PEC Fuel Pumps

FUNCTIONS

[v4.60]

PEC vC4.60

Part Number 2A91265

CONTENTS

(Functions Section)

1 INTRODUCTION

As the Functions are presented in this Manual in numerical order, page numbers are not required.

Each Function is presented in the same manner as follows:

- **Function Number**

When entered, the Function number appears on the Litres window.

- **Function Description**

A function description states what the function does. It could display information (e.g. last fatal error, software version), enter commands (e.g. erase setup) or enable/disable set-ups (e.g. preset delivery).

- **Function Range**

If applicable, this refers to the acceptable inputs.

- **Defaults**

  Where a range is available, a default is usually one of the values from the range

- **Considerations**

Includes further instructions concerning the procedures including general rules. Considerations may also include exceptions (e.g. if a function only applies to dispensers or to certain configurations as in Gilbarco)

2 HOW TO CONTACT PEC

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When contacting PEC always quote the serial number on the product's nameplate.

3 Latest addition/change introduced in 4.60e

Function 14. In addition to the float switch setting, this function now includes the ultra high setting which is applicable to single and dual models. The Emergency Stop option has been removed.

The tables below show the settings with the latest EPROM version first:

Switch	Function	
8	5 Digit = OFF	6 Digit = ON
7	Float Switch Yes = ON No = OFF	
6	Valves in Use = ON	No Valves = OFF
5	Single Delivery = OFF	Dual Delivery = ON
4	Single Delivery = ON	Dual Delivery = OFF
3	Pump Number Allocation See Table 4	
2		
1		

EPROM v4.60d Onwards

Switch	Function	
8	Float Operation = ON	Air Operation = OFF
7	Not Used	
6	Not Used	
5	Single Delivery = OFF	Dual Delivery = ON
4	Single Delivery = ON	Dual Delivery = OFF
3	Pump Number Allocation See Table 4	
2		
1		

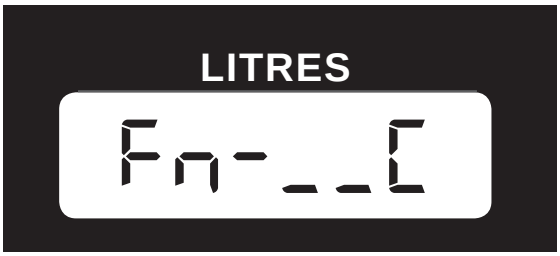
EPROM Pre vP4.60d

4 Assumptions and conventions

The following assumptions and conventions are in effect in the function details section:

(a) Unless stated otherwise, illustrations are of a single hose FleetPEC pump display, as shown below. The single hose FLEETPEC models deliver one grade (Stack A) of fuel through a single hose. Stack A also applies to any grade fuel

in a dual pumping unit, positioned on the left side, front view. Some of the functions, for example, Function 50, are specific to Stack C, in which case the figure below will be used.



(b) Functions requiring high level access are denoted by an asterisk (*). Accessing functions is discussed in the next section.

Note that the details are shown as seen on a system with vC4.60e installed. Some minor differences may be evident between the function details shown and models which have other versions of vC4.60 installed

5 Accessing the service functions

All service functions must be accessed from within the display box.

(a) Remove FleetPEC's front door panel.

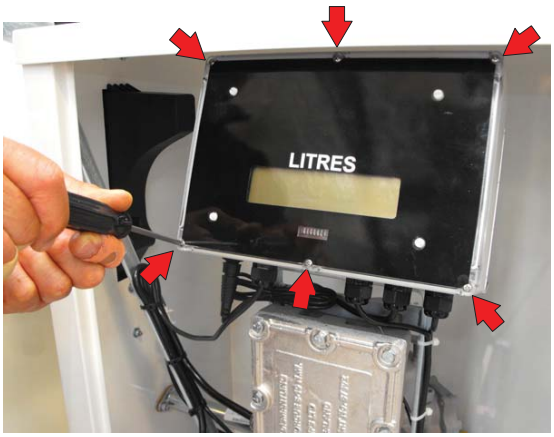
(i) Insert the key into the lock, situated in the top right hand corner of the front door panel;

(ii) Turn the key to the left to unlock the pump;

(iii) Lift the panel up which allows movement out at the base;

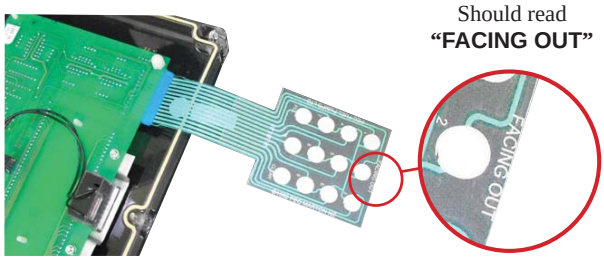
(iv) Lower the panel down and clear of the man unit.

(b) Remove the display panel. Unscrew the six captive screws securing the display panel.

