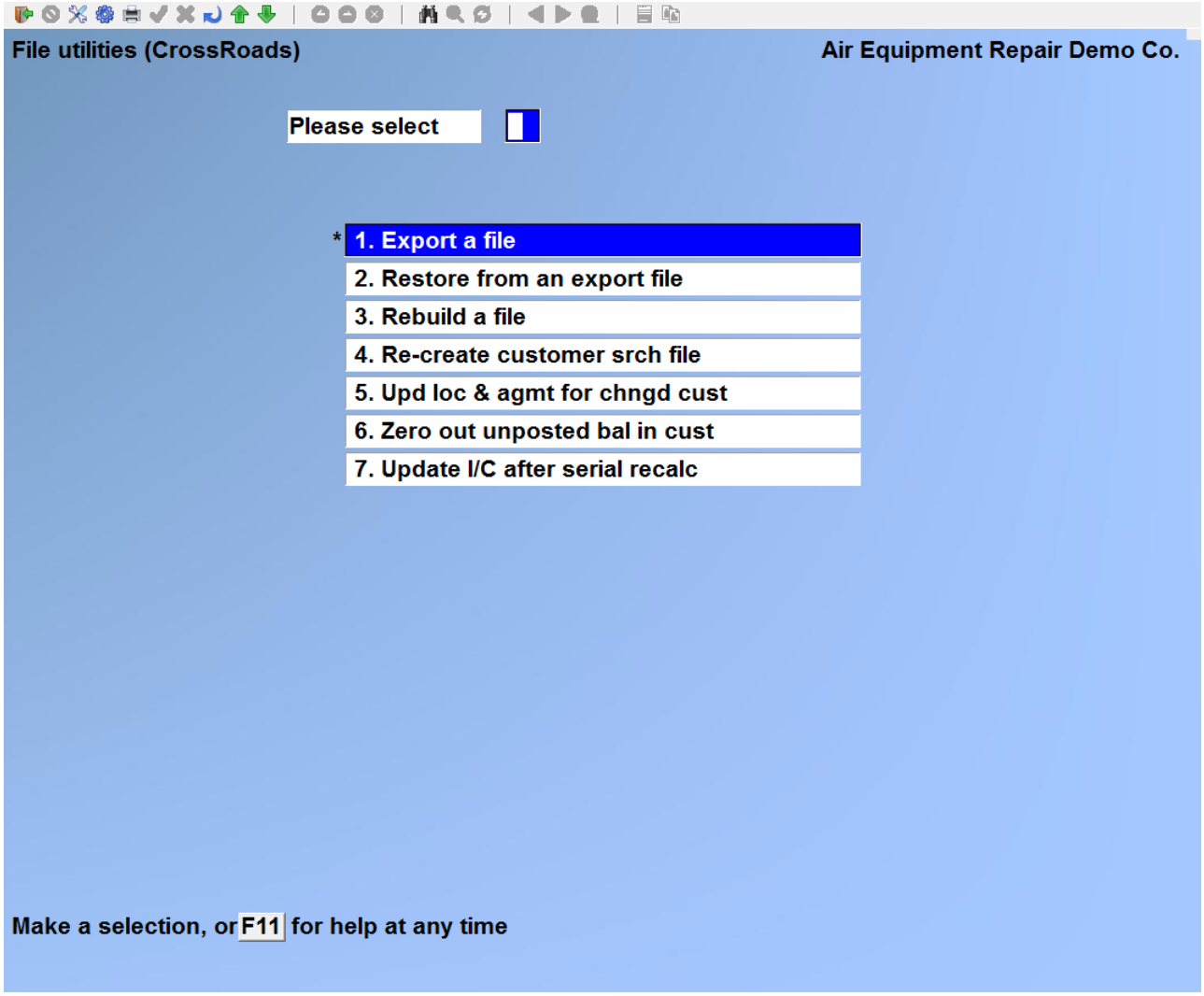
suspect that there may be a corrupted data file, you should get technical support.

Your supplier or an independent professional may be able to provide this support. If not, contact Samco Software Inc.'s support department directly (there may be a fee).

