	GROUP	NUMBER
Technical Service Bulletin	**AUTOMATIC TRANSMISSION**	**17-AT-001-1-G**
	DATE	**MODEL(S)**
	DECEMBER, 2017	**GENESIS G80 (DH) GENESIS G90 (HI)**

SUBJECT:	AUTOMATIC TRANSMISSION SOLENOID DTC P0741, P0743, P0748, P0753, P0758, P075A, P075D, P0763, P0768, P076A, P07B5, P076D, P0773, P0785, P078A, P0995 & P2709

This TSB supersedes TSB 17-AT-001-G to add the procedure for solenoid pressure characteristics input (Steps 10 and 28).

Description: When servicing a vehicle with a “Check Engine light” with any of the DTCs listed below, follow the Service Procedure and replace the related solenoid and E-module or park position switch.

Applicable Vehicles:

2017~ Genesis G80 (DH) 3.3L/5.0L with Shift-by-Wire (SBW)
2017~ Genesis G90 (HI) 3.3L/5.0L with Shift-by-Wire (SBW)

DTC LIST & SOLENOID AND E-MODULE INFORMATION:

DTC		DESCRIPTION	PNC	PART NO.
P0741	P074100	Torque converter clutch circuit performance or stuck off	46202A	46313-3B01*
P0743	P074300	Torque Converter Clutch Circuit Electrical (TC)	46202A	46313-3B01*
P0748	P074800	Line Pressure Control Solenoid Valve A Electrical (LP)	46313A	46313-3B60*
P0753	P075300	Shift Control Solenoid Valve A Electrical (UD)	46313	46313-4J10*
P0758	P075800	Shift Control Solenoid Valve B Electrical (6)	46313	46313-4J10*
P075A	P075A00	ON/OFF Solenoid Circuit (Park – SBC)	46313D	46313-3B03*
P075D	P075D00	ON/OFF Solenoid D (PRH) – Electrical)	46313D	46313-3B03*
P0763	P076300	Shift Control Solenoid Valve C Electrical (35R)	46313E	46313-4J20*
P0768	P076800	Shift Control Solenoid D (4&OD)	46313E	46313-4J20*
P076D	P076D00	ON/OFF Solenoid C (Park - SBW)	46313D	46313-3B03*
P0773	P077300	Shift Control Solenoid Valve E Electrical (27)	46313	46313-4J10*
P0785	P078500	ON/OFF Solenoid A (Drive – SBW)	46313D	46313-3B03*
P078A	P078A00	ON/OFF Solenoid B (Reverse – SBW)	46313D	46313-3B03*
P2709	P270900	Shift Control Solenoid Valve F Electrical (8LR)	46313	46313-4J10*
All	All	E-Module	46305C	46305-4****

PARK POSITION SWITCH DTC & PARTS INFORMATION:

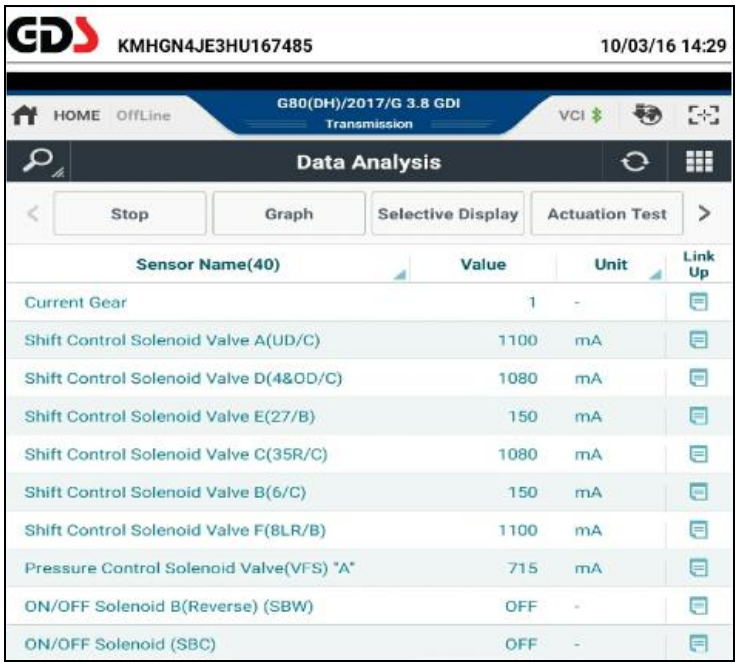
DTC		DESCRIPTION	PNC	PART NO.
P076A	P076A00	SBW Park System Fault – (SBW)	42700E	42700-4J50*
P07B5	P07B500	Park Position Sensor Circuit Low	42700E	42700-4J50*
P0995	P099500	Auto Shift Manual Mode Circuit (SBC)	46700E	46700-B1***

