 HYUNDAI Technical Service Bulletin	GROUP AUTOMATIC TRANSMISSION	NUMBER 20-AT-018H
	DATE MAY, 2020	MODEL ACCENT (HC) ELANTRA (AD/ADa) ELANTRA GT (PD) KONA (OS) SANTA FE SPORT (AN) TUCSON (TL) VELOSTER (JS)
SUBJECT: AUTOMATIC TRANSMISSION DTC P0880/P088000		

Description: If you are servicing an applicable vehicle with the following symptoms and DTC, follow the Service Procedure on Page 3.

- Check Engine light on
- DTC P0880/P088000 - TCM Power signal error open/short
- Transmission stuck in 4th gear fail-safe
- Harsh shift into Drive and Reverse

NOTE: P0880/P088000 are set when solenoid power voltage is lower than 7V or higher than 22V.

Do **not** replace the transmission for DTC P0880/P088000.

The vehicles listed below are equipped with a Generation2 valve body with 7 solenoids. Previous 6-speed transmissions have a Generation1 valve body with 8 solenoids (Refer to TSB 20-AT-017H).

APPLICABLE VEHICLES:

2018~19	Accent (HC) 1.6L
2017~19	Elantra (AD/ADa) 2.0L
2018~	Elantra GT (PD) 2.0L
2018~	Kona (OS) 2.0L
2017~18	Santa Fe Sport (AN) 2.4L
2018~	Tucson (TL) 2.4L
2019~	Veloster (JS) 2.0L

NOTE: Normal Warranty Applies

PARTS INFORMATION: Refer to the parts catalog to order the correct parts.

Model		Harness PNC	Harness Part Number
2018~19	Accent (HC) 1.6L	46307A	46307-2F***
2017~19	Elantra (AD/ADa) 2.0L		
2018~	Elantra GT (PD) 2.0L		
2018~	Kona (OS) 2.0L		
2017~18	Santa Fe Sport (AN) 2.4L		
2018~	Tucson (TL) 2.4L		
2019~	Veloster (JS) 2.0L		

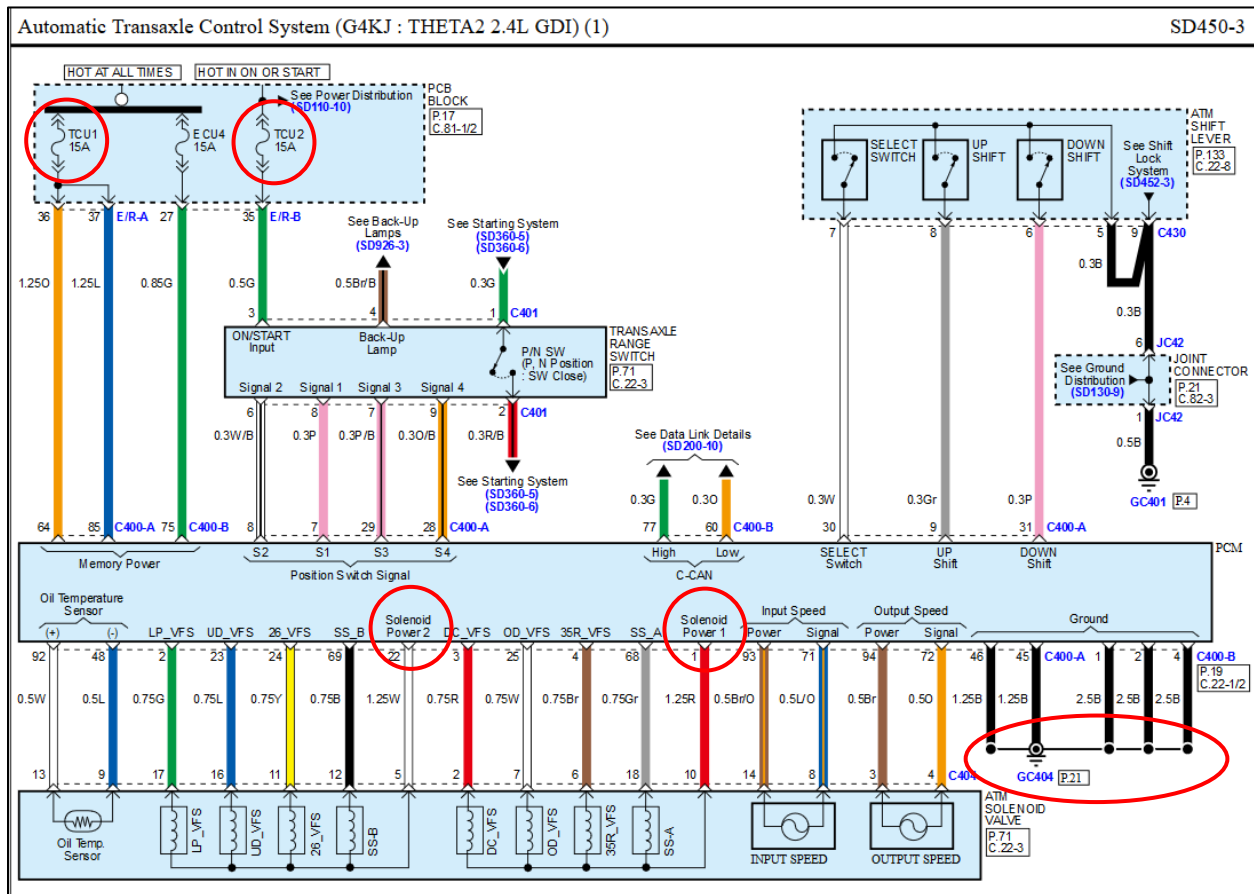
WARRANTY INFORMATION:

