 HYUNDAI NEW THINKING. NEW POSSIBILITIES. Technical Service Bulletin	GROUP	NUMBER
	AUTOMATIC TRANSMISSION	13-AT-002-1
	DATE	MODEL
	MAY 2013	GENESIS SEDAN (BH) GENESIS COUPE (BK) EQUUS (VI)

SUBJECT: **AUTOMATIC TRANSMISSION**
SOLENOID & SENSOR DTC P0741, P0743, P0748, P0753, P0758, P075A, P0763, P0768, P0773, P2709 & P0841

This TSB supersedes TSB 13-AT-002 to revise the Op Time for the pressure switch replacement.

Description: The Genesis Sedan, Genesis Coupe and Equus are equipped with an 8-speed transmission. Do not replace the transmission for the DTC listed below. Instead, follow the repair procedure and replace the related part.

Applicable Vehicles:

2012 MY ~ Genesis Sedan 3.8L/4.6L/5.0L
 2013 MY ~ Genesis Coupe 2.0L/3.8L
 2012 MY~ Equus 4.6L/5.0L

DTC LIST & PARTS INFORMATION:

DTC	DESCRIPTION	PNC	PART NO.
P0741	Torque converter clutch circuit performance or stuck off	45000	Parts catalog
P0743	Torque Converter Clutch Circuit Electrical	46202A	46313-3B010
P0748	Pressure Control Solenoid Valve(VFS) A Electrical	46313A	46313-4E510
P0753	Shift Control Solenoid Valve 'A' Electrical (UD/B)	46313	46313-4E500
P0758	Shift Control Solenoid Valve 'B' Electrical (2-6/B)	46313	46313-4E500
P075A	ON/OFF Solenoid	46313D	46313-3B030
P0763	Shift Control Solenoid Valve 'C' Electrical (35R/C)	46313C	46313-4E700
P0768	Shift Control Solenoid Valve 'D' Electrical (OD/C)	46313B	46313-4E600
P0773	Shift Control Solenoid Valve 'E' Electrical (SS-A – 27B)	46313	46313-4E500
P2709	Shift Control Solenoid Valve 'F' Electrical (SS-B)	46313A	46313-4E510
P0841	Transmission Fluid Pressure Sensor/Switch A Circuit	45662D	46306-4E000
All	E-Module – BH 3.8L, BK 2.0L/3.8L	46305C	46305-4F100
	E-Module – BH 4.6L/5.0L, VI 5.0L	46305C	46305-4E100

SUBJECT: AUTOMATIC TRANSMISSION SOLENOID & SENSOR DTC P0741, P0743, P0748, P0753, P0758, P075A, P0763, P0768, P0773, P2709 & P0841

WARRANTY INFORMATION – Solenoid replacement (BH & BK):

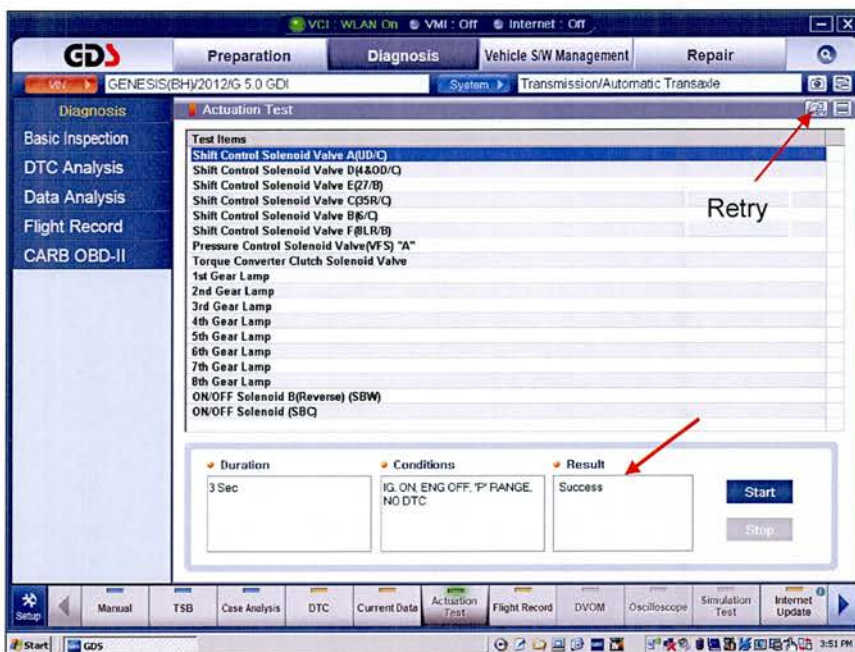
OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
45600R00	Replace valve body assy.	1.4	46200-4E220	N69	C15
45600RQ0	GDS Operation	0.3			

