

2004-2008 RX-8 - REPAIR PROCEDURE RECALL 1017E

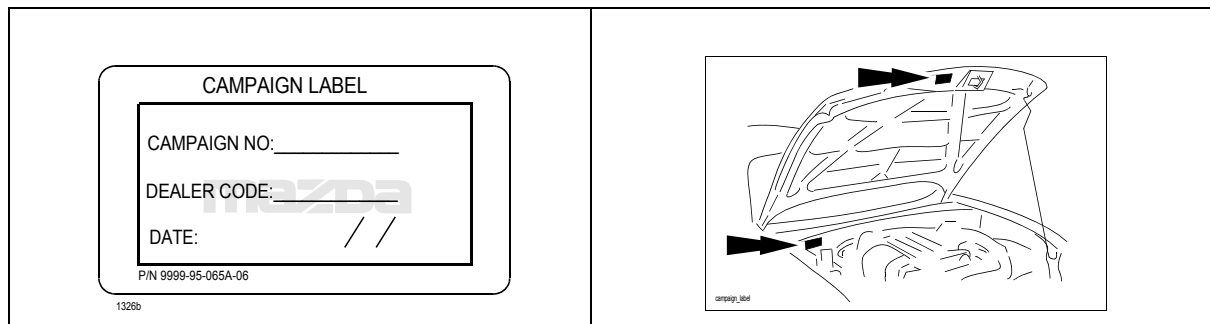
A. VEHICLE INSPECTION PROCEDURE

1. Verify that the vehicle is within the following range:

Model Year	VIN Range	Build Date Range
2004-2008	JM1 FE**** 40 100053 – 140891	From April 10, 2003 through February 18, 2008
	JM1 FE**** 50 140892 – 161178	
	JM1 FE**** 60 200012 – 207471	
	JM1 FE**** 70 207473 – 214011	
	JM1 FE**** 80 214012 – 216619	

- If the vehicle is within the above range, proceed to Step 2.
 - If the vehicle is not within the above range, return vehicle to the customer or inventory.
2. Perform a Warranty Vehicle Inquiry using your eMDCS System and inspect vehicle for Campaign Labels **Recall 0516J and 1017E** attached to the vehicle's hood or bulkhead. Refer to eMDCS System - Warranty Vehicle Inquiry Results table below.

NOTE: Be sure to verify Recall number as the vehicle may have multiple Recall labels.



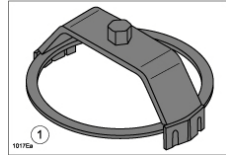
eMDCS System - Warranty Vehicle Inquiry Results:

If eMDCS displays:	Campaign Label is:	Action to perform:
RECALL 1017E OPEN and 0516J is not present	Present	Contact the Warranty Hotline at (877) 727-6626 option 3 to update vehicle history.
	Not present	Proceed to "B. REPAIR PROCEDURE."
RECALL 0516J CLOSED and 1017E OPEN	Present	Contact the Warranty Hotline at (877) 727-6626 option 3 to update vehicle history.
	Not present	Proceed to "B. REPAIR PROCEDURE" and pay attention to the NOTES regarding 0516J in the REPAIR PROCEDURE.
RECALL 0516J and 1017E are not displayed	Does not apply	Recall does not apply to this vehicle. Return vehicle to inventory or customer.

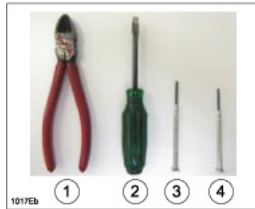
B. REPAIR PROCEDURE

(TOOL AND PARTS INFORMATION)



Special Tool

No.	Tool Name	Tool Number	
1	Fuel Pump Ring Wrench	49F-042-001	

Required Tools

No.	Tool Name	Notes	
1	Diagonal cutting pliers	-	
2	Flathead screwdriver	-	
3	2.3 mm small flathead screwdriver	2.3 mm head width	
4	2.0 mm small flathead screwdriver	2.0 mm head width	

Parts Information (Recall 1017E is open and Recall 0516J is not displayed)

No.	Part Name	Part Number	Component	
1	Fuel pump ring kit (union nut)	F1Y1-42-A1X	Fuel pump ring 2pcs Retainer 2pcs Fuel Pump Ring Gasket 2pcs Heat Insulation Pad 2pcs	
2	Fuel pump filter body kit	N3Y1-13-ZE0C	Fuel filter body 1pc Gasket 2pcs	

Parts Information (Recall 0516J is closed and 1017E is open)

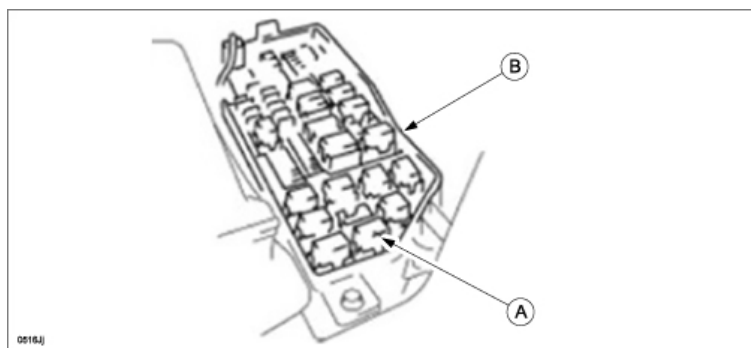
No.	Part Name	Part Number	Component
1	Fuel pump filter body kit	N3Y1-13-ZE0C	Fuel filter body 1pc Gasket 2pcs
2	Fuel pump ring gasket	BN8F-42-166	1pcs (Need main side only)

FUEL PUMP UNIT REMOVAL**WARNING:**

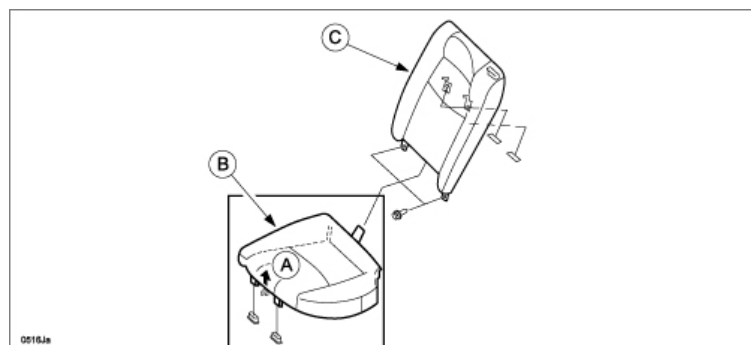
- Fuel is extremely flammable. Always keep sparks and flame away from fuel. Ignition may cause death or serious injury, or damage to equipment.
- Fuel line spills and leakage from the pressurized fuel system are dangerous. Fuel can ignite and cause serious injury or death and damage.
- Fuel can irritate skin and eyes. To prevent this, always complete the "Fuel Line Safety Procedure".
- A person charged with static electricity could cause a fire or explosion, resulting in death or serious injury. Before performing work on the fuel system, discharge static electricity by touching the vehicle body.

