

(1918/73, 1940/68, 1958/63,
1967/66, 2017/74, 2162/68,
2176/77, 2286/54, 2437/41,
2461/26, 2486/53, 2536/56,
2619/39, 2650/53)



III(5)a

Certificate
Pursuant to section 12 of the
Weights and Measures Act 1985
Series V006 Revision 9

| Certification No. | Valid Until | Certification No. | Valid Until |
|--------------------------|--------------------|--------------------------|--------------------|
| 1918/73 Revision 10 | 1 March 2016 | 2286/54 Revision 10 | 1 March 2016 |
| 1940/68 Revision 10 | 1 March 2016 | 2437/41 Revision 10 | 1 March 2016 |
| 1958/63 Revision 10 | 1 March 2016 | 2461/26 Revision 10 | 1 March 2016 |
| 1967/66 Revision 10 | 1 March 2016 | 2486/53 Revision 10 | 1 March 2016 |
| 2017/74 Revision 10 | 1 March 2016 | 2536/56 Revision 10 | 1 March 2016 |
| 2162/68 Revision 10 | 1 March 2016 | 2619/39 Revision 10 | 1 March 2016 |
| 2176/77 Revision 10 | 1 March 2016 | 2650/53 Revision 10 | 1 March 2016 |

In accordance with the provisions of section 12 of the Weights and Measures Act 1985, the Secretary of State for Business, Innovation and Skills hereby certifies as suitable for use for trade a pattern of a liquid flowmeter, as described in the descriptive annex to this Certificate, and having the following characteristics:-

DISPENSER(s): Dispensers described in certification numbers: 1918, 1940, 1958, 1967, 2017, 2162, 2176, 2286, 2437, 2461, 2486, 2536, 2619 and 2650.

SITE CONTROLLER: Torex Retail 9730 site controller or, Torex Forecourt Link or, DOMS PSS5000 or DOMS PSS5000 Compact as described in the descriptive annex.

KIOSK CONTROL UNIT AND POINT OF SALE: Torex Retail Lucas Fuel POS solution as described in the descriptive annex.

UNATTENDED PAYMENT TERMINAL SPOT M3 as described in the descriptive annex

Under the provisions of section 12(6), the validity of this certificate is limited as shown above.

Note: This certificate relates to the suitability of the equipment for use for trade only in respect of its metrological characteristics. It does not constitute or imply any guarantee as to the safety of the equipment in use for trade or otherwise.

This revision replaces previous versions of this certificate.

Submitted by: **MICROS**
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Issue Date: 02 March 2015

Reference No: T1118/0015

A handwritten signature in black ink, appearing to read 'G Stones'.

Signatory: G Stones
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Descriptive Annex

1 INTRODUCTION

This certificate describes the Torex Retail Fuel POS system connected to the specified fuel dispenser. The Torex Retail Lucas Fuel POS system is a combined pump controller and point of sale system comprising of one or more approved point of sale (POS) PC terminals. Attached to, or part of, the POS terminal may be a barcode reader, EFT card reader, receipt printer, cash drawer, EFT payment terminal and customer display unit (CDU) (see Figure 1). Each terminal connects to the kiosk system via a LAN and a back office PC can also be attached to the system on the LAN.

Each Torex Retail Lucas Fuel POS connects to the kiosk system via a LAN (see Section 1.1 System interconnections).

The Torex Retail 9730 site controller is connected to the system via the LAN (see Section 1.1 System interconnections). Alternatively the DOMS PSS 5000 site controller may be used.

A back office PC can also be attached to the system on the LAN (see Section 1.1 System interconnections).

Attached to, or part of, the Torex Retail Lucas Fuel Pos may be a barcode reader, EFT card reader, receipt printer, cash drawer, EFT payment terminal and customer display unit (CDU) (see Section 1.1 POS (till) and peripherals).

1.1 System interconnections

Where more than one Torex Retail Lucas Fuel POS is connected, each POS has its own database and the system can be set so that one of the POSs has the Master database or the back office PC holds the master database, all other POSs pass their data back to the Master database. If the master POS / back office PC should fail for some reason, the other POSs would continue to run and would transfer all transactions to the Master database once the connection was re established.

2 CONSTRUCTION

2.1 Site Controller

The site controller may be either the Torex Retail 9730 or the DOMS PSS5000 or DOMS PSS5000 Compact.

2.1.1 Torex Retail 9730 site controller

The Torex Retail 9730 site controller is an intelligent site controller that connects to the Torex Retail Lucas Fuel Pos via the LAN. It can connect to any Veeder Root tank gauge directly or any other tank gauge system via an opto-isolator. A connection can be made to the Torex Retail 9730 site controller for debug and software upgrade purposes via the network. The site controller is described in Test Certificate GB-1192 and Cert 2780 Supplement 7.

2.1.2 DOMS PSS5000 site controller

The DOMS PSS5000 forecourt controller comprises a metal rectangular box (Figure 15) housing the following main components.

- A power supply
- A Central Processing Board (CPU) with 8 serial ports (CPB508).
This has an LCD 16x2 character alphanumerical display and a keyboard comprising 5 keys for navigating the menu options, an adjacent legend describes the key functions as shown in Figure 16.
- Hardware interface modules.
Dispensers are connected to the CPU board via an appropriate hardware interface module compatible with the communication protocol of the dispenser.

2.1.2.1 Software

The DOMS PSS5000 has a legal authority module (LAM) for the UK containing specific parameter values and functions. The LAM version number is 498-06-100 and the checksum number is 0D6C. These can be viewed by selecting the appropriate menu heading using the operator keys on the CPU. The LAM version number and checksum are accessed as follows. When the PSS is powered on, the first line displays the application software version and the current time. The second line displays the W&M Service menu. Pressing the Down Arrow once, displays the W & M menu which comprises 7 sub-menus, W.1 to W.7. Press the right button once to obtain W.1 – LAM INFO and press again to display Version and Checksum information.

2.1.3 DOMS PSS5000 Compact site controller

As described in section 2.1.2, but in a more compact metal box, with less spaces for hardware interface modules. (Figure 27). The LAM version number is 498-06-101, checksum number is 0D6C

2.2 POS units approved for use with Torex Retail Lucas Fuel POS

2.2.1 Epson IM-700 Model No M215/A (Figure 2)

A point of sale PC incorporating a colour touch screen panel, a built in receipt printer and a customer display. A protective plastic cover is fitted on the rear of the unit covering the external connection ports and must not be removed during normal use.

2.2.2 Fujitsu ICL Teampos 2000 (Figure 3)

This comprises a PC, a customer display unit (Part #CA05951-2921), and the following CE marked items, a VGA operator display, a keyboard, a printer and a cash drawer. (This unit has 10 comms. ports.)

2.2.3 Fujitsu Teampos 2000 Light (as Figure 3)

As Teampos 2000 but with only 6 comms. ports.

2.2.4 Epson IM310 Model No: M137A (Figure 4)

A point of sale PC incorporating a colour touch screen panel, a built in receipt printer and a detachable customer display.

2.2.5 Epson IM320 Model No: M156X (as Figure 4)

A point of sale PC incorporating a colour touch screen panel, a built in receipt printer and a detachable customer display. A protective plastic cover is fitted on the rear of the unit covering the external connection ports and must not be removed during normal use.

2.2.6 Epson IM-800 with DM-M820 touch screen (Figure 5)

A point of sale PC supplied with a touch screen and connected to the following CE marked peripheral equipment: bar code reader, printer, cash drawer, customer display unit, modem and uninterruptible power supply (UPS).

2.2.7 TEC POS ST5600 Model No: ST-5601-B2nnn-nn (n may be any character) (Figure 6)

This comprises a PC having the following CE marked peripheral equipment connected: bar code reader, touch screen, printer, cash drawer, customer display unit, modem and uninterruptible power supply (UPS).

2.2.8 Posiflex Model : TP6000 /7000 (Figure 7)

A point of sale comprising a colour touch screen panel coupled to a PC main unit, the whole mounted on a stand, plus customer display unit. Additional CE marked peripheral equipment connected: (optional) operator keyboard, bar code reader, printer, cash drawer, modem.

2.2.9 IBM SurePOS 563 (15" display) and 573 (17" display) (Figure 8)

A point of sale PC incorporating a colour touch screen panel, a customer display and a separate receipt printer. A protective cover is fitted on the rear of the unit covering the external connection ports and must not be removed during normal use.

