

**HYUNDAI**NEW THINKING.  
NEW POSSIBILITIES.**Technical Service Bulletin**

GROUP	NUMBER
<b>AUTOMATIC TRANSMISSION</b>	<b>15-AT-010</b>
DATE	MODEL
<b>OCTOBER 2015</b>	Accent (RB), Azera (TG/HG), Elantra (UD/MD/GD/JK), Santa Fe (CM/AN/NC), Sonata (YF/YF-HEV/LF/LF-HEV), Tucson (LM/TL 2.0L), Veloster Turbo (FS)

<b>SUBJECT:</b>	AUTOMATIC TRANSAXLE SOLENOID DTC P0741, P0743, P0748, P0753, P0758, P0763, P0768, P0773, P1778 & P2709
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***This TSB supersedes 14-AT-012 to add the 2016 Sonata (LF HEV) and Tucson (TL).***

**Description:** Do not replace the transmission for solenoid DTC listed above. Instead, follow the repair procedure and replace the related part.

**Applicable Vehicles:**

Accent	2012~ Accent (RB)
Azera	2011 Azera (TG), 2012~ Azera (HG)
Elantra	2011~ Elantra Sedan (MD/UD), 2013~ Elantra GT (GD), 2013~14 Elantra Coupe (JK)
Santa Fe	2010~12 Santa Fe (CM), 2013~ Santa Fe (AN/NC)
Sonata	2011~14 Sonata (YF), 2015~ Sonata (LF), 2011~15 Sonata (YF HEV), 2016~ Sonata (LF HEV)
Tucson	2010~15 Tucson (LM), 2016~ Tucson 2.0L (TL)
Veloster	2013~ Veloster 1.6L Turbo (FS)

**Parts Information:**

Refer to the PNC in the parts catalog to order the correct solenoid part number.

Model	Part	PNC	Part Number
2012~ Accent (RB)	Torque converter solenoid (T/C)	46202A	46313-3B***
		46313C	46313-3B***
2011 Azera (TG)	Engine clutch solenoid (HEV)	46313C	46313-3B***
2012~ Azera (HG)	Shift solenoid C (35R)	46313B	46313-3B***
2011~ Elantra Sedan (MD/UD)	Shift solenoid B (26-B)	46313C	46313-3B***
2013~ Elantra GT (GD)	Shift solenoid A (UD)	46313B	46313-3B***
2013~14 Elantra Coupe (JK)	Shift solenoid D (OD)	46313B	46313-3B***
2010~12 Santa Fe (CM)	Shift solenoid F (SS-B)	46313D	46313-3B***
2013~ Santa Fe (AN/NC)	Shift solenoid E (SS-A)	46313D	46313-3B***
2011~14 Sonata (YF)	Pressure control solenoid (P/C)	46313A	46313-3B***
2015~ Sonata (LF)	Valve body internal harness	46307	46307-3B***
2011~15 Sonata (YF HEV)	Plastic oil pan gasket	45282E	45282-2****
2016~ Sonata (LF HEV)			45283-3****
2010~15 Tucson (LM)			
2016~ Tucson 2.0L (TL)			
2013~ Veloster 1.6L Turbo (FS)			

