

2008 Lexus LS 600h V8-5.0L (2UR-FSE) Hybrid

Vehicle > Maintenance > Fluids > Fluid - CVT > Service and Repair > Procedures > L110F Hybrid Transmission

FLUID - ADJUSTMENT [04/2007 -]

L110F HYBRID TRANSMISSION / TRANSAXLE: HYBRID TRANSMISSION FLUID: ADJUSTMENT; 2008 MY LS600H [04/2007 -]

1. BEFORE REFILLING TRANSMISSION

- This transmission requires Toyota Genuine ATF WS.
- After servicing the transmission, you must refill the transmission with the correct amount of fluid.
- If fluid has seeped out or an oil cooler hose has been disconnected, proceed to "FILL TRANSMISSION PAN". If any of the entire transmission, transmission pan, drain plug, transmission wire or oil pressure switches is replaced, proceed to "FILL TRANSMISSION".
- Maintain the vehicle in a horizontal position while adjusting the fluid level.
- If the entire transmission is replaced, proceed to the "PERFORM FLUID CIRCULATION" procedure.

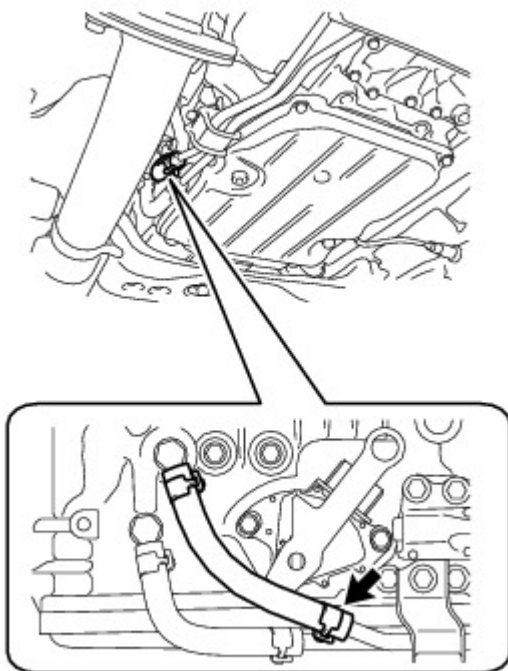
HINT:

New transmissions are already filled with transmission fluid.

2. FILL TRANSMISSION PAN

NOTICE:

- **Fill with ATF while the transmission is at normal operating temperature.**
- **After filling ATF, adjust the fluid level.**
 - a. Lift the vehicle up while keeping the vehicle level.
 - b. Disconnect the oil cooler hose.



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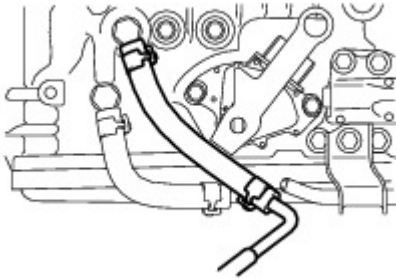
NOTICE:

Do not touch any high temperature parts, such as the exhaust pipe.

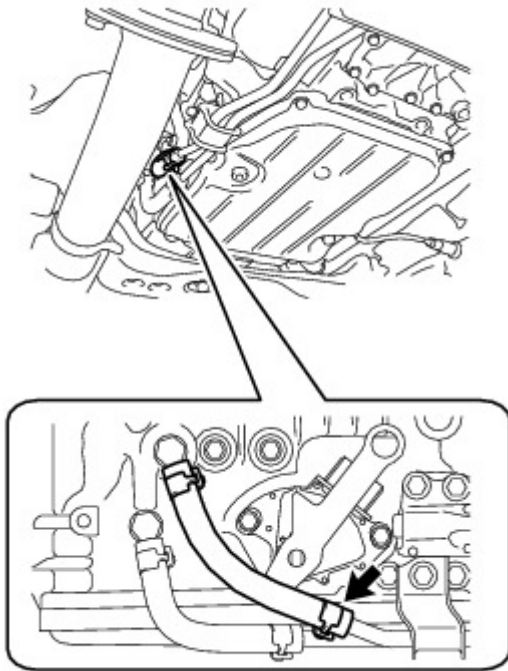
HINT:

Cover the disconnected oil cooler hose with a plastic bag or tape to prevent fluid from dripping.

c. Add fluid until it comes out of the disconnected oil cooler hose.



d. Connect the oil cooler hose.