2.2.10 Hewlett Packard RP 5000 POS PC (Figure 14)

A point of sale PC incorporating an LCD colour touch screen panel, a customer display and a separate receipt printer.

2.3 Operator display - Torex Retail Lucas Fuel POS display (Section 4.4.1)

The operator display is a LCD touch-sensitive display, for example IBM 15" or 17" active matrix touchscreen, which is attached either by PS2, USB or RS232 connection to the PC. The display has a matrix covering the screen that is sensitive to the touch of a finger. Only functions that are valid at a particular time will have icons/keys on the screen.

2.4 EFT card reader (Figure 9)

This unit is for reading chip, magnetically encoded credit and debit cards. The card reader is a separate unit attached to the system via RS232. (Other terminals may use different protocols).

2.5 Barcode reader (Figure 10)

This is used for the scanning of barcodes on dry stock items; it is attached to a serial port or as a keyboard wedge on the PC. Any CE approved barcode reader may be used.

2.6 Receipt printer - IBM 4610 SureMark thermal printer

The receipt printer can be connected to either the serial or USB port on the PC. Any suitable CE marked serial printer may be used.

2.7 Cash drawer

The cash drawer is connected to a printer at the rear of the printer; any 'generic', 'mini' or 'flip top' cash drawer may be fitted.

2.8 Customer display unit (Figure 11)

The customer display is an integral unit in the IBM SurePOS. The display has two rows each of twenty characters, facing away from the operator and toward the customer, or this is a 2-line CDU, which connects to serial port on the rear of the PC.

2.9 UPS (uninterruptible power supply)

The system is powered by an UPS which provides power for at least fifteen minutes in the event of a power failure to allow completion of current transactions and safe shutdown of the system. Individual UPS units may be attached to each PC to provide power during a mains failure or alternatively, a large UPS, capable of supporting the complete system, POS terminals and back office PC, may be installed together with UPS sockets installed at each PC position. The UPS installation is dependent upon the customer requirements but any UPS installed will carry the CE marking for EMC conformity.

2.10 Other related hardware

2.10.1 Back office PC

A back office PC may be connected to the system over the LAN. This PC is used to manage the wet and dry stock. This PC may also be used to hold the Master database.

2.10.2 Router

This provides communications with all devices connected by the LAN.

2.10.3 Modem

This may be added for remote support and diagnostics.

2.10.4 Cable connections

CAT 5 – for network connections, using TCP/IP.
RS-232 for peripherals (some printers may require parallel connection).

2.11 Software

A schematic view of the software is shown in Figure 12.

2.11.1 Operating system

The operating system is Microsoft Windows 2000 Professional or Microsoft Windows XP Professional or Linux.

2.11.2 Program modules (pump controller)

The pump controller is a graphical interactive application that runs on the screen alongside the POS application. It shows the operator the current state of each pump and the transactions held by the site controller, and allows the operator to authorise pumps to dispense fuel and to select concluded transactions for payment.

2.11.3 Controlled custom software version number

The files listed in the following section (legally relevant files/software) are subject to this approval, allowing for permitted minor changes. The following identification is used:

Version numbers are incremented for each software release. The version number structure is as follows: xx.yy.zz

where xx denotes major functional change, yy minor functional change, and zz refers to changes due to fault fixes (zz is not displayed). Only a change in the primary (xx) digit constitutes a metrological change. To display the software version number see section 3.6.

2.11.4 Legally relevant files/software

| | |
|----------------------------|-----------------------------------|
| Site controller interface | 1.3 |
| Transaction module | CRC 0xddff7004 |
| Alternative version number | |
| Site controller interface | 1.4 |
| Transaction module | CRC 0x36336507 |
| Interface Software | |
| Site Controller Software | 1.4.1 |
| Transaction Module | DOMS-410-38-144 CRC 0xE4E98B60 |
| NV9730 | |
| Interface software | 1.4.2 |
| Transaction module | CRC 0xAA0C296B |
| Forecourt Link | |
| Interface software | 1.4.2 |
| Transaction module | CRC 0xAA0C296B |

| | |
|---------------------------|-----------------|
| Interface Software | 1.4.3 |
| NV9730 and Forecourt Link | |
| Transaction module | CRC 0XA2856FA0 |
| DOMS | |
| Transaction module | CRC 0XFDDDB071C |

3 OPERATION

3.1 General features

3.1.1 Interactive touch-sensitive operator display

The operator display is an LCD touch-screen. Icons are displayed on the screen to represent button. The screen has a matrix covering it that is sensitive to the touch of a finger and reacts as if a mouse button had been clicked. When the screen is touched on a button/icon the system reacts as if that button had been pressed. The buttons shown at any point in time, depend on the activity being performed by the operator, so only functions that are valid can be performed. Some examples of button icons are:

- Alphanumeric icons: For the input of various alphanumeric entries as required for point of sale transactions, such as sales amounts or car registrations.
- Product/department icons: For the input of sales values against dry stock products that will increment the total value of the transaction.
- Method of payment icons: These icons are used to offset the payment of the dry stock or wet stock sale against.
- Special function icons: These icons are used to access specific tasks relating to the POS.
- Pump control icons: For the control of the pump functions, including authorisation.

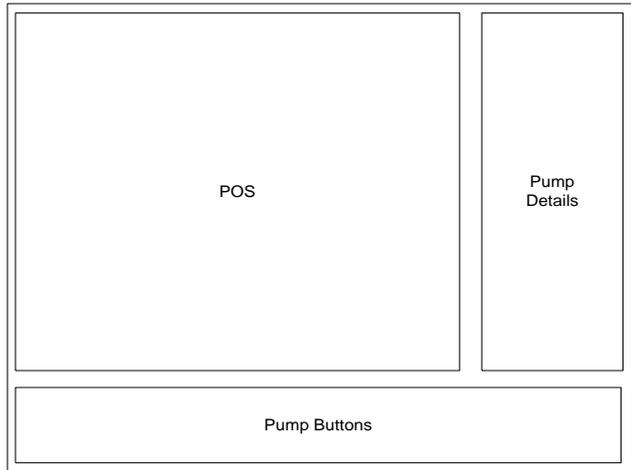
3.1.2 Touch screen appearance

The touch screen layout is configurable so its appearance will vary depending on how an organisation has decided it should look and work. All screens illustrated in this document are therefore example screens only.

The operational sequence and functionality of the keys remain constant although the layout/location of the screen keys/functions keys may vary.

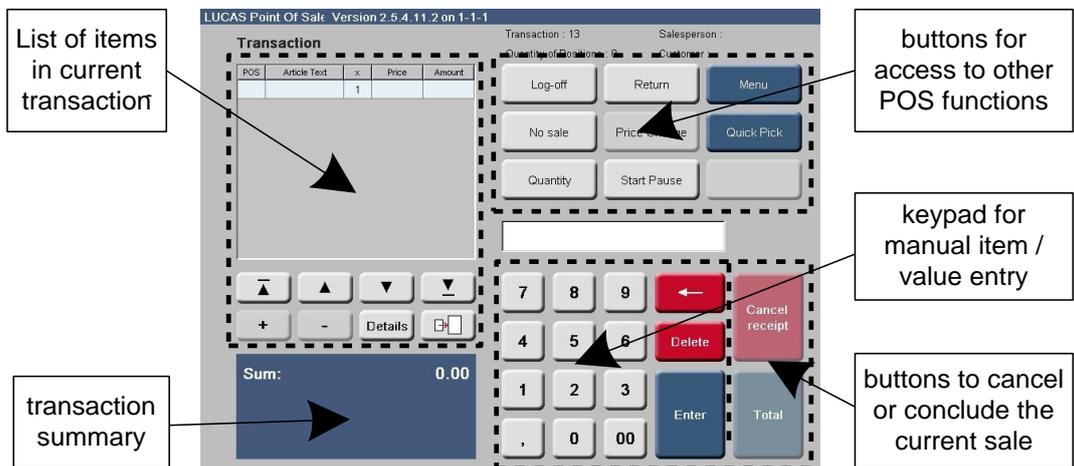
3.1.3 Screen areas

There are three distinct areas on the display screen. The main area, bordered by the top and left edges of the screen is the POS application. At the bottom of the screen are the pump control buttons. To the right of the screen is the pump details area, which displays background wallpaper most of the time, but shows detailed pump information and transaction details once a pump has been selected via the pump buttons. The pump details area also allows transactions to be selected for payment.