**SUBJECT:**

AUTOMATIC TRANSAXLE SOLENOID DTC

DTC P0741, P0743, P0748, P0753, P0758, P0763, P0768, P0773, P1778 &amp; P2709

**Warranty Information:**

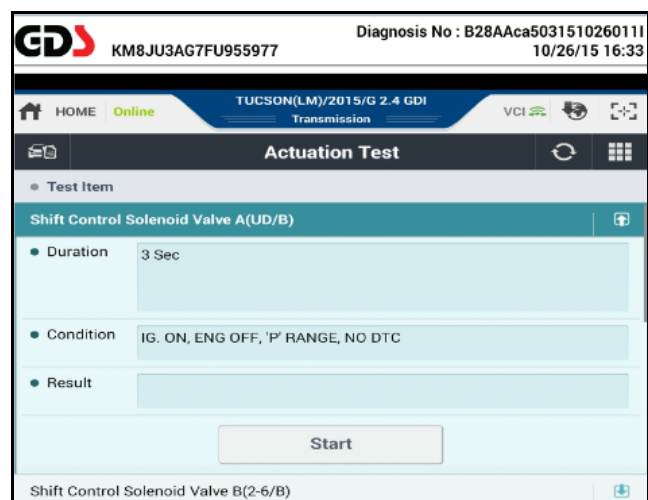
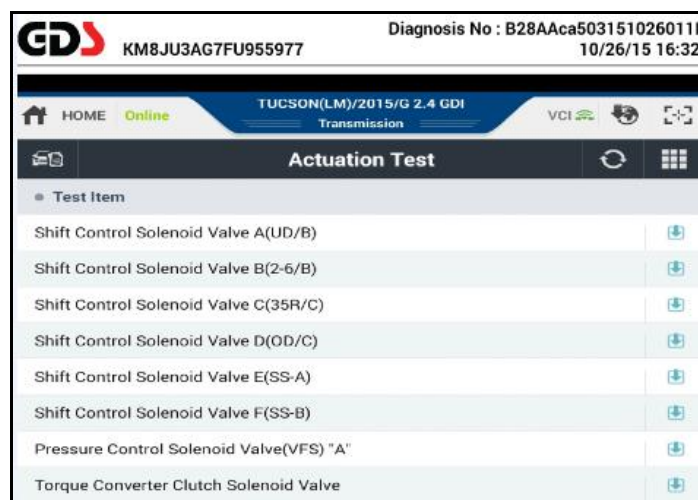
Model	OP Code	Operation	OP Time	Causal Part	Part Qty	Nature Code	Cause Code
2012~ Accent (RB)	45775R00	Replace solenoid valve (Includes valve body harness)	1.9	See Parts Catalog for 463313-3B***	1	T74	ZZ3
2011 Azera (TG)			2.6				
2012~ Azera (HG)			1.6				
2011~ Elantra (MD/UD)			1.6				
2013~ Elantra GT (GD)			1.6				
2013~14 Elantra Coupe (JK)			1.6				
2010~12 Santa Fe (CM)			2.6				
2013~ Santa Fe (AN/NC)			1.6				
2011~14 Sonata (YF)			1.6				
2015~ Sonata (LF)			1.2				
2011~15 Sonata (YF HEV)			1.6				
2016~ Sonata (LF HEV)			1.9				
2010~15 Tucson (LM)			1.6				
2016~ Tucson 2.0L (TL)			1.9				
2013~ Veloster 1.6L Turbo (FS)			1.6				
2011~15 Sonata (YF HEV)	45775RH1	Additional	0.7				
2016~ Sonata (LF HEV)	45775RH1	Additional	0.7				
All	45775RQ0	GDS Operation	0.3				

**Service Procedure:**

- Using a GDS, check for DTC in the **A/T menu**. Record the DTC and description and delete the DTC.
- From the GDS, select the following parameters.
  - Vehicle and **A/T** menu.
  - Actuation Test**
  - Select solenoid

Press the “**Start**” button and look for an “Operation Comment Sent” indication.

Continue the test for the remaining solenoids.



- If the test results show:
  - “Operation Command Sent” – The GDS requested the TCM to activate the solenoids. Use chassis ears or stethoscope to listen for 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. Repeat the test. If “Failure” is displayed again, go to Step 4.
- Visually check the wiring harness between the PCM and transmission for a damaged wire or open/short circuit. Check for a damaged pin or pin not fully inserted into the connector.
  - If damage exists, repair or replace the ECM control harness and drive the vehicle to confirm the repair.
  - If no damage or open/short circuit, go to Step 5.

**NOTICE**

If the estimated cost of the harness repair exceeds the cost of replacing the harness, then it is advisable to replace the wire harness.

Harness replacement requires prior consultation with Hyundai Technical Assistance Line personnel.

