

Fleet Management System FMS

User Manual



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1 Overview

The CMI 'Fleet Management Solution' (FMS) Module is a solution designed for tracking vehicle servicing activity. FMS provides viewing, monitoring, and reporting of vehicle servicing, fleet vehicle information, and ancillary activities related to processing rental returns. Vehicle service information is collected at the fuel islands with the use of CMI *Genus* terminals programmed to accept service attendant inputs. The fuel island terminal also includes a receipt printer that prints vehicle 'hang tags' with the necessary vehicle information, plus damage tags, lost item receipts, and service attendant shift total receipts each time an attendant logs off the terminal.

The vehicle servicing activities monitored includes the time servicing started and finished, elapsed time, vehicles serviced per shift by attendant, vehicle damage reporting, lost item logging, break times, and fuel usage. The collected information is stored in the FMS database and is available for daily, weekly, and monthly reporting of activities and productivity.

FMS is a module that works in conjunction with the underlying services provided by the CMI 'System Manager Server'(SMS). Like the main 'System Manager Server', FMS is a web based application designed for use with the Control Module *Genus* series of programmable data collection terminals. The module provides a web service that the terminal uses to report servicing activity as well as to download vehicle information.

The FMS module also provides data viewing and reporting via web pages accessible by the browser of any network accessible workstation. Access to these features is controlled by user login, and user role assignments.

There is an optional 'Productivity Module' for FMS that provides extended reporting and totaling of vehicle servicing records. This module is used to generate views and reports of statistics on individual employee servicing totals by shift for any defined date/time period. This module also provides statistics on vehicle servicing that can establish mean averages for vehicle classes for any date/time period. The module includes definable performance parameters that can be used to calculated possible incentive payouts.

1.1 Fuel Island Workstations

The Fleet Management System collects information from the service attendants while they are servicing vehicles at the fuel islands. Each fuel island will have one or more ruggedized *Genus* data terminals installed, depending on the size of the island and the optimum number of service attendants. Because there are service lanes on both sides of the island, each data terminal functions as two separate fuel island 'workstations'. Location labels mounted on the pole next to the data terminals are used to identify the left workstation and right workstation of each data terminal. When a service attendant logs on to a workstation, they must scan the label to be identified with the left or right side of the data terminal. Once the logon sequence is complete, all activities performed by the service attendant will be recorded with the appropriate workstation identification.



1.2 Features

- Browser access to functions via Intranet/Internet
 - User login with password
 - User access restricted by assigned roles
- Dashboard view of current activity
 - Selectable by site
 - Site selection limited to sites assigned by administrator
 - View one or more locations of a site simultaneously
 - Drill down into recent history of any active workstation
- Vehicle Database
 - Vehicle lookup and editing
 - View service records for any vehicle
 - Query for all duplicate service records in selected date/time period
- Vehicle Service Records
 - View service records by employee and/or workstation
 - Select any date/time period for lookup
 - o Period totals: vehicle count, fuel pumped, average service time
- Vehicle Servicing Statistics
 - Select any date/time period for lookup
 - All vehicles, by employee, or by workstation
 - Aggregate totals, or totals by vehicle class
- Lost Items
 - By all or selected employee for any date/time period
- Fuel Reporting
 - Select any date/time period for lookup
 - All, by workstation, by employee, or by VIN
 - Fuel totals for period by:
 - Fuel pumped during vehicle servicing
 - 'Fuel Only' transactions
 - Fuel not recorded against a specific VIN
- Features Configured by Site
 - Re-servicing lockout period
 - o Minimum vehicle servicing time
 - Maximum break and lunch times
 - Workstation identification
- Company-wide Configuration
 - Group vehicle codes into vehicle classes
 - Status codes
 - Lost item types
 - Vehicle operations



1.3 Recommended Hardware

No additional hardware requirements beyond the recommended requirements for System Manager Server (listed below) are needed.

- Minimum recommended hardware requirements:
 - Intel® Dual Core Xeon 1.6GHz
 - Memory 4GB 8GB RAM
 - o 2 Internal hard disks RAID 1, (73GB capacity)
 - Dual Ethernet Network Adapter 1Gb

1.4 Software Prerequisites

No additional software requirements beyond the recommended requirements for System Manager Server (listed below) are needed.