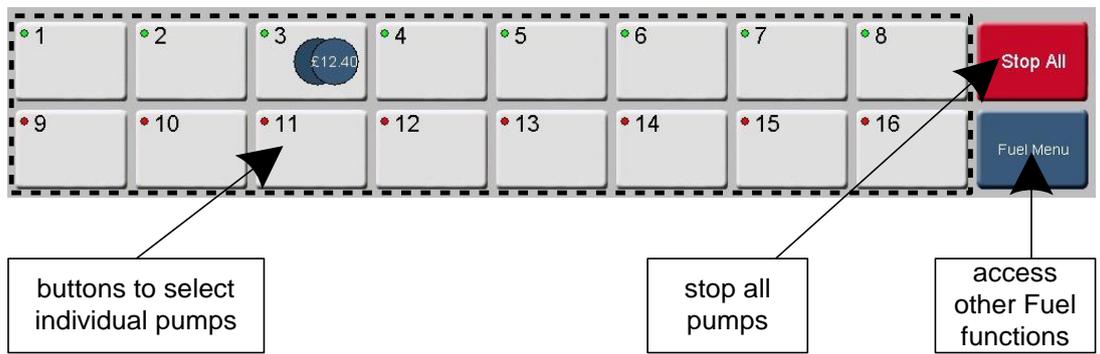


The areas are described in further detail in the following paragraphs.

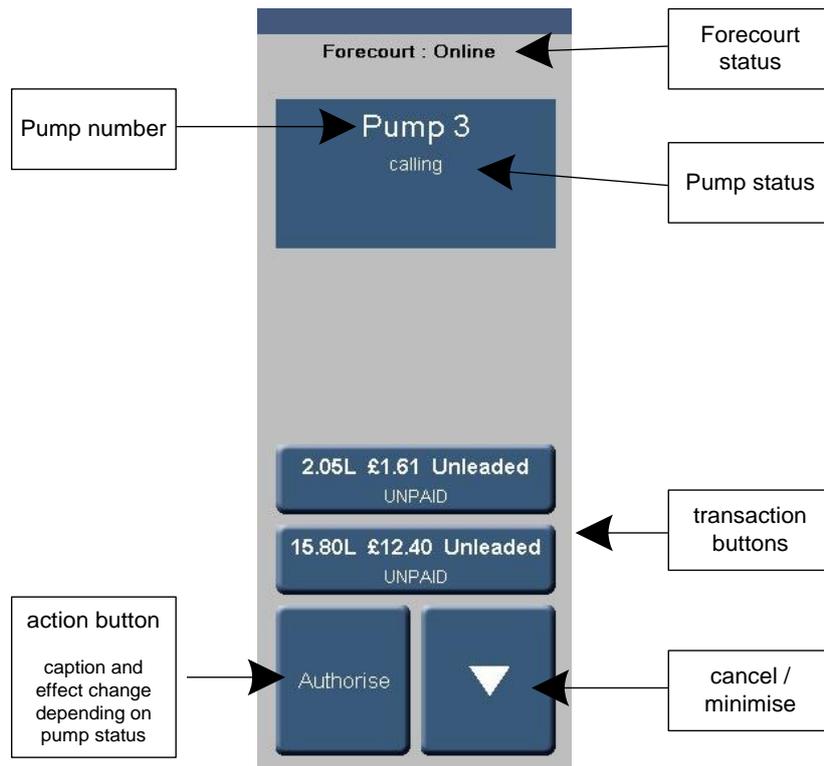
3.1.4 POS area



3.2 Pump area buttons

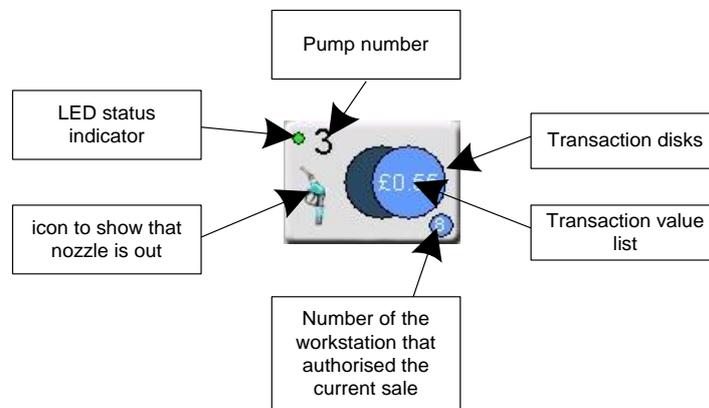


3.2.1 Pump detail area



The details on each transaction button are explained in Section 3.3.

3.2.2 Pump button



3.2.3 Pump number

The number of the pump (or more strictly the fuelling point) on the forecourt.

3.2.4 LED status indicator

This can be one of three colours:

| | |
|--------|---|
| Green | OK, pump is in service. |
| Yellow | Pump is in service, but is not in a state where it can currently be used. The detailed pump display will give details of the problem. |
| Red | Pump is out of service e.g. due to a hardware fault. |

3.2.5 Nozzle icon

This is visible whenever the nozzle is out e.g. while calling or dispensing.

3.2.6 Workstation number

The workstation / Pos (in the UK: “till”) number that authorised the sale.

3.2.7 Transaction value list

A list showing the value of each of the transactions at this pump that is available for sale. Each value is displayed in turn for 2 seconds.

3.2.8 Transaction disks

The disks show how many transactions are available for sale or in-progress at this pump. The front disk represents the current sale and changes colour to show the state of the current transaction. The rear disk is visible if there are any (i.e. one or more) stored (memorised) transactions.

Current transaction disk colours:

- Yellow (flashing) pump is calling.
- Light blue transaction in progress.
- Dark Blue transaction available for sale.

3.3 Transaction button



The transaction status is indicated by the colour of the button:

- Dark blue transaction available for sale.
- Light blue transaction in progress.
- Grey/blue transaction has already been paid for.

For transactions that have not been paid for, the status is further indicated by the second line of text:

- UNPAID available for sale.
- CONFIRMING waiting for customer to confirm transaction details.
- PAYING waiting for payment to be completed at the POS.

Note that the precise wording may differ due to translation.

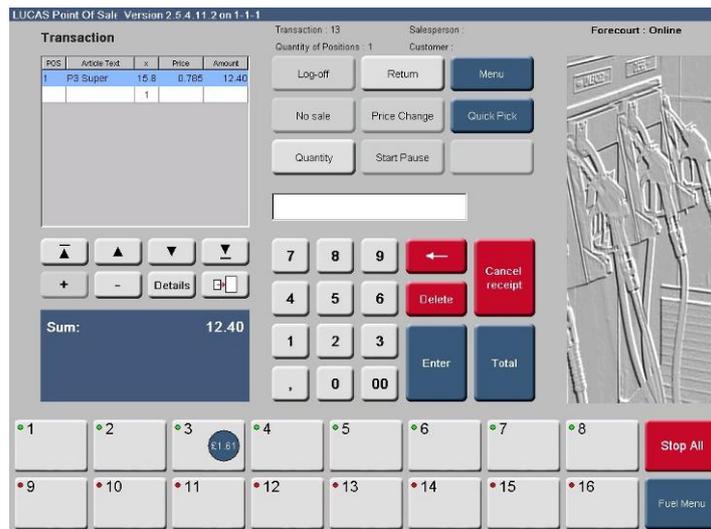
3.4 Example receipt format

See Figure 13.

3.5 Voiding transactions with fuel

If the wrong transaction is mistakenly transferred to the POS it can still be voided back to the site controller.