WARRANTY INFORMATION – Pressure switch replacement (BH, BK & VI):

OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
46306R00	Replace pressure switch	2.0	46306-4E000	N69	C15
46306RQ0	GDS Operation	0.3			

SERVICE PROCEDURE:

- Using a GDS, check for DTC in the “Automatic Transaxle” menu. Record the DTC and description. Delete the DTC.
- From the GDS, select the following menus:
 - Vehicle and A/T menu
 - “Actuation Test”
 - Press the “Start” button and look for a “Success” indication and listen for a solenoid operation noise. If necessary, use Chassis Ears or a stethoscope.

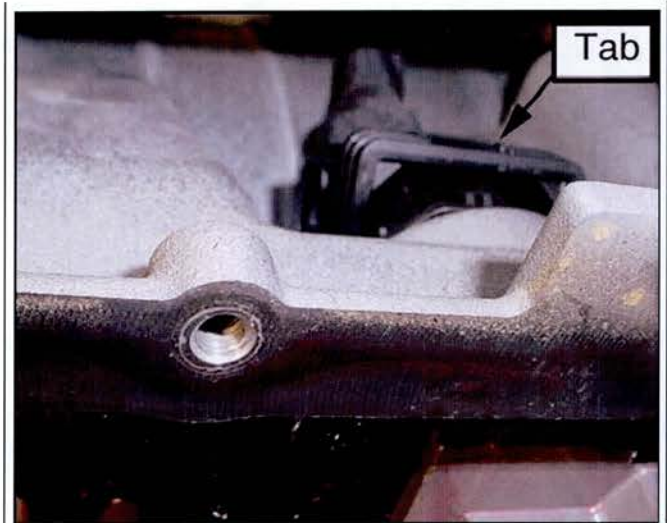


3. If the test results show:
 - “Success” – The GDS requested the TCM to activate the solenoids. Use a stethoscope or Chassis Ears to confirm the solenoid operation. If the solenoids are audible, the harness currently has no open/short circuit. Go to Step 5.
 - “Failure” – The GDS did not request the TCM to activate the solenoids. Click on the “Retry” button on the top right of the screen. If “Failure” is displayed again, go to Step 4.
4. Visually check the wiring harness between the PCM and transmission for a damaged wire or connector. Check for a open/short circuit.
 - If so, repair or replace the ECM control harness and drive the vehicle to confirm the repair.
 - If no damage, go to Step 6.
5. Disconnect the negative battery terminal.

6. Lift the vehicle on a hoist.

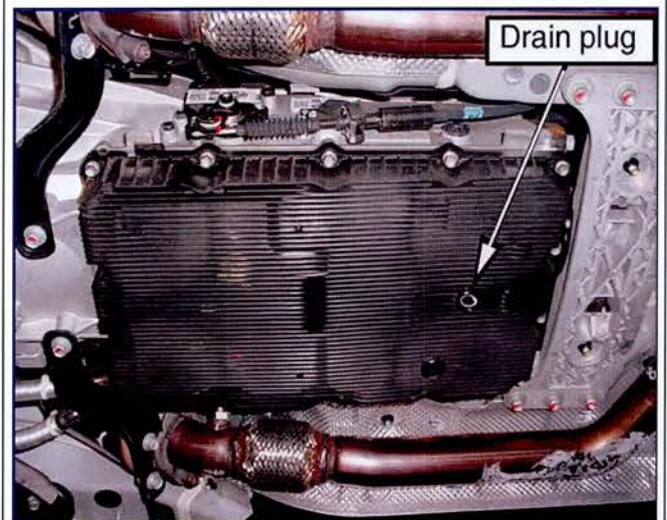
Press the tab in the center of the latch and push the latch upward.