- System Manager Server (SMS)
- SMS Prerequisites
 - Windows Server® 2003 R2, Standard x32 Edition, with SP2
 - o IIS 5.0 (minimum) or newer
 - o ASP.NET 2.0
 - Microsoft ® SQL Server ™ 2005 Standard (1 Socket)



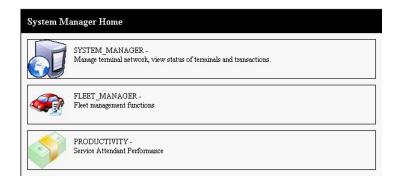
2 Navigation

2.1 Login

Access to the Fleet Management System is granted via the System Manager (SMS) login screen. This screen requires a user to enter their username and password to gain access to the site. Once logged in to the system, the user is restricted to functions based on his or her assigned roles or privileges. If the password is entered incorrectly, the system will prompt the user to re-enter.



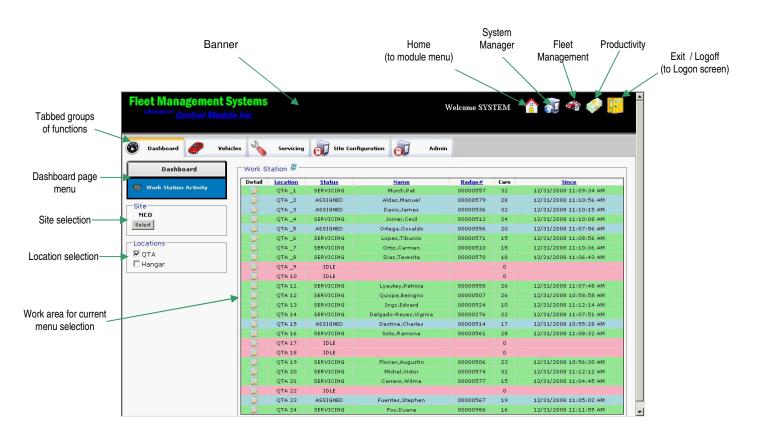
After a valid login is provided, the module selection screen is shown. Depending on the modules installed, other items in this module selection menu may be available. Click on the Fleet Manager item to access the main Fleet Manager view, and the fleet management functions.





2.2 Main View

To navigate around the Fleet Manager view, simply click on the appropriate buttons and tabs. Each section is represented by an easy to recognize icon, followed by its name. The Fleet Management features are organized into groups represented by the different tabs just below the banner. On each tab page, there is a menu of available operations on the left, and a work area to the right of the menu area that changes depending on the selected function. The icons on the right side of the banner can be used as shortcuts to the associated module.



In this sample view, the dashboard view is displayed. The 'MCO' site has been selected, and only the 'QTA' location is currently selected.



2.3 Common Navigation Items

There are many navigational items that are common among screens in the Fleet Manager pages. Most screens that display listings of data records use a list with integrated paging. Depending on the list, some rows may contain an icon used as a link to drill into a detail screen for viewing or editing. Some rows may contain a delete icon that may be used to delete the row from the table in the host database.

Common icons are:

Edit an item

Add an item

Delete an item

Refresh the view

Print the current list

Export the current list to Microsoft Excel

2.4 Date/Time Selection

Many screens are used to lookup historical records, like vehicle servicing records, for either viewing, reporting, or generating statistics and totals. On these screens, there is usually a panel labeled 'Range' that contains buttons for selecting the 'From:' and 'To:' date/time range of the lookup. Hitting either button will cause the date/time selection dialog to pop up. In this dialog, a date can be entered either manually through the 'Date:' edit box, or by clicking on the desired date in the calendar. The time can be set by selecting either the current time, or by using the values available through the hours, minutes, and AM/PM pull down lists. Hit OK to accept the selection. The new date and time will now be displayed in the appropriate area of the 'Range' panel.