CAUTION: If there is foreign material on the connecting area of the quick release connector, it might damage the connector or fuel pipe. When the quick release connector has been disconnected, clean the connecting area before reconnecting it to prevent damage.

1. Perform the fuel line safety procedure.
 - a. Remove the fuel-filler cap to release the pressure inside the fuel tank.
 - b. Remove the fuel pump relay (A) from the main fuse block (B).



- c. Start the engine.
 - d. After the engine stalls, crank the engine several times.
 - e. Turn the ignition switch to the LOCK position.
 - f. Install the fuel pump relay.
2. Remove the rear seat cushion (both right and left sides). Lift the front edge (A) of the seat cushion (B) in the direction of the arrow, leaving the rear seat back (C) in place.



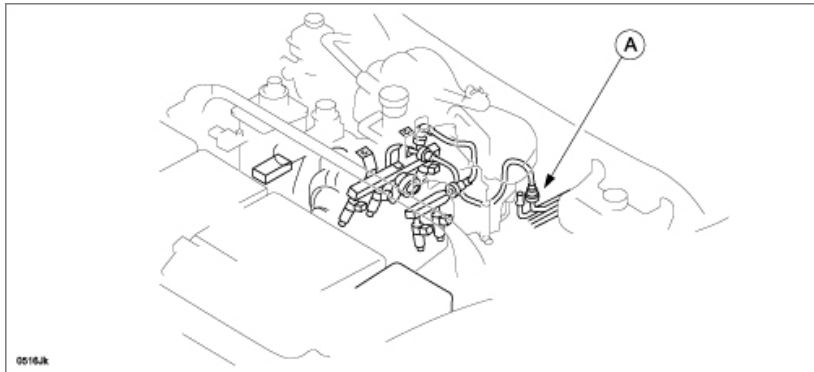
3. Remove the service hole cover.
4. Check the fuel gauge indication. If the fuel gauge indicates less than 1/4, go to step 6.

5. Drain fuel from the fuel tank (only when the fuel gauge indicates 1/4 or more).

CAUTION: When the fuel gauge indicates 1/4 or more, the fuel level is higher than the installation surface of the fuel pump and the fuel suction pipe bracket. Due to this condition, fuel may spill or leak out when performing the next steps. Therefore, make sure to drain fuel out until the fuel tank becomes less than 1/4 full (according to the fuel gauge indication).

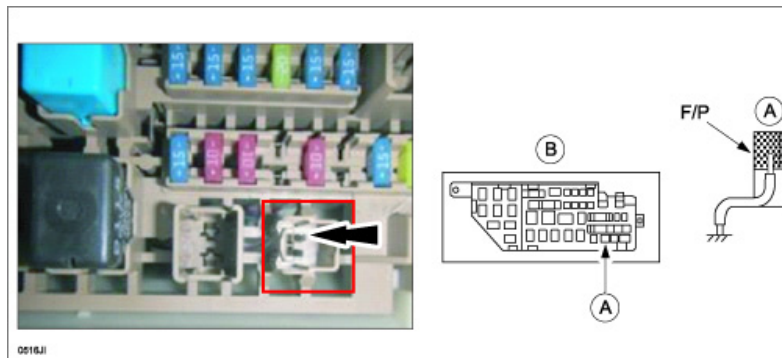
WARNING: A person charged with static electricity could cause a fire or explosion, resulting in death or serious injury. Before draining fuel, make sure to discharge static electricity by touching the vehicle body

- a. Disconnect the quick release connector (A) in the engine compartment.



- b. Attach a long hose to the disconnected fuel pipe and drain the fuel into a proper fuel receptacle.
- c. Ground the check connector (A) terminal F/P in the main fuse block (B) to the body using a jumper wire.

CAUTION: Shorting the wrong terminal of the check connector may cause electrical malfunctions. Make sure to short only the specified terminal.



- d. Turn the ignition switch to the ON position and operate the fuel pump.

CAUTION: The fuel pump may malfunction if it is operated without any fuel in the fuel tank (fuel pump idling). Constantly monitor the amount of fuel being discharged and immediately stop operation of the pump when barely any fuel is being discharged.

- e. When no fuel is barely being discharged from the hose, turn the ignition switch to the LOCK position.

NOTE: When operating the fuel pump with a full fuel tank, fuel discharge will become erratic after approximately 10 min, but will continue for approximately 10 min more (and barely any fuel will be discharged). At this time the fuel gauge needle will be at the 1/4 position.

- f. Disconnect the jumper wire.

6. Disconnect the negative battery cable.

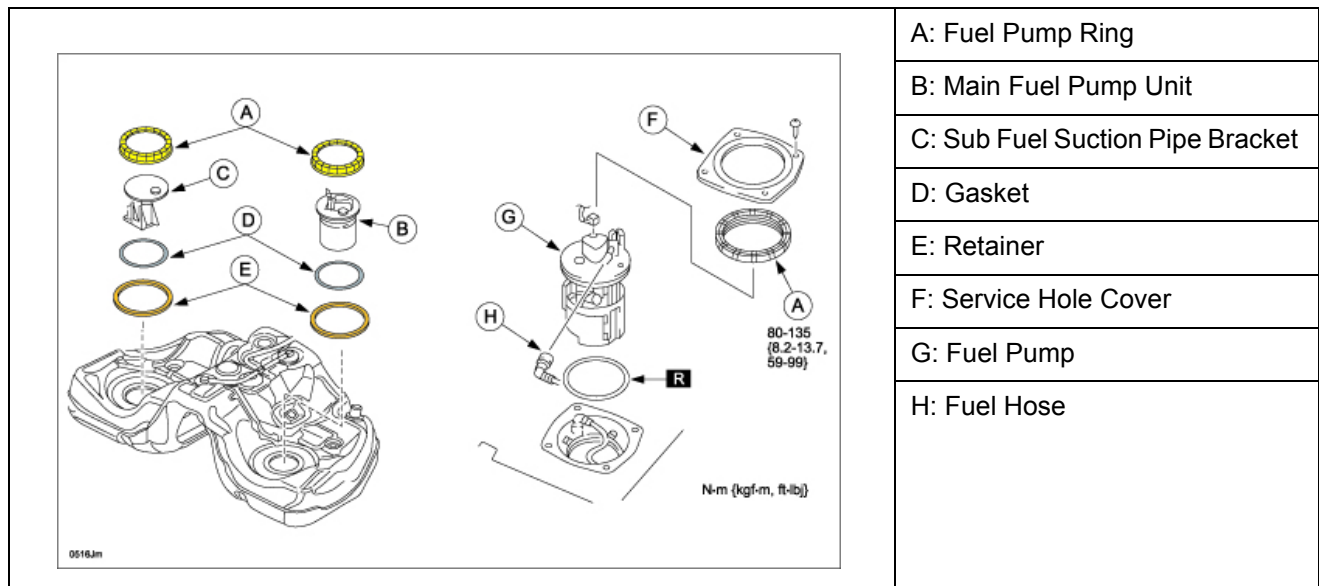
7. Replace the inner parts of fuel pump (main side) and the fuel pump ring (both sides) with a modified one, along with the gasket and retainer.

