JIGSAW
Real Time Fuel Management

JIGSAWFUEL.COM

Jigsaw **FUEL**
User Manual
V 2.0
August 2018

Contents.

1. Fuel Management System Overview

The Jigsaw Online Fuel Management System is made up of just two major components, the fuel island controller on your fuel island, and the Jigsaw web site. The fuel island controller manages all of the on-site control functions in response to information fed directly to it, in real time, from the web site.

The system makes full use of communication and Internet technology which is now taken for granted in most walks of life. Data is passed to and from the fuel island using the same technology as used in mobile phones, so that there is no requirement for expensive cabling, and yard disruption. The Mobile Network links directly to the Internet so that data leaving the fuel island is reliably and securely routed to the Jigsaw Website as it happens on site.

The Fuel Island Controller is the user interface for the pumps on site. Before fuelling the user must ID the vehicle to be fuelled (eg using a tag or card) and then may be prompted for other information such as mileage or registration number. The fuel island is configured to match the site it is installed on so that it can make decisions on what pumps to offer, or what ID methods to accept. This set up is only required once, when the system is installed.

The web service needs a similar set up to that of the terminal so that it matches the on-site configuration; the number of tanks, the number of pumps, the products in the tanks and which pumps draw from which tanks. Again, this set up is only required once.

Once the web service has been set up, the vehicle fleet information must be input so that the system can recognise vehicles allowed to fuel on your sites. As soon as a vehicle is set up on the web server, it is able to fuel on all sites on the network. This latest generation of fuel management systems has done away with the requirement to "Ring-Round" the sites to gather transactions and update vehicle tables; all data is held centrally; all transactions are co-ordinated in real time on the central server and can be viewed immediately after they complete.
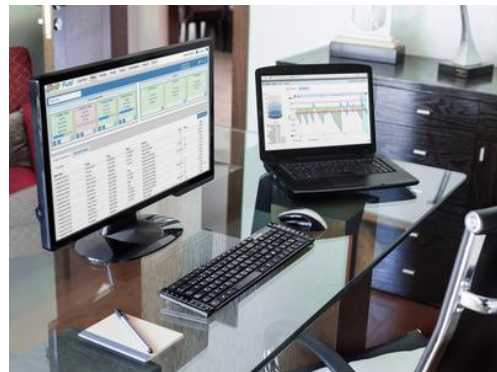
The system uses the mobile phone network linking directly to the Internet to communicate and hence avoids the requirement to connect to the users own web services. You don't need a dedicated on site PC; there is no software to install on your own PC, and hence no need to worry that you don't have the latest version of software. All you need is a web browser.

2. Setting up the FUEL Web Service.

Before using the web site, it's important to gather the information on your fleet. Also, you need to decide who will have access to the system and with what level of authority – eg see just one site, see all sites, have the ability to add and delete vehicles, be able to run reports etc.

2.1   Fleet Information

First, you need a list of all the vehicles you wish to be able to use the fuel island. In some fleets, the vehicle will only have a registration number, in some, just an allocated fleet number, some may have both. This primary identification will form the basis of your fleet listing. In addition to vehicles, you may have plant equipment which also requires fuel. To account for every drop of fuel running through your system, make sure that you include equipment such as lawn mowers, chain saws, tractors - even fuel cans.

Appendix 1 gives a typical layout for a data gathering sheet for your fleet. Fill in as many of the fields as possible.

2.2   Vehicle groups.

Once you have a current fleet listing, you need to decide on how reports on the fleet will be structured. Your fleet will have natural divisions in it such as make, type, use or department. You can define up to four group types for your fleet, each with unlimited entries. As an example, you may define one group as "Vehicle Make", with categories such as Volvo, Scania, Leyland, Ford, the next as "Vehicle Model", the next as "Vehicle Type" (eg Van, Tractor, Artic, Rigid, Plant), and the final group as department (eg Sales, Transport, Maintenance, Installation etc.). This last group will allow you to allocate fuel costs within your business.

Once you have decided on the vehicle groupings, assign your vehicles to the relevant groups ready for input.

3. Logging In

The Jigsaw Web Site is accessed through a standard web browser such as Windows Internet Explorer™, Google Chrome, Safari, etc.. Enter fuel.jigsawm2m.com into the browser address bar and then hit Enter.

A screen similar to the following will be displayed :
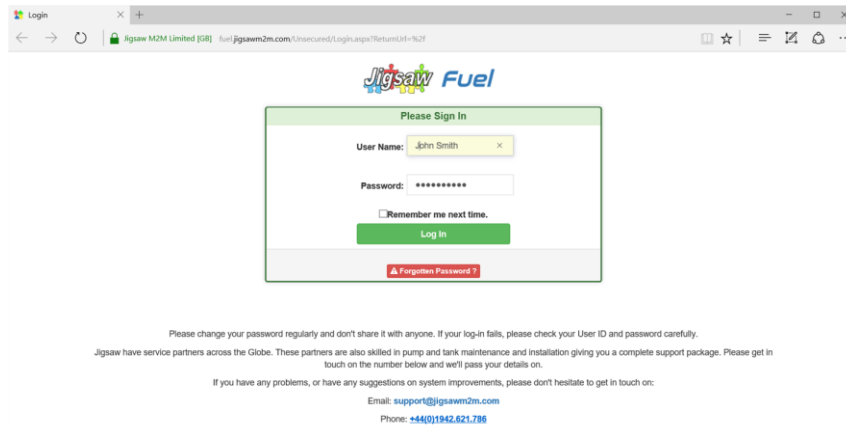
Enter your User Name and Password and then click the "Log In" button. If you have not been issued with a user name and password, get in touch with your system supplier as soon as possible, as you can't access the site without one.

If you forget your password, then there is a mechanism to send you a reset password which is accessed by clicking the red "Forgotten Password ?" Button.

Note:

This log in page will look slightly different depending on which Jigsaw distributor supplied the fuel management system to you.

4. Selection Tabs

Once logged in, the first page you are presented with will be the Quickview screen, but at the top of this page please take note of the tab bar. This is the primary means of navigating the site. The Tab bar has the following selectable options :

If any of the Tabs are missing or greyed out, then this indicates that when your log in was set up, you were not permitted access to this function.

The "Sites" tab allows you to view the latest information regarding the fuelling site being monitored. If your system monitors more than one fuelling site, then a pull down selection box allows you to switch the site being viewed.

The "Vehicles" tab is where you input and maintain all vehicle details. This tab also gives access to the latest fuelling transactions sorted by vehicle.

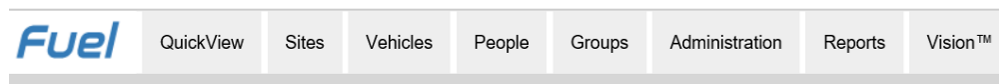The "People" tab is where you input and maintain all driver and fueller details. This tab also gives access to the latest fuelling transactions sorted by person. Identifying individual drivers is an option and the system may be configured not to show this tab.

The "Groups" tab is where you set up the reporting groups for vehicles and people. The Groups headings and contents should be decided on and set up before adding your fleet and drivers to the system.

The "Administration" tab is where system functions are accessed such as password maintenance, adding new users, and importing or exporting fuelling data.

The "Reports" tab is where you can generate and print out various reports such as transactions, stock levels, and group filtered reports.

Finally, the "Vision" tab gives the user a unique overview of the fuelling operation. The Tiles on the Vision page may be moved and changed to suit your preferences and market sector.

4.1   Accounts Tab

The Accounts tab is not normally available on a system so is not shown above. This function would only be used for systems where fuel is to be resold and hence is not normally required in a standard commercial fuelling environment.

The accounts tab incurs an additional annual management fee and so is only enabled when specifically requested.

The Accounts Tab functions are described in a separate manual available from Jigsaw.

5. QuickView Screen

After Log On, the user is always directed to this screen first. This screen gives an overview of the entire fuelling network on one page.
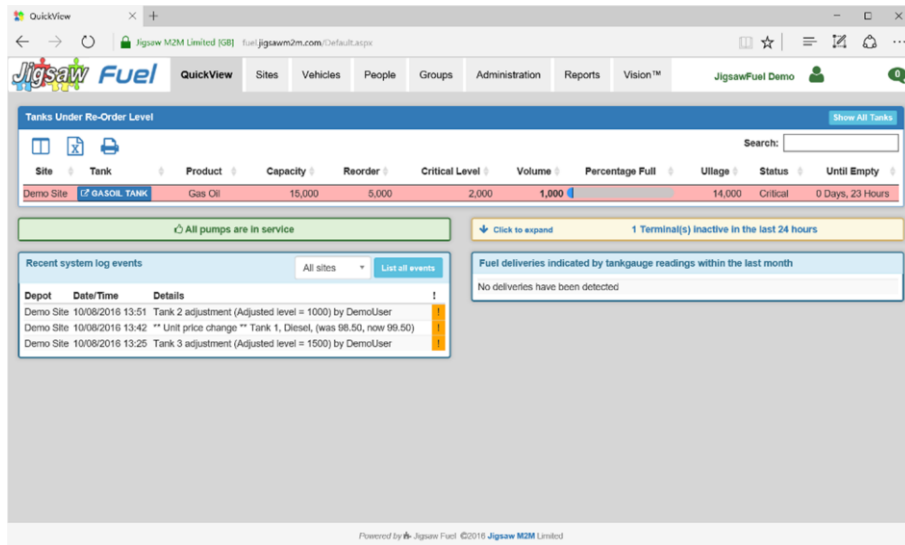
This is the QuickView screen. This screen will give you a working overview of the current status of your entire fuelling network including any issues requiring immediate attention, such as low fuel stocks or pumps out of service.

Starting at the top, this gives a list of all tanks which are below their re-order or critical levels. Users have pointed out that whilst they are ordering fuel, they would also like to see any other tanks close to re-order so they may be included in a round of fuel purchasing, so at the top right of the screen there is a "Show all Tanks" button. Click this to see the status of all the tanks in the network, irrespective of their alarm status.
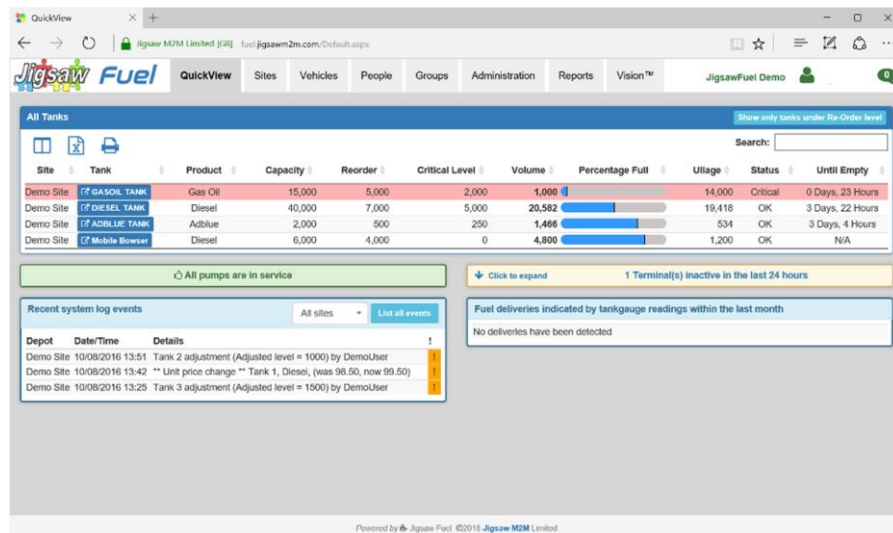
All the tanks in your network are now visible; click on the "Percentage Full" Heading to sort the tanks in to least to most full order.

The list of tanks may be filtered using the search box - for example typing "ad" in to the search box will immediately just show the ad blue tank.

The list of tanks may be sorted by clicking the column header. For example, the above list of tanks has been sorted from lowest percentage stock level to the highest by clicking the "Percentage Full" heading. The columns displayed may be changed, and the tank data exported by clicking the buttons below the buttons which are top left under the blue banner.

A unique feature of the Jigsaw system is the final column showing an estimated time until the tank is empty, based on the last five fill/refill cycles.

Below the tank stock status are four status boxes. The top two show the status of all the pumps in the network (left) and the status of the fuel island terminals (right) if they are both green, then there are no problems, if they are yellow or pink, then they will indicate the presence and number of problems, and clicking the box will drop down a list with the details of the pump or terminals in question.

Below these two boxes are two light blue boxes. The left hand box shows a log of system events. Only the critical events are shown by default, but a log of all events can be shown by clicking the "Show all events" button.

The right hand panel shows a list of deliveries in to the tanks calculated from the stock rise as measured by an installed tank gauge. If there is no gauge fitted, then this box will remain empty.

5.1   Tank Contents Display

Returning to the Tank Listing at the top of the page, the name of each tank shown at the start of the line is a button which, when clicked brings up a tank stock analysis tool :
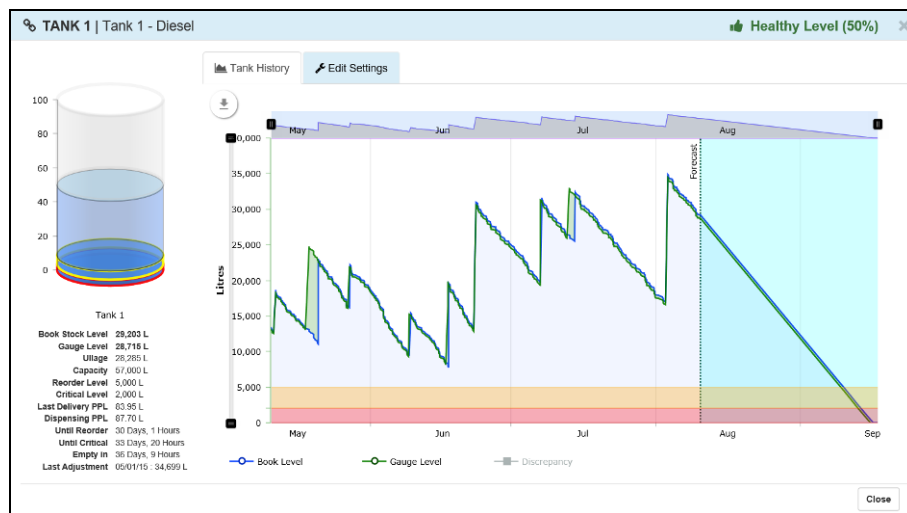
There are two tabbed pages on this screen. The default tab shows a history of the level of the stock in the tank being viewed along with the current level, alarm levels, stock price (last and dispensing), and estimated time until empty at current use rate. The above graph has two plots, one for the calculated book stock, and one for the returned tank gauge level. Above the main plot is a zoom tool which enables the user to look in more detail at sections of the stock history. If gauging is fitted, then another plot may be added showing the discrepancy between the book stock and the gauge stock. Click the "Discrepancy" text at the bottom of the graph to enable.

The two coloured bands at the bottom of the graph show the re-order and critical levels; the plot on the right hand side of the graph shows the predicted rate of fall based on the last 5 fill/refill cycles.

TANK 1 | Tank 1 - Diesel

Tank 1

Book Stock Level	29,203 L
Gauge Level	28,715 L
Ullage	28,285 L
Capacity	57,000 L
Reorder Level	5,000 L
Critical Level	2,000 L
Last Delivery PPL	83.95 L
Dispensing PPL	87.70 L
Until Reorder	30 Days, 1 Hours
Until Critical	33 Days, 20 Hours
Empty in	36 Days, 9 Hours
Last Adjustment	05/01/15 : 34,699 L
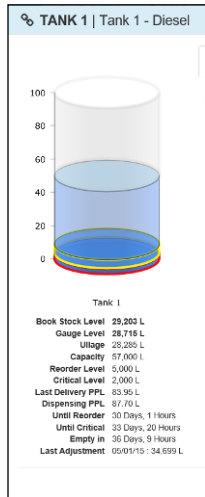
On the left hand side is a mimic display of the tank contents with the coloured bands at the bottom showing the re-order and critical fuel levels. Below the tank mimic display is a list of the current tank stock level, alarm settings and pricing information as follows :

Book Stock Level : The calculated stock in the tank given by Opening stock + deliveries in to tank – drawings through the pumps.