## Handling

Data file corruption does not mean that all of the data in the file is no longer usable. Usually, just a few of the records in the file have become corrupted.

In *File utilities*, the function *Rebuild a file* will take out the good records in the data file, place these in a temporary file, and then replace the old file with the good records. In addition to this, any deleted or purged records which are taking up disk space will also be permanently removed and the file compressed to its physical size.




## Export a file

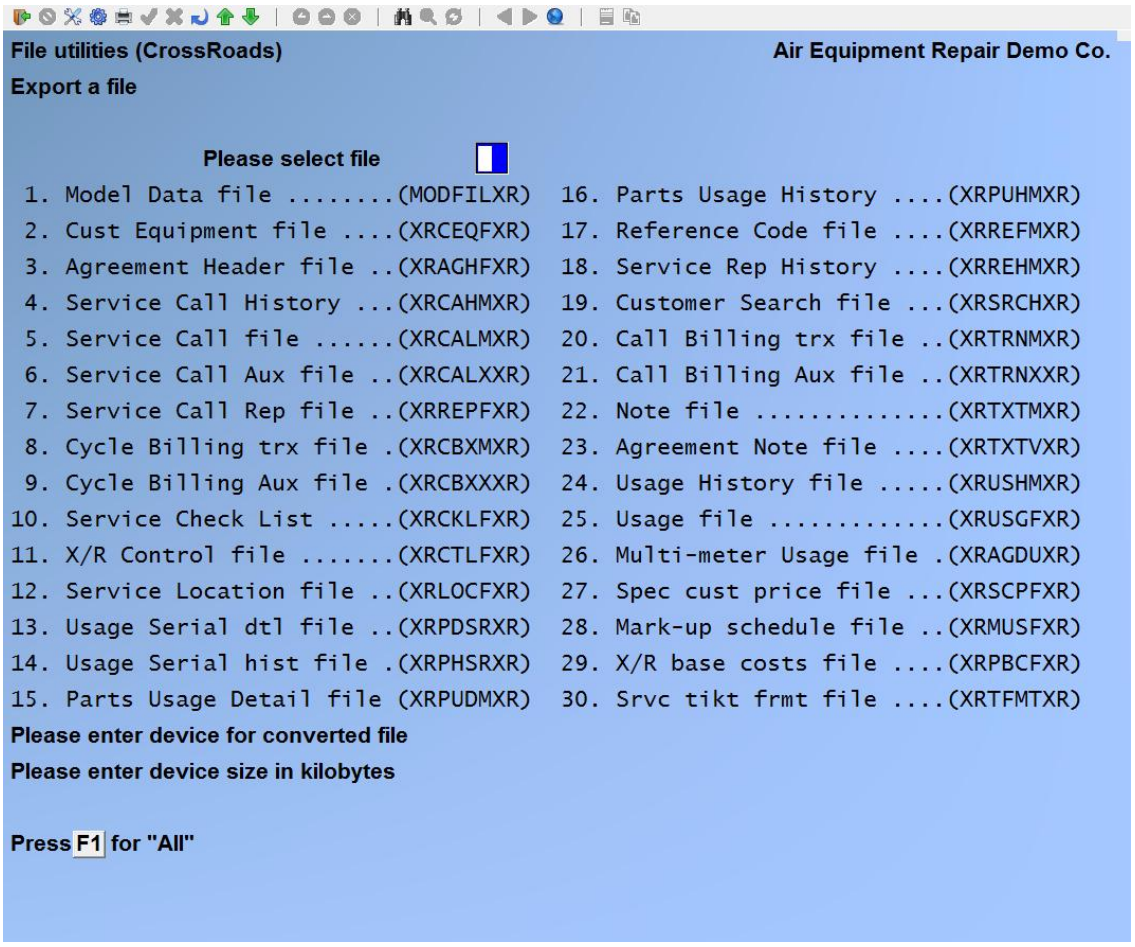
This function is used to export data files from the internal format to a "flat" ASCII file format. The data file(s) is read in and an output file is created in the Samco root directory with the name "**xxxxxxnn.EXP**". Where '**xxxxxx**' is the file name, and where '**nn**' is the company number the file came from.