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NOTICE:

Be sure to adjust the fluid level after adding fluid.

HINT:

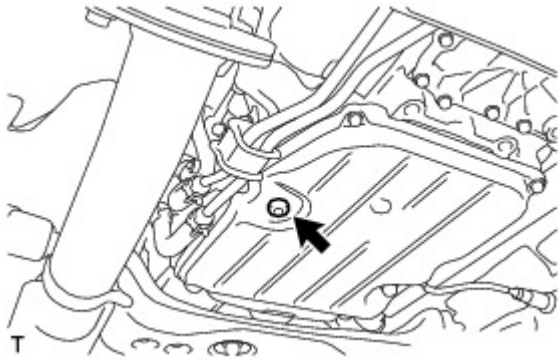
Proceed to "PERFORM FLUID CIRCULATION".

3. FILL TRANSMISSION

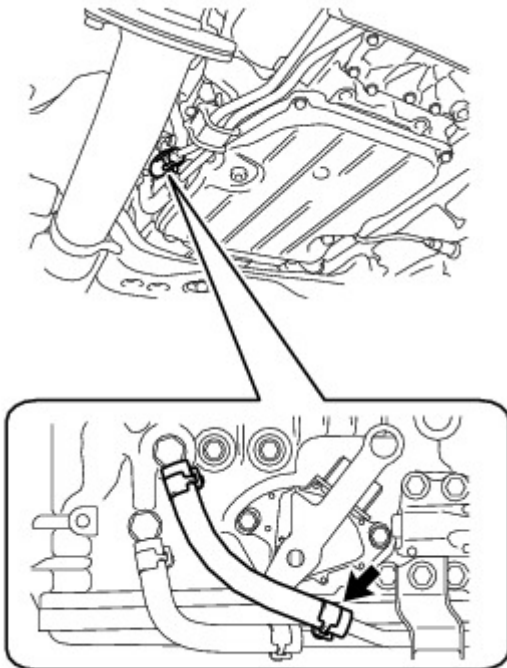
NOTICE:

- o **Fill with ATF while the transmission is at normal operating temperature.**
- o **After filling ATF, adjust the fluid level.**
- a. Lift the vehicle up while keeping the vehicle level.

b. Remove the overflow plug.



c. Disconnect the oil cooler hose.



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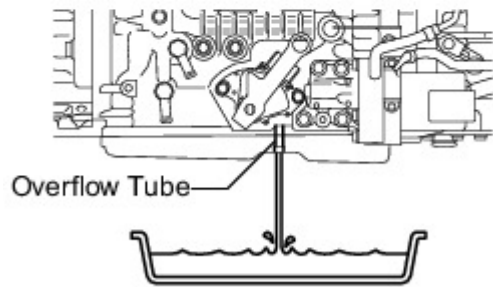
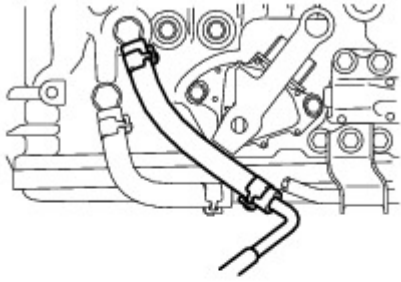
NOTICE:

Do not touch any high temperature parts, such as the exhaust pipe.

