

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

According to the DATA LIST displayed on the intelligent tester, you can read the values of components, such as the switches, sensors and actuators, without removing any parts. Reading the DATA LIST as the first step of troubleshooting is one method of shortening labor time.

NOTICE:

In the table below, the values listed under "Normal Condition" are for reference only. Do not depend solely on these reference values when judging whether a part is faulty or not.

- (a) Warm up the engine.
- (b) Turn the ignition switch off.
- (c) Connect the intelligent tester together with the CAN VIM (controller area network vehicle interface module) to the DLC3.
- (d) Turn the ignition switch to the ON position.
- (e) Push the "ON" button of the tester.
- (f) Select the items "DIAGNOSIS/ ENHANCED OBD II/ DATA LIST/ A/T".
- (g) According to the display on the tester, read the "DATA LIST".

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
SPD (NCO)	Input Speed display: 50 rpm	HINT: <ul style="list-style-type: none"> • 3rd Gear Lock-up ON (After warming up the engine); Input turbine speed (NCO) equal to the engine speed • 4th Gear Lock-up ON (After warming up the engine); Input turbine speed (NCO): 0 rpm • Lock-up OFF (Idling at N position); Input turbine speed (NCO) nearly equal to the engine speed 	-
SPD (SP2)	Counter Gear Speed display/ min.: 0 mph (0 km/h) max.: 158 mph (255 km/h)	Vehicle stopped: 0 mph (0 km/h)	-
PNP SW [NSW]	PNP SW Status/ ON or OFF	Shift lever position is; P or N: ON Except P and N: OFF	When the shift lever position displayed on the intelligent tester differs from the actual position, adjustment of the PNP switch or the shift cable may be incorrect. HINT: When the failure still occurs even after adjusting these parts, see page AT-34.
STOP LIGHT SW	Stop Lamp Switch Status/ ON or OFF	<ul style="list-style-type: none"> • Brake Pedal is depressed: ON • Brake Pedal is released: OFF 	-
SHIFT	Actual Gear Position/ 1st, 2nd, 3rd or 4th	Shift Lever Position is; <ul style="list-style-type: none"> • L: 1st • 2: 1st or 2nd • 3: 1st, 2nd or 3rd • D: 1st, 2nd, 3rd or 4th 	-

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
REVERSE	PNP SW Status/ ON or OFF	Shift lever position is; R: ON Except R: OFF	When the shift lever position displayed on the intelligent tester differs from the actual position, adjustment of the PNP switch or the shift cable may be incorrect. HINT: When the failure still occurs even after adjusting these parts, see page AT-34.
DRIVE	PNP SW Status/ ON or OFF	Shift lever position is; D and 3: ON Except D and 3: OFF	
3RD	PNP SW Status/ ON or OFF	Shift lever position is; 3: ON Except 3: OFF	
2ND	PNP SW Status/ ON or OFF	Shift lever position is; 2: ON Except 2: OFF	
LOW	PNP SW Status/ ON or OFF	Shift lever position is; L: ON Except L: OFF	
A/T OIL TEMP1	ATF Temperature Sensor Value/ min.: -40°C (-40°F) max.: 215°C (419°F)	<ul style="list-style-type: none"> After Stall Test; Approximately 80°C (176°F) Equal to ambient temperature when cold soak 	If the value is "-40°C (-40°F)" or "215°C (419°F)", ATF temperature sensor circuit is open or short.
A/T OIL TEMP3	ATF Temperature Sensor Value/ min.: -40°C (-40°F) max.: 215°C (419°F)	<ul style="list-style-type: none"> After Stall Test; Approximately 80°C (176°F) Equal to ambient temperature during cold soak 	If the value is "-40°C (-40°F)" or "215°C (419°F)", ATF temperature sensor circuit is open or short.
ATF	ATF Condition	ATF Condition NG: ON OK: OFF	Replace ATF when ATF condition is ON.
LOCK UP SOL	Lock-up solenoid status/ ON or OFF	<ul style="list-style-type: none"> Lock-up: ON Except lock-up: OFF 	-
SOLENOID (SLT)	Shift Solenoid SLT Status/ ON or OFF	<ul style="list-style-type: none"> Accelerator pedal is depressed: OFF Accelerator pedal is released: ON 	-
SOLENOID (SLU)	Shift Solenoid SLU Status/ ON or OFF	<ul style="list-style-type: none"> Lock-up: ON Except Lock-up: OFF 	-

2. ACTIVE TEST

HINT:

Performing the ACTIVE TEST using the intelligent tester allows components, such as the relay, VSV, and actuator, to be operated without removing any parts. Performing the ACTIVE TEST as the first step of troubleshooting is one method of shortening labor time. It is possible to display the DATA LIST during the ACTIVE TEST.

- (a) Warm up the engine.
- (b) Turn the ignition switch off.
- (c) Connect the intelligent tester together with the CAN VIM (controller area network vehicle interface module) to the DLC3.
- (d) Turn the ignition switch to the ON position.
- (e) Push the "ON" button of the tester.
- (f) Select the items "DIAGNOSIS/ ENHANCED OBD II/ ACTIVE TEST".

(g) According to the display on the tester, perform the "ACTIVE TEST".

Item	Test Details	Diagnostic Note
SHIFT	[Test Details] Operate the shift solenoid valve and set each shift position manually. [Vehicle Condition] <ul style="list-style-type: none"> • IDL: ON • Less than 31 mph (50 km/h) [Others] <ul style="list-style-type: none"> • Press → button: Shift up • Press ← button: Shift down 	Possible to check the operation of the shift solenoid valves.
LOCK UP	[Test Details] Control the shift solenoid SLU to set the automatic transmission to the lock-up condition. [Vehicle Condition] Vehicle Speed: 37 mph (60 km/h) or more	Possible to check the SLU operation.
LINE PRESS UP *	[Test Details] Operate the shift solenoid SLT to raise the line pressure. [Vehicle Condition] <ul style="list-style-type: none"> • Vehicle Stopped • IDL: ON HINT: OFF: Line pressure up (When the active test of "LINE PRESS UP" is performed, the ECM commands the SLT solenoid to turn off). ON: No action (normal operation)	-

*: "LINE PRESS UP" in the ACTIVE TEST is performed to check the line pressure changes by connecting SST to the automatic transmission, which is used in the HYDRAULIC TEST (See page [AT-14](#)) as well.

HINT:

The pressure values in the ACTIVE TEST and HYDRAULIC TEST are different from each other.