WARRANTY INFORMATION:

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
2017~ Genesis G80 (DH) 2017~ Genesis G90 (HI)	45775R8T	Solenoid valve assy.	Refer to WEBLTS for current LTS time	Refer to parts catalog	13A	ZZ3
	42700R00	Park position switch			13A	ZZ3

SERVICE PROCEDURE:

1. Attach a GDS and select **DTC Analysis** and **A/T** menu. Record the DTC and description. Delete the DTC.
2. From the GDS home screen, select **Data Analysis** and **A/T** menu and the solenoid parameters shown below. If the solenoids show:
   - Continuous and changing output while driving, the wiring **currently** has no open/short circuits. Go to Step 4.
   - No continuous and changing output, go to Step 3.

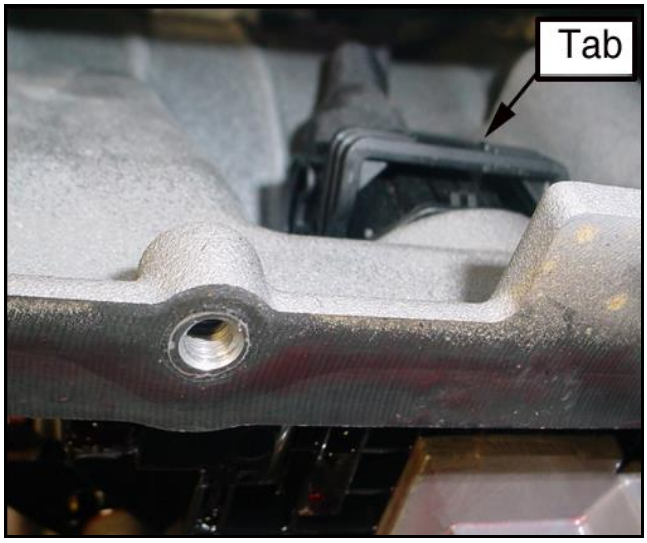


3. Visually check the wiring harness between the TCM and transmission for a damaged wire or connector. Check for an open/short circuit.
   - If so, repair or replace the ECM control harness and drive the vehicle to confirm the repair.
   - If no damage is found, go to Step 4.
4. Record the audio preset stations and disconnect the negative battery terminal.
5. Locate the harness connector on the passenger side of the transmission.

   Press the tab in the center of the latch and push the latch upward.

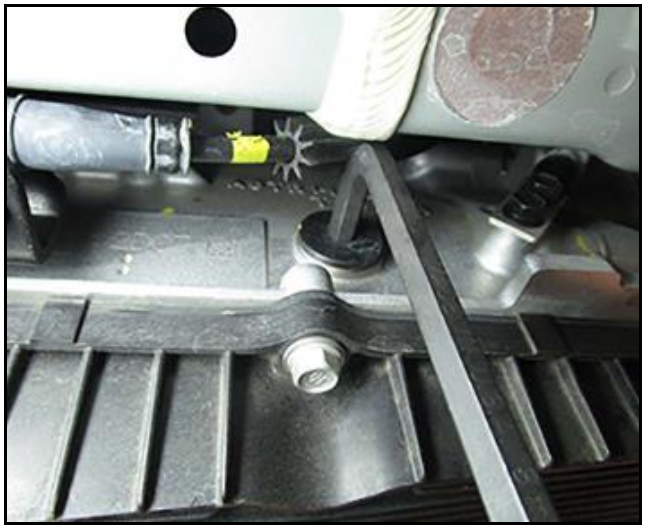
   Push the connector up to disconnect the connector from the valve body.

   To gain better access to the connector, place a support under the rear transmission support, loosen the bolts about ½ inch and lower the support about ½ inch.



