(1828, 1918, 1940, 1958, 1967, 2017, 2162, 2176, 2286, 2461, 2486, 2536, 2616, 2619, 2650, 2780)

BIS
Department for Business Innovation & Skills

III(5)a

SUPPLEMENT TO CERTIFICATE

Series S029 Revision 2

Certificate No.	Supplement No.	Certificate No.	Supplement No.
1828/40*	58	2286	72
1918	88	2461/26*	39
1940	90	2486/54*	69
1958/53	73	2536	76
1967/66*	80	2616	16
2017	92	2619	58
2162	107	2650	70
2176	95	2780	23

(*) Refers to the dispenser only, the self service device described in these certificates is not part of this approval.

Submitted by:

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Authorisation is hereby given by the Secretary of State for Business, Innovation & Skills for the following Certificate of approval relating to a pattern of a liquid flowmeter to be modified as described below.

As described in the following Certificates but modified to have an alternative self service device, as detailed in the descriptive annex, and having the following characteristics:-

DISPENSER(s): Dispensers described in above certification numbers.

FORECOURT CONTROL UNIT: DOMS PSS 5000 as described in the descriptive annex.

SELF SERVICE DEVICE: Retalix Win POS and Storeline as described in the descriptive annex

Signatory: G Stones

for Chief Executive
National Measurement Office
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Reference No: T1118/0038

Date: 5 July 2012

CONTENTS

ILLUSTRATIONS

Descriptive Annex

1 INTRODUCTION

The Retalix system consists of the following elements:

- Dispensers as specified in the certificate
- DOMS PSS 5000 site controller.
- NCR RealPOS combined KCU and POS running Windows XP Embedded (SP2) and Retalix Win POS and Storeline software.

The kiosk equipment is shown in the table below:

Item	Manufacturer	Part Number
Site controller	DOMS	PSS5000
POS/KCU	NCR	RealPOS
Customer display	NCR	RealPOS 5975 VFD or any suitable CE marked
Cashier Touch Screen	NCR	NCR 5964 or any suitable CE marked
Printer	NCR	RealPOS 7167 or any suitable CE marked
Uninterruptible power supply (UPS)	-	Any suitable CE marked
Chip and PIN	-	Any suitable CE marked
Scanner	-	Any suitable CE marked
Cash drawer	-	Any suitable CE marked

A system interconnection diagram is shown in Figure 1.

2 CONSTRUCTION

2.1 Forecourt controller DOMS PSS 5000

The DOMS PSS5000 forecourt controller comprises a metal rectangular box (Figure 2) housing the following main components. The general arrangement is shown in Figure 3.

- 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 4.
- Hardware interface modules.
  Dispensers are connected to the CPU board via an appropriate hardware interface module compatible with the communication protocol of the dispenser.

2.1.1 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.

2.1.2 Alternative Software version

Having an alternative LAM version number of 498-06-101 with a checksum number of 084C.

2.2 NCR RealPOS Base unit

NCR RealPOS base unit with Celeron 2.50 GHz running Windows XP Embedded (SP2)
The base unit has:

- On board LAN
- VGA output and DVI output
- 1 – 3.5 IN Floppy drive
- 4 RS232 D-Type 9 pin com ports
- 3 standard USB ports
- LPT port
- Line in/Mic in /speaker out
- 3 - 12V USB ports and 1 – 24V USB port
- Cash Drawer connection (RJ11 type)

2.3 Back-office

2.3.1 Configuration

The back-office equipment consists of two servers and a number of cash office workstations.

2.3.1.1 Main server (MFS1)

The main server (MFS1) holds the proprietary QDEX database which manages the store environment. This maintains data on the POS and it also provides full journal data integrity. User interaction with QDEX is via a SQL database.

The MFS1 server is installed with the following major components:

- Microsoft Windows 2003 – Server Edition;
- Microsoft SQL Server 2005
- QDEX
- Retalix StoreLine application components.

The hardware is a Hewlett Packard LP2000R configured with RAID 5.

2.3.1.2 PFS Workstation

PFS will also have workstations that will allow access to the back office application. The workstations are installed with the following major components:

- Microsoft Windows 2000- Professional Edition;
- Retalix StoreLine application components.

The hardware is a Hewlett Packard Vectra VL-400.