NOTE: If Recall 0516J (Fuel Leak at Fuel Pump Rings) is closed, the retainer and fuel pump ring will be reused.

CAUTION: DO NOT LEAVE THE FUEL TANK FOR A LONG TIME IN CONDITION THAT THE FUEL PUMP RING IS NOT INSTALLED. If the fuel tank is left for a long time without the fuel pump ring installed, the shape of the fuel tank where the fuel pump ring is installed could be deformed from swelling, making it difficult to install the fuel pump ring. Therefore, install a new one immediately after removing the old fuel pump ring.

To complete the replacement in a short time:

- Place the replacement parts near the vehicle.
- Complete the replacement at one side before proceeding to other side.
- When you remove the fuel pump ring to disassemble/assemble the fuel pump unit, immediately reinstall it again temporarily to the fuel tank side by rotating with hands. There is no need to use the SST.

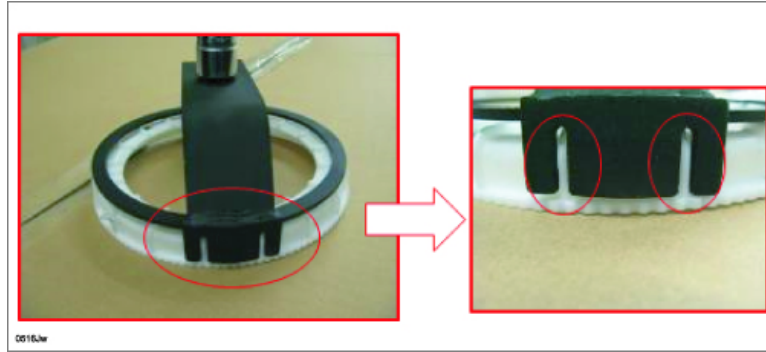


Main side (Fuel pump unit side)

- a. Disconnect the connector.
- b. Disconnect the quick connector (fuel hose).
- c. Remove the fuel pump ring using SST (49F 042 001).

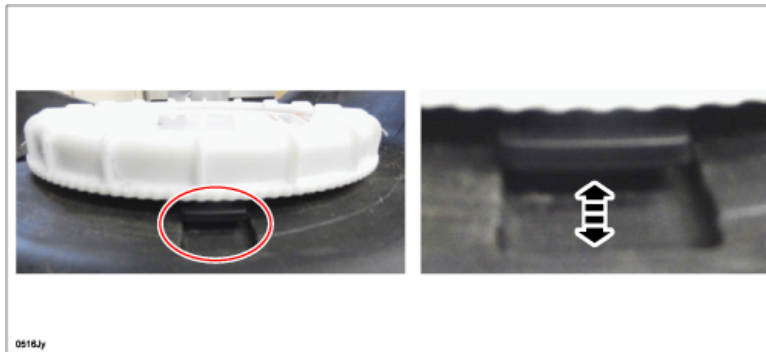


NOTE: Fit the groove of the SST into the rib of the fuel pump ring



CAUTION:

- The fuel pump ring could be damaged if the SST is used with any play between the fuel pump ring and the SST. Securely attach the SST so that there is no gap between the SST tabs and the side of the fuel pump ring.
- The fuel suction pipe might be damaged, if the fuel pump unit is lifted too much. Make sure to lift the pump only a small amount.
- When removing the fuel pump ring, be careful not making the retainer lift up. Otherwise, they will rotate together and the fuel pump ring will not be removed.



- d. Remove the fuel pump unit assembly.
- e. Disassemble/Assemble the fuel pump unit according to the instructions "FUEL PUMP UNIT DISASSEMBLY/ASSEMBLY."

CAUTION: After removing the fuel pump ring, immediately reinstall it again temporarily to the fuel tank side by rotating with hands. There is no need to use the SST. This prevents deformation from swelling at the installing portion of the fuel tank while disassembling/assembling the fuel pump unit.



FUEL PUMP UNIT DISASSEMBLY/ASSEMBLY

Parts Information

	A: Transfer Jet (Reuse)
	B: Pressure Regulator (Reuse)
	C: Reserve Cup (Reuse)
	D: Spring (Reuse)
	E: Holding Cover
	F: Wire Harness
	G: Fuel Filter (High Pressure)

Kit Components

	Wiring Harness
	Holding Cover
	Fuel Pump
	Fuel Filter (High Pressure)
	O-Ring (Pressure regulator side)
	O-Ring (Transfer jet pump side)

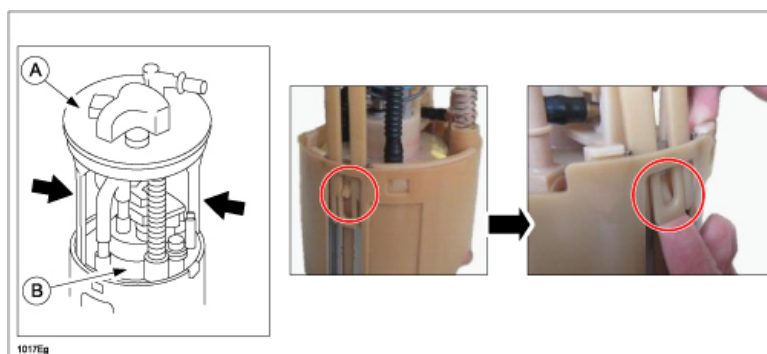
WARNING: Fuel line spills and leakage are dangerous. Fuel can ignite and cause serious injuries or death and damage. Fuel can also irritate skin and eyes. To prevent this, do not damage the sealing surface of the fuel pump unit when removing or installing.