Gauge Level : The stock level returned from the electronic tank gauge (if fitted)

Ullage : The volume in the tank not taken by fuel – this much stock may be added.

Capacity : The total volume of the Fuel Tank

Reorder Level : The first alarm level at which stock should be reordered so that it is delivered before stock runs out.

Critical Level : A Second alarm level warning that the fuel level in the tank is dangerously low. It might be that pumps drawing from a critical level tank are disabled so that water/ sludge is not pumped in to vehicles.

Last Delivery PPL : This is the price per litre in pence/cents that the last delivery in to this tank was priced at.

Dispensing PPL : This is the price per litre in pence/cents of the fuel currently being dispensed. The system prices fuel on a FIFO (First in, First Out) basis so that if there are two deliveries in the tank, the fuel is costed at the price of the oldest delivery until that has all gone, then switches to the price of the latest delivery.

Until Reorder : This is the time, calculated by the system, and based on the recent usage pattern, until the stock in the tank will hit the re-order level of the tank.

Until Critical : This is the time, calculated by the system, and based on the recent usage pattern, until the stock in the tank will hit the critical fuel level of the tank.

Until Empty : This is the time, calculated by the system, and based on the recent usage pattern, until the tank will be empty.

The second tab (Edit Settings) allows the tank name, tank capacity and two alarm levels to be set/changed. You will need the correct access permissions set against your log in to be able to change, or even view these settings.
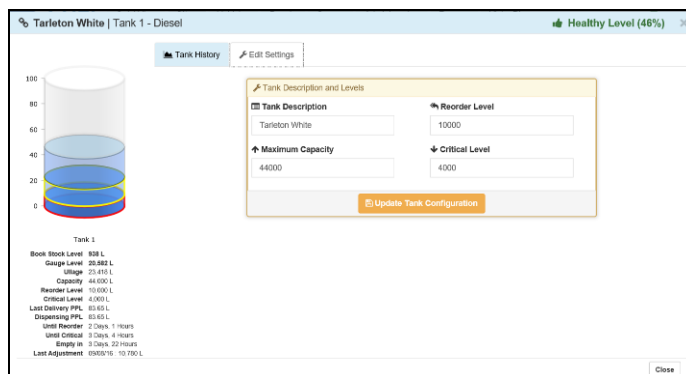
6. Sites Screen

The Sites screen is split into two sections. The top section (shown below) gives a current status of the site whilst the lower section provides a real time view of fuelling transactions and fuel stock records.

Starting with the top Blue Banner; on the left hand side is a drop down box which allows the user to switch between sites (if you have more than one).

On the right hand side is the name of the user's company, with a contact telephone number for the selected site underneath.
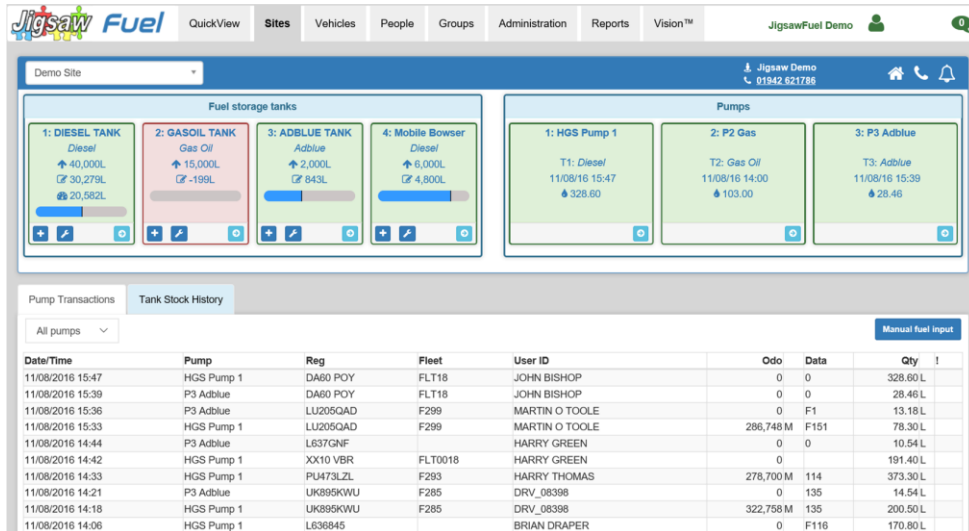
Clicking the house symbol gives access to the address and phone details of the site with a map service to pinpoint the terminal.

Clicking the telephone symbol gives access to the site contact details who may be contacted in reference to the system.

The Bell symbol (if visible) gives access to the alarm settings for e-mails or texts when, for example, fuel stock low alarms are raised.

Below the top banner are the Tank and Pump status boxes. The system can display up to four tanks and four pumps. If there are more than four, then a button will be present in the title banner which will allow the rest to be displayed if required.
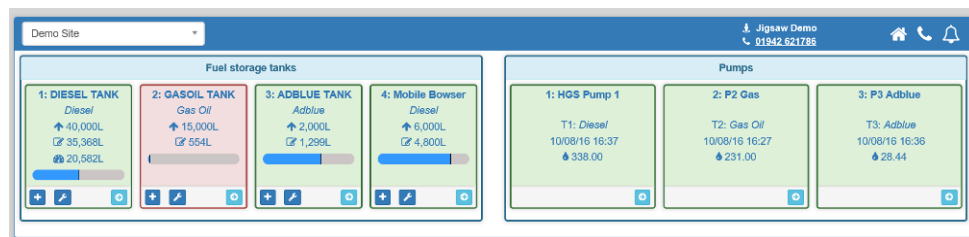
The status of the tanks or pumps is indicated by the colour of the box – green means all OK, yellow or red that there is a problem.

6.1   Tanks Status Display

At the top left of the sites screen is a list of tanks on that site. Each tanks details are shown in a coloured box, the colour of the box denoting the current status of the tank. The amount of information shown depends on the number of tanks on the site, but the tank name, the product, capacity and book stock are always shown, as well as a graphical bar display of the contents. If there are more than four tanks, then there will be a button on the top right of the banner which, when clicked, will show the rest.

If a gauge is fitted (as on tank 1 here) there is an additional line showing the volume in the tank according to the tank gauge. A tank with a gauge is highlighted by the graphical contents display being lower than on those without.

To add stock, or adjust the level in a tank, simply click the Plus (Add Delivery) or Spanner (Adjust Stock) Symbol for the relevant t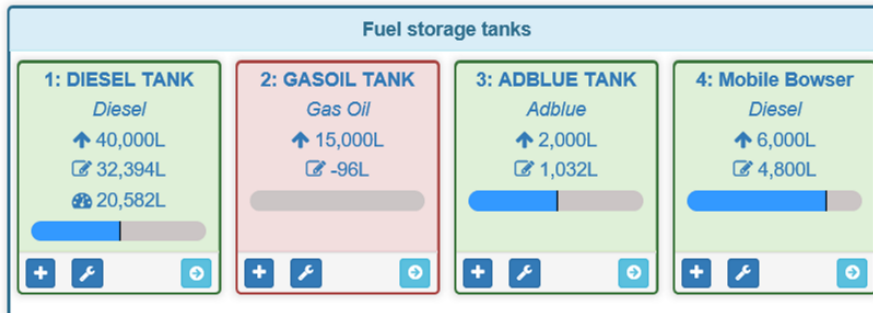ank. By clicking the Arrow symbol, or anywhere inside the tank box, the tank details and analysis tool are accessed. For more information see sections :

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                Section 5.4 for Adding Fuel Deliveries to a Tank
    and   Section 5.5 for Adjusting Fuel Stock Levels - Inputting Fuel Dips

To access tank details, click the arrow button, or anywhere in the relevant tank box. See Section 4.1 for more details.

6.2   Pumps Status Display

At the top right of the Sites page is a box which shows the status of up to four pumps. If there are more pumps than this on the site, then click the button which will appear at the top right of the banner to display them all.
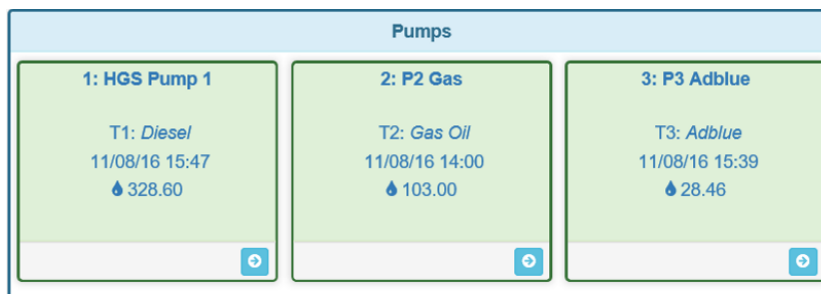
The status of the pump is shown by its colour – Green in service, Red out of service.

Clicking the arrow symbol, or anywhere on the text will show the details and settings of the pump and give the option to edit these settings. The ability to change settings is dependent on the access level of the log in used.

Clicking the pump box shows the following :

The box on the left shows a list of the last ten fuellings on this pump, the box on the right gives the details and current settings for this pump as follows :

Description : This is the name set by the user for this pump. The default name is Pump 'n' where 'n' is the logical number of the pump on the system.

Tank : This shows the Number of the tank which supplies this pump.

Life Total : This shows the total fuel throughput for this pump since it was started to be controlled by the FM system.

Period Total : This is a resettable totaliser showing the amount of fuel drawn since the last time the tote was reset. This may be used to manage pump servicing by resetting when the pump is serviced, then rescheduling servicing when it reaches some agreed value.

Period Start : This shows the time and date when the totaliser was last reset to zero.

In Service : This shows the current status of the pump – in service or otherwise. A pump may be taken out of service in one of three ways; It may be disabled using this web feature by editing the settings, it may be disabled on site using a managers tag, or it may taken out of service by the system if the number of "Null Deliveries" configured in to the "Null Delivery Setting" is exceeded. The default for this cut off is five. A Null delivery occurs when a tag has been used to start a transaction, but the system doesn't detect any fuel being delivered. If there are 5 consecutive ND's then the pump is disabled. This feature can be disabled by setting the Null Cutoff's to zero.

Start Timer : This sets the time in seconds that the system waits to see the first fuel start to flow before abandoning the transaction and posting a Null delivery. This time should be long enough to get from the FM system to the pump, remove the nozzle, remove the filler cap and start fuelling. The default is 15 seconds

End Timer : This sets the time in seconds that the system waits after the fuel stops flowing before it terminates the transaction. This should be made long enough to allow users to let a foaming tank settle, or to swap sides if vehicles have double sided tanks etc. The default is 45 seconds.

Null Cutoff : This sets the number of consecutive times a fuelling transaction may be started without the system registering any fuel flow. This helps to avoid damage to pumps from empty tanks, or highlights faults with the pumps. The default value for this setting is 5.

6.3 The fuelling and fuel stock records audit list

By default, the last 100 fuelling records for the selected depot are displayed as in the example below. The records may be filtered for individual pumps by selecting from the drop down list. (Top Left – Under pump Transactions Tab)

The final column of the fuelling records list (Headed'!') may contain a two-character alarm code to denote a record other than a standard fuelling record. A list of these codes may be found in appendix 3.

Hovering the mouse cursor over any of the fuelling transactions will give more details and a longer explanation of what any alarm flags mean.

At the top right of the transaction listing is a button marked "Manual Fuel Input". This allows any manual transactions to be entered. These transactions would be fuel drawings from a monitored tank that weren't controlled by the fuel management system. These transactions will draw down stock form the tanks. (See section 5.6)

Selecting the "Tank Stock History" tab switches to the fuel stock records. This is a log of all the deliveries and stock adjustments (dips) entered in to the system. A typical fuel stock audit trail is shown below. The records may be filtered for an individual tank by selecting from the drop down list (Top Left).

If user access allows, deliveries may be edited or even deleted if the fuel in question hasn't started to be issued yet.

6.4 How to enter a fuel stock delivery onto the system

At the top left of the sites screen is a list of tanks on that site. Each tanks details are shown in a coloured box, the colour of the box denoting the current status of the tank. The amount of information shown depends on the number of tanks on the site, but the tank name, the product, capacity and book stock are always shown, as well as a graphical bar display of the contents.
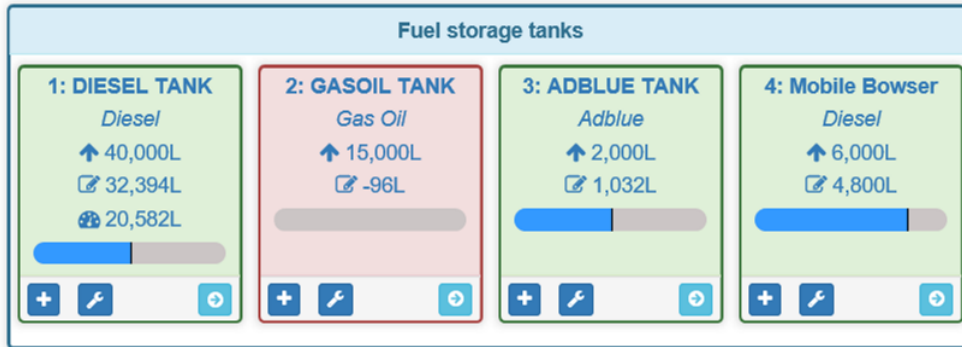
If a gauge is fitted (as on tank 1 here) there is an additional line showing the volume in the tank according to the tank gauge. A tank with a gauge is highlighted by the graphical contents display being lower than on those without. If a gauge is fitted, then the stock figures shown are those of the gauge rather than the book stock.

At the bottom of each tank box, there are three buttons. To add a fuel delivery, click the Button with the plus sign for the relevant tank.

The following Input box is displayed :

The left hand side shows the last ten deliveries for the tank in question. This allows the user to double check that the stock is being entered in to the correct tank, and that no one else has already entered the delivery.

The white boxes on the right hand side are where the delivery particulars are entered. The top box holds the delivery volume in litres. Below this the price per litre may be entered. The price is entered in pence or cents per litre to two decimal places. When the input page is first displayed, the Unit Price defaults to the price of the last delivery input; be sure to change this or some of the Vision Tiles and the "On Costing" reports won't work properly.

Below the fuel price, input the name of the fuel supplier. Below that you can input a delivery docket number, or purchase order number. Finally, if required you may enter any notes relating to this delivery. Press confirm to input the delivery.

6.5 How to adjust the volume of fuel stored in a tank

At the top left of the sites screen is a list of tanks on that site. Each tanks details are shown in a coloured box, the colour of the box denoting the current status of the tank. The amount of information shown depends on the number of tanks on the site, but the tank name, the product, capacity and book stock are always shown, as well as a graphical bar display of the contents.
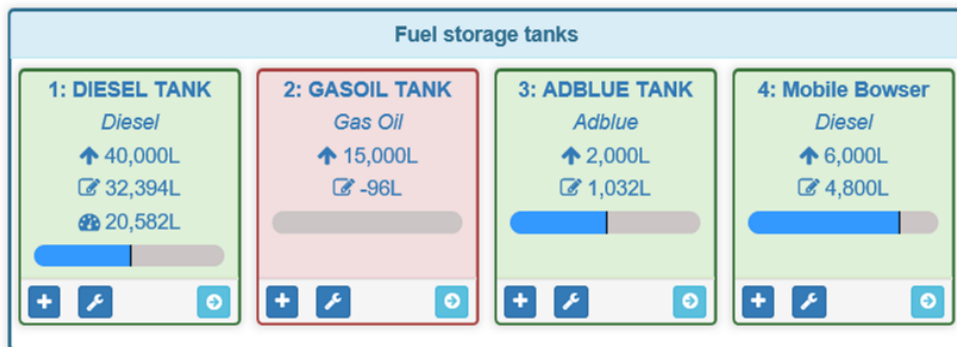
If a gauge is fitted (as on tank 1 here) there is an additional line showing the volume in the tank according ot the tank gauge. A tank with a gauge is highlighted by the graphical contents display being lower than on those without.

At the bottom of each tank box, there are three buttons. To adjust the stock in the tank, click the button with the spanner sign for the relevant tank.

