SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-13EXL14-501	DATE : 2013-07-03
SUBJECT : COOLING SYSTEM OF EV		<Destination/Model> (EUR/MMAL/NZ) <M/Y> 14
GROUP : EV COOLING SYSTEM(Gr.14B)		OUTLANDER PHEV(GF0W)

1. Description :

Please refer to the attached document for the correction of the error in writing existing in the applicable service manual.

2. Applicable service manual :

Applicable manual		Pub.No.	Applicable title (INFO ID)		Content
2014 OUTLANDER PHEV Workshop manual	EU	CGFE14E1-CD (ENG) CGFF14E1-CD (FRE) CGFG14E1-CD (GER) CGFS14E1-CD (SPA) CGFI14E1-CD (ITA)	Motor coolant	Coolant change M142-00-120-08400-01	Attached Sheet 3 (1/6～2/6)
			Oil	Oil change M143-00-100-01600-01	Attached sheet 3 (3/6～5/6)
				EV oil cooler removal and installation M143-00-120-01000-01	Attached sheet 3 (6/6)
	MMAL/ NZ	AU900408 NZ:DRAFT	Motor coolant	Coolant change M142-00-120-08400-01	Attached Sheet 3 (1/6～2/6)
			Oil	Oil change M143-00-100-01600-01	Attached sheet 3 (3/6～5/6)
				EV oil cooler removal and installation M143-00-120-01000-01	Attached sheet 3 (6/6)

3. About the details :

Please refer to the attached document (attached sheet 3)

※ Effective time : From the initial vehicle

MOTOR COOLANT REFILLING

⚠ CAUTION

Use the Mitsubishi genuine Mitsubishi Motors Genuine Super Long Life Coolant Premium without adding water because the concentration is preadjusted to 50%.

1. Prepare the required volume of coolant using a jug so as to avoid running out of motor coolant during the refilling and causing any damage to the electric water pump.

   Recommended antifreeze: MITSUBISHI MOTORS GENUINE SUPER LONG LIFE COOLANT PREMIUM
   Quantity: 6.5 L
2. Remove the EV radiator condenser tank cap.
3. Fill the motor coolant up to the radiator condenser tank filler port.
4. According to either of the procedures below, start the "Coolant refilling control".
   (1) Not using M.U.T.-III
      a. Pull the parking brake lever.
      b. Turn the power supply mode of the electric motor switch to ON.
      c. Press the ECO mode switch 10 times or more within seven seconds.
   (2) When using M.U.T.-III
      a. Turn off the power supply mode of the electric motor switch. Then connect the M.U.T.-III to the diagnosis connector.
      b. Turn the power supply mode of the electric motor switch to ON.
      c. From the system selection screen of M.U.T.-III, select "PHEV-ECU".
      d. From the PHEV-ECU screen, select "Special Function-test".
      e. Select the item No. 2 "Water pump actuate".
5. There will be a wait time of 20 seconds after the start of "Coolant refilling control" until the actuation of electric water pump. During this period, hold the prepared jug, and insert the jug tip into the EV radiator condenser tank filler port to be ready to fill the motor coolant.

<Incorrect>

~~6. After the 20-second wait time, the electric water pump repeats the operation (4 seconds) and stop (15 seconds). So, refill the motor coolant with an amount decreased by the electric water pump operation.~~

<Correct>

6. Wait for 20 seconds. As the motor coolant level drops due to the intermittent operation of the electric water pump, refill the motor coolant up the radiator condenser tank filler port.

   NOTE:
   - *In a case if the prepared coolant becomes about to run out, turn off the power supply mode of the electric motor switch beforehand, and stop the "Coolant refilling control" (at this time, perform the work with two people).*
   - *Including the wait time, "Coolant refilling control" will be completed within ten minutes from the start (during this period, 31 times of 4-second operation are included).*
     If the motor coolant change is not completed, or if the control is stopped during the work, the refilling can be resumed by starting "Coolant refilling control" once again.

<Added>

   - *The water pump cycles on and off follows:*

     Not using the M.U.T.-III: ON for four seconds and OFF for 15 seconds
     Using the M.U.T.-III: ON for four seconds and OFF for 30 seconds
7. Until the motor coolant level stops decreasing by the electric water pump operation, repeat the step 6 above.