These instructions explain how to export a file. This example exports the Model Data (MODFIL) file in company XR.

1. From the main menu:

   Service Manager >> F2 >> File utilities >> Export a file … the system will display

the file selection menu:




2. Type the number that corresponds to the file that you wish to export (e.g. 1. for Model Data file).

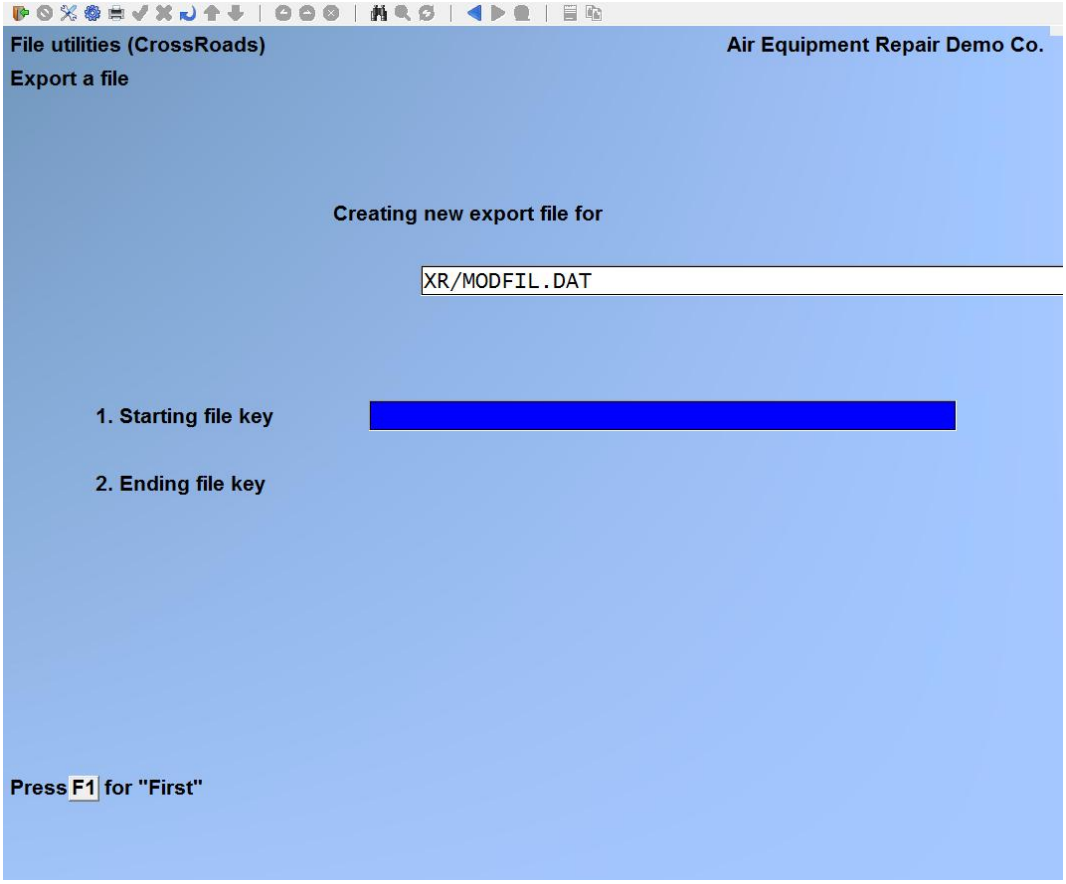
3. At “Please enter device for export file” press **[F1]** for Linux or specify the drive for Windows (e.g. C)

4. At “Please enter device size in kilobytes” press **[F1]**.

5. At “Any change” press [**ENTER**].

6. At (C) create new export file or (A) add records to existing export file type C to create a new file and press [**ENTER**].

7. The system displays:




8. The system will display the message “Export completed - press TAB to return to file selection menu”. Tab out. The system has copied the MODFIL.DAT file for the XR company to file MODXR.EXP.