Push the connector up to disconnect the connector.



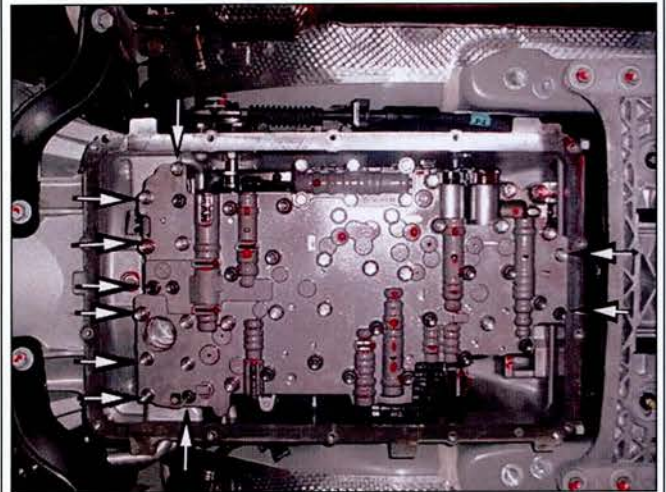
7. Use an 8mm or 5/16” hex socket and remove the drain plug and drain the ATF. Reinstall the drain plug.
Torque: 17~19 lb.ft (2.4~2.6 kgf.m)

Remove the 14 bolts that secure the oil pan and remove the pan.



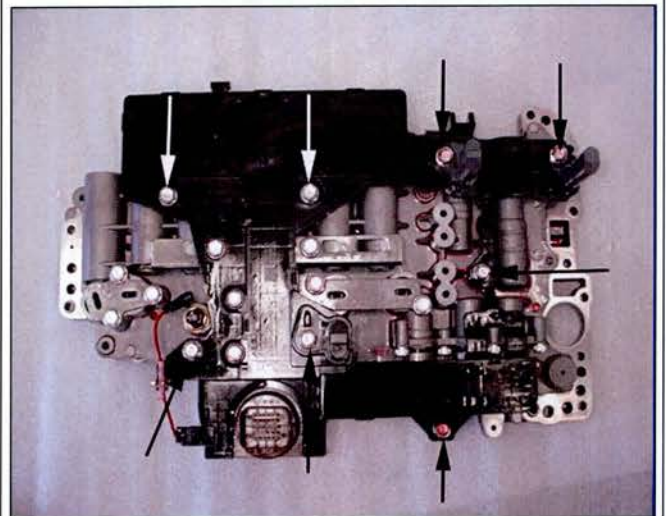
8. Remove the 10 bolts that secure the valve body to the case and remove the valve body.

Note the location of the 3 black long bolts.



9. Remove 8 bolts and remove the E-module. Install a new E-module after solenoid replacement.

Torque: 6~7 lb.ft (0.9~1.0 kgf.m)

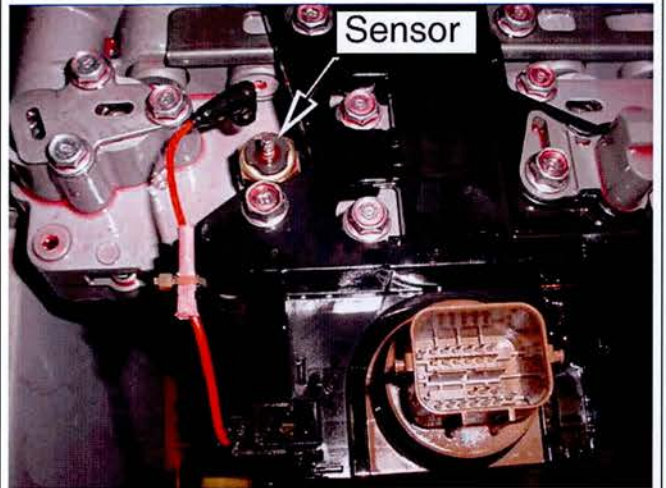


10. **P0841 only:**

If P0841 was recorded in Step 1, disconnect the connector and replace the pressure switch, P/N 46306-4E000. Reconnect the connector.