   NOTE: The motor coolant refilling will be complete in about 3 to 4 minutes.
8. For the air bleeding of the EV cooling system, operate the electric water pump for at least one minute according to either of the procedures below.
   (1) Not using M.U.T.-III
      a. Operate the electric motor switch with the brake pedal depressed.
      b. Turn on the power supply mode of the electric motor switch to make the READY (ready to drive) indicator illuminate for at least one minute.

NOTE: The electric water pump will run as long as the READY (ready to drive) indicator illuminates.
If the READY (ready to drive) indicator continues to illuminate for at least one minute, the electric water pump has been activated for at least one minute.

   (2) When using M.U.T.-III

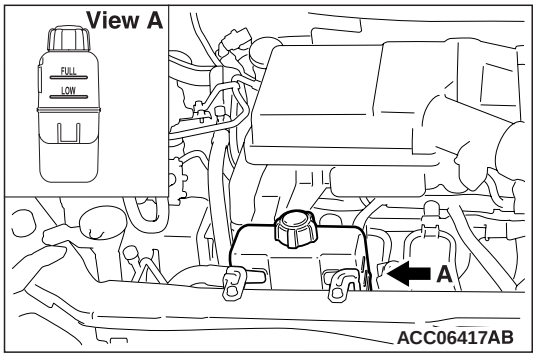
Attached sheet 3 (2/6)

a. Turn off the power supply mode of the electric motor switch. Then connect the M.U.T.-III to the diagnosis connector.
b. Turn the power supply mode of the electric motor switch to ON.
c. Make the READY (ready to drive) indicator illuminate.
d. From the system selection screen of M.U.T.-III, select "PHEV-ECU".
e. From the PHEV-ECU screen, select ~~"Special Function-test".~~ <Incorrect>
f. Select the item ~~No. 2~~ "Water pump actuate".<Incorrect> <Correct>

No.8

9. Turn off the power supply mode of the electric motor switch to deactivate the electric water pump.

"Actuator test"
<Correct>



10. When the motor coolant level in EV radiator condenser tank is at the "LOW" line or higher, the air bleeding is complete.
11. If the motor coolant level in EV radiator condenser tank is at the "LOW" or lower, fill the motor coolant to the "FULL" line, and then perform the air bleeding of above step 8 again.
12. Adjust the coolant level so that the motor coolant level in EV radiator condenser tank comes to near the "FULL" line when the electric water pump is stopped.
13. Tighten the EV radiator condenser tank cap securely.

Attached sheet 3 (3/6)

ON-VEHICLE SERVICE <OIL COOLING SYSTEM>

OIL LEAK CHECK

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1. Visually check the front motor, the generator and the electric oil pump for oil leaks.
2. If any oil leak is found, drain the oil (Refer to P.14B-10).
3. Repair or replace the component where the oil leak is found.
4. Refill the oil (Refer to P.14B-10), and then check that no oil leaks are found around the relevant component.

OIL CHANGE

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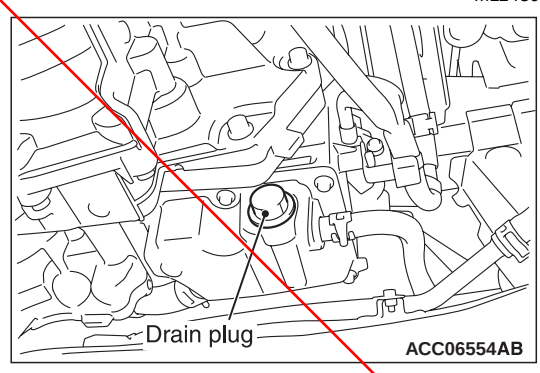
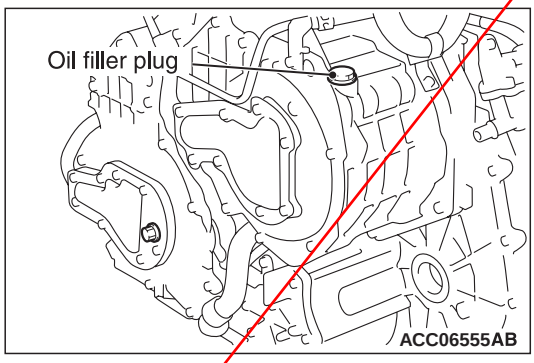
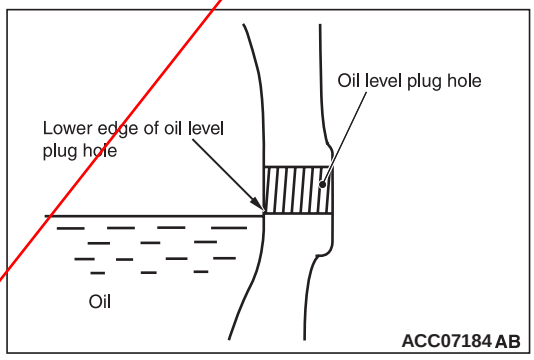


