

 HYUNDAI Technical Service Bulletin	GROUP AUTOMATIC TRANSMISSION	NUMBER 19-AT-002H
	DATE FEBRUARY, 2019	MODEL ELANTRA SPORT (AD) 1.6T, TUCSON (TL) 1.6T, VELOSTER (FS) 1.6T
SUBJECT: DUAL CLUTCH TRANSMISSION CLUTCH REPLACEMENT AND TCU SOFTWARE UPDATE		

Description: Certain vehicles (listed below) equipped with 7-speed Dual Clutch Transmission (DCT) may exhibit an abnormal vibration at low speeds. This bulletin outlines the procedures for diagnosing and replacing the Double Clutch, including a Transmission Control Unit (TCU) software update.

Applicable Vehicles:	2017~2018 Elantra Sport (AD) 1.6L Turbo 2016~2017 Tucson (TL) 1.6L Turbo 2016~2017 Veloster (FS) 1.6L Turbo
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Parts Information:

MODEL	DTC PART	PNC	PART NUMBER
2017~2018 Elantra Sport (AD) 1.6L Turbo	Double Clutch	41200C	41200-2D220
2016~2017 Tucson (TL) 1.6L Turbo 2016~2017 Veloster (FS) 1.6L Turbo	Snap Ring	44167G	41068-2D000

Warranty Information:

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
Elantra Sport (AD) 1.6L Turbo Tucson (TL) 1.6L Turbo Veloster (FS) 1.6L Turbo	41200F02	Clutch Judder Inspection Only	0.2 M/H	See Parts Catalog	V81	ZZ3
Tucson (TL) 1.6L Turbo	41200F03	Clutch Judder Inspection, Replacement of Double Clutch, and TCU Upgrade	3.6 M/H	See Parts Catalog	V81	ZZ3
Elantra Sport (AD) 1.6L Turbo	41200F04		3.8 M/H	See Parts Catalog	V81	ZZ3
Veloster (FS) 1.6L Turbo	41200F06		4.3 M/H	See Parts Catalog	V81	ZZ3

Special Service Tool

SPECIAL SERVICE TOOL	PART NUMBER	DISCRIPTION	PHOTO
Double Clutch Remover	09430-C1180	Used to remove the double clutch from the transmission	
Double Clutch Installer	09430-2A240	Used to install the double clutch into the transmission	
Actuator Fixing Jig & Motor Shaft Reset Tool	09430-C1302	Used to measure and reset the double clutch actuator	
Clutch Abrasion Compensation	09430-C1300	Clutch actuator adjustment tool	

GDS Information: System Selection: TCU

Event #	Model	Description
464	AD	1.6T 7DCT CONTROL LOGIC IMPROVEMENT(F850 clutch material only)
466	FS	1.6T 7DCT CONTROL LOGIC IMPROVEMENT(F850 clutch material only)
468	TL	1.6T 7DCT CONTROL LOGIC IMPROVEMENT(F850 clutch material only)

ECM Manual Mode Password Information Table:

