	GROUP	NUMBER
HYUNDAI **Technical Service Bulletin**	**AUTOMATIC TRANSMISSION**	**20-AT-012H**
	DATE **MARCH, 2020**	MODEL **ACCENT (HC)** **ELANTRA (AD/ADa)** **ELANTRA GT (PD)** **KONA (OS)** **SANTA FE SPORT (AN)** **TUCSON (TL)** **VELOSTER (JS)**

SUBJECT: AUTOMATIC TRANSAXLE INPUT/OUTPUT SPEED SENSOR DTC P071700, P072100 & P072200

This TSB supersedes TSB 18-AT-009 to add the Tucson (TL) 2.4L and revise the Elantra (AD/ADa) 2.0L applicable dates.

Description: If you are servicing an applicable vehicle with a "Check Engine Light on" and one or more of the DTC listed below, follow the repair procedure and replace the input/output speed sensor and oil pressure harness.

NOTE: 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-011H).

Applicable Vehicles:

2018~	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

Parts Information:

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

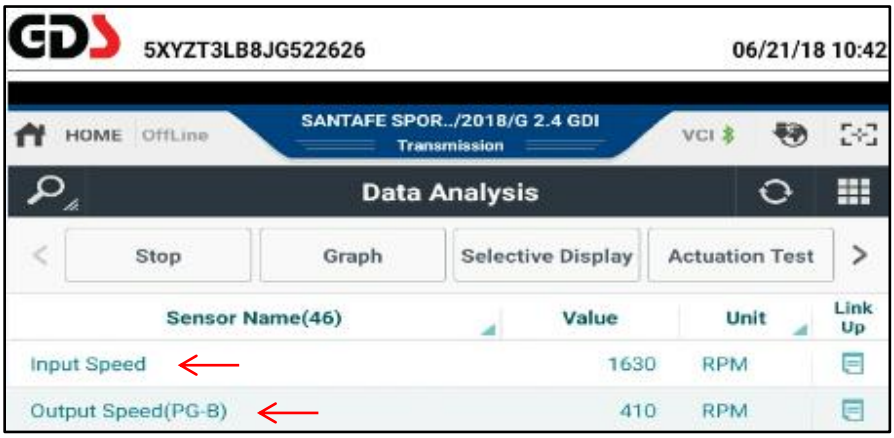
MODEL	DTC	DESCRIPTION	PNC	PART NUMBER
2018~ Accent (HC) 1.6L 2017~19 Elantra (AD/ADa) 2.0L 2018~ Elantra GT (PD) 2.0L 2018~ Kona (OS) 2.0L 2017~18 Santa Fe Sport (AN) 2.4L 2018~ Tucson (TL) 2.4L 2019~ Veloster (JS) 2.0L	P071700	Input/Turbine speed sensor A no signal	42620	42620-*****
	P072100	Output speed sensor circuit range/performance		
	P072200	Output speed sensor circuit no signal		
	ALL	Oil pressure switch harness	46307A	46307-2F***

Warranty Information:

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
2018~ 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	45644R00	Solenoid replacement	Refer to WEBLTS for current LTS time	See parts catalog	I3A	ZZ3
ALL	45644RQ0	GDS Operation				

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.



3. 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 4.

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

DTC	DESCRIPTION	REPAIR PROCEDURE
P071700	Input/Turbine speed sensor A no signal	Go to Step 5 and replace the input/output speed sensor **and** oil pressure switch harness.
P072100	Output speed sensor circuit range/performance	
P072200	Output speed sensor circuit no signal	

