 <b>Technical Service Bulletin</b>	<b>GROUP</b> <b>AUTOMATIC TRANSMISSION</b>	<b>NUMBER</b> <b>24-AT-003G</b>
	<b>DATE</b> <b>MAY 2024</b>	<b>MODELS</b> <b>G70 (IK), G80 (DH),  G80 (RG3), G90 (HI),  G90 (RS4), GV80 (JX1),  GV70 (JK1/JK1A)</b>
<b>SUBJECT:</b> AUTOMATIC TRANSMISSION (ATM) FLUID TEMPERATURE SENSOR AND INPUT/OUTPUT SPEED SENSOR DTC P0711, P0712, P0713, P0717, P0721 & P0722		

*This TSB supersedes TSB 23-AT-007G to add GV70, GV80 & G90 (RS4) E-module illustration.*


**Description:** When servicing an 8-speed automatic transmission vehicle with a “Check Engine light” and any of the DTCs listed below, follow the Service Procedure and, if necessary, replace the E-module.

<b>Applicable Vehicles: Equipped with Automatic Transaxles</b>			
• 2019-	G70 (IK)	• 2021-	G80 (DH)/(RG3)
• 2019-20	G80 (DH)	• 2021-23	GV70 (JK1)
• 2019-22	G90 (HI)	• 2024-	GV70 (JK1a)
• 2023-	G90 (RS4)	• 2022-	GV80 (JX1)

**DTC List & Part Number:**

DTC	DESCRIPTION	PNC	PART NO.
P071100	Transmission fluid temperature sensor ‘A’ range/performance	46305C	46305-4****
P071200	Transmission fluid temperature sensor ‘A’ circuit low input		
P071300	Transmission fluid temperature sensor ‘A’ circuit high input		
P071700	Input/turbine speed sensor ‘A’ circuit no signal		
P072100	Output speed sensor circuit range/performance		
P072200	Output speed sensor circuit no signal		

**Suggested Tool:**

Name	Part Number	Figure	Remarks
Alignment tool	09480-D2100		Park position switch alignment tool

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

**Warranty Information:**

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
G70 (IK) G80 (DH) G80 (RG3) G90 (HI) G90 (RS4) GV70 (JK1/JK1a)	46305R00	E-Module Assembly	Refer to WEBLTS for current LTS time	Refer to part number in table above	W11	ZZ3

**NOTE 1:** Normal warranty applies.

**NOTE 2:** Submit claim on Claim Entry Screen as “Warranty” type.

**NOTE 3:** This TSB includes Repair validation photo(s). Op times include VIN, and Mileage as outlined in the Digital Documentation Policy.

**NOTE 4:** The incident parts are subject to callback through the normal Warranty Technical Center (WTC) parts return process. Claim is subject to debit if the part is not returned.

**NOTE 5:** If a part is found in need of replacement while performing this TSB and the affected part is still under warranty, submit a separate claim using the same repair order. If the affected part is out of warranty, submit a Prior Approval request for goodwill consideration prior to performing the work.

