 HYUNDAI NEW THINKING. NEW POSSIBILITIES. Technical Service Bulletin	GROUP	NUMBER
	AUTOMATIC TRANSMISSION	13-AT-005-1
	DATE	MODEL
	MARCH 2013	Elantra Sedan (HD) Elantra Touring (FD)
SUBJECT:	AUTOMATIC TRANSAXLE HARSH AND/OR DELAYED UPSHIFT – GDS ANALYSIS	

This TSB supersedes TSB 13-AT-005 to revise the Op Code

Description:

This procedure uses the GDS to analyze shift performance for the 2007~10 Elantra Sedan and 2009~12 Elantra Touring.

Applicable Vehicles:	Model Years	Model
	2007~10 2009~12	Elantra (HD) Elantra Touring (FD)

WARRANTY INFORMATION – No Trouble Found (NTF):

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
2007~10 Elantra Sedan 2009~12 Elantra Touring	45000RQ0	GDS Operation	0.3	00268 See Parts Catalog	N26	C11

WARRANTY INFORMATION – Automatic Transaxle replacement

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
2007~10 Elantra Sedan 2009~12 Elantra Touring	45000R00	Replace auto transaxle	4.0	00268- See Parts Catalog	N26	C11
	45000RQ0	GDS Operation	0.3		N26	C11

SERVICE PROCEDURE:

1. Check the ATF level when the engine is idling in "N" according to TSB 06-40-016. Adjust the ATF level as needed.
2. Reset and relearn the adaptive values according to TSB 12-AT-017.

3. Compare to a similar model and year vehicle. If the shift delay is:
 - Same as comparison vehicle: Return the vehicle to the customer
 - Longer than the comparison vehicle, continue with the diagnosis.
4. Attach the GDS and check for Diagnostic Trouble Codes in both the “Engine” and “Automatic Transaxle” menu. If DTC are found, repair according to the appropriate TSB or shop manual.
5. Attach the GDS and select the following:
 - VIN and “A/T”
 - “Current Data”
 - Shift position
 - Pressure Control Solenoid A duty
 - Pressure Control Solenoid B duty
 - Pressure Control Solenoid C duty
 - On/off solenoid duty



CAUTION

Ask an assistant to drive the vehicle as you monitor the GDS.

6. Drive the vehicle and verify the condition:
 - Accelerate the vehicle and shift from 1-2-3-4 at 25~50% throttle (TPS).
 - Select “Record” (on top right of screen)
 - Select “PC Record” (on left of screen) and save the file.

REVIEW THE GDS DATA:

1-2 UPSHIFT:

- Open the GDS program and select:
- VIN and “A/T”
- “Flight Record” and “Data Review”
- Select “Items List” (top right of screen) and select: “Shift Position”, “Pressure control solenoids A, B & C” and “On/off solenoid”.
- Click the “+” or “-” buttons to choose 0.5 sec./Div. or less.
- Move the cursor to the start of the shift and “Left click”.
- Move the cursor to the end of the shift and “Right click”.
- Read the Pressure Control Solenoid B elapsed time at the top right of the screen. If the 1-2 shift requires more than 2.0 seconds, replace the transaxle.

NOTE: The Solenoid B elapsed time is important; the shape of the graph is not.