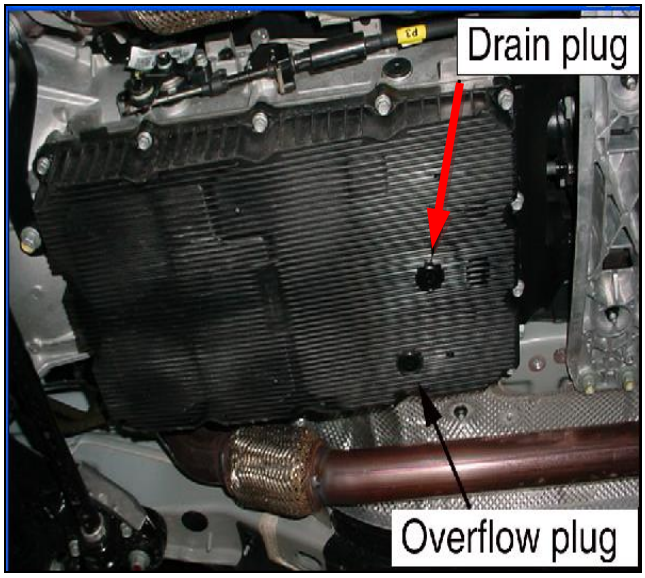
6. Use an 8mm or 5/16” hex wrench and remove the fill plug.

   Torque: 17~18 lb.ft (2.3~2.5 kgf.m, 22~24 N.m)



7. Use an 8mm or 5/16” hex socket and remove the drain plug and drain the ATF. Reinstall the drain plug.

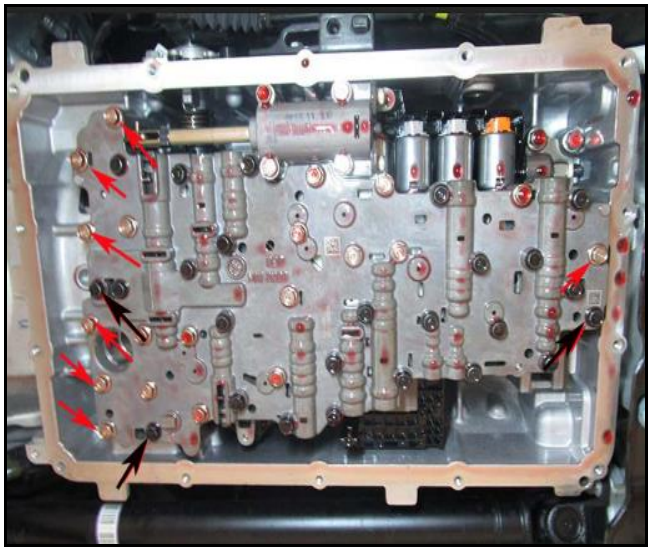
   Torque: 17~18 lb.ft (2.3~2.5 kgf.m, 22~24 N.m)



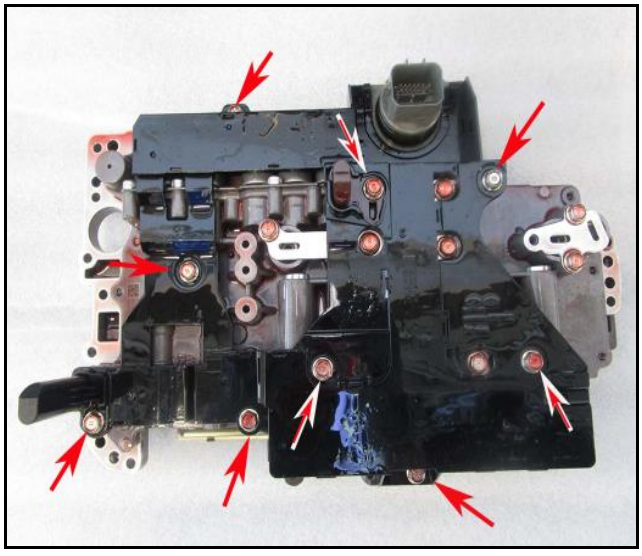
8. Remove 10 bolts that secure the valve body to the case and remove the valve body.

   Note the location of the 3 black bolts (shown with black arrow).

   If the valve body is stuck in the transmission, insert a screwdriver between the valve body and case and carefully pull the valve body out of the transmission.