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DTC P0741, P0743, P0748, P0753, P0758, P0763, P0768, P0773, P1778 &amp; P2709

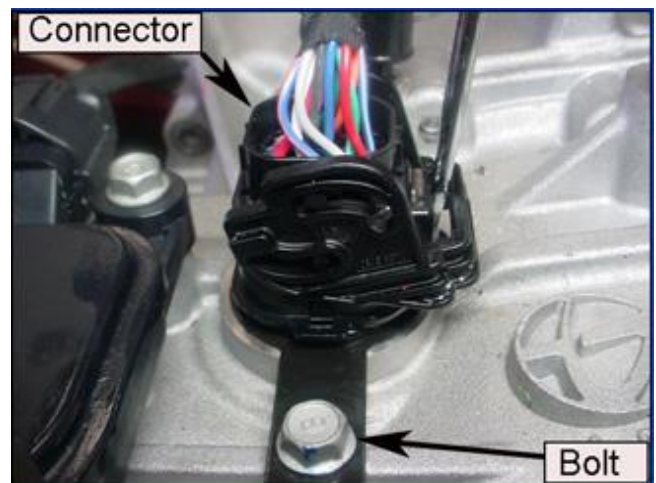
5. Refer to the DTC recorded in Step 1 and follow the repair procedure shown below:

DTC		Repair Procedure
P0741	Torque converter clutch system	Replace the T/C solenoid if no other DTC found.  Go to Step 6 and replace the related solenoid <u>and</u> valve body harness
P1778	Engine clutch solenoid (HEV)	
P0743	Torque converter (T/C)	
P0763	Shift solenoid C (35R)	
P0758	Shift solenoid B (26-B)	
P0753	Shift solenoid A (UD)	
P0768	Shift solenoid D (OD)	
P2709	Shift solenoid F (SS-B)	
P0773	Shift solenoid E (SS-A)	
P0748	Pressure control solenoid (P/C)	

6. Record the preset radio stations.  
Remove the battery and battery tray.
7. Remove the undercover below the transmission.
8. Drain the radiator and remove the lower radiator hose from the radiator, if necessary.  
Drain the ATF.
9. Use a screwdriver to release the tab and remove the solenoid connector on top of the case.

Remove the bolt that secures the connector and push the connector into the transmission.

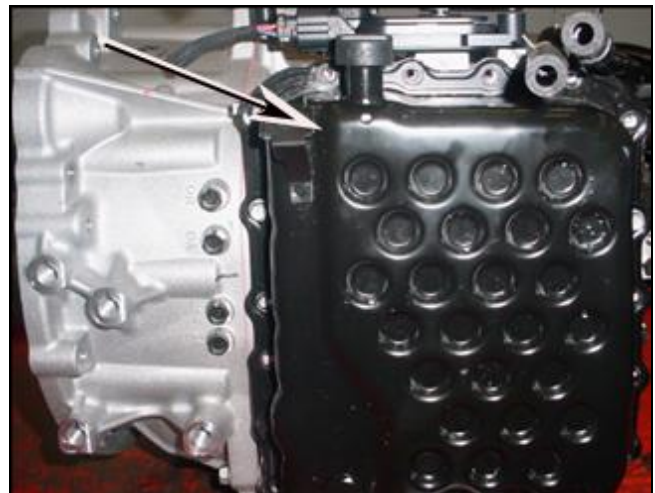
Disconnect the vent hose on the top of the oil pan.