**Service Procedure:**

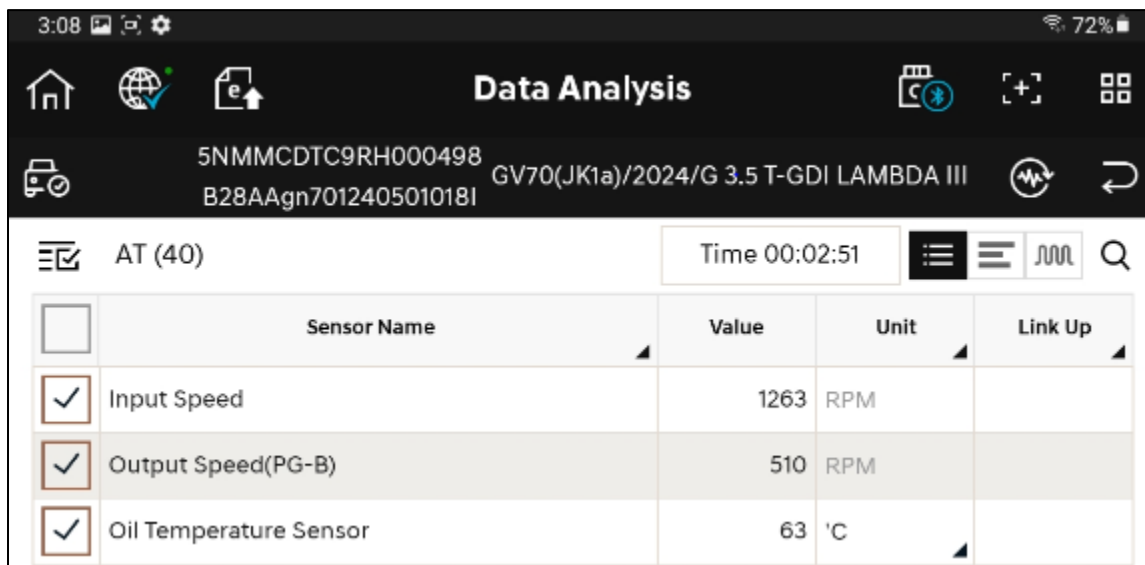


**STUI**

**This TSB includes Repair validation photos. Refer to the latest Warranty Digital Documentation Policy for photos,**

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.



<input type="checkbox"/>	Sensor Name	Value	Unit	Link Up
<input checked="" type="checkbox"/>	Input Speed	1263	RPM	
<input checked="" type="checkbox"/>	Output Speed(PG-B)	510	RPM	
<input checked="" type="checkbox"/>	Oil Temperature Sensor	63	°C	

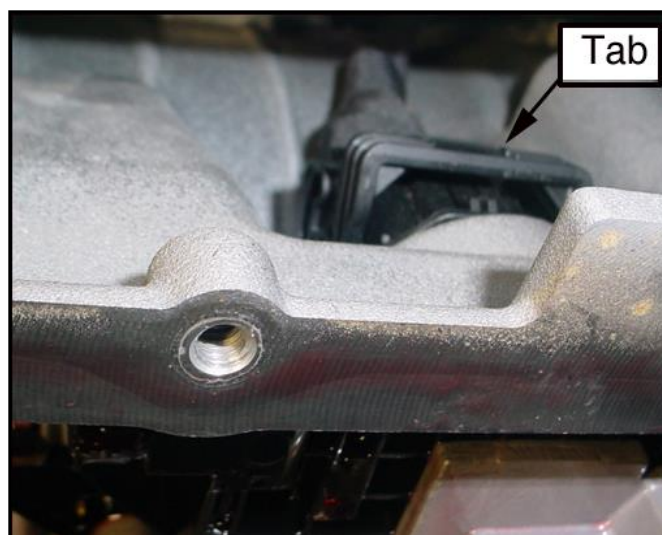
3. Visually check the wiring harness between the TCU and transmission for a damaged wire or connector. Check for an open/short circuit.
  - If so, repair or replace the control harness and drive the vehicle to confirm the repair.
  - If no harness damage is found, go to Step 4.
4. Record the audio preset 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 to release 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 ½ inch and lower the support about ½ inch.

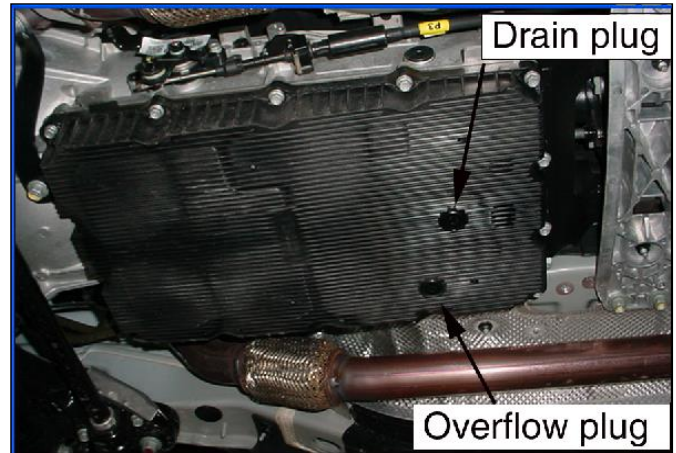


- Use an 8mm or 5/16" hex wrench and remove the drain plug and drain the ATF. Reinstall the drain plug.