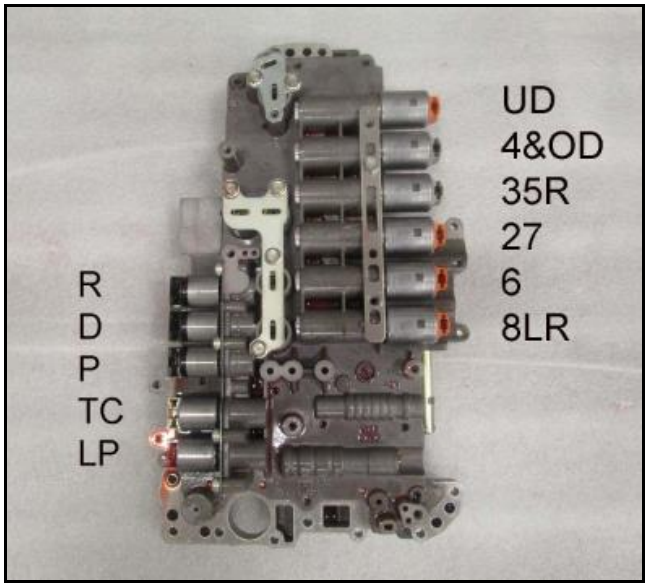
9. Remove 9 bolts and remove the E-module.



10. Record the 8-digit solenoid pressure characteristics before installing the solenoid.

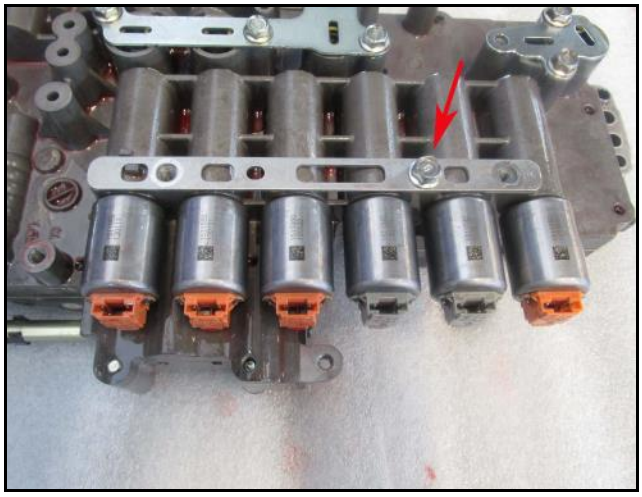
11. Refer to the solenoid DTC recorded in Step 1 and replace the related solenoid.

DTC	SOLENOID	PNC
P0753	UD	46313
P0768	4&OD	46313E
P0763	35R	46313E
P0773	27	46313
P0758	6	46313
P2709	8LR	46313
P078A	R	46313D
P0785	D	46313D
P076D	P	36313D
P0743	TC	46202A
P0748	LP	46313A



12. **For UD, 4&OD, 35R, 27, 6 and 8LR solenoids:**

    Remove one bolt and remove the solenoid support.

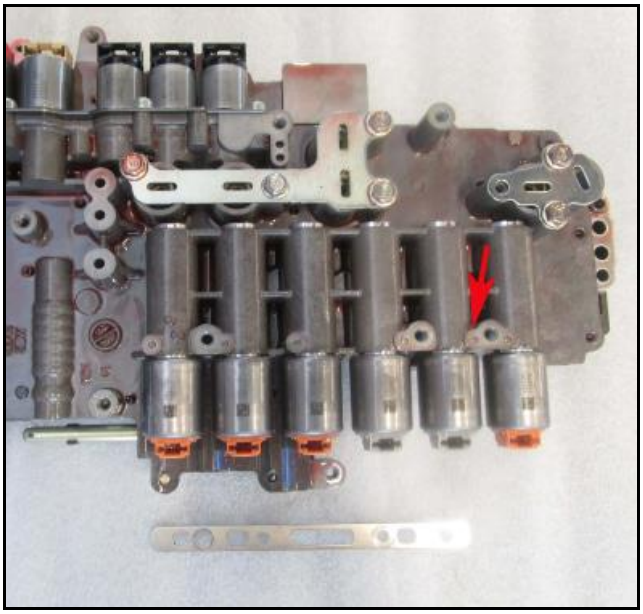


13. Use a magnet to remove the pin that secures the affected solenoid.

    Pull out the affected solenoid and install the new solenoid.