From the sales screen:



Press <cancel receipt>

The transaction is reinstated on the site controller and shows again on the pump button:



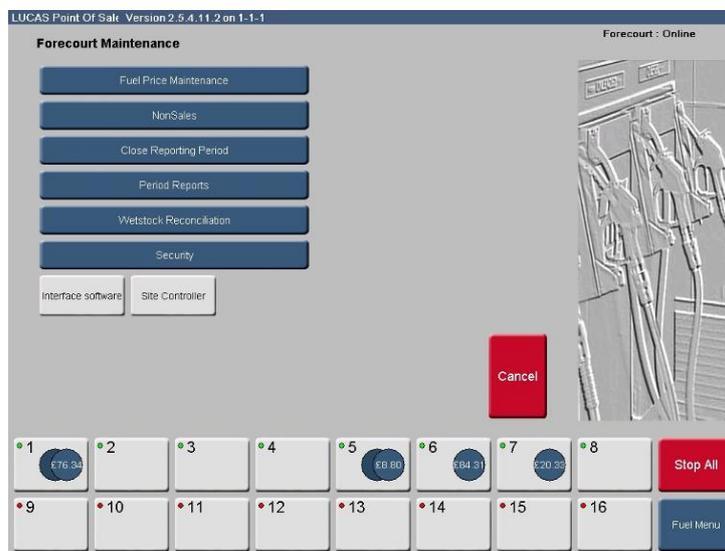
3.6 Verifying software versions

3.6.1 Overview

The version number and/or checksums of the interface components can be checked and verified. Some key areas, particularly those where transaction data is handled, are protected by a checksum, which must be confirmed as correct before the system can sell or authorise any fuel transactions.

3.6.2 Checking the software version number and checksums

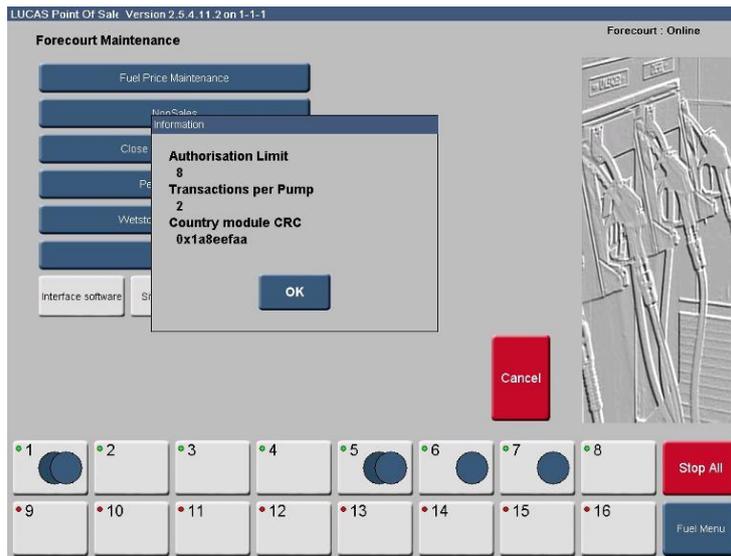
The version number and/or checksums of the interface components can be checked via system menus. To view the security settings, select the Fuel Menu from the front screen. Select <Security>. The Security option is expanded:



3.6.2.1 Site controller country module

Country-specific operation, such as the limit on stored transactions and the number of permissible concurrent transactions are fixed within a module in the site controller, and not configurable by the POS. The current settings can be viewed via the Security option from the Fuel Menu.

Press <Site Controller> the site controller security settings are shown in a pop-up message box:

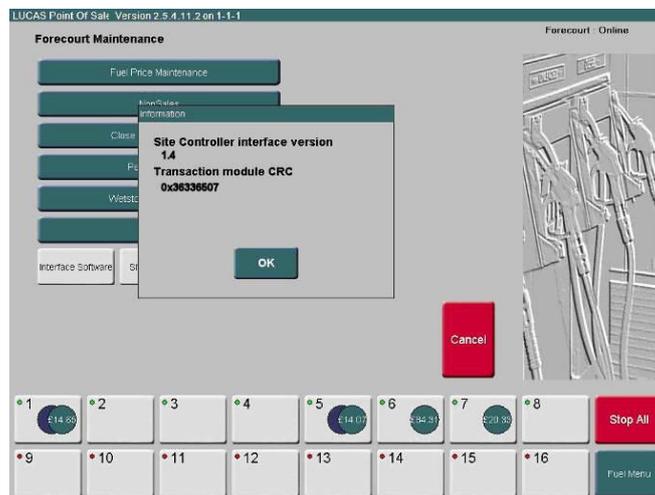


Acknowledge the message by pressing <OK>.

3.6.2.2 Interface software

All the Java classes that handle critical transaction data such as volume and value are grouped into a separate Java archive (jar) file. The checksum of this file is validated at power-up, and if it is not correct, the system will restrict the pump controller operation to prevent authorisation or sale of fuel transactions.

From the security menu press <Interface Software>. The interface software settings are shown in a pop-up message box:



Acknowledge the message by pressing OK.

3.6.2.3 Alternative POS Software

The Site controller software is designed to wrap around other POS software allowing for additional POS applications. The operation and functionality of the Pump control software remain the same including the customer display and printing of receipts.

These POS Applications include:

COOP InControl POS



Pump Calling



Pump transaction in flow



Software version being displayed

3.7 Alternative Method of verifying Software Versions



- Select the Menu button on the main screen



- Select Services from the selection on the left hand side of the screen



- Select Forecourt Operations from the dropdown selections



- Select either Site Controller or Software Version



- If Software Version is pressed the screen above will appear showing the relevant details.



- If the Site Controller is pressed the above screen will appear showing the relevant details

4 AUTHORISED ALTERNATIVES

4.1 All the equipment listed in Section 2.10 (Other related hardware) may optionally be replaced with suitable CE marked equipment.

4.2 SPOT OPT (Outdoor Payment Terminal)

4.2.1 Terminal Construction

The Secure Payment Outdoor Terminal (SPOT) has two basic component architectures.

The M3 SPOT terminal is a development of the M2 SPOT terminal, the major change being separation of the secure pin pad from the display. These are now two physically separate units connected via secure encrypted communication channel.

The payment terminal accepts bank and fuel cards. The payment terminal has alternatives described below and is dependent upon a separate forecourt control system for all sequencing and transaction data.

As an alternative to mounting the SPOT into the dispenser (CRIND), it can be mounted independently on a pedestal to controller customer selected pump.

The components used in the SPOT OPT configuration are the same as used for the SPOT M3 CRIND configuration.

The SPOT OPT operates as the CRIND, but with the added functionality which allows the customer to select which fuelling point the transaction is to be made from.

The SPOT can be packaged in a number of different pumps (CRIND) or in a number of different pedestal configurations (OPT) as shown in figures 17, 18, 19, 28 & 29.

4.2.1.1 RFID interface

An optional I/O device with RF transponder for use with TAG devices of the Radio Frequency Identification Device (RFID) type. This is typically the Texas Instruments key fob device. Where installed, the SPOT-CRIND/OPT collects the TAG number and passes it to the host POS using the same software and hardware systems used for cards.

4.2.1.2 Contactless cards

An optional card interface may be fitted that communicates to contactless chip cards. Where installed, the SPOT-CRIND/OPT collects the card information and processes it in an identical manner to that used in the contact card interface.

4.2.1.3 Transaction log

The Transactions are stored in the main SQL database which normally resides on the Back Office PC, The Database is not accessible to operators or site staff. It is only accessible to engineers via a utility program. The correct username and password is required to gain access to the transactions stored on the Database.

For the Site management to view the transactions and print Duplicate receipts the back Office PC has a program called SMS (Store Management System) this also requires a user name and password to access the SMS system. OPT / CRIND receipts can also be printed from any of the POS units on site.

4.2.1.4 Electronic Journal

As above the transactions are stored in a electronic format (SQL Database) therefore there is no Journal printer.

4.2.2 Interlocks and Security Features

4.2.2.1 Paper insufficient to print receipt

The SPOT CRIND/OPT terminal printer detects when the printer paper is low and displays a message warning:

Day Mode: Receipts available from Kiosk

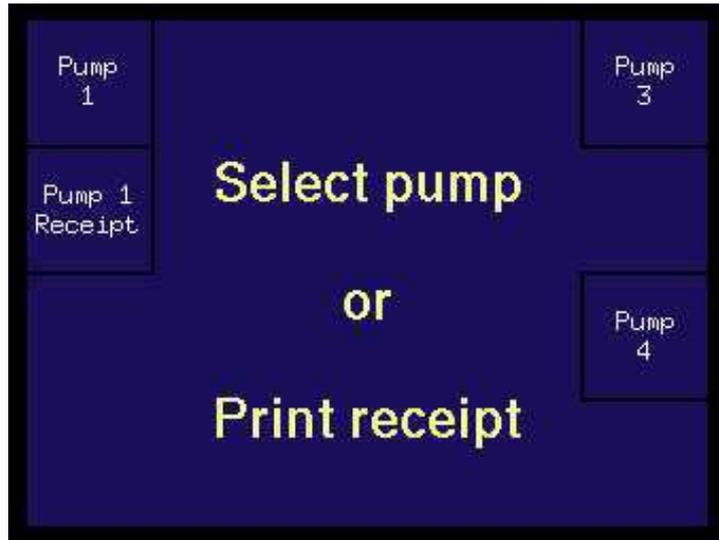
Night Mode: Out of Service

Alternatively, the system can be configured to prevent any new CRIND/OPT transactions starting once paper low has been detected.