**Tightening Torque:**

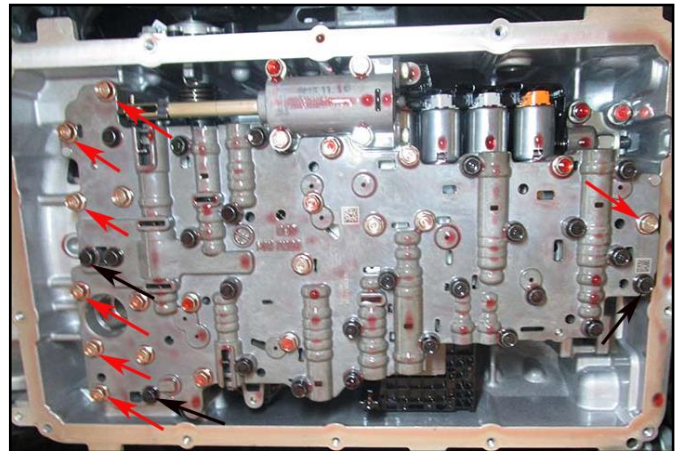
lb-ft	17
N.m	23

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



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

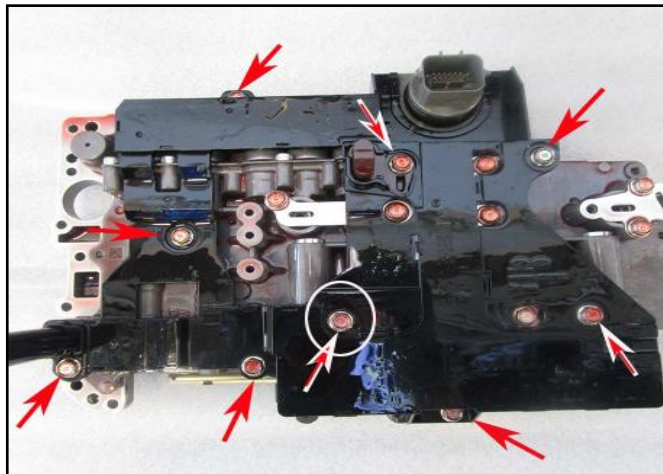
If the valve body is stuck in the transmission, insert a plastic tool between the valve body and case and carefully pull the valve body out of the transmission.



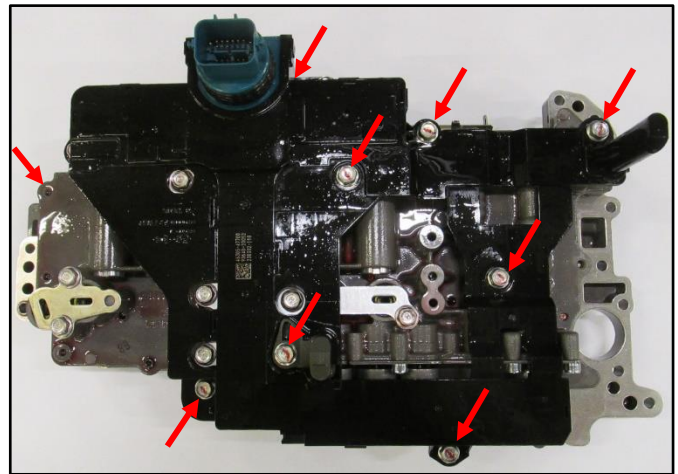
- Remove the attaching bolts and remove the E-module from the valve body. Install a **new** E-module and torque the bolts to specification.

