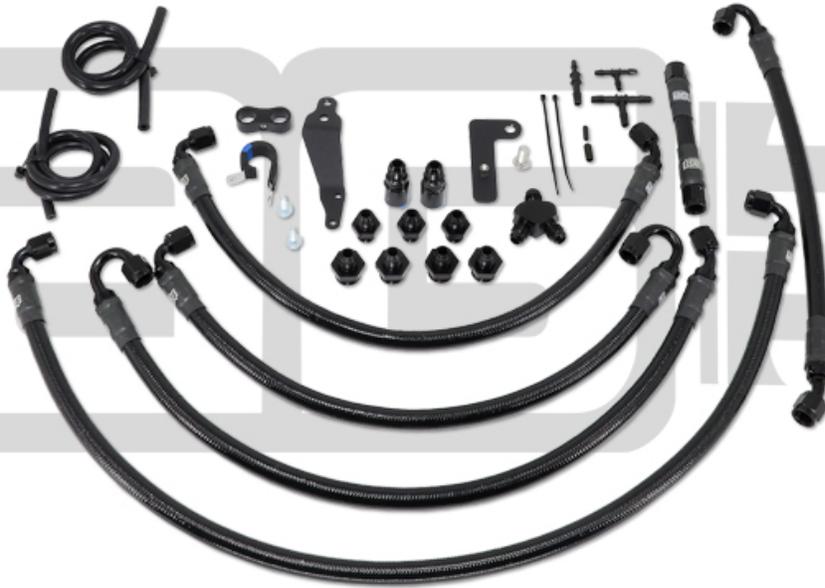


IAG PTFE Fuel Line Kit for 08-14 WRX, 08-21 STI



Step 1/20

IAG-AFD-2215 IAG PTFE Fuel Line Kit for 08-14 WRX/08-21 STI for Use With IAG V3 TGV Housings/OEM TGV Housings

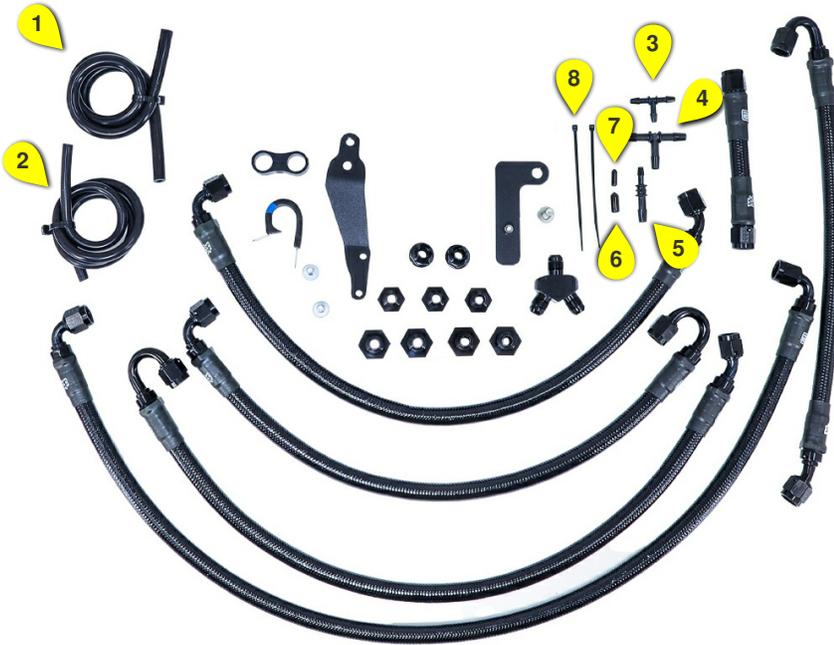
Part# IAG-AFD-2215

Thank you for choosing the IAG PTFE Fuel Line Kit. IAG recommends professional installation for this product. If you do the installation yourself, please reference the OE Service Manual for steps not listed in these instructions. If you do not own a Service Manual you can access and download the Subaru Service Manual for your car online at techinfo.subaru.com (\$34.95).