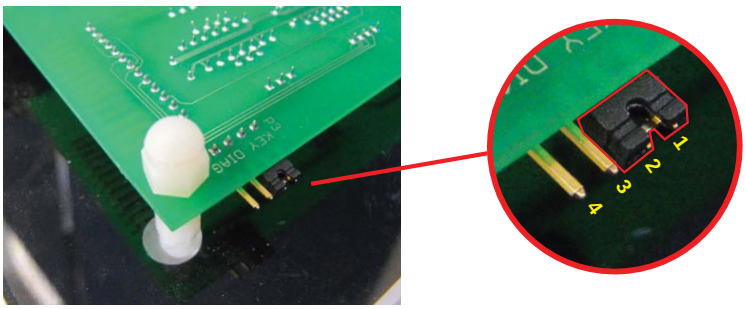


(c) To turn on the Service Functions (and access the High Level Function) requires the following actions once the display panel is open. It is not necessary to remove the display PCB unless wanting to alter or check the jumper settings:

(i) Connect a Ceepec keypad to P2. Ensure correct orientation (see figure below) and fold the Keypad up onto the front of the display to key-in data (figure below).



(ii) On the Display Board PCB, in one corner, there is P3 with the writing "Key Diag" from which four pins jut out. A jumper is supplied affixed to Pin 1. Place the Jumper on Pins 1 & 2 (figure next page) which will put the pump into "Function Mode".



Jumper

(iii) The display will now show Fn-__A:

(iv) Using the keypad, press the appropriate numbers for the function to be performed, followed by FILL to confirm, or CLEAR to cancel;

(v) Once in Functions Mode, authorised personnel can enter the High Level Access by causing a temporary short (using a screwdriver or similar) across pins 3 and 4. Access to this level is indicated by a long beep;

(vi) Press CLEAR to leave any setup function. If you enter a setup function and do not press any keys for 30 seconds, the FLEETPEC beeps and automatically exits the function you selected.

6 exiting the service functions

(a) If you connected a keypad to P2 then disconnect the keypad.

(b) Remove the jumper from P3 Pin 1 &2. This sets the pump to normal delivery mode and the display will show 0.00.

(c) If you removed the Display board from the Display panel, secure the Display board to the Display panel using the 4 plastic dome nuts.

(d) Insert and tighten the 6 screws to secure the Display panel back into place.

(e) Replace the pump's front panel.

DISPLAY THE LAST FATAL ERROR

DESCRIPTION

Displays the last reported fatal error code. A fatal error is one that will cause a pump to shut down, see the Error Codes section.

RANGE

N/A

DEFAULT

N/A

PROCEDURE

☞ (1)

☞ (FILL)

☞ (CLEAR)

The error code displayed in the litres window could be any fatal error. See the Error Codes section for a full list of fatal error codes and their meanings.

The above example shows FE-07, displayed when there is a keypad error. Possible causes includes display PCB fault or faulty keypad.

NOT APPLICABLE IN FLEETPEC

COMMUNICATION TEST

DESCRIPTION

Displays polls received on the comms loop from the forecourt controller. Shows polls for all pumps on the loop not just the pump the function is performed on.

This function gives an indication of the speed and efficiency of pump comms while running.

RANGE

N/A

DEFAULT

N/A

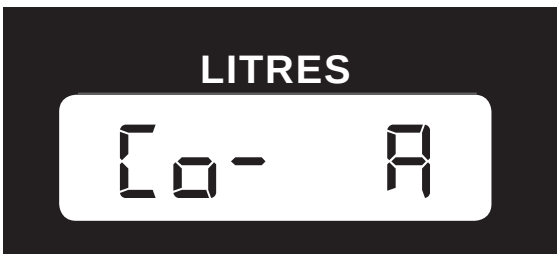
PROCEDURE

☞ 3

☞ FILL

The above is a snapshot of the polling sequence. The numbers will **not** be displayed in sequential order and the display sequence will repeat continuously until the CLEAR button is pressed.

The display shown below indicates that comms are inoperative, for example the pump is currently set to standalone mode.



TEMPORARY STANDALONE

DESCRIPTION

Permits Forecourt Controlled pumps to operate independently of the forecourt controller in the event of communications failure. The pump automatically resumes forecourt controlled operation when communications are restored.

For permanent standalone, the pump comms number should be set to 00 (see Function 20/41).

RANGE

N/A

DEFAULT

N/A

PROCEDURE

☞ 4

☞ FILL

☞ FILL to confirm the command

NOT IN USE

Auxilliary lighting functionality is designed into all software models but is not used. hardware to switch lighting does not exist.

DOES NOT EXIST

DISPLAY TEST

DESCRIPTION

Function 7 tests each segment of the LCD displays. The test is continuous, to stop, press CLEAR .