The following input box is displayed :

The left hand side shows the last ten stock adjusts for this tank. This helps highlight if adjusting the stock in this tank is a regular occurrence. If you need to adjust the stock significantly on a regular basis, then further investigation is needed as this is a prime indication of pump calibration issues, leaks from tanks, short deliveries, or even theft from tanks.

6.6   How to enter a manual fuelling record

Clicking on the Manual fuel entry button will give you a screen similar to the one below. This screen allows you to enter fuelling details from sites configured on you system which do not have an active fuel monitoring system.

The information required is as follows :

Date/time of fuelling	Selectable from the calendar / dropdown lists.
Fuelling location	The depot at which the fuelling occurred.
Pump	Selectable.
Fuel quantity	Input the amount of fuel drawn in litres.
Vehicle	Selectable by reg., fleet or number.
Driver	Selectable
Odometer reading	The odometer reading (if known)
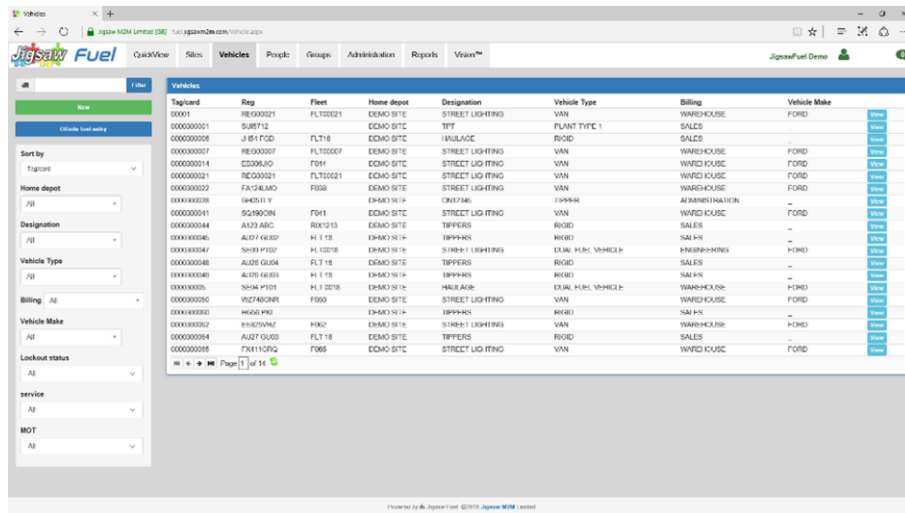
Click the "Confirm" button to save the entered details. The screen will reset to await the next entry. When completed, click the Return button to return to the Depots screen.

To keep track when entering several fuellings, the most recent will be shown in a list below the input box.

7. Vehicles Screen

The Vehicles screen allows you to assign, modify and view your vehicle fleet details.

The exact layout of this screen will vary according to your specific system configuration but a general example is shown below.

7.1   Sorting/Ordering

By default, the list is ordered by vehicle tag/card number. However, you can use the "Sort by" drop down (on the left hand side) to order by registration or fleet number.

7.2   Filtering

The list of vehicles can be filtered using the dropdown boxes on the left hand side of the screen. This can restrict the vehicles displayed by home site, by any of the enabled groups, and several other options. The exact list of options is a reflection of the functions configured. For example, if you are only using two of the four groups available, there will only be two group drop downs.

At the top left of the screen is a Filter Box. This allows the list of vehicles to be filtered easily and quickly. For example, typing all or part of a registration number in to the box, then clicking the "Filter" button will find all instances of that sequence of numbers/letters in the vehicle database.

At the end of each line, there is a View button which allows access (depending on Log In ID) to the vehicles details. (See next Section)

7.3   Viewing or Editing Details of an existing vehicle

To view or edit the details of a particular vehicle, simply click on the "View" button on the right hand side adjacent to the required vehicle.

If you are having difficulty finding the vehicle or, if your fleet is large, use the "Filter" facility at the top left of the screen. The search can be made on tag number, vehicle registration or fleet number. Input the details then click the "Filter" Button.

Note : If spaces have been added to input registration numbers then these must be entered in the Filter as they exist in the vehicle table for them to be found.

By selecting the "View" button the following screen is displayed :
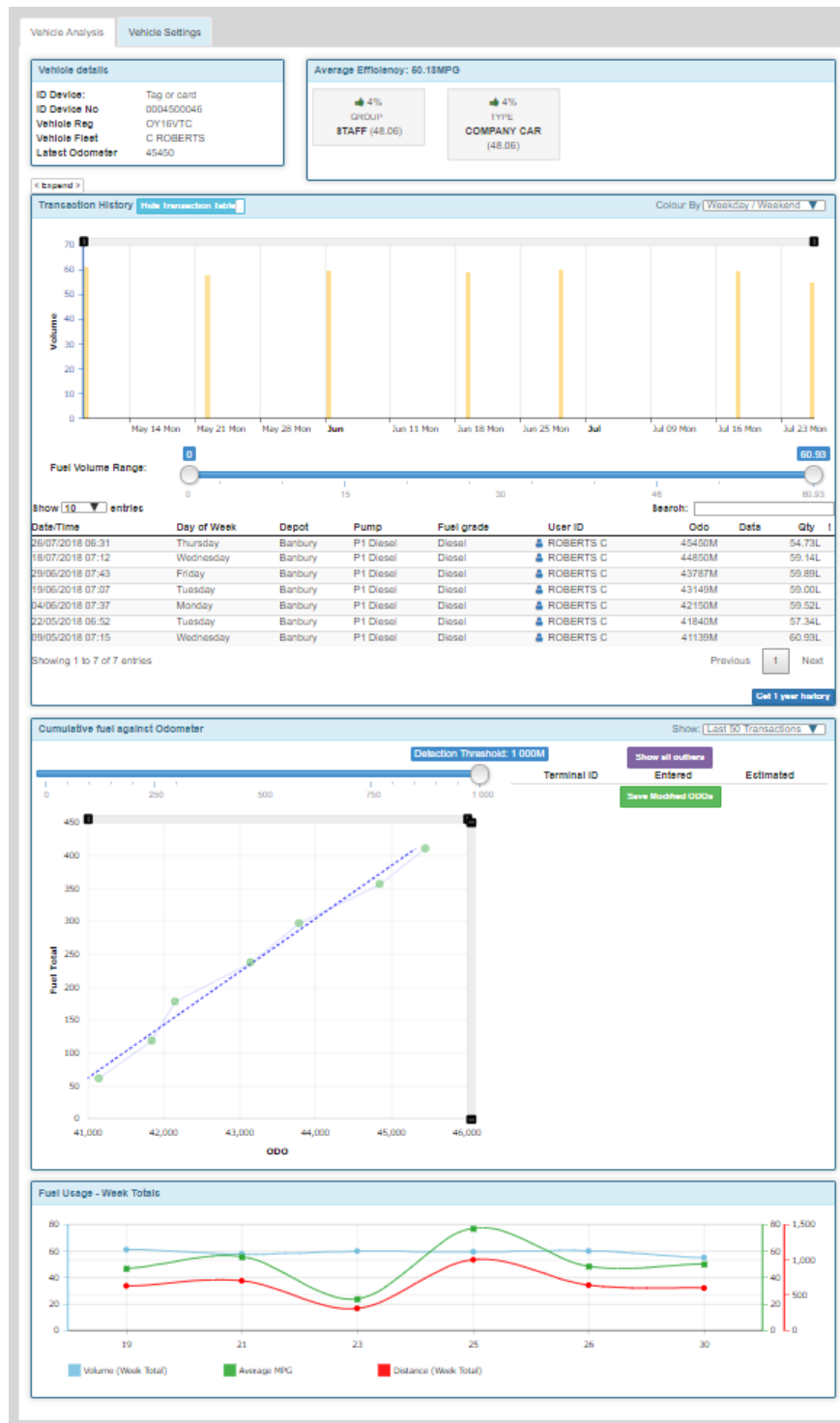
As may be seen, there are two tabs. The default landing from the vehicle listing is the "Vehicle Analysis" tab. Selecting the "Vehicles Settings" tab will show the following :
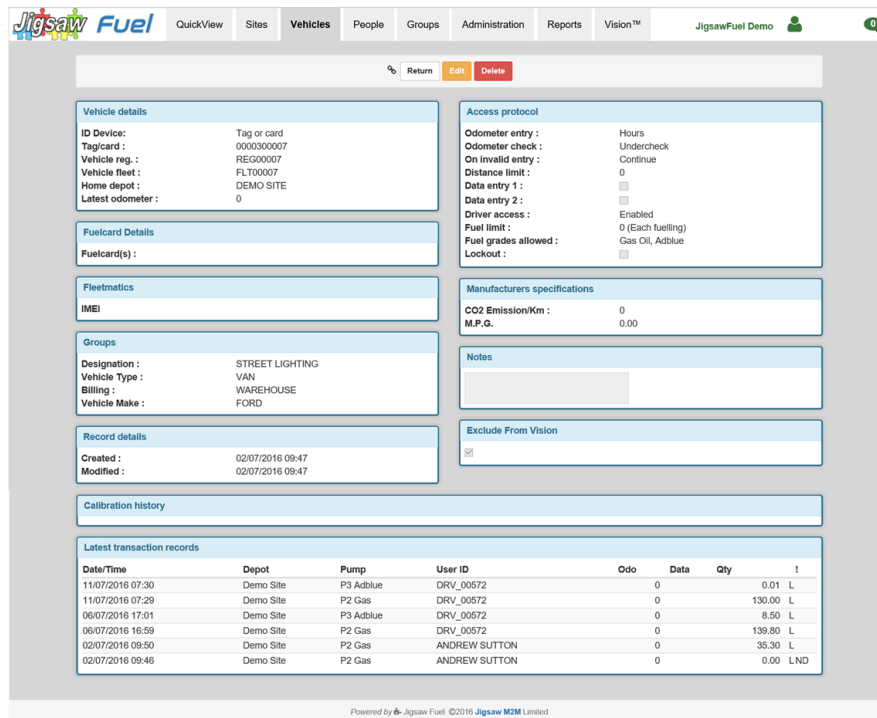
This screen shows all the current details of the selected vehicle as well as the latest fuelling transactions sorted by this vehicle. To change any details, click the "Edit" button. To leave the screen, click the "Return" button. To remove this vehicle from the system, click the "Delete" button. Access to Edit or Delete function is dependent on your user log on settings.

The details which appear are dependent on what functions are being used on the system. The number of groups will depend on how many groups are being used; calibration records will depend on whether or not FuelGuard or Midas is being used, CO2 and MPG targets will depend on whether these functions are configured on when the system is set up. To make the system as simple as possible, any unused functions are configured not to appear so that redundant input, and a great deal of confusion is avoided.

The most common input requirements are those marked Vehicle Details, Groups and Access protocol.

Note. Deleting a vehicle will permanently remove it from the system and the details will not be retrievable. The fuellings for this vehicle will, however, remain on the system as these are part of the site/tank/pump/stock throughput records and hence can't be deleted.

7.4   Assigning a new vehicle onto the system

To assign a vehicle to the system, Click the Green "New" button at the upper left of the screen. The following screen will appear:

Once the vehicle details have been entered, click the "Update" button to save or "Cancel" to discard the changes.

7.5   Configurable vehicle details

The most common information stored against each vehicle is stored in the Vehicle Details, Groups and Access Protocol Boxes as follows :

Vehicle details Box :

i)   **ID Device.** This is the type of ID device used for this vehicle, typically Tag/Card or Midas.

ii)   **Tag/Card.** This is the number of the tag or card used to identify the vehicle or equipment to the system. This number will be found on the tag or card when issued.

iii)   **Vehicle Reg.** The vehicles registration number.

iv)   **Vehicle Fleet.** The vehicles fleet number if one is allocated.

v)   **Home Depot.** Select the home depot of this vehicle using the pull down box. If there is only one depot, then this will automatically be selected. For multi-site systems, the home depot can be used as a further grouping for vehicles when generating reports.

vi)   **Latest Odometer.** As vehicles are added, it is best to leave this entry blank as it indicates that the first entry at the fuel island should be accepted even if

range checking is switched on. Later, if the vehicle odometer needs resetting (eg for a tacho change), then the new value may be edited in later

vii)   **Groups Box :**

There will be up to four boxes displayed here, depending on how many vehicle groups have been set up under the "Groups" tab. Select the appropriate group entry for this vehicle.

viii)   **PIN Entry.** (Optional field – may not appear) There are three options here :

    a.   **None –** No PIN will be requested.

    b.   **PTRP –** Not yet available

    c.   **P'Vend –** This uses an algorithm to generate a PIN number from the details of the tag or card presented. The user must enter this PIN correctly to start fuelling.

ix)   **Odometer Entry.** There are four options here :

    a.   **None.** No Input will be required by the user

    b.   **Miles.** User will be prompted to enter the odometer reading in Miles.

    c.   **Kilometres.** User will be prompted to enter the odometer reading in kilometres.

    d.   **Hours.** User will be prompted to enter the hours run reading for the vehicle or plant equipment.

x)   **Odometer Check.** There are three Options here :

    a.   **None.** Any odometer entered will be accepted

    b.   **UnderCheck.** So long as the number entered is less than the last recorded odometer, the number will be accepted.

    c.   **Full.** The number entered must be greater than the last recorded odometer, but must be less than that number plus the "Distance Limit" value input below.

xi)   **On Invalid Entry.** There are two Options here :

    a.   **Continue.** After three entries of the same "bad" odometer, the system will accept the value as correct and continue to fuel. This may be used in a situation such as when a tachometer has been changed, or a vehicle has been away from the site for some time.

    b.   **Lockout.** After three attempts of a bad odometer, the vehicle will be locked out. The assumption is that the tag has been found by an unauthorised user who doesn't have the vehicle to hand to get the latest mileage and is trying to steal fuel. This method of operation also educates drivers to enter the correct mileage as it is easier than ringing the office to get the vehicle enabled again.

xii)   **Distance Limit.** If full range checking on the entered odometer is required, then the value input here is used to set the range in which the entered

_____

mileage must fall. The entered mileage must be greater than the last recorded mileage, but no greater than that figure plus the value entered here.

xiii) **Data Entry 1 and 2.** When the fuel island terminal is configured, two data prompts are programmed. These may be "Please Enter Your Mileage", "Enter Job Number", "Please Enter Police Collar Number", Have you Checked Your Oil Today ? (Y/N)" or anything else required by your business. None, either, or both of these prompts can be enabled so that the user is asked the associated question at the time of fuelling. Check whichever boxes are appropriate.

xiv) **Driver Access.** Two Options here :

    a. **None.** The user will not be prompted to identify himself.

    b. **Enabled.** The user will be prompted to enter a driver PIN number or to use a driver tag to identify him/herself to the system. The method of identity is set when the fuel island terminal is configured.

    Note : This option may be forced on if the system is set up to have all vehicles requiring Driver ID.

xv) **Fuel Limit.** This limit can be set as an individual fill, daily, weekly or monthly total. To reduce the possibility of theft, it is prudent to set this limit to the approximate capacity of the fuel tank on the vehicle. At the fuel island, the pump will be turned off when this limit is reached.

xvi) **Fuel Grades Allowed.** Dependant on the number of grades of fuel managed by the fuel island terminal on this site, a number of checkboxes will be presented. Select the grades of fuel which this vehicle will need to draw. This is useful to stop diesel being drawn by petrol vehicles, or white diesel being used by plant equipment.

xvii) **Lockout Checkbox.** This checkbox is used to enable the vehicle to fuel. If the box is checked, then fuelling will not be allowed. It is usual to leave this box unchecked so that fuelling can commence on presentation of the tag at the fuel island.

xviii) **Notes.** Any special notes or information regarding this vehicle.

xix) **Available in Vision.** This defaults to on (Checked) for a new vehicle. If a vehicle is to be excluded from the vision tiles, then untick this box.

7.6 Offsite fuel entry

If your system has been configured to allow the input of offsite fuelling details, then clicking the 'Offsite fuel entry' button on the vehicle listing screen (top left, under "New" button) will give access to the following screen. This facility allows the input of fuelling data from 'offsite' sources (eg service stations etc) to be incorporated into the system to produce accurate fuel consumption data etc.