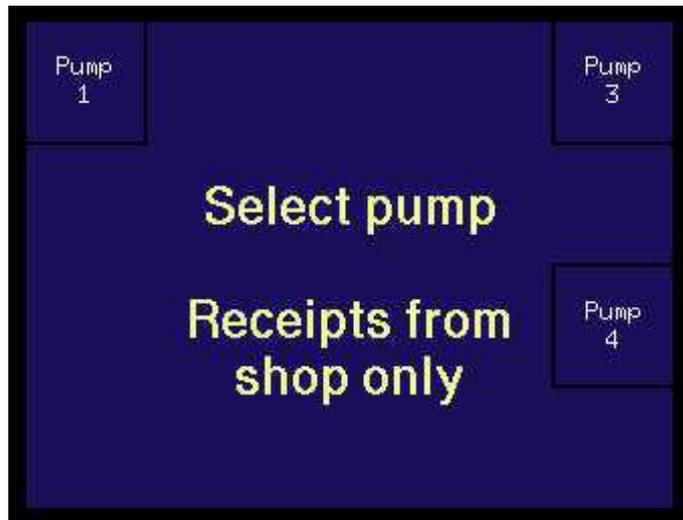
The SPOT CRIND/OPT can be configured to print receipts automatically or on demand

4.2.2.2 Printer fault

If the terminal identifies a printer fault, a message states that the receipt is unavailable but gives the customer the choice to proceed with the transaction.



- In day mode, if the receipt printer cannot produce a receipt then the customer will see the following screen informing them that a receipt can be obtained at the shop



- Other screens that may be seen will allow the customer to buy a car wash via the OPT, this will include on his receipt the action code for the car wash. The customer can then enter this code into the car wash to activate the wash program selected.

4.2.5 CRIND Operation

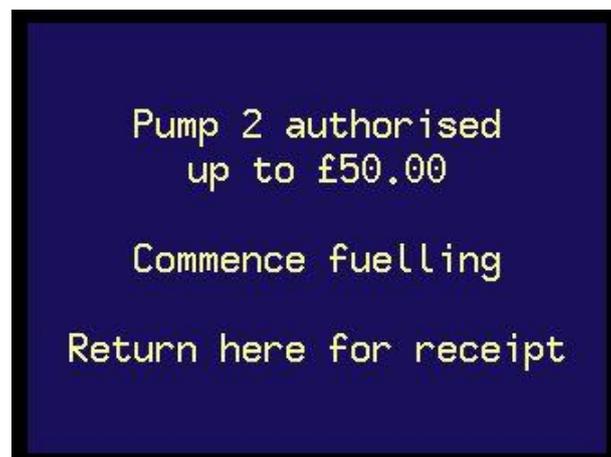
- When the customer uses the pump they will see the following screen and will be required to either select Pay at pump or in the shop. They will also be able to just lift the nozzle to pay in the shop.



- If receipts are not available then this screen will be displayed at the start of the transaction.



- Screen below confirms to the customer that they are authorised to begin fuelling.



4.3 Alternative POS PC: ELO Model 15D1

This is a PC based electronic till having an LCD touch screen operator display with a built-in card swipe and integrated customer display.

4.4 Alternative POS PCs: Toshiba models ST-A10 and ST-A20

These are PC based electronic tills having an LCD touch screen operator display with a built-in card swipe.

4.5 Torex Forecourt Link and Forecourt Interface Box

4.5.1 Introduction

As described in the descriptive annex but having the software installed on the POS and the pump interface cards in a smaller box utilising the same hardware.

4.5.2 Construction

Figure 20 shows a schematic of the Torex Forecourt Link (TFL) and Forecourt Interface Box in a typical forecourt application. The (TFL) manages all the communication between the dispensers and the 3rd party POS ensuring the integrity of the dispenser transactions (volume and price data).

The Forecourt Interface Box (Figure 21) consists of following parts:

- Control board
- Interface card rack to hold the interface cards
- Different types of interface cards to communicate with the dispensers
- Serial backplane
- Power supply
- Metal box (usually black)

4.5.3 Main sub-assemblies

4.5.3.1 Pump Interface Cards

The Dispenser Specific Interface Card(s) (Figures 23 and 24) installed in the Interface Rack (Figure 21) handle communication between the (TFL) and the dispensers on the forecourt. The Control-board handles the communication between the system Software (TFL) and PumpLink Interface Box. The communications between the interface cards and the Control board over the I²C-bus are CRC-protected.

4.5.3.2 Lon Interface

The Lon interface connects the TFI to the IFSF network. The connection can be by either a USB LON adaptor or a LON PCI card. Utilising these type of boards the system allows for both IFSF and non IFSF pumps to be used on the same system (IFSF via the Lon card and the other pumps via the individual interface cards on the I²C network).

4.5.3.3 Interface card rack

The interface card rack holds the interface cards. The rack is powered by the ‘EMC 40or ASM40’ power supply. The dispensers are linked to the interface cards using the connectors provided on the Interface rack board. The interface cards in the interface card rack communicate with the Control Board over the I²C-bus.

4.5.3.4 Interface cards

The interface cards enable the (TFL) to communicate with particular dispenser types. There is a specific Torex interface card for each dispenser type.

Interface cards will be either EPROM based or a programmable flash micro-controller that contains the dispenser-specific protocol. Most of the interface cards can communicate with 4 dispensers, but some versions can communicate with 8 dispensers.

The LEDs on the interface card give information about the status of the card and the communication between (TFL) and dispenser. The red LED indicates communication from the (TFL) towards the dispenser. The green LED indicates communication from the dispenser towards the (TFI). The yellow (heartbeat) LED indicates the application is running and communication via the I²C network with the main system.

A Bank Note Acceptor (BNA), or an Outdoor Payment Terminal (OPT), or a price sign may be connected to the (TFL) using the appropriate interface cards.

4.5.4 **Mechanical**

The Forecourt Interface Box is encased in a Torex custom-made metal enclosure as shown in Figure 22. Removing the lid allows access to all sub-assemblies (see Figure 21).

4.5.4.1 Housing

The Forecourt Interface Box is installed in a (normally black) metal enclosure. The lid is secured using 4 machine screws. The lid is made from Perspex permitting viewing of the LED’s on the interface cards in the rack (Figure 22). The box is grounded via the power supply connection.

4.5.5 **Electrical and Electronics**

4.5.5.1 Electrical

Power for the (TFL) is provided by the ECM 40 or ASM 40 power supply. The power supply output delivers 9V DC to the Forecourt Interface Box control / PSU board. The Forecourt Interface Box uses a maximum of 40 Watt.

4.5.5.2 Electronics

The electronic hardware contained in the Forecourt Interface Box is listed below.

| | | |
|-----|---|-------------------------------|
| 1 | x | Control / PSU board |
| 1 | x | Torex interface card rack |
| 1-8 | x | Torex interface cards |
| 1 | x | ECM 40 or ASM 40 power supply |
| 1 | x | Serial Backplane |
| 1 | x | Powered Serial 9 way |
| 2 | x | Serial 9 way |
| 1 | x | 26 Way I/O Port |

4.6 Alternative POS PCs: IBM 4810-340 & 4810-33H (15" display) (Figure 26)

A point of sale PC incorporating a colour touch screen panel, a customer display and a separate receipt printer. The main processor is separate from the screen, customer display and printer. The screen is mounted on a pole with the customer display mounted on the rear of the pole. This customer display shows both the POS and Pump Control sections.

4.7 Alternative POS – Any CE MARKED POS PC

The software may be installed on any CE marked PC running Microsoft Windows XP or more recent operating system.

