



HYUNDAI

Technical Service Bulletin

GROUP AUTOMATIC TRANSMISSION	NUMBER 19-AT-005H
DATE MARCH, 2019	MODEL(S) GENESIS SEDAN (BH/DH), GENESIS COUPE (BK) EQUUS (VI)

SUBJECT: AUTOMATIC TRANSMISSION FLUID TEMPERATURE SENSOR
AND INPUT/OUTPUT SPEED SENSOR
DTC P0711, P0712, P0713, P0717, P0721 & P0722

Description: If you are servicing a vehicle with a “Check Engine light” and any of the DTCs listed below, follow the Service Procedure and replace the E-module.

Applicable Vehicles:

2012~16	Genesis Sedan (BH/DH)
2013~16	Genesis Coupe (BK)
2012~16	Equus (VI)

DTC LIST & PART NUMBER:

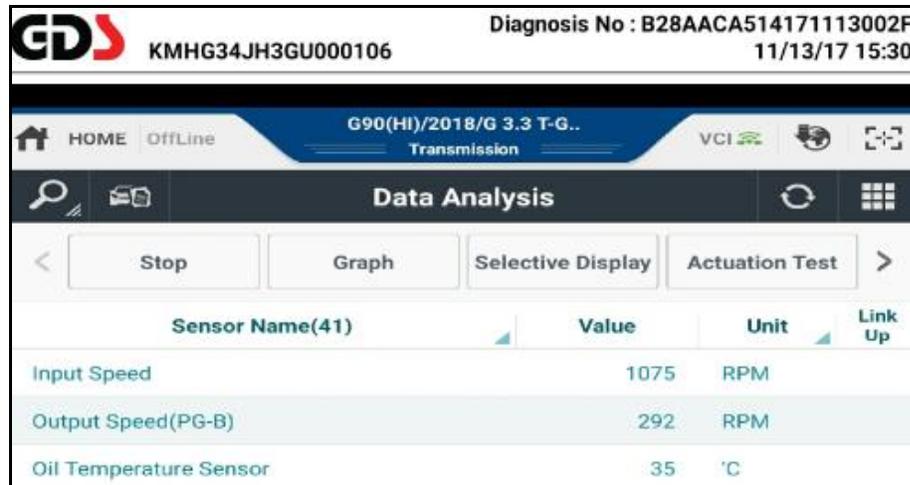
DTC		DESCRIPTION	PNC	PART NO.
P0711	P071100	Transmission fluid temperature sensor 'A' circuit range	46305C	46305-4****
P0712	P071200	Transmission fluid temperature sensor 'A' circuit low input		
P0713	P071300	Transmission fluid temperature sensor 'A' circuit high input		
P0717	P071700	Input/turbine speed sensor 'A' circuit no signal		
P0721	P072100	Output speed sensor circuit range/performance		
P0722	P072200	Output speed sensor circuit no signal		

WARRANTY INFORMATION:

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
Genesis Sedan (BH/DH) Genesis Coupe (BK) Equus (VI)	46305R00	E-Module Assy	Refer to WEBLTS for current LTS time	46305-4****	13A	ZZ3
					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 parameters shown below. If the parameters 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.



Sensor Name(41)	Value	Unit	Link Up
Input Speed	1075	RPM	
Output Speed(PG-B)	292	RPM	
Oil Temperature Sensor	35	°C	

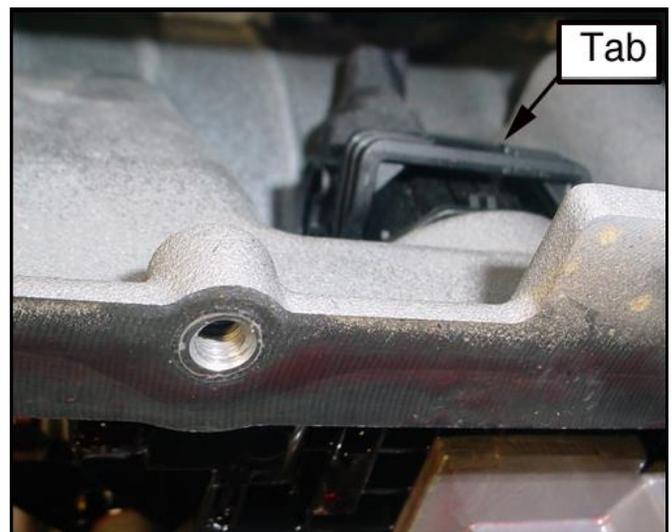
3. Visually check the wiring harness between the TCM and transmission for a damaged wire or connector. Check for an open/short circuit.
 - If so, repair or replace the ECM control harness and drive the vehicle to confirm the repair.
 - If no damage is found, go to Step 4.
4. Record the audio preset stations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

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.