RANGE

N/A

DEFAULT

N/A

PROCEDURE

☞ 7

☞ FILL The segments are displayed on all of the windows except the totes (Preset, Dollars, Cents Per Litre and Litres) in the order illustrated below.

From the last segment display above, there will be a time lapse of approximately 40 seconds. Then a rapid succession of displays of 5s and 8s will occur.

Ultimately, the final display will be as shown below. Unless the CLEAR key is pressed, the process will go back to the segments display and the sequence will repeat indefinitely.

SOFTWARE VERSION

DESCRIPTION

Displays the version of code in the EPROM on the main Processor PCB. The first letter of the version number shown in the Litres window indicates which pump protocol is set via jumpers on processor PCB.

P = PEC

G = Gilbarco

RANGE

N/A

DEFAULT

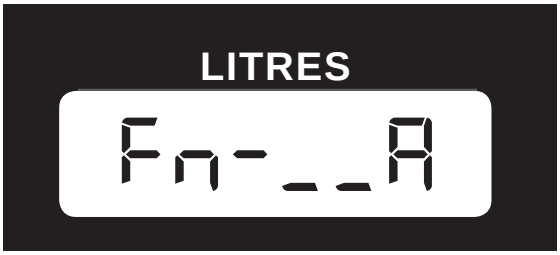
N/A

PROCEDURE

☞ 8

☞ FILL

☞ CLEAR Pressing CLEAR exits the function. Alternatively, the function display cancels after 30 seconds, the display then appearing as shown below.



NOT APPLICABLE IN FLEETPEC

ERASE SETUP

DESCRIPTION

This function will erase all existing setup information and return system values to their default parameters.

RANGE

N/A

DEFAULT

N/A

CONSIDERATIONS

Function 10 has a limited use in FleetPEC as most settings are automatically activated on reset. These settings include:

(a) Price settings - automatically set to $1

(b) Hoses active - In FleetPEC, hoses are automatically activated on reset even if the hoses have been set to inactive in Function 22 or its related Function 43.

Comms numbers are not automatically reset. Electronic tote readings are also lost on performing Function 10.

PROCEDURE

☞ Function 10 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 `and a beep will sound to confirm access.

☞ 1 , 0

☞ FILL

☞ FILL

RAM is cleared, the pump resets and goes through the normal startup process. The Dollars and Litres windows are rendered blank: six beeps are given and the display automatically goes back to Function Mode, as shown below and next page.

Reset the switch to "RUN". The pump will need to be setup again.

Fn 11

NOT IN USE

NOT APPLICABLE IN FLEETPEC

PRESET OPTIONS - DOLLARS OR LITRES

DESCRIPTION

Sets the Preset to either the dollar value or litres value on pumps set to PEC Comms

On pumps set to Gilbarco Comms, and on both Single and Dual configurations, Function 13 allows an option of either Enva or Electroline.

RANGE

PEC: VAL-P or VOL-P

Gilbarco: EnVA or EL In

DEFAULT

PEC: Dollar value preset (VAL-P).

Gilbarco: EnVA

PROCEDURE (ON PEC CONFIGURATION)

☞ Function 13 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

☞ 1 , 3

☞ FILL

☞ Press any numeric key (except $20) to toggle the values from UOL-P to UAL-P.

☞ FILL to confirm the entry.

PROCEDURE (ON GILBARCO CONFIGURATION)

This procedure applies to both Single and Dual configurations.

☞ Function 13 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

☞ (1) , (3)

☞ (FILL)

☞ Press any numeric key (except ($20)) to toggle the values from EnUA to EL In.

☞ (FILL) to confirm the entry.

FLOAT SWITCH AND ULTRA HIGH SETTING

DESCRIPTION

Includes two distinct operations:

1 - defines the input method for the Float Switch, if fitted, and

2 - renders the ultra high switches as either active or inactive.

RANGE

Float Switch input method:

0 (not fitted/used);

1 not to be used as an option to activate the float switch. Use option 2 in all instances.

2 float switch cable connected to the Processor PCB. Always use this option to activate the float switch.

Ultra high input method:

0 inactive;

1 active.

DEFAULTS

FLt-0

UHA-0 and

UHC-0

PROCEDURE

☞ 1 , 4

☞ FILL

☞ 2 Activates the float switch

☞ FILL Brings up the ultra high display for Side A

☞ (1) Activates the ultra high switch for Side A (in Single Hose and Side A in Dual)

☞ (FILL) Brings up the ultra high display for Side C (applicable in Dual)

☞ (1) Activates the ultra high switch for Side C (applicable in Dual)

☞ (FILL) Confirms the entry

NOZZLE FINALISATON

DESCRIPTION

Determines whether the transaction total is sent to the console as soon as delivery is completed (e.g. preset limit reached or no fuel has flowed for 60 seconds) or if the nozzle must first be replaced into its holster before the total is sent.

The setting is applied to ALL delivery types (preset, prepay and postpay).

