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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HEATING / AIR CONDITIONING: AIR CONDITIONING SYSTEM (for PHEV Model): DATA LIST / ACTIVE TEST; 2023 - 2024 MY Prius Prime [03/2023 -]		

DATA LIST / ACTIVE TEST

DATA LIST

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.

HINT:

Using the GTS to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

(a) Air Conditioner

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Total Distance Traveled	Total distance traveled	0 to 999999	Total distance traveled	-
Total Distance Traveled - Unit	Total distance traveled unit	km / mile	-	-
Room Temperature Sensor	Room temp. sensor (cooler thermistor)	-327.68 to 327.67°C	Actual cabin temperature displayed	Room temp. sensor (cooler thermistor) circuit malfunction
Ambient Temperature Sensor	Ambient temp. sensor (thermistor assembly)	-327.68 to 327.67°C	Actual ambient temperature displayed	Ambient temp. sensor (thermistor assembly) circuit malfunction
Front Left Solar Sensor	Front left side solar sensor (automatic light control sensor)	0 to 6553.5 W/m^2	Front left side solar sensor (automatic light control sensor) value increases as brightness increases	Solar sensor (automatic light control sensor) circuit malfunction
Front Right Solar Sensor	Front right side solar sensor (automatic light control sensor)	0 to 6553.5 W/m^2	Front right side solar sensor (automatic light control sensor) value increases as brightness increases	Solar sensor (automatic light control sensor) circuit malfunction

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Engine Coolant Temperature Sensor	Engine coolant temperature sensor	-327.68 to 327.67°C	Actual engine coolant temperature displayed	• SFI system malfunction (Engine coolant temperature sensor circuit malfunction) • CAN communication system malfunction
Evaporator Fin Thermistor	Evaporator temp. sensor (No. 1 cooler thermistor)	-327.68 to 327.67°C	Actual evaporator temperature displayed	Evaporator temp. sensor (No. 1 cooler thermistor) circuit malfunction
Regulator Pressure Sensor	Air conditioning pressure sensor	-32768 to 32767 kPa(gauge) (-32.768 to 32.767 MPaG)	Actual refrigerant pressure displayed	• Refrigerant line (gas leak etc.) • Air conditioning pressure sensor circuit malfunction
Front Left Seat Heat Sensor	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Front Right Seat Heat Sensor	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Refrigerant Outlet Temperature Sensor	Refrigerant temperature after passing through the compressor with motor assembly	-327.68 to 327.67°C	Ambient temperature of the refrigerant outlet sensor (discharge temperature sensor)	Refrigerant outlet sensor (discharge temperature sensor) circuit malfunction
Water Refrigerant Condenser Refrigerant Temperature Sensor	-	-	-	Cannot be used

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
External Condenser Refrigerant Temperature Sensor	Refrigerant temperature after passing through the outer heat exchanger (cooler condenser assembly)	-327.68 to 327.67°C	Ambient temperature of the outer heat exchanger refrigerant temperature sensor (No. 1 air conditioning thermistor assembly)	Outer heat exchanger refrigerant temperature sensor (No. 1 air conditioning thermistor assembly) circuit malfunction
Evaporator Refrigerant Temperature Sensor	Refrigerant temperature after passing through the No. 1 cooler evaporator sub-assembly	-327.68 to 327.67°C	Ambient temperature of the evaporator refrigerant temperature sensor (No. 2 air conditioning thermistor assembly)	Evaporator refrigerant temperature sensor (No. 2 air conditioning thermistor assembly) circuit malfunction
Ambient Temperature Adjustment Value	Adjusted ambient temperature	-327.68 to 327.67°C	Adjust ambient temperature displayed	Air conditioning amplifier assembly circuit malfunction
Front Right Air Outlet Temperature	Target air outlet temperature	-327.68 to 327.67°C	Target air outlet temperature displayed • MAX COLD: -327.68°C • MAX HOT: 327.67°C	-
Front Left Air Outlet Temperature	-	-	-	Cannot be used
Evaporator Target Temperature	Evaporator target temperature	-327.68 to 327.67°C	Evaporator target temperature displayed	Evaporator temp. sensor (No. 1 cooler thermistor) circuit malfunction
Driver Side Set Temperature	Set temperature	MAX COLD / 14.0°C to 32.0°C (58°F to 90°F) / MAX HOT	Set temperature displayed	Air conditioning control assembly circuit malfunction
Passenger Side Set Temperature	-	-	-	Cannot be used

