SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : INFORMATION	ISSUE NO. : MSB-13E54-001	DATE : 2013-03-20
SUBJECT : LDW CAMERA		<Destination/Model> (EUR/RUSSIA) OUTLANDER(GF0W) <M/Y> 13
GROUP : CHASSIS ELECTRICAL		

1. Description :

See the attached document for the information about the change of mention in the applicable service manual.

2. Applicable service manual :

Applicable manual	Pub. No.		Applicable title (INFO ID)	Contents
2013 OUTLANDER Workshop Manual	EU	CGFE13E1-CD (ENGLISH) CGFS13E1-CD (SPANISH) CGFF13E1-CD (FRENCH) CGFG13E1-CD (GERMAN) CGFI13E1-CD (ITALIAN) RUSSIA:N/A	How to initialise the LDW camera (M549-80-370-01300-01)	Attached sheet 2 (1/6)～(3/6)
			How to adjust the LDW camera image (M549-80-380-01000-01)	Attached sheet 2 (4/6)～(6/6)

3. Details :

See the attached document

How to initialise the LDW camera

CAUTION

- **When the LDW-ECU is replaced, first initialise the LDW camera, and then adjust the LDW camera image.**
- **Before the LDW camera is initialised, check the LDW camera mounted surface on the windshield for scratch, cracks, contamination or drain drops and check that the LDW-ECU is installed correctly.**

How to initialise the LDW camera

This procedure describes how to adjust the LDW camera image and how to initialise the rain sensor and the light sensor by using white paper (such as printer paper) and a suitable light (such as a hand torch).

CAUTION

- **The white paper should penetrate light. Do not a ruled-line or contaminated paper.**
- **The hand torch should have a wide lighting range.**

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "OFF" position. (Do not start the engine.)
3. From the system selection screen of M.U.T.-III, select "LDW".
4. Locate a white paper on the windshield glass (on the LDW camera mounted surface). Then shine a bright light directly to it.

CAUTION

- **No shadow should fall on the paper.**

5. Select items from the M.U.T.-III while keeping the condition above:
   (1) Select "Special function."
   (2) Select "Reset."
   (3) Select "Decalibration:Camera inter. data."
   (4) Select "Learning."
   (5) Initialise the LDW camera.
6. The LDW indicator lamp in the combination meter should flash.
7. Check that the lamp ceases flashing.
8. Wait for ten seconds * and then turn the ignition switch "ON". If diagnosis code No. C1703 or B1952 is stored, repeat the procedure from step 3.

   *NOTE: *: The rain sensor will be initialised automatically during this ten-second period.*
9. The LDW camera has been initialised completely.

How to reset the LDW camera initialisation data

If you replace the windshield glass or initialise the ECU again, first reset the LDW camera initialisation data according to this procedure before the initialisation.

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "ON" position. (Do not start the engine.)
3. Select the M.U.T.-III screen menu as follows.
   (1) Select "LDW" displayed on the "System selection" screen.
   (2) Select "Special function."
   (3) Select "Reset."
   (4) Select "Decalibration:Camera inter. data."
4. After the reset is complete, diagnosis code No. C1703 will be stored and the LDW warning lamp in the combination meter will illuminate.

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Attached sheet2 (2/6)～(3/6)

How to initialise the LDW camera

⚠ CAUTION

- **When the LDW-ECU is replaced, first initialise the LDW camera, and then adjust the LDW camera image.**
- **Before the LDW camera is initialised, check the LDW camera mounted surface on the windshield for scratch, cracks, contamination or drain drops and check that the LDW-ECU is installed correctly.**

How to initialise the LDW camera

This procedure describes how to adjust the LDW camera image and how to initialise the rain sensor and the light sensor by using a white paper, which covers the whole the LDW camera, and a suitable hand torch of at least 500 lux.

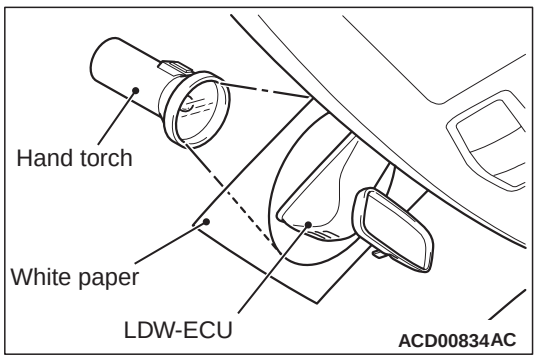
⚠ CAUTION

- **The white paper should penetrate light. Do not a ruled-line or contaminated paper.**
- **The hand torch should have a wide lighting range.**

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "ON" position. (Do not start the engine.)
3. From the system selection screen of M.U.T.-III, select "LDW".
4. Place a white paper on the exterior side of the windshield glass (on the LDW camera mounted surface). Then shine a bright light directly to it.

⚠ CAUTION

- **You should hold a certain distance between the hand torch and the windshield glass.**



5. Select items from the M.U.T.-III while keeping the condition above:
   (1) Select "Special function."
   (2) Select "Reset."
   (3) Select "Decalibration:Camera inter. data."
   (4) Select "Learning."
   (5) Initialise the LDW camera.
6. The LDW indicator lamp in the combination meter should flash.
7. Then it should go out once and then come on again.
8. Wait for ten seconds. * If diagnosis code No. C1703 or B1952 is stored, repeat the procedure from step 3.