Normal Preset Finalisation - The FDS will send the sale information through to the console as soon as the delivery has been completed (i.e. as soon as the preset/prepay value has been reached or after no fuel has flowed for 60 seconds). The nozzle does not have to be replaced into its holster.

Wait for Nozzle Preset Finalisation - The FDS will not send the sale information through to the console until the nozzle has been replaced into its holster.

RANGE

dF-n! (Wait for Nozzle Preset Finalisation**)** or

dF-nL (Normal Preset Finalisation)

DEFAULT

dF-n! (Wait for Nozzle Preset Finalisation**)**

CONSIDERATIONS

dF-n! should ALWAYS be used to reduce likelihood of drive-offs.

PROCEDURE

☞ Function 15 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

☞ 1 , 5

☞ FILL

☞ any numeric key to toggle between dF-n1 and dF-nL

☞ FILL to confirm the entry.

START-UP DELAY - EXISTS WITH LIMITED FUNCTIONALITY

DESCRIPTION

Sets the delay before deliveries can start. It permits the leak detectors in the submersible pumps to function properly while the system is pressurising before the dispenser begins delivering. The number of seconds required for the leak detectors to work correctly will vary from site to site but is usually in the range of 3-6 seconds.

RANGE

00.5 to 25.5 seconds.

DEFAULT

00.5 sec

CONSIDERATIONS

This function is usually used on dispensers. It should be set as part of the installation of the dispenser.

The values must be entered in multiples of 00.5 seconds.

Values should be entered as three digit sequences with an implied decimal point, so 2,5,5 represents the maximum of 25.5 seconds.

If a number greater than 25.5 seconds is entered, the value registered may not be correct.

The user may input a value to change the time of the start-up delay. However there will be no visible indication of the new value. Key in the new value with care. The format has an implied decimal point, for example, to enter 6 seconds, press 0 , 6 , 0 .

PROCEDURE

☞ Function 16 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

☞ 1 , 6

☞ FILL

☞ 0 , 6 , 0 (6 seconds used in this example). Note that there will be no window available to display this input.

☞ FILL to confirm the entry.

NOT APPLICABLE IN FLEETPEC

NOT APPLICABLE IN FLEETPEC

Fn 19

DOES NOT EXIST

SETTING THE PUMP NUMBER (STACK A)

DESCRIPTION

Sets the pump number(s) for forecourt controller to use when communicating with the FDS.

In FleetPEC, **dip switch settings (switches 1 to 3)** may be used to set pump numbers in Single hoses up to number 7 and up to number 14 in Dual hoses.

For higher numbers, use Function 20 for Single pumps (Stack A) and Function 41 (Stack C) on Dual pumps.

Refer to Considerations section for general rules on setting pump numbers.

Following are the tables for setting pump numbers (also available as a laminated insert in this manual):

PUMP NUMBERS	DIP 1	DIP 2	DIP 3
LOCAL	OFF	OFF	OFF
1(A)	ON	OFF	OFF
2(A)	OFF	ON	OFF
3(A)	ON	ON	OFF
4(A)	OFF	OFF	ON
5(A)	ON	OFF	ON
6(A)	OFF	ON	ON
7(A)	ON	ON	ON

Single Hose - Pump Number Settings

PUMP NUMBERS	DIP 1	DIP 2	DIP 3
LOCAL	OFF	OFF	OFF
1(A), 2(C)	ON	OFF	OFF
3(A), 4(C)	OFF	ON	OFF
5(A), 6(C)	ON	ON	OFF
7(A), 8(C)	OFF	OFF	ON
9(A), 10(C)	ON	OFF	ON
11(A), 12(C)	OFF	ON	ON
13(A), 14(C)	ON	ON	ON

Dual Hose - Pump Number Settings

RANGE

01 to 32 when using PEC protocol;

01 to 16 when using Gilbarco protocol;

(Standalone pumps are assigned 00.)

DEFAULT

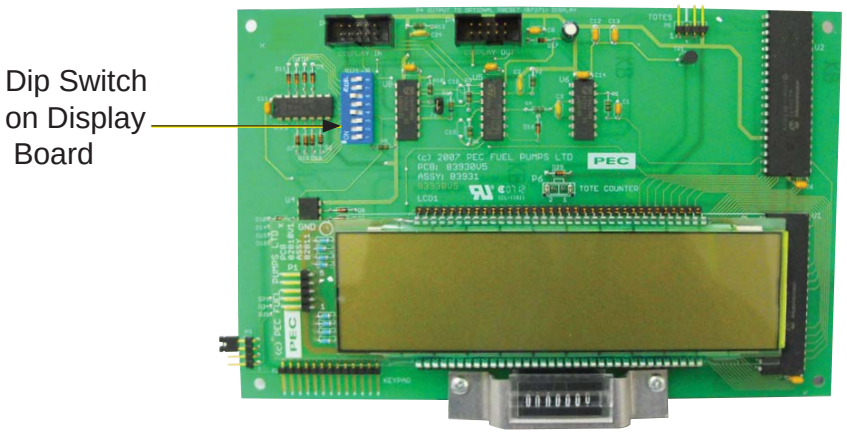
00

CONSIDERATIONS

Use dip switches for setting pump numbers if possible as these are more likely to be retained in the event of power fluctuations such as outages and spikes.