2.3.2 Electronic journal

All transaction data (journal or audit data) are transferred at regular intervals to the back-office file server system. The electronic journal of all transactions are ‘mirrored’ in hard drive sectors on MFS1. Transaction data is retained for periods of at least 3 months. Data is overwritten in sequential order.

Access to the journal is via the utilities/electronic journal function in the back office. This presents a list of journal files in date order with the newest first. Selecting a journal file will then prompt for the transaction types you want to examine; entering “1” will show all transaction types. A typical journal screen display is show in Figure 5.

The screen of Figure 6 shows a list of transactions by time. Each transaction is identified by POS and transaction type as shown on the screen shot below. Double clicking on the transaction will bring up full details of that transaction.

2.4 Software

2.4.1 Application name:-

StoreLine (C:\Program Files\StoreLine\WinPOS\POSW32.exe).

The Retalix PFS application is a till system for use in petrol stations. Its function is to provide a standard shop checkout system combined with the ability to control a petrol forecourt to sell fuel. The application performs two main functions, transaction handling and forecourt control.

The Fuel software runs on POS1 and is also installed on POS2, in case of a system failure POS2 automatically takes over.

2.4.2 The software structure for the StoreLine program is modular with each function segregated. Metrological applications such as fuel transaction data are isolated from the operational and management functions. Operational and management profiles may be amended but can have no effect upon fuel instrument metrology.

2.4.3 The individual modules for fuel and weighing instrument communications/metrology are further safeguarded by means of hidden checksum files which, on boot-up, are compared with the checksum of the modules themselves. If the module checksum does not match the file checksum, the module will not run. By this means, the system ensures that no unauthorised software amendments can be made.

2.4.4 The general measures listed below are embodied to provide system and software security.

- The system is self-booting and the application on the till will automatically load with a pre-defined user name and password.
- Access to the floppy disk is controlled by keylock.
- It is not possible to get into the operating system or other programs by attaching a keyboard. The only option presented on pressing Ctl-Alt-Del is Shutdown or Restart.

2.4.5 Checksums

2.4.5.1 A 'Fuel CRC (Cyclic Redundancy Check)' and a 'Weighing Instrument CRC' have been included in the system. The fuel CRC will be calculated on the software (C:\Program Files\StoreLine\PumpSrv\CL2PumpSrv.exe) within the convert layer between the StoreLine fuel application and the site controller.

2.4.5.2 CRC numbers are 16 bit (00000 - 65535). This unique number is the result of a complex manipulation over EACH byte at the final compiled file. So, even a change of one byte in the code will cause a change to the CRC.

2.4.5.3 A print-out of the CRCs is selected by selecting MORE-SVR MENU-NWML (see Figure 10). For the Fuel this is 33663.

2.4.6 Software version

Application (POS) software Version (shown above) should be: 8.9.X.Y.ZZZZ, where: X is the minor revision number and Y.ZZZZ is any intermediate software release. X will be 3 or greater. POS version is always displayed on the bottom line of the screen.

2.5 Connection of weighing instrument

Any weighing instrument having a test certificate in accordance with The Council Directive 90/384/EEC on Non-Automatic Weighing Instruments may be connected to the store controller serial port. The software controlling the operation of the weighing instrument is described in NWML Test Certificate GB-1209.

3 OPERATION

3.1 Kiosk operation is described in Section 3.3 and typical receipts are shown in Figure 6.

3.2 Reward card

The system is configured to invite and accept a reward card at any convenient point after initial transaction.

3.3 Kiosk operation

3.3.1 Kiosk operation is instigated by lifting the nozzle on the dispenser, or on an OPT by pressing the 'pay at kiosk' button, or inserting card. The OPT contains a loudspeaker and audible warning messages are produced if the specified actions are not followed.

3.3.2 Transaction handling

This component uses the right-hand section of the touch screen to handle shop sales. It controls the transaction handling, printing, scanning, and customer display. Customers can purchase goods from the shop, which may or may not include fuel, these can be scanned through the till and payment made. A typical customer display unit (CDU) screen is shown in Figure 7. The following fuel transaction information must be displayed on the CDU:

- Dispenser number
- Volume dispensed with a legend indicating Litres (the scale interval shall be the same as the dispenser)
- Calculated price with currency symbol
- Sequence number for current or stored transactions

3.3.3 Forecourt control

The dispensers on the forecourt are displayed on the centre and left-hand side of the bottom of the touch screen. From this part of the screen the operation controls the operation of the forecourt with functions for arming and reading the dispensers. Up to 27 dispensers can be displayed at the bottom of the screen in 3 rows of 9 dispensers. Typical fuel transaction screen displays are show in Figure 8.

