

Technical Bulletin

Division: Automotive
 Category: Technical

Section Title: Engine
 TSB No. TS 13 09164

SUBJECT: SAFETY RECALL CAMPAIGN: ER, FUEL PRESSURE REGULATOR REPLACEMENT AND VACUUM LINE REROUTING
MODEL(S): V-6 VITARA, GRAND VITARA AND XL-7
YEAR: ALL 1999-2003 GRAND VITARA AND XL-7
 CERTAIN 2004 V-6 VITARA, SEE ATTACHED VIN LIST

CONDITION: Fuel leak on high pressure fuel hoses where they connect to the steel lines. This usually occurs at or near the ambient temperature of -25 degrees Centigrade (-13 degrees Fahrenheit)

CAUSE: Condensation from inside the intake manifold can be drawn into the pressure regulator diaphragm and freeze. This frozen moisture will lock the regulator valve shut causing excessive fuel pressure in the fuel system

CORRECTION: -1999 and 2000 vehicles install ER Kit A P/N 15600-67810 per attached instructions.
 -2001 and later vehicles install ER Kit B P/N 15600-67820 per attached instructions

PART(S) INFORMATION:

Kit	Part Numbers	Description	QTY	Notes
A	15600-67810	REGULATOR SET, FUEL PRESSURE	1	USE ONLY FOR 1999 AND 2000 MY
B	15600-67820	REGULATOR SET, FUEL PRESSURE	1	USE ONLY FOR 2001 AND LATER MY

NOTE:
 For Claim Submission information please refer to Campaign Bulletin SC-26

Technical Service Department
 Dealership Circulation - Initial and file:

Service Manager	Parts Manager	Service Advisor	Technicians						

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2004MY V-6 VITARA EFFECTED VIN LIST

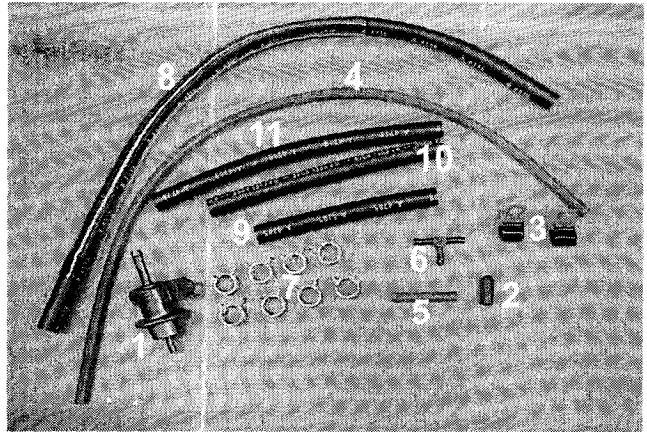
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Kit A Installation Instructions

(99' and 00'MY)

Parts

1. Fuel Pressure Regulator
2. Vacuum Plug
3. Vacuum Hose Mounting Clamp 2qty
4. Vacuum Hose 520mm
5. Vacuum Hose 40mm
6. Vacuum Tee 3-Way
7. Fuel Hose Clamps 8qty
8. Fuel Hose (Filter Inlet)
9. Fuel Hose 120mm (Filter Outlet)
10. Fuel Hose 160mm (Pipe #1 to #2)
11. Fuel Hose 200mm (Pipe to Engine)

**Installation**

- 1) **Inspect the radiator core support for an "ER" sticker.** If there is an "ER" sticker the recall has been completed, no further action required. If there is no "ER" sticker please continue to the next step.

CAUTION:

The following work must NOT be performed when the engine is hot, as it may cause damage to the catalytic converters.

WARNING:

The following work must be performed in a well ventilated non smoking area away from any open flames or sparks.

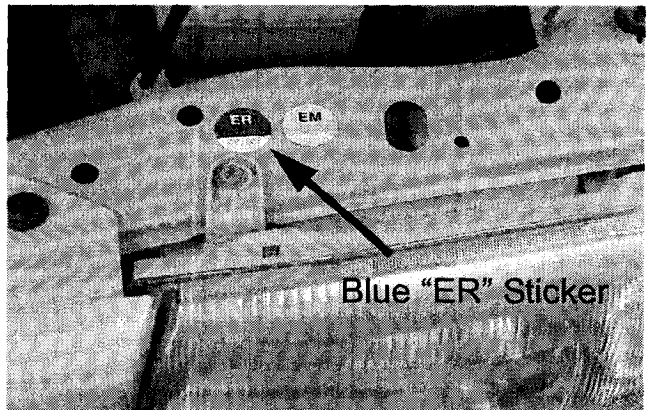
NOTE:

The vehicle needs to be on a hoist before next step due to fuel tank removal later in the procedure.