10. Remove the oil pan bolts and remove the pan.

**CAUTION**

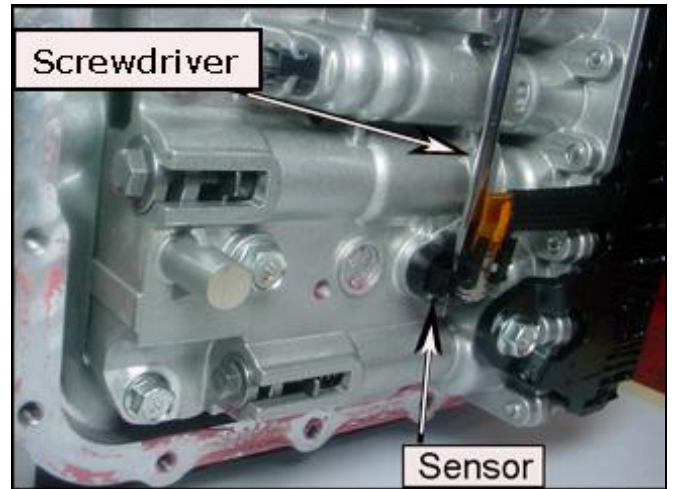
Use rubber hammer to tap the oil pan cover on a corner until the cover is loose.



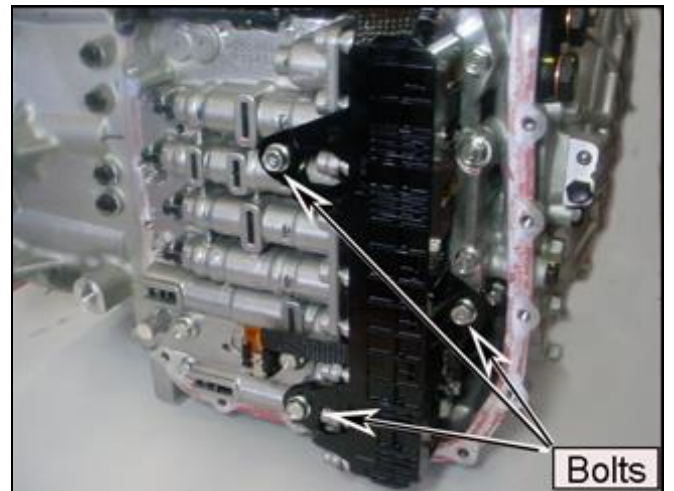
**SUBJECT:****AUTOMATIC TRANSAXLE SOLENOID DTC**

DTC P0741, P0743, P0748, P0753, P0758, P0763, P0768, P0773, P1778 &amp; P2709

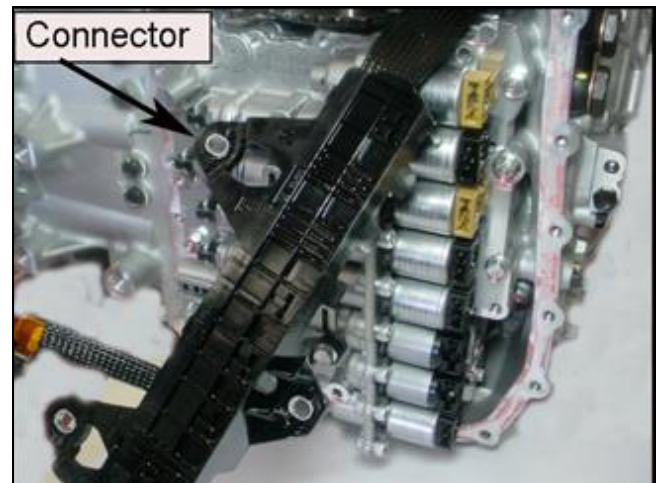
11. Use a small screwdriver to pry the connector from the oil temperature sensor (except for transmissions with integrated temperature sensor and harness).