If additional clearance is needed to access the connector, place a support under the rear transmission support, loosen the bolts about 1/2 inch and lower the support about 1/2 inch.

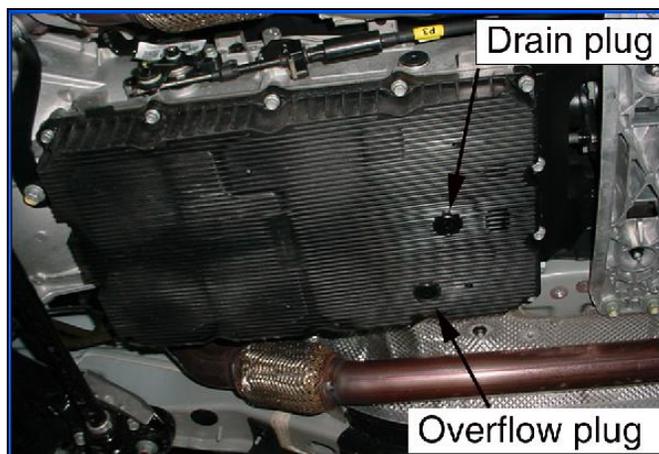


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6. Use an 8mm or 5/16" hex wrench and remove the drain plug and drain the ATF. Reinstall the drain plug.

Torque: 17~18 lb.ft (2~3 kgf.m, 22~24 N.m)

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



7. 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 arrows).

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.

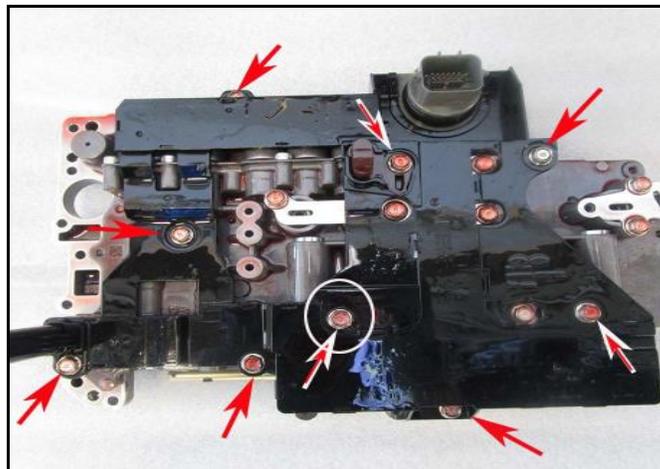


8. Remove 9 bolts and remove the E-module.

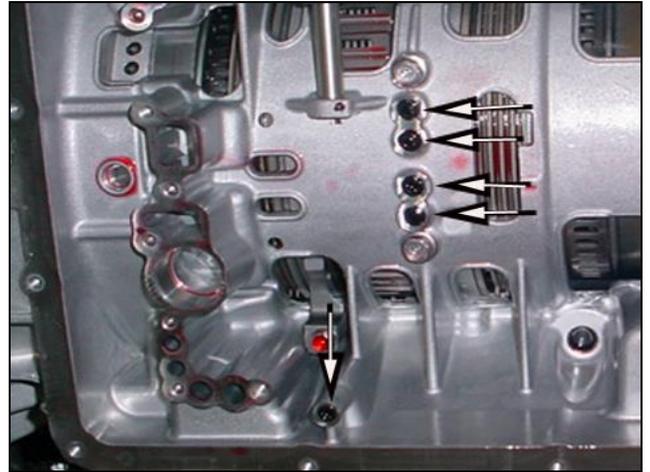
Install a new E-module and torque the bolts to specification.