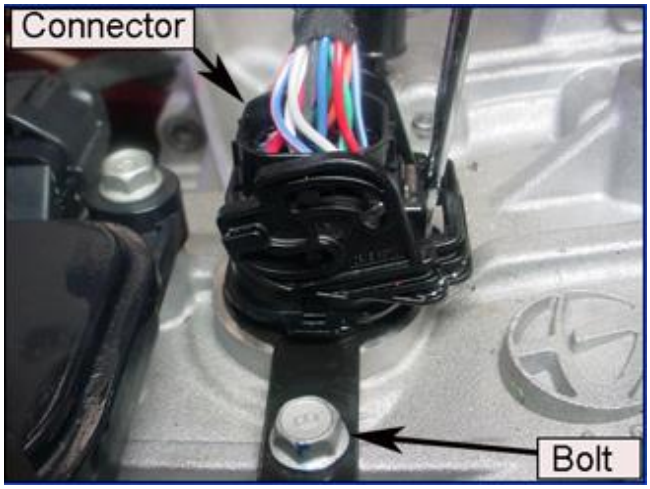
5. Record the preset radio stations.
   Remove the air cleaner, battery and battery tray.

6. Remove the undercover below the transmission.

7. If necessary to access the input/output speed sensor, 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.

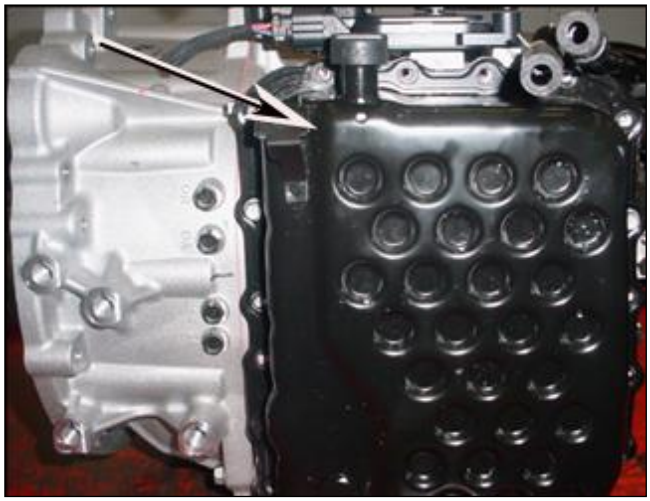
   Remove the bolt that secures the retainer and push the connector into the transmission.



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

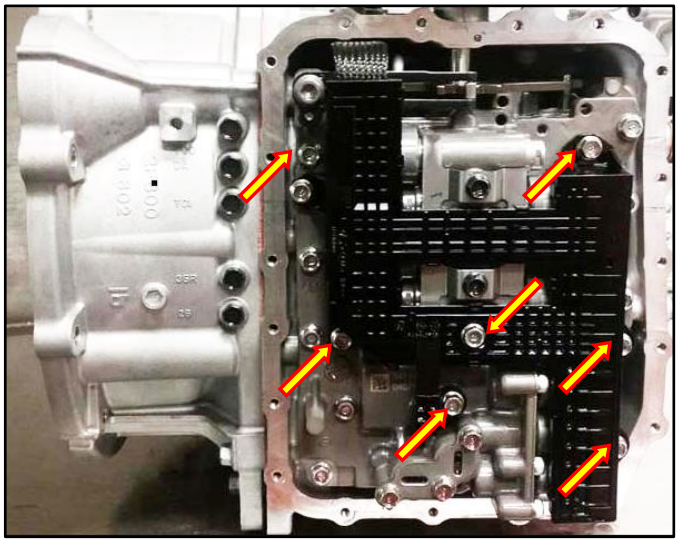
CAUTION

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



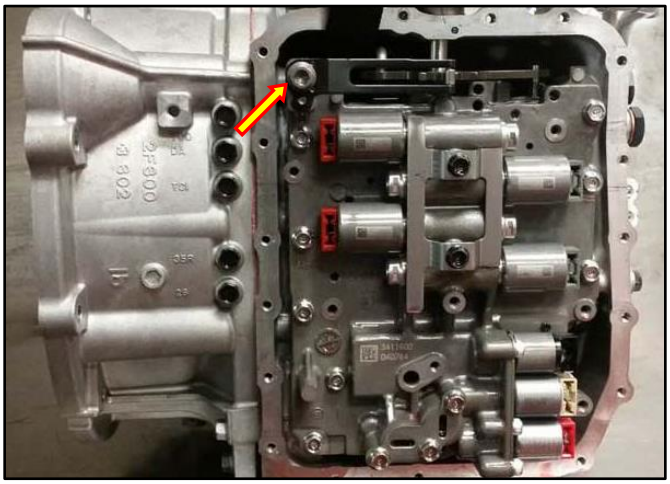
10. Remove 7 bolts to the oil pressure switch harness.