Model	Op Code	Operation	Op Time	Causal Part	Nature Code	Cause Code
2018~19 Accent (HC) 1.6L 2017~19 Elantra (AD/ADa) 2.0L 2018~ Elantra GT (PD) 2.0L 2018~ Kona (OS) 2.0L 2017~18 Santa Fe Sport (AN) 2.4L 2018~ Tucson (TL) 2.4L 2019~ Veloster (JS) 2.0L	46308R00	Valve body harness	Refer to WEBLTS for current LTS time	Refer to Parts Information table on Page 1	13A	ZZ3
ALL	46308RQ0	GDS Operation				

ETM INFORMATION: Example only - refer to the related shop manual:

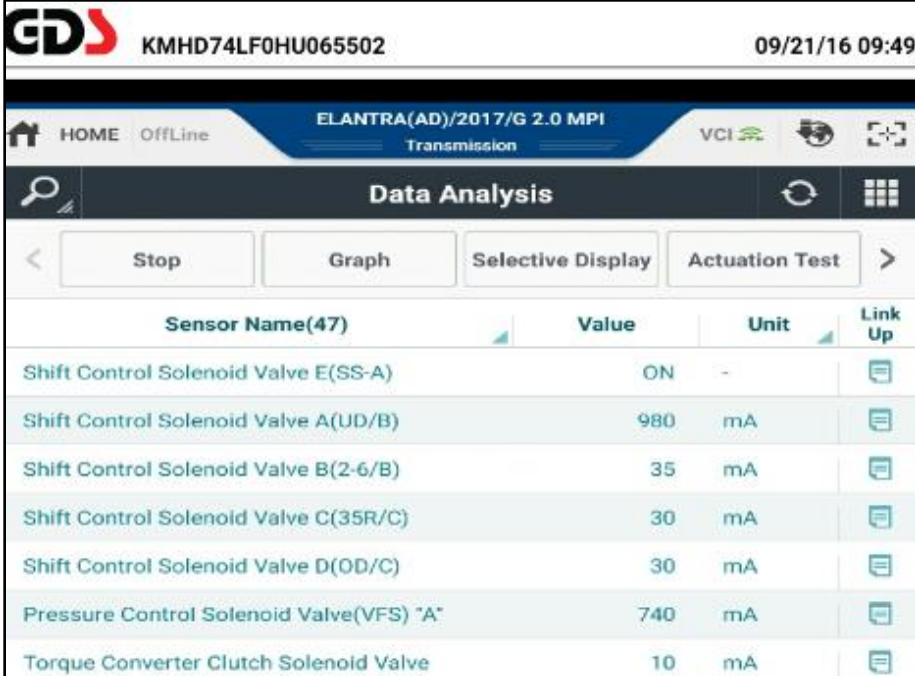
P0880/P088000 are set when solenoid power voltage is lower than 7v or higher than 22v.

Possible Causes: Poor connection/circuit fault or faulty TCU.



