



Technical Service Bulletin

SUBJECT:			No: TSB-14-35-003
ASC OFF LAMP ILLUMINATED WITH DTCS C121D AND C121E			DATE: December, 2014
			MODEL: 2007-09 Outlander
CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input type="checkbox"/> PARTS MANAGER	<input type="checkbox"/> TECHNICIAN
<input type="checkbox"/> SERVICE ADVISOR	<input type="checkbox"/> SERVICE MANAGER	<input type="checkbox"/> WARRANTY PROCESSOR	<input type="checkbox"/> SALES MANAGER

PURPOSE

Some customers may report the ASC OFF indicator lamp is illuminated on the MID. During diagnosis, the technician may determine replacement of the ABS-ECU is necessary to correct the condition. As MMC has recently made a hydraulic unit repair kit available, replacement of the entire ABS/ASC assembly is no longer necessary.

This TSB advises technicians to use the instructions in this TSB to repair the ABS hydraulic unit using the repair kit identified in the Parts Information section of this TSB.

AFFECTED VEHICLES

2007-2009 Outlander equipped with Active Stability Control (ASC)

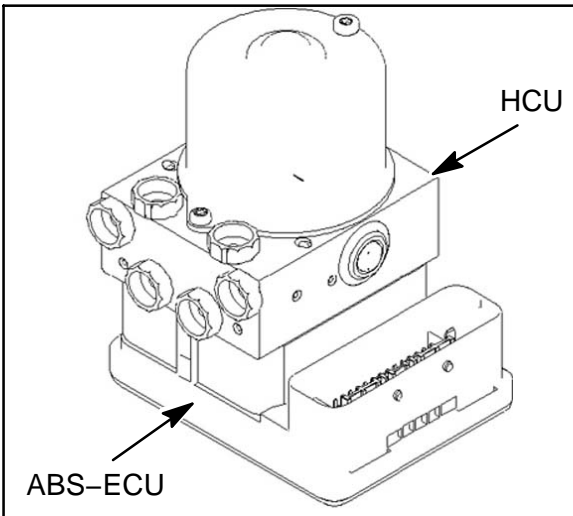
REPAIR PROCEDURE

Follow the instructions in the service manual to diagnose DTCs C121D and C121E. Repair as instructed.

If the diagnosis indicates replacement of the ABS/ASC assembly.

CAUTION

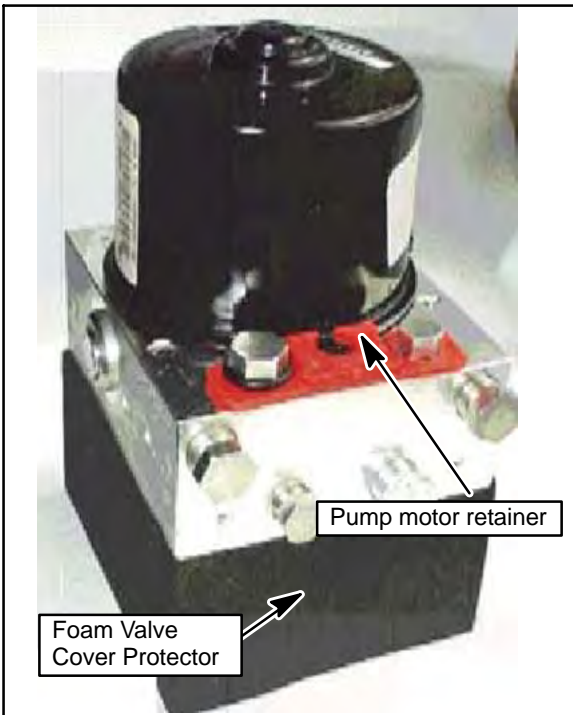
- Do not move the vehicle with the hydraulic unit removed.
- Remove the hydraulic unit following instructions in Group 35C: Active Stability Control System (ASC) of the service manual.
- Protective caps are included in the repair kit to protect the brake fluid ports from contamination. Cap the ports as soon as the unit is removed from the vehicle.
- Rebuilding should be performed on a work bench in a clean environment, using clean tools and lint free rags. Use only DOT 3 brake fluid for cleaning parts. DO NOT use cleaners containing mineral spirits, or chlorinated cleaners when cleaning the unit (inner and outer surfaces).
- Prevent the possibility of electrostatic discharge (ESD) by periodically touching a large, metal object (e.g. metal work bench) while handling the assembled unit or ASC-ECU.
- Keep the disassembled unit clean. Prevent dirt, dust and debris from contaminating the unit while it is disassembled.
- Avoid using compressed air for cleaning or drying to reduce the possibility of airborne contaminants after the unit is disassembled.
- Do not allow fluids to contaminate the electrical connector.
- Do not touch the electrical contacts in the connector, pressure sensor or ASC-ECU.
- Do not use a hydraulic unit that has been dropped or otherwise struck forcefully.