Torque: 3~4 lb.ft (0.4~0.5 kgf.m)

If P0841 was not recorded, go to Step 11.



SUBJECT: AUTOMATIC TRANSMISSION SOLENOID & SENSOR DTC P0741, P0743, P0748, P0753, P0758, P075A, P0763, P0768, P0773, P2709 & P0841

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

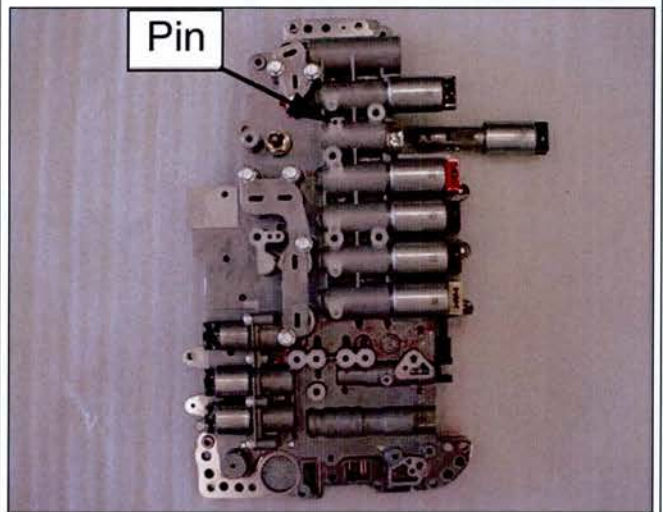
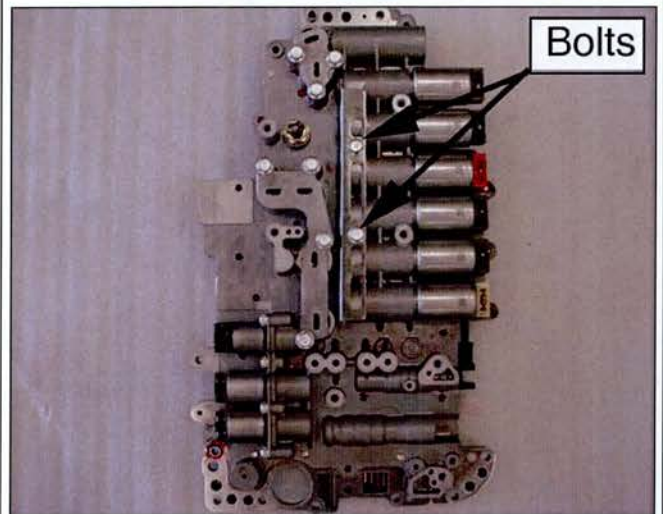
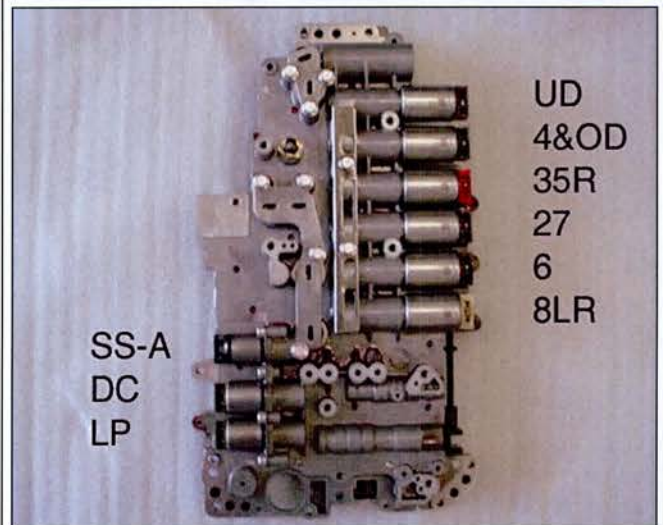
DTC	SOLENOID	PNC
P0753	(A) UD	46313
P0768	(D) 4&OD	46313B
P0763	(C) 35R	46313C
P0773	(E) 27	46313
P0758	(B) 6	46313
P2709	(F) 8LR	46313A
P075A	SS-A	46313D
P0743	DC	46202A
P0748	LP	46313A

12. Remove two bolts and remove the solenoid support.

13. Use a magnet to remove the pin and remove the related solenoid.

Install a new solenoid.