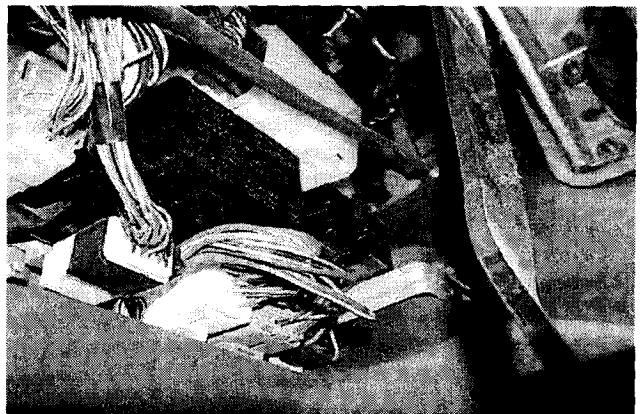
- 2) **Relieve the fuel pressure.** First remove the fuel filler cap to release fuel vapor pressure in fuel tank and reinstall it. Then disable the fuel pump and run the engine until it stalls. Crank it again three times for three seconds each time to purge any remaining fuel pressure.

NOTE:

Remove the fuel pump relay to disable the fuel pump. The fuel pump relay location can be found in the appropriate Service Manual in the Engine section.



Blue "ER" Sticker



Example relay panel under left side of dash.

3) Fuel Pressure Regulator (1) replacement.

Remove and discard the Fuel Pressure Regulator vacuum hose and install the Vacuum Plug (2) at the manifold connection. Follow the Fuel Pressure Regulator Removal and Installation procedure in the appropriate Service Manual under the Engine Fuel section.

WARNING:

Be sure you are wearing safety glasses when removing Fuel Pressure Regulator. Fuel could spray out under high pressure and cause eye injury.

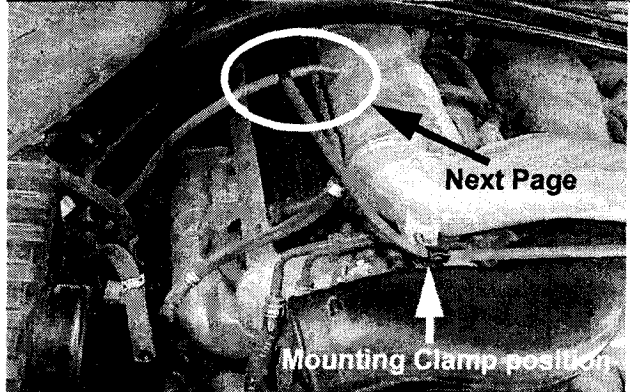
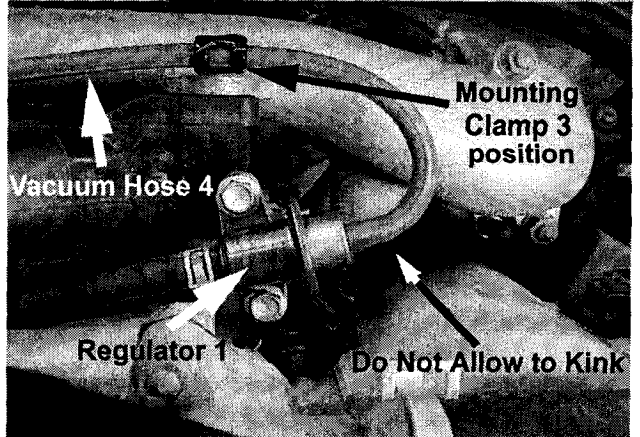
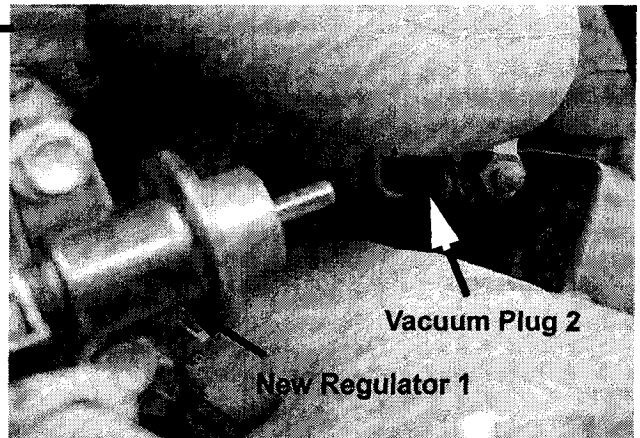
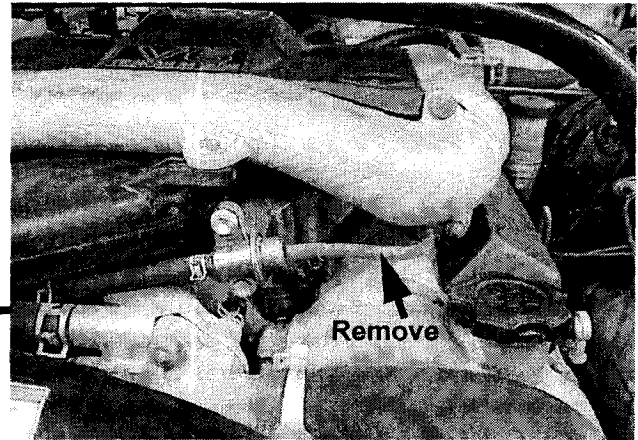
NOTE:

Use the fuel that drains out of the fuel rail to lube the new Regulator's O-ring before inserting the new Regulator into the fuel rail.

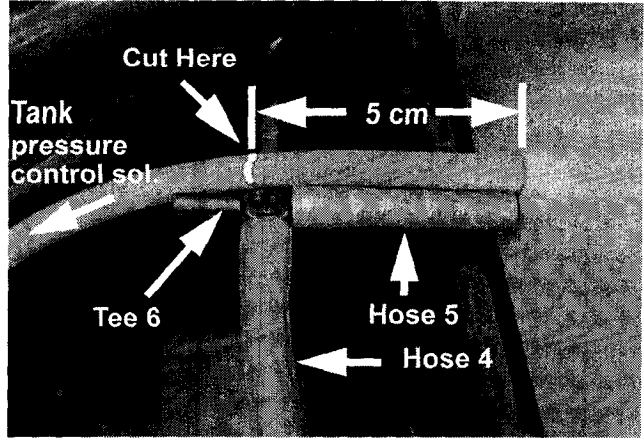
4) Rerouting the Pressure Regulator (1) vacuum hose.

Starting at the new Fuel Pressure Regulator connect the Vacuum Hose (4) to the Regulator (1). Insert the Vacuum Hose (4) into one of the Vacuum Hose Mounting Clamps (3). Install Vacuum Hose Mounting Clamp (3) with existing bolt in surge tank as shown in picture. Make sure there is a smooth radius in the hose to prevent a kink at the Regulator.

Continuing to your left. Install the last Vacuum Hose Mounting Clamp (3) with the other existing bolt on the surge tank.

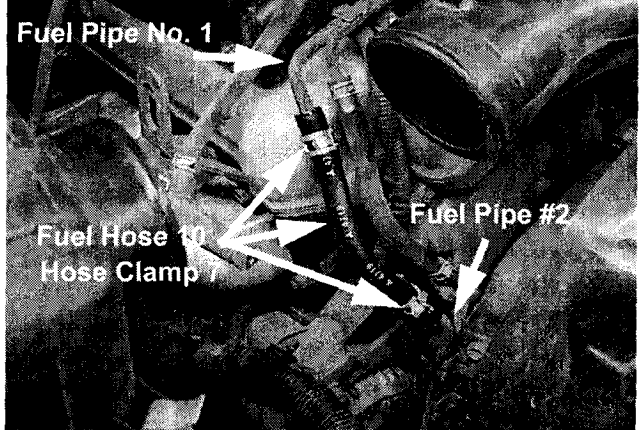


Insert Vacuum Tee 3-way (6) and Vacuum Hose (5) into end of Vacuum Hose (4) as shown. Cut and remove 5cm off of tank pressure control solenoid vacuum hose and connect new Vacuum Hose (5) with tee assembly to nipple. Then attach remaining vacuum hose from tank pressure control solenoid to Tee (6).