12. Remove three bolts to the solenoid valve connector.



13. Pull the solenoid connector outward and move the connector out of position.

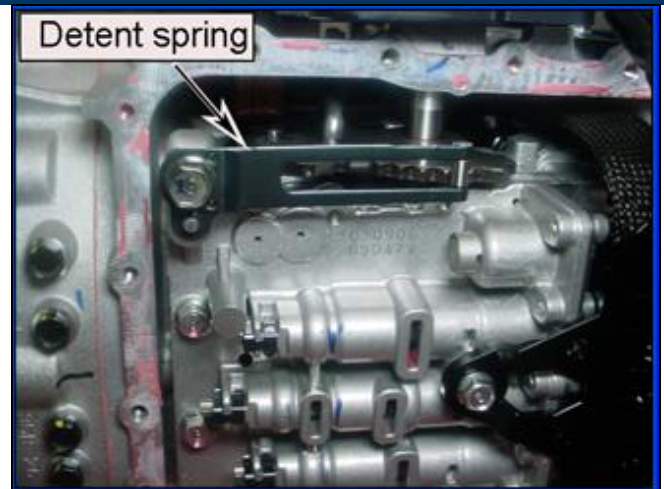


**SUBJECT:****AUTOMATIC TRANSAXLE SOLENOID DTC**

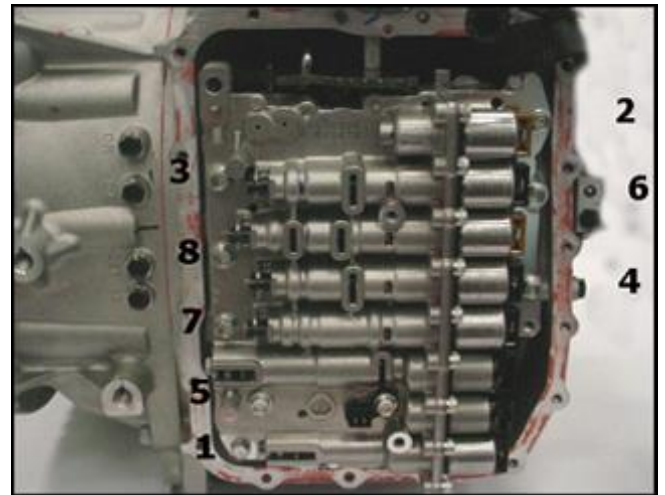
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14. Remove the bolt that secures the detent spring and remove the spring.

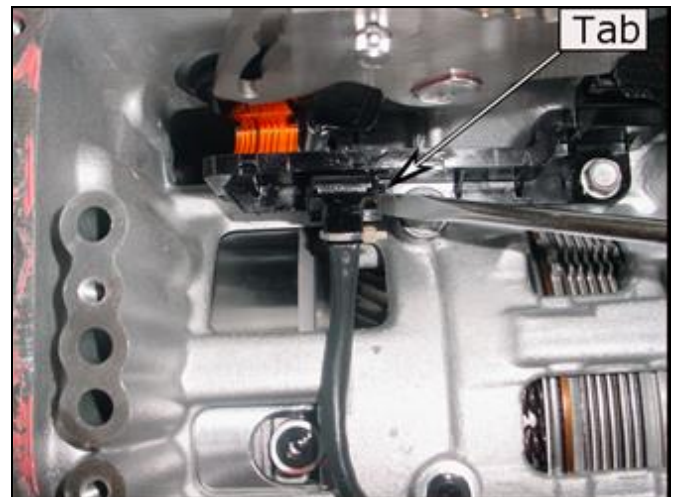
Torque: 8~11 lb.ft (1.2~1.5 kgf.m/10~13 N.m)



15. Remove the valve body bolts in the order shown and remove the valve body.



16. Use a screwdriver to depress the locking tab and pull outward on the connector to the input and output speed sensor.



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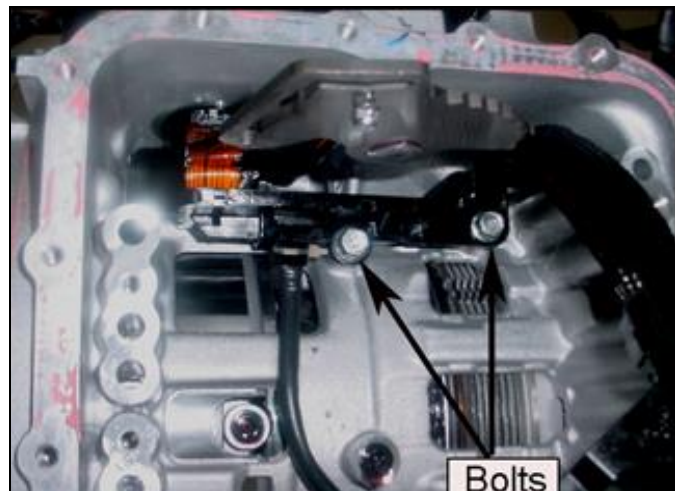
17. Remove two bolts that secure the valve body harness to the case.

