

Authorized Field Change

AFC 08907R

Date: June, 2008

Subject File: ENGINE

Subject: Fuel Pressure Regulator and Fuel Pressure Switch on VT 275 Engines in Workhorse Commercial Chassis

Model: Workhorse

Start Date: 01/01/2005 End Date: 12/01/2007

Engine Family: VT 275

DESCRIPTION

REVISION DESCRIPTION

Step 25 and Figure 10 have been revised.

Campaign will require the installation of a new engine fuel pressure regulator spring, fuel pressure switch, wiring harness and new ECM software. Failure of either the plunger or return spring results in low or no fuel delivery to the injector, and can ultimately result in injector failure.

PARTS INFORMATION

Fuel Pressure Switch

Table 1 **Parts Information**

Part Number	Description	Quantity
Kit # 2597067C92	Switch (With Harness)	1

INSTALLATION



WARNING – To prevent personal injury or death, read all safety instructions in the “Safety Information” section of the EGES 300 Service Manual.



WARNING – To prevent personal injury or death, shift transmission to park or neutral, set parking brake, and block wheels before doing diagnostic or service procedures.

INSTALLATION (CONT.)

! WARNING – To prevent personal injury or death, make sure the engine has cooled before removing components.

! WARNING – To prevent personal injury or death, do not let engine fluids stay on your skin. Clean skin and nails using hand cleaner and wash with soap and water. Wash or discard clothing and rags contaminated with engine fluids.

! WARNING – To prevent personal injury or death, do not turn ignition key to ON during disassembly. This would pump fuel from the HFCM through disconnected tubing, causing a fuel spill and possible fire.

1. Remove engine cover and small access plate on the left side of the engine tunnel (Figure 1). This access plate may be held on with rivets which will have to be drilled out.



Figure 1

2. Loosen nuts securing the battery cover. Remove battery cover and disconnect the negative battery cable.

INSTALLATION (CONT.)



WARNING – To prevent personal injury or death, remove ground cable from negative terminal of main battery before disconnecting or connecting electrical components. Always connect ground cable last.

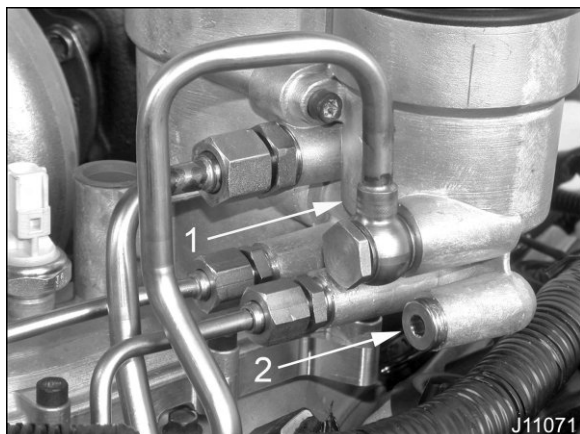


Figure 2 Secondary Fuel Filter Housing and Diagnostic Port Plug

1. Fuel Filter Housing
2. Diagnostic Port Plug, M12



WARNING – To prevent personal injury or death, do not smoke and keep fuel away from flames and sparks.



WARNING – To prevent personal injury or death, dispose of fuel in a container marked DIESEL FUEL, according to applicable regulations.

3. Drain the secondary fuel filter housing into a suitable container beneath the fuel diagnostic port. Remove and discard the port plug.
4. Crack open the top fuel filter line to allow air into the filter housing and drain the housing into the container.
5. Disconnect all fuel supply / return tubes from fuel bowl.
6. When removing the fuel filter housing, firmly hold the fuel filter housing against the oil filter housing as the three M6 x 25 Torx bolts (p/n 1831387C1) are removed. The poppet spring is under compression and will eject the poppet and spring if the fuel filter housing is not slowly and carefully removed.

INSTALLATION (CONT.)

7. Remove the following components (Figure 3):

- . Poppet spring (p/n 1831441C1)
- . Poppet and seal (p/n's 1838635C1 and 1831479C1)
- . O-ring (p/n 1846211C1)
- . Gasket (p/n 1838630C1)