Using Function 20 and 41 will override dip switch settings until a memory clear is performed (Function 10), after which, on reset, the physical dip settings will again prevail.

The two display boards in a FleetPEC dual pumping unit each have a dip switch. The right display board connected to the main Processor PCB is the master, while the one on the left is the slave. ***Ensure that the dip switch settings on the slave display board are all set to OFF.***



PROCEDURE

☞ 2 , 0

☞ FILL

☞ 1 , 2 (pump number 12 used in this example.)

☞ FILL to confirm the entry.

NOT APPLICABLE IN FLEETPEC

NOT APPLICABLE IN FLEETPEC

Traditionally this function is used to set hoses active, but in FleetPEC hoses are automatically activated on reset even if the hoses have been set to inactive in Function 22 or its related Function 43.

In instances where a pump needs to be deactivated (as when it is awaiting servicing or needing parts replacement), the circuit breaker must be turned off to ensure non-operation.

NOT APPLICABLE IN FLEETPEC

Traditionally this function is used to set hoses active, but in FleetPEC hoses are automatically activated on reset even if the hoses have been set to inactive in Function 22 or its related Function 43.

In instances where a pump needs to be deactivated (as when it is awaiting servicing or needing parts replacement), the circuit breaker must be turned off to ensure non-operation.

Fn24* (Associated function: Fn45.)

TEST DELIVERY

DESCRIPTION

Permits a test delivery which is not sent to the POS.

RANGE

N/A

DEFAULT

N/A

CONSIDERATIONS

Applicable to Forecourt Controlled FDS's only.

Totes are incremented during the delivery.

PROCEDURE

Function 24 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

2 , 4

FILL

FILL

Litres show either the last sale details or zeros

Deliver fuel.

delivery details will be shown in the Litres windows during and after delivery

Either perform further test deliveries or turn the power off and turn it on again to get back into function mode.

NOT APPLICABLE IN FLEETPEC

READING ELECTRONIC TOTES

DESCRIPTION

Displays the total volume delivered since the last RAM Clear (Fn 10).

RANGE

N/A

DEFAULT

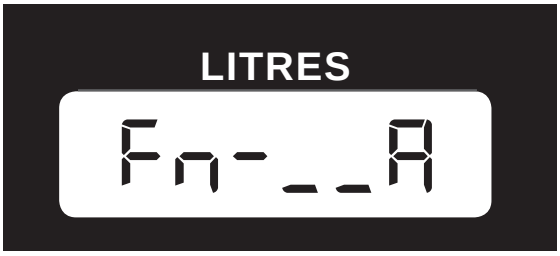
N/A

PROCEDURE

☞ 2 , 6

☞ FILL

☞ FILL , FILL to exit and return to functions mode. Alternatively, if no keys are pressed for 30 seconds, the function times out and the following will be displayed:



NOT APPLICABLE IN FLEETPEC

Fn 28

DOES NOT EXIST

NOT APPLICABLE IN FLEETPEC

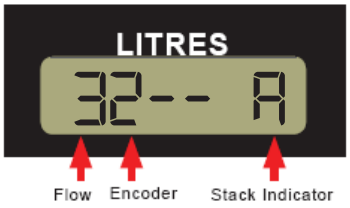
Fn 30 * (Associated function: Fn 50.)

PUMP STACK TEST (STACK A)

DESCRIPTION

Allows testing of and provides data relating to a variety of stack functions. Whilst within the function, various operations can be carried out on the valves and motors of the stack.

A stack test will check that fuel is flowing correctly and should also be used to flush the pipes and hoses and prime the system during installation.



The LITRES readout shows a pair of digits.

Flow Rate
The first digit of the pair shows the flow rate of the hose in tens of litres per minute. A figure between 0 and 4 (on a standard FleetPEC) is normal.

The flow rate (in litres per minute) in a standard FleetPEC is 40 (16mm hose); on a high flow it is 80 (25mm hose) and in ultra high flow it is 135. The flow rates on site may differ slightly as these are greatly influenced by site conditions such as tank placement, check valves, hose size/length and nozzle size.

The tens per litre display for the three flow rates will fluctuate between these numbers:

0 to 4 (standard);

0 to 8 (high flow);

0 to 9 (ultra high flow). Note that due to the lack of numerical fields on the display window, to denote the maximum flow rate of 135, instead of displaying "13" only the "3" portion of the tens litre per minutes will show.

Encoder Errors
The second digit indicates whether the encoder is generating errors when fluid is flowing. This digit can display any figure, but must remain constant. A changing figure shows that errors are being detected.