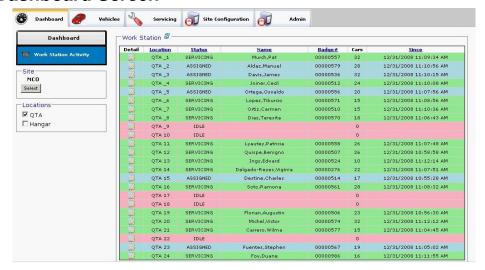
3 Screens

The Fleet Management software is designed to use the same screen organization and layout style as the System Manager. The various FMS functions and views are grouped into collections represented by each tab in the FMS main screen. Each tab contains a menu that provides access to the views and reports associated with the selected tab. The tabs, and their menus, are:

- Fleet Management Module
 - Dashboard Tab
 - Work Station Activity
 - Vehicles Tab
 - Vehicle Information
 - View Service Records
 - Duplicate Service Records
 - Servicing Tab
 - Service Records
 - Service Statistics
 - Lost Items
 - Fuel
 - Site Configuration Tab
 - Settings
 - Work Stations
 - Admin Tab
 - Status Codes
 - Vehicle Classifications
 - Lost Item Types
 - Operations
- Productivity Module
 - Productivity Tab
 - Shift Totals
 - Site Configuration Tab
 - Productivity Settings
 - Vehicle Class Scale



3.1 Dashboard Screen



The Dashboard screen (shown above) is the default Fleet Management Dashboard view. The Work Station Activity view is the only view available from the menu of the Dashboard tab. This view provides a quick visual indication of the current activity for all workstations associated with the locations selected in the 'Locations' panel. Each row in the list of workstations is color coded according to the current activity at that workstation. The 'IDLE' status indicates that no service attendant is currently logged on. If a service attendant is logged on, but not in the process of servicing a vehicle, the status is 'ASSIGNED'. When the service attendant begins servicing a vehicle by scanning or entering the VIN at the workstation, the status will show as 'SERVICING'. When finished servicing a vehicle, the attendant will hit the red 'Finish' button at the data terminal which sends the service complete message, and the status changes back to 'ASSIGNED'. When taking a break, or lunch, the service attendant performs the break sequence at the data terminal, and the status will show in yellow as 'BREAK'. If the attendant does not log back before the configured maximum break time, then the status will automatically change to 'BREAK EXCEEDED' and the color of the row in the list will be changed to a darker yellow. When the service attendant logs off the workstation at the end of their shift, the workstation status returns back to 'IDLE'. This screen automatically updates approximately every 10 seconds. It may also be updated manually by hitting the 'refresh' icon located above the list.

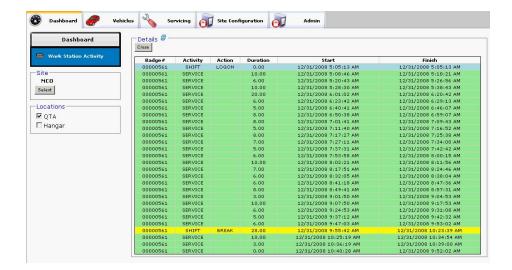
Clicking on the edit icon in the left column of any row will bring up a detail view of the shift activity performed on the workstation since the last logon. If the workstation status is 'IDLE' there will not be any shift detail.

NOTE:

Only the Dashboard tab provides the ability to select the site to view! If on a view in another tab, and it becomes necessary to select or change the site, the user must first return to the Dashboard tab to select the site, and then return to the previous tab.



3.1.1 Shift Detail View



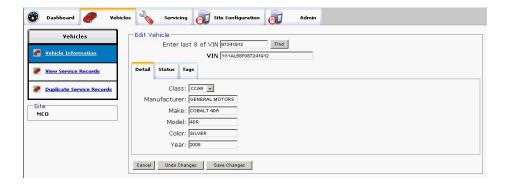
The Shift Detail view shows all shift activity for the attendant who is currently logged on to the selected workstation. The list will show the start and finish times of each activity, plus the calculated duration of the activity. Vehicle servicing, break times, and fuel only (if any) activities are the only activities that would be displayed in this view.

3.2 Vehicles

The Vehicles tab provides access to the menu for all vehicle related information and views.

3.2.1 Vehicle Information

The Vehicle Information screen provides view and edit access to the information stored for any VIN in the vehicle database. Each vehicle entry in the vehicle database is created when the vehicle information is imported from a customer provided vehicle file. To lookup a vehicle, enter the last 8 characters of the vehicle VIN, and then click on the 'Find' button.