Step 2/20

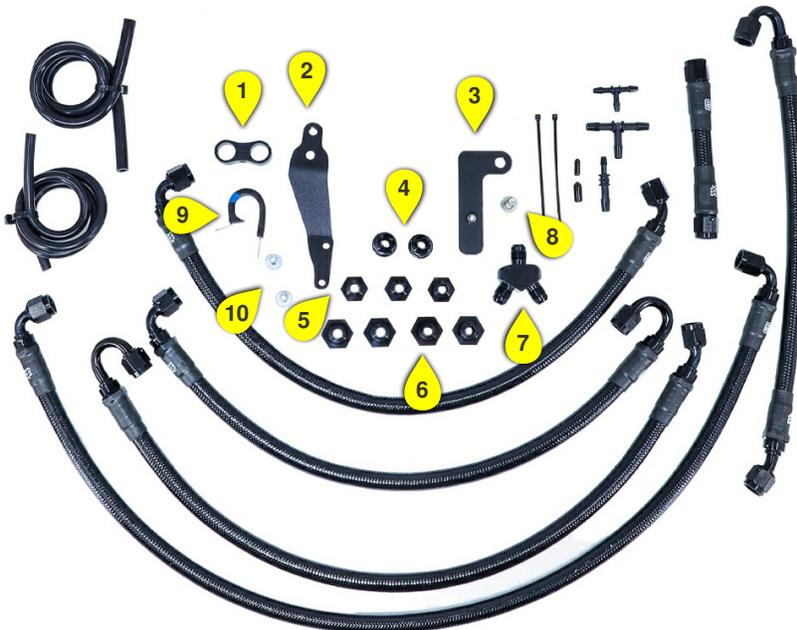
Numbered annotations (8)

- 1 2ft 3/16" Silicone Vacuum Hose
- 2 2ft 1/8" Silicone Vacuum Hose
- 3 3/16" Black Nylon T Fitting
- 4 1/4" Black Nylon T Fitting
- 5 3/16" x 1/4" Black Nylon Straight Reducer
- 6 3/16" Vinyl Cap
- 7 1/8" Vinyl Cap
- 8 2x 4" Ziptie

**Step 3/20**

Numbered annotations (10)

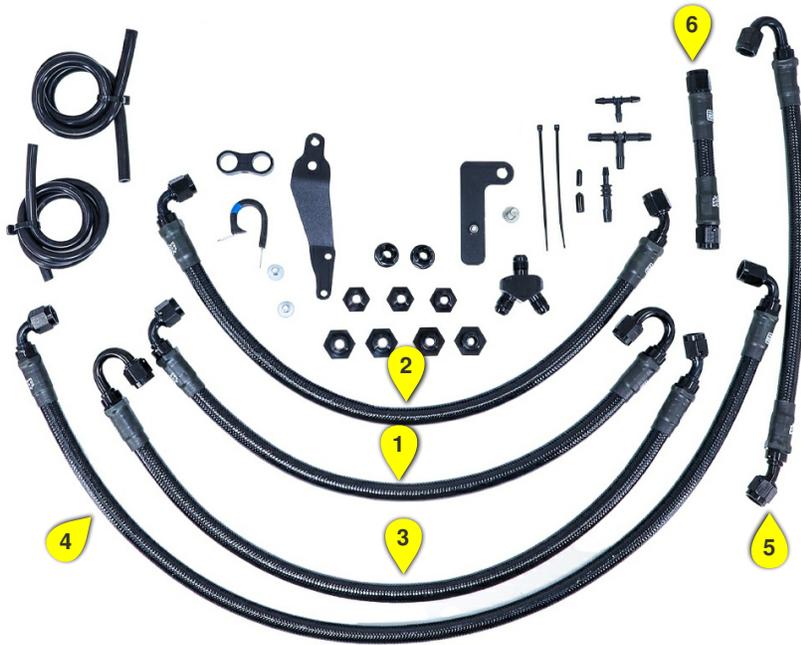
- 1 Fuel Line Separator
- 2 FPR Bracket
- 3 Fuel Line L-Bracket w/ M4x.70x12mm Button Head Torx Screw
- 4 2x 5/16" SAE Quick Disconnect
- 5 3x -6AN to -6ORB Straight Fitting
- 6 4x -6AN to -8ORB Straight Fitting
- 7 -6AN Billet Y Fitting
- 8 M8x1.25x16mm Button Head Hex Screw
- 9 Adel-Style Hose Clamp
- 10 2x M6x1.00x16mm Hex Flange Screw



Step 4/20

Numbered annotations (6)