CAUTION:

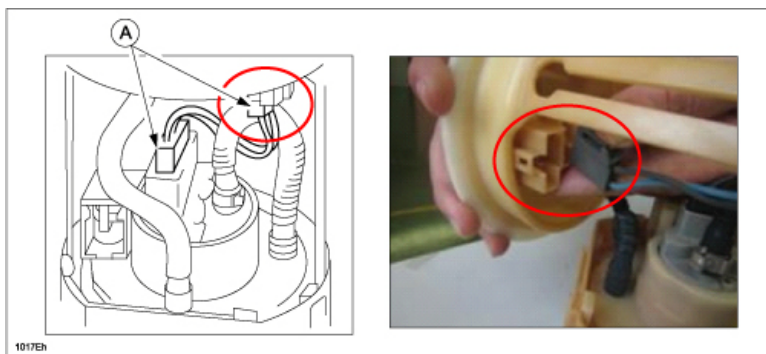
- Do not touch the fuel pump discharge pipe unless it is necessary. If servicing is needed, be careful not to damage the pipe with tools or other objects, or by applying lateral stress. If the pipe is damaged, it may cause fuel leakage or a fuel pump operation malfunction.
- Be careful not to damage the pressure regulator or fuel hose. If it is damaged, it may cause fuel leakage.
- When any parts are removed, be careful that no foreign materials penetrate the part. Otherwise it may cause a fuel pump unit operation malfunction.
- Protect any removed parts using rubber matting to prevent damage. Furthermore, if a part has been dropped, do not reuse it, replace it with a new one.
- Do not use any textile products such as cotton work gloves. If used, fabric may get caught in the fuel pump or pressure regulator causing a fuel pump unit operation malfunction.
- Do not touch the flange seal side of the set plate. If it is damaged or foreign material adheres, it may cause fuel leakage.
- When removing foreign material inside the reserve cup, use fuel for flushing. If foreign material is removed with air, it may penetrate into the jet pump pressure regulator.

Disassembly

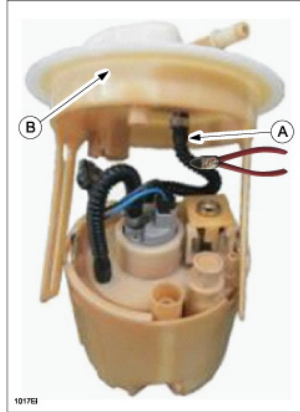
1. Remove the arm part of the set plate (A).
(B = Fuel filter - high pressure)



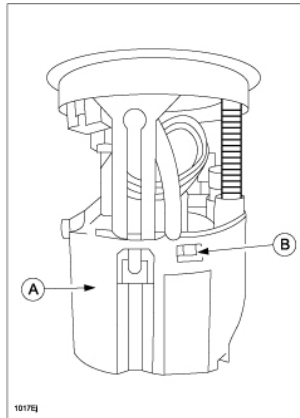
2. Disconnect the fuel pump connectors (A).



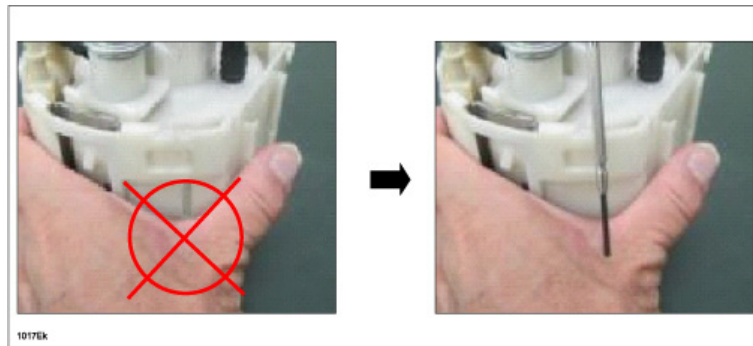
3. Cut the nylon tube (A), then remove the set plate (B).



4. Remove the fuel pump, fuel filter, pressure regulator and transfer jet pump as a single unit from the reserve cup (A) while pressing the snap fit tab (B) using a flathead screwdriver.

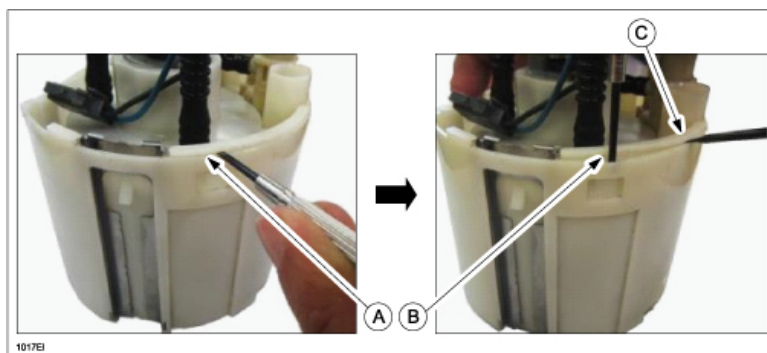


CAUTION: When disengaging the snap fit tab, DO NOT hold the reserve cap as shown. This is to avoid injury if small flathead screw driver slips and comes down unintentionally.

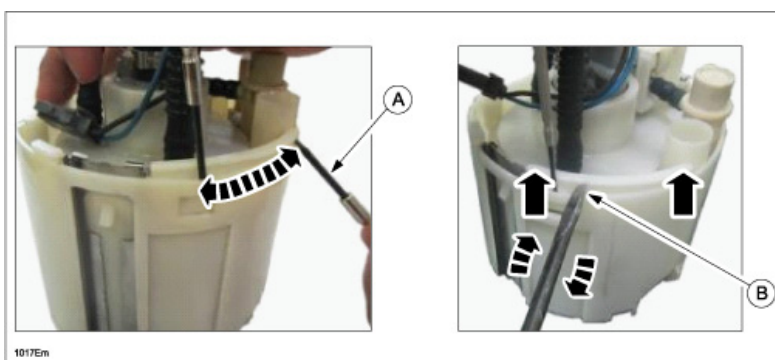


REPAIR PROCEDURE RECALL 1017E

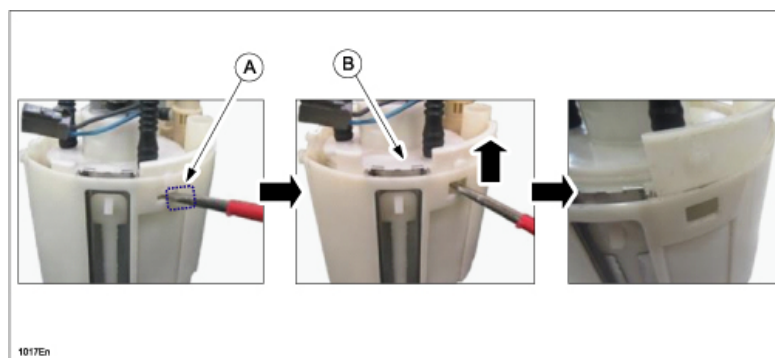
- a. Insert the 2.0 mm flathead screwdriver at the snap fit tab (A) and disengage the snap fit tab (B) while widening the clearance using the 2.3 mm flathead screwdriver (C).



- b. Pull up the fuel pump up while disengaging the snap fit tab with 2.0 mm flathead screwdriver and working the 2.3 mm flathead screwdriver (A) along the edge. Then insert the flathead screwdriver (B) and rotate to increase the gap.