**Tightening Torque:**

lb-ft	8
N.m	11

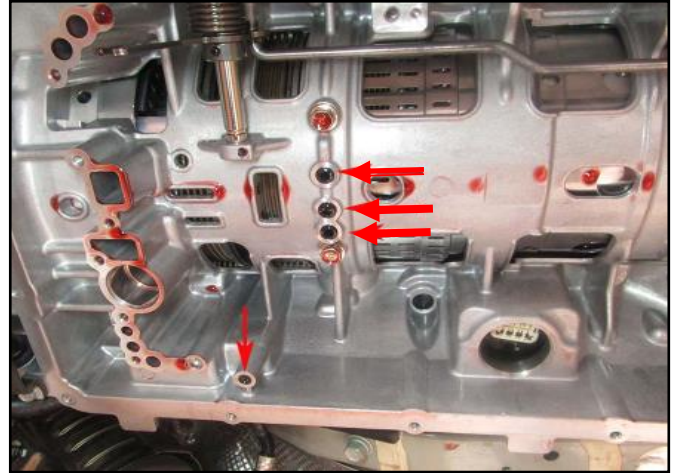
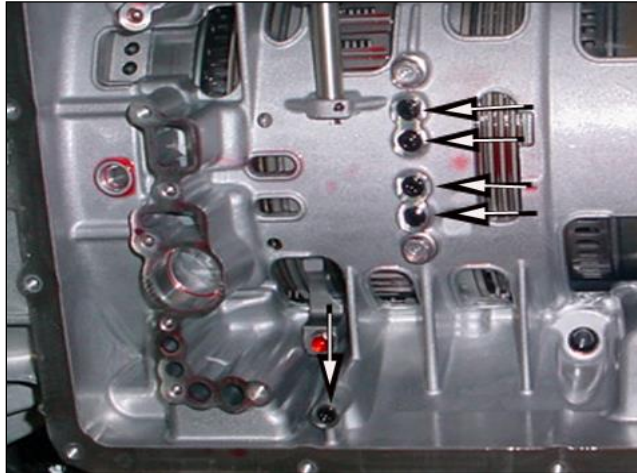


**Early models**



**G90 (RS4), GV70/80 & later models**

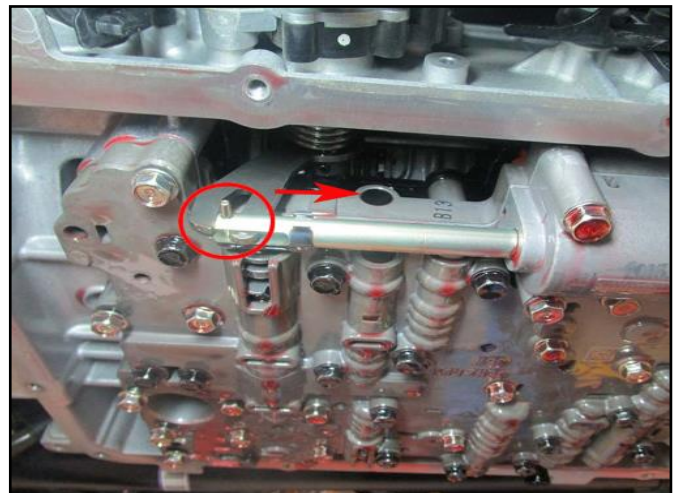
9. Confirm the O-rings are not damaged and are correctly in position.



**FOR SHIFT-BY-CABLE (SBC):**

**FOR SHIFT-BY-WIRE (SBW):**

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.