4.8 Alternative OPTS

Having the following alternative OPT systems connected to the system:

- Tokheim Fuel-POS - Parts Certificate TC8099 or Evaluation Certificate TC7346
- Wayne Fusion - Evaluation Certificate No. 10 70 24
- Mobile Payment via mobile phone app, Utilising the same OPT server unit as normal OPTs

5 RECOMMENDED TEST

5.1 Verifying software

Check that the legally relevant software version numbers are correct for the system configuration (see Section 2.11.4). The software version is displayed above the POS screen.

5.2 Verifying transaction data

Check that the volume and calculated price shown on the dispenser(s) correspond with the customer display and point of sale receipt. For installations with more than one dispenser the dispenser number must accompany the volume and calculated price.

CERTIFICATE HISTORY

| ISSUE NO. | DATE | DESCRIPTION |
|--|-------------------------------|---|
| Certification No 1918/73 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 1940/68 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 1958/63 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 1967/66 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2017/74 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2162/68 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2176/77 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2286/54 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2437/41 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2461/26 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2486/53 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2536/56 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2619/39 | 2 nd March 2006 | Type examination certificate first issued. |
| Certification No 2650/53 | 2 nd March 2006 | Type examination certificate first issued. |
| Series V006 Revision 1 of certificates above | 29 th January 2009 | - Consolidation of above certificates into one certificate series. - Creation of sections 2.1.1 and 2.1.2. Addition of DOMS site controller detailed in section 2.1.2 - Section 2.11.4, alternative software added. |
| V006 Revision 1 Revision 2 of certificates above | 13 May 2010 | 4.2 Addition of SPOT M3 OPT 4.3 & 4.4 Alternative POS PCs |
| V006 Revision 2 Revision 3 of certificates above | 08 November 2010 | 4.5 Torex Forecourt Link and Forecourt Interface Box – Limited Approval 4.6 Alternative POS PCs - Limited Approval |
| V006 Revision 3 Revision 4 of certificates above | 18 January 2011 | 4.5 and 4.6 Limited Approval Removed |
| V006 Revision 4 Revision 5 of certificates above | 17 June 2011 | 2.2 DOMS PSS5000 Compact site controller added Figure 28 Gilbarco SPOT M3 Housing added |
| V006 Revision 5 Revision 6 of certificates above | 24 August 2011 | Section 2.11.4, correction to: NV9730 Addition of “Forecourt Link” Transaction module CRC 0xE4E98B60 replaced by CRC 0xAA0C296B |

| | | |
|---|-------------------|--|
| V006 Revision 6 Revision 7 of certificates above | 18 October 2011 | Section 2.11.4, correction to software version module descriptions. Section 3.7 added, alternative method of software verification |
| V006 Revision 7 Revision 8 of certificates above | 8 April 2013 | Front Page: Torex changed to MICROS. Section 4.7 added, Any CE Marked POS PC may be used Figure 29 added and referenced in section 4.2 |
| V006 Revision 8 Revision 9 of certificates above | 29 September 2014 | Section 4.8 Alternative OPTS added |
| V006 Revision 9 Revision 10 of certificates above | 02 March 2015 | Section 2.11.4 Interface software 1.4.3 added Section 4.8 Mobile phone payment option added |

Note: Expired certificates are included for completeness. Further revisions only apply to valid certificates.

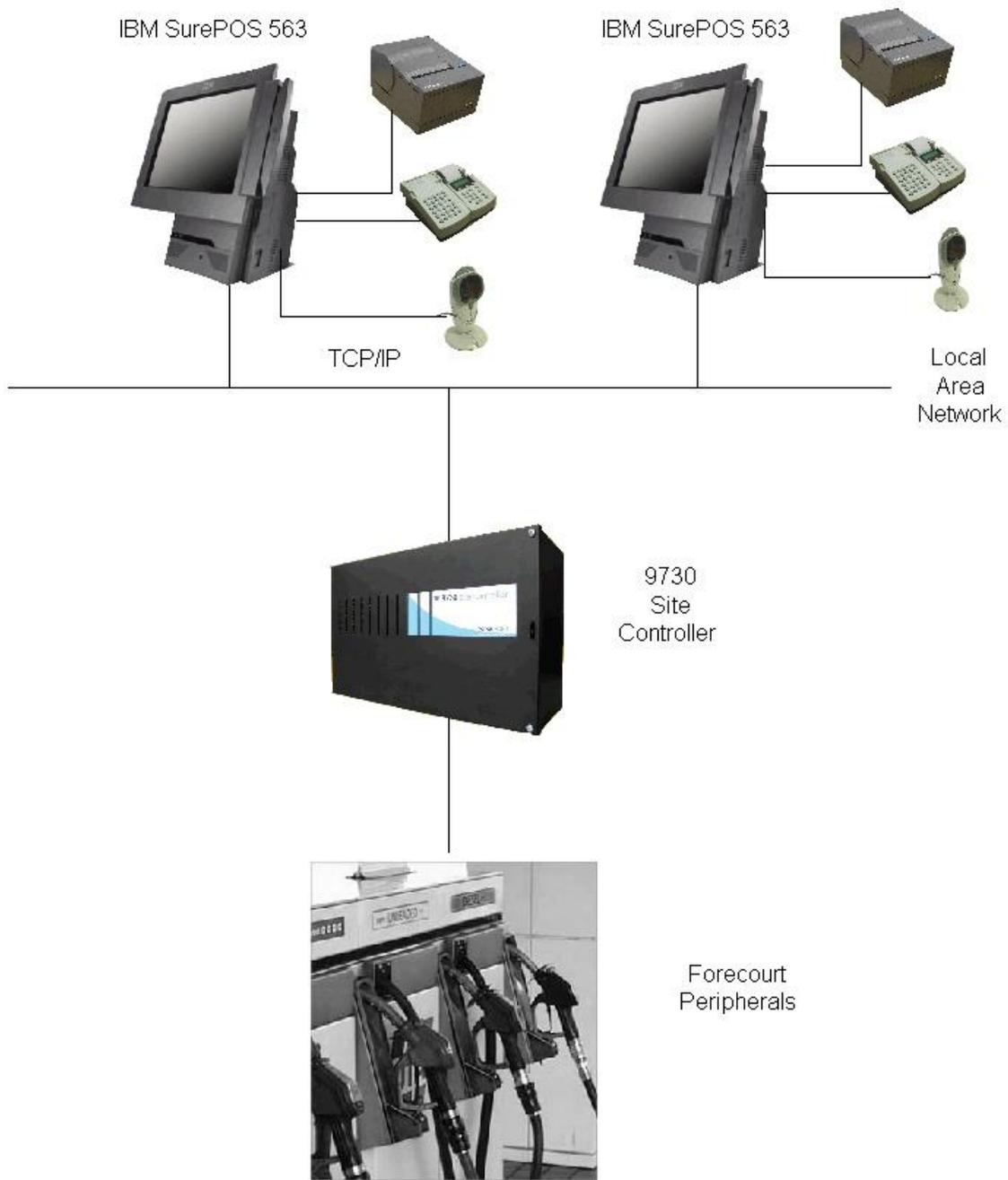


Figure 1 Schematic diagram of typical system



Figure 2 Epson IM 700

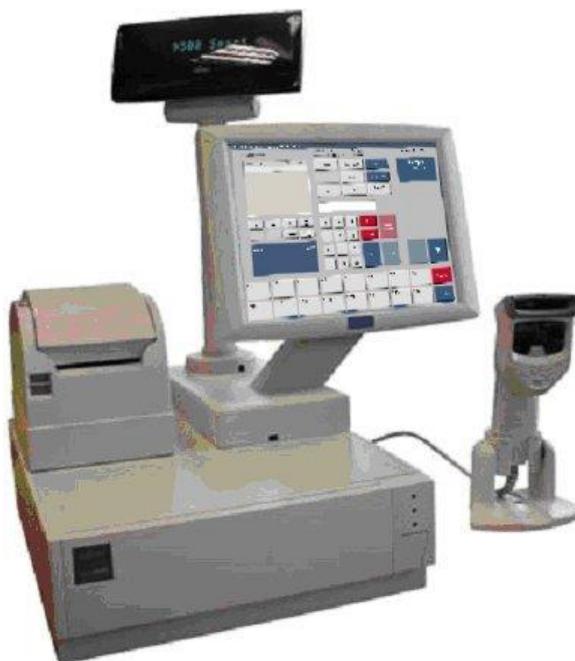


Figure 3 Fujitsu teampos 2000



Figure 4 Epson IM-310



Figure 5 Epson IM-800 with DM-M820 touch screen



Figure 6 Tec ST5600 (base only)