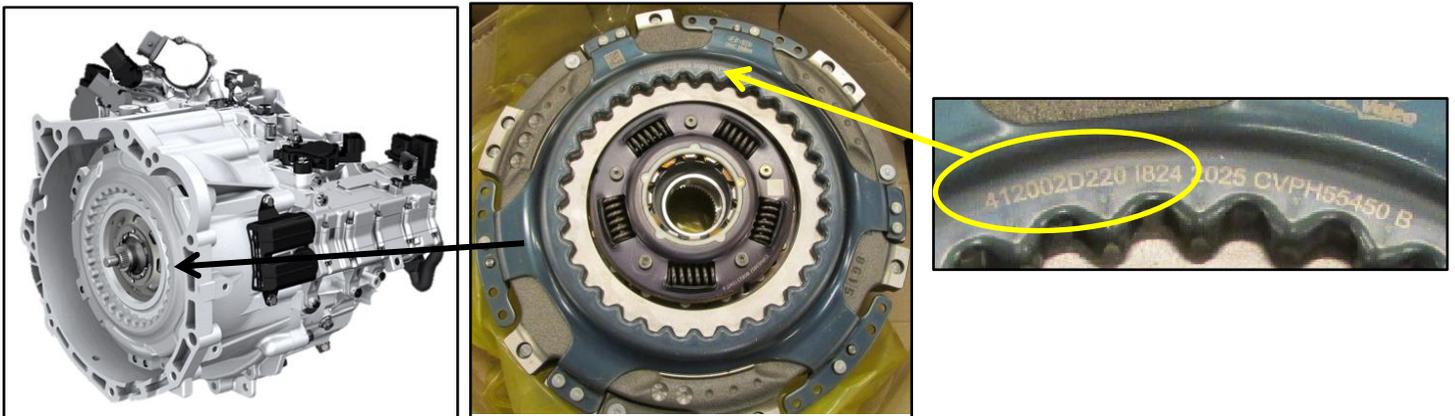
Menu	Vehicle Type	Password
AD 1.6T-GDI (7-DCT) TCU 95441-2DCE0	ALL 1.6T	4120
FS 1.6T-GDI (7-DCT) TCU 95441-2D400	ALL 1.6T	2400
TL 1.6T-GDI (7-DCT) 95441-2D720	ALL 1.6T	2720

ROM ID Information Table:

MODEL	SYSTEM	PART NUMBER		ROM ID	
		OLD	NEW	OLD	NEW
Elantra Sport (AD)	TCM	95440-2DCE0	95440-2DCE1	DADOT16NS0 DADOT16NS1 DADOT16NS2	DADOT16NS4
Veloster (FS)	TCM	95440-2D400	95440-2D401	DFSOT16NS0 DFSOT16NS1 DFSOT16NS2 DFSOT16NS3 DFSOT16NS4 DFSOT16NS5 DFSOT16NS6 DFSOT16NS7 DFSOT16NS8 DFSOT16NS9 DFSOT16NSA DFSOT16NSB	DFSOT16NSC
Tucson (TL)	TCM	95440-2D720	95440-2D721	DTLOT16NS0 DTLOT16NS1 DTLOT16NS2 DTLOT16NS3 DTLOT16NS4 DTLOT16NS5 DTLOT16NS6 DTLOT16NS7 DTLOT16NS8	DTLOT16NNSD

Updated F850 clutch material identification:

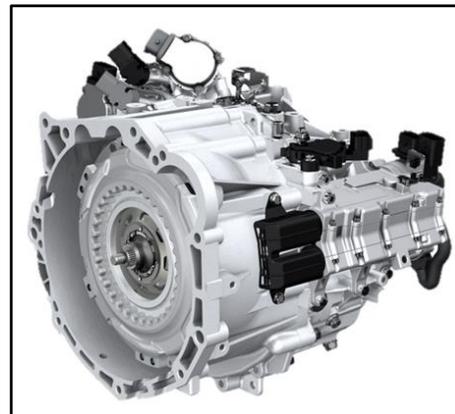
MODEL	PREVIOUS CLUTCH PART NUMBER (F833DS)	NEW CLUTCH PART NUMBER (F850)
2017~2018 Elantra Sport (AD) 1.6L Turbo 2016-2017 Tucson (TL) 1.6L Turbo 2016-2017 Veloster (FS) 1.6L Turbo	41200-2D101	41200-2D220



Judder Inspection Procedure:

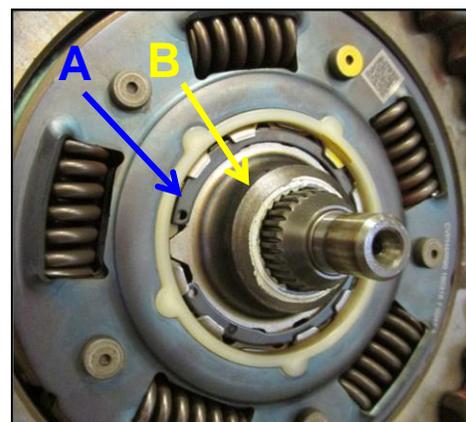
1. Park the vehicle on a level surface.
2. Start the engine and allow it to reach operating temperature.
3. Once the engine RPM has stabilized, move the gear selector to the 'D' position.
4. Slowly release the brake pedal and allow the vehicle to "creep" (drive) forward without pressing the gas or brake pedal for 30-40ft.
5. Bring the vehicle to a complete stop. Release the brake and slowly apply the throttle until the vehicle has reach 3rd or 4th gear.
6. If any abnormal vibration (clutch judder/chatter) is felt, follow the procedure below to replace the Double Clutch.