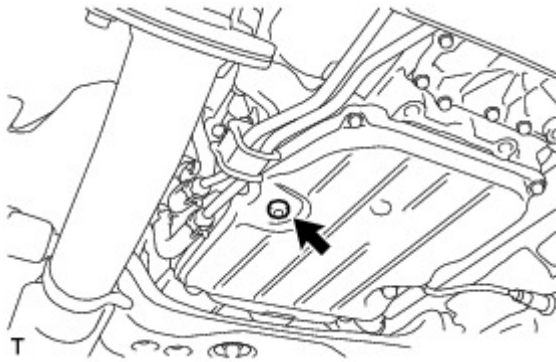
HINT:

Cover the disconnected oil cooler hose with a plastic bag or tape to prevent fluid from dripping.

d. Add fluid to the disconnected oil cooler hose until fluid comes out of the overflow tube.



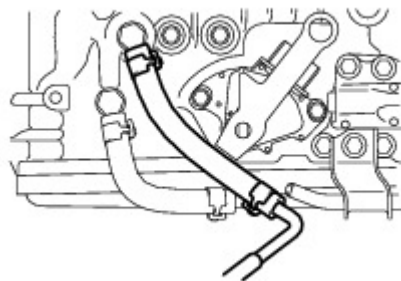
e. Reinstall the overflow plug.



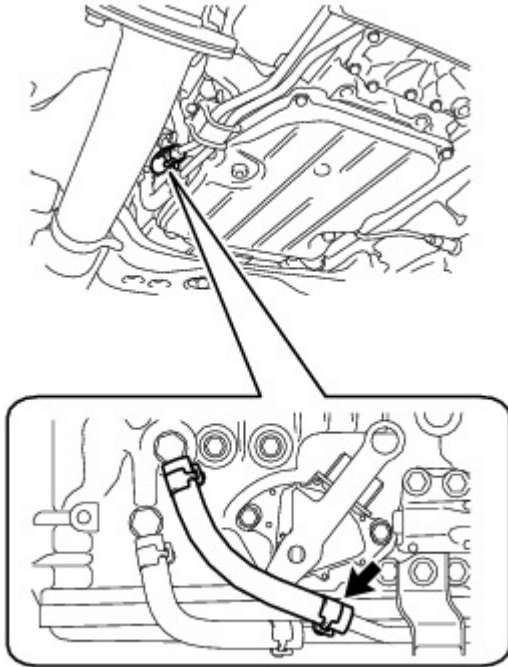
HINT:

The overflow plug will be removed again later. Therefore, reuse the gasket at this step.

f. Add 1.1 liters (1.2 US qts, 1.0 Imp qts.) of ATF to the disconnected oil cooler hose.



g. Connect the oil cooler hose.



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NOTICE:

Be sure to adjust the fluid level after adding fluid.

4. PERFORM FLUID CIRCULATION

- a. Allow the engine to idle with the air conditioning OFF.
- b. Move the shift lever through the entire gear range to circulate fluid.
- c. Select the following menu items: Powertrain / Hybrid Control / Data List / T/M Oil Temperature and Line Pressure
- d. Check T/M Oil Temperature and Line Pressure.
- e. Before adjusting the fluid amount, make sure that Line Pressure is OFF with the power switch on (READY).

Standard:

Line Pressure: OFF

NOTICE:

- **If Line Pressure is ON, the fluid amount cannot be adjusted accurately.**
- **If Line Pressure is still ON even after the power switch has been turned to on (READY), troubleshoot the system in accordance with the output DTC. Adjust the fluid amount only after making sure that Line Pressure is OFF.**

- f. After adjusting the fluid amount, make sure that Line Pressure remains OFF with the power switch on (READY).

Standard:

Line Pressure: OFF

NOTICE:

- **If Line Pressure is ON, the fluid amount has not been adjusted accurately.**
- **Turn the power switch to on (READY) or troubleshoot the system in accordance with the output DTC. Then adjust the fluid amount only after making sure that Line Pressure is OFF.**

- g. Allow the engine to idle until the fluid temperature reaches 30°C (86°F).