SERVICE PROCEDURE:

1. Attach a GDS and select **DTC Analysis** and **A/T** menu. Record the DTC and description. Delete the DTC.
If DTC other than P0880/P088000 are found, refer to the appropriate TSB or shop manual and repair the vehicle. Go to Step 2.
2. Refer to the appropriate shop manual, **Schematic Diagrams, Transaxle/Transmission, Automatic Transaxle Control System** and **Schematic Diagrams**. Check the TCU1 and TCU2 fuses in the E/R junction box (Refer to ETM Information, Page 2). Confirm the fuse fits tightly and does not have an open circuit.
 - If an open circuit is found: Replace the fuse or repair the connection. Drive the vehicle to confirm P0880/P088000 does not return. If so, return the vehicle to the customer.
 - If no open circuit: Confirm the PCM ground bolt is clean and tight. Repair or replace the bolt, if necessary. Go to Step 3
3. From the GDS home screen, select **Data Analysis** and **A/T** menu and the solenoid parameters shown below. If the solenoids show:
 - Continuous and changing output while driving, the solenoids are operating correctly and the wiring **currently** has no open/short circuits. Go to Step 5.
 - No continuous and changing output, go to Step 4.



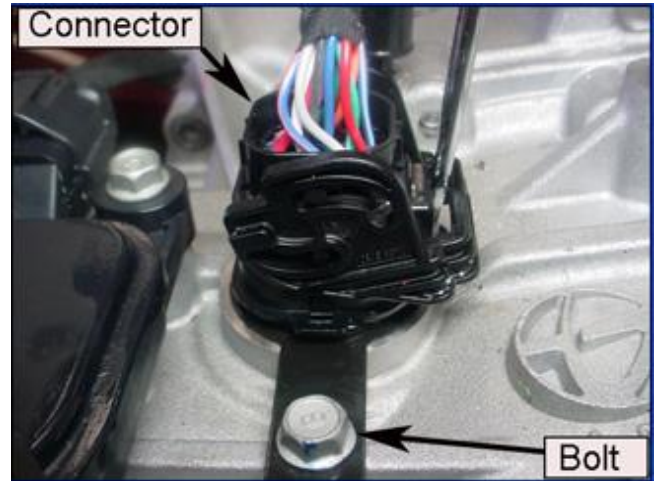
Sensor Name(47)	Value	Unit	Link Up
Shift Control Solenoid Valve E(SS-A)	ON	-	
Shift Control Solenoid Valve A(UD/B)	980	mA	
Shift Control Solenoid Valve B(2-6/B)	35	mA	
Shift Control Solenoid Valve C(35R/C)	30	mA	
Shift Control Solenoid Valve D(OD/C)	30	mA	
Pressure Control Solenoid Valve(VFS) "A"	740	mA	
Torque Converter Clutch Solenoid Valve	10	mA	

4. Visually check the Control 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 Control Wiring. Drive the vehicle to confirm the repair.
 - If no damage or open/short circuit, go to Step 5.

5. Record the preset radio stations.
Remove the air cleaner, battery and battery tray.
6. Remove the undercover below the transmission.
7. If necessary to access the solenoids, drain the radiator and remove the lower radiator hose from the radiator.
Drain the ATF.
8. Use a screwdriver to release the tab and remove the harness connector on top of the case.

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

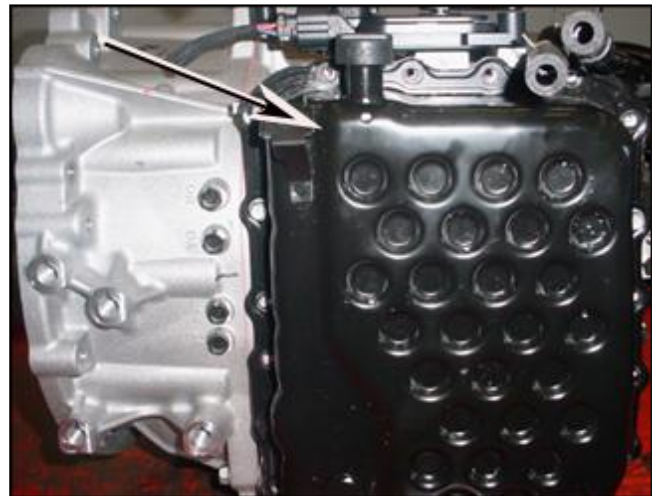
Disconnect the vent hose on the top of the oil pan.