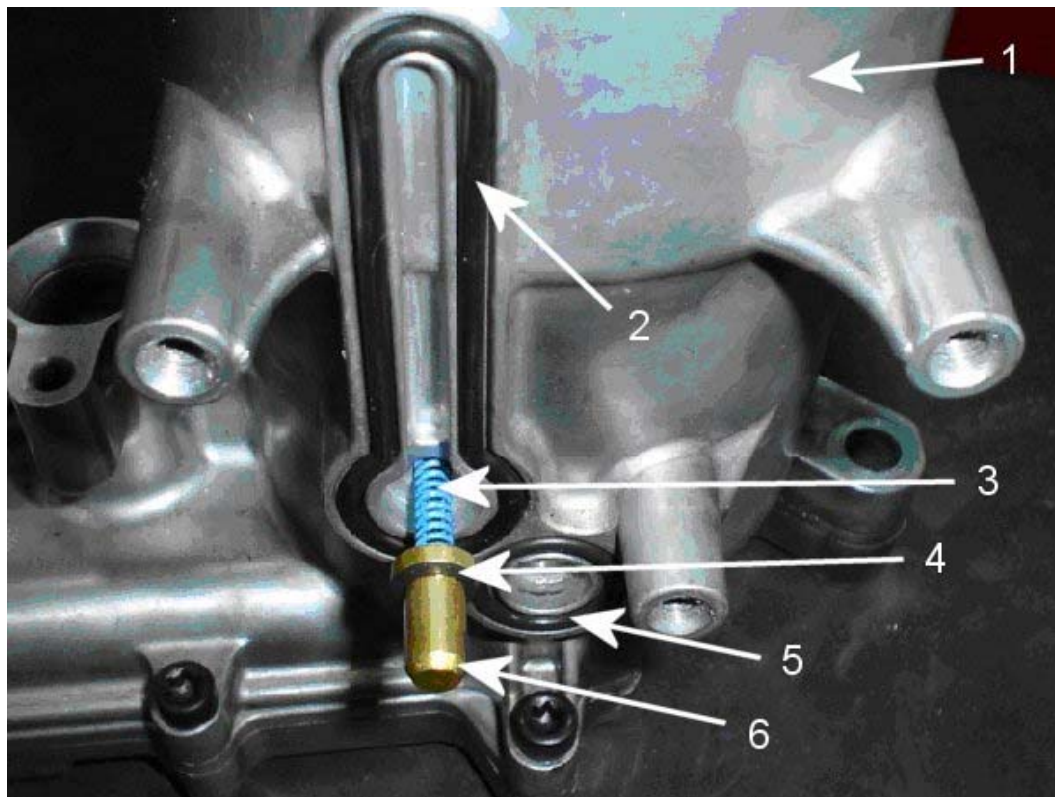


Figure 3 Oil Filter Housing

1. Oil Filter Housing
2. Gasket
3. Spring (Blue)
4. O-Ring
5. Seal
6. Poppet

8. Place new components (poppet, poppet spring, o-ring, and gasket) (kit 1854267C93) in place of discarded components. Install the new poppet and spring in the fuel filter housing (Figure 4) for reassembly to the oil filter housing.

- Ensure poppet seal is fully seated in poppet seal gland.
- New poppet spring is blue

INSTALLATION (CONT.)

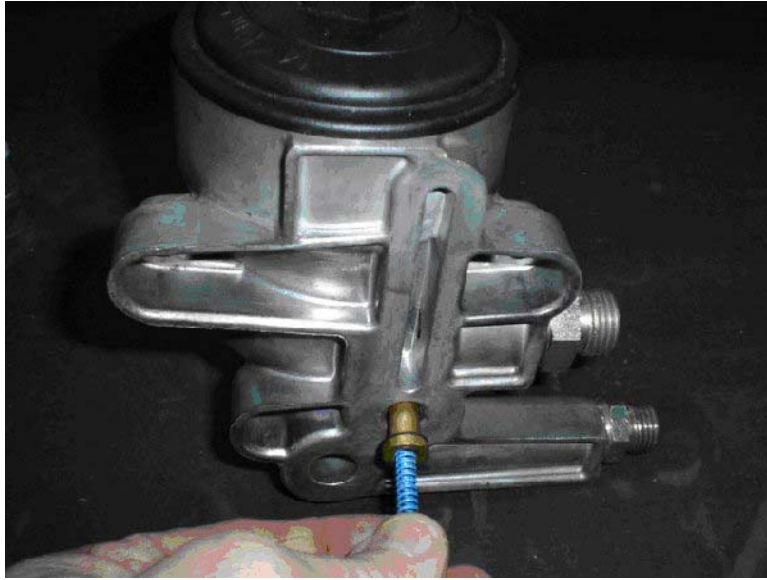


Figure 4 Installing Poppet in Fuel Filter Housing

9. Align the poppet spring with its recess in the oil filter housing and slide the fuel filter housing over the three Torx bolt bosses on the oil filter housing (Figure 5) while holding the fuel filter housing firmly in place, start and tighten by hand the three Torx bolts to prevent damaging threads.



Figure 5 Assembly of Fuel Filter Housing to Oil Filter Housing

10. Tighten the three Torx bolts: 98.7 to 10.5 Nm (77 to 93 lbs-in.).

INSTALLATION (CONT.)