- 1 Hose 1 - 20" x 90 deg x 180 deg PTFE Fuel Line
- 2 Hose 2 - 22" x 90 deg x 60 deg PTFE Fuel Line
- 3 Hose 3 - 25.125" x 45 deg x 180 deg PTFE Fuel Line
- 4 Hose 4 - 33" x 90 deg x 90 deg PTFE Fuel Line
- 5 Hose 5 15.25" x 30 deg x 150 deg PTFE Fuel Line
- 6 Hose 6 - 5.50" x 0 deg x 0 deg PTFE Fuel Line



Step 5/20

Numbered annotations (1)

- 1 The -8ORB fittings (larger) are installed in the fuel rails.

The -6ORB fittings (smaller) are installed in the IAG FPR.



**Step 6/20**

Numbered annotations (1)

- 1** ALWAYS apply lube to all o-rings during installation. Dry o-rings can tear and create leaks in the fuel system.

**Step 7/20**

Numbered annotations (1)

- 1** Note that all fittings should be fully flush when installed properly. Do not over-tighten.

**Step 8/20**

Numbered annotations (1)

- 1 Fuel pressure sensor or fuel pressure gauge can be installed in front NPT port if you are using one.

**Step 9/20**

Numbered annotations (1)

- 1 Install the FPR bracket using the hardware supplied with the regulator. Pay attention to the orientation of the bracket as shown.



Step 10/20

Reference the factory service manual for the following steps. As a reminder, professional installation is highly recommended for this product. You will be modifying the fuel system of your vehicle and improper installation can cause injury and damage to the vehicle if improperly installed.

Step 11/20

Numbered annotations (1)

1 Pull the fuel pump fuse and crank the care until it stalls. Attempt to start the vehicle a second time. This will relieve the majority of the fuel pressure.

Remove the factory intake manifold.

Remove the factory TGV's.

Remove the factory fuel lines.

8i-4 IGNITION CONTROL

AUTO SHUT DOWN RELAY (Continued)

When energized, the ASD relay on SBEC vehicles supplies battery voltage to the fuel injectors, coils and the heating element in each O2 sensor. When energized, the ASD relay on NGC vehicles provides power to operate the injectors, ignition coil, generator field, O2 sensor heaters (both upstream and downstream), evaporator purge solenoid, EGR solenoid (if equipped), engine solenoid, EGR solenoid and NVLD solenoid. On vehicles equipped with SBEC and NGC, the ASD relay also provides sense circuit to the ASD for diagnostic purposes. The PCM monitors the ASD for 15 seconds from the time the engine is cranked. If the ASD does not energize, the PCM sets a Diagnostic Trouble Code (DTC). The PCM will not energize the ASD any further until an engine speed that is a predicted voltage (typically about 50 rpm) is reached. The ASD relay can also be energized for the engine if it has been turned off to perform an O2 sensor heater test, if vehicle is equipped with O2 sensor heaters.

On vehicles equipped earlier, the PCM energizes the ASD relay during an O2 sensor heater test. This test is performed only after the engine has been shut off for SBEC vehicles. On NGC vehicles it checks the O2 heater upon vehicle start. The PCM still operates internally to perform several checks, including monitoring the O2 sensor heaters.