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



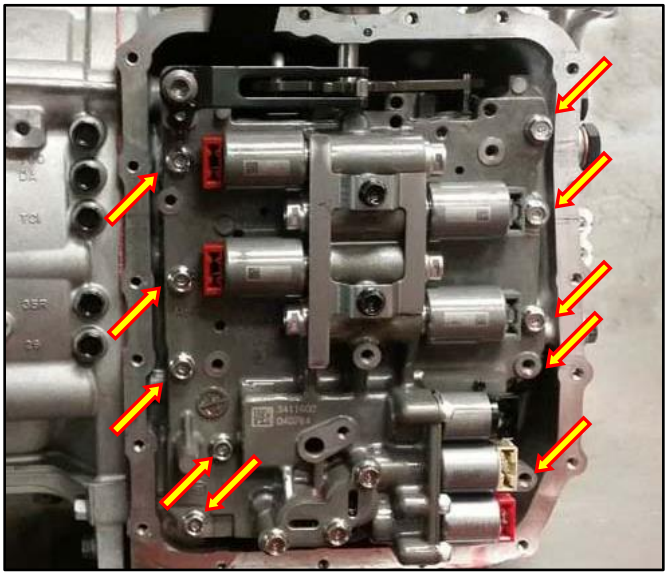
11. Remove the bolt that secures the detent spring and remove the spring.

    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.

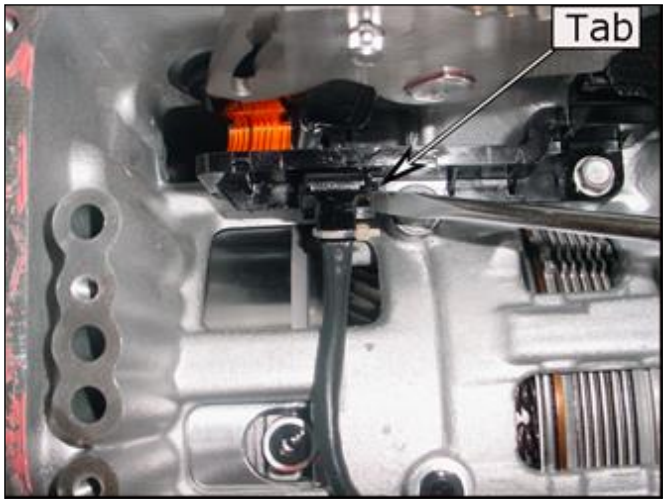
    Remove the valve body.



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.



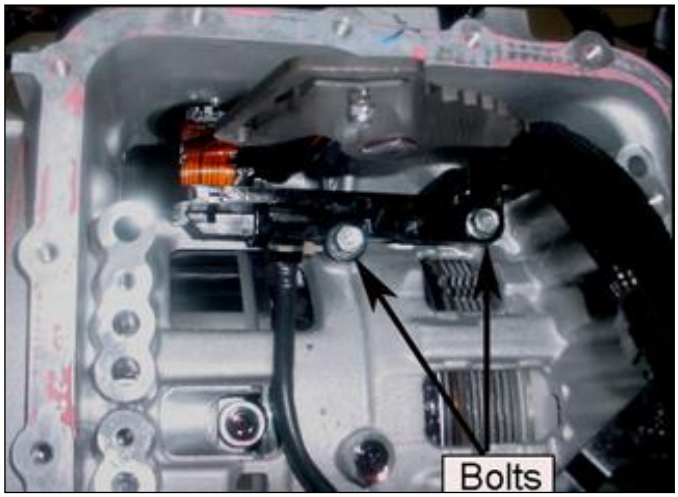
14. Remove two bolts that secure the harness to the case.

    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.