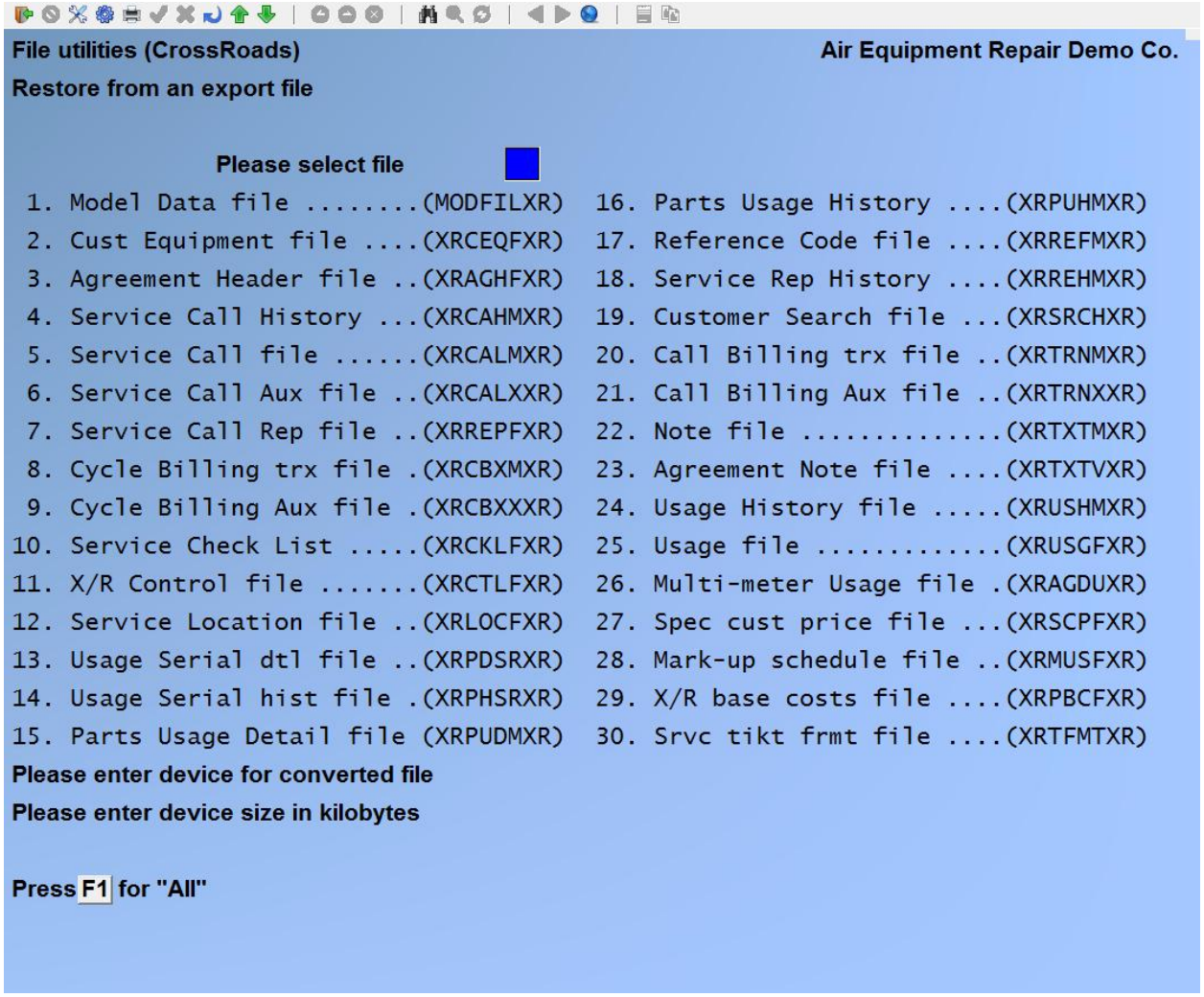
## Restore from an export file

This function is used to restore one or more of the listed data files from the "flat" ASCII file format to the internal format. The exported file is read in and an output file is created in the company sub-directory with the name "**xxxxxx.DAT**". Where "**xxxxxx**" is the file name.