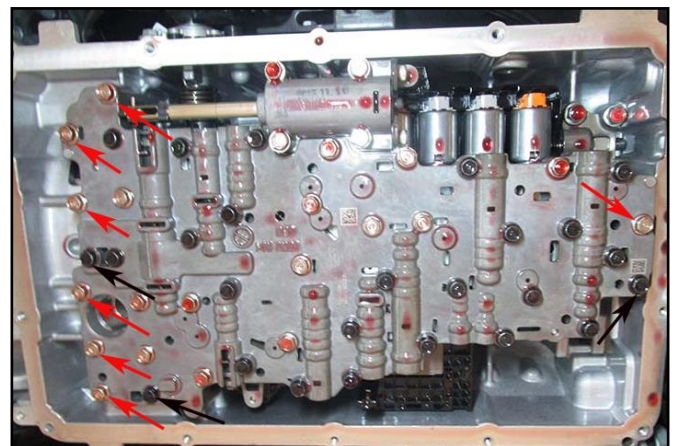


**NOTICE**  
Confirm the pin on the park switch lever faces outward from the valve body.

11. Install bolts in the locations shown.  
Torque the valve body bolts to specification.

**Tightening Torque:**

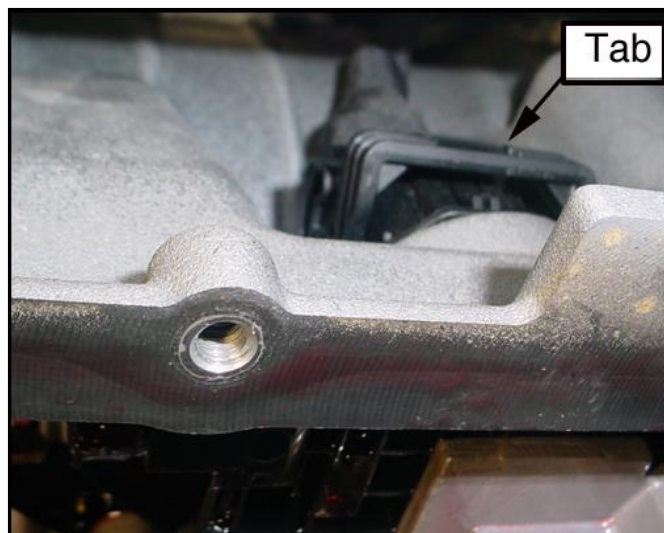
lb-ft	8
N.m	11



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.

