05ILU–01

DATA LIST/ACTIVE TEST

1. DATA LIST

HINT:

From the DATA LIST displayed on the intelligent tester II, you can read the value of the display, sensor, actuator and so on without parts removal. Reading the DATA LIST as the first step of troubleshooting is one way to shorten labor time.

(a) Connect the intelligent tester II to the DLC3.

(b) Turn the power switch to the ON position.

(c) From the display on the tester, select the ”DATA LIST”.

DATA LIST / AIR CONDITIONER:

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
Room temperature sensor (Room Temp)	Room temperature sensor / min.: –6.5°C (20.3°F) max.: 57.25°C (135.05°F)	Actual room temperature is displayed	Open in the circuit: –6.5°C (20.3°F) Short in the circuit: 57.25°C (135.05°F)
Ambient temperature sensor (Ambi Temp Sens)	Ambient temperature sensor / min.: –23.3°C (–9.94°F) max.: 65.95°C (150.71°F)	Actual ambient temperature is displayed	Open in the circuit: –23.3°C (–9.94°F) Short: in the circuit: 65.95°C (150.71°F)
Evaporator temperature sensor (Evap Temp)	Evaporator temperature sensor / min.: –29.7°C (–21.46°F) max.: 59.55°C (139.19°F)	Actual evaporator temperature is displayed	Open in the circuit: –29.7°C (–21.46°F) Short in the circuit: 59.55°C (139.19°F)
Solar sensor (D side) Solar Sens–D	Solar sensor (Driver side) / min.: 0 max.: 255	Increases as brightness increases	Open in the circuit: 0 Short in the circuit: 255
Engine coolant temperature (Coolant Temp)	Engine coolant temperature / min.: 1.3°C (34.34°F) max.: 90.55°C (194.99°F)	Actual engine coolant temperature is displayed while the engine is warmed up	–
Set temperature (D side) (Set Temp–D)	Set temperature (Driver side) / min.: 0 max.: 255	The same contents as a setting temperature display part are displayed	–
Estimated temperature (D side) (Estimate Temp–D)	Estimated temperature (Driver side) / min.: –358.4°C (–613.12°F) max.: 358.4°C (677.12°F)	Damper is at ”MAX. COOL”: –358.4°C (–613.12°F) Damper is at ”MAX. HOT”: 358.4°C (677.12°F)	–
Air mix damper position (D side) (A/M Damp Pos–D)	Air mix damper position (Driver side) / min.: –14% max.: 113.5%	Damper is at ”MAX. COOL”: –10.0% Damper is at ”MAX. HOT”: 100.0% or 71.0%	–
Air outlet damper position (A/O Damp Pos)	Air outlet damper position / min.: –14% max.: 113.5%	Damper is at ”FACE”: –10.0% Damper is at ”FACE/FOOT”: 12.0% Damper is at ”FOOT” (Manual): 33.5% or 69.0% (33.5%)*1 Damper is at ”FOOT” (Auto): 49.0% or 69.0 % Damper is at ”FACE/DEF”: 69.0% or 95.0% Damper is at ”DEF”: 110.0%	Open in the circuit: 50.0%
Air inlet damper position (A/I Damp Pos)	Air inlet damper position / min.: –14% max.: 113.5%	Damper is at ”RECIRCULATION”: –1.0% Damper is at ”FRESH”: 110.0% Damper is at ”HALF–RECIRCULATION”: 20.0 to 102.0%	Open in the circuit: 50.0%