Pull the connector downward out of the case.

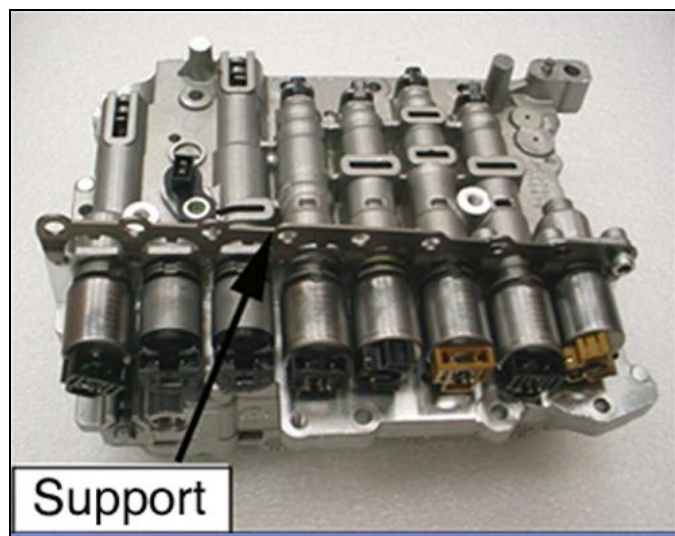
Install a new harness and insert the connector into the case. Attach the retainer and bolt on top of the case as shown in Step 9.

Install the bolts that secure the harness.

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

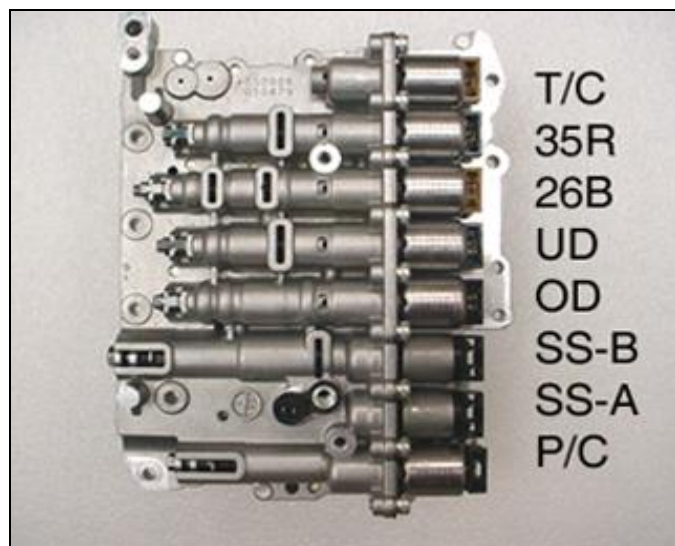


18. Use a 5mm hex socket and remove 9 Allen bolts that secure the solenoid support. Remove the solenoid support.



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

DTC		Solenoid
P0741	T/C	TC solenoid (T/C)
P0743	T/C	TC solenoid (T/C)
P1778	T/C	HEV clutch solenoid
P0763	35R	Shift solenoid C (35R)
P0758	26B	Shift solenoid B (26-B)
P0753	UD	Shift solenoid A (UD)
P0768	OD	Shift solenoid D (OD)
P2709	SS-B	Shift solenoid F (SS-B)
P0773	SS-A	Shift solenoid E(SS-A)
P0748	P/C	P/C solenoid

