Technical Service Bulletin

SUBJECT: REVISED ACC/FCM ECU DIAGNOSIS (INCLUDING DTC C1753) – SERVICE MANUAL REVISION	No: **TSB–13–17–002**
	DATE: **December, 2013**
	MODEL: **2014 Outlander**

CIRCULATE TO:	[ ] GENERAL MANAGER	[X] PARTS MANAGER	[X] TECHNICIAN
[X] SERVICE ADVISOR	[X] SERVICE MANAGER	[ ] WARRANTY PROCESSOR	[ ] SALES MANAGER

PURPOSE

This TSB adds failsafe functions related to the ACC/FCM ECU to the service manual and revises the diagnostic steps for DTC C1753 – ACC/FCM radar blockage detected.

AFFECTED VEHICLES

2014 Outlander

AFFECTED SERVICE MANUALS

2014 Outlander Service Manual – Group 17: Engine and Emission Control > Adaptive Cruise Control System > Diagnostic Trouble Code Procedures > DTC C1753 – ACC/FCM radar blockage detected.

Continued

Please insert the chart from page 3 where indicated in 2014 Outlander Service Manual – Group 17: Engine and Emission Control > Adaptive Cruise Control System:

HOW TO DIAGNOSE THE CAN BUS LINES

Required Special Tools:

- MB992744: Vehicle communication interface-Lite (V.C.I.-Lite)
- MB992745: V.C.I.-Lite main harness A
- MB992747: V.C.I.-Lite USB cable short
- MB992748: V.C.I.-Lite USB cable long
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicles Communication Interface (V.C.I.)
  - MB991827: M.U.T.-III USB Cable
  - MB991910: M.U.T.-III Main Harness A (Vehicles with CAN communication system)

1. Connect scan tool (M.U.T.-III) to the data link connector.
2. Turn the ignition switch to the "ON" position.
3. Select "CAN bus diagnosis" from the start-up screen.
4. When the vehicle information is displayed, confirm that it matches the vehicle being diagnosed.
   - If they match, go to Step 8.
   - If not, go to Step 5.
5. Select the "view vehicle information" button.
6. Enter the vehicle information and select the "OK" button.
7. When the vehicle information is displayed, confirm again that it matches the vehicle being diagnosed.
   - If they match, go to Step 8.
   - If not, go to Step 5.
8. Select the "OK" button.
9. When the optional equipment screen is displayed, choose the one which the vehicle is fitted with, and then select the "OK" button.

CHECK OF THE FREEZE FRAME DATA

Various data of when the diagnostic trouble code has been stored is obtained, and the status of that time is stored. By analyzing each data using M.U.T.-III, troubleshooting can be carried out efficiently.

Display items of the freeze frame data are as follows.

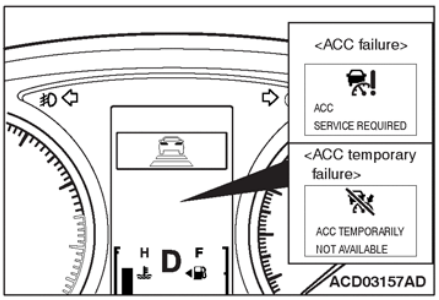
DISPLAY ITEM LIST

Item No.	Item	Unit/display contents
1	Odometer	km (mile)
2	Odometer (Last time)	km (mile)
3	Frequency counter	Count
4	Operation counter	Count
5	System counter	Count

<Added>
Insert the attached sheet 3 (2/3)

Please insert the following chart where indicated where indicated on page 2 in 2014 Outlander Service Manual – Group 17: Engine and Emission Control > Adaptive Cruise Control System:

FAIL-SAFE FUNCTIONS <ACC/FCM-ECU> (Related to the ACC)



If the ACC/FCM-ECU determines that the ACC is defective by means of its self-diagnosis, the ACC failure display or the ACC temporary failure display will illuminate.