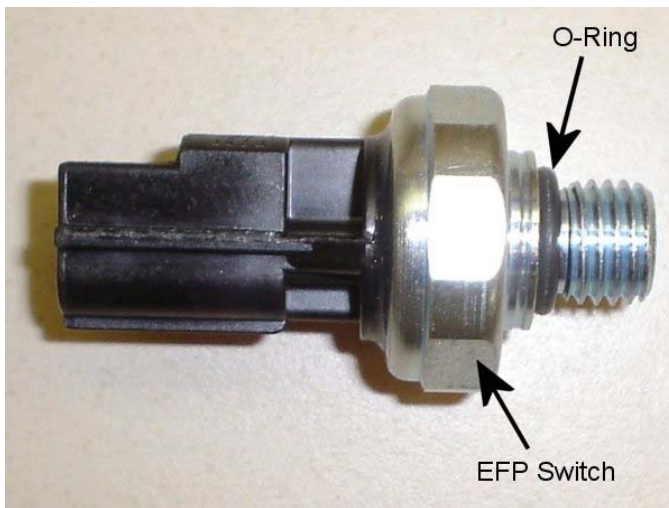


Figure 6 EFP Switch (1876926C92)

CONFIRM O-RING IS IN PLACE

Install the EFP switch (Figure 6) into the diagnostic port in the bottom of the secondary fuel filter housing and tighten to 14 N-m (124 lbf-in).

11. Connect the 1-pin connector of the EFP switch wiring harness included in kit to the EFP switch. Push the connector into the switch until a click is heard. This indicates the wiring harness is secured to the switch.

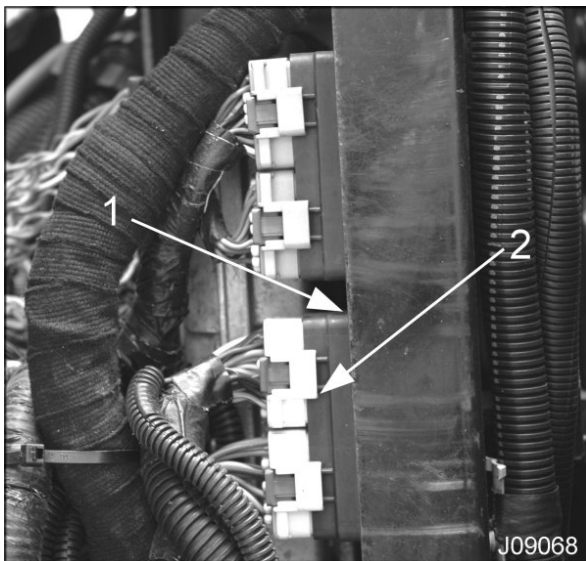


Figure 7 ECM and X-3 Connector

1. ECM
2. X-3 Connector

INSTALLATION (CONT.)

12. Route the EFP switch wiring harness to the Electronic Control Module (ECM) by following the main engine wiring harness. Secure the EFP switch wiring harness to the main engine wiring harness using tie straps (not provided). Make sure there is no rubbing or contact with other parts or engine.

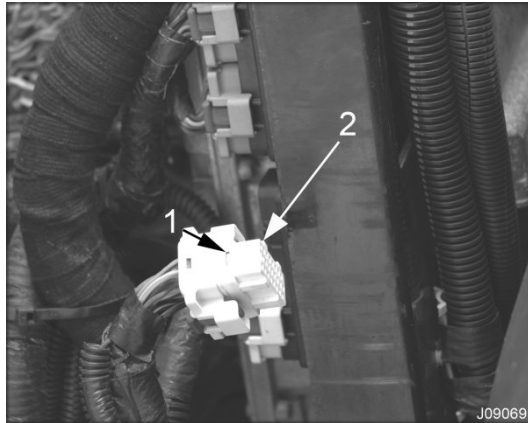


Figure 8 X-3 Connector Removed

1. Locking tab
2. X-3 connector

13. Remove the X-3 connector from the ECM (Figure 7).
14. Using the flat blade of a screwdriver, push down on the locking tab and unlock the connector (Figure 8).
15. Pull the plastic plug from the number 2 terminal position and discard.