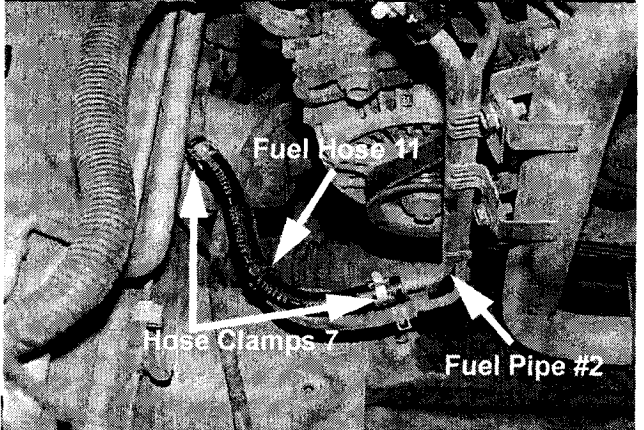


5) Fuel line and Fuel Hose Clamp replacement.

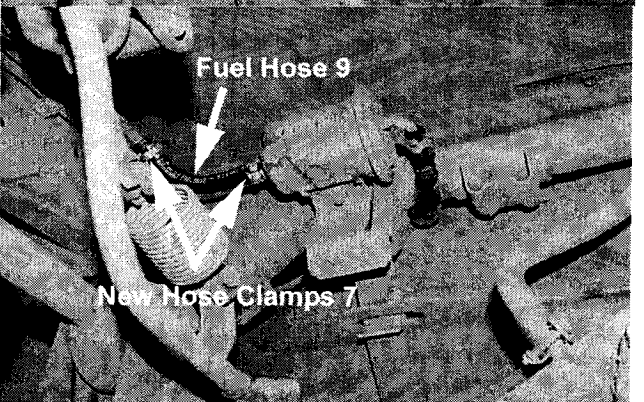
There are four fuel hoses and eight hose clamps on the high pressure side of the fuel system which require replacement. Remove the air cleaner outlet hose and the carbon canister for access to two of the fuel hoses that will be replaced. The first hose is Fuel Hose (10) which is connected between Pipe #1 and Pipe #2 shown at the right.



The next fuel hose to be replaced is connected from the bottom of fuel pipe #2 to the fuel feed pipe at the right frame rail.



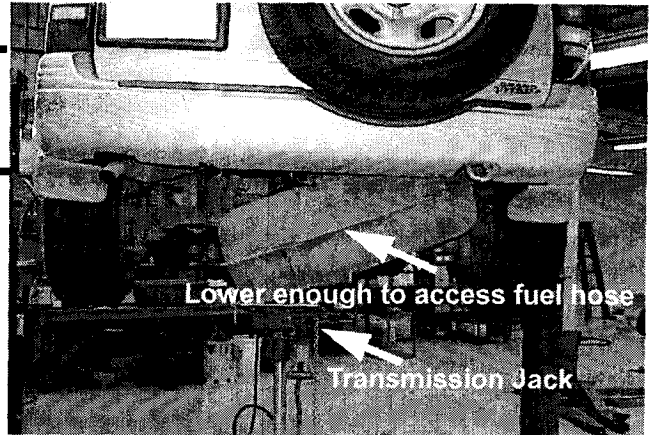
Working under the vehicle remove and replace the Fuel Hose (9) and hose clamps at the fuel filter outlet. Refer to next page for fuel filter inlet hose replacement.



WARNING:

Wear safety glasses when removing fuel tank, road debris on top of fuel tank can fall into eyes and cause injury.

Remove fuel tank shield. Using a transmission jack secure the fuel tank before removing four mounting bolts. Lower tank carefully far enough to access the fuel filter inlet hose.