Illumination condition of display in case of failure

DTC No.	Item	ACC failure display	ACC temporary failure display
C1394	Incompleted learn neutral (Steering wheel sensor)	ON	OFF
C1707	Implausible coding data	ON	OFF
C1750	ACC/FCM-ECU voltage out of range	OFF	ON
C1751	ACC/FCM-ECU failure	ON	OFF
C1752	ACC/FCM radar temperature out of range	OFF	ON
C1753	ACC/FCM radar blockage detected	OFF	ON
C1754	ACC/FCM radar calibration not completed	OFF	ON
C1768	Alignment left compensation	ON	OFF
C1769	Alignment right compensation	ON	OFF
C1770	Reflector plate in the lowermost	ON	OFF
C1771	Reflector plate in the uppermost	ON	OFF
C1772	Alignment sensor too far right	ON	OFF
C1773	Alignment sensor too far left	ON	OFF
C1774	Alignment sensor too low	ON	OFF
C1775	Alignment sensor too high	ON	OFF
C1776	Received ACC failure from engine control module	ON	OFF
C1777	Received ACC failure from ASC-ECU	ON	OFF
C1778	Vehicle speed signal failure	ON	OFF
C1779	Brake master pressure signal failure	ON	OFF
C1780	A basis signal failure	ON	OFF
C1781	SAS failure	ON	OFF
C1782	SAS signal failure	ON	OFF
C1783	ACC distance switch fixed ON	ON	OFF
C1785	Fault detection signal failure	ON	OFF
C1786	Received limp home from transaxle control module	ON	OFF
U0100	Engine CAN timeout	ON	OFF
U0101	T/M CAN timeout	ON	OFF
U0121	ABS/ASC CAN timeout	ON	OFF
U0126	SAS CAN timeout	ON	OFF
U0141	ETACS CAN timeout	ON	OFF
U1195	Coding not completed	ON	OFF

Please make the following changes to:
2014 Outlander Service Manual – Group 17: Engine and Emission Control > Adaptive Cruise Control System > Diagnostic Trouble Code Procedures > DTC C1753 – ACC/FCM radar blockage detected.

<Added>
NOTE: The radar may not function normally if foreign object or dirt (snow or ice) is adhered on the radar or its surrounding area, or the road condition is bad due to a severe weather (heavy rain or snow). In that case, the system will deactivate the ACC and/or FCM as system protection and display an alert message ("ACC or FCM temporarily not available") on the combination meter.

DTC C1753: ACC/FCM Radar Blockage Detected

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be stored. Prior to this diagnosis, diagnose the CAN bus lines.**
- **Whenever the ECU is replaced, ensure that the CAN bus lines are normal.**

OPERATION
The ACC/FCM-ECU monitors whether the <Old> radar is contaminated or its beam is blocked by foreign material. <New> radar or its surrounding area

<New>
- If any of the following conditions are satisfied with the cruise control switch or the FCM switch "ON", the system will determine that the radar detection performance is deteriorated.
  - The radar or its surrounding area is contaminated with dirt or foreign material (snow or ice).
  - The system can not monitor a vehicle-travelling-ahead steadily due to a water splash, etc.
  - The system receives little radar reflection from a distance (traffic is not heavy and free of obstacles, or the obstacles are covered with snow).

DIAGNOSTIC TROUBLE CODE SET CONDITION
This diagnostic trouble code is stored when the abnormality below is detected:
<Old>
- Cruise control switch "ON" or FCM switch "ON"
- The ACC/FCM-ECU's radar detection performance is deteriorated or its detection is interfered.

PROBABLE CAUSES
- The <Old> radar is contaminated by dirt or foreign material, etc. <New> radar or its surrounding area
- Improperly installed ACC/FCM-ECU
- Malfunction of ACC/FCM-ECU

DIAGNOSIS

STEP 1. Check the <Old> radar for dirt or foreign material.
(1) Wipe off the dirt or foreign material from the ACC/FCM-ECU's <Old> radar. <New> radar or its surrounding area

⚠ CAUTION
To prevent damage to scan tool (M.U.T.-III), always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool (M.U.T.-III).
(2) Connect scan tool (M.U.T.-III). Refer to "How to connect the Scan Tool (M.U.T.-III)."
(3) Turn the ignition switch to the "ON" position.
(4) Erase the diagnostic trouble code.
(5) Drive the vehicle for approx. five minutes.
(6) Check if the diagnostic trouble code is stored.
(7) Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is diagnostic trouble code No.C1753 stored?
YES : Go to Step 2
NO : This diagnosis is complete <Old> (Protection is deactivated).

<New>
The system has deactivated the ACC or/and FCM temporarily for safety reason.
This is not a malfunction.

STEP 2. Check whether the ACC/FCM-ECU is installed properly.
Check whether the ACC/FCM-ECU is installed correctly (Refer to).

Q: Is the check result normal?
YES : Go to Step 3
NO : Reinstall the ACC/FCM-ECU correctly (Refer to).

STEP 3. Check whether the diagnostic trouble code is stored again.

Q: Is diagnostic trouble code No.C1753 stored?
YES : Replace the ACC/FCM-ECU (Refer to).
NO : Intermittent malfunction (Refer to GROUP 00 – How to Cope with Intermittent Malfunction).