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Front Left Air Mix Damper Control Servo Motor Target Pulse	-	-	-	Cannot be used
Front Left Air Mix Damper Control Servo Motor Actual Pulse	-	-	-	Cannot be used
Front Right Air Mix Damper Control Servo Motor Target Pulse	-	-	-	Cannot be used
Front Right Air Mix Damper Control Servo Motor Actual Pulse	-	-	-	Cannot be used
Front Left Air Outlet Damper Control Servo Motor Target Pulse	-	-	-	Cannot be used
Front Left Air Outlet Damper Control Servo Motor Actual Pulse	-	-	-	Cannot be used
Front Right Air Outlet Damper Control Servo Motor Target Pulse	-	-	-	Cannot be used

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Front Right Air Outlet Damper Control Servo Motor Actual Pulse	-	-	-	Cannot be used
Air Inlet Damper Control Servo Motor Target Pulse	No. 1 blower damper servo sub-assembly target pulse	128 to 384	• Fresh: 220 (pulse) • Recirculation: 256 (pulse)	No. 1 blower damper servo sub-assembly circuit malfunction
Air Inlet Damper Control Servo Motor Actual Pulse	No. 1 blower damper servo sub-assembly actual pulse	128 to 384	• Fresh: 220 (pulse) • Recirculation: 256 (pulse)	No. 1 blower damper servo sub-assembly circuit malfunction
Front Air Mix Damper Control Servo Motor Target Pulse	No. 1 air conditioning radiator damper servo sub-assembly (air mix) target pulse	128 to 384	• MAX COLD: 257 (pulse) • MAX HOT: 165 (pulse)	No. 1 air conditioning radiator damper servo sub-assembly (air mix) circuit malfunction
Front Air Mix Damper Control Servo Motor Actual Pulse	No. 1 air conditioning radiator damper servo sub-assembly (air mix) actual pulse	128 to 384	• MAX COLD: 257 (pulse) • MAX HOT: 165 (pulse)	No. 1 air conditioning radiator damper servo sub-assembly (air mix) circuit malfunction
Front Air Outlet Damper Control Servo Motor Target Pulse	No. 1 air conditioning radiator damper servo sub-assembly (mode) target pulse	128 to 384	• FACE: 256 (pulse) • B/L: 267 (pulse) • FOOT-0: 288 (pulse) • FOOT: 297 (pulse) • FOOT-D: 305 (pulse) • F/D: 320 (pulse) • D/F: 339 (pulse)	No. 1 air conditioning radiator damper servo sub-assembly (mode) circuit malfunction

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
			• DEF: 348 (pulse)	
Front Air Outlet Damper Control Servo Motor Actual Pulse	No. 1 air conditioning radiator damper servo sub-assembly (mode) actual pulse	128 to 384	• FACE: 256 (pulse) • B/L: 267 (pulse) • FOOT-0: 288 (pulse) • FOOT: 297 (pulse) • FOOT-D: 305 (pulse) • F/D: 320 (pulse) • D/F: 339 (pulse) • DEF: 348 (pulse)	No. 1 air conditioning radiator damper servo sub-assembly (mode) circuit malfunction
Front Control Rear Air Outlet Damper Control Servo Motor Target Pulse	-	-	-	Cannot be used
Front Control Rear Air Outlet Damper Control Servo Motor Actual Pulse	-	-	-	Cannot be used
Compressor Target Speed	Compressor target speed	0 to 10000 rpm	Compressor target speed displayed	When compressor running: • Compressor with motor assembly
Compressor Actual Speed	Compressor speed	0 to 10000 rpm	Actual compressor speed displayed	When compressor running: • Compressor with motor assembly
Heating Electric Expansion	Target opening angle of heating electric expansion	0 to 100 %	Target opening angle of heating electric expansion	Heating electric expansion valve (magnet valve assembly) circuit malfunction