These instructions explain how to restore a previously exported file. This example restores the Model Data (MODFIL) file in company XR.

1. From the main menu:

   Service Manager >> F2 >> File utilities >> Restore from an export file … the system will display the file selection menu:




1. Type the number that corresponds to the file that you wish to export (e.g. 1. for Model Data file).

2. At “Please enter device for export file” press **[F1]** for Linux or specify the drive for Windows (e.g. C)

3. At “Please enter device size in kilobytes” press **[F1]**.

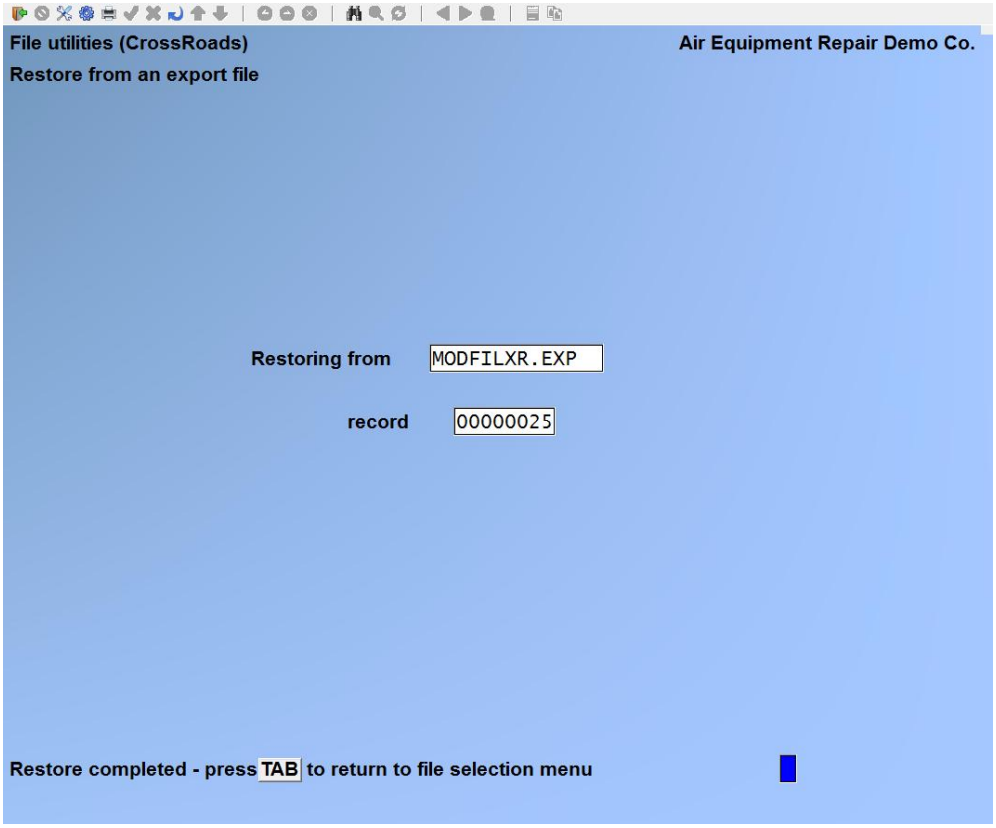
4. At “Any change” press [**ENTER**].

5. At (C) create new export file or (A) add records to existing export file.

   If you select (C) create, this function will initialize the data file currently being used in production. Its contents will be fully replaced with data from the

export file. Please make sure you want to do this.

6. The system displays:




7. The system will display the message "Restore completed - press [**TAB**] to return to file selection menu". Tab out. The system has copied the MODFIL.DAT file for the XR company to file MODFILXR.EXP.