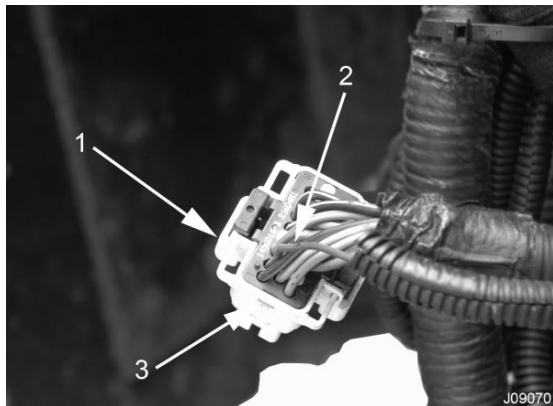


Figure 9 EFP Switch Terminal Connected

1. X-3 connector
2. EFP switch wiring harness installed
3. Tab locks

16. Insert the connector end of the EFP switch wiring harness into terminal 2 of the X-3 connector. Push the terminal wire into the connector until a click is heard.
17. Check if terminal wire is secure in the connector by gently pulling back on the wire.

INSTALLATION (CONT.)

- a. If the wire is secure, it will remain in the connector block while pulling on the wire.
 - b. If the wire is not secure, it will pull out of the connector while pulling on the wire. Repeat Step 16.
18. Using the flat blade of a screwdriver, push down on the locking tab and lock the connector.
 19. Install X-3 connector into ECM.
 20. Connect the fuel supply and return lines to the fuel filter housing.
 21. Connect the ground cable to the negative terminal of the battery and tighten terminal nut.
 22. Install battery cover and tighten the two nuts.
 23. Check for fuel leaks.
 24. Replace access plate (reinstall with screws or bolts). Install engine cover.
 25. Update Engine calibration:
 - Use only NETS or Auto upgrade for the calibration programming
 - When using NETS, Select "Replace/Reflash Module"

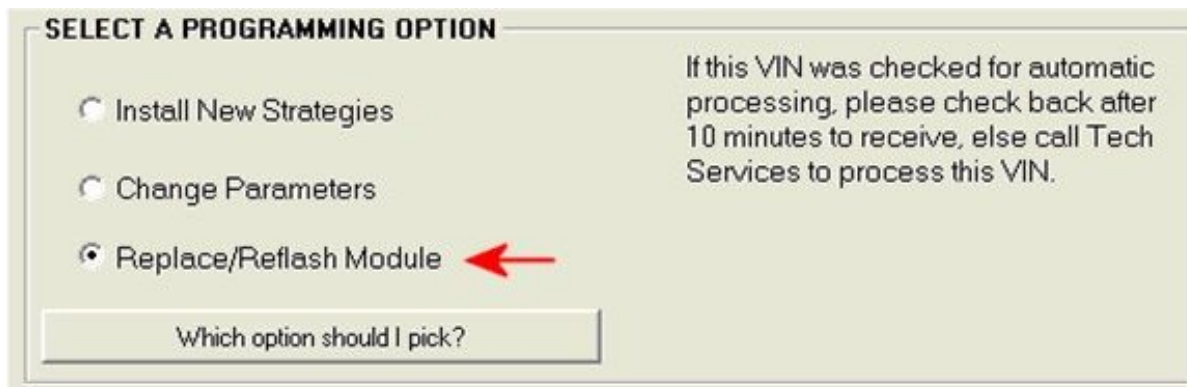


Figure 10

- After programming, validate using Service Assistant (SA) that the calibration is the following:
Workhorse : PVWID 400
 - No programmable parameters need to be changed at this time. Fuel pressure switch parameter does not need to be set to ON for calibration to work.
26. Validate that the fuel light is working.
 - With SA still connected, start the engine and let idle.
 - Remove the electrical connector to the pressure switch.
 - Check Engine light should illuminate and a DTC code (372) will be active in the Engine ECM.
 - Reconnect the connector and the light should go out and code should go inactive after ten seconds.

INSTALLATION (CONT.)

- You will not be able to read fuel pressure in Master Diagnostics or Service Assistant.
- Clear all DTC codes using SA.

Operation number must appear on all claims.

Table 2 Labor Information

Operation No.	Description	Time
A40-08907-1	Replace parts with 2597067C91, fuel pressure kit with harness, and program ECM	1.6 Hrs.

ADMINISTRATIVE PROCEDURE

Expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Authorized Field Change Number G-08907

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Manual, Section 7-1. Special attention should be given to Items 39 through 44.

To assure this important improvement is made in a timely manner, all claims for G-08907 activity must be submitted by June 30, 2009 or within the normal warranty period for the vehicle, if after June 30, 2009.

	GROUP	NOUN	C	WARR.	TP	PAD
GROUP Enter number G—						
NOUN Leave blank						
C (CAUSE) Enter either 1, 2, 3. (see below)						
1. Inspected (No repair required).						
2. Inspected and repaired.						
3. Defective part from parts stock.						
WARRANTY (Warranty Code) Enter 40.						
TYPE PART Enter P for type part causing failure.						
PAD Enter 100						

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