3.3.4 When a dispenser transaction is commenced, the dispenser icon on the touch screen flashes with a red border. The operator will then arm the dispenser by pressing the ARM key and the dispenser icon. The dispenser is then armed and fuelling can commence. When the nozzle is replaced, and the transaction completed, the transaction data can be pulled into the transaction window by selecting it from the dispenser icon. The operator can then use that sale information as part of a sales transaction including fuel and other items. Payment may be cash, cheque or card (credit, debit or fuel).

3.4 Mains power failure

3.4.1 In the event of a mains power failure, any stored or current transactions indicated on the KCU/POS display remain available for at least 15 minutes. This is achieved by means of any CE marked UPS.

3.4.2 Deliveries in progress at power failure can be completed normally and paid for through the kiosk. Further deliveries are inhibited until normal power supplies are restored. The kiosk printer is powered via the UPS and receipts will remain available. In the event that printer function is disrupted, hand-written receipts will be supplied.

3.5 Price change

Fuel price may be changed via the kiosk control equipment. Access to the price change menu is limited by password access to authorised staff. Price changes cannot be implemented until current transactions are concluded.

4 RECOMMENDED TESTS

The following tests may be carried out in addition to those specified in the Regulations to determine conformity to the approved pattern.

4.1 Check the fuel metrology software issue and CRC checksum number.

4.2 Verify that for each test transaction, there is no discrepancy between the dispenser display, the kiosk display, the customer display unit, and any corresponding receipts.

4.3 View the test transactions on the back-office computer journal display and verify that there is no discrepancy between the journal display and the transactions noted above.

5 CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
Series S029	14th May 2009	Type examination certificate first issued
Series S029 Revision 1	6th December 2011	Revision 1 Issued Correction to CRC number in section 2.5.4.3, from 9758 to 33663. Certificate History added
Series S029 Revision 2	5 th July 2012	Revision 2 Issued Correction to LAM version number in section 2.1.1, from 498-06-101 to 498-06-100. Section 2.1.2 Alternative Software version added