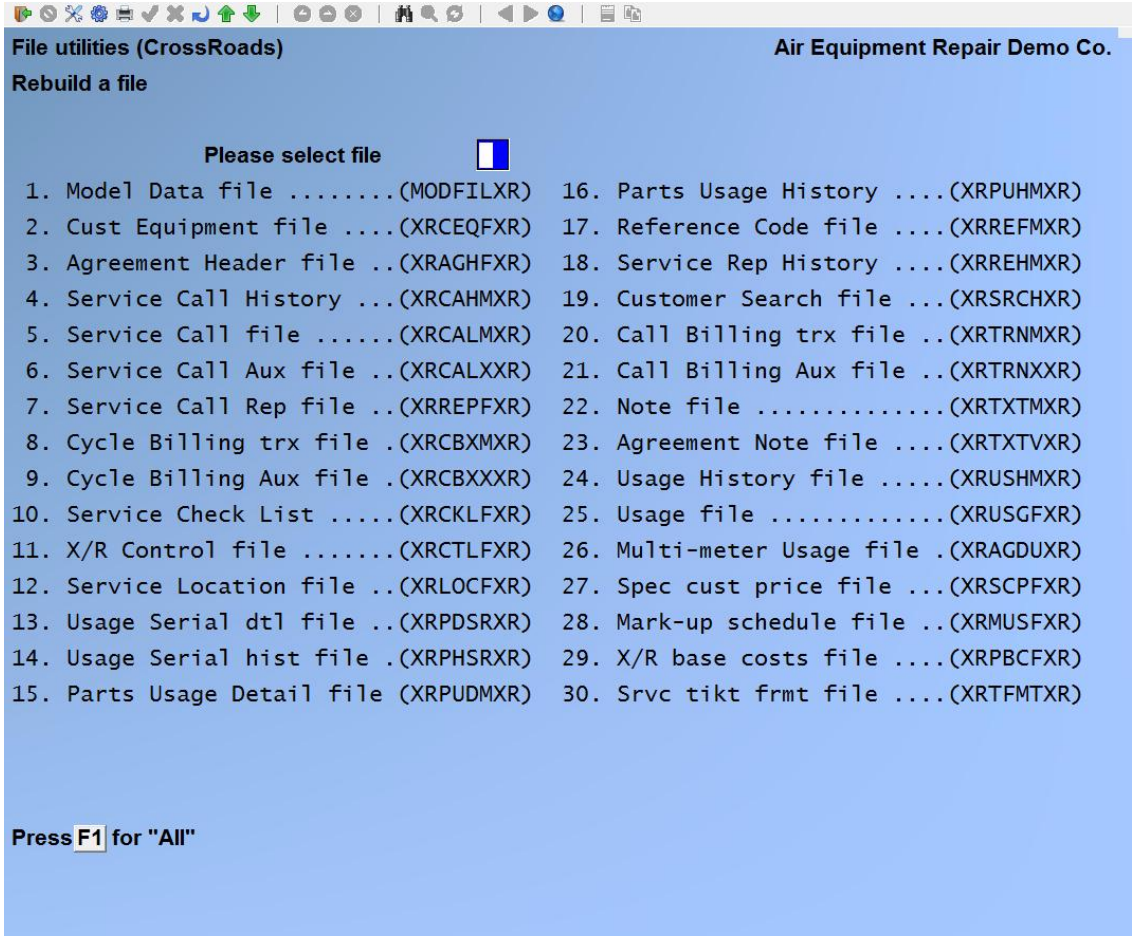
## 3. Rebuild a file

Rebuilding data files can be used for one of two reasons:

1. A data file has become corrupted and needs to be recovered.
2. To recover disk space and clean out deleted or purged records.

The *Rebuild a file* function essentially takes the good records out of a file, removes the old file, and creates a new file with the good records.

To begin, select *Rebuild a file* from the *File utilities* menu.




At **Please select file** enter the number of the file you wish to rebuild or press **[F1]** to rebuild all of the data files. A new screen appears showing the status of each file as it is being rebuilt. Once completed, you are returned to the *Rebuild a file* screen.

**4. Re-create customer search file**

This function is used to create or re-create (as the case may be), a quick-search file used by Service Manager to "find" a customer's I.D. (account number) from their address or phone number. It will build-from-scratch for customers that were existing in Accounts Receivable before Service Manager was loaded, or it will re-create the search file for customer records that may have been damaged.

