05MLU–02

DATA LIST/ACTIVE TEST

1. DATA LIST

HINT:

Using the Intelligent Tester II Data List allows switch, sensor, actuator and other item values to be read without removing any parts. Reading the Data List early in troubleshooting is one way to shorten labor time.

NOTICE:

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

(a) Warm up the engine.
(b) Turn the ignition switch off.
(c) Connect the Intelligent Tester II to the DLC3.
(d) Turn the ignition switch to the ON position.
(e) Turn on the tester.
(f) Select the item ”Enter / Power train / Engine and ECT / Data List”.
(g) Follow the instructions on the tester and read the Data List.

Item	Measurement Item/ Range (display)	Normal Condition	Diagnostic Note
Stop Light Switch	Stop light SW Status/ ON or OFF	• Brake Pedal is depressed: ON • Brake Pedal is released: OFF	–
Neutral Position SW Signal	PNP SW Status/ ON or OFF	Shift lever position is; P and N: ON Except P and N: OFF	When the shift lever position displayed on the Intelligent tester II 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 05–1055.
Shift SW Status (L Range)	PNP SW Status/ ON or OFF	Shift lever position is; L: ON Except L: OFF	↑
Shift SW Status (2 Range)	PNP SW Status/ ON or OFF	Shift lever position is; 2 and L: ON Except 2 and L: OFF	↑
Shift SW Status (3 Range)	PNP SW Status/ ON or OFF	Shift lever position is; 3: ON Except 3: OFF	↑
Shift SW Status (4 Range)	PNP SW Status/ ON or OFF	Shift lever position is; 4: ON Except 4: OFF	↑
Shift SW Status (R Range)	PNP SW Status/ ON or OFF	Shift lever position is; R: ON Except R: OFF	↑
Shift SW Status (D Range)	PNP SW Status/ ON or OFF	Shift lever position is; D and 4: ON Except D and 4: OFF	↑
Shift Status	Actual Gear Position/ 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	–
Lock Up Solenoid Status	Lock Up Solenoid Status/ ON or OFF	• Lock Up: ON • Except Lock Up: OFF	–

SLT Solenoid Status	Shift Solenoid SLT Status/ ON or OFF	• Accelerator pedal is depressed: OFF • Accelerator pedal is released: ON	–
SLU Solenoid Status	Shift Solenoid SLU Status/ ON or OFF	• Lock Up: ON • Except Lock Up: OFF	–
A/T Oil Temperature 1	ATF Temp. Sensor No.1 Value/ min.: –40°C (–40°F) max.: 215°C (419°F)	• After Stall Test; Approx. 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 temp. sensor No.1 circuit is open or shorted.
A/T Oil Temperature 2	ATF Temp. Sensor No.2 Value/ min.: –40°C (–40°F) max.: 215°C (419°F)	• After Stall Test; Approx. 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 temp. sensor No.2 circuit is open or shorted.
SPD (SP2)	Output shaft Speed/ min.: 0 km/h (0 mph) max.: 255 km/h (158 mph)	Vehicle stopped: 0 km/h (0 mph) [HINT] Equal to vehicle speed	–
SPD (NT)	Input Turbine Speed/ display: 50 r/min	[HINT] • Lock–up ON (After warming up the engine); Input Turbine speed (NT) equal to the engine speed. • Lock–up OFF (Idling at N position); Input Turbine speed (NT) nearly equal to the engine speed.	–
Snow Switch Status	Pattern SW (2nd STRT) Status/ ON or OFF	• IG SW ON: OFF ↓ • Pattern SW (2nd STRT) Push: ON ↓ • Pattern SW (2nd STRT) Push: OFF	–

2. ACTIVE TEST

HINT:

Performing the Intelligent Tester II Active Test allows relay, Vacuum Switching Valve (VSV), actuator and other items to be operated without removing any parts. Performing the Active Test early in troubleshooting is one way to shorten labor time. The Data List can be displayed during the Active Test.

(a) Warm up the engine.
(b) Turn the ignition switch off.
(c) Connect the Intelligent Tester II to the DLC3.
(d) Turn the ignition switch to the ON position.
(e) Turn on the tester.
(f) Select the item ”Enter / Power train / Engine and ECT / Active Test”.
(g) Follow the instructions on the tester and read the Active Test.

Item	Test Details	Diagnostic Note
Control the Shift Position	[Test Details] Operate the shift solenoid valve and set each shift position by yourself. [Vehicle Condition] Less than 50 km/h (31 mph) [Others] • Press ”→” button: Shift up • Press ”←” button: Shift down	Possible to check the operation of the shift solenoid valves.
Control the Lock Up	[Test Details] Control the shift solenoid SLU to set the automatic transmission to the lock–up condition. [Vehicle Condition] • Throttle valve opening angle: Less than 35% • Vehicle Speed: 60 km/h (37 mph) or more	Possible to check the SLU operation.
Control the Line Pressure Up *	[Test Details] Operate the shift solenoid SLT and raise the line pressure. [Vehicle Condition] • Vehicle Stopped. • IDL: ON [HINT] OFF: Line pressure up (When the active test of ”Control the Line Pressure Up” is performed, the ECM commands the SLT solenoid to turn off). ON: No action (normal operation)	–

*: ”Control the Line Pressure Up” in the ACTIVE TEST is performed to check the line pressure changes by connecting the SST to the automatic transmission, which is used in the HYDRAULIC TEST (see page 05–1023) as well.

HINT:

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