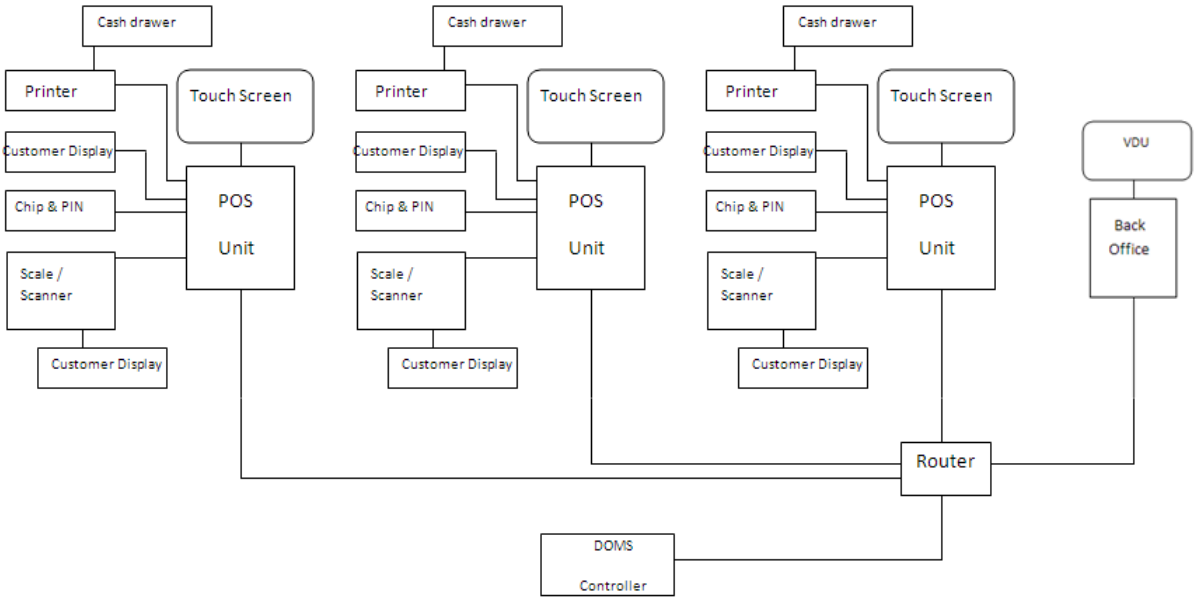

Figure 1 System interconnection diagram

Figure 2 DOMS PSS 5000

Figure 3 Central Processing Board (CPB508) display and menu navigation keys

Figure 4 NCR RealPOS rear view

Figure 5 NCR RealPOS Unit

Figure 6 Typical sales receipt