If no abnormal vibration is felt, the Double Clutch does not need to be replaced. The TSB procedure is complete; use the **Clutch Judder Inspection Only** OP-code (41200F02).



Clutch Replacement Procedure:

1. Remove the Dual-Clutch Transmission following the shop manual procedure.
2. Remove retaining ring (A) (41126-2D100) and the splined hub (B).



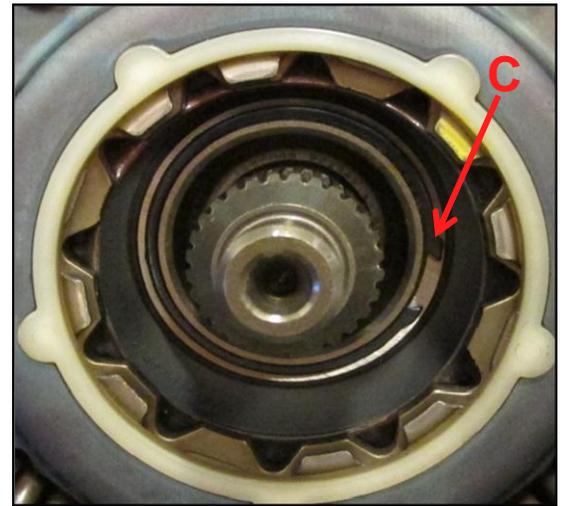
3. Remove snap ring (C) (41068-2D000).

CAUTION

The snap ring can become deformed in the removal process. Do not reuse the existing snap rings when reinstalling the Double Clutch into the transmission.

NOTICE

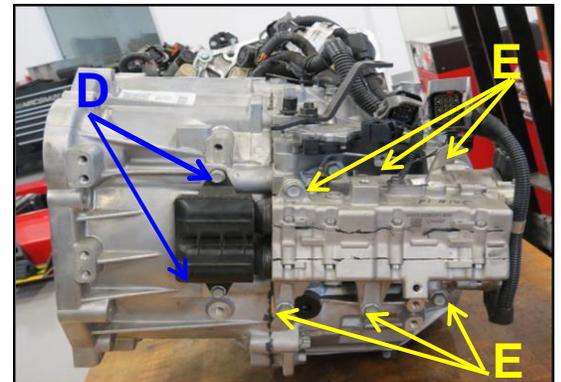
This operation requires special service tools. Please see the tools listed above.



4. Using the special service tool (SST 09430-C1180), remove the double clutch from the transmission assembly.



5. Remove the 2 bolts (D) securing the fork cover. Remove the 6 bolts (E) retaining the clutch actuator assembly to the transmission.