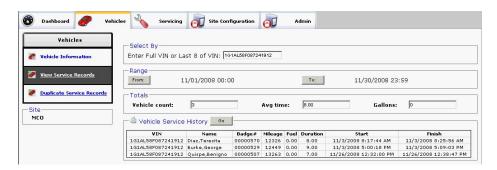




3.2.2 View Service Records

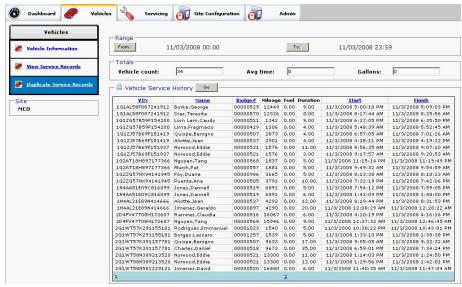
This screen is used to lookup any vehicle servicing activities that have been recorded for a particular vehicle. Either the full 17 character VIN, or the last 8 characters of the VIN can be entered for the lookup. The lookup is limited to the date/time range selected in the 'Range' panel.

If service records for the vehicle are found within the selected date/time range, each record will be displayed in the Vehicle Service History list, and the 'Totals' panel will display the total record count, the total amount of fuel in gallons used, and the average vehicle servicing time.



3.2.3 Duplicate Service Records

This screen is used to list all service records found for each vehicle that has been serviced more than once in the selected date/time range. Although any date/time range may be selected, this lookup is most useful when limited to a single day.





3.3 Servicing

The Servicing tab contains a selection of the different viewing and reporting activities that can be performed on the vehicle servicing transactions stored in the database. There are four distinct types of records in the vehicle servicing transaction table:

Service

A vehicle servicing activity. Starts when the attendant scans the VIN of a vehicle to service. Ends when the attendant hits the red 'Finish' button at the data terminal. Includes amount of gas pumped during the service activity, and the vehicle mileage entered by the service attendant.

Shift

Each shift record is identified as either a 'Logon', 'Logoff', or 'Break' activity. The shift logon record contains the start time of the shift, and the shift logoff record contains the finish time of the shift. The shift break record will contain both the start time and finish time of the break.

Fuel Only

The 'Fuel Only' activity is a special transaction that is designed to capture and record the employee and vehicle information of a non-revenue fuel transaction.

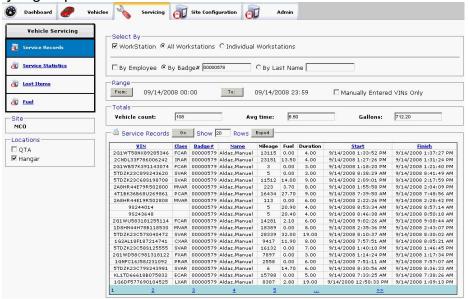
Fuel

The 'Fuel' transaction is designed to capture all other pumped fuel amounts that are not attributable to vehicle servicing or company sanctioned 'Fuel Only' activities. The fuel island data collection terminal constantly monitors the fuel pumped at the adjacent fuel pump. If fuel amounts are recorded, but there is no legitimate activity in progress, the fuel amount captured will be reported as a separate 'Fuel' transaction at the next fuel island terminal activity (any logon, logoff, break, or start vehicle service activity).



3.3.1 Vehicle Service Records

This screen is used to review the service record history in any selected date/time period for one or all employees. It is also possible to review by one, by all, or by a group of workstations.



The 'Select By' panel is used to determine what workstations, and what employees to include in the lookup. If only 'Workstation' is checked, then the service record lookup will include records for all employees, filtered by either 'All Workstations', or the 'Individual Workstations' selection. Choosing 'Individual Workstations' will display a pop-up list of all the workstations associated with the locations selected in the 'Locations' panel. One or more workstations may be checked to restrict the search to only service activities performed at those workstations. Choosing only 'By Employee' will further restrict the search to only service activities performed by the indicated employee at the selected workstations. If 'Workstation' is not checked, but 'By Employee' is checked, then records for all workstations are searched. If both items are unchecked, or no locations are checked, then no records will be returned, and the list area will show 'No service records'.