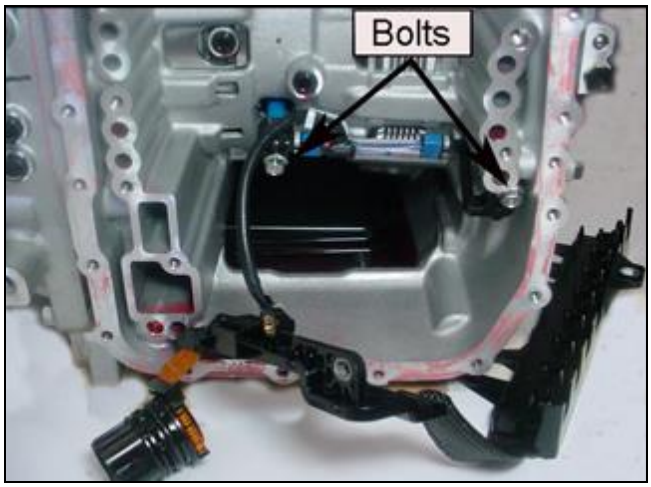
    Torque: 7~9 lb.ft (1.0~1.2 kgf.m, 10~12 N.m)



15. Remove two bolts that secure the input/output speed sensor and remove the sensor.

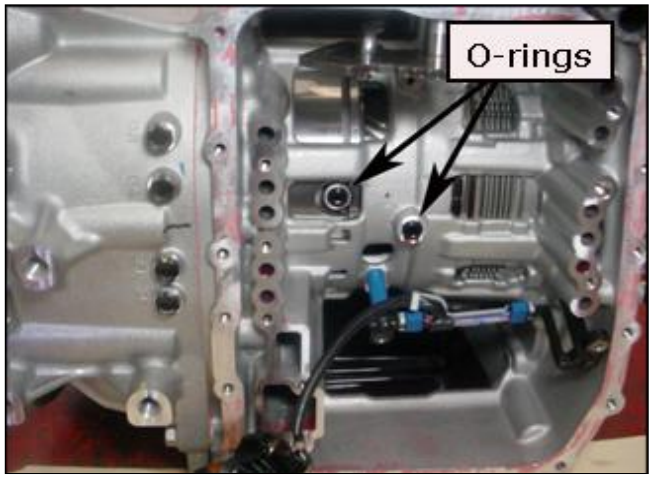
    Install a new input/output speed sensor and tighten the bolts to specification.