*All users must be logged out of Service Manager, Billing, Professional Invoicing, Job Cost and Point-of-Sale before running this utility.*

**5. Update locations and agreements for changed customer data**

This function is used to update the addresses and phone numbers in the agreement record and the 000 location record in Service Manager.

In the current Service Manager package, the agreement and location files are automatically updated when the address and phone number is changed in the A/R customer master file. The only time this utility is needed is if customer records were changed before this feature was added.

*All users must be logged out of Service Manager, Billing, Professional Invoicing, Job Cost and Point-of-Sale before running this utility.*

**6. Zero out the unposted balances in the customer master file**

This function is used to zero out incorrect un-posted balances in the customer master file.

*Please make sure that all transactions are posted from Service Manager, Billing, Professional Invoicing, Job Cost and Point-of-Sale before running this utility.*

*All users must be logged out of Service Manager, Billing, Professional Invoicing, Job Cost and Point-of-Sale before running this utility.*

**7. Update I/C after serialized recalculate**

This function is only used if you are using the Inventory module. It must be run immediately after the recalculate inventory function in Inventory Control has been run. It will update the inventory item file and status records with quantities committed through Service Manager service calls; and it commits the unsold serial numbers that have been assigned through Service Manager parts usage.

**Data Files in Service Manager:**

**Model Data file:**
This file contains the basic information that is captured for each model of equipment that you may service. It includes all of the data required for creating agreements, tracking repair and failure data and scheduling preventive maintenance.

**Cust Equipment file:**
This file maintains a record for each piece of field equipment. It is your master data base describing which customers own what make and model of equipment.

**Agreement Header file:**
This file contains the basic information that is captured for every service agreement. It includes customer number, relevant agreement dates, bill type, call type, cycle billing frequency and sales terms.

**Service Call file:**
This file contains all of the information relevant to non-billed service calls. That is calls that are opened, dispatched, suspended, completed, or closed and not yet billed.

**Service Call History file:**
This file contains all of the information relevant to billed service calls. That is calls that are opened, dispatched, completed, closed and billed.

**Service Call Rep file:**
This file contains the information about labour expended on each service call while the call is still active (i.e. not billed). One file record is created for each block of on-site time, for each service person engaged. The information stored includes the call number, service rep I>D>, the date and time of dispatch, arrival, departure, all pricing information for onsite time, as well as travel time and distance, the hours and minutes billing time for travel and on-site charges, the description to be printed on the service invoice for the labour time and a variety of status flags related to the labour record.

**Cycle Billing Transaction file:**
This is a work file used to hold service agreement cycle billing records from the time that they are selected for billing until the time they are posted to Accounts Receivable.

**Service Checklist file:**
This file contains the user-defined check lists.

**Service Manager Control file:**
This file contains the parameters that you set to define your Service Manager module. Each parameter determines a specific procedure to be used in other packages.

**Service Location file:**
This file contains the information used for customer "service-at" locations that are in addition to the bill-to address entered in the Accounts Receivable package. Records in this file contain the service-at address, personal contact, phone number, travel zone, map co-ordinates, travel time and mileage, assigned service rep, the location's tax code and travel directions.

**Usage Serial Detail file:**
This file contains the information about serialized parts used on each service call while the call is active (i.e. not billed). The information stored includes the call number, part number, quantity used and the relevant pricing and costing data.

**Usage Serial History file:**
This file is similar to the Usage Serial Detail file and contains the information about serialized parts used on each service call after the call has been billed. The information stored includes the call number, part number, quantity used and the relevant pricing and costing data.

**Parts Usage Detail file:**
This file contains the information about parts used on each service call while the call is active (i.e. not billed). The information stored includes the call number, part number, quantity used and the relevant pricing and costing data.

**Parts Usage History file:**
This file is similar to the Parts Usage Detail file and contains the information about parts used on each service call after the call has been billed. The information stored includes the call number, part number, quantity used and the relevant pricing and costing data.

**Reference Code file:**
This file contains the key codes for service reps, action codes, failure codes, overage codes, call types and bill types.