The 'Range' panel is used to restrict the search for only the records that have a service start date/time greater than or equal to the range 'From:' time, and a service finish date/time less than or equal to the range 'To' time.

Note that any time changes to the selections in the 'Select By' or 'Range' panels are made, it is necessary to hit the 'Go' button to perform the new search.

The 'Totals' panel will display the total number of vehicles (records) returned by the search, the total amount of fuel in gallons of the returned records, and the average service time over all the returned records.

The last panel, the 'Service Records' panel will display a grid of the returned records. The number of rows in the grid can be adjusted for optimum viewing. If more records than the number of records to 'Show' is returned, there

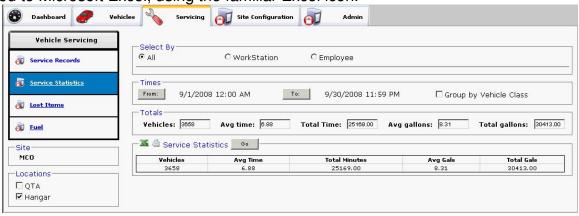


will be a list navigation bar on the bottom row of the list to permit access to the entire list of returned records. The printer icon to the left of 'Service Records' is used to print the currently displayed page of records in the list. To print or export the entire list of records, use the 'Export' button.

3.3.2 Vehicle Servicing Statistics

This page is used to create total and average service times and total and average gallons of fuel consumed for all the service records returned according to the desired search criteria. This page is useful for generating monthly and weekly service figures for the entire site or individual service attendants.

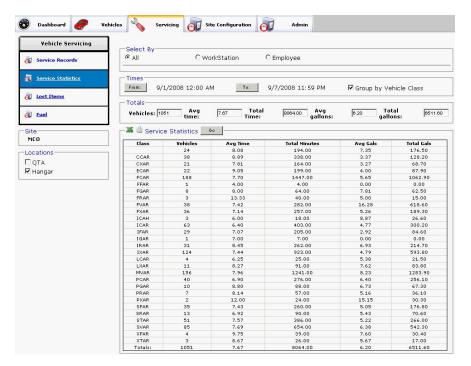
The results in the 'Service Statistics' panel will show the number of 'Vehicle' service records returned by the search, plus the combined statistics of those records. The results can either be printed by using the printer icon, or exported to Microsoft Excel, using the familiar Excel icon.



The 'Select By' choices on this page allow for selecting either 'All' records, records for an individual 'Employee', or records collected at one or more 'Workstations. As usual, the 'Times' panel restricts the date/time range of the lookup.

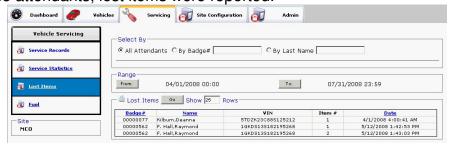
Checking the 'Group by Vehicle Class' box will cause the results of the search to be broken down according to vehicle class, and one row of statistics will be display for the statistics of each vehicle class that appeared in the search results.





3.3.3 Lost Items

The fuel island terminals have a function to print a 'Lost Item' receipt on demand whenever a service attendant finds a lost item while servicing a vehicle. The service attendant name and badge number, the vehicle VIN, and the date and time the lost item was reported will be printed on the receipt and recorded in the Fleet Management database. This page can be used to lookup when and by which service attendants, lost items were reported.



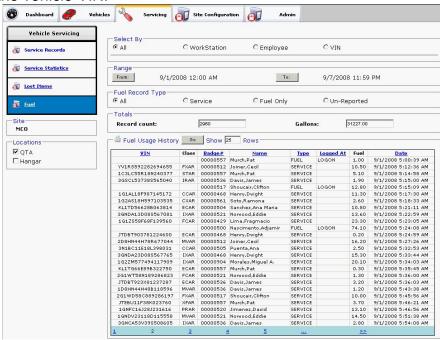


3.3.4 Fuel Reporting

This page is used to view and report on fuel consumption recorded by the fuel island data collection terminals. As stated before, fuel amounts are stored in three different types of records in the vehicle service records table:

- SERVICE
 - Contains the amount of fuel pumped while the vehicle was being serviced.
- FUEL ONLY
 - o A special transaction for approved, non-revenue fuel usage
- FUEL
- A 'catch-all' record to log when fuel is pumped, although the vehicle that received the fuel is unidentified.
- These records should be carefully reviewed to determine whether or not the fuel usage was approved.