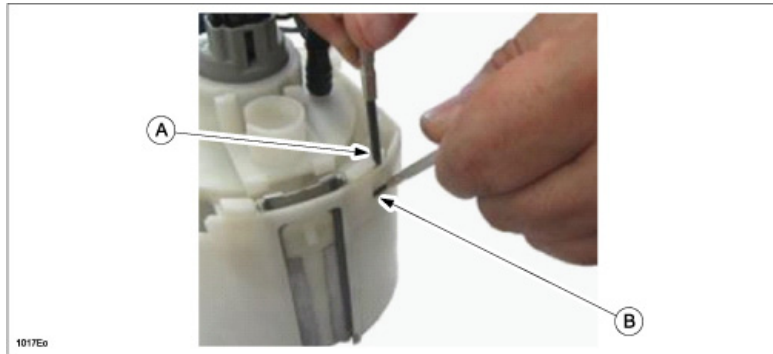


- c. Insert the flathead screwdriver in the snap fit tab (A) and pry up, lifting the fuel filter (high-pressure) (B).



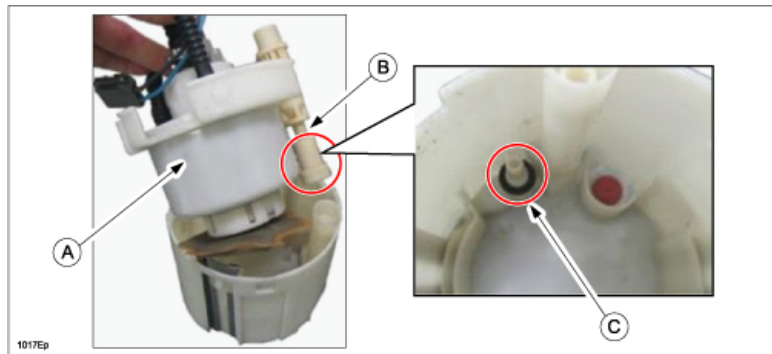
REPAIR PROCEDURE RECALL 1017E

- d. In the same way as the other side, insert the 2.3 mm flathead screwdriver (A) to release the snap fit tab and lift up the fuel filter using the flathead screwdriver (B).



- e. Remove the fuel filter (high-pressure) (A), pressure regulator and transfer jet pump (B) as a single unit from the reserve cup.

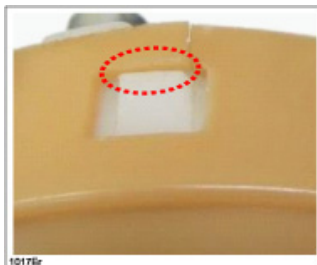
NOTE: If the O-ring remains on the reserve cup side (C), remove it and discard.



- f. Determine whether to reuse the reserve cup if damaged, depending on the condition of the damage.

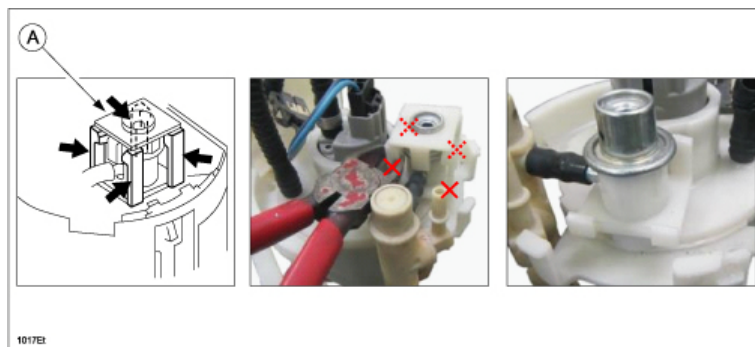
Reusable with crack	Not reusable (missing piece)
<p>A photograph of a white plastic reserve cup with a crack. A red dashed circle highlights the crack. The text '1017Eg' is visible in the bottom left corner.</p>	<p>A photograph of a white plastic reserve cup with a missing piece. A red dashed circle highlights the missing piece. The text '1017Eg' is visible in the bottom left corner.</p>

NOTE: The reserve cup is reusable if the snap fit tab is held by the reserve cup (which has a crack).



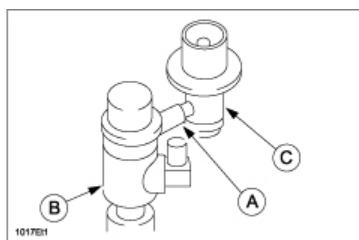
5. Cut the four legs located under the pressure regulator holding cover (A).

NOTE: Discard the removed pressure regulator holding cover.

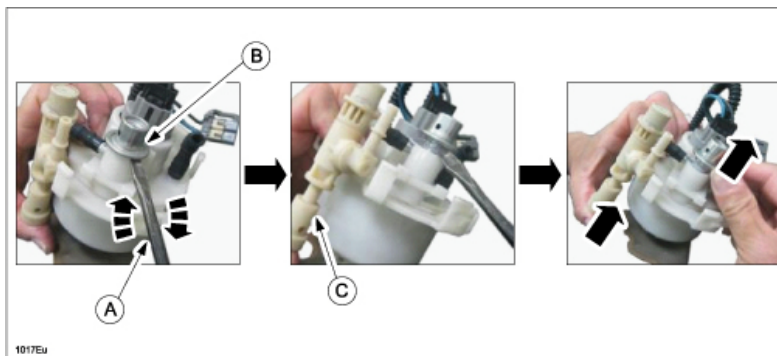


6. Remove the pressure regulator and transfer jet pump from the fuel filter (high-pressure) by using the flat-head screwdriver.

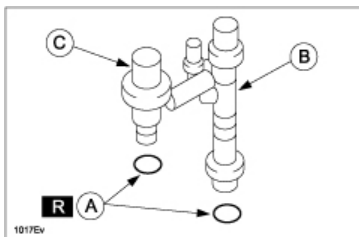
CAUTION: DO NOT pull out the fuel hose (A) located between the transfer jet pump (B) and pressure regulator (C). DO NOT forcibly rotate or bend it, otherwise it could damage the sealing of the fuel hose (press fit area) or cause pipe breakage/splitting. In addition, if the fuel hose is buckled and fuel flow distortion occurs, it may cause deterioration of the jet pump performance.



NOTE: Insert the tip of the flathead screwdriver into the position indicated (A) and rotate the screwdriver to pry up the pressure regulator (B) with the transfer jet pump (C).



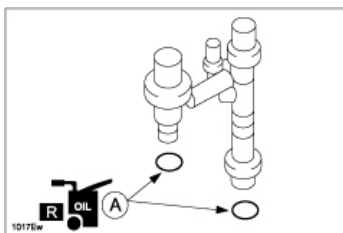
- Remove the O-rings (A) from the transfer jet pump (B) and pressure regulator (C).