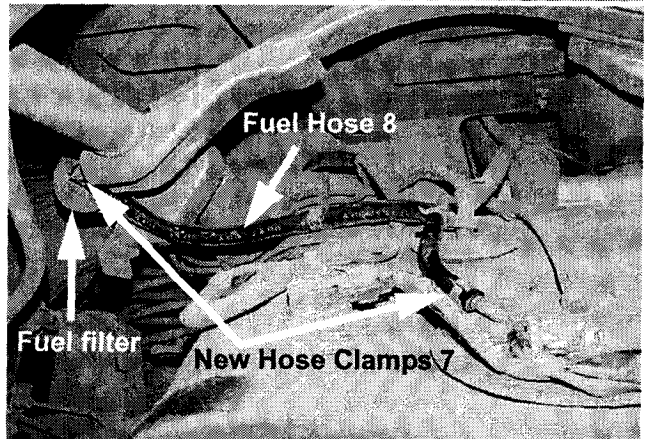


Remove old fuel hose and clamps and replace it with new Fuel Hose (8) and Fuel Hose Clamps (7) as shown in picture.

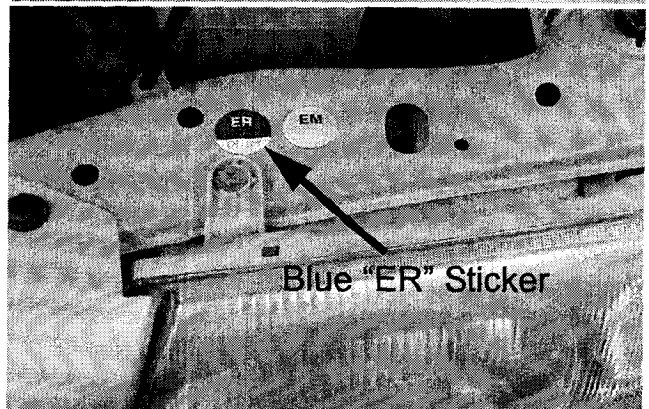
NOTE:

Be sure the clear protective cover on Fuel Hose (8) is mounted towards the fuel filter.

Carefully raise the tank back up and secure it with the four bolts. Reinstall fuel tank shield. Bolt tighten torque 50 Nm(5.0 kg-m, 36.5lb-ft).



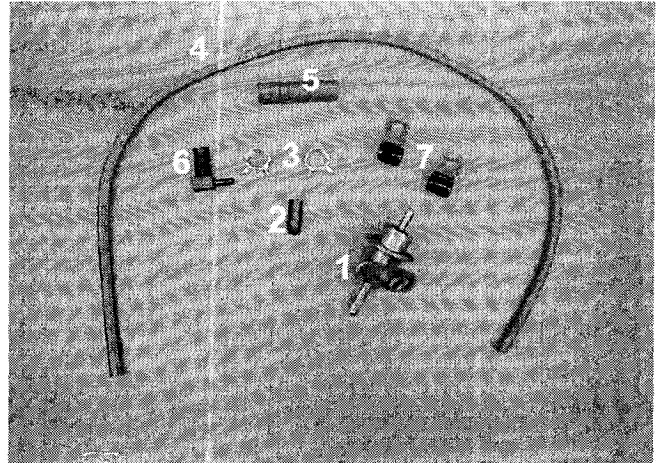
6) Leak check and apply "ER" sticker. Lower the vehicle and pressurize the fuel system. This can be done by turning the ignition key on for three seconds and off for three seconds several times. Check for leaks. Then start the engine to purge any remaining air in the fuel system. Be sure to write the dealer number on the blue "ER" sticker and affix to radiator core support as shown. Recall complete.



Kit B Installation Instructions (2001 and Later MY)

Parts

1. Fuel Pressure Regulator
2. Vacuum Plug
3. Vacuum Hose Clamp 2qty
4. Vacuum Hose 620mm
5. Vacuum Hose 5cm
6. Vacuum Adaptor 90 degree
7. Vacuum Hose Mounting Clamp 2qty



Installation

- 1) **Inspect the radiator core support for an "ER" sticker.** If there is an "ER" sticker the recall has been completed, no further action required. If there is no "ER" sticker please continue to the next step.