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

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



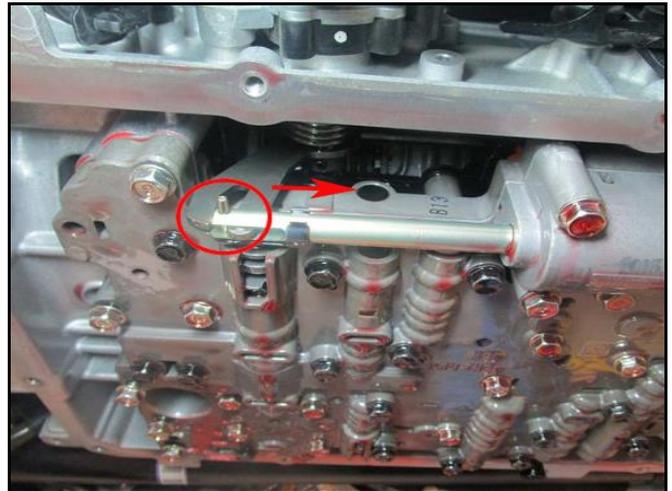
9. Confirm that 5 O-rings are seated in the case.



10. Place the valve body on a transmission jack.
Rotate the park switch lever in the direction of the arrow. Carefully raise the valve body and insert the manual valve into the lever.
Install the valve body fully into the transmission case.

NOTICE

Confirm the pin on the park switch lever faces outward from the valve body.

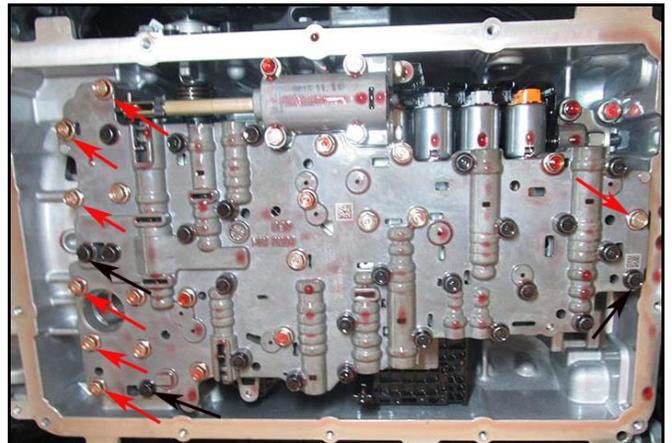


11. Install 3 black bolts in the locations shown (black arrows).

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

Torque the bolts to specification.

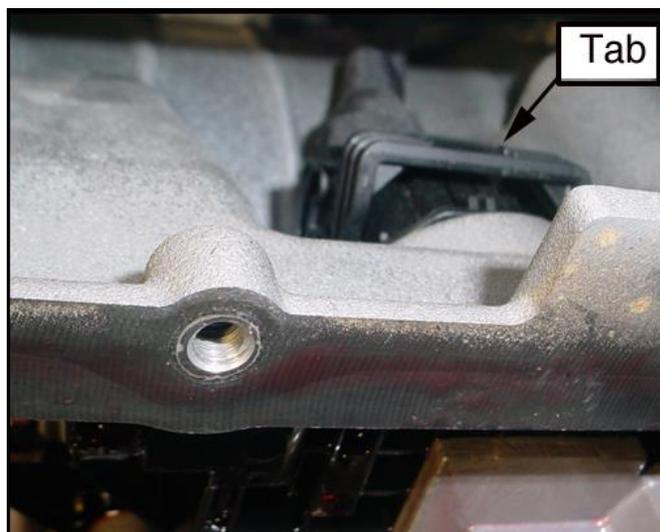
Torque: 7~9 lb.ft (1.0~1.2 kgf.m, 10~12 N.m)



12. Reconnect the harness connector.

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.