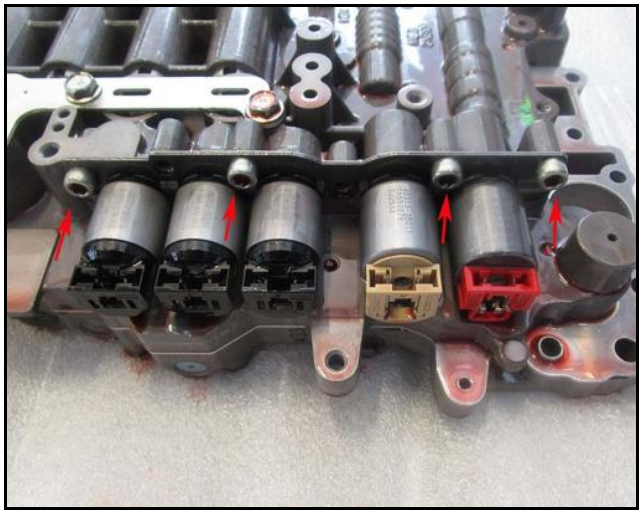
    Reinstall the pin.

    Reinstall the solenoid support using one bolt.



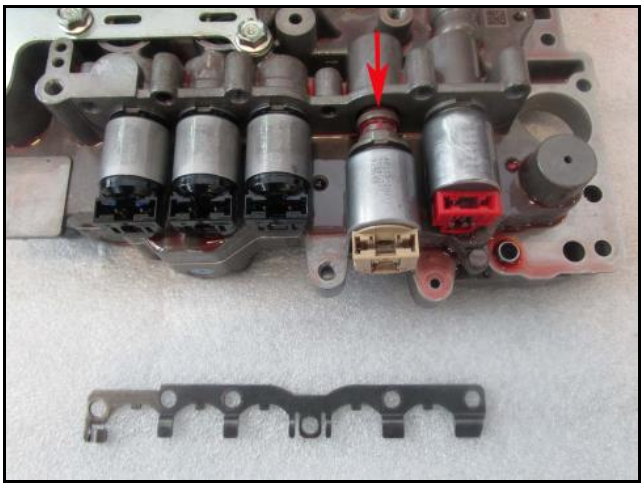
14. **For R, D, P, TC and LP solenoids**:

    Use a 5mm hex wrench or socket to remove 4 bolts that secure the support to the valve body and remove the support.



15. Pull out the related solenoid and install a new solenoid.

    Reinstall the support.

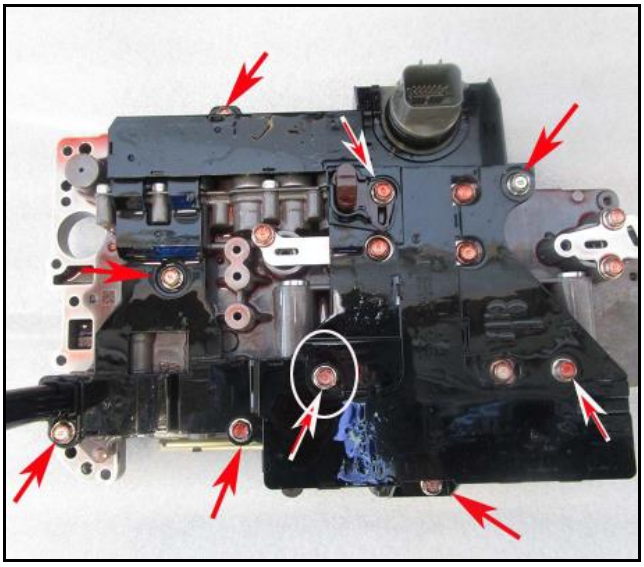


16. Install a <u>new</u> E-module.

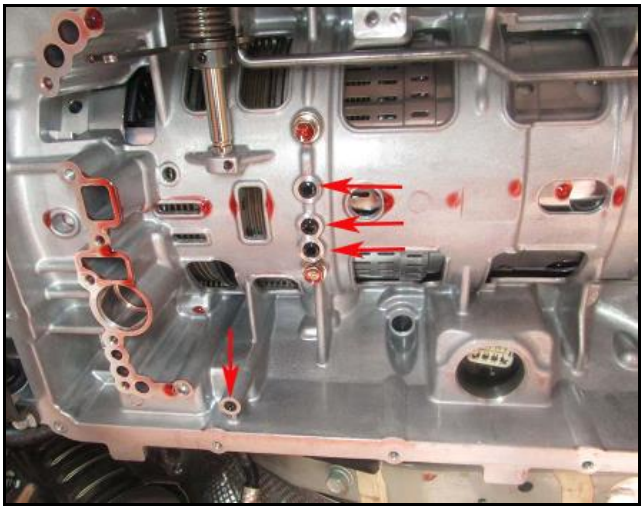
    Install 9 bolts and torque to specification.

    NOTE: Install the short bolt in the location shown in the circle.