CAMSHAFT POSITION SENSOR

DESCRIPTION

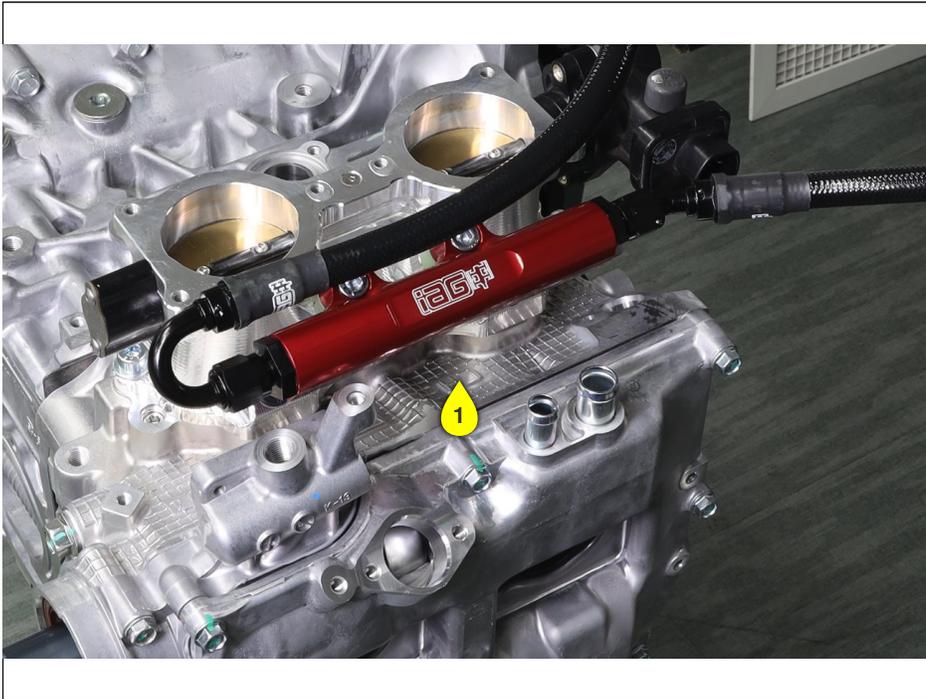
On 2.0/2.4L engines the camshaft position sensor is mounted to the rear of the cylinder head (Fig. 1). (Fig. 2). On 1.6L engines it is mounted on the front side of the cylinder head.

OPERATION

The PCM sends approximately 5 volts to the Hall-effect sensor. This voltage is required to operate the Hall-effect chip and the electronics inside the sensor.

Fig. 1 Camshaft Position Sensor -2.0/2.4L DOHC

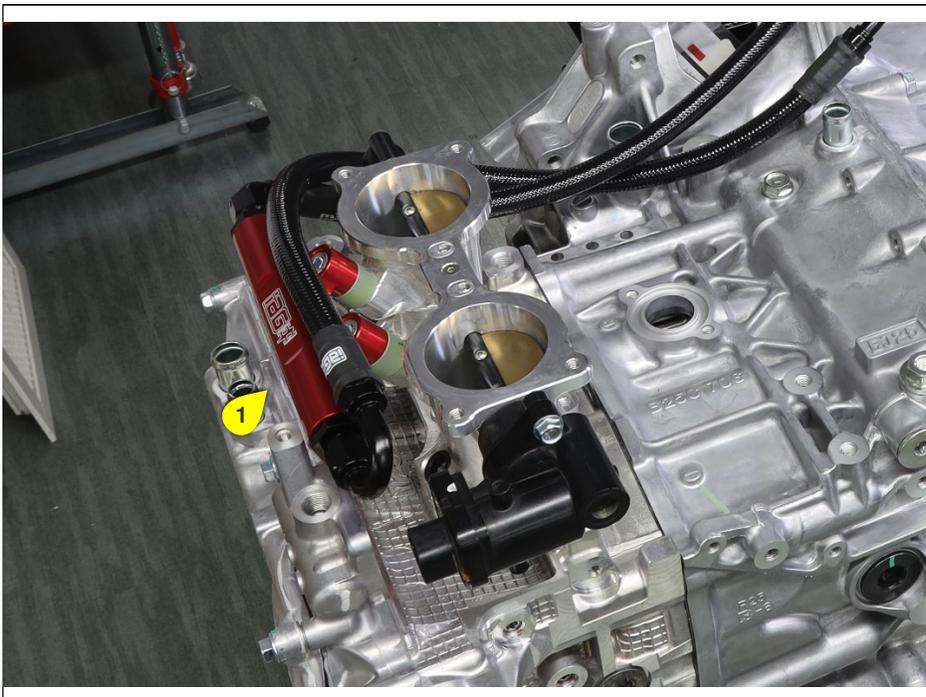
1 - PCV VALVE
2 - EGR VALVE
3 - CAMSHAFT POSITION SENSOR

**Step 12/20**

Numbered annotations (1)

- 1 Driver side fuel rail has Hose 1 (20" x 90 deg x 180 deg) installed at front of rail using 180 deg fitting.