This allows the entry of fuelling transactions against a specific vehicle that were not controlled by the fuel island terminal. If there are lots of offsite transactions per month, for example from a fuel card company, then it may be worth adding a fuel import module which will import a file of transactions at one time.

7.7 Vehicle Analysis Tab

The Vehicle Analysis tab shows specific data analysis for the vehicle selected. There are several data tiles displayed. The tiles displayed, and the amount of data in those tiles depends on what data is gathered on that particular vehicle and so may not be the same for each vehicle selected. For example, if mileage data isn't collected, then mpg analysis will not be possible.

7.8 Odometer Correction Tool

One of the tiles on the Vehicle Analysis tab demands special mention as it a unique tool which first of all identifies poor odometers entered by drivers, then suggests what the value should have been and allows the user to correct it with a single mouse click.

This function is further enhanced when operated along with the fleet efficiency swarm graph. The swarm graph identifies vehicles not performing as well as its peers – usually because of bad mileage inputs :
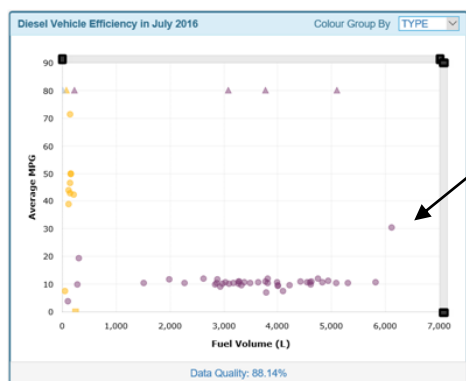
Outlier from purple group

By simply clicking this dot on the graph, a new browser window opens showing the Vehicle Analysis tile for this vehicle along with the odometer correction tool, allowing the user to quickly see what the problem is and correct it.

A vehicle with good, consistently correct mileage entry will look like this :
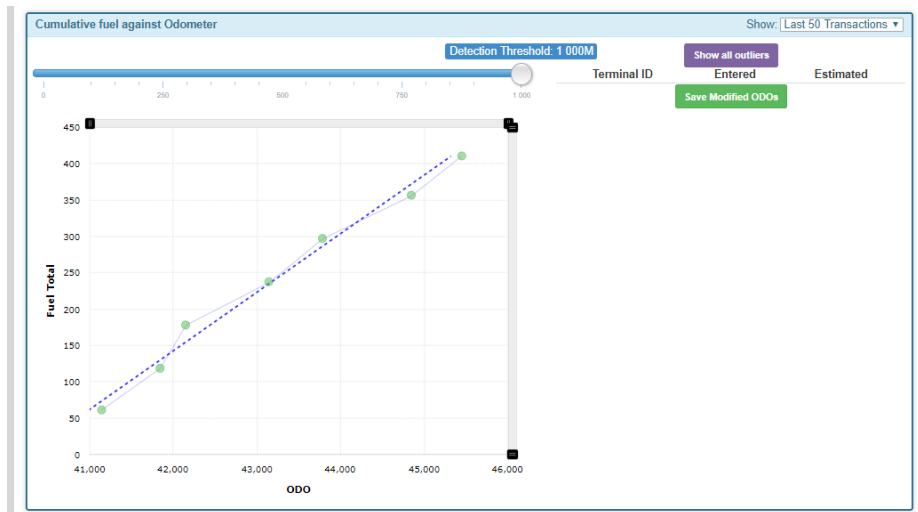
The slope of the blue line shows the average mpg for the vehicle and the last few fuellings are shown in context of this average. Each fuelling is represented as a dot on the graph. The colour of the dot indicates if it is in an acceptable range of variation from the average. In this case. All dots are green showing that the driver(s) have input mileage consistently.

A vehicle with poor mileage entry will look something like this :
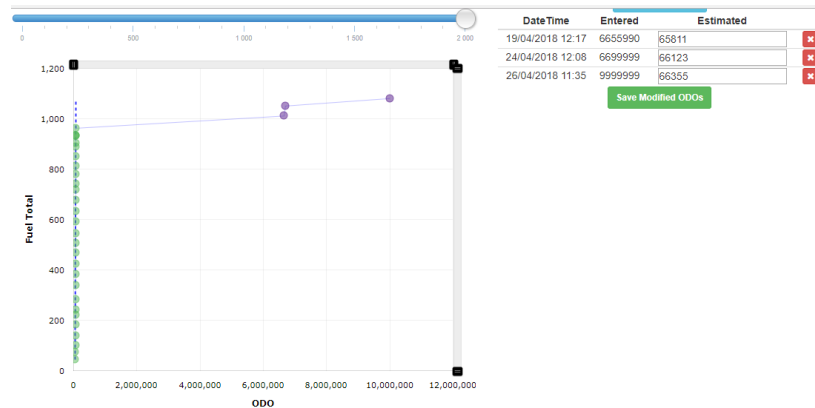
Three recent odometer entry problems have been highlighted on what is usually a well-managed vehicle – in this case a contract driver started using the vehicle.
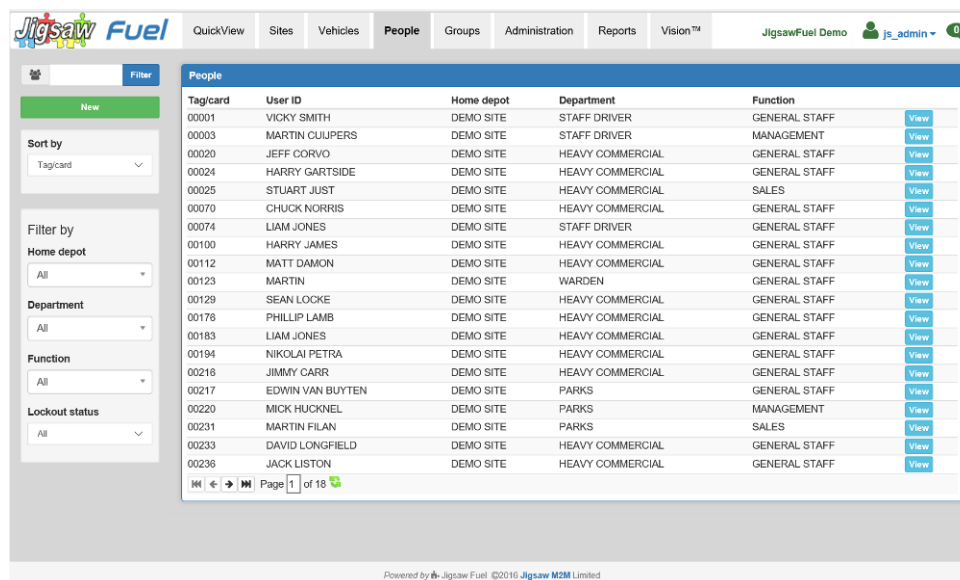
The three bad entries are highlighted on the right of the screen and are aimed at defeating the under-range input check employed in this case – the last one is the most typical entry seen in these cases – 9999999.

The system shows the mileage entered, suggests what the mileage should have been and allows the user to either ignore the suggestion (by taking it out of the list using the red cross) or accepting the suggestion and changing the odometer by clicking the green "Save Modified Odo's" button.

8. People Screen

The People screen allows you to assign, modify and view your driver / fueller details. You will only have access to this screen if your system has been configured to accept driver or fueller identification.

The exact layout of this screen will vary according to your specific system configuration but a general example is shown below.

8.1   Sorting/Ordering

By default, the list is ordered by the Tag/Card number (eg Tag Number) . However, this is selectable and may also be ordered by the User Identifier (eg Name). To select which is used, select the required option in the "Sort by" box (Under the New Button, top left)

8.2   Filtering

The list of people can be filtered using the dropdown boxes on the left hand side of the screen. This can restrict the people displayed by Home depot, by any of the enabled groups, or the user lock out status.

The 'Filter" Box (Top Left) can be used to quickly find a particular Person or tag. Simply type in all or part of the name or tag number and click the Filter button. The list will now be limited to those people with details containing the Filter text.

8.3   Viewing or editing the details of an existing user

To view or edit the details of a particular user, simply click on the "View" button on the right hand side adjacent to the required user.

If you are having difficulty finding the required driver, use the "Search" facility at the top left of the screen. The search can be made on Tag/Card number or user Identifier (usually their name).

By selecting the "View" button, the following screen is displayed :

This screen shows all the current details of the selected person as well as the latest fuelling transactions which that person has carried out. To change any details, click the "Edit" button. To leave the screen, click the "Return" button. To remove this user from the system, click the "Delete" button.

Note. Deleting a person will permanently remove them from the system and the details will not be retrievable. The transactions assigned to this person will, however remain on the system as they are needed for a full transaction history.

8.4 Assigning a new Driver/Fueller on to the system

To assign a new person (driver or fueller) to the system, Click the "New" button at the upper left of the screen. The following screen will appear:

The information which may be stored against each person is as follows :

i)   **User Number.** The user number is either an issued number to be typed into the system, or the number of the tag issued to that driver.

ii)   **User ID.** This is the name of the driver associated with this User Number

iii)   **Home Depot.** A list of all fuelling sites controlled by this web site is available. The home site for this user should be chosen.

iv)   **Groupings.** There will be up to two boxes displayed here, depending on how many user groups have been set up under the "User Groups" tab. Select the appropriate entry for each group.

v)   **Notes.** Any special notes or information regarding this user.

Once the vehicle details have been entered, click the "Update" button to save or "Cancel" to discard the changes.

9. Groups Screen

On selecting the "Groups" tab at the top of the web page, a screen similar to the following will be displayed ;
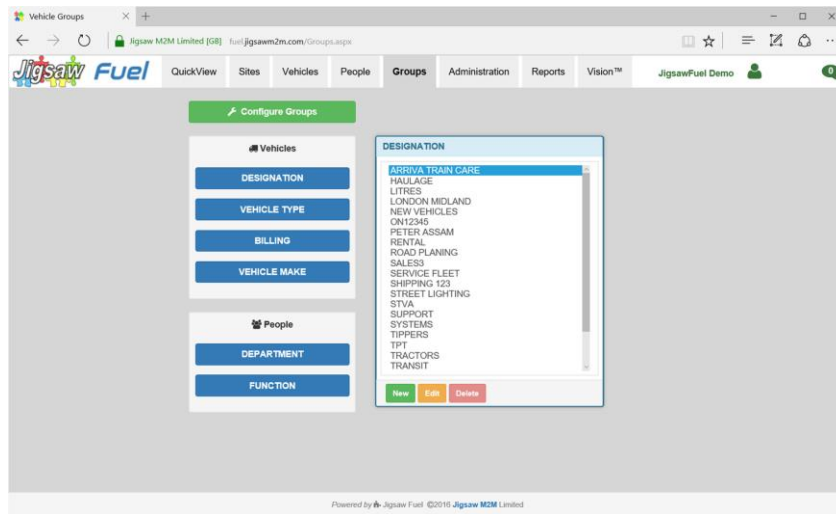
On a new system, none of the groups will be assigned. Deciding on which groups are to be used is one of the most important parts of setting up the fuel management system as reporting will be much less effective without the ability to "drill down" to individual parts of your business. For vehicles, there are four group headings available, for people there are two.

9.1   Setting up Group Headings

By Clicking the "Configure Groups" button at the top of the Groups Tab Page, you will be presented with the current group headings for both the Vehicles and People :
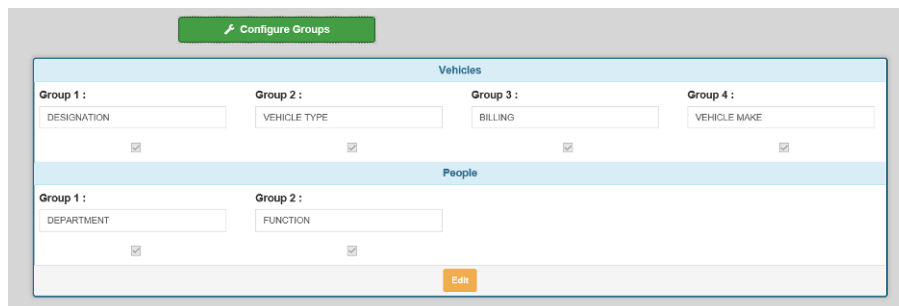
The top four Group Headings are for the vehicles, the bottom two for people. To change the group headings click the Edit button. If your log in has the required clearance, you will now be able to change the Group Headings.

9.2   Vehicle Group Heading Examples.

The Vehicle Group headings may be set to whatever suits your business and the following examples are simply an illustration. The following makes suggestions for all four groups, but there is no requirement to use all four groups; unticking the select box under each heading will remove that heading from the system.

For vehicles, the first two groups set are typically Make and Model. This allows the direct comparison of similar vehicles, especially useful in the Vision Tiles tools where members of a group that aren't conforming to the norm are easily identified.

The next group would typically be used for something like function or operation, where all vehicles performing a similar function in the organisation may be grouped. This may be Transport, Trunking, Distribution, Service, Installation etc.

The final group could be used for internal cross billing purposes, so there may be departments set up such as Transport, Management, Sales, Operations etc.

First decide how many groups you need to use. Select the Orange "Edit" button and enable as many groups as are needed by checking the boxes under each group title. Always work from the left leaving any unused groups rightmost.

Enter the Group Headings in the white boxes under each group title being used, then press "Update" to confirm the changes, or Cancel to abort.

If you decide to change the names of the groups later, simply edit the relevant name later using the same screen.

With the Groups identified, you will see that, for each grouping defined and enabled, there is a button with the group name on it now in the lower "Vehicles" section. Select the first group and then click the "New" button at the bottom of the right hand group member entry box. Enter the name of the new group member, then press "Add". Repeat for as many Group Members as required, then repeat this for each grouping.

If you make a mistake, or need to change a group member, simply select the relevant group, then the offending group member, and click the "Edit" button.

Note. You can't delete a group member if any vehicles are assigned to it. To remove a group member, you must first reassign any vehicles assigned to it to another group.

9.3   People Group Heading Examples.

The People Group headings may be set to whatever suits your business and the following examples are simply an illustration. The following makes suggestions for both groups available, but there is no requirement to use both groups; unticking the select box under each heading will remove that heading from the system.

For People, the first group would typically be Department, which would be used to be able to cross bill internally so that all fuel drawn by this group of drivers could be costed, irrespective of what vehicles they were driving. Typical Group members here may be Sales, Managers, Drivers, Service, Support etc.

A typical use for the next group is more difficult to define. It is most often used for job function such as Driver, General staff etc.

First decide how many groups you need to use. Select the "Edit" button and enable as many groups as are needed by checking the boxes under each group title. Always work from the left leaving any unused groups rightmost.

Enter the Group Headings in the white boxes under each group title being used, then press "Update" to confirm the changes, or Cancel to abort.

If you decide to change the names of the groups later, simply edit the relevant name later using the same screen.

With the Groups identified, you will see that, for each grouping defined and enabled, there is a button with the group name on it now in the lower "People" section. Select the first group and then click the "New" button at the bottom of the right hand group member entry box. Enter the name of the new group member, then press "Add". Repeat for as many Group Members as required, then repeat this for each grouping.

If you make a mistake, or need to change a group member, simply select the relevant group, then the offending group member, and click the "Edit" button.

Note. You can't delete a group member if any people are currently assigned to it. To remove a group member, you must first reassign any people assigned to it to another group.

10.   Administration Screen
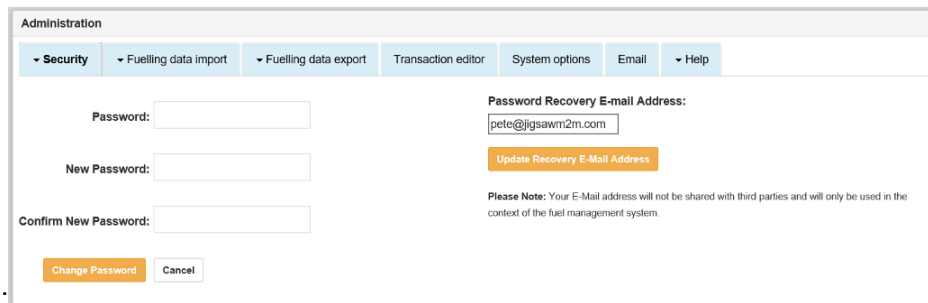
The "Administration" screen gives access to password, data import/export and transaction editing functions. The level of access to these functions will depend on the level assigned to your log in.