    Torque: 7~9 lb.ft (1.0~1.2 kgf.m, 10~12 N.m)



17. Confirm that 4 O-rings are seated in the case.



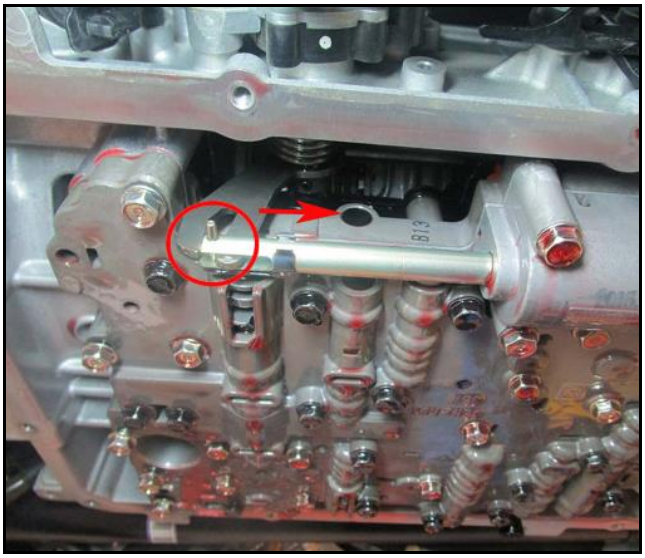
18. Place the valve body on a transmission jack.

    Rotate the park switch counter-clockwise and carefully raise the valve body and insert the manual valve into the shift lever.

    Install the valve body fully into the transmission case.

NOTICE

Confirm the manual valve pin faces outward from the valve body.



19. Install 3 black bolts in the locations shown (black arrow).

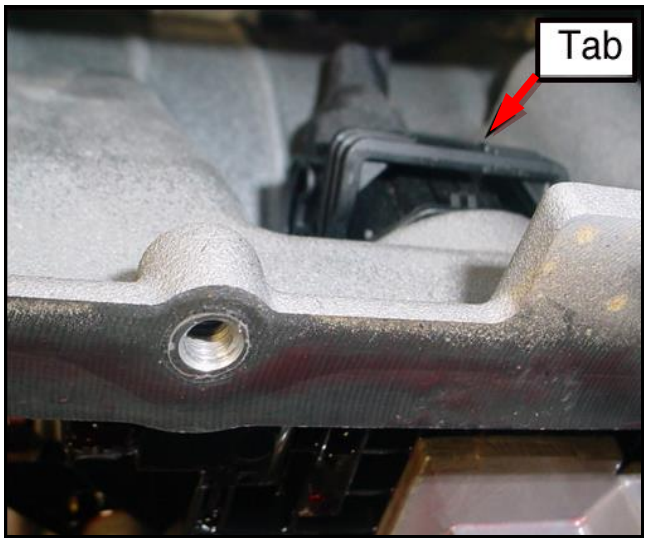
    Install 7 brass bolts in the location shown (red arrows).

    Torque the bolts to specification.

    Torque: 7~9 lb.ft (1.0~1.2 kgf.m, 10~12 N.m)

20. Use a 90° pick or similar tool to pull the connector down into position on the valve body.

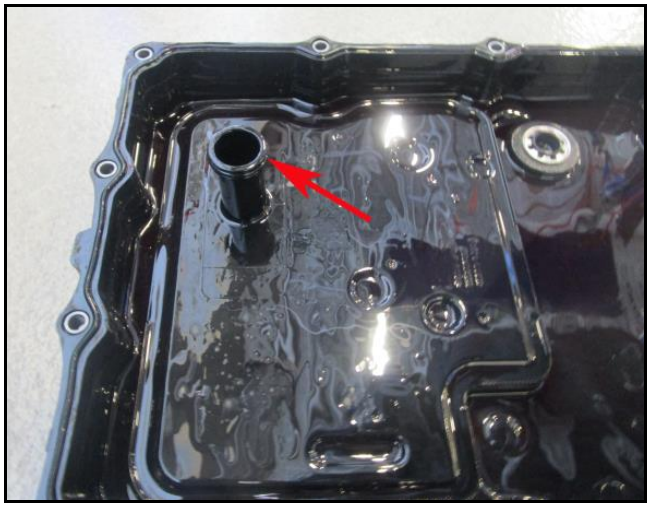
    Pull the latch down until it clicks into the tab.



21. Confirm the O-ring is installed at the location shown.

    Reinstall the valve body cover and torque to specification.