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

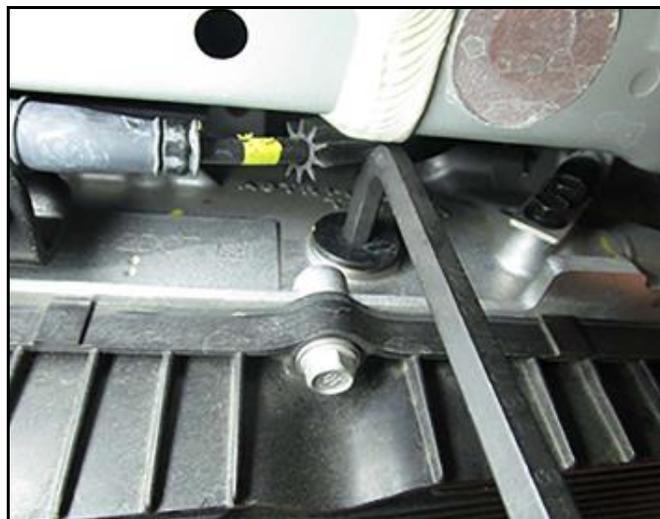
Reinstall the valve body cover and torque to specification.

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



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

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



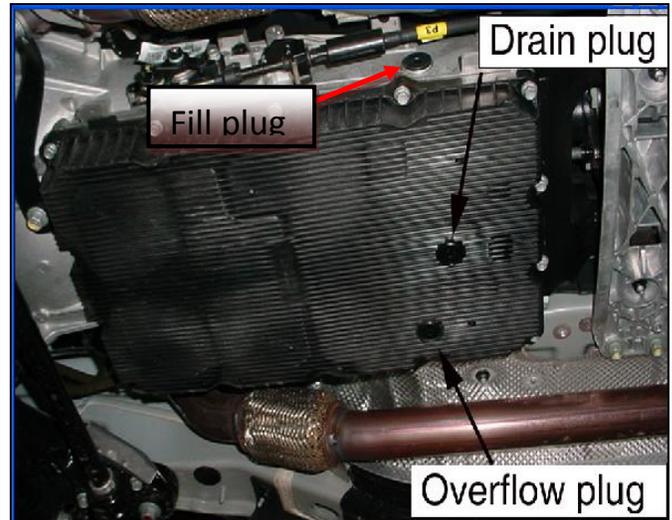
15. Remove the overflow plug.

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

Reinstall the fill plug, washer and overflow plug.

NOTICE

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



16. Lower the vehicle.

Reconnect the negative battery terminal.

Reset the audio preset stations.

17. Attach a GDS and select vehicle, **Data Analysis, AT** 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).

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

Remove the fill plug, washer and overflow plug.

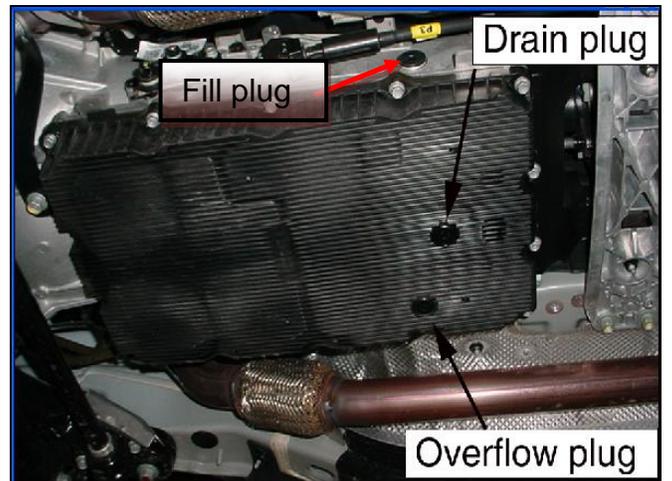
Add **SP-IV-RR** ATF through the fill plug until the ATF flows out the overflow.

Reinstall the overflow check plug.

Torque: 16~18 lb-ft (2~3 kgf.m, 22~24 N.m)

Reinstall the fill plug and washer.

Torque: 16~18 lb-ft (2~3 kgf.m, 22~24 N.m)



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

19. 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 DTC returns, perform the following repairs:

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DTC		DTC REPAIR PROCEDURE
P0711	P071100	<ul style="list-style-type: none">• Replace the control wiring harness between the TCM and transmission.<ul style="list-style-type: none">➤ If the DTC does not occur again, return the vehicle to the customer.➤ If the DTC returns again, replace the TCM.
P0712	P071200	
P0713	P071300	
P0717	P071700	
P0721	P072100	
P0722	P072200	

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

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