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Valve Target Position	valve (magnet valve assembly)		valve (magnet valve assembly)	
Heating Electric Expansion Valve Current Position	Current opening angle of heating electric expansion valve (magnet valve assembly)	0 to 100 %	Current opening angle of heating electric expansion valve (magnet valve assembly)	Heating electric expansion valve (magnet valve assembly) circuit malfunction
Cooling Electric Expansion Valve Target Position	Target opening angle of cooling electric expansion valve (cooler expansion valve)	0 to 100 %	Target opening angle of cooling electric expansion valve (cooler expansion valve)	Cooling electric expansion valve (cooler expansion valve) circuit malfunction
Cooling Electric Expansion Valve Current Position	Current opening angle of cooling electric expansion valve (cooler expansion valve)	0 to 100 %	Current opening angle of cooling electric expansion valve (cooler expansion valve)	Cooling electric expansion valve (cooler expansion valve) circuit malfunction
Low Pressure Magnetic Valve Status	Operation condition of low pressure magnetic valve (No. 3 magnet valve assembly)	OFF / ON	ON: Low pressure magnetic valve (No. 3 magnet valve assembly) closed OFF: Low pressure magnetic valve (No. 3 magnet valve assembly) open	Low pressure magnetic valve (No. 3 magnet valve assembly) circuit malfunction
High Pressure Magnetic Valve Status	Operation condition of high pressure magnetic valve (No. 2 magnet valve assembly)	OFF / ON	ON: High pressure magnetic valve (No. 2 magnet valve assembly) closed OFF: High pressure magnetic valve (No. 2 magnet valve assembly) open	High pressure magnetic valve (No. 2 magnet valve assembly) circuit malfunction
Front Evaporator Magnetic Valve Status	Operation condition of evaporator front magnetic valve (No. 1 magnet valve assembly)	OFF / ON	ON: Evaporator front magnetic valve (No. 1 magnet valve assembly) closed OFF: Evaporator front magnetic valve (No. 1 magnet valve assembly) open	Evaporator front magnetic valve (No. 1 magnet valve assembly) circuit malfunction

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Subcool Target Temperature	Target temperature of the sub-cooler calculated by ECU	-327.68 to 327.67°C	Target temperature of the sub-cooler calculated by ECU	Displays in range of 0 to 30°C (32 to 86°F)
Subcool Estimated Temperature (ECU Calculation Value)	Sub-cooler estimated temperature calculated by ECU	-327.68 to 327.67°C	Sub-cooler estimated temperature calculated by ECU	Displays in range of 0 to 30°C (32 to 86°F)
Heat Pump Operating Cycle Status	Heat pump operation cycle condition	Cooling / Series Heating / Parallel Heating / Heating / Defrosting / Idle / Initialization / Cooling Battery / Battery Alone	Heat pump operation cycle condition	• Determines heat pump cycle condition according to set temperature and various temperature sensor detection values • During cooling electric expansion valve (cooler expansion valve) and heating electric expansion valve (magnet valve assembly) initialization, the heat pump system does not operate and the heat pump cycle condition switches to Initialization
Refrigerant Gas Type	Refrigerant gas type	R134a / Hfo1234yf	Refrigerant gas type displayed	-
Refrigerant High Pressure History Count	Refrigerant high pressure history	0 to 255	Number of times refrigerant high pressure history stored displayed	*1
Refrigerant Low Pressure History Count	Refrigerant low pressure history	0 to 255	Number of times refrigerant low pressure history stored displayed	*1