1. Remove the drain plug and the gasket to drain the oil.
2. Install the drain plug with a new gasket, then tighten them to the specified torque.

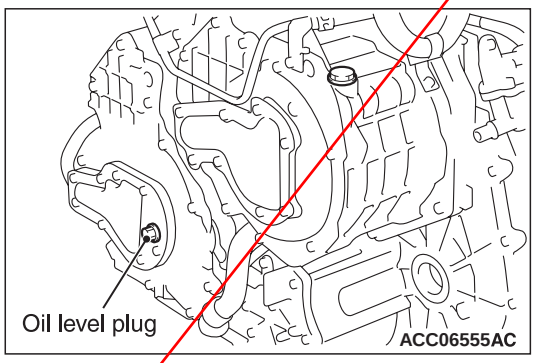
Tightening torque: 65 ± 5 N·m

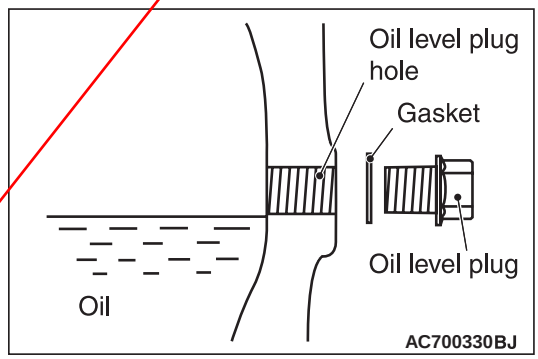




3. Remove the oil filler plug and the gasket, and then fill the oil up to the lower edge of the oil level plug hole.

Recommended oil: MITSUBISHI MOTORS GENUINE CVTF-J4
Quantity: 1.5 L

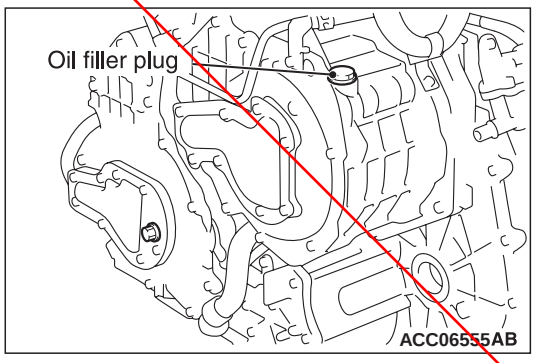




4. Remove the oil level plug and the gasket to check the oil level.
5. Install the oil level plug and a new gasket, then tighten them to the specified torque.

Tightening torque: 39 ± 2 N·m

⚠ CAUTION
When the EV oil cooler is removed, install the oil level plug and then add the oil of approx. 0.45 dm^3. (The total oil capacity is approx. 2.2 dm^3)



6. Install the oil filler plug and new gasket, then tighten them to the specified torque.

Tightening torque: 32 ± 2 N·m

<Incorrect>

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Inset the attached sheet 3 (4/6 and 5/6)

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<Correct>

OIL CHANGE

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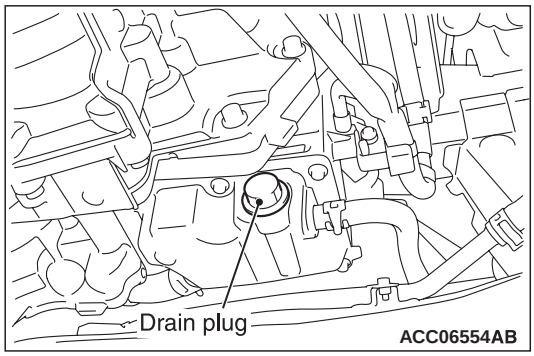
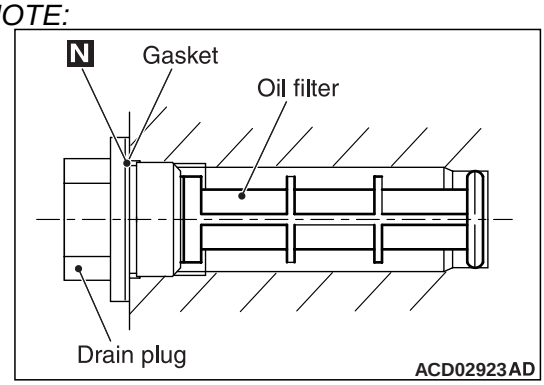