Assembly

CAUTION: Be careful not to damage the O-ring. If it is damaged, sealing damage might occur, causing fuel leakage.

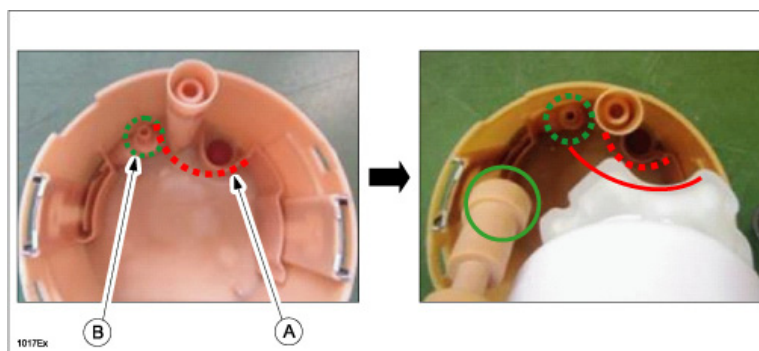
- Apply clean engine oil to the new O-rings (A).



- Install a new O-ring to the pressure regulator and the transfer jet pump.

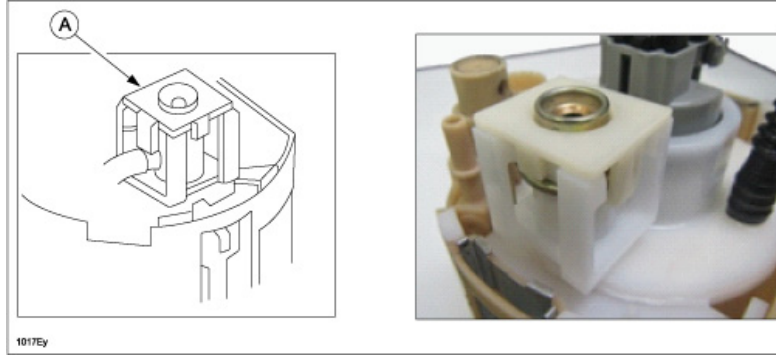
CAUTION: DO NOT pull out the fuel hose located between the pressure regulator and transfer jet pump. DO NOT forcibly rotate or bend it, otherwise it could damage the sealing of the fuel hose (press fit area) or cause pipe breakage/splitting. In addition, if the fuel hose is buckled and fuel flow distortion occurs, it may cause deterioration of the jet pump performance.

- Install the transfer jet pump and pressure regulator to modified fuel filter (high-pressure).
- Install the fuel filter (high-pressure) (A), pressure regulator and transfer jet pump (B) as a single unit to the reserve cup.



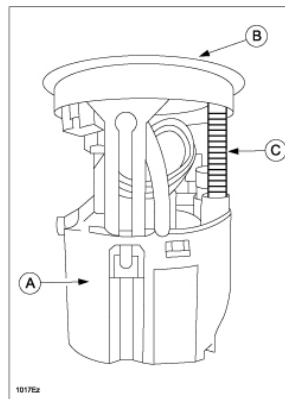
- Engage the snap fit tab and reserve cup, and verify that they are properly engaged.

6. Install the new pressure regulator holding cover (A) and verify that the snap fit tab is properly engaged.

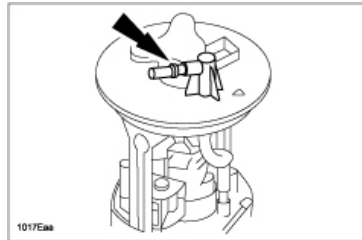


7. Perform the following procedure to install the set plate (A) to the reserve cup (B).

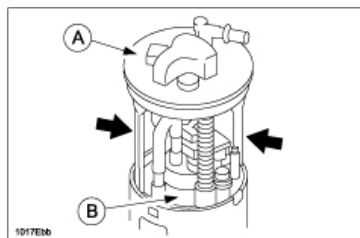
NOTE: Reuse the spring (C) by removing from old set plate.



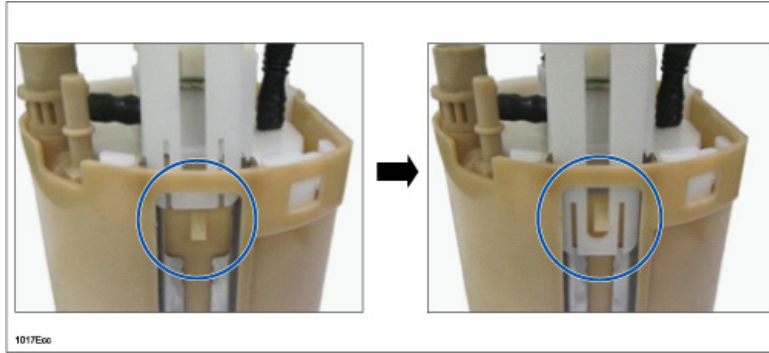
CAUTION: DO NOT grasp the pipe located on the upper surface of the set plate. The pipe could be damaged, causing fuel leakage.



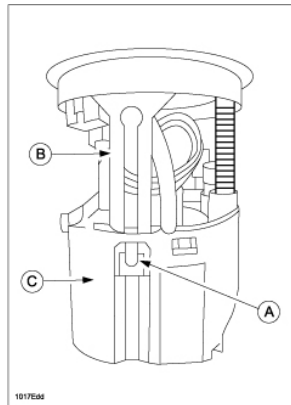
CAUTION: Be careful not to break the set plate arm by applying excessive pressure. If it is broken, it could cause a fuel pump unit operation malfunction (A=set plate, B=fuel filter (high pressure)).



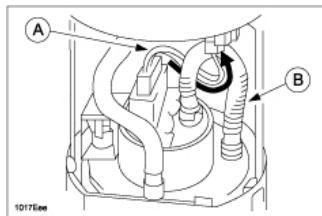
- a. Insert the set plate arm to the reserve cup.



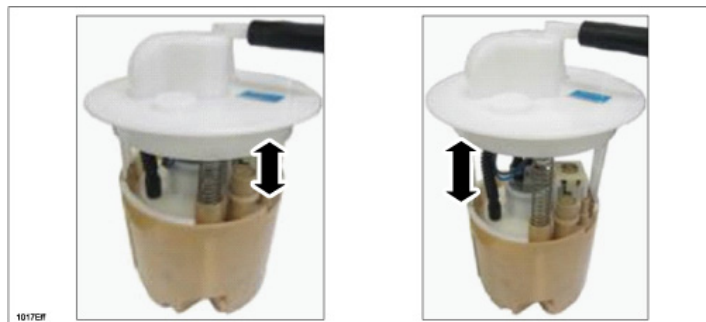
- b. Engage the snap fit tab (A) and set plate arm (B), and verify that it is properly engaged to the reserve cup (C).