When the holster panel is connected, if the nozzle switch cable is plugged into the Logic PCB and any nozzles are NOT in their holsters (i.e. if any of the holster switches are open), the motor of that module will start running.

Note - both Function 30 and Function 50 are detailed here for clarity.

RANGE

N/A.

DEFAULT

N/A

Motor operation and flow rates are controlled from the keypad and the flow adjustment switch.

The digits assigned to start/stop motor or open/close valve must be pressed twice initially (except for 4 which only needs to be pressed once). Subsequent toggling is done by just pressing once.

1	to open/close valve	Dispenser Single/Dispenser Dual (Standard/High Model) - Stack A Dispenser Single (Ultra High Model) - Stack A Pump Single (Ultra High Model) - Stack A
2	to start/stop motor	Pump Single/Pump Dual (Standard/High Model) - Stack A
4	to start/stop motor	Pump Dual (Standard/High Model) - Stack C
6	to open/close valve	Dispenser Dual (Standard/High) - Stack C
7	to show actual flow rates. The figures will fluctuate but the lowest flow rate will be the most accurate measure.	
8	returns the display to the original view showing flow rates in tens of litres per minute	
	start/stop second motor (ultra high pump); open/close second valve (ultra high dispenser).	
CLEAR	takes user to this display:	

PROCEDURE

Warning! Motor may start immediately when performing Function 30 or Function 50. Keep clear of the Vee-belt.

☞ Function 30 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

☞ 3 , 0

☞ FILL

The following table and shows which keys perform the various operations in the stack test on differing models of FleetPEC.

	STANDARD/HIGH FLOW				ULTRA HIGH FLOW	
	Pump		Dispenser		Pump	Dispenser
	Single	Dual	Single	Dual	Single	Single
Fn 30	✓	✓	✓	✓	✓	✓
1	×	×	*F*	*F*	*A*	*F*
2	*A*	*A*	*G*	*G*	*G*	*G*
3	×	×	×	×	×	×
4	×	×	*H*	×	*H*	*H*
5	×	×	×	×	×	×
6	×	×	×	×	×	×
7	*B*	*B*	*B*	*B*	*B*	*B*
8	*C*	*C*	*C*	*C*	*C*	*C*
9	×	×	×	×	×	×
0	×	×	×	×	×	×
					*J*	*J*

Fn 50	×	✓	×	✓	×	×
1		×		×		
2		×		×		
3		×		×		
4		*D*		*I*		
5		×		×		
6		*(E)*		*F*		
7		*B*		*B*		
8		*C*		*C*		
9		×		×		
0		×		×		
						

KEY:

A: Starts motor (no display confirmation)
B: Flow rate (displays approx. litres per minute)
C: Default display mode (10s of litres plus errors)
D: Starts second motor (no display confirmation)
E: Display 01--6A or 01--6C (no other effect)
F: Starts submersible motor
G: Opens valve 1 (no display confirmation)
H: Energises valve 2 terminal on AC PCB (no valve present)
I: Opens valve 2 (no display confirmation)
J: Starts second motor for Ultra High Flow

NOT APPLICABLE IN FLEETPEC

Fn 32

NOT IN USE

NOT APPLICABLE IN FLEETPEC

Fn 34

DOES NOT EXIST

Fn 35

DOES NOT EXIST

DOES NOT EXIST

NOT APPLICABLE IN FLEETPEC

NOT APPLICABLE IN FLEETPEC

Fn 39

DOES NOT EXIST

NOT APPLICABLE IN FLEETPEC

SETTING THE PUMP NUMBER (STACK C)

DESCRIPTION

Sets the pump number(s) for forecourt controller to use when communicating with the FDS.

In FleetPEC, **dip switch settings (switches 1 to 3)** may be used to set pump numbers in Single hoses up to number 7 and up to number 14 in Dual hoses.

For higher numbers, use Function 20 for Single pumps (Stack A) and Function 41 (Stack C) on Dual pumps.

Following is the table for setting pump numbers (also available as a laminated insert in this manual):

PUMP NUMBERS	DIP 1	DIP 2	DIP 3
LOCAL	OFF	OFF	OFF
1(A), 2(C)	ON	OFF	OFF
3(A), 4(C)	OFF	ON	OFF
5(A), 6(C)	ON	ON	OFF
7(A), 8(C)	OFF	OFF	ON
9(A), 10(C)	ON	OFF	ON
11(A), 12(C)	OFF	ON	ON
13(A), 14(C)	ON	ON	ON

Dual Hose - Pump Number Settings

Refer to Considerations section for general rules on setting pump numbers.

RANGE

01 to 32 when using PEC protocol;

01 to 16 when using Gilbarco protocol;

(Standalone pumps are assigned 00.)