Figure 7 Posiflex Model TP6000



Front view



CDU display

Figure 8 IBM SurePOS 563



Figure 9 Typical EFT payment terminal



Figure 10 Typical bar scanners



Figure 11 Typical CDU

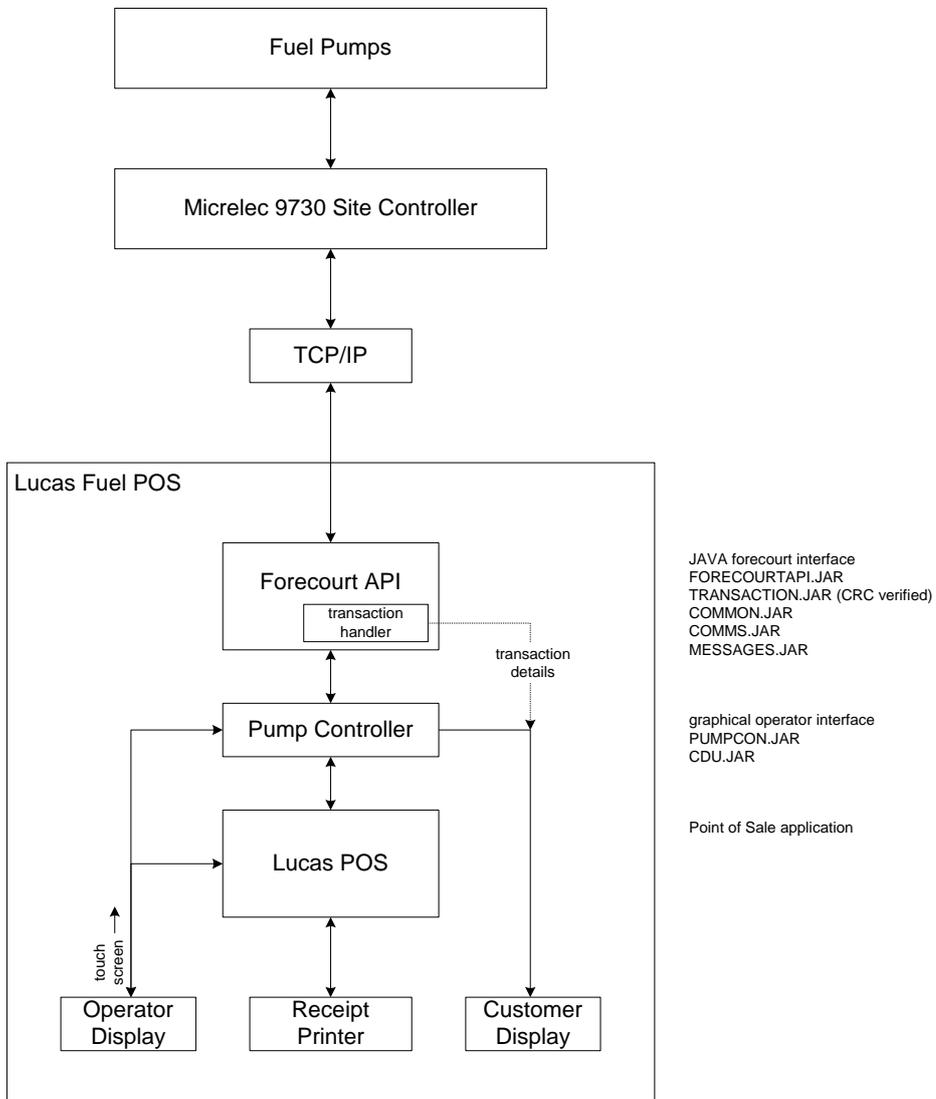


Figure 12 Software diagram



Figure 13 Typical receipts



Figure 14 Hewlett Packard RP 5000 POS PC (front and rear views)