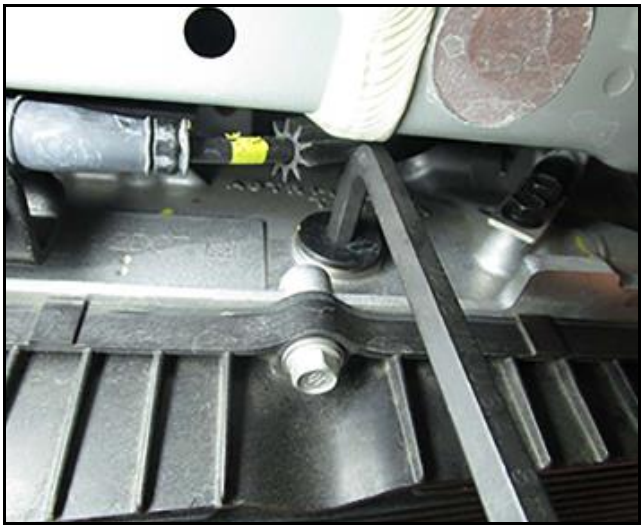
    Torque: 10~12 lb.ft (1.4~1.6 kgf.m, 14~16 N.m)



22. Reconnect the negative battery terminal. Reset the audio preset stations.

23. With the engine off, lift the vehicle on a hoist.

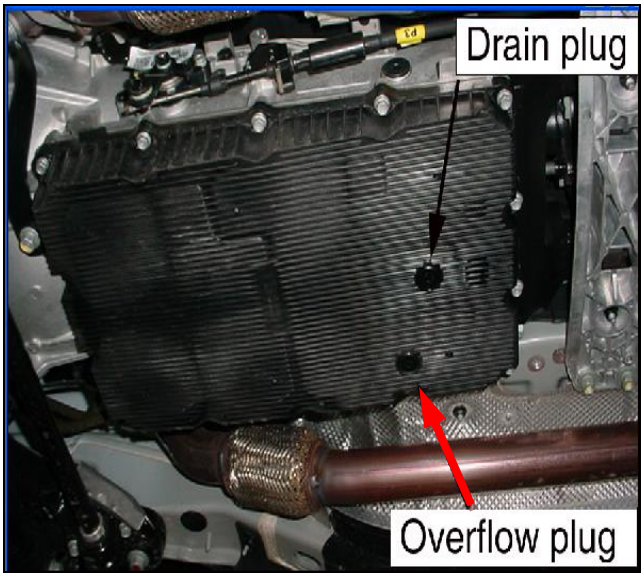
    Use an 8mm or 5/16" hex socket and remove the fill plug and washer.



24. Remove the overflow plug.

    Use a fluid pump or suction gun to add **SPH-IV-RR** ATF through the fill plug until ATF flows from the overflow plug.

    Reinstall the fill plug and overflow plug.



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> ***NOTICE***
>
> **Use only SPH-IV-RR ATF, P/N 00232-19052.**

25. Attach a GDS and select vehicle, **Data Analysis, A/T** menu and **Oil Temperature Sensor**.

    Move the shift lever from P-R-D and back to P. Drive the vehicle until the ATF is at the low end of the range of 122~140°F (50~60°C).

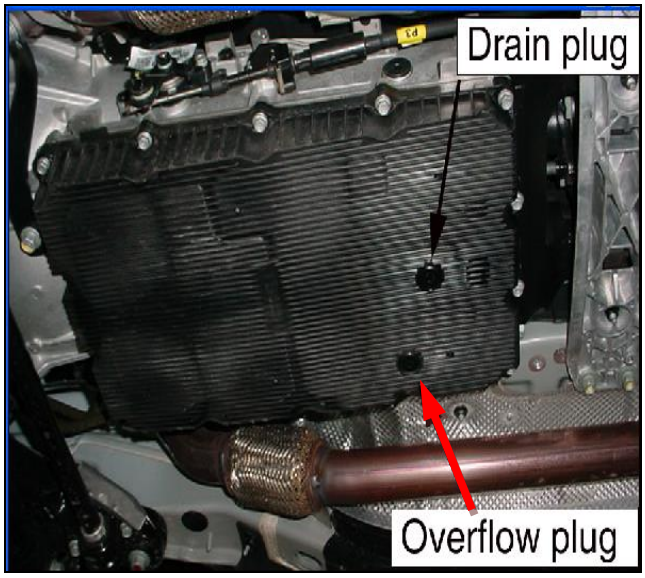
26. Start the engine, shift to Neutral and raise the vehicle on a hoist.

