	GROUP	MODEL
	TRA	**All Models w/6 Spd. A/T Excl. Optima Hybrid**
	NUMBER	DATE
	051	**May 2014**

TECHNICAL SERVICE BULLETIN

SUBJECT: 6 SPD A/T SOLENOID REPLACEMENT – DTC P0741

This bulletin provides information relating to the replacement of the Damper Clutch (D/C) Solenoid on 6-speed automatic transaxles with DTC P0741 (active or history), instead of replacing the transaxle. To reduce vehicle repair time, this procedure can be performed with the transaxle installed in the vehicle. Refer to KGIS for solenoid pack removal and reinstallation procedures for the specific year and model of the vehicle.



AFFECTED MODELS:

Year	Model	Engine
2011>	Optima (TF & QF)	2.0L Theta II & 2.4L Theta II
2011>	Sorento (XMa)	2.4L Theta II & 3.5L Lambda II 3.3L Lambda GDI
2012>	Soul (AM)	1.6L Gamma GDI & 2.0L Nu
2011>	Sportage (SL)	2.0L Theta II & 2.4L Theta II
2011>	Sedona (VQ)	3.5L Lambda II
2011>	Forte (TD) Sedan, Koup & 5-Door	2.0L Theta II & 2.4L Theta II
2011>	Rio (UB)	1.6L Gamma GDI
2014>	Cadenza (VG)	3.3L Lambda GDI
2014>	Forte (YD)	2.0L Theta II & 1.6L Gamma Turbo
2014>	Soul (PS)	2.0L Theta II & 1.6L Gamma GDI

File Under: Transmission

Circulate To: ☒ **General Manager** ☒ **Service Manager** ☒ **Parts Manager**

☒ **Service Advisors** ☒ **Technicians** ☒ **Body Shop Manager** ☒ **Fleet Repair**

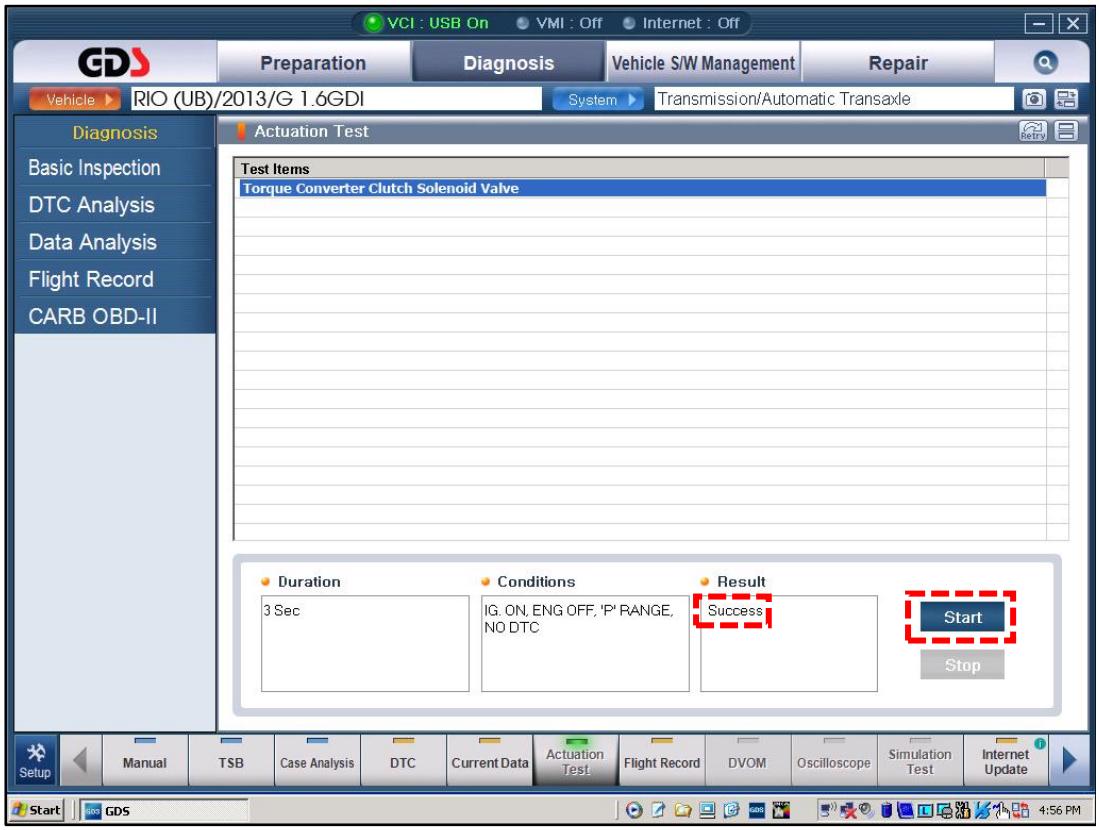
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Service Procedure:

1. Using GDS, check for DTC in the "Automatic Transaxle" menu. Record the DTC and the description**.** Then, delete the DTC.

2. From GDS, select the following parameter: **Vehicle and A/T menu** > **Actuation Test**

Press the **Start** button and check the "Result" box for a message indicating "Success".



If the test results show:

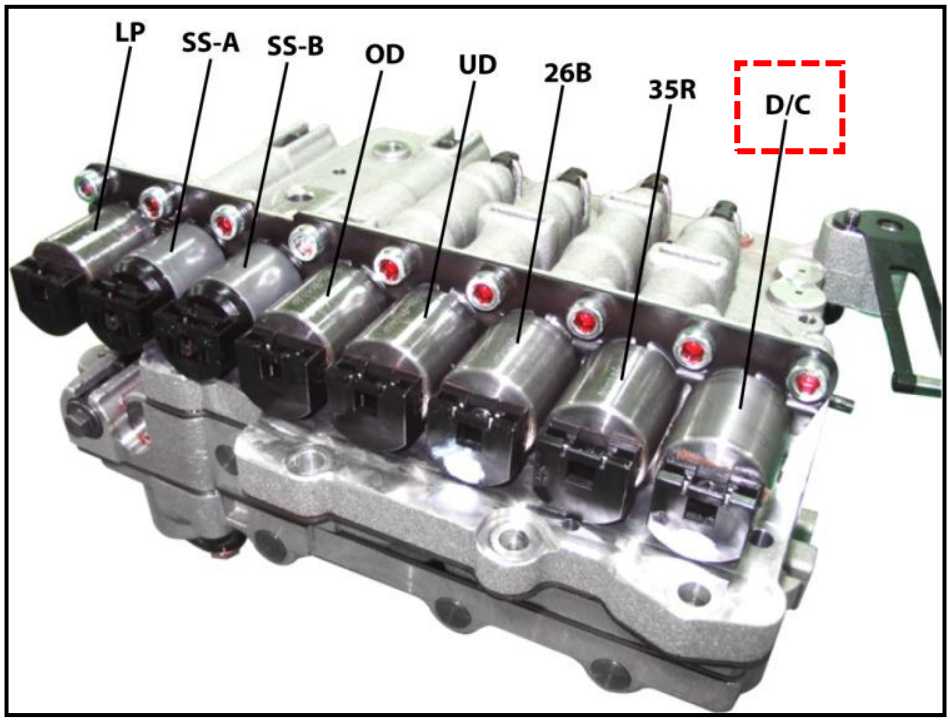
3.
- "Success" – GDS requested the TCM to activate the solenoids. Repeat while using chassis ears or a stethoscope to listen for solenoid operation. If the solenoids are audible, the harness currently has no open/short circuit. Proceed to Step 5.
- "Failure" - The GDS did not request the TCM to activate the solenoids. Proceed to Step 4.

4. Visually check the wiring harness between the PCM and transmission for a damaged wire or short circuit to ground. 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 not, proceed to Step 5.

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5. Refer to KGIS for solenoid pack removal and reinstallation procedures for the specific year and model of the vehicle.

Sample of Rio (UB) 6-Speed A/T Solenoid Pack
(Image is for reference purposes only and location of D/C solenoid will vary by model)



6. Once solenoid replacement is complete, refill the transmission by referring to the applicable ATF refill procedure on KGIS.

✶ NOTICE

Refer to KGIS or TSB TRA 046 for information on ATF requirements by model. Refill the transmission with the same amount of fluid as was drained during removal process, then check level and adjust as required.

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✶ NOTICE

- **STEEL OIL PAN:**
  Apply Kia RTV Silicone Gasket Maker (P/N UM010 CH046) to the oil pan and reinstall it.