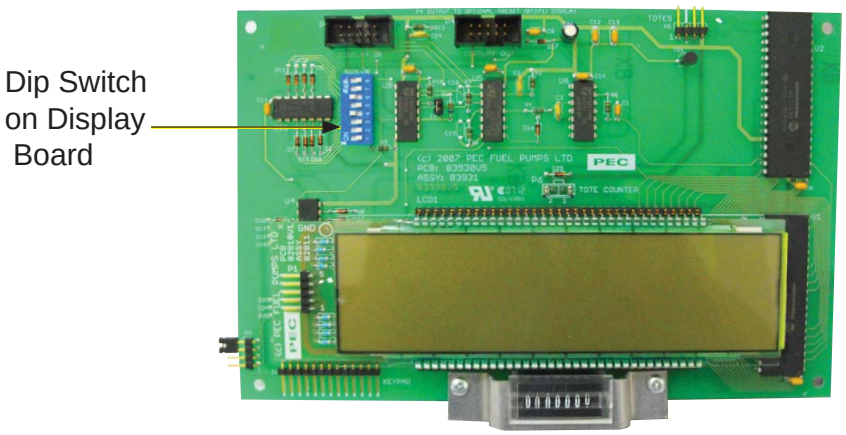
DEFAULT

00

CONSIDERATIONS

Use dip switches for setting pump numbers if possible as these are more likely to be retained in the event of power fluctruations such as outages and spikes. Using Function 20 and 41 will override dip switch settings until a memory clear is performed (Function 10), after which, on reset, the physical dip settings will again prevail.

The two display boards in a FleetPEC dual pumping unit each have a dip switch. The right display board connected to the main Processor PCB is the master, while the one on the left is the slave. Ensure that the dip switch settings on the slave display board are all set to OFF.



PROCEDURE

☞ 4 , 1

☞ FILL

☞ 1 , 2 (pump number 12 used in this example.)

☞ FILL to confirm the entry.

NOT APPLICABLE IN FLEETPEC

NOT APPLICABLE IN FLEETPEC

NOT APPLICABLE IN FLEETPEC

Fn45* (Associated function: Fn24)

TEST DELIVERY

DESCRIPTION

Permits a test delivery which is not sent to the POS.

RANGE

N/A

DEFAULT

N/A

CONSIDERATIONS

Applicable to Forecourt Controlled FDS's only.

Totes are incremented during the delivery.

PROCEDURE

Function 45 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

4 , 5

FILL

FILL

Litres show either the last sale details or zeros

Deliver fuel.

delivery details will be shown in the Litres windows during and after delivery

Either perform further test deliveries or turn the power off and turn it on again to get back into function mode.

NOT APPLICABLE IN FLEETPEC

NOT APPLICABLE IN FLEETPEC

DOES NOT EXIST

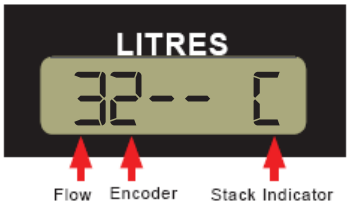
NOT APPLICABLE IN FLEETPEC

PUMP STACK TEST (STACK C)

DESCRIPTION

Allows testing of and provides data relating to a variety of stack functions. Whilst within the function, various operations can be carried out on the valves and motors of the stack.

A stack test will check that fuel is flowing correctly and should also be used to flush the pipes and hoses and prime the system during installation.



The LITRES readout shows a pair of digits.

Flow Rate
The first digit of the pair shows the flow rate of the hose in tens of litres per minute. A figure between 0 and 4 (on a standard FleetPEC) is normal.

The flow rate (in litres per minute) in a standard FleetPEC is 40 (16mm hose); on a high flow it is 80 (25mm hose) and in ultra high flow it is 135. The flow rates on site may differ slightly as these are greatly influenced by site conditions such as tank placement, check valves, hose size/length and nozzle size.

The tens per litre display for the three flow rates will fluctuate between these numbers:

0 to 4 (standard);

0 to 8 (high flow);

0 to 9 (ultra high flow). Note that due to the lack of numerical fields on the display window, to denote the maximum flow rate of 135, instead of displaying "13" only the "3" portion of the tens litre per minutes will show.

Encoder Errors
The second digit indicates whether the encoder is generating errors when fluid is flowing. This digit can display any figure, but must remain constant. A changing figure shows that errors are being detected.

When the holster panel is connected, if the nozzle switch cable is plugged into the Logic PCB and any nozzles are NOT in their holsters (i.e. if any of the holster switches are open), the motor of that module will start running.

Note - both Function 30 and Function 50 are detailed here for clarity.

RANGE

N/A.

DEFAULT

N/A

Motor operation and flow rates are controlled from the keypad and the flow adjustment switch.

The digits assigned to start/stop motor or open/close valve must be pressed twice initially (except for 4 which only needs to be pressed once). Subsequent toggling is done by just pressing once.