The options which appear are dependent on your access level, and on which functions are available in your configuration. The full spread of options available will appear as :

10.1   Security

On clicking the "Security" option, the user gets the option to change password, or, with admin rights, to add new system users. If Change Password is selected, then the following appears

To change your password, simply enter your current and required new password where indicated, then click the "Change Password" button to confirm. Whilst doing so, please ensure that your password recovery E-Mail is correct as this can be used at log in to recover a lost password.

10.2   Fuelling Data Import

The "Fuelling data import" option facilitates the input of 3rd party fuelling information (for example fuelcards).

To upload a file to the server for processing, select "Fuelling Data Import from the Administration. This gives two options, Upload fuelling data and List Files. Selecting "Upload fuelling data file" will show a screen similar to the one below :

To be able to import data, and to make viewing that data easier, each external data source is set up to have a dummy site on the system. For example, a "Keyfuels Card Fuellings" site may be set up. If there is more than one source of external data (eg two card companies) then each will have its own Depot Reference.

Select the target depot reference from the pull down box. If there is only one import reference, then that will be pre-selected.

Now, click the "Browse" button to navigate to and select the file to be imported. When you have selected the correct file, click the "Upload" button to upload the file to the server for processing.

Once the file has been uploaded to the server, you will get a banner showing that the file has been uploaded. Click "Continue" and a list of files will appear as below:

Administration					
▾ Security	▾ Fuelling data import	Fuelling data export	Transaction editor	Email	▾ Help

Uploaded on	Filename	Uploaded by	Status	Records	
12/08/2016 10:43	DrawingResults.csv	triciam	Processed	186	Process
27/07/2016 10:44	DrawingResults.csv	triciam	Processed	95	Process
20/07/2016 11:10	DrawingResults.csv	triciam	Processed	114	Process
13/07/2016 11:31	DrawingResults.csv	triciam	Processed	126	Process
07/07/2016 09:48	DrawingResults.csv	triciam	Processed	115	Process
28/06/2016 11:35	DrawingResults.csv	triciam	Processed	86	Process
23/06/2016 10:53	2.csv	triciam	Processed	161	Process
08/06/2016 13:11	DrawingResults.csv	triciam	Processed	106	Process
06/06/2016 14:56	DrawingResults.csv	triciam	Processed	94	Process
02/06/2016 09:06	DrawingResults.csv	triciam	Processed	105	Process
25/05/2016 13:09	DrawingResults.csv	triciam	Processed	110	Process
18/05/2016 10:48	DrawingResults.csv	triciam	Processed	95	Process
11/05/2016 14:21	DrawingResults1.csv	triciam	Processed	91	Process

When first uploaded, the status of the file is set to "Pending" and the button will say "Convert" which means that the file has been copied to the server but has not yet been processed. Clicking the "Convert" button starts the process of converting the input file in to a common import format.

Once converted the status changes and the button changes to "Process". Clicking the process button moves the data in the common file format in to the SQL database to appear as transactions against the vehicle.

If the system is unable to process any of the records, the unprocessed records will be listed. Either select "Edit" to modify the details or "Ignore" to mark the record as not for processing. Until the whole file is imported properly, then the button on the end of the line will show "Re-Process". Edit any rejected files, or mark them as "Ignore", then click the "Re-process" button to reprocess any modified records.

When all the files have been successfully processed a banner will appear notifying you of the fact.

When the whole file has been processed, the Process Button at the end of the file list will "Grey" out and become unusable.

The "List files" option gives a record of the files imported into the system. In the example below, the two most recent files have been successfully processed whilst the file uploaded on 23/02/2009 contains some unprocessed records.

10.3 Fuelling Data Export

Depending on configuration, the "Fuelling data export" tab will either be greyed out (not available), gives just the "List Files" option (when export is automated), or gives two options – "Create New Export", or "List Files" (for manual exporting).

Assuming the manual option, clicking the "Create new export file" option will create a new file on the server containing the latest unprocessed fuelling data.

If there are new transactions to export, then a banner similar to this is displayed :

File 1608161414.csv containing 42 records has been generated Continue
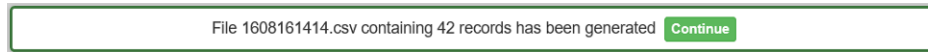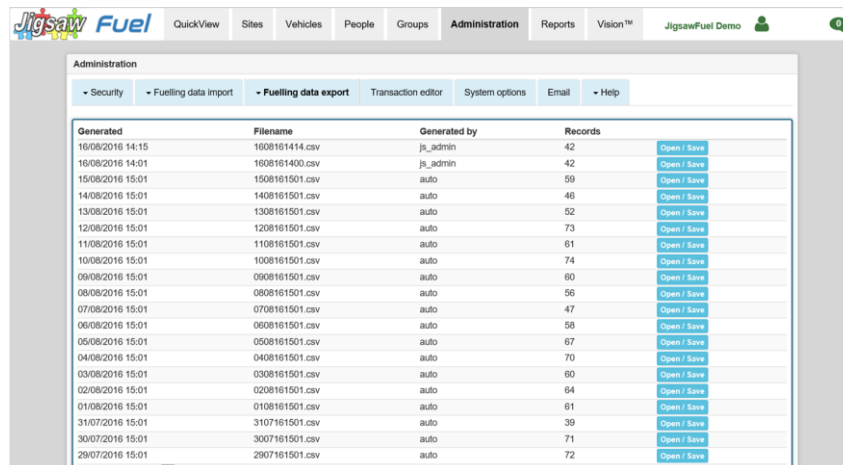
Clicking "Continue will take you to the "List Files" View.

If there are no new records, then this banner will be displayed :

There is no unprocessed data available Continue
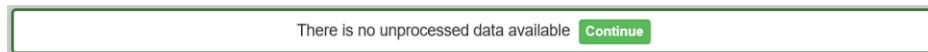
Clicking Continue will take you back to the Administartion Fuelling Data export drop down.

To view, save or e-mail the exported fuelling data, select "List files" to list the saved files as below:

Click the Open/Save box at the end of the line holding the required file. This will download the file to the browsing PC. If the file is in CSV format, opening the file will invoke Excel or other spreadsheet, or notebook, depending on the settings on the host PC. In earlier versions of windows, the option will be given to open or save the file, and choosing to save the file will pop up the file explorer window. In Windows 10, the usual Open/Open Folder/ View downloads box will appear.

10.4 Transaction editor

The "Transaction editor" allows incorrect odometer entries to be corrected and, in the case of unauthorised (override) fuellings, the assignment of the fuelling details to the vehicle that actually fuelled. Records may be viewed by depot, transaction record type or vehicle. The example below shows unauthorised fuellings (UF's)selected :
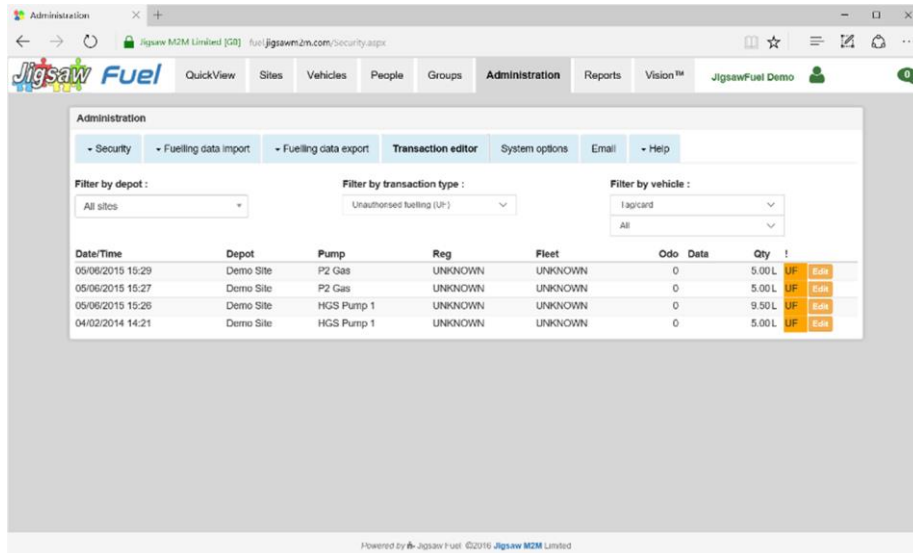
Clicking on the "Edit" button gives slightly different results dependant on the transaction record type. For an unauthorised (override) fuelling, the screen is shown below:

In the example above, the fuelling details from the transaction are shown in the grey boxes at the top of the window. The details which may be changed are shown in the white boxes below. In this example, the transaction is about to be allocated to vehicle whose registration Number is F99 WFV with an odometer entry of 125478. The driver will be posted as Bernard Mathews. Click "Update" to save the changes. The resulting transaction record still has the UF flag, but is now marked with '!' to show that it has been edited.

Administration

| ▾ Security | ▾ Fuelling data import | ▾ Fuelling data export | **Transaction editor** | System options | Email | ▾ Help |

Filter by depot :

All sites ▾

Filter by transaction type :

Unauthorised fuelling (UF) ⌄

Filter by vehicle :

Tag/card ⌄

All ⌄

Date/Time	Depot	Pump	Reg	Fleet	Odo	Data	Qty	!
05/06/2015 15:29	Demo Site	P2 Gas	F99 WFV	FLT0083	125,478		5.00L	UFI Edit
05/06/2015 15:27	Demo Site	P2 Gas	UNKNOWN	UNKNOWN	0		5.00L	UF Edit
05/06/2015 15:26	Demo Site	HGS Pump 1	UNKNOWN	UNKNOWN	0		9.50L	UF Edit
04/02/2014 14:21	Demo Site	HGS Pump 1	UNKNOWN	UNKNOWN	0		5.00L	UF Edit

11. Reports.

On selecting the "Reports" tab, the user is presented with the settings for the first report in the configured list of reports available. The reports configured on any one system will be dependent on what is applicable to the end user.

Each report listed below has multiple configuration options for grouping, sorting, filtering and time ranges. Many of the reports may be configured in templates so that the configuration settings may be saved for often used reports. Also, the templates can be used to auto e-mail reports at specific times.(See section 12)

The reports available include :

11.1   Audit – Alarm Records Report

A list filtered by the alarm flag allocated to the transaction. For example, to see all Odometer Override transactions, filter by OO.

11.2   Audit – Pump Totalisers

This report lists the totaliser values read from the pump and input at the fuel island, and compares with the pump throughput for the same period as calculated from the received transactions.

11.3   Drivers – Driver Assignment Report

This lists all the Drivers/Fuellers set up on the system. The list shows the Tag Number (Usually Tag Number), The User ID (Usually Name), and which group they are allocated to for each enabled group heading.

11.4   Fuel – Driver Totals

This shows a totalised report of all fuel drawn in the selected period for each driver. The list can be ordered from least to most fuel drawn so that any driver taking excessive fuel volumes is highlighted.

11.5   Fuel – Pump Throughputs

This shows the total fuel delivered by each pump for the configured period. A total for all the pumps is shown at the bottom of the report.

11.6   Fuel – Transaction list

Probably one of the most widely used reports, this lists all the transactions drawn within a period. There are multiple options to group, filter and sort the report. If the system is used to cross bill for fuel, the price of the fuel can be adjusted to a fixed amount, or by a percentage "on-cost" in the report.

11.7   Fuel – Vehicle efficiency

This report makes use of the MPG / Km/100L figures and the target MPG to list vehicles by fuel efficiency.

11.8 Fuel – Vehicle Groups

This shows a totalised report of all fuel drawn in the selected period for each group member in the selected group. The Report lists each fuel product separately for each group member.

11.9 Fuel – Vehicle Totals

This shows the total fuel drawn by each vehicle in the fleet. The report shows a separate entry for each fuel type drawn.

11.10 OnCost – Transaction list

This is very similar to the Fuel - Transaction List above, but this one has the option to list each transaction with a percentage on cost, which may be used to cross bill between departments with a proportional handling charge for example.

11.11 OnCost – Vehicle Totals

This report is the same as the Fuel - Vehicle Totals report but has an extra column showing a percentage on cost on the fuel.

11.12 Stock – Current Stock

This report shows a snapshot at the current time of the stock in each tank on the system. Any tanks at alarm levels are marked. This is essentially the same information as shown on the QuickView screen so this report is largely redundant unless run automatically at a fixed time.

11.13 Stock – Summary

This report shows the stock adjustments, Stock deliveries, opening and closing stock for each tank on the system for the selected period.

11.14 TGauge – Book Stock Variance

This report shows the variance (difference) between the gauge reading and the calculated book stock for the selected period. This report has been superseded by the tank view screen which gives a clear graphical indication of the variance making variance trends very easy to see.

11.15 TGauge – Metered Deliveries

This lists the fuel deliveries in to the tanks as estimated by a rise in stock being detected by the tank gauge for the selected period. This report has been largely superseded as the information is available on the QuickView CSreen.

11.16 Vehicle – Access Protocol

This shows all the access protocol settings for all the vehicles in the fleet. This is useful for spotting any vehicles not set up correctly, especially if there is a company-wide or group level access policy.

11.17   Vehicle – Assignment

The Vehicle Assignment Report lists all the vehicles with their Tag ID, Reg, Fleet number, and group settings.

11.18   Vehicle – Unfuelled List

This report gives a list of vehicles which haven't fuelled from the selected Date/Time until the current date and time. This report is useful for managing the vehicle fleet list and spotting vehicles which should be removed from the system.

In a bus refuelling environment, this may be used to spot any vehicles which haven't been fuelled on the current shift, although this function has been superseded by the Unfuelled Vehicles Tile which gives a real time view of unfuelled vehicles.

11.19   Printing or Exporting a Report

At the top of each report, there is a banner which contains the following icons :

As well as the usual navigation arrows to step through the pages of the report, there is a picture of a disc with an arrow on it, and at the side of that, a pull-down arrow. Clicking this arrow gives access to the export format menu, listing Excel or PDF. Clicking either will generate the report as either a spreadsheet or a PDF document and download it to the users PC, giving the option to Open, or View the saved file in your file browser.

NOTE : If you do not currently have Adobe Acrobat installed on your PC, the free reader software may be downloaded from http://www.adobe.com/downloads/

To return, to the reports selection screen, click the blue 'Return' button.

12.   Report Templates and Auto E-Mail

A new feature in the Fuel web site is the ability to save often used report configurations and to auto generate and e-mail those reports at fixed intervals.

12.1   Setting a Report Template

At the bottom of many of the reports, there is a "Report Template(s)" section :

To set a template, go through all the required settings so that the sorting/grouping and filtering for the report are all as required. When you are happy with the settings, give the report a name in the box provided and click the "Save" button. The new template will be added to the template list.

To edit a template, click the "Load" button of the desired template and make any changes. Save the new version of the template under a different name (eg add a 1) then click save. If the old version of the template is not required, then simply click the delete button.

The report may be loaded and run any time by simply clicking the load button to set the report configuration, and setting the desired date/time span before running.

12.2   Auto Generating and E-Mailing a report.

Before this process can operate, a template for the desired report needs setting up as described above.

The time span of the report doesn't need to be set in the template as that will be dynamically configured when the report is generated.

Now, under the Administration Tab, select the "Email" option :

A list of the current Auto E-Mailed reports will appear, along with the details of when and where they will be sent. To add a new report click the Green "New" button :

Input the E-Mail address of the intended recipient of the report along with their name and the e-mail address of another recipient if required.

The Message Subject and Messgae Body will be filled in automatically but may be changed as required.

Set the frequency that the report will be generated from the options available. The span of the report will be set automatically by the selection, so that the Daily report will be set from midnight to midnight daily, the weekly reports from midnight on the selected day to midnight a week later, and the monthly report to the previous calendar month.

Set the File type to either and Excel Spreadsheet or a PDF.