1. HYDRAULICS UNIT – GENERAL INFORMATION

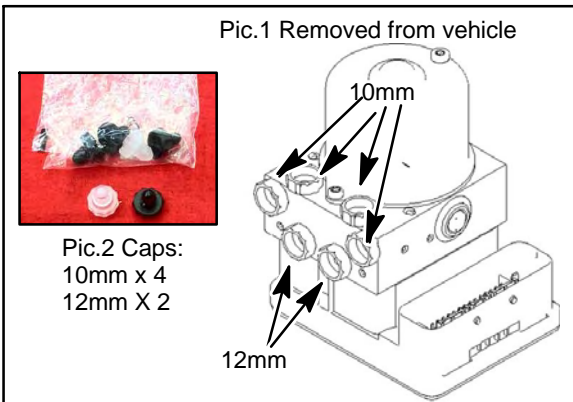
The hydraulic unit consists of the hydraulic control unit (HCU) and the ASC-ECU.

Separation for rebuilding is only possible after the unit is removed from the vehicle.



2. NECESSARY TOOLS AND REPLACEMENT PARTS

- 1/4" long handle box wrench
- Long extension
- Socket wrench: 10mm, 12mm
2. Ring fork wrench: 10mm
3. T25 Torx screwdriver (1/4" drive)
4. Torque wrench (1/4" drive): 4 – 15Nm
5. MUT-III Scan Tool
6. Hydraulic Control Unit Repair Kit
P/N 4670A532:
 - 1 – Hydraulic Control Unit
 - 6 – Protection plugs (M10/M12)
 - 2 – Assembly screws

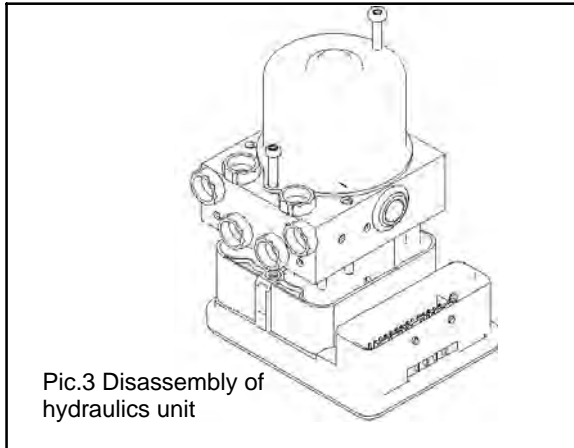


3. HYDRAULICS UNIT REMOVAL

Remove the hydraulics unit from the vehicle following instructions provided in Group 35C: Active Stability Control System (ASC) of the service manual.

NOTE:

- Disconnect the brake lines from the hydraulic unit.
- Insert plastic plugs provided in the kit into the open brake fluid ports to prevent brake fluid spills.