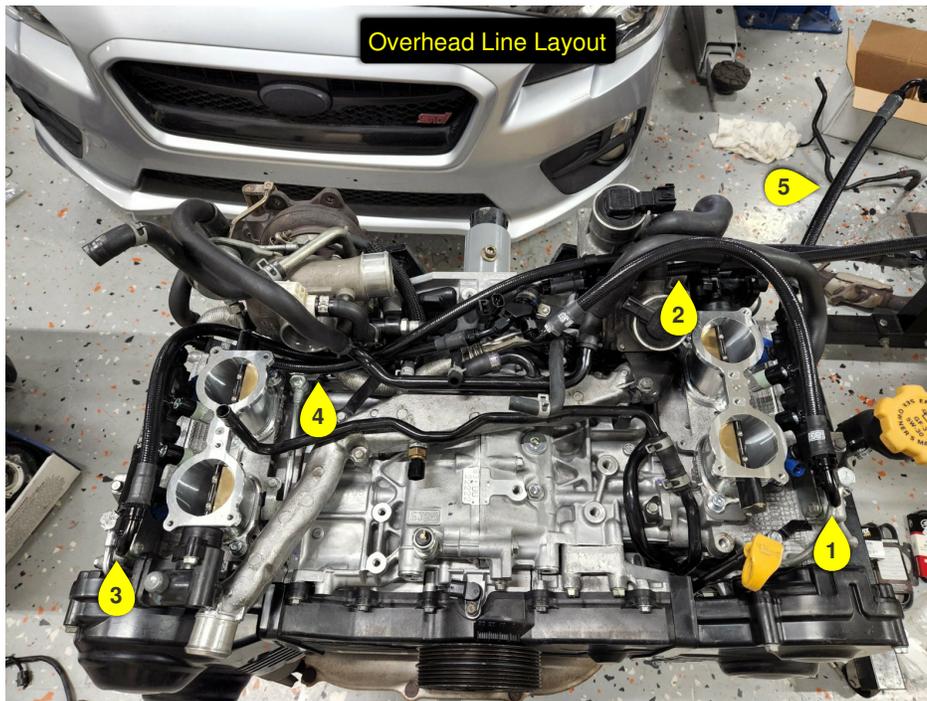
Hose 5 (15.25" x 30 deg x 150 deg) is installed in rear of passenger fuel rail using the 30 deg fitting.

**Step 13/20**

Numbered annotations (1)

- 1 Passenger side fuel rail has Hose 3 (25.125" x 45 deg x 180 deg) installed at front of rail using 180 deg fitting.

Hose 4 (33" x 90 deg x 90 deg) is installed in rear of passenger fuel rail.



Step 14/20

Numbered annotations (5)

- 1 Hose 1 (20" x 90 deg x 180 deg)
- 2 Hose 2 (22" x 90 deg x 60 deg)
- 3 Hose 3 (25.125" x 45 deg x 180 deg)
- 4 Hose 4 (33" x 90 deg x 90 deg)
- 5 Hose 5 (15.25" x 30 deg x 150 deg)



Step 15/20

Numbered annotations (2)

- 1 Install hose separator here.
- 2 L-Bracket installed with adel style hose clamp securing Y-Fitting.