Finally, select the report template set up earlier to attach to the e-mail.

Once all the required fields are configured, Click the "Confirm" button to add this Auto E-Mail to the sceduler.

13.   The Vision Page

13.1   Overview

The vision page gives a simple to access view of the operation of the entire fuel management system. Each tile has been designed to highlight a facet of the fuel management system so that problems are identified at a glance, rather than being buried in the vast quantity of impenetrable data generated by a fuel management system.

Printed reports have their place, but, for the most part, they have had their day.

At the top left of the Tiles Banner, you can select all sites, or a single site which will limit the information displayed in each tile. On the top left of the tiles banner there is a Gears symbol which sets which tiles, and their positions to be set and saved.

13.2   Current Fuel Stock and Ullage Tile
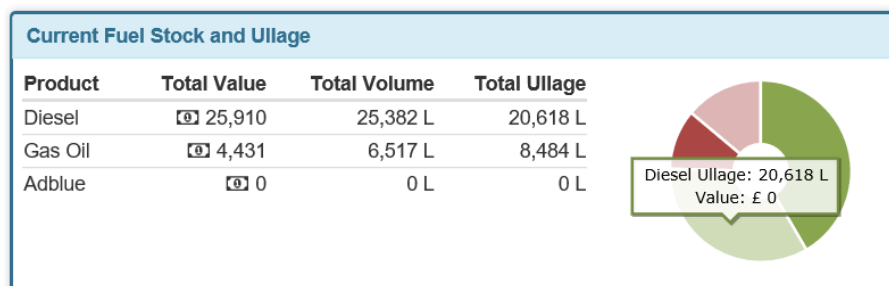
This shows the quantity of fuel held across the network, or for the selected site. The relative volumes of both product and ullage are also displayed graphically.

If the cost of the fuel is input with the deliveries, then the price of the fuel. To avoid having the option for different currency symbols, a universal note symbol is used.

13.3   Fuel Usage – Three Year Overview Tile
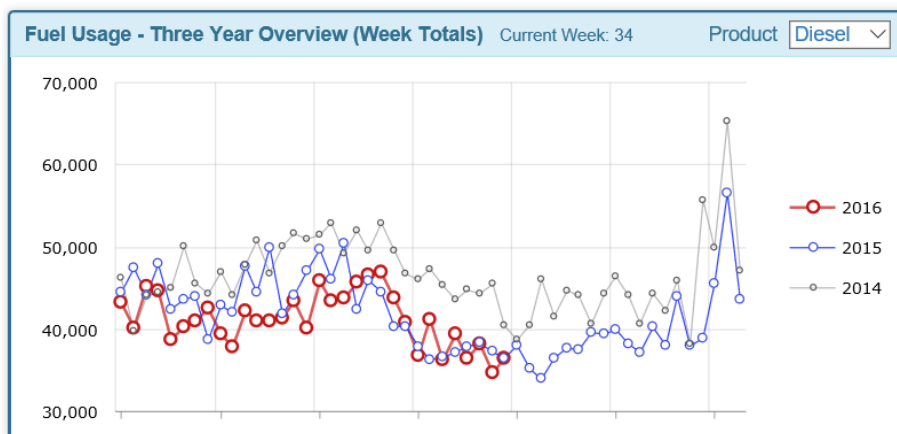
This shows the fuel usage, week by week for the entire company or the site selected. The default will usually be diesel, but any of the other products available can be selected using the drop down box (top right)

The system can be used to predict and manage the required stock holdings across the entire network. The profile of fuel usage will vary by industry sector – the one shown here would tend to show a quiet summer, ramping up towards Christmas.

13.4 Vehicle Efficiency Tile
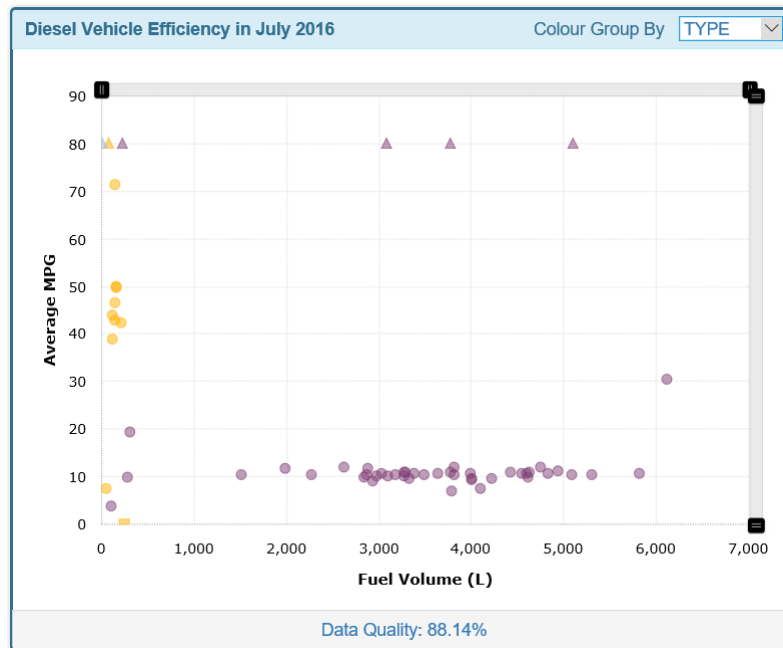
This tile allows ther user to see the entire fleet at one glance. Each vehicle on the system is represented by a dot on the graph. Vehicles in the same group are represented in the same colour, and hence should largely appear in the same cluster on the graph. Here, there are two main clusters – the purple haulage vehciles and the yellow cars.

In the above example, it is easy to see that one haulage vehcile seems to be behaving in a non standard manner with an mpg of 30 and to have travelled over 6000 miles in the displayed month. To quickly identify this vehcile, simply point the mouse at the dot and a pop up box will show the relevant vehcile details. Clicking on the dot will open a new web page window and show the settings and all recent fuellings of this vehicle.

(In this case, it was found the vehcile had been mis-allocated and was the yard key, used for vehicles which hadnt been issued tags).

On the above graph, vehicles with unfeasably large or small MPG figures are shown on the 0 mpg (Squares) or 80 mpg (Up Arrows) lines. These are vehciles which have probably input no mileage, or the wrong mileage. Again, clicking on the symbol will take you to the relevant vehicle details page in a new browser page.

At the bottom of the graph is a Data Quality KPI which shows the percentage of vehciles which fall within the normal mpg limits. The aim in managing the system would be try to get this to 100 %.

The graph is best suited to comparing vehicles of the same type so that the clustering is obvious. It is important to select the most appropriate group heading for this which is facilitated in the pull down (top left) .

13.5 Fuel Purchase History Tile
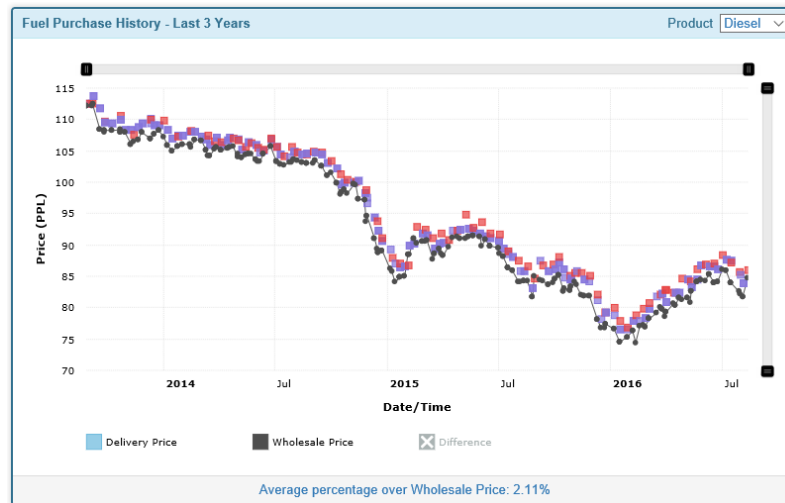
This tile is dependant on the user entering the amount paid for fuel when entering deliveries in ot the system.

Each coloured dot on the graph represents the price paid for a delivery input in to the system. The colour of the dot represents the fuelling site, so it is possible to see that, for example here, the site represented by the red dots above is paying consitently more than the site represented by the purple dots.

The black dots (if available for your country) show the Average Refinary Price for fuel on the day the delivery was input, and the graph above shows a good correlation between the refinary price and the price paid.

There will always be a difference between the price paid and the refinary price as the fuel supplier will need to cover transport costs, overheads and make a profit – the aim is to purchase fuel as close to the refinary price as is possible.

At the bottom of the tile, there is a KPI showing the average percentage price paid over the refinery price. The aim is obviously to get this KPI as close to zero as possible.

Above the KPI bar, there is an X button marked Difference – clicking this will add a plot of the difference between the Refinery price and the price paid for the fuel. This can be used to highlight any sudden jumps in payments – or more often, an incorrect price entered.
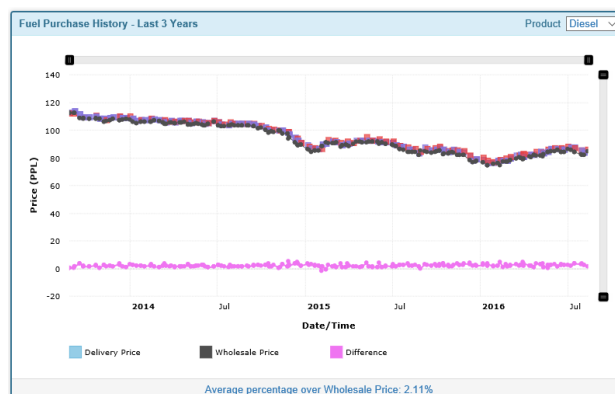
13.6 Vehicle Utilisation Tile
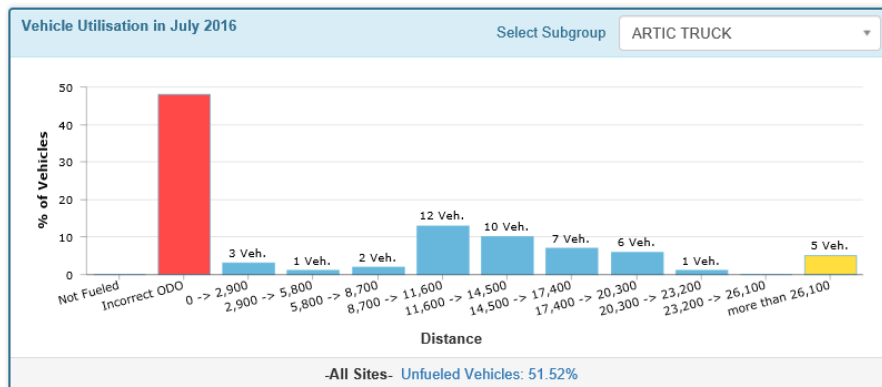
This tile is aimed at highlighting how much of the fleet is being used in any one month, and the spread of distances travelled so that the fleet is being used evenly. It would be expected for example, that all HGV's would be used in any one month, and that all would travel a similar distance if used evenly.

It is important to select the most appropriate fleet grouping (top right) so that the graph best reflects these aims. In this case the graph shows all Articulated Trucks in the fleet.

The left hand column shows the number of vehicles in the selected group that havent fuelled in the last month.(in this case all Articulated Trucks have fuelled). The next column (red) shows the number of bad odometers entered, which means they cant be incuded in the main utilisation figures. In this case, this has highlighted a problem that the majority of the vehciles are not enetering a mileage, or are entering incorrect mileages.

The next nine colums show the spead of distances travelled for this group. If the vehciles in this group are being used evenly, then the graph will have a peak in the middle with few falling either side.

The final column highlights vehicles in the group which have driven excessive miles in the period.
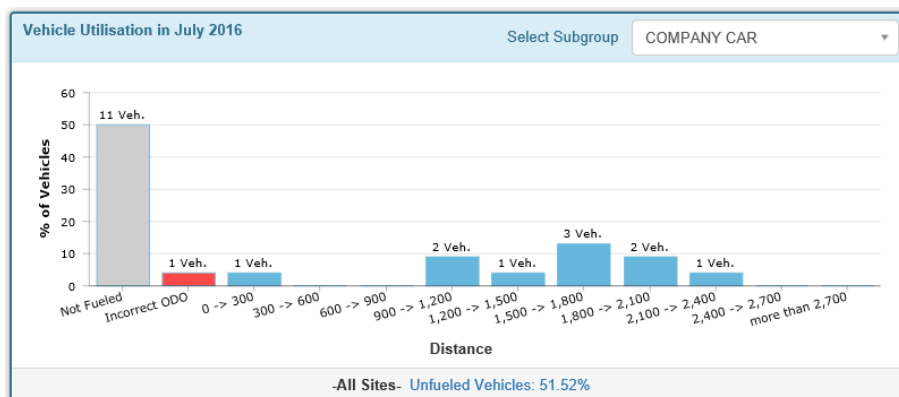
In this example, most of the Company Cars are doing a similar range of mileages, but 11 vehicles in the group have not fuelled in the past month. Some may be in the garage, some may exclusively use fuel cards, but it may be that the fleet list needs checking so that obsolete vehicles are removed.

Note : The KPI for this tile always refers to the entire fleet – not to the selected group.

13.7   Carbon Footprint Tile

This Tile shows the carbon footprint of the entire company, or of the selected site.
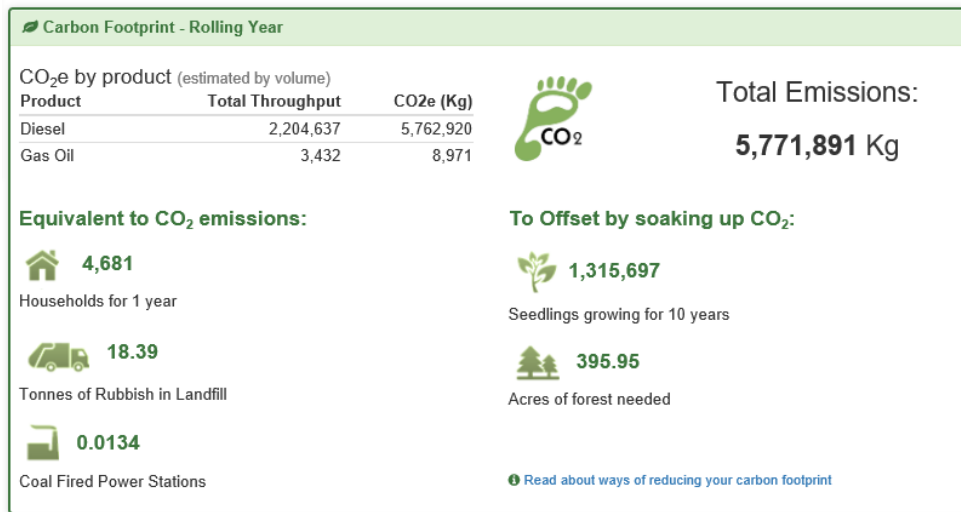
The carbon emissions are calculated using industry standard figures based on fuel volume. On the left, the carbon emissions are shown in context of other common carbon emitters. On the right, the equivalence in carbon sinks which would absorb the carbon emitted.

The calculation is made on a rolling year basis.

13.8   Vehicle - Highest Fuel Used

This tile shows the vehicles which have taken the most fuel in the last month.
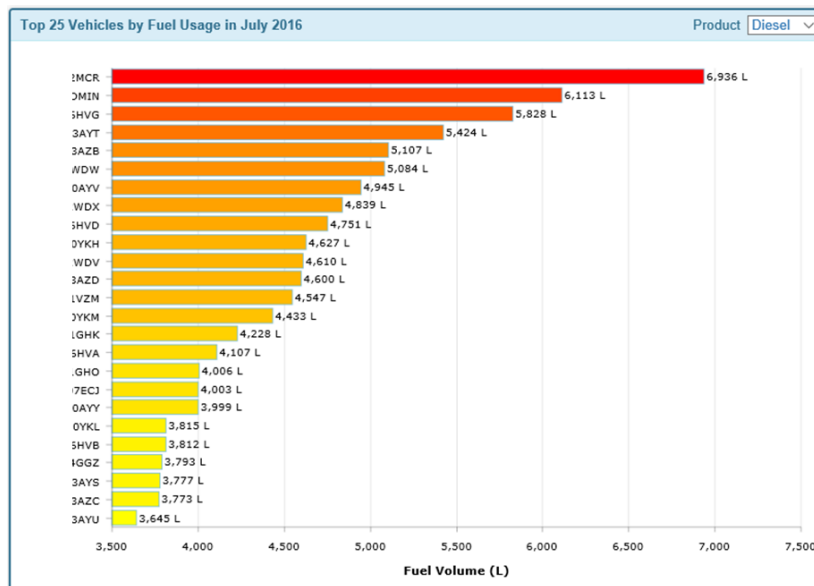
Very often, the tag using the most fuel is a yard tag, or agency drivers tag, but efforts should be made to limit the use of "miscellaneous" tag as much as possible as it opens the door to theft of fuel.