Pic.3 Disassembly of hydraulics unit

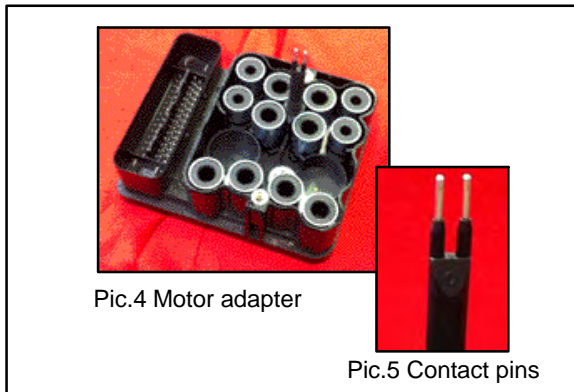
4. DISASSEMBLE THE ASC-ECU

- a. Place the hydraulics unit on a clean cloth spread over a flat, stable surface. **Do not place it in a vise.**
- b. Remove and discard the motor retaining screws.

⚠ CAUTION

After removing the screws, the pump motor is no longer secured to the HCU!

Make sure the pump motor and HCU are held together while removing the screws. Then carefully separate the ASC-ECU from the HCU after the screws are removed.



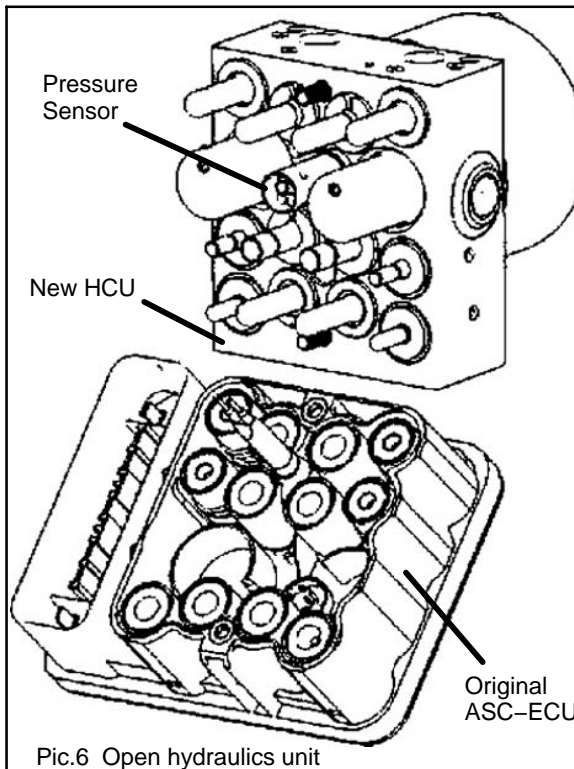
Pic.4 Motor adapter

Pic.5 Contact pins

NOTE:

The pump motor contact pins can be torn away during disassembly due to corrosion, leaving it stuck to the HCU. If this occurs, the complete hydraulic unit must be replaced.

If the ASC-ECU contact pins (Pic.5) are damaged (ECU connector, DC motor contact pins) the complete hydraulics unit must be replaced.