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
Air mix damper target position (D side) (A/M Damp Targ–D)	Air mix damper target position (Driver side) / min.: –14% max.: 113.5%	Damper is at "MAX. COOL": –10.0% Damper is at "MAX. HOT": 100.0% or 71.0%	–
Air outlet damper target position (A/O Damp Targ)	Air outlet damper target position / min.: –14% max.: 113.5%	Damper is at "FACE": –10.0% Damper is at "FACE/FOOT": 12.0% Damper is at "FOOT" (Manual): 33.5% or 69.0% (33.5%)*1 Damper is at "FOOT" (Auto): 49.0% or 69.0 % Damper is at "FACE/DEF": 69.0% or 95.0% Damper is at "DEF": 110.0%	Open in the circuit: 50.0%
Air inlet damper target position (A/I Damp Targ)	Air inlet damper target position / min.: –14% max.: 113.5%	Damper is at "RECIRCULATION": –1.0% Damper is at "FRESH": 110.0% Damper is at "HALF–RECIRCULATION": 20.0 to 102.0%	Open in the circuit: 50.0%
Hand free telephone (Hand Free Tel)	Hands free telephone / OFF, ON	–	–
Blower motor speed level (Blower Level)	Blower motor speed level / min.: Level 0 max.: 31	Increases in the range between 0 and 31 as the speed increases.	–
Adjust ambient temperature (Ambi Temp)	Adjusted ambient temperature / min.: –30.8°C (–23.44°F) max.: 50.8°C (123.44°F)	–	–
Shift set temperature (Set Temp Shift)	Shift set temperature /+2C, +1C, NORMAL, –1C, –2C	Customized value will be displayed	–
Air inlet mode (Air Inlet Mode)	Air inlet mode / AUTO, MANUAL	Customized value will be displayed	–
Compressor mode (Compressor Mode)	Compressor mode / AUTO, MANUAL	Customized value will be displayed	–
Compressor/DEF operation mode (Comprs/Def Oper)	Compressor / DEF operation mode / LINK, NORMAL	Customized value will be displayed	–
Foot air leak (Foot Air Leak)	Foot air leak / ON, OFF	Customized value will be displayed	–
Foot/DEF automatic blow up function (Auto Blow Up)	Foot / DEF automatic blow up function / ON, OFF	Customized value will be displayed	–
Foot/DEF auto mode (Foot/Def Mode)	Foot / DEF auto mode / ON, OFF	Customized value will be displayed	–
Ambient temperature shift (Ambient Tmp Sft)	Ambient temperature shift / +3C, +2C, +1C, NORMAL, –1C, 2C, 3C	Customized value will be displayed	–
Destination (Destination)	Destination/ DOMEST, USA, EUROPE, AUSTRAL, MIDEAST, NO INFO	Changes with destinations	–
Destination (Destination)	Destination/ DOMEST, USA, EUROPE, AUSTRAL, MIDEAST, NO INFO	Changes with destinations	–
Humidity sensor (Humidity Sens)	Humidity sensor / min.: 0% max.: 100%	Actual room humidity is displayed	–
Compressor speed (Comprs Spd)	Compressor speed / min.: 0 rpm max.: 65,535 rpm	Displays actual rotation speed in the range between 0 rpm and 7,500 rpm	–

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
Compressor target speed (Comprs Targ Spd)	Compressor target speed / min.: 0 rpm max.: 65,535 rpm	Displays target rotation speed in the range between 0 rpm and 7,500 rpm	–
Number of Trouble Codes (#Codes)	Number of trouble codes / min.: 0 max.: 255	Number of DTCs will be displayed	–

HINT:

*1: Australia models

2. ACTIVE TEST

HINT:

Performing the ACTIVE TEST using the intelligent tester II allows the relay, VSV, actuator and so on to operate without parts removal. Performing the ACTIVE TEST as the first step of troubleshooting is one way to shorten labor time.

It is possible to display the DATA LIST on the intelligent tester II during the ACTIVE TEST.

(a) Connect the intelligent tester II to the DLC3.

(b) Turn the power switch to the ON position.

(c) From the display on tester, perform the ”ACTIVE TEST”.

ACTIVE TEST / AIR CONDITIONER:

Item	Test Details / Display (Range)	Diagnostic Note
Blower Motor (Blower Motor)	Blower motor / min.: 0 max.: 31	–
Air Mix Damper (D side) (Air Mix Damp–D)	Air mix damper (Driver side) / min.: –14% max.: 113.5%	–
Air Outlet Damper Position (A/O Mode Damp–D)	Air outlet damper position (Driver side) / min.: –14% max.: 113.5%	–
Air Inlet Damper Position (Linear) (A/I Damp–Linear)	Air inlet damper position (linear) / min.: –14% max.: 113.5%	–
Compressor Target Speed (Comprs Targ Spd)	Compressor target speed / min.: 0 max.: 255	–
Defogger Relay (Rear) (Defogger Rly–R)	Defogger relay (Rear) / OFF, ON	–
Water Pump (Water Pump Rly)	Water pump / OFF, ON	–
Electric Fan (Electrical Fan)	Electrical fan / OFF, ON	–
Defogger Relay (Rear) (Defogger Rly–R)	Defogger relay (Rear) / OFF, ON	–
Water Pump (Water Pump Rly)	Water pump / OFF, ON	–
Electric Fan (Electrical Fan)	Electrical fan / OFF, ON	–