	GROUP	NUMBER		
HYUNDAI NEW THINKING. NEW POSSIBILITIES.	AUTOMATIC TRANSMISSION	12-AT-015-1		
Technical Service Bulletin	DATE	MODEL		
recifical del vice Dulletin	OCTOBER 2012	GENESIS SEDAN (BH) GENESIS COUPE (BK)		
AUTOMATIC TRANSMISSION SUBJECT: SOLENOID & SENSOR DTC P0741, P0743, P0748, P0753, P0758, P075A, P0763, P0768, P0773, P2709 & P0841				
This TSB supersedes TSB 12-AT-015 to revise the Applicable Vehicles.				
Description: The Genesis Sedan and Genesis Coupe 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

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	46305C	46305-4E100

WARRANTY INFORMATION:

OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
45600R00	Replace valve body assy.	1.4	40000 45000	NGO	015
45600RQ0	GDS Operation	0.3	46200-4E220	1009	015

SERVICE PROCEDURE:

- 1. Using a GDS, check for DTC in the "Automatic Transaxle" menu. Record the DTC and description. Delete the DTC.
- 2. 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.

CARB OBD-II	V2012/G 5.0 GDI Actuation Test Test Items Shift Control Solenoid Valve A Shift Control Solenoid Valve D Shift Control Solenoid Valve C Shift Control Solenoid Valve C Shift Control Solenoid Valve F Pressure Control Solenoid Valve F Tergue Converter Clutch Solen Tel Gear Lamp Zad Gear Lamp	(UD/C) (4800/C) (27/B) (51R/C) (6/C) (81/R/B) (81/R/B) (81/R/B) wei/FS) ⁷ A* noid Valve	Transmission/Automatic T	Transaxle () () 深 ()		
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DTC Analysis Data Analysis Flight Record CARB OBD-II	Shift Control Solenoid Valve A Shift Control Solenoid Valve D Shift Control Solenoid Valve E Shift Control Solenoid Valve B Shift Control Solenoid Valve B Shift Control Solenoid Valve B Shift Control Solenoid Valve T Pressure Converter Clutch Solen 14 Gear Lamp 2nd Gear Lamp	(UD/G) (4&0D/C) (27/8) (5\$R/C) (6/C) (8/RP) vre(VFS) *** noid Valve				
Data Analysis Flight Record CARB OBD-II	Shift Control Solenoid Valve El Shift Control Solenoid Valve El Shift Control Solenoid Valve El Shift Control Solenoid Valve Fl Pressure Control Solenoid Valve Torque Converter Clutch Solen 1st Gear Lamp 2nd Gear Lamp	(27/6) (25/7) (5/7) (6/7) (8/7/6) ve(VFS) "A" noid Valve				
Data Analysis Flight Record CARB OBD-II	Shift Control Solenoid Valve C Shift Control Solenoid Valve Bi Shift Control Solenoid Valve Bi Pressure Control Solenoid Valve Torque Converter Clutch Solen 1st Gear Lamp 2nd Gear Lamp	(258/C) (6/C) (8LR/B) ve(VFS) "A" ioid Valve				
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- 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 <u>currently</u> has no open/short circuit. Go to Step 5.
 - "Failure" The GDS did not request the TCM to activate the solenoids. 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.

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

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

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.



Tab

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, replace the:

- Pressure switch, P/N 46306-4E000
- E-Module, P/N 46305-4E100 or 46305-4F100 (refer to Page 1)

If P0841 was not recorded, go to Step 11.

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)



Bolts



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)



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- 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: 6~7 lb.ft (0.9~1.0 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 $4\sim 5$ additional quarts of SPH-IV-<u>**RR**</u> ATF through the fill plug until the ATF flows out in a thin steady stream.

Reinstall the fill plug and washer. Torque: 25~32 lb-ft (3.5~4.5 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).

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.