    Remove the fill plug and overflow plug.

    Add SPH-IV-**RR** ATF through the fill plug until the ATF flows out the overflow.

    Reinstall the overflow plug.
    Torque: 16~18 lb-ft (2.3~2.5 kgf.m, 21~24 N.m)

    Reinstall the fill plug and washer.
    Torque: 27~33 lb.ft (3.7~4.6 kgf.m, 33~44 N.m)



ATF TEMPERATURE = 122~140°F (50~60°C)
SHIFT LEVER IN "P" AND ENGINE RUNNING

27. If the shift cable was moved to add ATF:

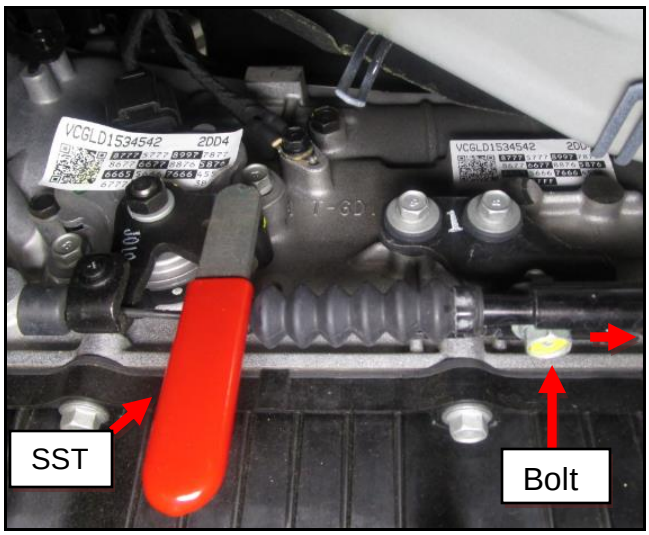
    Install the SST (09480-D2100) or 5mm bolt in the alignment hole of the park position switch.

    Loosen the adjustment bolt shown.

    Slide the adjustment bracket rearward to remove the slack in the park cable.

    Tighten the bolt to specification.

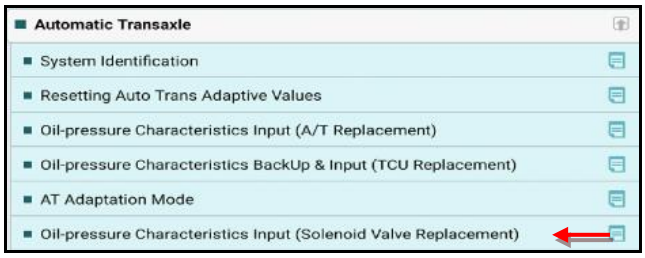
    Torque: 7~8 lb-ft (0.9~1.0 kgf.m, 9~10 N.m)



28. Attach a GDS and select **S/W Management**, **Automatic Transaxle** and **Oil Pressure Characteristics Input (Solenoid Valve Replacement).** Select **OK**.

    Confirm the instructions and select **OK**.

    Follow the prompts and input the pressure characteristics from Step 10.



29. Test drive the vehicle for two driving cycles (two key-on to key-off driving cycles, including 1-2-3-4-5-6-7-8 upshifts and 8-7-6-5-4-3-2-1 downshifts). If the solenoid DTC returns, perform the following repairs:

DTC		SOLENOID DTC REPAIR PROCEDURE
P0741	P074100	• Replace the transmission
P0743	P074300	• Replace the control wiring harness between the TCM and transmission. ➢ If the solenoid DTC does not occur again, return the vehicle to the customer. ➢ If the solenoid DTC returns again, replace the TCM.
P0748	P074800	
P0753	P075300	
P0758	P075800	
P075A	P075A00	
P075D	P075D00	
P0763	P076300	
P0768	P076800	
P076D	P076D00	
P0773	P077300	
P0785	P078500	
P078A	P078A00	
P2709	P270900	

DTC		PARK POSITION SWITCH DTC REPAIR PROCEDURE
P076A P07B5 P0995	P076A00 P07B500 P099500	Refer to the G80 or G90 Shop Manual for the related DTC and follow the repair diagnosis for **Wiring Inspection** and **ETM**.

30. Clear DTC in the BlueLink system per instructions of TSB 12-BE-005-2.

31. Drive the vehicle to confirm the proper operation of the transmission.