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

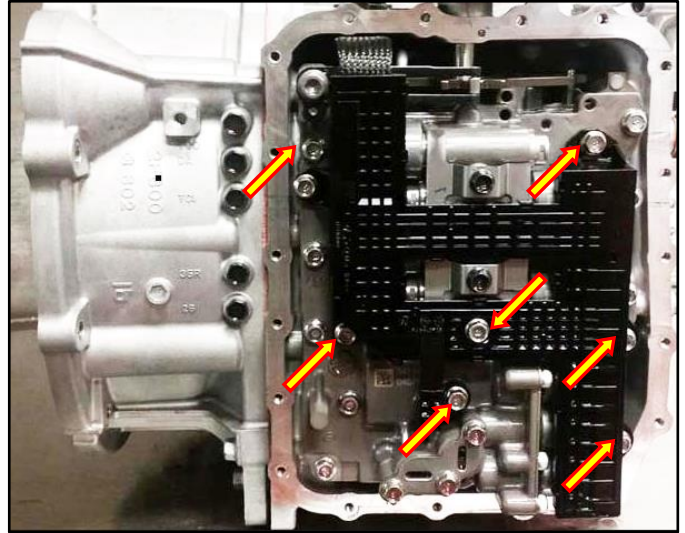
**CAUTION**

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



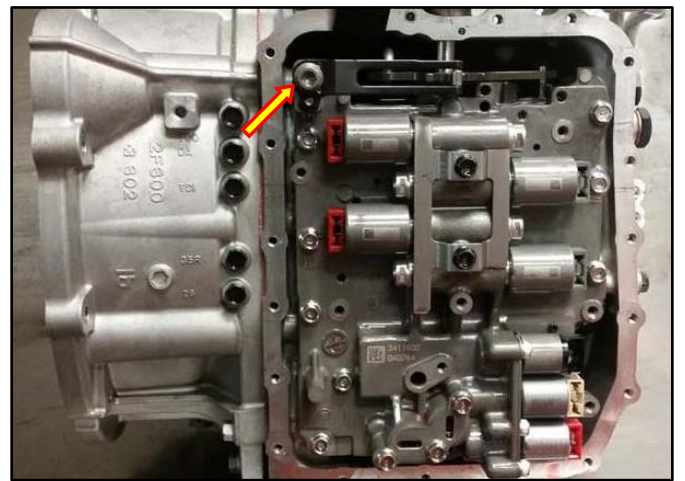
10. Remove 7 bolts to the harness.

Pull the harness outward and move the harness out of position.



11. 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)



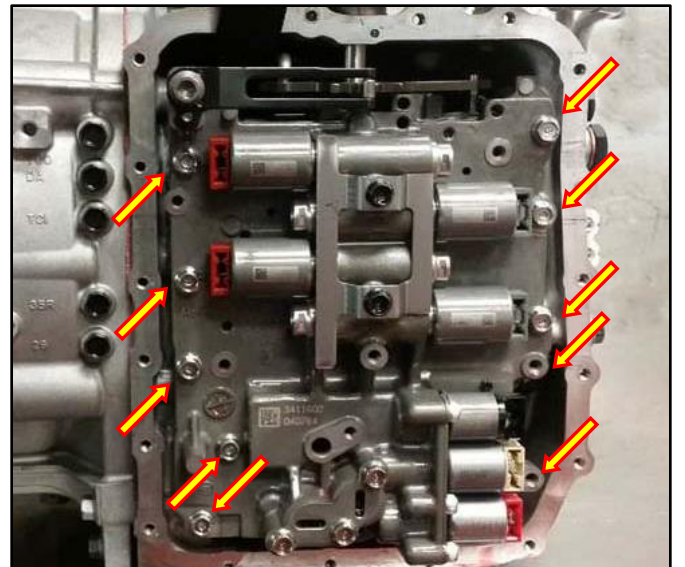
12. Remove the valve body bolts from the outermost bolts to the center bolts.

Remove the valve body.