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

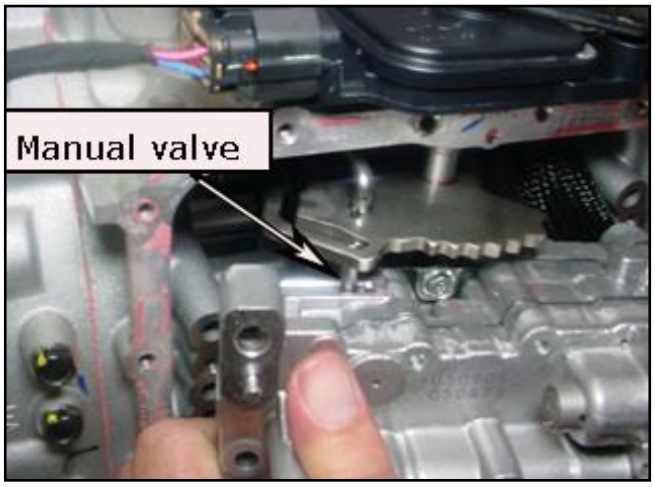


16. Connect the input and output speed sensor to the harness (see Step 13).

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



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

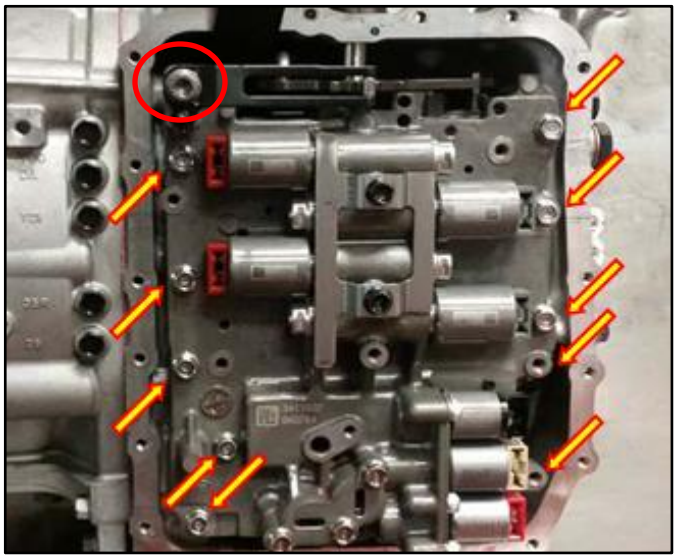


18. Install the valve body bolts and torque the bolts to specification from the center bolts to the outermost bolts.

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

    Reinstall the bolt and detent spring.

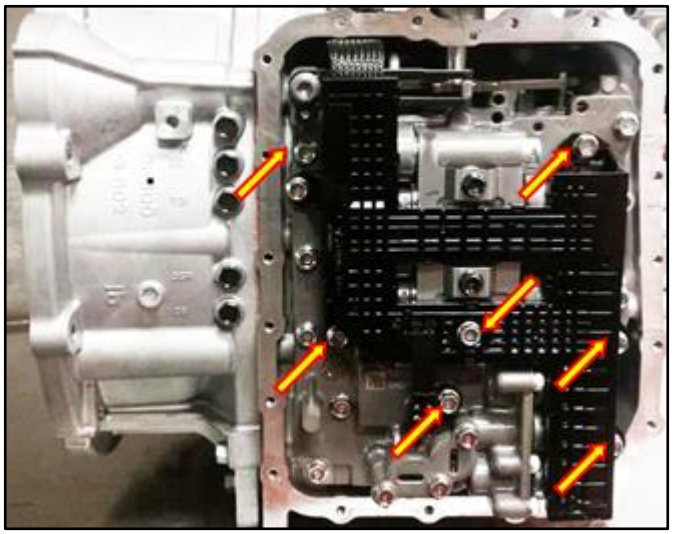
    Torque: 8~11 lb.ft (1.2~1.5 kgf.m/10~13 N.m)



19. Connect the new oil pressure harness to the solenoids and install the oil pressure sensor.

    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)



20. Reinstall the pan and tighten the bolts to specification.

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

21. 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.

22. Reconnect the battery.
    Input the radio stations recorded in Step 5.

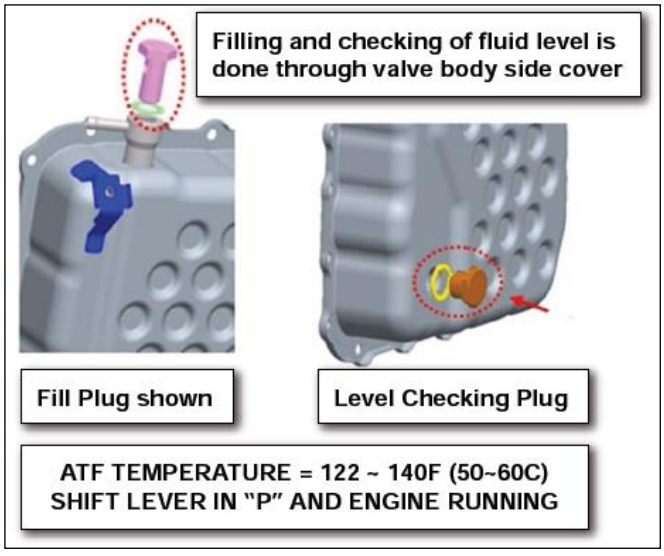
23. Remove the transaxle fill plug.

    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.



24. 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
P071700 P072100 P072200	Replace the control wiring harness between the PCM and transmission. • If the solenoid DTC does not return, return the vehicle to the customer. • If the solenoid DTC returns again, replace the PCM..

25. Drive the vehicle to confirm the transmission is operating as designed.