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Operation Limit Control History Count	History of auxiliary battery voltage drop in the past	0 to 255	Number of times auxiliary battery voltage dropped in the past displayed	Counted when voltage drops below the specified level due to over discharge while driving. **HINT:** Make sure to delete the vehicle control history after performing an inspection.*2
Refrigerant Recovery Preparation Mode States	Refrigerant recovery preparation mode status	Not Running / Running / Finish	• Not Running: During normal operation • Running: During refrigerant recovery preparation mode • Finish: When refrigerant recovery preparation mode is complete	-
Efficient Ventilation Mode	Function to automatically change ambient air induction and room circulation is set.	OFF / ON	Customized value displayed	-
Foot/DEF Auto Mode	Function to turn the air flow from Foot/DEF ON automatically when AUTO MODE is ON.	OFF / ON	Customized value displayed	-
ECO Mode Control	This function switches ON/OFF of the controlling function of the air conditioning by ECO mode. If there is no ECO MODE switch, this customize function is not available.	OFF / ON	Customized value displayed	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
A/C Auto Switch Mode	Function to turn the A/C ON automatically by pressing the AUTO button when the blower is ON and the A/C is OFF.	OFF / ON	Customized value displayed	-
Noise and Vibration Reduction	Function to change speed of the compressor when item is ON.	OFF / ON	Customized value displayed	-
Ion Generate Control	-	-	-	Cannot be used
Set Temperature Shift	Function to control with the shifted temperature against the display temperature.	-2C / -1C / Normal / +1C / +2C	Customized value displayed	-
Seat Airflow Mode Setting	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Refrigerant Shortage Check	Function to cancel the refrigerant shortage check when item is OFF. (The verification mode is excluded.)	OFF / ON	Customized value displayed	-
High Heat Condenser Outlet Refrigerant Temperature	Refrigerant temperature after passing through the internal condenser (condenser assembly)	-327.68 to 327.67°C	Ambient temperature of the internal condenser temperature sensor	Internal condenser temperature sensor circuit malfunction
Target High Heat Source Temperature	Target temperature of the internal condenser (condenser assembly)	-327.68 to 327.67°C	Target temperature of the internal condenser (condenser assembly)	Displays in range of -50 to 150 °C (-58 to 302 °F)

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Actual High Heat Source Temperature	Estimated internal condenser (condenser assembly) temperature calculated by ECU	-327.68 to 327.67°C	Estimated internal condenser (condenser assembly) temperature calculated by ECU	Displays in range of -50 to 150 °C (-58 to 302 °F)
Blower Level	Blower motor speed level	0 to 31	Displayed speed level increases in range between 0 and 31 as blower motor speed increases	Blower motor with fan sub-assembly circuit malfunction
Rear Defogger Relay	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Front Deicer Relay	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Ion Generator	-	-	-	Cannot be used
Steering Heater	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Front Right Seat Heater	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Front Left Seat Heater	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Rear Right Seat Heater	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Rear Left Seat Heater	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Front Right Seat Blower	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Front Left Seat Blower	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Heating Electric Expansion Valve	Actual opening angle of heating electric expansion valve (magnet valve assembly)	0 to 100 %	Actual opening angle following the target opening angle	Heating electric expansion valve (magnet valve assembly) circuit malfunction
Cooling Electric Expansion Valve	Actual opening angle of cooling electric expansion valve (cooler expansion valve)	0 to 100 %	Actual opening angle following the target opening angle	Cooling electric expansion valve (cooler expansion valve) circuit malfunction
Low Pressure Magnetic Valve	Operation condition of low pressure magnetic valve (No. 3 magnet valve assembly)	OFF / ON	ON: Low pressure magnetic valve (No. 3 magnet valve assembly) closed OFF: Low pressure magnetic valve (No. 3 magnet valve assembly) open	Low pressure magnetic valve (No. 3 magnet valve assembly) circuit malfunction
High Pressure Magnetic Valve	Operation condition of high pressure magnetic valve (No. 2 magnet valve assembly)	OFF / ON	ON: High pressure magnetic valve (No. 2 magnet valve assembly) closed OFF: High pressure magnetic valve (No. 2 magnet valve assembly) open	High pressure magnetic valve (No. 2 magnet valve assembly) circuit malfunction
Front Evaporator Magnetic Valve	Operation condition of evaporator front magnetic valve (No. 1 magnet valve assembly)	OFF / ON	ON: Evaporator front magnetic valve (No. 1 magnet valve assembly) closed OFF: Evaporator front magnetic valve (No. 1 magnet valve assembly) open	Evaporator front magnetic valve (No. 1 magnet valve assembly) circuit malfunction