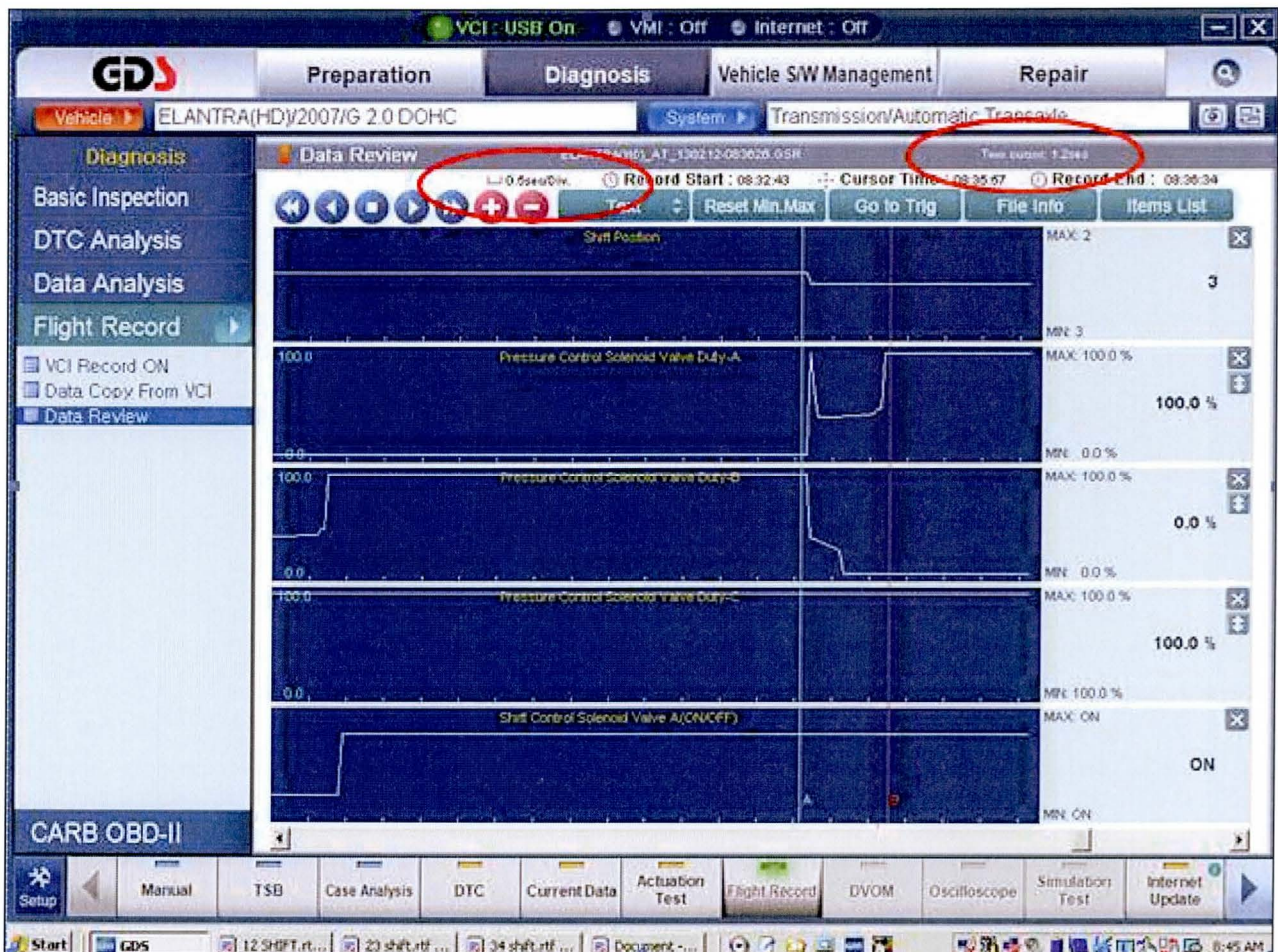


2-3 UPSHIFT:

Open the GDS program and select:

- VIN and “A/T”
- “Flight Record” and “Data Review”
- Select “Items List” (top right of screen) and select: “Shift Position”, “Pressure control solenoids A, B & C” and “On/off solenoid”.
- Click the “+” or “-” buttons to choose 0.5 sec./Div. or less.
- Move the cursor to the start of the shift and “Left click”.
- Move the cursor to the end of the shift and “Right click”.
- Read the Pressure Control Solenoid A elapsed time at the top right of the screen. If the 2-3 shift requires more than 2.0 seconds, replace the transaxle.

NOTE: The Solenoid A elapsed time is important; the shape of the graph is not.



3-4 UPSHIFT:

- Open the GDS program and select:
- VIN and “A/T”
- “Flight Record” and “Data Review”
- Select “Items List” (top right of screen) and select: “Shift Position, Pressure control solenoids A, B & C and On/off solenoid.
- Click the “+” or “-” buttons to choose 0.5 sec./Div. or less.
- Move the cursor to the start of the shift and “Left click”.
- Move the cursor to the end of the shift and “Right click”.
- Read the Pressure Control Solenoid B elapsed time at the top right of the screen. If the 3-4 shift requires more than 2.0 seconds, replace the transaxle.

NOTE: The Solenoid B elapsed time is important; the shape of the graph is not.