**Tightening Torque:**

lb-ft	8
N.m	11

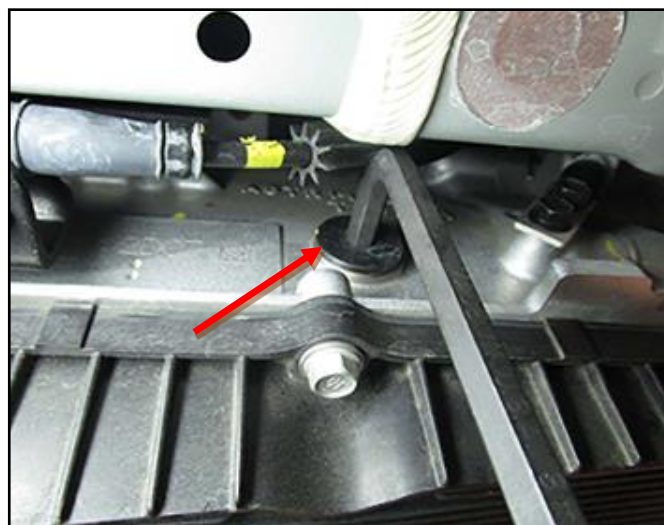


14. With the engine off, lift the vehicle on a hoist.

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

**Tightening Torque:**

lb-ft	28
N.m	38



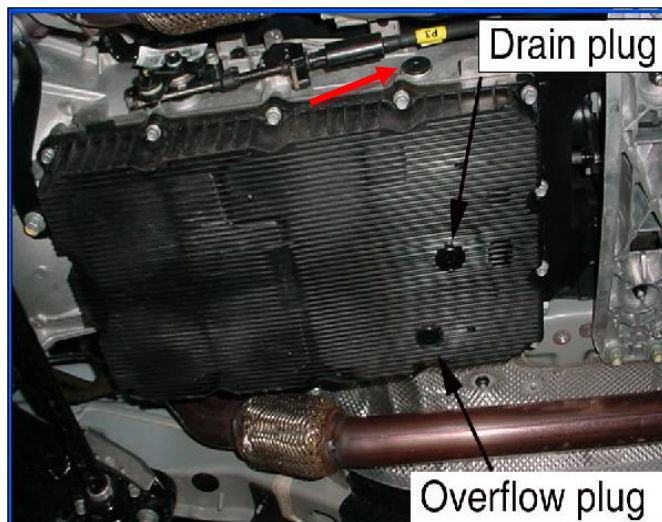
15. Remove the overflow plug.

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.

**NOTICE**

Use only **SPH-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, 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).

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

Remove the fill plug and overflow plug.

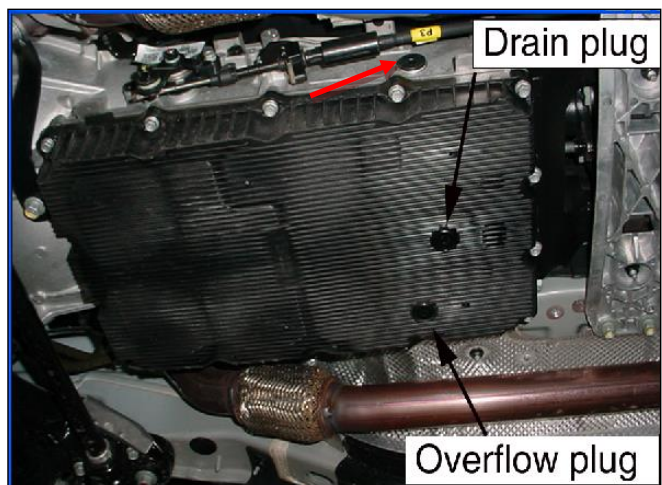
Add **SPH-IV-RR** ATF through the fill plug until the ATF flows out the overflow.

Reinstall the fill plug and washer.

Reinstall the overflow plug.

**Overflow Plug Tightening Torque:**

lb-ft	8
N.m	11



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

**19. FOR SBW PARK POSITION SWITCH:**

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.

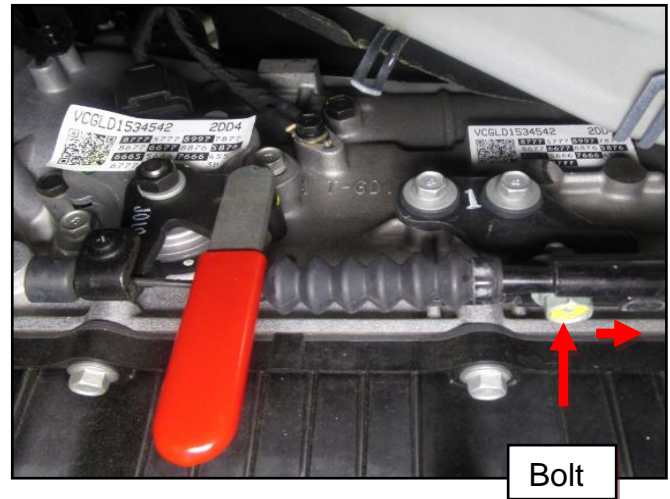
Loosen the adjustment bolt shown.

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

Tighten the bolt to specification.

**Tightening Torque:**

<b>lb-ft</b>	8
<b>N.m</b>	10



20. 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:

<b>DTC</b>	<b>DTC REPAIR PROCEDURE</b>
P071100	Replace the control wiring harness between the TCU and transmission. <ul style="list-style-type: none"> <li>➤ If the DTC does not occur again, return the vehicle to the customer.</li> <li>➤ If the DTC returns again, replace the TCU.</li> </ul>
P071200	
P071300	
P071700	
P072100	
P072200	

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