8. Route the wiring harness (A) under the nylon tube (B).



9. Connect the fuel pump connector.
10. Press the set plate to expand/contract the fuel pump unit, and make sure the fuel pump connector wiring harness is not pinched into the pressure regulator holding cover.



11. Inspect and verify the following:

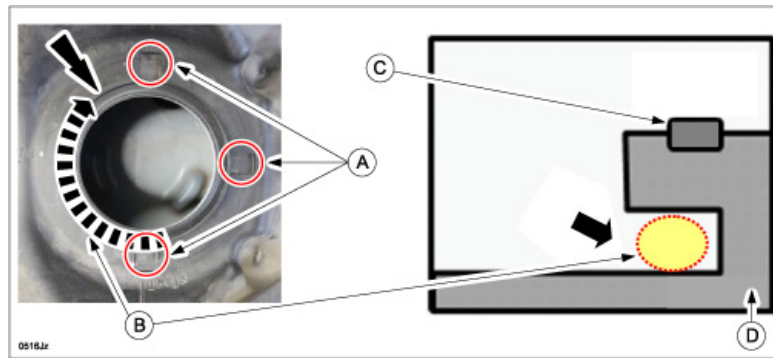
- No missing parts
- Engagement condition of snap fit areas is correct
- No splitting, chipping, bending, and cracking in each part
- Wiring harness routed correctly
- Connector condition is OK

FUEL PUMP UNIT INSTALLATION

1. Replace the retainer and gasket with new ones.

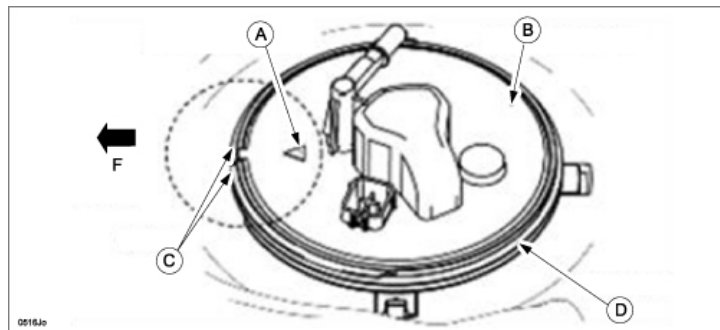
NOTE: If Recall 0516J (Fuel Leak at Fuel Pump Rings) is closed, the retainer and fuel pump ring will be reused.

CAUTION: Before installing the retainer, clean up the retainer fixing (A) / installing portions (B) of the fuel tank where sand or dust can accumulate. (C=Gasket, D=Fuel Tank)

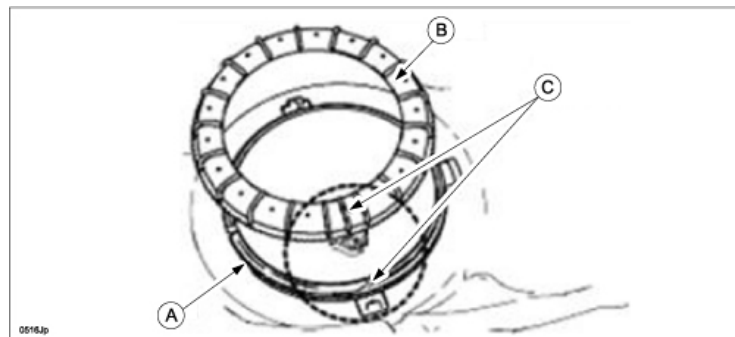


2. Install the modified fuel pump ring.

- a. Align the alignment mark (A) on the fuel pump unit (B) with the notch (C) on the retainer (D) as shown.



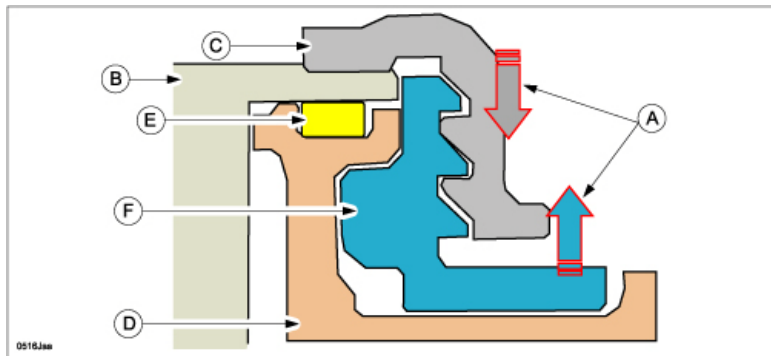
- b. Align the positions of the retainer (A) and fuel pump ring (B) as shown (C), and tighten them one full rotation by hand.



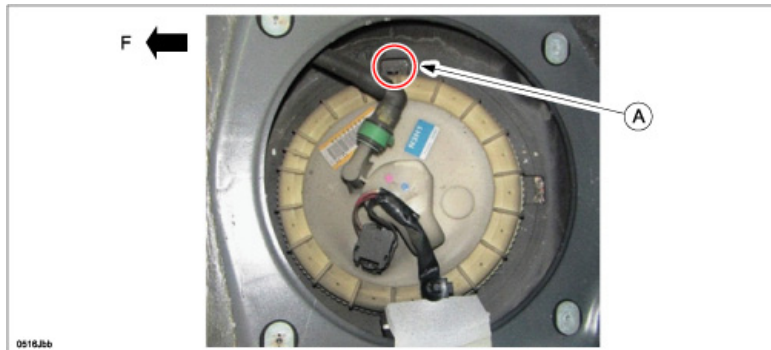
NOTE: If the retainer and fuel pump ring cannot be tightened by hand, remove the fuel pump ring, verify that there is no damage or misalignment on the retainer and fuel pump ring, and then tighten again.

CAUTION:

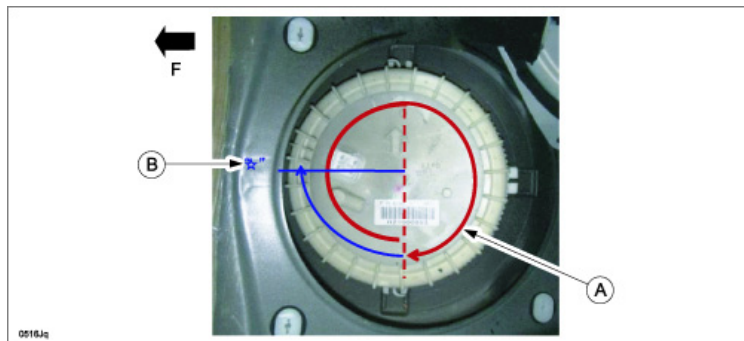
- The fuel pump ring could be damaged if the SST is used with any play between the fuel pump ring and the SST. Securely attach the SST so that there is no gap between the SST tabs and the side of the fuel pump ring.
- When tightening the fuel pump ring, DO NOT let the retainer lift up (A). If the retainer comes off from the fixing portions, the retainer spreads, the threads jams, and it reaches the specified torque before rotating to the specified position “**”.
(B=Fuel Pump Unit, C= Fuel Pump Ring, D=Fuel Tank, E= Gasket, F=Retainer)



The fixing portion (A) can lift up easily.