**Service Rep History file:**
This file contains the records of time spent on each call by each service rep. As the name implies, this file is used to hold the service rep data for calls that have been billed.
**Customer Search file:**
This file contains a copy of each name, address, telephone number and customer

number for each “service-at” location. It is used to quickly identify a service location using any of those parameters during service call open and/or dispatch operations.

**Call Billing Trx file:**
This temporary file is used to hold service call billing records from the time they are selected for billing until the time they are posted to Accounts Receivable.

**Note file:**
The Note file contains those notes that you have constructed for inclusion in service call invoices and histories.

**Agreement Note file:**
The Agreement Note file contains the notes that you have included in your Service Agreements.

**Usage file:**
This file contains usage meter readings entered during service calls or usage update transactions.

**Usage History file:**
This file contains usage meter readings entered during service calls or usage update transactions for billed service calls.

**Multi-meter Usage file:**
This file stores the usage statistics and billing codes for agreements that contain a piece of equipment with multiple usage meters. Records in this file are keyed to the service agreement and equipment identifier and contain a table of data for each meter associated with the specified customer.

**Special Customer Price file:**
This file is used to store special pricing for a particular customer. It contains the customer number, item numbers and relevant prices for each item.

**Mark-up Schedule file:**
This file contains all of the pricing schedules for both mark-ups and discounts.

**Service Manager Base Cost file:**
This file holds the cost which is to be used to override the default cost when using Service Manager special pricing features.

**Agreement Detail file:**
This file contains a record for each piece of equipment included in a service agreement. It holds the equipment model and serial numbers, description, cycle

charge, service interval and relevant service dates, the assigned service check list, tax status and the service-at code.

**Service Manager Sales Trx file:**
This is a work file for sales transactions generated both from agreements and service calls. This file is posted to the Accounts Receivable Open Item file and is purged each time it is posted.

**Service Manager Sales Trx Dist file:**
This is a work file for sales transactions generated both from agreements and service calls. This file is posted to the Sales Distribution file in Accounts Receivable Open is purged each time it is posted.

**Service Manager Cash Trx file:**
This is a work file for cash receipts from service calls. It is purged when cash receipts are posted to Accounts Receivable.

**Service Manager Cash Application file:**
This is a work file contains a record for every invoice to which cash is applied during service call billing.

**Service Manager Inventory Trx file:**
This file contains the inventory transactions entered when processing service calls. This file is purged when invoices are posted to Inventory Control.

**Service Manager Inventory Lock file:**
This file is used to limit access to invoice processing to one user at a time.

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# Chapter 33

# Error Messages

**Introduction**
This chapter presents and explains only those error messages that are specific to Service Manager.

**ERROR IN CALCULATING AGREEMENT EXPIRATION DATE**

**Cause:** Your entries for the service agreement start date and agreement length are causing the agreement expiration date to be outside of the software's allowable range.

**Action:** Correct either the agreement start date or the agreement length.

**ERROR IN CALCULATING NEXT CYCLE BILLING DATE**

**Cause:** Your entry for either the last cycle billing date and/or pro-rate days is producing an error when calculating the next cycle billing date.

**Action:** Correct either the last cycle billing date or the pro-rate days entry.

**NO RECORDS SELECTED FOR BILLING**

**Cause:** This message appears if you attempt to print invoices, but there are no service calls or agreement cycle bills selected.

**Action:** Use the various billing selection functions to select service calls or agreements before attempting to print invoices.

**INVALID FREQUENCY, PLEASE RE-ENTER**

**Cause:** You have entered a service agreement cycle billing frequency that is not recognized by the software.

**Action:** Enter a valid frequency.

**0 (ZERO) DETAIL RECORDS HAVE BEEN CHANGED**

**Cause:** This message appears when you requested an automatic price

change to service agreements, but there are no service agreement detail records that match the specifications you have entered.

**Action:** Make the necessary changes to your specification and request the automatic price change again.

**CUSTOMER OVER CREDIT LIMIT – OVERRIDE?**

**Cause:** This message appears if you attempt to open a service call for a customer whose balance exceeds his credit authorization.

**Action:** This is a customer relations problem to be handled according to your company's policy for such situations.

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