1	to open/close valve	Dispenser Single/Dispenser Dual (Standard/High Model) - Stack A Dispenser Single (Ultra High Model) - Stack A Pump Single (Ultra High Model) - Stack A
2	to start/stop motor	Pump Single/Pump Dual (Standard/High Model) - Stack A
4	to start/stop motor	Pump Dual (Standard/High Model) - Stack C
6	to open/close valve	Dispenser Dual (Standard/High) - Stack C

7 to show actual flow rates. The figures will fluctuate but the lowest flow rate will be the most accurate measure.

8 returns the display to the original view showing flow rates in tens of litres per minute

start/stop second motor (ultra high pump); open/close second valve (ultra high dispenser).

CLEAR takes user to this display:

PROCEDURE

Warning! Motor may start immediately when performing Function 30 or Function 50. Keep clear of the Vee-belt.

☞ Function 50 is a high level function. Access high level by causing a temporary short (using a screwdriver or similar) across pins 3 and 4 and a beep will sound to confirm access.

☞ 3 , 0

☞ FILL

The following table and shows which keys perform the various operations in the stack test on differing models of FleetPEC.

	STANDARD/HIGH FLOW				ULTRA HIGH FLOW	
	Pump		Dispenser		Pump	Dispenser
	Single	Dual	Single	Dual	Single	Single
Fn 30	✓	✓	✓	✓	✓	✓
1	×	×	*F*	*F*	*A*	*F*
2	*A*	*A*	*G*	*G*	*G*	*G*
3	×	×	×	×	×	×
4	×	×	*H*	×	*H*	*H*
5	×	×	×	×	×	×
6	×	×	×	×	×	×
7	*B*	*B*	*B*	*B*	*B*	*B*
8	*C*	*C*	*C*	*C*	*C*	*C*
9	×	×	×	×	×	×
0	×	×	×	×	×	×
					*J*	*J*

Fn 50	×	✓	×	✓	×	×
1		×		×		
2		×		×		
3		×		×		
4		*D*		*I*		
5		×		×		
6		*(E)*		*F*		
7		*B*		*B*		
8		*C*		*C*		
9		×		×		
0		×		×		
						

KEY:

A: Starts motor (no display confirmation)
B: Flow rate (displays approx. litres per minute)
C: Default display mode (10s of litres plus errors)
D: Starts second motor (no display confirmation)
E: Display 0 1--6A or 0 1--6C (no other effect)
F: Starts submersible motor
G: Opens valve 1 (no display confirmation)
H: Energises valve 2 terminal on AC PCB (no valve present)
I: Opens valve 2 (no display confirmation)
J: Starts second motor for Ultra High Flow

FUNCTION TITLE BY FUNCTION NUMBER

1 DISPLAY THE LAST FATAL ERROR
2 NOT APPLICABLE IN FLEETPEC
3 COMMUNICATION TEST
4 TEMPORARY STANDALONE
5 NOT IN USE
6 DOES NOT EXIST
7 DISPLAY TEST
8 SOFTWARE VERSION
9 NOT APPLICABLE IN FLEETPEC
10 ERASE SETUP
11 NOT IN USE
12 NOT APPLICABLE IN FLEETPEC
13 PRESET OPTIONS - DOLLARS OR LITRES
14 FLOAT SWITCH AND ULTRA HIGH SETTING
15 NOZZLE FINALISATON
16 START-UP DELAY - EXISTS WITH LIMITED FUNCTIONALITY
17 NOT APPLICABLE IN FLEETPEC
18 NOT APPLICABLE IN FLEETPEC
19 DOES NOT EXIST
20 SETTING THE PUMP NUMBER (STACK A)
21 NOT APPLICABLE IN FLEETPEC
22 NOT APPLICABLE IN FLEETPEC
23 NOT APPLICABLE IN FLEETPEC
24 TEST DELIVERY
25 NOT APPLICABLE IN FLEETPEC
26 READING ELECTRONIC TOTES
27 NOT APPLICABLE IN FLEETPEC
28 DOES NOT EXIST
29 NOT APPLICABLE IN FLEETPEC
30 PUMP STACK TEST (STACK A)
31 NOT APPLICABLE IN FLEETPEC
32 NOT IN USE
33 NOT APPLICABLE IN FLEETPEC
34 DOES NOT EXIST
35 DOES NOT EXIST
36 DOES NOT EXIST
37 NOT APPLICABLE IN FLEETPEC
38 NOT APPLICABLE IN FLEETPEC
39 DOES NOT EXIST
40 NOT APPLICABLE IN FLEETPEC
41 SETTING THE PUMP NUMBER (STACK C)

42 NOT APPLICABLE IN FLEETPEC
43 NOT APPLICABLE IN FLEETPEC
44 NOT APPLICABLE IN FLEETPEC
45 TEST DELIVERY
46 NOT APPLICABLE IN FLEETPEC
47 NOT APPLICABLE IN FLEETPEC
48 DOES NOT EXIST
49 NOT APPLICABLE IN FLEETPEC
50 PUMP STACK TEST (STACK C)