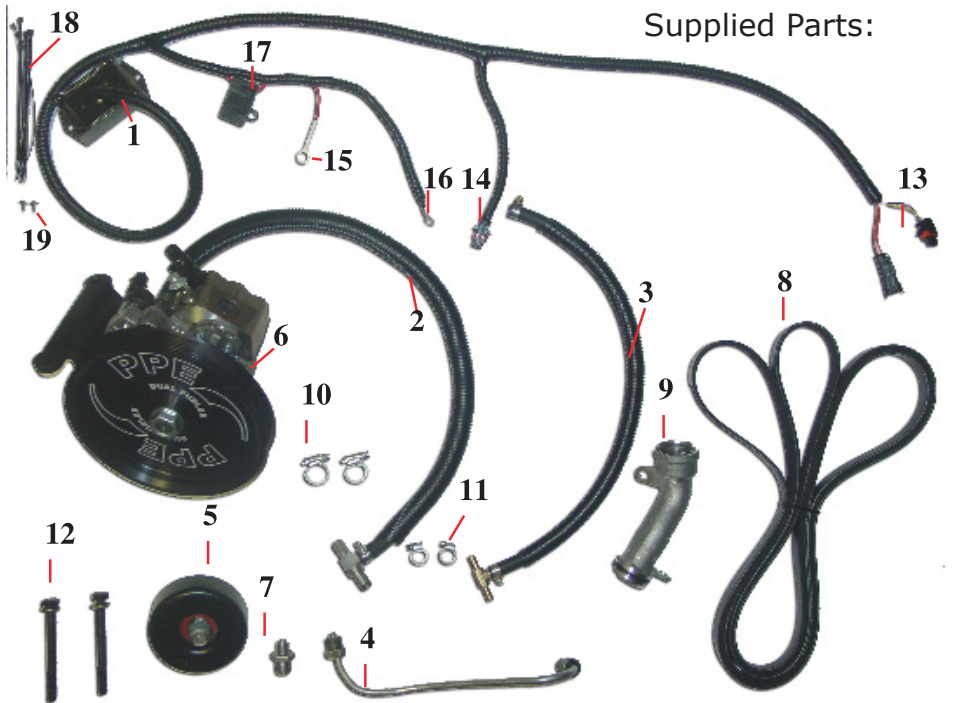


Dual Fueler CP3 Pump Kit
Installation Guide for **LB7**
50 STATES EMISSIONS LEGAL



Supplied Parts:

- | | |
|--|---|
| 1. Control Module Pulley | 9. Oil Filler Tube |
| 2. 3/8" Inlet Fuel Line with Attached
1/2" x 1/2" x 3/8" 'T' Connector | 10. 2 #6 hose Clamps |
| 3. 5/16" Return Fuel Line with Attached
5/16" x 5/16" x 5/16" 'T' Connector | 11. 6 #4 hose Clamps (4 already on
hoses) |
| 4. High Pressure Steel Fuel Supply Line | 12. 2 M10-1.5x100 bolts with 2 washers |
| 5. Idler Pulley with attached parts
(02-04 models only, see
appendix C) | 13. Control Module Internal Engine
Pump connectors |
| 6. Assembled CP3 Pump, Wheel, and
bracket | 14. Control Module Dual Fueler
Connector |
| 7. Fuel Rail Fitting | 15. Control Module +12V (Red Wire) |
| 8. #6 Rib Belt | 16. Control Module Ground (Black Wire) |
| | 17. Control Module Fuse 10A |
| | 18. Control Module Harness Tie Straps |
| | 19. Control Module Mounting Screws |

Please note these part numbers, they will be used in installation descriptions!

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First: Install the “Dual Fueler” bracket and pulley if not assembled on pump. Refer to Appendix B on page 8.

1. 2002-04 Models: Remove the belt and Install **#5 Idler Pulley** in the existing threaded hole on the engine bracket as shown below. Torque to 27 lb. ft.

2001 Models refer to appendix C.



Fig. 1

3. Remove plug from the end of the fuel rail with a 500E (used on seatbelt bolts) Torx wrench or socket and install **#7, Fuel Rail Fitting**.

Important: Early Model LB7 trucks may have a block off plate behind torx plug fitting. If so REMOVE this Block Off Plate and drill out to same size as supplied fuel rail adapter fitting.



Fig. 3

2. Remove the **4 A/C Bolts** as shown and set the **A/C compressor** to the left of the engine to access the fuel rail below.

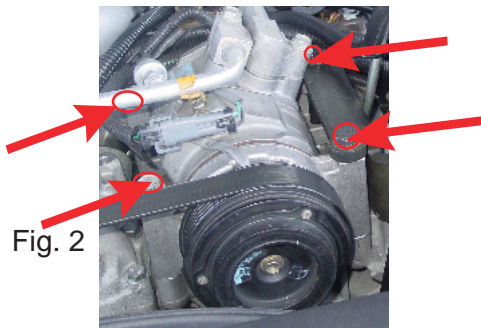


Fig. 2

4. Drain the coolant from the radiator drain plug. Remove the alternator. Remove the EGR by disconnecting the in and out hoses first. Remove the Water Line **W** so you can access the **#4 steel high pressure line** when **A/C compressor** is placed back and the **Dual Fueler** is installed.