HINT:

The fluid temperature should be less than 40°C (104°F) before starting the hybrid system.

5. CHECK FLUID LEVEL

NOTICE:

- **Make sure that Line Pressure is OFF.**
 - **If Line Pressure is ON, the fluid amount cannot be adjusted accurately.**
 - **After adjusting the fluid amount, make sure that Line Pressure remains OFF with the power switch on (READY).**
 - **Do not touch any high temperature parts, such as the exhaust pipe, during the fluid level check. This is because the fluid level check is performed with the power switch on (READY).**
 - **If turning the power switch on (READY) while the vehicle is lifted up, be sure to connect terminals 11 (OPA) and 4 (CG) of the DLC3. After performing the fluid level check, turn the power switch off or lower the vehicle down to the ground, and then disconnect the terminals.**
- a. Connect the Techstream to the DLC3.
 - b. Turn the power switch on (READY).
 - c. Turn the Techstream ON.
 - d. Select the following menu items: Powertrain / Hybrid Control / Data List / Line Pressure.
 - e. Check Line Pressure.

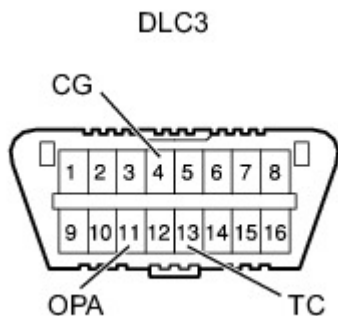
Standard:

Line Pressure: OFF

NOTICE:

- **Make sure that Line Pressure is OFF.**
- **If Line Pressure is ON, the fluid amount cannot be adjusted accurately.**
- **If Line Pressure is still ON even after the power switch has been turned to on (READY), troubleshoot the system in accordance with the output DTC. Adjust the fluid amount only after making sure that Line Pressure is OFF.**

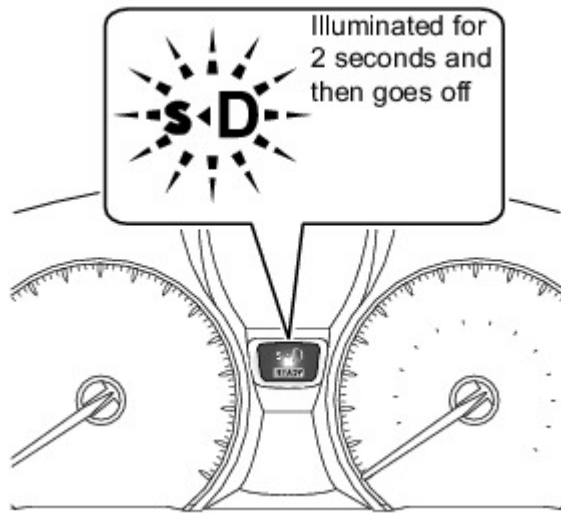
- f. Turn the power switch off.
- g. Disconnect the Techstream to the DLC3.
- h. Using SST, connect terminals 13 (TC), 11 (OPA) and 4 (CG) of the DLC3.



P

SST : 09843-18040

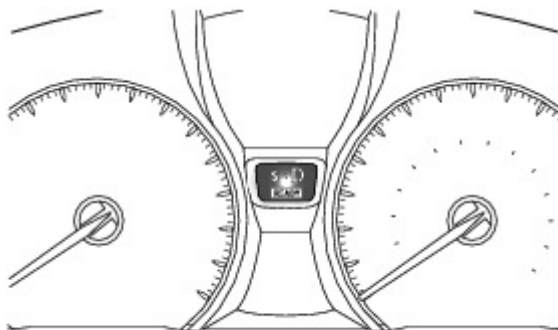
- i. Turn the power switch on (READY).
- j. Move the shift lever to the D position, and quickly move it back and forth between N and D at an interval of 1.5 seconds for 6 seconds or more. This will activate the fluid temperature detection mode.