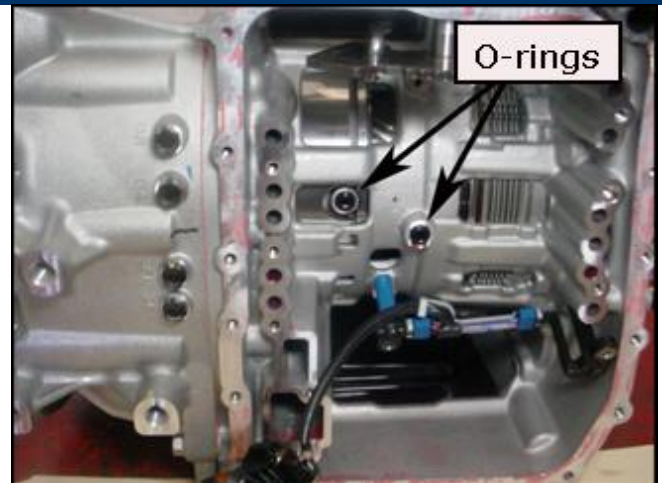


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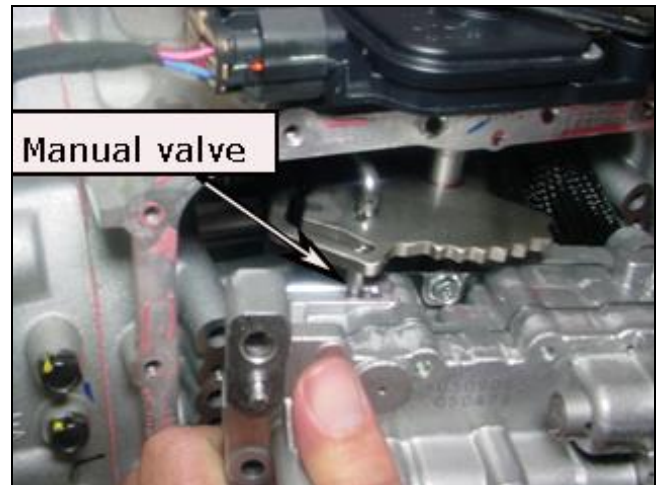
DTC P0741, P0743, P0748, P0753, P0758, P0763, P0768, P0773, P1778 &amp; P2709

20. Confirm the O-rings are installed correctly in the case.

Reconnect the input and output speed sensor connector to the harness.