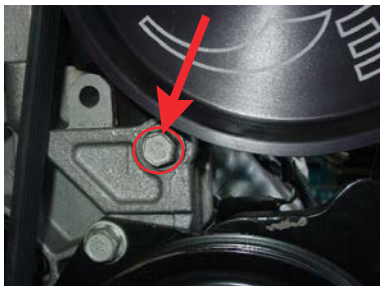
Then attach **#4, Steel high pressure line**, BUT DO NOT TORQUE IT YET! Route it so it will lay under the **A/C compressor**.



5. Place the A/C Compressor back into the original position. Place the **#6, (Dual Fueler Assembly bracket with pump)** on top of the Right A/C Compressor bolt holes and use **#12 bolts** to attach the Dual Fueler Bracket Assembly to A/C Compressor, torque 37 lb. ft. Save 1 of the original A/C bolt for the next step.

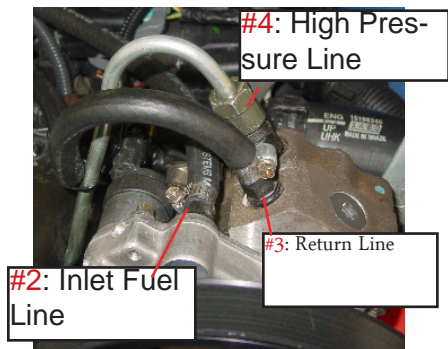


6. Install 1 factory A/C Bolt that you removed from top of A/C Unit into bottom of the Dual Fueler bracket.

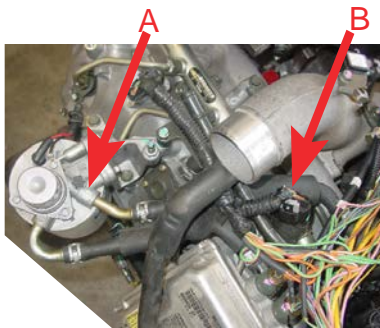


7. Then torque the **#4 high pressure line nut** onto both ends (to 30 ft. lb.). Re-install the **Water Line W** (See figure 4 on step 4).

8. Attach the lines by part number as shown below:



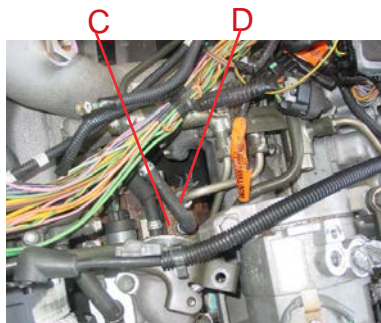
9. Follow the flow direction arrow **A** exiting from the fuel filter housing in order to locate the fuel supply hose **B**.



10. Cut back the rubber sleeve **B**. Cut the stock fuel supply line and insert supplied **#2** 1/2"x1/2"x3/8" 'T' connector in between the 1/2" fuel supply line, secure with **#10** 1/2" hose clamps.



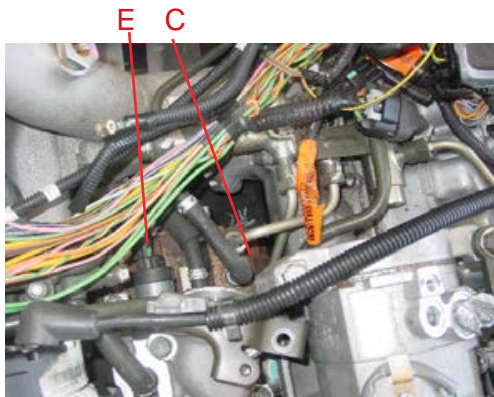
11. Locate the Stock CP3 Pump **C** and the stock return line **D** from Stock CP3 Pump. Cut the rubber hose and insert **#3** 5/16"x5/16"x5/16" 'T' connector. Use **#11** hose clamps to secure.



Now all of the 3 lines should be connected to the Dual Fueler Pump and to the engine in the correct spots.

12. Locate the Stock CP3 Pump **C** from step 11, and the electronic control wire harness **E**. Unplug the wire Harness **E**.

13. Plug the Wire Harness **E** into **#13**, then plug the other end of **#13** back into the Stock CP3 Pump **C**.



19. Remove the original Oil filler tube, install **#9**, Replacement Oil Filler Tube to allow for the belt clearance and assemble with original bolts. Torque 15 lb. ft.
20. Route **#8** Replacement Belt (as shown below) for 2002-04 models. For 2001 models refer to appendix C.