   *NOTE: *: The rain sensor will be initialised automatically during this ten-second period.*
9. The LDW camera has been initialised completely.

How to reset the LDW camera initialisation data

If you replace the windshield glass or initialise the ECU again, first reset the LDW camera initialisation data according to this

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procedure before the initialisation.

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "ON" position. (Do not start the engine.)
3. Select the M.U.T.-III screen menu as follows.
   (1) Select "LDW" displayed on the "System selection" screen.
   (2) Select "Special function."
   (3) Select "Reset."
   (4) Select "Decalibration:Camera inter. data."
4. After the reset is complete, diagnosis code No. C1703 will be stored and the LDW warning lamp in the combination meter will illuminate.

How to adjust the LDW camera image

⚠ CAUTION

- **When the LDW-ECU is replaced, initialise the LDW camera before adjusting the LDW camera image.**
- **Before the LDW camera image is adjusted, check the LDW camera mounted surface on the windshield for scratch, cracks, contamination or drain drops and check that the LDW-ECU is installed correctly.**

How to adjust the LDW camera image

This procedure describes how to adjust the LDW camera input image.

NOTE:

- *The LDW camera image cannot be adjusted under unfavourable conditions such as snowfall. In such a case, you can eliminate a warning message in the combination meter by pressing the LDW switch for at least five seconds until the conditions improve. (A diagnosis code will not be erased.)*
- *To recover the display, press the LDW switch for at least five seconds again.*

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "ON" position. (Start the engine.)
3. Select the M.U.T.-III screen menu as follows.
   (1) Select "LDW" displayed on the "System selection" screen.
   (2) Select "Special function."
   (3) Select "Learning."
   (4) Select "Calibration:Image adjustment."
4. The LDW indicator lamp in the combination meter will flash until the step below completes.
5. Drive the vehicle for at least five minutes cumulative at 40 km/h or more under the conditions below.

   NOTE: The ideal vehicle speed is 70 km/h or more. If you can drive the vehicle on a dry, stable and straight road at 70 km/h or more during day time, the image adjustment will be complete more quickly.

   (1) Road and environmental conditions should be so that the lane division lines should be clear.
   (2) A cornering radius of the road should be 300 m or more.
6. After flashing, the lamp should go out or illuminate.
7. After checking the step above, turn the ignition switch "ON". If diagnosis code No. C1706 is stored, reset the LDW camera image compensation value, and then repeat the procedure.
8. The LDW camera image adjustment is complete.

How to reset the LDW camera image compensation value

If you adjust the LDW camera image again on the ECU which camera image has been adjusted before, first reset the image compensation image.

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "ON" position. (Do not start the engine.)
3. Select the M.U.T.-III screen menu as follows.
   (1) Select "LDW" displayed on the "System selection" screen.
   (2) Select "Special function."
   (3) Select "Reset."
   (4) Select "Decalibration:Image adjustment."
4. After the reset is complete, diagnosis code No. C1706 will be stored and the LDW warning lamp in the combination meter will illuminate.

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Attached sheet2 (5/6)～(6/6)

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How to adjust the LDW camera image

⚠ CAUTION

- **When the LDW-ECU is replaced, initialise the LDW camera before adjusting the LDW camera image.**
- **Before the LDW camera image is adjusted, check the LDW camera mounted surface on the windshield for scratch, cracks, contamination or drain drops and check that the LDW-ECU is installed correctly.**

How to adjust the LDW camera image

This procedure describes how to adjust the LDW camera input image.

NOTE:

- *The LDW camera image cannot be adjusted under unfavourable conditions such as snowfall. In such a case, you can eliminate a warning message in the combination meter by pressing the LDW switch for at least five seconds until the conditions improve. (A diagnosis code will not be erased.)*
- *To recover the display, press the LDW switch for at least five seconds again.*

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "ON" position. (Start the engine.)
3. Select the M.U.T.-III screen menu as follows.
   (1) Select "LDW" displayed on the "System selection" screen.
   (2) Select "Special function."
   (3) Select "Learning."
   (4) Select "Calibration:Image adjustment."
4. The LDW indicator lamp in the combination meter will flash until the step below completes.
5. Drive the vehicle for at least five minutes cumulative at 40 km/h or more under the conditions below.

   NOTE: The ideal vehicle speed is 70 km/h or more. If you can drive the vehicle on a dry, stable and straight road at 70 km/h or more during day time, the image adjustment will be complete more quickly.

   (1) Road and environmental conditions should be so that the lane division lines should be clear.
   (2) A cornering radius of the road should be 300 m or more.
6. Then it should go out once and then come on again.
7. After checking the step above, turn the ignition switch "ON". If diagnosis code No. C1706 is stored, reset the LDW camera image compensation value, and then repeat the procedure.
8. The LDW camera image adjustment is complete.

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How to reset the LDW camera image compensation value

If you adjust the LDW camera image again on the ECU which camera image has been adjusted before, first reset the image compensation image.

1. Turn the ignition switch "OFF" and then connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Turn the ignition switch to the "ON" position. (Do not start the engine.)
3. Select the M.U.T.-III screen menu as follows.
   (1) Select "LDW" displayed on the "System selection" screen.
   (2) Select "Special function."
   (3) Select "Reset."
   (4) Select "Decalibration:Image adjustment."
4. After the reset is complete, diagnosis code No. C1706 will be stored and the LDW warning lamp in the combination meter will illuminate.