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 a 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 (SP2)	Counter Gear Speed / min.: 0 mph (0 km/h) max.: 158 mph (255 km/h)	Vehicle stopped: 0 mph (0 km/h)	-
SPD (NT)	Input Turbine Speed/ display: 50 rpm	[HINT] • Lock-up ON (After warming up the engine); Input turbine speed (NT) equal to the engine speed. • Lock-up OFF (Idling in N position); Input turbine speed (NT) nearly equal to the engine speed.	-
PNP SW [NSW]	PNP Switch Status/ ON or OFF	Shift lever position is; P or N: ON Except P or 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-142)
STOP LIGHT SW	Stop Light Switch Status/ ON or OFF	• Brake Pedal is depressed: ON • Brake Pedal is released: OFF	-
SHIFT	ECM gear shift command/ 1st, 2nd, 3rd, 4th or 5th	Shift Lever Position is; • L: 1st • 2: 1st or 2nd • 3: 1st, 2nd or 3rd • 4: 1st, 2nd, 3rd or 4th • D: 1st, 2nd, 3rd, 4th or 5th	-
REVERSE	PNP Switch Status/ ON or OFF	Shift lever position is; R: ON Except R: OFF	Same as PNP SW [NSW]

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
DRIVE	PNP Switch Status/ ON or OFF	Shift lever position is; D and 4: ON Except D and 4: OFF	Same as PNP SW [NSW]
4th/DRIVE	PNP Switch Status/ ON or OFF	Shift lever position is; 4: ON Except 4: OFF	Same as PNP SW [NSW]
3RD	PNP Switch Status/ ON or OFF	Shift lever position is; 3: ON Except 3: OFF	Same as PNP SW [NSW]
2ND	PNP Switch Status/ ON or OFF	Shift lever position is; 2 and L: ON Except 2 and L: OFF	Same as PNP SW [NSW]
LOW	PNP Switch Status/ ON or OFF	Shift lever position is; L: ON Except L: OFF	Same as PNP SW [NSW]
AT OIL TEMP1	No. 1 ATF Temperature Sensor Value/ min.: -40°C (-40°F) max.: 215°C (419°F)	• After Stall Test; Approximately 80°C (176°F) • Equal to ambient temperature during cold soak	If the value is "-40°C (-40°F)" or "150°C (302°F) or more", No. 1 ATF temperature sensor circuit is open or short.
AT OIL TEMP2	No. 2 ATF Temperature Sensor Value/ min.: -40°C (-40°F) max.: 215°C (419°F)	• After Stall Test; Approximately 80°C (176°F) • Equal to ambient temperature during cold soak	If the value is "-40°C (-40°F)" or "150°C (302°F) or more", No. 2 ATF temperature sensor circuit is open or short.
LOCK UP SOL	Lock Up Solenoid Status/ ON or OFF	• Lock Up: ON • Except Lock Up: OFF	-
SOLENOID (SLU)	Shift Solenoid SLU Status/ ON or OFF	• Lock Up: ON • Except Lock Up: OFF	-
SOLENOID (SLT)	Shift Solenoid SLT Status/ ON or OFF	IG SW ON: ON	-

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 a 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
LINE PRESS UP *	[Test Details] Operate the shift solenoid SLT to raise the line pressure. [Vehicle Condition] • 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)	-
LOCK UP	[Test Details] Control the shift solenoid SLU to set the automatic transmission to the lock-up condition. [Vehicle Condition] Vehicle Speed: 36 mph (60 km/h) or more	Possible to check the SLU operation.
SHIFT	[Test Details] Operate the shift solenoid valve and set each shift position manually. [Vehicle Condition] Vehicle Speed: Less than 30 mph (50 km/h) [Others] • Press →button: Shift up • Press ←button: Shift down	Possible to check the operation of the shift solenoid valves. HINT: Shifting to the 5th gear is possible only when the vehicle is stationary with the engine idling.

*: "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-16) as well.
HINT:
The pressure values in ACTIVE TEST and HYDRAULIC TEST are different from each other.