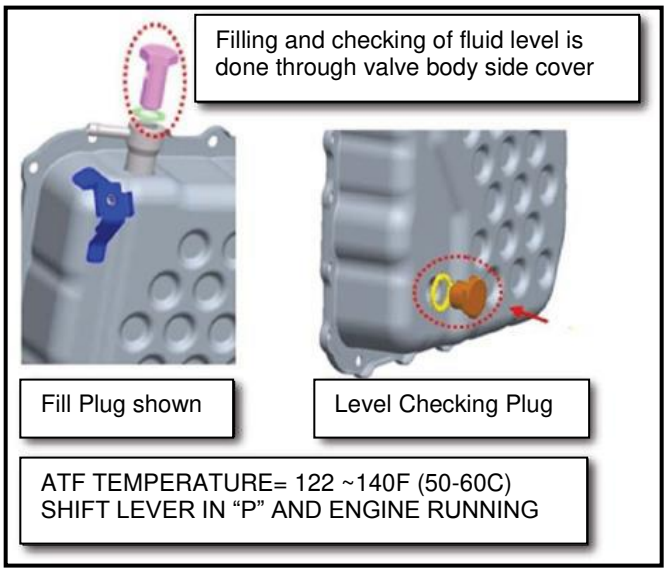
- **PLASTIC OIL PAN:**
  Install a new gasket on the oil pan and reinstall it.



✶ NOTICE

For Idle Stop and Go (ISG) equipped vehicles, allow the vehicle to remain undisturbed for 4 hours after all repairs are complete. This will allow for the required self-recalibration of the system to take place. Otherwise, the ISG system will not operate correctly.

- Attach the GDS to the DLC and select vehicle > A/T Menu > Current Data > Oil Temperature Sensor.
- With the transmission in “P”, start the engine and remove the level checking plug when the ATF reaches 122°F~140°F (50~60°C). The level is correct when oil flows out of the level checking plug in a thin and steady stream.



✶ NOTICE

Refer to PS171 for information on fluid level checking on vehicles equipped with plastic oil pans.

- Collect and dispose of any excess fluid in accordance with local laws and regulations.

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7. Clear the codes and test drive the vehicle for two driving cycles (two key-ON to key-OFF driving cycles, including 1-2-3-4-5-6 upshifts and 6-5-4-3-2-1 downshifts). If OK, no further action is required. If the DTC returns, perform the following repairs:

DTC	SOLENOID
P0741	• Replace the control wiring harness between the PCM and transmission. If the solenoid DTCs do not return, release the vehicle to the customer. • If any of the solenoid DTCs return again, replace the PCM.

8. After all repairs are complete, test drive the vehicle for two driving cycles (two key-ON to key-OFF driving cycles, including 1-2-3-4-5-6 upshifts and 6-5-4-3-2-1 downshifts) to confirm the DTC no longer returns, and for proper transmission operation.

REQUIRED PARTS:

For vehicles equipped with a steel oil pan:

Part Name	Part Number			
	Old		New	
	(A6MFx)	(A6LFx)	(A6MFx)	(A6LFx)
Oil Pan	45280 3B600	45280 3B000	45280 3B601	45280 3B001
ATF Level Plug Gasket	45323 39000			
ATF Fill Hole Plug Gasket	21513 11000			
ATF Drain Plug Gasket	45323 39000			
Solenoid Valve	46313 3B673			

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For vehicles equipped with a plastic oil pan:

Part Name	Part Number		
	(A6GF1)	(A6MF1)	(A6LF1)
Oil Pan	45280 26100	45280 3B810	45280 3B010
Valve Body Cover Gasket	45282 26100	45283 3B810	45283 3B810
ATF Level Plug Gasket	45284 26100	45285 3B010	45285 3B010
ATF Fill Hole Plug Gasket	21513 11000		
ATF Drain Plug Gasket	45323 39000		
Solenoid Valve	46313 3B073		46313 3B673

WARRANTY CLAIM INFORMATION:

MODEL	OP CODE	OP NAME	OP TIME	NATURE	CAUSE
AM	46313F00	6-SPEED AT REPAIR WHEN DTC P0741 OCCURS	1.2	N94	C15
PS			1.2		
TD			1.2		
UB			1.2		
SL			1.4		
QF / TF			1.5		
YD			1.5		
VG			1.6		
XM			1.8		
VQ			2.8		