13.9   Driver – Highest Fuel Used

This tile shows the driver who has been responsible for the most fuel deliveries in the last month.
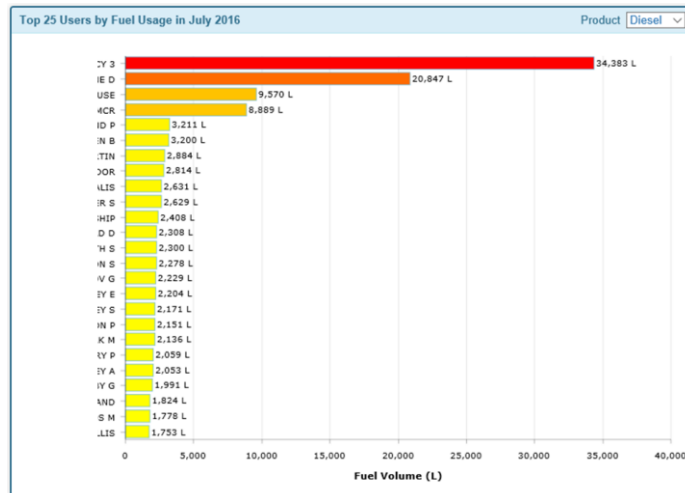
Often, the driver taking the most fuel is a manager or site operative who is responsible for fuelling vehicles not managed directly by the system.

14.   Messaging System

14.3 Overview.

 At the top right of all the tabbed screens is a small speech bubble. This is usually green and static with the number 0 in it, but, if a message is pending, the speech bubble will turn red and shake occasionally to draw attention. The number inside the bubble shows how many messages are pending.

 Messages are generated by the system when events occur such as low stocks on tanks, a pump becoming disabled, or a fuel delivery is detected on a gauge, but the details haven't been entered.

 Click the Speech Bubble to activate the messaging slide out.

The stored messages are displayed along with a maximum of three action buttons.

 The "Done" button acknowledges that the message has been read and acted on.

 The "Ignore" button acknowledges that the message has been read and no further action will be taken.

 The "Show Me" button opens a new web session in the browser and takes the user to the relevant page on the site, or even to another web site on the Internet.

Once a message has been marked as "Done" or "Ignored", then the message is relegated to the Archive where it will remain for a month. If a message has been relegated to the archive, it can be promoted back to active by clicking the "Reactivate" button.

15.   Frequently Asked Questions

15.1   Why do pumps become disabled ?

There are two ways in which the system will deny use of a particular pump :

A/ By a site manager setting the pump to disabled either through the web site or at the fuel island terminal.

A Site manager may lock out a pump because of contaminated fuel, or to keep stocks in reserve, or for security at certain times of the day.

B/ The system will automatically lock out a pump if a fuelling transaction is repeatedly being started, but no delivery activity is detected by the terminal from the pump.

On initial Fuel Island Terminal set up, the system is given settings for each pump which include a start time, an end time, and a null delivery cut off. The start time sets the number of seconds to wait after the pump has been turned on before turning it off again if no fuel has been delivered. The end time sets the number of seconds to wait before terminating a delivery after the fuel has stopped flowing. The null delivery cut off sets the number of consecutive start fuelling attempts which have resulted in no fuel delivery before the pump is disabled.

There are two main causes for null deliveries :

i.   The start time is too short and the fueller can't start the delivery in the time allowed. This can be remedied by extending the start time. The default setting is 45 seconds.

ii.   The pulser in the pump is broken so that although fuel is flowing, it is not detected by the fuel island terminal. This can only be remedied by repairing the pump.

15.2   Why has a vehicle been automatically locked out ?

Whilst a vehicle can be barred from fuelling any time by setting the "Lockout" flag on the vehicles details screen on the web site, it can also be automatically blocked from fuelling through bad mileage entry.

To ensure drivers are encouraged to input the correct mileage at the time of fuelling, the system can perform range checks on the input mileage before fuelling is allowed to commence. This range check can be just that the input mileage is greater than the last mileage entered, or it can be a window check where the mileage must be greater than the last known mileage, but not greater than the last known mileage plus a figure set for that vehicle. If a bad mileage is entered three times the same, then the system can be configured to either accept the new mileage, or to lock out the vehicle. If locked out, then the vehicle would have to be re-enabled through the web site.

15.3 There is a discrepancy between the actual tank stock and the system book stock – what can cause this ?

There are several reasons that this can happen, here are the most common :

i)   The fuel quantity put in to the tank was not what was on the delivery note.

Resolution : Dip tank before and after delivery.

ii)   The fuel has leaked or has been stolen from the tank.

Resolution : Check tank bund for signs of leakage. Secure access to the tank.

iii) Your pump is delivering a different amount of fuel to what is being sensed by the fuel island controller.

Resolution : Have Pump Calibrated. Check wiring between pump and Fuel Island Terminal. Check Pulses per Litre setting for pump.

15.4 How do I correct a discrepancy between the actual tank stock and the system book stock ?

On the Sites Screen, click the button with the Spanner on it for the relevant tank and input the correct amount of fuel. There is a notes field to allow the input of the reason for the adjustment. A record of the adjustment will be kept in the "Tank Stock History" accessed through the tab of that name on the sites screen.

15.5 How do I tell the system about fuel deliveries ?

On the Depot Screen, click the Plus button on the relevant tank and input the fuel delivery details. There is a field available for the delivery note number so that you can check against records on invoices later. A record of the delivery will be kept in the "Tank Stock History" accessed through the tab of that name on the sites screen. It is important that you input the price paid for the fuel so that the price comparison tile works correctly, and the on cost report can be used.

15.6 I've lost an ID tag and need to stop it being used – how do I do this ?

On the web site select the "Vehicles" tab and use the filter box to find the vehicle to be Locked Out. The filter can be against the ID Tag number, the vehicles Registration Number or its Fleet Number. Once the vehicle has been found, click the view button and set the "Lockout" Checkbox. The tag will not now be usable on any site across the network. The vehicle in question will have to either be re-enabled, or issued with a new tag to fuel. (See next FAQ).

15.7 How do I transfer an existing vehicle to a new ID Tag ? (EG Lost Tag)

This is very simple. On the web site find the vehicle associated with the lost tag using the search facility which can find the vehicle using registration number, fleet number or the lost tag number. Once found, select the "Edit" button and input the details of

the new ID Tag or card for that vehicle in to the "Vehicle Number" box. All transactions associated with the new ID Tag or Card will be allocated to that vehicle and the ones using the old tag will also remain for reporting purposes.

The lost tag is not now assigned to a vehicle so it can't be used to fuel.

16.   Appendix 1.

16.1   Fleet data gathering form.

ID Assigned (Tag No.)	Reg	Fleet	Fuel 1 (___) Fuel 2 (___) (Y/N)	V-Group 1	V-Group 2	V-Group 3	V-Group 4	PIN (Y/N)	ODO Check (N,U,F)	On Bad Odo (A,L)	Distance Limit	Data Entry 1 (Y/N)	Data Entry 2 (Y/N)	Driver Access (Y/N)

17. Appendix 2 – Report Examples.

17.1 Transaction report

		← Return

Report Name :	Fuel - Transaction list
Report Span :	From 10/08/2016 00:00 to 17/08/2016 23:59
Filter(s) :	None
Costing Method :	System book value

Veh Fleet = 10234

Date/Time	Veh Fleet	Veh Reg	User ID	Depot	Pump	Data	Quantity	Odo	Dist.	MPG	L/100K	Value
12/08/2016 10:49	10234	OE62YGV	DRV_08393	Demo Site	2 Goil	PN63YFE	21.20 L	0	0	0.00	0.00	14.42
12/08/2016 15:24	10234	OE62YGV	DRV_08393	Demo Site	3 Ablu	PN63YFE	21.42 L	0	0	0.00	0.00	9.32
12/08/2016 15:29	10234	OE62YGV	DRV_08393	Demo Site	1 Dsl	PN63YFE	195.70 L	425037	721 M	16.75	16.87	195.70
13/08/2016 09:48	10234	OE62YGV	DRV_08398	Demo Site	1 Dsl	169	148.30 L	426443	1406 M	43.10	6.56	148.30
13/08/2016 09:53	10234	OE62YGV	DRV_08398	Demo Site	3 Ablu	169	6.45 L	0	0	0.00	0.00	2.81

Totals												
Diesel							344.00					344.00
Gas Oil							21.20					14.42
Adblue							27.87					12.13

Veh Fleet =

Date/Time	Veh Fleet	Veh Reg	User ID	Depot	Pump	Data	Quantity	Odo	Dist.	MPG	L/100K	Value
10/08/2016 04:25		K238 FGD	BEN FLOWER	Demo Site	1 Dsl	0	122.80 L	0	0	0.00	0.00	120.96
10/08/2016 04:25		K238 FGD	BEN FLOWER	Demo Site	3 Ablu	0	16.31 L	0	0	0.00	0.00	7.09
10/08/2016 04:30		L636845	GEORGE WILLIAMS	Demo Site	3 Ablu	0	12.15 L	0	0	0.00	0.00	5.29
10/08/2016 04:31		L636845	GEORGE WILLIAMS	Demo Site	1 Dsl	0	157.20 L	0	0	0.00	0.00	154.84
10/08/2016 09:00		K576HJE	GEORGE WILLIAMS	Demo Site	3 Ablu	0	33.57 L	0	0	0.00	0.00	14.60
10/08/2016 09:02		K576HJE	GEORGE WILLIAMS	Demo Site	1 Dsl	0	274.00 L	0	0	0.00	0.00	269.89
10/08/2016 12:32		KL13 HIU	GEORGE WILLIAMS	Demo Site	3 Ablu	164	0.01 L	0	0	0.00	0.00	0.00
10/08/2016 12:34		KL13 HIU	GEORGE WILLIAMS	Demo Site	2 Goil	164	99.70 L	0	0	0.00	0.00	67.80
10/08/2016 12:54		L636845	NEIL MORRISY	Demo Site	1 Dsl	115	99.40 L	0	0	0.00	0.00	97.91
10/08/2016 13:06		KL13 HIU	GEORGE WILLIAMS	Demo Site	3 Ablu	0	32.18 L	0	0	0.00	0.00	14.00
10/08/2016 13:08		KL13 HIU	GEORGE WILLIAMS	Demo Site	1 Dsl	0	61.90 L	0	0	0.00	0.00	60.97
10/08/2016 16:08		GH845HJI	DRV_08377	Demo Site	1 Dsl		167.40 L	0	0	0.00	0.00	166.56
11/08/2016 01:06		L636845	DRV_08376	Demo Site	3 Ablu	173	14.25 L	0	0	0.00	0.00	6.20
11/08/2016 01:06		L636845	DRV_08376	Demo Site	1 Dsl	173	148.30 L	0	0	0.00	0.00	147.56
11/08/2016 05:56		K238 FGD	GEORGE WILLIAMS	Demo Site	1 Dsl	253	77.60 L	0	0	0.00	0.00	77.21
11/08/2016 10:04		K576HJE	GEORGE WILLIAMS	Demo Site	1 Dsl	0	113.90 L	0	0	0.00	0.00	113.33
11/08/2016 10:06		K576HJE	GEORGE WILLIAMS	Demo Site	3 Ablu	0	8.20 L	0	0	0.00	0.00	3.57
11/08/2016 10:10		K576HJE	GEORGE WILLIAMS	Demo Site	2 Goil	174	70.30 L	0	0	0.00	0.00	48.51
11/08/2016 11:02		J629KBE	DRV_08389	Demo Site	3 Ablu	0	60.68 L	0	0	0.00	0.00	26.40
11/08/2016 11:02		J629KBE	GEORGE WILLIAMS	Demo Site	1 Dsl	0	248.50 L	0	0	0.00	0.00	247.26
11/08/2016 11:18		GH05TLY	PAUL POTTS	Demo Site	3 Ablu		15.39 L	0	0	0.00	0.00	6.69
11/08/2016 11:21		GH05TLY	PAUL POTTS	Demo Site	1 Dsl		279.30 L	0	0	0.00	0.00	277.90
11/08/2016 11:46		GH845HJI	DRV_08377	Demo Site	3 Ablu	F101	40.93 L	0	0	0.00	0.00	17.80
11/08/2016 11:47		GH845HJI	DRV_08377	Demo Site	1 Dsl	F101	262.40 L	0	0	0.00	0.00	261.09
11/08/2016 13:54		L636845	BRIAN DRAPER	Demo Site	3 Ablu	F116	12.28 L	0	0	0.00	0.00	5.34
11/08/2016 14:00		L636845	BRIAN DRAPER	Demo Site	2 Goil	F116	103.00 L	0	0	0.00	0.00	71.07
11/08/2016 14:06		L636845	BRIAN DRAPER	Demo Site	1 Dsl	F116	170.80 L	0	0	0.00	0.00	169.95
11/08/2016 14:44		L637GNF	HARRY GREEN	Demo Site	3 Ablu	0	10.54 L	0	0	0.00	0.00	4.58
11/08/2016 17:33		K576HJE	GEORGE WILLIAMS	Demo Site	1 Dsl	0	71.10 L	0	0	0.00	0.00	70.74
12/08/2016 02:14		K576HJE	DRV_08422	Demo Site	1 Dsl	888	126.80 L	0	0	0.00	0.00	126.80
12/08/2016 02:40		GH845HJI	GEORGE WILLIAMS	Demo Site	3 Ablu	T37	14.77 L	0	0	0.00	0.00	6.43
12/08/2016 02:44		GH845HJI	GEORGE WILLIAMS	Demo Site	1 Dsl	T37	193.60 L	0	0	0.00	0.00	193.60
12/08/2016 02:56		L637GNF	GEORGE WILLIAMS	Demo Site	1 Dsl	0	167.50 L	0	0	0.00	0.00	167.50
12/08/2016 06:57		HG678HTR	RYAN SUTTON	Demo Site	1 Dsl	1	28.00 L	0	0	0.00	0.00	28.00
12/08/2016 09:55		PDB 01	GEORGE WILLIAMS	Demo Site	3 Ablu	172	48.70 L	0	0	0.00	0.00	21.18
12/08/2016 09:55		PDB 01	GEORGE WILLIAMS	Demo Site	1 Dsl	172	243.20 L	0	0	0.00	0.00	243.20
12/08/2016 09:57		PDB 01	GEORGE WILLIAMS	Demo Site	2 Goil	172	58.30 L	0	0	0.00	0.00	39.64
12/08/2016 13:04		XV388JGH	DAMON BAIRD	Demo Site	3 Ablu	148	41.11 L	0	0	0.00	0.00	17.88
12/08/2016 13:04		XV388JGH	DAMON BAIRD	Demo Site	1 Dsl	148	273.20 L	371317	101886 M	999.99	0.17	273.20
12/08/2016 13:08		XV388JGH	DAMON BAIRD	Demo Site	2 Goil	148	203.70 L	0	0	0.00	0.00	138.52
12/08/2016 17:00		K576HJE	CONNER FARRIMOND	Demo Site	1 Dsl	153	150.30 L	0	0	0.00	0.00	150.30

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17.2 Vehicle Totals Report

◄◄ ◄ 1	of 5 ► ►►							

Report Name :	Fuel - Vehicle totals							
Report Span :	From 10/08/2016 00:00 to 17/08/2016 23:59							
Filter(s) :	None							
Costing Method :	System book value							