Figure 15 Forecourt controller DOMS PSS 5000



Figure 16 Central Processing Board (CPB508) display and menu navigation keys



Figure 17 SPOT M3 OPT on Stand



Figure 18 SPOT M3 OPT Housing and Screen



Figure 19 Wayne CRIND using the Spot M3

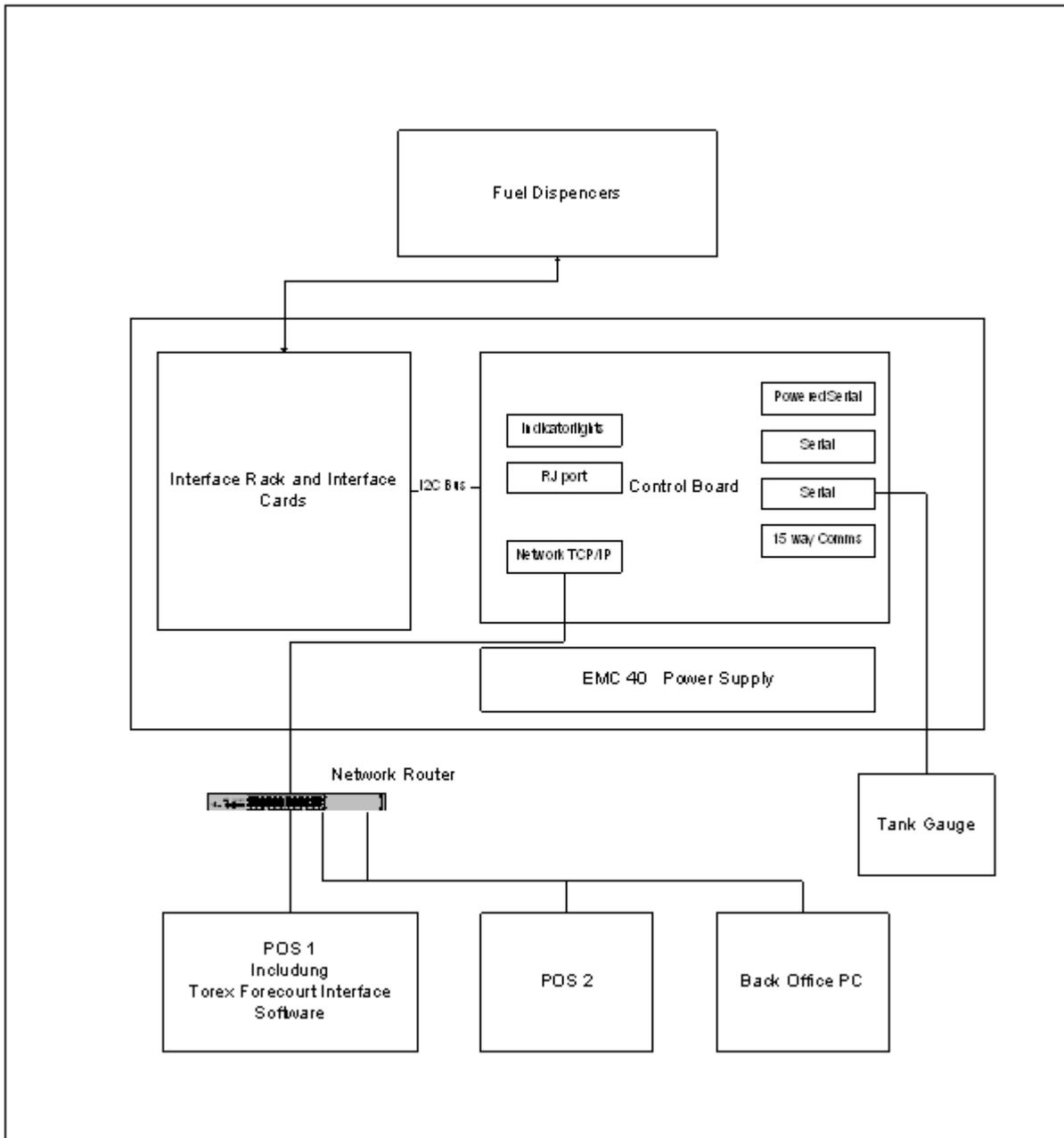


Figure 20 (TFL)/ Forecourt Interface Box schematic overview of system

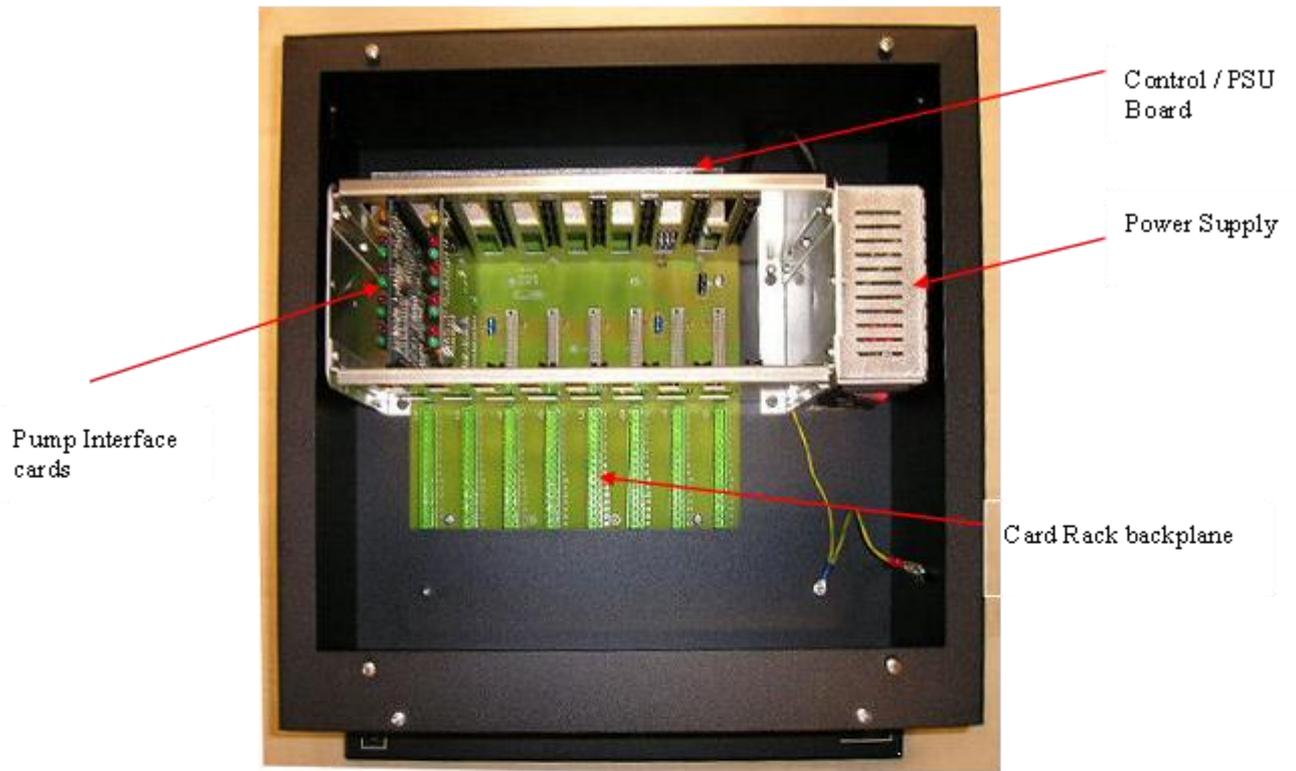


Figure 21 Forecourt Interface Box lid removed

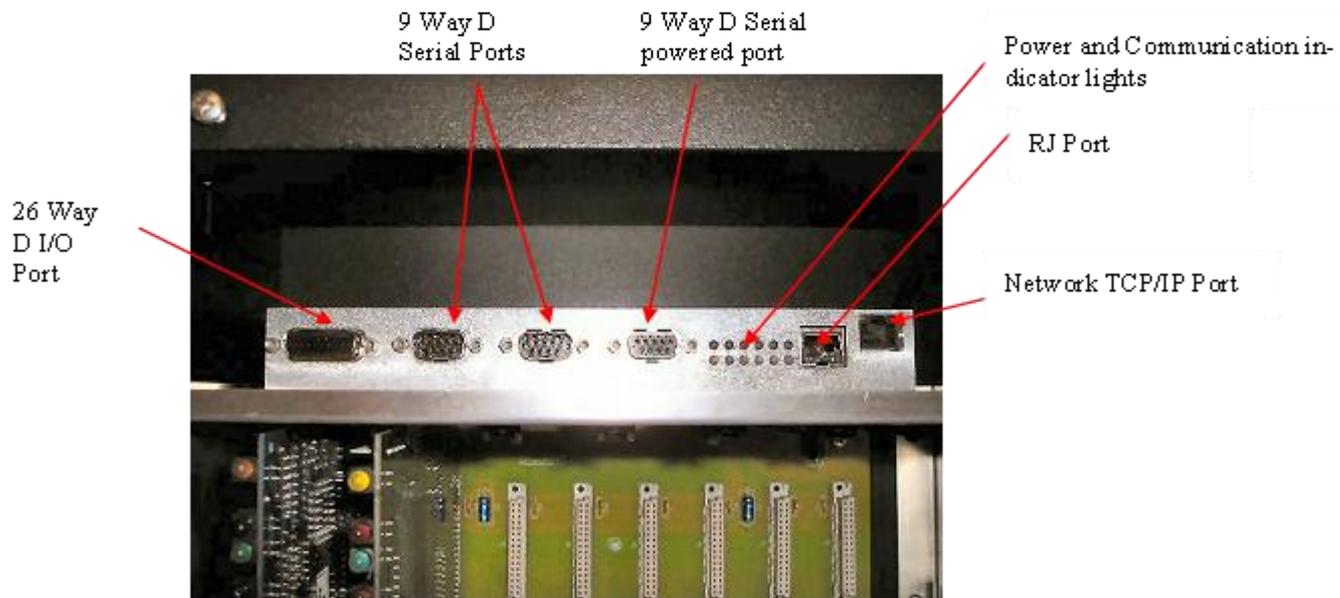


Figure 22 Torex ForecourtLink (TFL) Control / PSU Board.



Figure 23 Control / PSU Board



Figure 24 Torex Dispenser Interface Card type BA22800_B



Figure 25 Torex Dispenser Interface Card type BA07603



Figure 26 IBM 4810-340 / 4810-33H

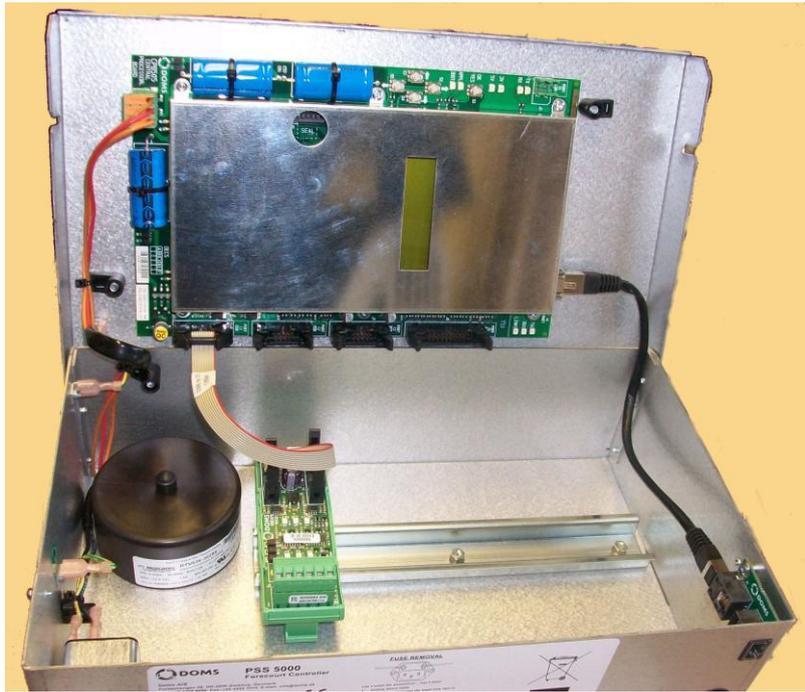


Figure 27 DOMS PSS500 Compact



Figure 28 Gilbarco SPOT M3 Housing



Figure 29 Gilbarco SPOT M3 Alternative Housing