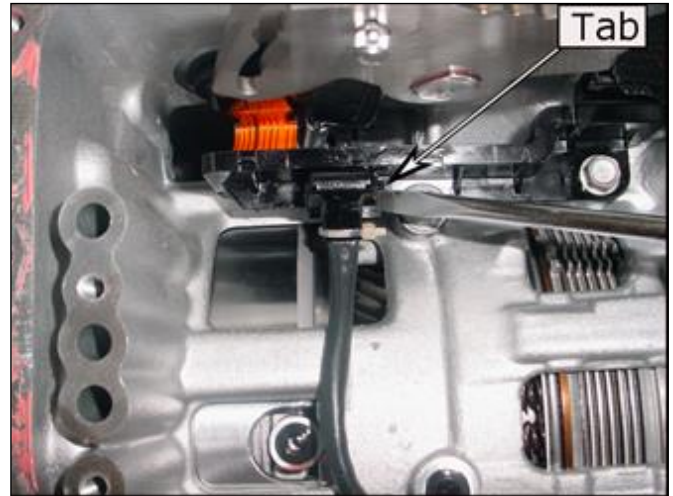


CAUTION

Place the valve body on a clean paper towel. Placing the valve body on a rag may cause lint to enter the valve body.



13. Use a screwdriver to depress the locking tab on the connector and pull outward on the connector.



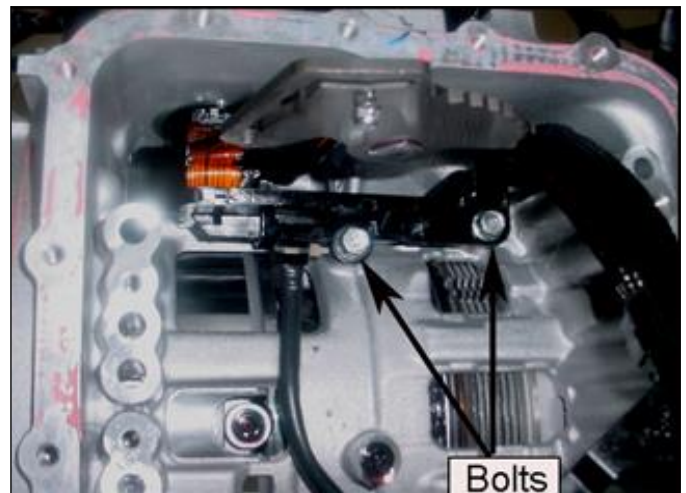
14. Remove two bolts that secure the harness to the case.

Pull the harness 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 8.

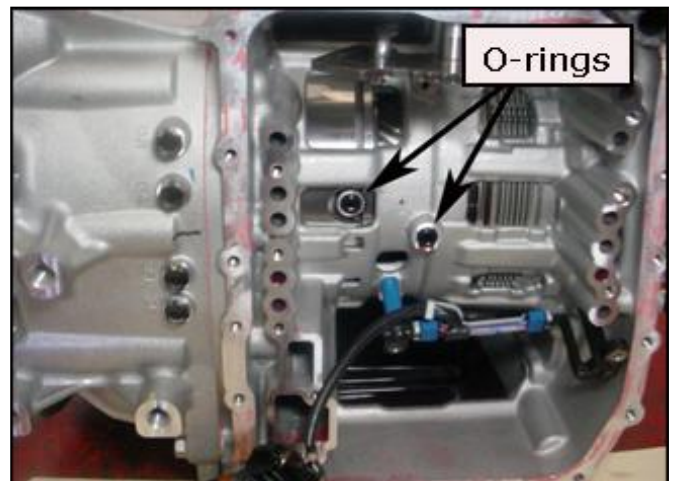
Reinstall the bolts that secure the harness.