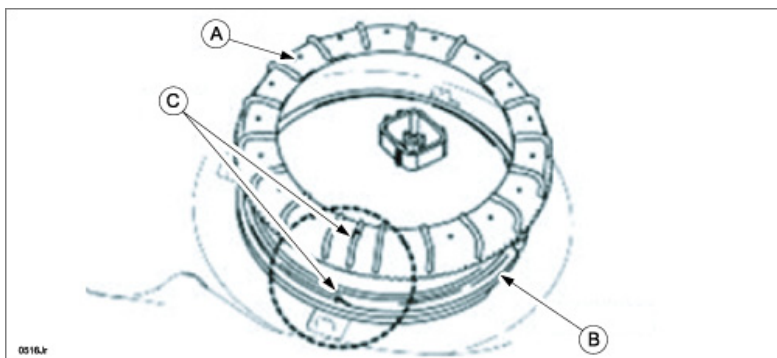


- c. While keeping the alignment mark and the retainer notch aligned, tighten the fuel pump ring to the rotation angle (50-140 degrees) and specified torque (80-135 Nm, 8.2-13.7 kgfm, 59-99 ft lbf) using the SST. Total angle for step 2 and step 3 is 410-500 degrees: One full rotation (A) and tighten so the start position (3 ribs) comes to the star mark (B) using the SST (F=front of vehicle).

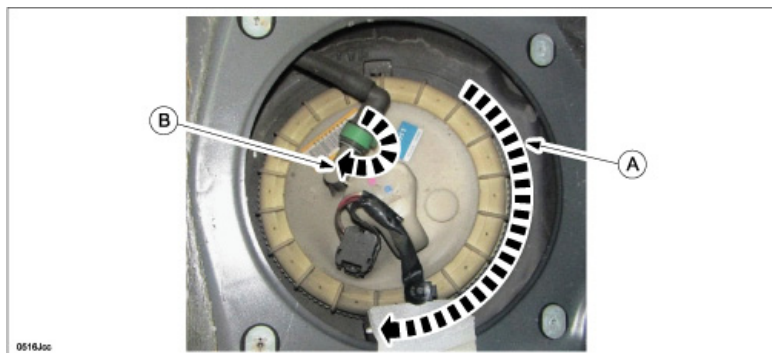


Sub side

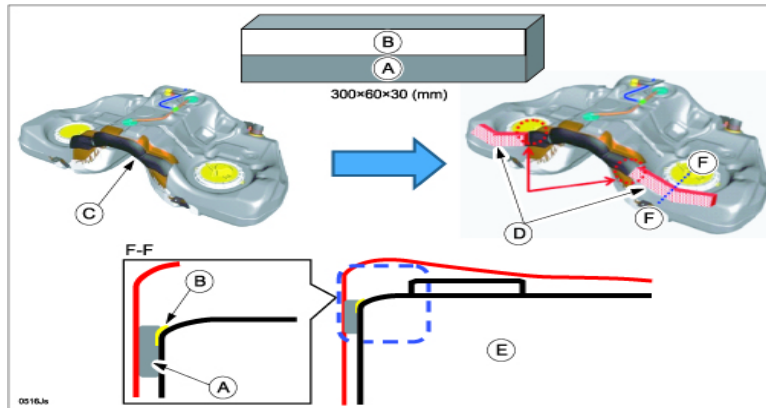
- a. Disconnect the connector.
- b. Remove the fuel pump ring (A) using SST.
- c. Replace the retainer (B) and gasket with new ones.



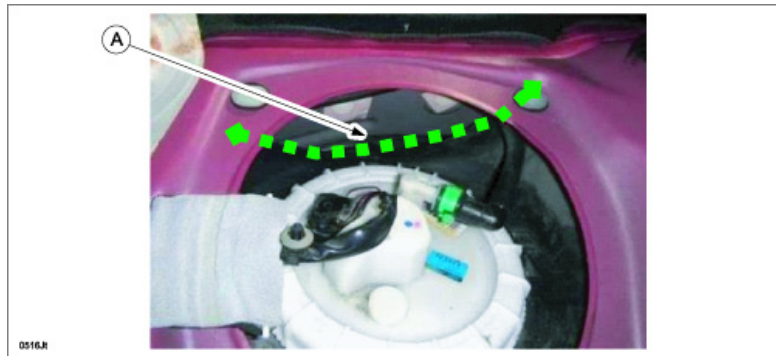
- d. Install the modified fuel pump ring with the same procedure as the main side (aligning the positions of the fuel pump ring (A) and retainer (B) as shown (C)).
3. *****IMPORTANT***** Perform "Fuel Leak Inspection" after the fuel pump unit installation.
 - a. Start driving the vehicle from a standstill or brake suddenly 5 to 6 times at a low speed.
 - b. **Stop the vehicle and verify from inside the vehicle that there is no fuel leakage around the fuel ring (A) and quick connector (B).**



4. Attach two heat insulation pads (A) with tape (B) to the fuel tank (E) on either side (D) of the existing pad (C).



- a. Clean the fuel tank where the pad will be attached (A).



- b. Remove the backing tape and attach the pad to the fuel tank as shown.

NOTE:

- Attach the pad along the parting line (A) of the fuel tank.
- Attach the pad so it connects without clearance to the existing pad in the central portion of the fuel tank.



- c. Attach the pad on the sub side repeating steps a and b.
5. Install the service hole cover with four (4) screws.
6. Install the rear seat cushion.

C. CAMPAIGN LABEL INSTALLATION

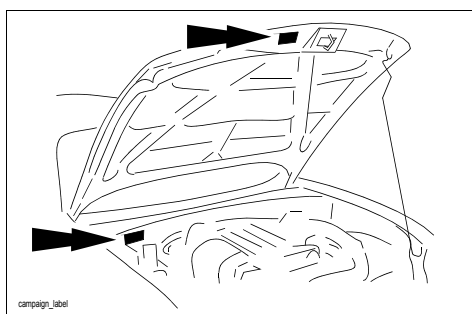
1. Fill out a blue "Campaign Label" (9999-95-065A-06) with Campaign No: "1017E", your dealer code, today's date.

CAMPAIGN LABEL	
CAMPAIGN NO:	_____
DEALER CODE:	_____
DATE:	__ / __ / __

P/N 9999-95-065A-06

1326b

2. Affix it to the hood or bulkhead as shown:



3. Return the vehicle to customer.