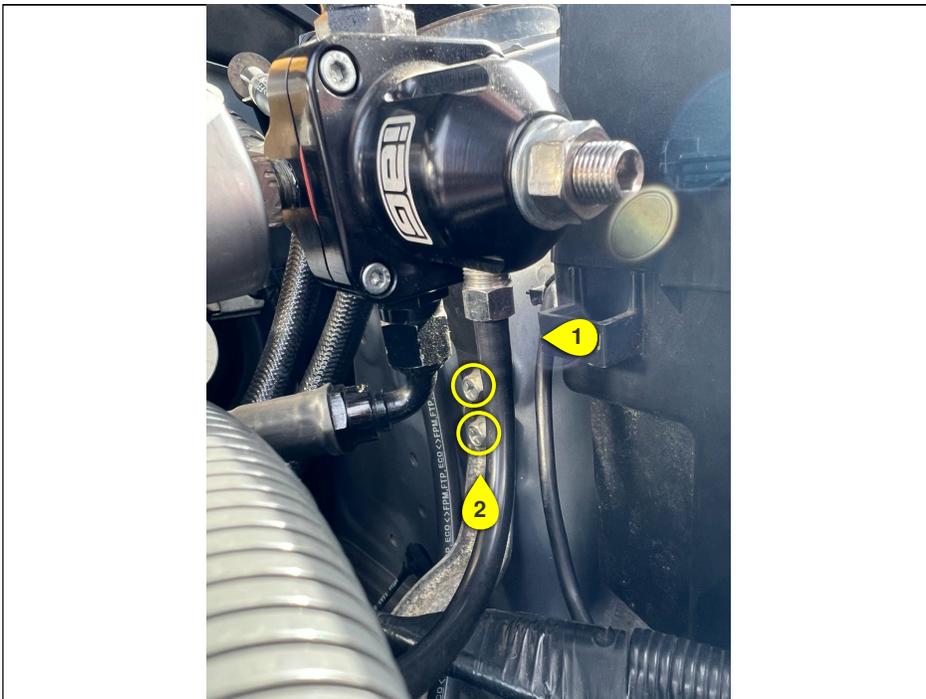


Step 16/20

Numbered annotations (1)

1 !!!For 08-14 WRX ONLY!!!

Push/Bend bracket down so line lays on air pump hose.

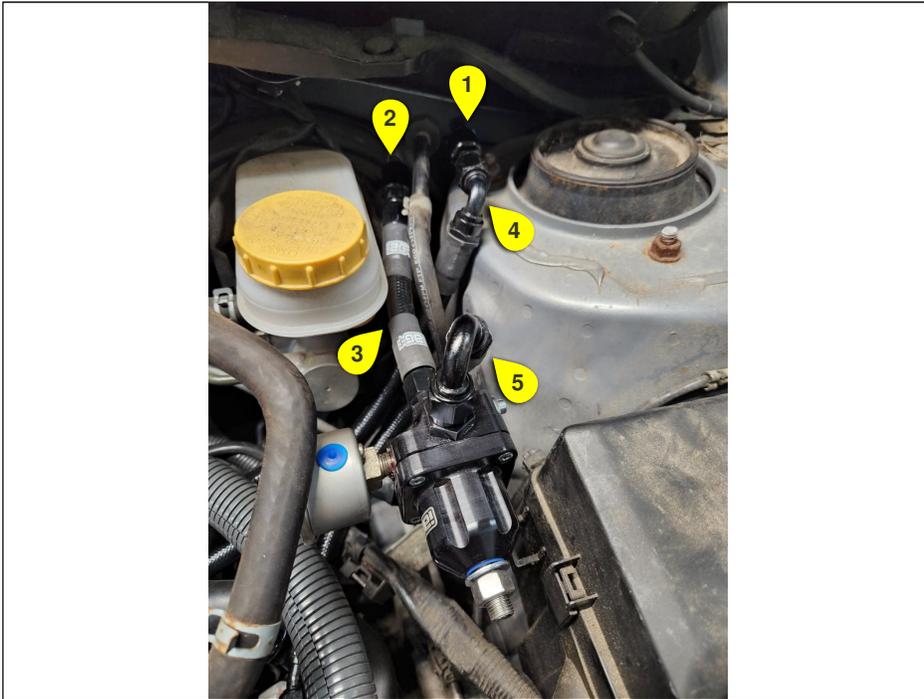


Step 17/20

Numbered annotations (2)

1 Connect your FPR to a vacuum source.

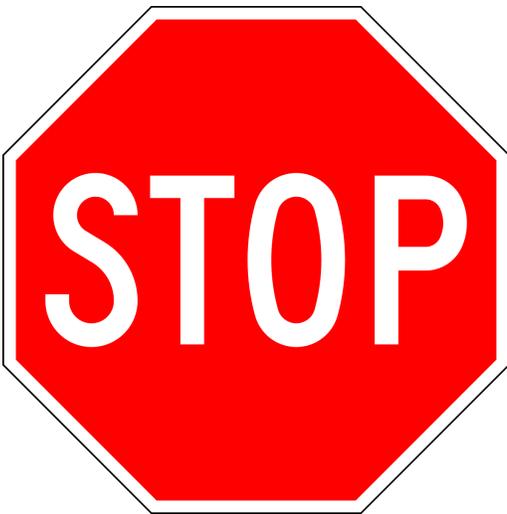
2 Install the FPR Bracket using the included M6x1.00mmx16mm screws.