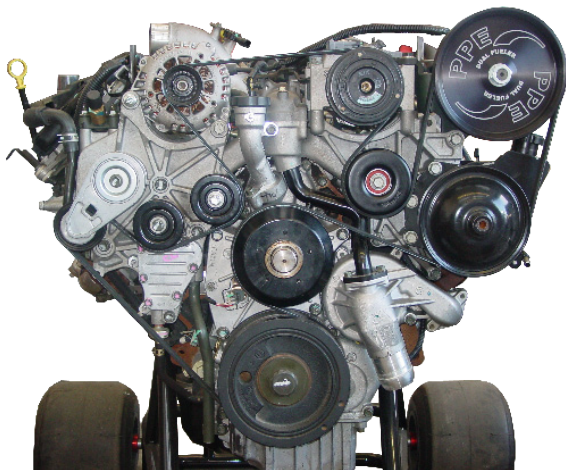
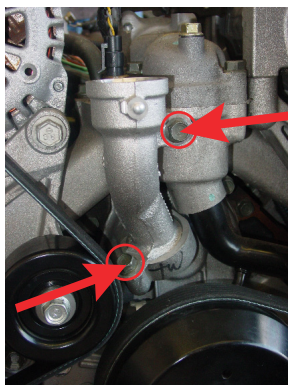


Photo shows for 2002-2004 routing

21. Connect the **#15** Red Wire to the 12V constant battery jumper terminal stud, and **#16** ground the wire to the terminal stud mounting bolt as shown.



22. Insert 10 Amp Fuse into **#17**.

23. The engine should be ready to start, prime the fuel filter pump to bleed air from the system and start the engine.

Appendix A: Troubleshooting

Engine noisy: Too Much Fuel Pressure

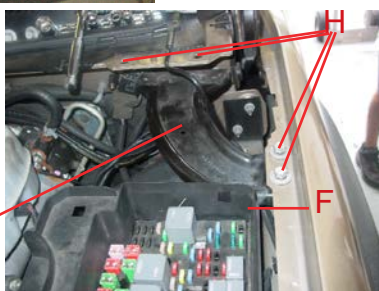
Cause: Check if the fuse is good and in the controller's fuse holder. And all power connections are secure. Including connectors for both pumps, make sure they are fully plugged in.

14. Route **#1**, (Control Module) Wiring from Stock CP3 Pump **C** as shown and attach to other wiring with **#18** (tie straps). Connect **#14** to the back of Dual Fueler CP3 Pump.



Wire Routing

15. Temporarily remove Metal Support **G** (as shown) by removing 4 bolts **H** and set them aside to remove the fuse box cover **F**. **#1** will be tucked inside the fuse box cover **F**.



16. Remove the Fuse box Cover **F** and place **#1** (Control Module) as shown to the below.



(photo is taken from the drivers side of the vehicle)

17. Secure **#1** with **#19** screws as shown below.

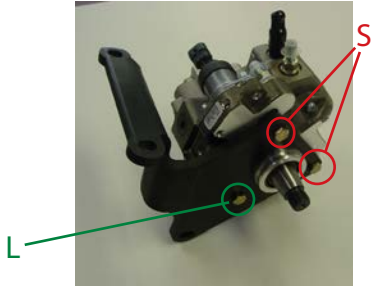


18. Replace fuse box cover **F**, taking care to not pinch harness, and the re-assemble stock parts **G** and **H** as shown in step 15.

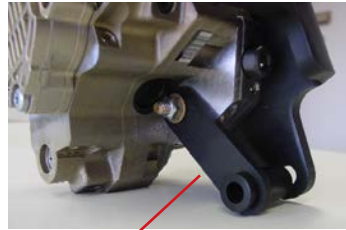
19. Place supplied Dual Fueler decal on the engine shield in the designated area for use during future smog testing.

Appendix B: Fuel Pump with Bracket Assembly

1. Install the Main Bracket and insert the 3 supplied bolts. Make sure the **longer bolt L** and 2 **shorter bolts S** are used as shown.

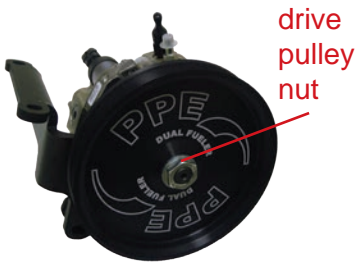


2. Install the **Smaller Support Bracket** and secure with washer and nut on the back of the pump as shown. Secure the other 2 bolts S with a washer and nut on the back of the pump.



Smaller Support Bracket

3. Put the pulley on pump by placing the pulley on pump with washer and nut, and torque fuel injection pump drive pulley nut to 52 lb. ft.



Appendix C: 2001 Installation

For 2001 installs, move Idler Factory Idler Pulley from location **I1** to location **I2**. No other Idler Pulleys are required. Route belt as shown to the left.