6. Remove the clutch actuator and place it on the actuator fixing jig (SST 09430-C1302).

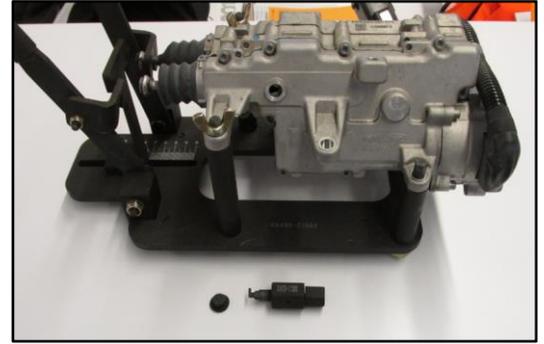


7. Follow the service shop manual procedure to initialize the rod length for both odd and even clutch actuator rods.



CAUTION

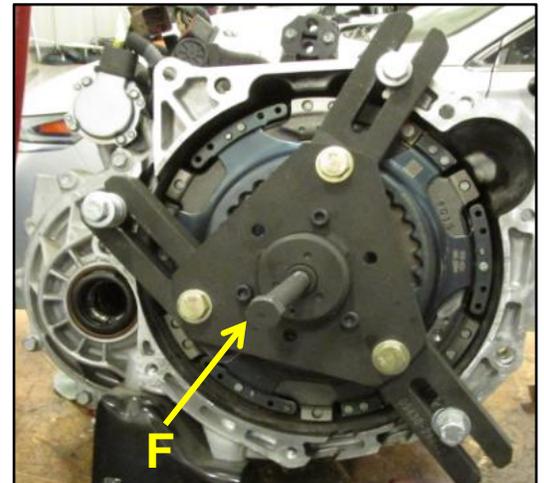
When installing a new Double-Clutch, the clutch actuator rod length has to be reset back to the factory zero. If the rod length is not adjusted correctly, the GDS DCT relearn procedure will not complete.



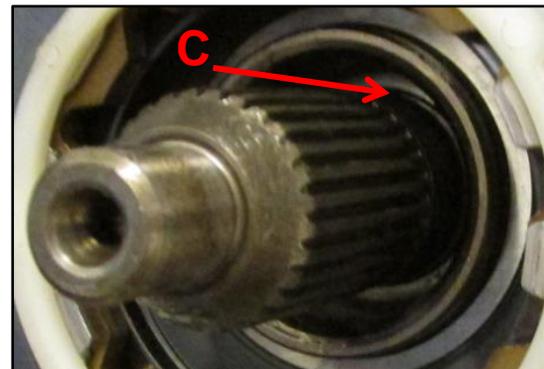
8. Reinstall the clutch actuator in the order that it was removed.
Torque: Fork Cover - 2.9-4.3 lb-ft (3.9-5.9 N.m)
Torque: Clutch Actuator - 14.5-19.5 lb-ft (19.6-26.5 N.m)



9. Install the new Double-Clutch using the special service tool (SST 09430-2A240) to fully seat the Double-Clutch.
10. Turn bolt (F) clockwise. When the force needed to turn the bolt increases, the Double-Clutch is fully seated.



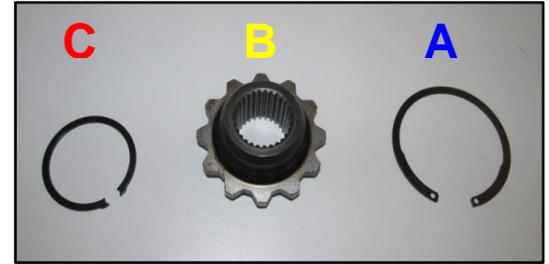
11. Verify the Double-Clutch is fully seated on the input shafts. The snap ring groove (C) will be fully exposed.



12. Install new snap ring (C), splined hub (B) and retaining ring (A).

CAUTION

When installing the new snap ring, make sure it is fully seated and can be easily rotated left and right.



13. Reinstall the Dual Clutch Transmission into the vehicle by following the service shop manual procedure.

NOTICE

- When replacing the Double Clutch, refer to the table on page 3 of this TSB to identify if the originally clutch material was the older F833DS or newer F850 clutch material.
- Only if the Dual Clutch Transmission was originally equipped with the old F833DS clutch and the replacement Double Clutch is the new F850 material should the software update be performed.

NOTICE

- **The TCU software can only be performed in manual mode.**

14. Follow TSB: 15-GI-001 (GDS Mobile) and 15-GI-002 (PC GDS) for GDS update procedure.
15. Check for Diagnostic Trouble Codes in the **ALL** menus and erase any DTC.
16. Erase the DTC in the BlueLink system according to TSB 12-BE-005-2.
17. Use the GDS to perform the DCT learning function.
18. Confirm normal vehicle operation.