The 'Select By' panel is nearly the same as that used on the 'Service Statistics' page with the added ability to select a specific vehicle for the search by entering the vehicle VIN.



The 'Fuel Record Type' panel can be used to restrict the results to only the type of fuel records desired. The 'Totals' panel provides a quick look at the number of records, and the total number of gallons of fuel.

Because the 'FUEL' records are created at the fuel island terminal whenever a new service attendant activity is performed, like logging off the shift, going on break, or returning from break, that information is recorded for reference in the 'Logged At' column. This means that the amount of fuel shown was pumped sometime before the indicated event, and after the last completed activity.



3.4 Site Configuration

Some items may be configured on an individual basis by site. This allows for setting values according to the local work methods.

3.4.1 Vehicle Servicing



VIN Service Lockout Time

Whenever a service attendant scans a VIN to begin servicing a vehicle, the start service request is sent to the host. The host checks to see if the vehicle has recently been serviced. If the vehicle had been serviced within the number of minutes defined for the lockout time, then the host sends a message back to the user that the vehicle has recently been serviced and rejects the attempt to start the vehicle servicing. The service attendant may get a supervisor to override this lockout at the fuel island terminal.

Minimum Service Time

A minimum service time is enforced at the fuel island terminal. Once a service attendant has started a vehicle service activity, the terminal will not accept the 'Finish' button to close the vehicle service activity until the minimum vehicle service time has elapsed. This feature is designed to prevent false service records that could exaggerate the service attendant's performance.

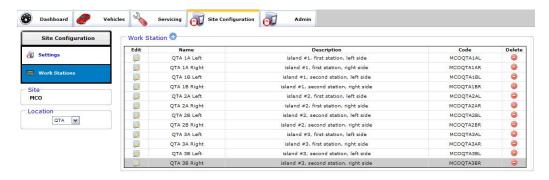
Break Time / Lunch Time

Maximum values may be set for the break and lunch times to be observed at the fuel islands. These values are downloaded to the fuel island data collection terminals. When an attendant goes off on break or lunch, the yellow light on top of the fuel island terminal is lit. If the attendant exceeds the break or lunch time, the yellow break light will start flashing to indicate to the supervisor that the break or lunch time has been exceeded. This status is also sent to the host for display on the dashboard screen.



3.4.2 Workstations

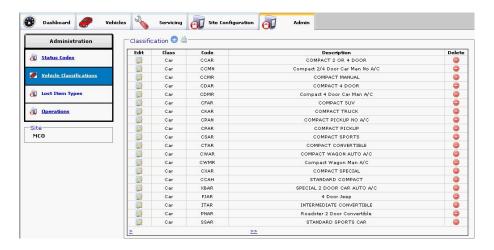
Each fuel island data collection terminal may function as two workstationsone to be used by the service attendant using the lane on the left side of the unit, and one used by the service attendant using the right lane. There are barcoded labels provided by Control Module Inc. that are used to identify the workstation, and associate that workstation with the service attendant when the attendant logs on for the work shift. This table is used to provide a user friendly name for each workstation. The name is associated with the actual bar code used at the fuel island terminal, shown in the 'Code' column. These workstations are usually configured for each site after the initial data terminal installation.





3.5 Admin

The Admin section is for system administrators only. It contains company wide settings that apply across all sites.



3.5.1 Status Codes

Vehicle status codes are only actively used in systems that have a live interface to the rental system and current vehicle status. They are used to provide user friendly translation of status types for reports.

3.5.2 Vehicle Classifications

Vehicle classifications are used for grouping vehicles of specific code types into classes for vehicle servicing statistics calculations. Typically the initial list is populated via an import from an existing system. New vehicle codes may be added using the symbol. Any existing code or classification can be changed by clicking on the edit symbol in the left hand column.

3.5.3 Lost Item Types

Lost item types are used when recording lost items.

3.5.4 Operations

Not currently in use.