1. Remove the drain plug and the gasket to drain the oil.

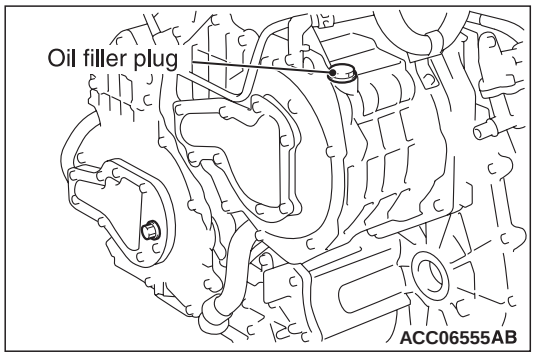
   NOTE:



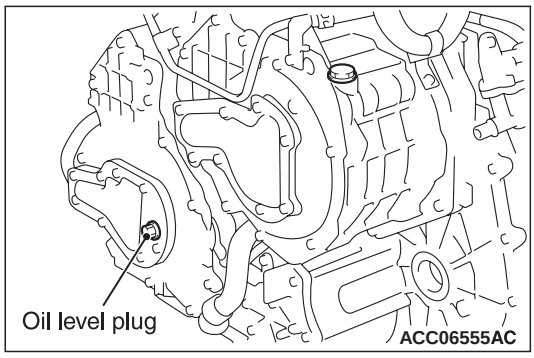
   When you remove the drain plug, check that the oil filter behind it is not clogged or damaged. If necessary, clean or replace the oil filter.

2. Install the drain plug with a new gasket, then tighten them to the specified torque.

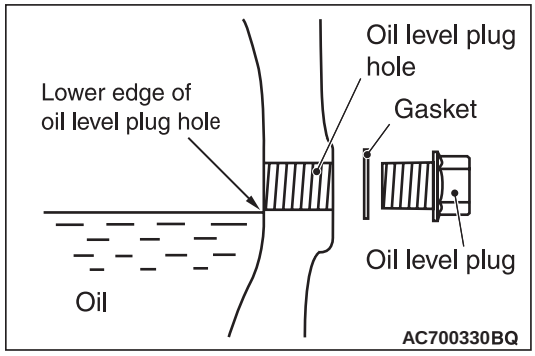
   Tightening torque: 65 ± 5 N·m



3. Remove the oil filler plug and gasket.

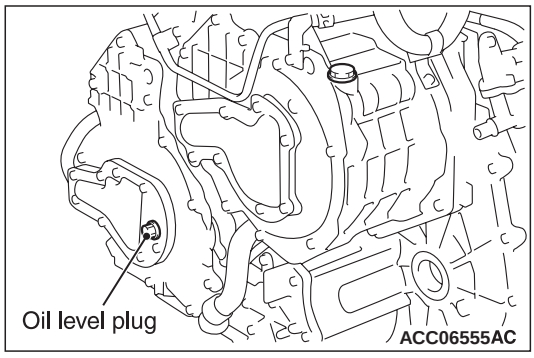


4. Remove the oil level plug and gasket.



5. Fill the oil until the the oil level reaches the lower edge of the oil level plug.

   Recommended oil: MITSUBISHI MOTORS GENUINE CVTF-J4
   Quantity: approx. 1.5 L



6. Install the oil level plug and new gasket, then tighten them to the specified torque.

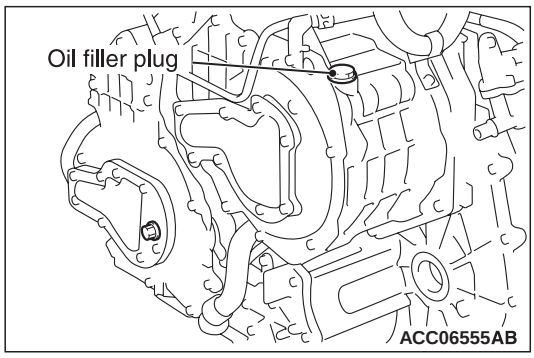
   Tightening torque: 39 ± 2 N·m

<Correct>

Attached sheet 3 (5/6)

⚠ CAUTION

If the EV oil cooler is removed, install the oil level plug and then add the oil of 0.45 litre.