Standard:

The indicator light (D) remains illuminated for 2 seconds and then goes off.

- k. Return the shift lever to the P position and disconnect terminal 13 (TC).
- l. Idle the engine to raise the temperature of the ATF.
- m. When the indicator light (D) turns on, lift the vehicle up immediately.



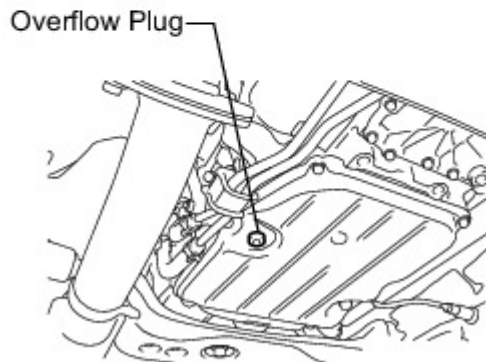
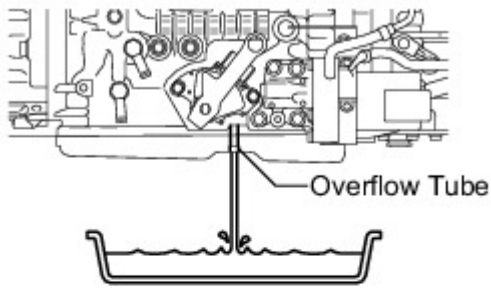
The ATF temperature range is indicated by the indicator light (D) as shown below:

Below Normal Operating Temperature	Normal Operating Temperature	Above Normal Operating Temperature
OFF	ON	Blinking

NOTICE:

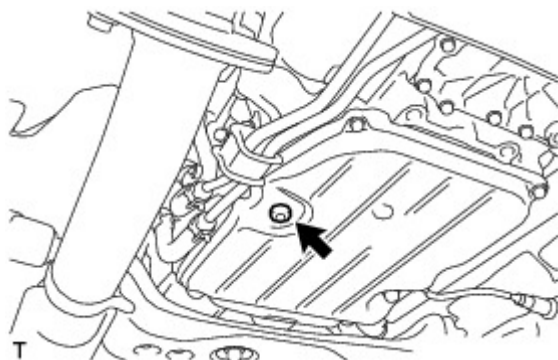
Perform fluid level inspection while the indicator light is on.

- n. Remove the overflow plug. At the proper fluid inspection temperature, check the fluid amount.



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- If the ATF flows from the overflow tube and the ATF flows in a thin stream, the fluid amount is normal.
 o. Install a new gasket and the overflow plug.



Torque : 20 Nm (204 kgf-cm, 15 ft-lbf)

- p. Install the front center floor cover . [**2UR-FSE ENGINE MECHANICAL: ENGINE ASSEMBLY: INSTALLATION+**]
 q. Lower the vehicle.

- r. Disconnect SST from terminals 11 (OPA) and 4 (CG) of the DLC3.

SST : 09843-18040

NOTICE:

Make sure that the vehicle is fully lowered with all 4 tires on the ground when disconnecting SST from terminals 11 (OPA) and 4 (CG) of the DLC3.

- s. Connect the Techstream to the DLC3.

- t. Turn the Techstream ON.

- u. Select the following menu items: Powertrain / Hybrid Control / Data List / Line Pressure.

- v. Check Line Pressure.

Standard:

Line Pressure: OFF

NOTICE:

- **Make sure that Line Pressure is OFF.**
- **If Line Pressure is ON, the fluid amount cannot be adjusted accurately.**
- **Turn the power switch to on (READY) or troubleshoot the system in accordance with the output DTC. Then adjust the fluid amount only after making sure that Line Pressure is OFF.**

w. Turn the power switch off.

x. Disconnect the Techstream to the DLC3.