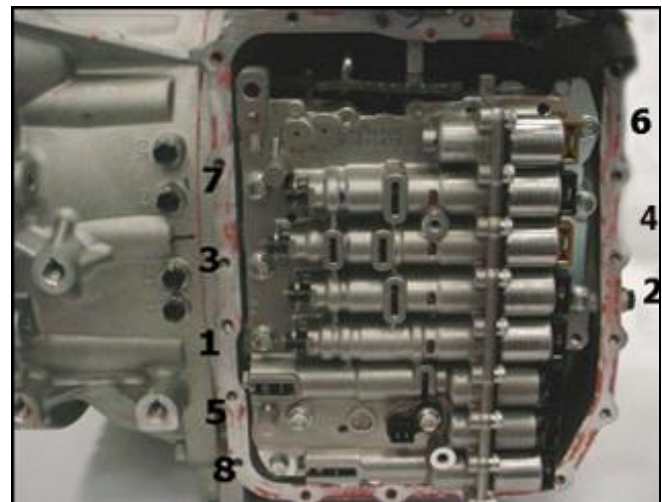


21. Align the manual shaft to the shift lever and install the valve body.



22. Install the valve body bolts and torque the bolts to specification in the order shown.

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

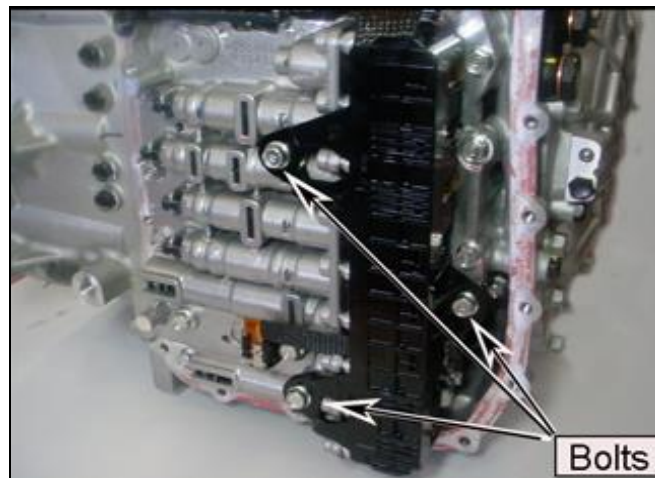




23. Reconnect the solenoid harness to the solenoids and oil temperature sensor.

Install the bolts to the solenoid harness connector and torque to specification.

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



24. **STEEL OIL PAN:**

Apply Permatex Ultra Gray Sealer or Hyundai Ultra Gray Gasket Sealer, P/N 00232-19039, to the oil pan and reinstall the pan.

Tighten the bolts to specification.

Torque: 10~11 lb.ft (1.4~1.5 kgf.m/14~15 N.m)

**PLASTIC OIL PAN:**

Install a new gasket to the oil pan and reinstall the pan.

Tighten the bolts to specification.

Torque: 10~11 lb.ft (1.4~1.5 kgf.m/14~15 N.m)



25. Add ethylene glycol engine coolant to the radiator and check the level according to the appropriate shop manual, "Engine" Section.

26. Reconnect the battery.  
Input the radio stations recorded in Step 6.

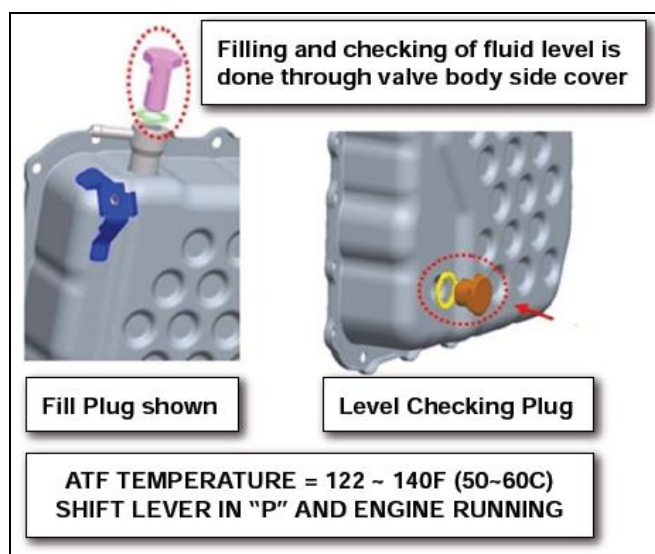
27. Remove the transaxle fill plug.

Use a funnel to add approximately 5~6 quarts of SPH-IV ATF through the fill plug opening. Reinstall the fill plug.

Attach the GDS to the DLC and select **vehicle, A/T menu, Current Data and Oil Temperature Sensor.**

Start the engine and shift to Park. When the ATF is 122°F~140°F (50~60°C), remove the level checking plug. The level is correct when oil flows out of the level checking plug in a thin steady stream.

Collect and dispose of any excess fluid in



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accordance with local regulations.

28. Clear the DTC and test drive the vehicle for two key-on/key-off driving cycles, including 1-2-3-4-5-6 upshifts and 6-5-4-3-2-1 downshifts. If the DTC returns, perform the following repairs.

DTC	Repair Procedure
P0741	Replace the transmission
P0743	Replace the control wiring harness between the PCM and transmission. <ul style="list-style-type: none"><li data-bbox="310 552 1466 585">• If the solenoid DTC does not return, return the vehicle to the customer.</li><li data-bbox="310 590 1466 623">• If the solenoid DTC returns again, replace the PCM.</li></ul>
P1778	
P0753	
P0758	
P0763	
P0768	
P0773	
P2709	
P0741	
P0748	

29. Clear the DTC in the Blue Link system per instructions of TSB 12-BE-005-2.
30. Drive the vehicle to confirm the transmission is operating as designed.