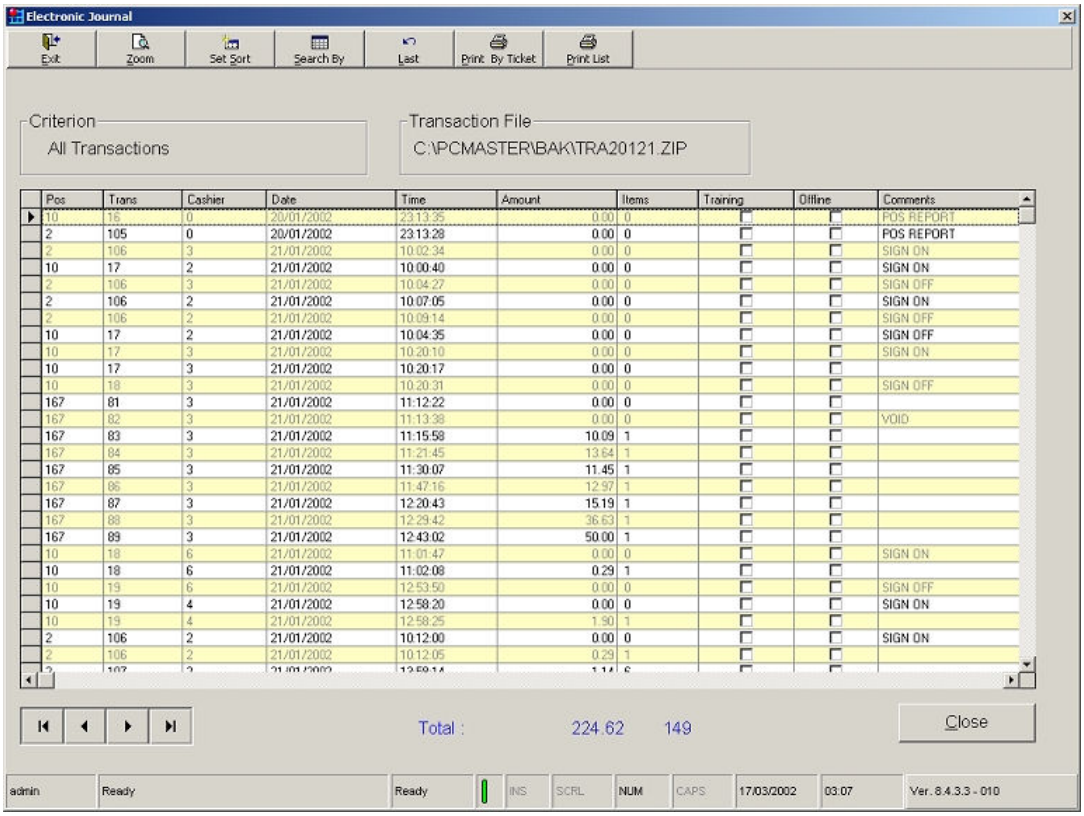

Figure 7 Journal screen display - listing

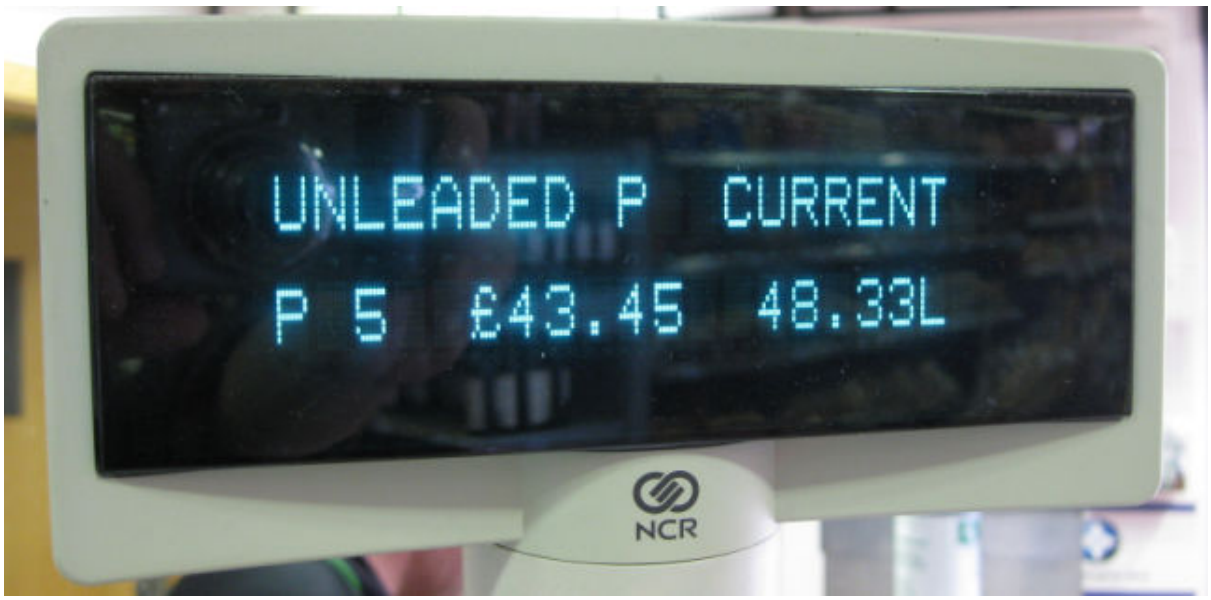

Figure 8 Typical customer display unit (CDU) screen

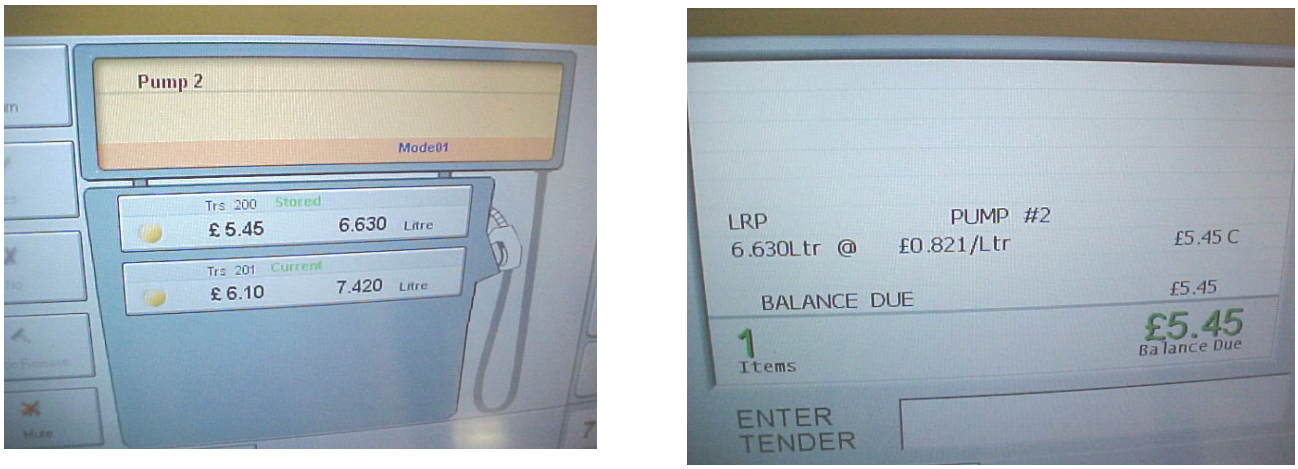

Figure 9 Typical fuel transaction screen displays

Figure 10 CRC print-out