7. Install the oil filler plug and new gasket, then tighten them to the specified torque.

   Tightening torque: 32 ± 2 N·m

Attached sheet 3 (6/6)

EV OIL COOLER

REMOVAL AND INSTALLATION

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⚠ CAUTION

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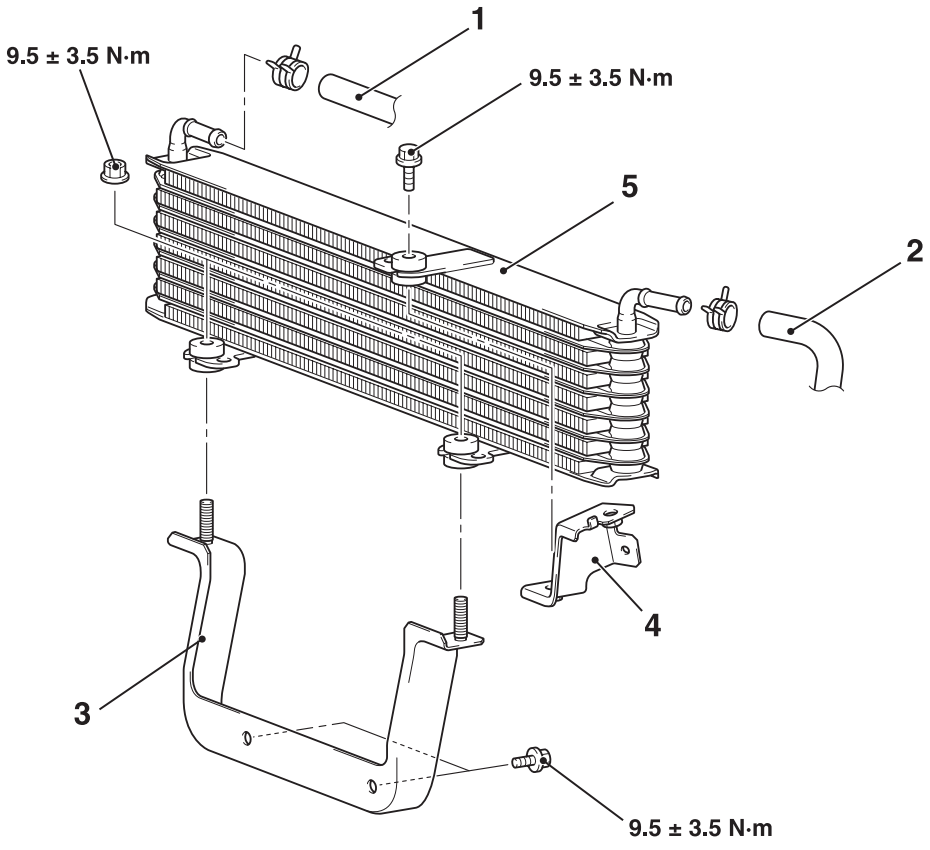
~~**When the EV oil cooler is removed, install the oil level plug and then add the oil of approx. 0.45 dm^3. (The total oil capacity is approx. 2.2 dm^3)**~~

Pre-removal and post-installation operation

- Oil Draining and refilling.
- Headlamp Support Upper Panel Cover and Radiator Grille Removal and Installation (Refer to GROUP 51 – Radiator Grille).
- Latch Cover and Front Bumper Side Reinforcement A Removal and Installation (Refer to GROUP 42A – Loose Panel).
- Hood Latch Removal and Installation (Refer to GROUP 42A – Hood).

<Correct>

If the EV oil cooler is removed, install the oil level plug and then add the oil of 0.45 litre.



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			Removal steps
<<A>>	>>A<<	1.	EV oil cooler hose D connection
<<A>>	>>A<<	2.	EV oil cooler hose E connection
		3.	EV oil cooler lower bracket
		4.	EV oil cooler upper bracket
		5.	EV oil cooler