Step 18/20

Numbered annotations (5)

- 1 Install 5/16" SAE disconnect to -6 AN Male fitting here. This is the fuel FEED line.
- 2 Install 5/16" SAE quick disconnect to -6 AN Male fitting here. This is the fuel RETURN line.
- 3 Hose 6 (5.50"x 0 deg x 0 deg) is installed in the bottom port of the FPR. Keep in mind the FPR is rotated 90 degrees for installation so the port facing the firewall is actually the bottom/return port.
- 4 This is Hose 2 (22" x 90 deg x 60 deg). This is the fuel FEED line and runs to the Y-fitting to feed both fuel rails.
- 5 This is Hose 5 (15.25" x 30 deg x 150 deg). This runs to the rear of the driver side fuel rail.



Reference the factory service manual for the following steps. As a reminder, professional installation is highly recommended for this product. You will be modifying the fuel system of your vehicle and improper installation can cause injury and damage to the vehicle if improperly installed.

Step 19/20

Step 20/20

Numbered annotations (1)

- 1 Reinstall the intake manifold.
- Reinsert the fuel pump fuse.
- Crank the engine to build fuel pressure.
- Check all connections for leaks.
- You are now finished installing the IAG PTFE Fuel Line kit.

Bookmarks

- intro-INTRODUCTION
- 0-LUBRICATION & MAINTENANCE
- 2-SUSPENSION
- 3-DIFFERENTIAL & DRIVELINE
- 5-BRAKES
- 6-CLUTCH
- 7-COOLING
- 8a-AUDIO
- 8b-CHIME/BUZZER
- 8e-ELECTRONIC CONTROL MOD
- 8f-ENGINE SYSTEMS
- 8g-HEATER SYSTEMS
- 8h-HORN
- 8i-IGNITION CONTROL
- 8j-INSTRUMENT CLUS
- 8l-LAMPS
- 8m-MESSAGING SYSTEM
- 8n-POWER SYSTEMS
- 8o-RESTRAINTS
- 8p-SPEED CONTROL
- 8q-VEHICLE THEFT SECURITY
- 8r-WIPERS/WASHERS
- 8w-WIRING
- 9-ENGINE

SAMPLE

1

engine switched battery PCM when the ASD relay at this input indicates to be activated. This input maintain drivers on NGC vehi

Find: x

Camshaft

Previous Next

Replace with

8i - 4 IGNITION CONTROL PT

AUTO SHUT DOWN RELAY (Continued)

When energized, the ASD relay on SBEC vehicles supplies battery voltage to the fuel injectors, ignition coils and the heating element in each O₂ sensor. When energized, the ASD relay on NGC vehicles provides power to operate injectors, ignition coil, generator field, O₂ sensors (both upstream and downstream), evaporator purge solenoid, EGR solenoid (if equipped), cruise solenoid, and NVLD solenoid (if equipped).

For SBEC and NGC vehicles, the ASD relay also provides sense circuit to the PCM for diagnostic purposes. The PCM is notified for diagnostic purposes for gross misfire control strategy. The ASD relay also provides ASD input to the PCM. The PCM checks ASD input to determine an engine speed that a predetermined value (typically about 50 rpm) ASD relay can also be energized for the engine has been turned off to prevent an O₂ sensor heater test, if vehicle is equipped with O₂ sensor heaters.

Earlier, the PCM energizes the ASD relay after an O₂ sensor heater test. This test is performed only after the engine has been shut off for SBEC vehicles. On NGC vehicles it checks the O₂ heater upon vehicle start. The PCM still operates internally to perform several checks, including monitoring the O₂ sensor heaters.

CAMSHAFT POSITION SENSOR

DESCRIPTION

On 2.0/2.4L engines the camshaft position sensor is mounted to the rear of the cylinder head (Fig. 1). (Fig. 2). On 1.6L engines it is mounted on the front side of the cylinder head.

OPERATION

The PCM sends approximately 5 volts to the Hall-effect sensor. This voltage is required to operate the Hall-effect chip and the electronics inside the sensor.

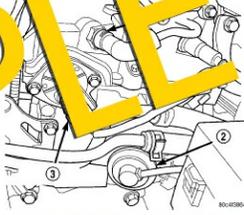
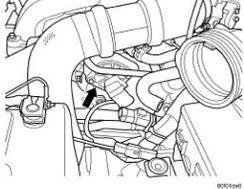


Fig. 1 Camshaft Position Sensor -2.0/2.4L DOHC

- 1 - PCV VALVE
- 2 - EGR VALVE
- 3 - CAMSHAFT POSITION SENSOR



IAG Performance

11/11