Install the pin and the solenoid support.

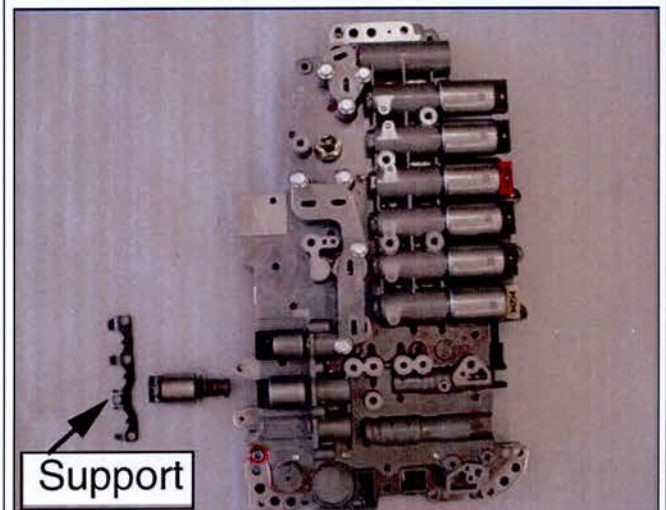


14. Use a 5mm hex socket to remove 4 bolts that secure the support to the valve body and remove the support.

Remove the related solenoid.

Install a new solenoid.

Install the support.



15. Install a new E-module and torque to specification (See Step 9).

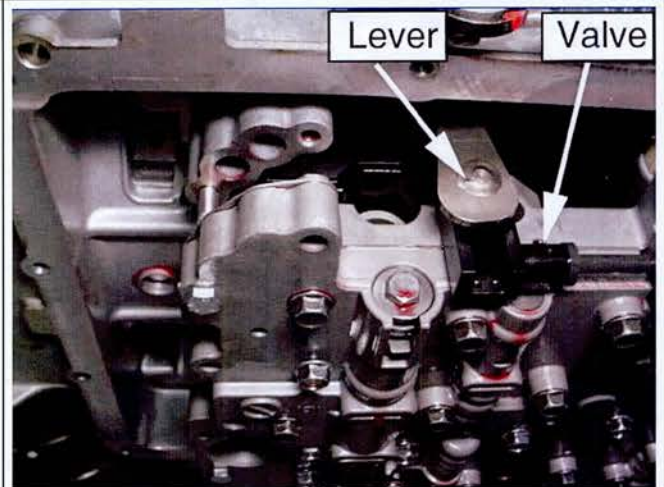
Torque: 6~7 lb.ft (0.9~1.0 kgf.m)

ASSEMBLY

16. Confirm that 5 o-rings are seated in the case.



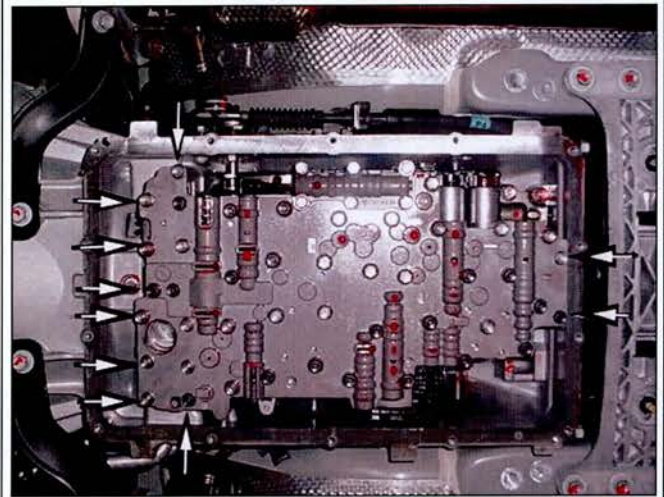
17. Carefully align the manual valve to the shift lever and install the new valve body.