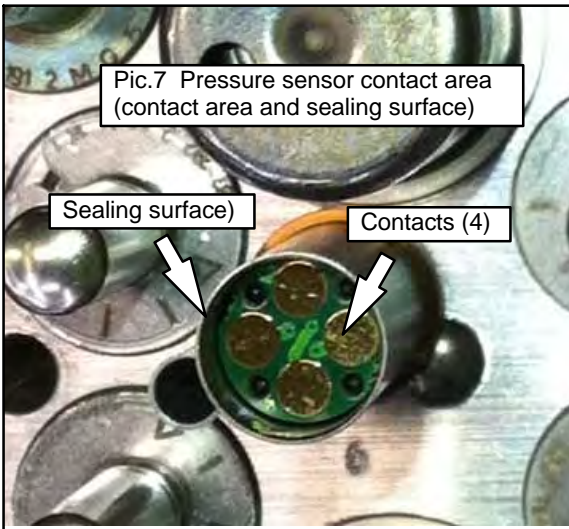


Pic.6 Open hydraulics unit

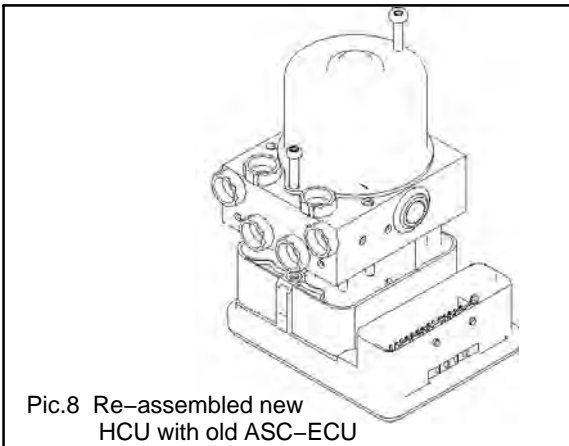
5. PREPARING THE NEW HCU AND ECU FOR REASSEMBLY

NOTE:

- While reassembled the hydraulics unit, take care to not damage or touch the pressure sensor contacts.
- Take care to not damage the edge of the pressure sensor housing. It is a sealing surface.
- Prevent moisture and dirt from contaminating the ASC-ECU.
- The white potting compound on the bottom of the ASC-ECU is a sealant and must not be removed.



- Make sure the ASC-ECU pressure sensor contact area does not become contaminated (Pic.7).
- If necessary, turn the ASC-ECU upside down before assembling it to the new HCU to remove debris from the contact area close to the sensor.
- Do not touch the pressure sensor contact area or sealing surface. If it's not possible to remove contaminants from the area, replace the complete hydraulics unit.



6. ASSEMBLE ELECTRONIC CONTROL UNIT

NOTE:

- Do not remove six (6) brake fluid port sealing plugs or the motor retainer from the new HCU until assembly is complete and the hydraulics unit is installed into the vehicle.
- The hydraulics unit is not sealed until completely reassembled and installed.
 - a. Remove the foam block from the new HCU.
 - b. Reassemble the ASC-ECU to the new HCU. Align the components and keep them level and square to each other at all times to prevent damage to the contacts and the edge of the contact housing.
 - c. Secure the HCU to the ECU using two (2) new torx head screws (provided). Torque to $5.5 \pm 0.5\text{Nm}$ (47 ± 4.5 in. lbs).

7. REINSTALL HYDRAULICS UNIT

Reinstall the hydraulics unit following instructions provided in Group 35C: Active Stability Control System (ASC) of the service manual.

NOTE: Do not remove the plugs from the hydraulic ports until you are ready to attach the brake lines. After removing two (2) plugs holding the motor retainer in place, the retainer can be discarded.

8. GENERAL NOTES FOR REASSEMBLY AND REINSTALLATION

- Never use mineral oil or other cleaners. Use only Genuine Mitsubishi Brake Fluid, p/n MZ311987 for cleaning the inside of the hydraulics unit and brake fluid ports.
- After repairs to the brake system, use the service manual to completely check all mechanical and ABS.ASC components for proper operation. Check all hydraulic ports and connections for leakage.

NOTE: A hydraulics unit can be rebuilt using this procedure a maximum of 5 times.

PARTS INFORMATION

Use the following Genuine Mitsubishi Parts

Part #	Description	Qty.
4670A532	Hydraulic Control Unit Kit	1

WARRANTY INFORMATION

This bulletin is supplied as technical information only and is not an authorization to repair. If an affected vehicle is reported with the described condition, diagnose using the service manual, repair as described in this TSB and submit a normal warranty claim.

Rebuild ASC-ECU/HCU

Nature Code: 59J

Cause Code: 27D

Labor Operation No.: 354520 99

Time Allowance: 1.9 hr.

Warranty Coverage: **BASIC** Coverage