Vehicle Type = CHERRY PICKER

Veh Fleet	Veh Reg	Grade	Litres	Open	Close	Distance	MPG	L/100K	Value
	PDB 01	Dsl	695.10	0	0	0	0.00	0.00	695.10
	PDB 01	Goil	204.20	0	0	0	0.00	0.00	138.85
	PDB 01	Ablu	81.49	0	0	0	0.00	0.00	35.44

Totals									
Diesel			695.10						695.10
Gas Oil			204.20						138.85
Adblue			81.49						35.44

Vehicle Type = FIAT DV1

Veh Fleet	Veh Reg	Grade	Litres	Open	Close	Distance	MPG	L/100K	Value
FLT0101	KJ15SPD	Dsl	852.50	486250	489925	3675 K	12.17	23.20	852.50
FLT0101	KJ15SPD	Goil	80.40	0	0	0	0.00	0.00	54.68
FLT0101	KJ15SPD	Ablu	53.98	0	0	0	0.00	0.00	23.48
FLT 0018	ML56 LOA	Dsl	1323.40	0	0	0	0.00	0.00	1319.98
FLT 0018	ML56 LOA	Goil	281.80	0	0	0	0.00	0.00	193.14
FLT 0018	ML56 LOA	Ablu	109.85	0	0	0	0.00	0.00	47.76
FLT0129	RG10KDS	Dsl	226.80	482325	483121	796 K	9.90	28.49	223.40
FLT0129	RG10KDS	Ablu	12.85	0	0	0	0.00	0.00	5.59

Totals									
Diesel			2402.70						2395.88
Gas Oil			362.20						247.82
Adblue			176.68						76.85

Vehicle Type = HIAB

Veh Fleet	Veh Reg	Grade	Litres	Open	Close	Distance	MPG	L/100K	Value
-	JH09DFG	Dsl	567.50	422999	425408	2409 K	11.98	23.56	567.50
-	JH09DFG	Ablu	46.68	0	0	0	0.00	0.00	20.30

Totals									
Diesel			567.50						567.50
Gas Oil			0.00						0.00
Adblue			46.68						20.30

Vehicle Type = LAWN MOWER

Veh Fleet	Veh Reg	Grade	Litres	Open	Close	Distance	MPG	L/100K	Value
	GH845HJI	Dsl	1224.50	0	0	0	0.00	0.00	1222.35
	GH845HJI	Ablu	126.72	0	0	0	0.00	0.00	55.13
	HG676HTR	Dsl	28.00	0	0	0	0.00	0.00	28.00

Totals									
Diesel			1252.50						1250.35
Gas Oil			0.00						0.00
Adblue			126.72						55.13

Vehicle Type = MINI BUS

Veh Fleet	Veh Reg	Grade	Litres	Open	Close	Distance	MPG	L/100K	Value
FLT134	JHG98UI	Dsl	71.40	0	0	0	0.00	0.00	71.40
FLT0144	TF58DDE	Dsl	106.60	25252	26063	811 K	21.45	13.14	105.97

Totals									
Diesel			178.00						177.37
Gas Oil			0.00						0.00
Adblue			0.00						0.00

Vehicle Type = MOTORCYCLES

Veh Fleet	Veh Reg	Grade	Litres	Open	Close	Distance	MPG	L/100K	Value
	L637GNF	Dsl	488.40	0	0	0	0.00	0.00	488.40

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17.3   Pump throughputs report

Return								

Report Name :	Fuel - Pump throughputs							
Report Span :	From 10/08/2016 00:00 to 17/08/2016 23:59							
Filter(s) :	None							
Depot	Pump	Grade	Accounted	Unaccounted	Manual	Transferred	Total	
Demo Site	HGS Pump 1	Diesel	37218.50	0.00	0.00	0.00	37218.50	L
Demo Site	P2 Gas	Gas Oil	8909.60	0.00	0.00	0.00	8909.60	L
Demo Site	P3 Adblue	Adblue	3634.02	0.00	0.00	0.00	3634.02	L
Report Totals								
Diesel							37218.50	
Gas Oil							8909.60	
Adblue							3634.02	

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17.4 Driver assignment report

A List of all the assigned drivers (or fuellers) with ID Device numbers (Tag Numbers), names, and assigned groups.

Report Name :	Driver - Assignment	
Filter(s) :	None	

User Number	User ID	Department	Function
00001	VICKY SMITH	STAFF DRIVER	GENERAL STAFF
00003	MARTIN CUIJPERS	STAFF DRIVER	MANAGEMENT
00020	JEFF CORVO	HEAVY COMMERCIAL	GENERAL STAFF
00024	HARRY GARTSIDE	HEAVY COMMERCIAL	GENERAL STAFF
00025	STUART JUST	HEAVY COMMERCIAL	SALES
00070	CHUCK NORRIS	HEAVY COMMERCIAL	GENERAL STAFF
00074	LIAM JONES	STAFF DRIVER	GENERAL STAFF
00100	HARRY JAMES	HEAVY COMMERCIAL	GENERAL STAFF
00112	MATT DAMON	HEAVY COMMERCIAL	GENERAL STAFF
00123	MARTIN	WARDEN	GENERAL STAFF
00129	SEAN LOCKE	HEAVY COMMERCIAL	GENERAL STAFF
00176	PHILLIP LAMB	HEAVY COMMERCIAL	GENERAL STAFF
00183	LIAM JONES	HEAVY COMMERCIAL	GENERAL STAFF
00194	NIKOLAI PETRA	HEAVY COMMERCIAL	GENERAL STAFF
00216	JIMMY CARR	HEAVY COMMERCIAL	GENERAL STAFF
00217	EDWIN VAN BUYTEN	PARKS	GENERAL STAFF
00220	MICK HUCKNEL	PARKS	MANAGEMENT
00231	MARTIN FILAN	PARKS	SALES
00233	DAVID LONGFIELD	HEAVY COMMERCIAL	GENERAL STAFF
00236	JACK LISTON	HEAVY COMMERCIAL	GENERAL STAFF
00248	JAMES FRANCO	HEAVY COMMERCIAL	GENERAL STAFF
00249	CHRISTIAN POOLE	HEAVY COMMERCIAL	GENERAL STAFF
00258	CHEYNE WALKER	HEAVY COMMERCIAL	GENERAL STAFF
00267	MATT TWEED	HEAVY COMMERCIAL	GENERAL STAFF
00284	SETH MCFARLANE	HEAVY COMMERCIAL	GENERAL STAFF
00306	TAM SAVAGE	PART TIME	MAINTENANCE
00324	BARRY CHUCKLE	HEAVY COMMERCIAL	GENERAL STAFF
00404	DAVID EATOUGH	STAFF DRIVER	TRAINING
00406	DRV_00406	HEAVY COMMERCIAL	GENERAL STAFF
00426	JOE WOOLLEY	STAFF DRIVER	GENERAL STAFF
00428	DRV_00428	HEAVY COMMERCIAL	GENERAL STAFF
00436	TOMAS MARO	STAFF DRIVER	GENERAL STAFF
00462	GARY LLOYD	STAFF DRIVER	GENERAL STAFF
00468	GRAHAM R ALTY	STAFF DRIVER	GENERAL STAFF
00470	TOMASZ WABICH	STAFF DRIVER	GENERAL STAFF
00472	JOHN SHARPLES	STAFF DRIVER	GENERAL STAFF
00484	KEITH METCALFE	STAFF DRIVER	GENERAL STAFF
00558	RAY RATCLIFFE	STAFF DRIVER	SALES
00559	DRV_00559	HEAVY COMMERCIAL	GENERAL STAFF
00565	MICHAEL SHAKESHAFT	STAFF DRIVER	GENERAL STAFF
00570	SAM KENWORTHY	STAFF DRIVER	GENERAL STAFF
00572	DRV_00572	HEAVY COMMERCIAL	GENERAL STAFF
00589	DRV_00589	HEAVY COMMERCIAL	GENERAL STAFF
00600	PETE SHEPHERD	PART TIME	GENERAL STAFF
00602	STEVE POTTER	HEAVY COMMERCIAL	GENERAL STAFF
00603	ANDY FIELDING	HEAVY COMMERCIAL	GENERAL STAFF
00606	MARTIN O TOOLE	HEAVY COMMERCIAL	GENERAL STAFF
00607	ANDY CHOPWZ	HEAVY COMMERCIAL	GENERAL STAFF
00608	PAUL CAWLEY	HEAVY COMMERCIAL	GENERAL STAFF
00610	BOB TAYLOR	HEAVY COMMERCIAL	GENERAL STAFF
00611	FRED TAYLOR	HEAVY COMMERCIAL	GENERAL STAFF
00612	BRIAN DRAPER	HEAVY COMMERCIAL	GENERAL STAFF
00613	STEVE YOUNG	HEAVY COMMERCIAL	GENERAL STAFF
00617	GRAHAM ATKINSON	HEAVY COMMERCIAL	GENERAL STAFF
00633	DON TOMLINSON	HEAVY COMMERCIAL	GENERAL STAFF
00634	JILL NEWSOME	HEAVY COMMERCIAL	GENERAL STAFF

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17.5 Vehicle Assignment Report

A List of all the vehicles assigned on the system with the Access ID, Fleet and Reg Numbers and group assignments.

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Report Name : Vehicle - Assignment
Filter(s) : None

Access Device Number	Fleet	Registration	Pin	Vehicle Type	Group	Vehicle Make
00001	FLT00021	REG00021	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300001		SUI5712	TPT	PLANT TYPE 1	SALES	_
0000300006	FLT18	JH54 FGD	HAULAGE	RIGID	SALES	_
0000300007	FLT00007	REG00007	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300014	F014	EB306JIO	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300021	FLT00021	REG00021	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300022	F038	FA124LMO	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300038		GH05TLY	ON12345	TIPPER	DONG 12345	_
0000300041	F041	SQ198OIN	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300044	RIX1213	A123 ABC	TIPPERS	RIGID	SALES	_
0000300045	FLT 18	AU27 GU02	TIPPERS	RIGID	SALES	_
0000300047	FLT0018	SE09 PT02	STREET LIGHTING	DUAL FUEL VEHICLE	ENGINEERING	FORD
0000300048	FLT 18	AU26 GU04	TIPPERS	RIGID	SALES	_
0000300049	FLT 18	AU26 GU03	TIPPERS	RIGID	SALES	_
0000300005	FLT 0018	SE04 PT01	HAULAGE	DUAL FUEL VEHICLE	WAREHOUSE	FORD
0000300050	F050	WZ748GNR	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300060		HG56 PKL	TIPPERS	RIGID	SALES	_
0000300062	F062	EE825VHZ	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300064	FLT 18	AU27 GU03	TIPPERS	RIGID	SALES	_
0000300065	F065	FX411GRQ	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300070	FLT0070	FP05 FFR	TRANSPORT	TRACTOR	TRUNKING	VOLVO
0000300071	FLT0018	GJ03 KK	HAULAGE	ON12346	WAREHOUSE	DAF
0000300072	FLT0072	M165 TWG	NEW VEHICLES	VAN	TRUNKING	VOLVO
0000300073	FLT0073	PN57 YWE	NEW VEHICLES	STACKER	TRUNKING	VOLVO
0000300074	FLT 0018	C0UR733NRS	HAULAGE	RIGID	ENGINEERING	_
0000300075	FLT0075	OP54 HAM	NEW VEHICLES	TRACTOR	TRUNKING	VOLVO
0000300076	FLT0004	FP06 ZWT	TRANSPORT	STACKER	TRUNKING	VOLVO
0000300077	FLT0018	AS10 DFG	HAULAGE	ON12346	WAREHOUSE	DAF
0000300079	FLT0018	PO11 FGH	HAULAGE	ON12346	WAREHOUSE	DAF
000300008		MB12 UFG	HAULAGE	RIGID	WAREHOUSE	_
0000300080	FLT0018	HO11 DFG	HAULAGE	ON12346	WAREHOUSE	DAF
0000300082	FLT0018	1C3 WEF	HAULAGE	ON12346	WAREHOUSE	DAF
0000300083	FLT0083	F99 WFV	NEW VEHICLES	TRANSPORT	TRUNKING	VOLVO
0000300085	FLT0018	QW12 FLO	HAULAGE	VAN	WAREHOUSE	DAF
0000300086	FLT0086	MX07 GTY	NEW VEHICLES	TRACTOR	TRUNKING	VOLVO
0000300087	FLT0007	FP07 MWJ	NEW VEHICLES	STACKER	TRUNKING	VOLVO
0000300088	FLT0018	HY12 DRG	HAULAGE	VAN	WAREHOUSE	DAF
0000300089	FLT0018	SU12 VBC	HAULAGE	VAN	WAREHOUSE	DAF
0000300090	FLT0090	OP53 MWA	TRANSPORT	TRACTOR	SALES	VOLVO
0000300091	-	HG06KJH	RENTAL	STACKER	ENGINEERING	FORD
0000300092	FLT0018	TY12 IOU	HAULAGE	VAN	WAREHOUSE	DAF
0000300093	FLT0093	L141 NRH	TRANSPORT	TRACTOR	TRUNKING	VOLVO
0000300094	-	PL07WHG	RENTAL	STACKER	ENGINEERING	FORD
0000300096	FLT0096	KR51 PDB	RENTAL	STACKER	PRODUCTION	VOLVO
0000300097	FLT 0018	ML59 UGO	HAULAGE	RIGID	WAREHOUSE	_
0000300098	FLT0098	FG35SHD	TRACTORS	FIAT DV1	TRUNKING	_
0000300099	PETES	J19SAW	RENTAL	TRACTOR	PRODUCTION	VOLVO
0000300100	F100	PM165HOZ	STREET LIGHTING	VAN	WAREHOUSE	FORD
0000300101	FLT0101	KJ15SPD	SALES3	FIAT DV1	DONG 12345	_
0000300103	FLT1	KH03XGH	NEW VEHICLES	TRACTOR	PRODUCTION	VOLVO
0000300104	FLT0104	PACK HOUSE	NEW VEHICLES	MINI BUS	TRUNKING	VOLVO
0000300105	FLT0018	HJ09 AXD	HAULAGE	VAN	WAREHOUSE	DAF
0000300106	FLT106	DF05AHE	RENTAL	STACKER	ENGINEERING	FORD
0000300107	107	FK03 DDT	NEW VEHICLES	TRANSPORT	PRODUCTION	VOLVO
0000300108	108	FX07 BKB	NEW VEHICLES	TRANSPORT	PRODUCTION	VOLVO
0000300109	FLT0018	VB12 WES	HAULAGE	VAN	WAREHOUSE	DAF

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18.   Appendix 3

18.1 Transaction alarm codes

Fuelling Records
Unauthorised (override) fuelling   UF
Odometer override   OO
Null delivery   ND
Power failed while fuelling   PF
Null delivery cutoff   NC

Engineer/Manger Events
Stock entry   SE
Tank dip   TD
Pump enabled   PE
Pump disabled   PD
Vehicle locked locally   VL
User locked locally   UL
Vehicle unlocked locally   VU
User unlocked locally   UU
Powerfail at FMU (when idle)   PF
Pump flow test   FT

Fueller logon   F1
Fueller logoff   F2

Server declined vehicle or driver access
Access denied   AD

Invalid Vehicle/User ID
Attempted use of locked out user id   LU
Attempted use of locked out vehicle id   LV
Vehicle card has expired   XV
User card has expired   XU
Fuel limit exceeded   FX
Invalid vehicle   IV
Invalid user   IU
Invalid manager   IM
Invalid engineer   IE
Unknown vehicle fuelled   UV
Unknown driver fuelled   UD

PC Functions
Manual fuel entry   MF
Imported from file   FI
Offsite fuel entry   OF

Transaction Editor
Modified using transaction editor   xx!

(Where xx is one of the above codes or blank for a standard fuelling record. When a
record has been modified using the transaction edit facility, this is indicated by addin '!'
to the existing alarm code. For example, a modified override fuelling record would be
'UF!' A modified standard fuelling record would simply be '!')