18. Install 10 bolts and torque to specification.

Install the 3 long black bolts in the correct location.

Torque: 7.2~8.7 lb.ft (1.0~1.2 kgf.m)



19. Reconnect the harness connector and pull the latch down until it clicks (See Step 6).
20. Install the oil pan and torque the bolts to specification.
Torque: 10~12 lb.ft (1.4~1.6 kgf.m)
21. Reconnect the negative battery terminal.

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

Shift into Park and lift the vehicle on a hoist.

Use a fluid pump or suction gun to add approximately 4 quarts of SPH-IV-RR ATF through the fill plug.

*** NOTE**

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



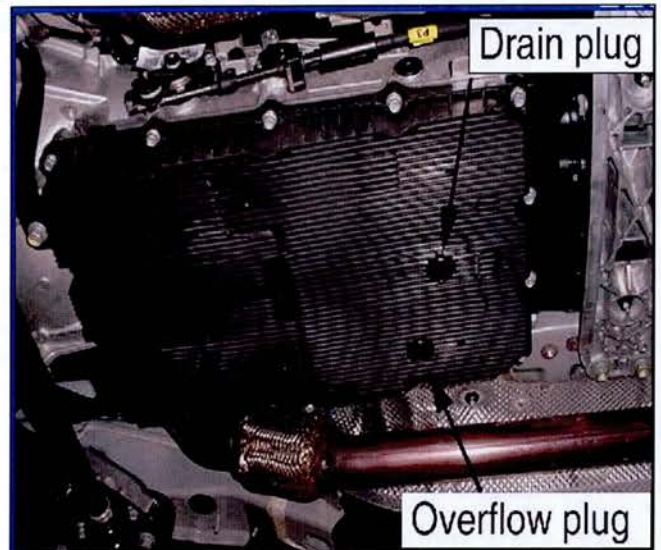
23. Remove the overflow plug.

Start the engine.

Add approximately 4~5 additional quarts of SPH-IV-RR ATF through the fill plug until the ATF flows out in a thin steady stream.

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

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

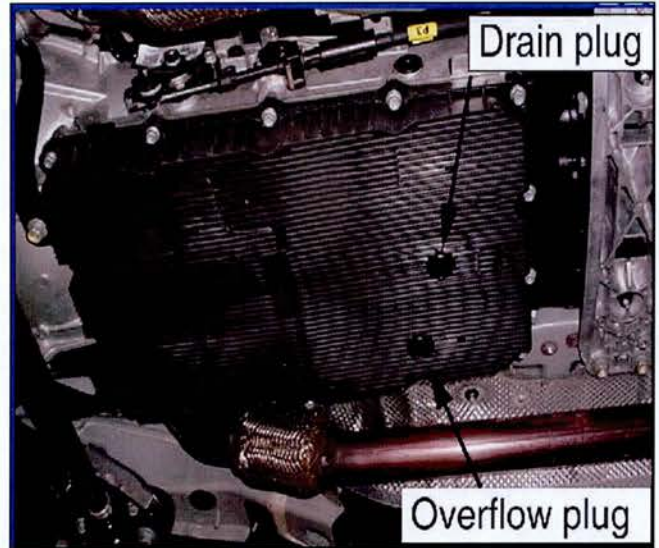


24. Attach a GDS and select vehicle, A/T menu, Current Data and Oil Temperature Sensor.
25. Drive the vehicle until the ATF is at the low end of the range of 122~140°F (50~60°C).

SUBJECT: AUTOMATIC TRANSMISSION SOLENOID & SENSOR DTC P0741, P0743, P0748, P0753, P0758, P075A, P0763, P0768, P0773, P2709 & P0841

26. Move the shift lever to "P" and leave the engine idling. Raise the vehicle on a hoist.

Remove the overflow plug. The ATF level is correct when the ATF flows out in a steady, thin stream.



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

27. Attach a GDS and reset the adaptive learning. Select VIN, A/T menu, "Option Treatment" and "Resetting Auto T/A values. Follow the screen prompts.

Follow TSB 12-AT-017 to relearn the TCM.

Erase any DTC.

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