CAUTION:

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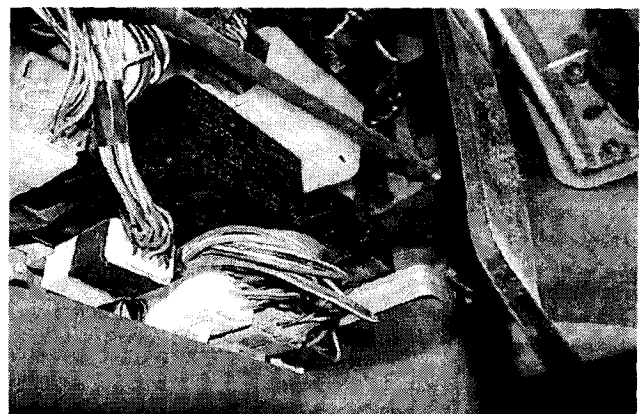
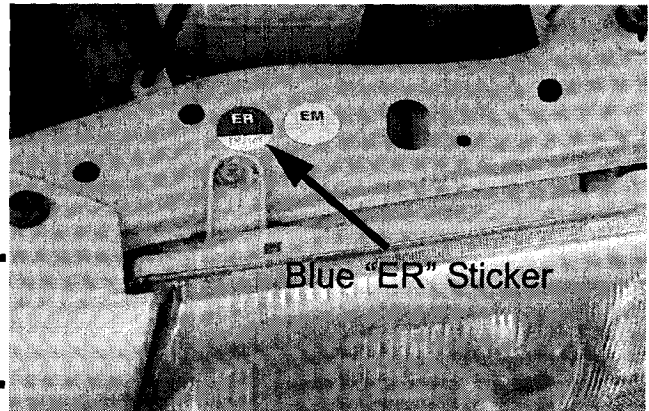
WARNING:

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- 2) **Relieve the fuel pressure.** First remove the fuel filler cap to release fuel vapor pressure in fuel tank and reinstall it. Then disable the fuel pump and run the engine until it stalls. Crank it again three time for three seconds each time to purge any remaining fuel pressure.

NOTE:

Remove the fuel pump relay to disable the fuel pump. The fuel pump relay location can be found in the appropriate Service Manual in the Engine section.



Example relay panel under left side of dash.

3) Fuel Pressure Regulator (1) replacement.

Remove and discard the Fuel Pressure Regulator vacuum hose and install the Vacuum Plug (2) at the manifold connection. Follow the Fuel Pressure Regulator Removal and Installation procedure in the appropriate Service Manual under the Engine Fuel section.

WARNING:

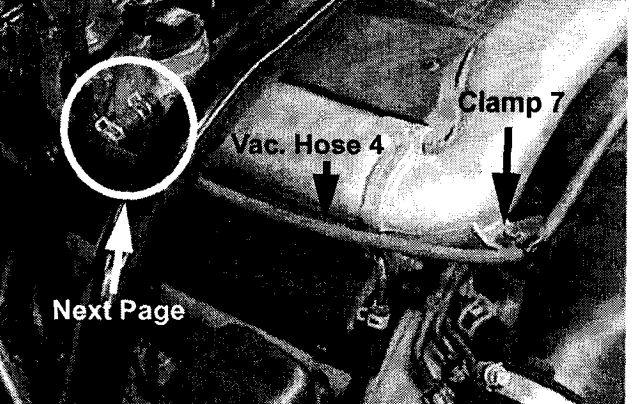
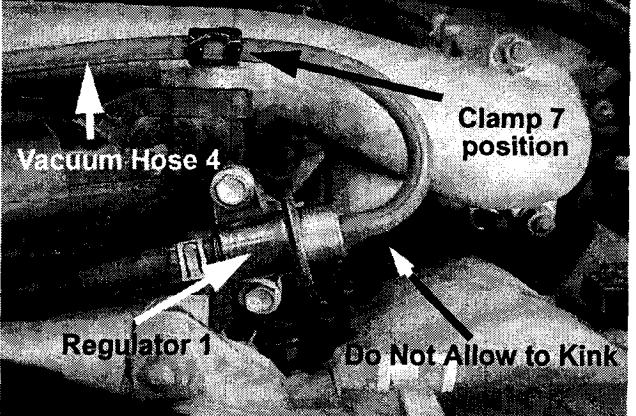
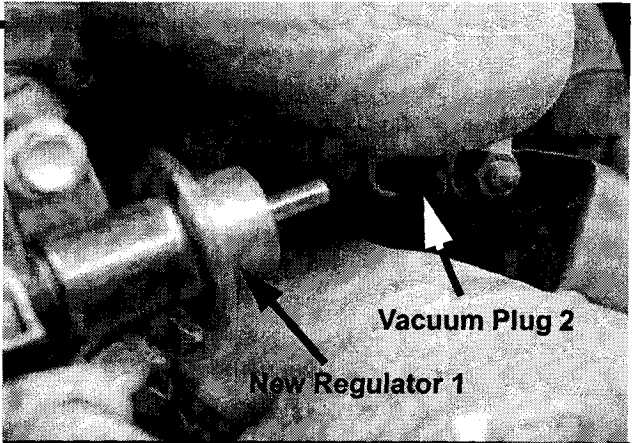
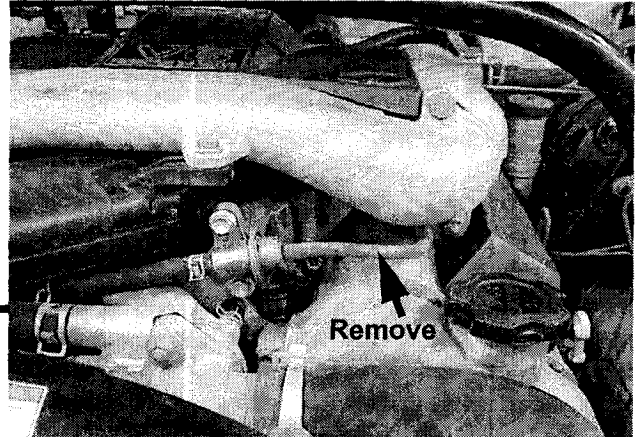
Be sure you are wearing safety glasses when removing Fuel Pressure Regulator. Fuel could spray out under high pressure and cause eye injury.

NOTE:

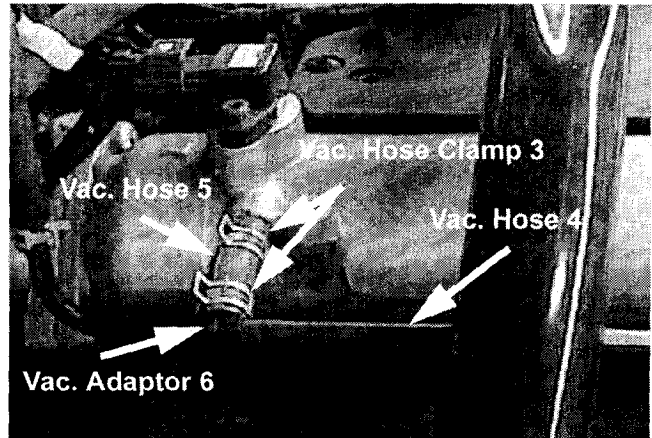
Use the fuel that drains out of the fuel rail to lube the new Regulator's O-ring before inserting the new Regulator into the fuel rail.

4) Rerouting the Pressure Regulator (1) vacuum line. Starting at the new Fuel Pressure Regulator connect the Vacuum Hose (4) to the Regulator (1). Insert the Vacuum Hose (4) into one of the Vacuum Hose Mounting Clamps (7). Install Vacuum Hose Mounting Clamp (7) with existing bolt in surge tank as shown in picture. Make sure there is a smooth radius in the hose to prevent a kink at the Regulator.

Continuing to your left. Install the last Vacuum Hose Mounting Clamp (7) with the other existing bolt on the surge tank.



Remove and discard the vacuum plug and clamp at the right rear side of the intake near the MAP sensor. Connect the Vacuum Adaptor (6) to the Vacuum Hose (4). Connect the Vacuum Hose (5) to the Adaptor (6) with a Hose Clamp (3). Connect finished hose assembly to the intake and secure with remaining Hose Clamp (3). See picture.



6) Leak check and apply "ER" sticker.

Pressurize the fuel system. This can be done by turning the ignition key on for three seconds and off for three seconds several times. Check for leaks. Then start the engine to purge any remaining air in the fuel system. Be sure to write the dealer number on the blue "ER" sticker and affix to radiator core support as shown. Recall complete.