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



15. Reconnect the harness to the input and output speed sensor (see Step 13).

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



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

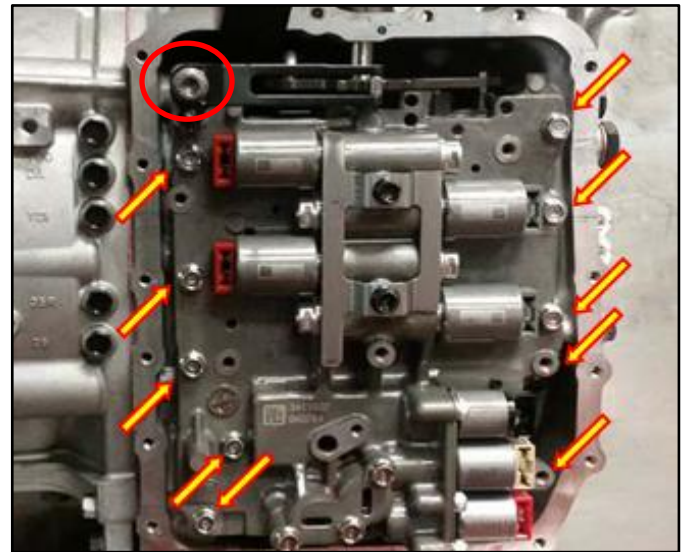


17. Install the valve body bolts and torque the bolts to specification from the center bolts to the outermost bolts.

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

Reinstall the bolt and detent spring.

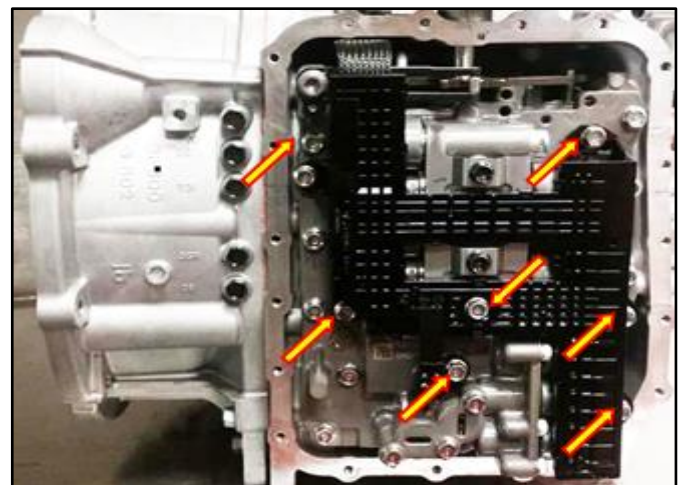
Torque: 8~11 lb.ft (1.2~1.5 kgf.m/10~13 N.m)



18. Connect the harness to the solenoids.

Install the bolts to the harness and torque to specification.

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



19. Install a new pan gasket, reinstall the pan and tighten the bolts to specification.

Torque: 9~10 lb.ft (1.2~1.4 kgf.m/12~14 N.m)



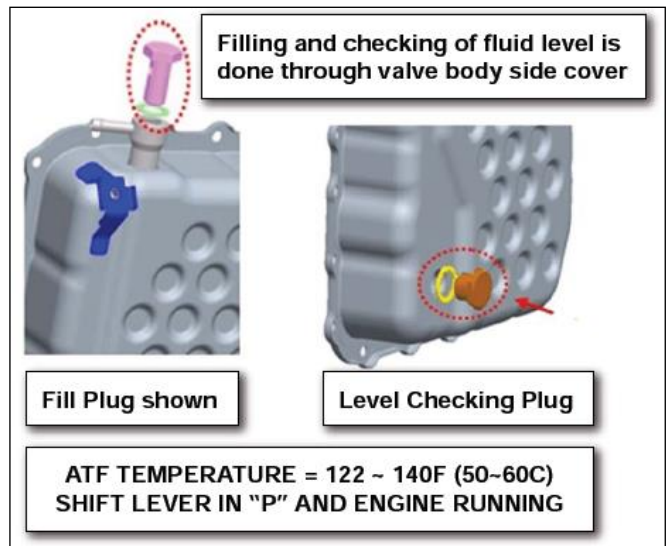
20. Attach the lower radiator hose. Add ethylene glycol engine coolant to the radiator and check the level according to the appropriate shop manual, "Engine" section.
21. Reconnect the battery.
Input the radio stations recorded in Step 5.
22. Remove the transaxle fill plug.

Use a funnel to add approximately 5~6 quarts of **SP4-M** ATF through the fill plug opening. Reinstall the fill plug.

Attach the GDS and select **Data Analysis, A/T** menu and **Oil Temperature Sensor**.

Start the engine and shift to R, D and place in 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 accordance with local regulations.



23. 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
P0880 P088000	<ul style="list-style-type: none"> • If P0880/P088000 returns, replace the ECU (PNC 39110). • If P0880/P088000 returns again, repair or replace the Control Wiring between the ECU and transmission (PNC 91400D).

24. Drive the vehicle to confirm the transmission is operating as designed. If so, the service procedure is complete.