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Front Left Air Mix Damper Control Servo Motor Initialization History Count	-	-	-	Cannot be used
Front Right Air Mix Damper Control Servo Motor Initialization History Count	-	-	-	Cannot be used
Front Left Air Outlet Damper Control Servo Motor Initialization History Count	-	-	-	Cannot be used
Front Right Air Outlet Damper Control Servo Motor Initialization History Count	-	-	-	Cannot be used
Air Inlet Damper Control Servo Motor Initialization History Count	Displays the initialization history count	0 to 255	-	-
Front Air Mix Damper Control Servo Motor Initialization History Count	Displays the initialization history count	0 to 255	-	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Front Air Outlet Damper Control Servo Motor Initialization History Count	Displays the initialization history count	0 to 255	-	-
Front Control Rear Air Outlet Damper Control Servo Motor Initialization History Count	-	-	-	Cannot be used
Efficient Ventilation Mode (Driver1)	Displays the customized value set by My Settings	OFF / ON	Customized value displayed	For vehicles with air conditioning system set by My Settings
A/C Auto Switch Mode (Driver1)	Displays the customized value set by My Settings	OFF / ON	Customized value displayed	For vehicles with air conditioning system set by My Settings
Efficient Ventilation Mode (Driver2)	Displays the customized value set by My Settings	OFF / ON	Customized value displayed	For vehicles with air conditioning system set by My Settings
A/C Auto Switch Mode (Driver2)	Displays the customized value set by My Settings	OFF / ON	Customized value displayed	For vehicles with air conditioning system set by My Settings
Efficient Ventilation Mode (Driver3)	Displays the customized value set by My Settings	OFF / ON	Customized value displayed	For vehicles with air conditioning system set by My Settings
A/C Auto Switch Mode (Driver3)	Displays the customized value set by My Settings	OFF / ON	Customized value displayed	For vehicles with air conditioning system set by My Settings

*1: Refer to the following procedure to clear the refrigerant pressure history.

Click here INFO

*2: Refer to the following procedure to clear the A/C operation limitation history.

Click here INFO

(b) Engine

Powertrain > Engine > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Coolant Temperature	Engine coolant temperature	Min.: -40°C (-40°F) Max.: 140°C (284°F)	75 to 100°C (167 to 212°F): After warming up	This is the engine coolant temperature. **HINT:** • After warming up the engine, the engine coolant temperature will be 75 to 100°C (167 to 212°F). • After a long soak, the engine coolant temperature, intake air temperature and ambient air temperature will be approximately equal. • If the value is -40°C (-40°F), or higher than 135°C (275°F), the sensor circuit is open or shorted. • Check if the engine overheats if the value indicated is higher than 135°C (275°F).

(c) HV Battery

Powertrain > HV Battery > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Hybrid/EV Battery Refrigerant Pressure 1	HV battery refrigerant pressure 1	-7.660 to 7.659 MPa	-	-

ACTIVE TEST

HINT:

Using the GTS to perform Active Tests allows relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing Active Tests early in troubleshooting is one way to save diagnostic time. Data List information can be displayed while performing Active Tests.

(a) Air Conditioner

Body Electrical > Air Conditioner > Active Test

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
Blower Level	This test activates the blower motor to adjust the air volume high/low. (Blower motor with fan sub-assembly)	0: Air Volume Low 31: Air Volume High	Operate with the ignition switch ON.
Compressor Target Speed	This test drives the compressor to selected target speed. (Compressor with motor assembly)	800: Min 10000: Max (every 100) **HINT:** The maximum value for the Active Test is 8800.	Operate with the ignition switch ON (READY) and the vehicle stopped.
Rear Defogger Relay	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Front Deicer Relay	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Ion Generator	-	-	Cannot be used
Steering Heater	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Front Right Seat Heater	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Front Left Seat Heater	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Rear Right Seat Heater	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Rear Left Seat Heater	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
Front Right Seat Blower	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Front Left Seat Blower	-	-	Although this test is displayed on the GTS, it is not applicable to the air conditioning system.
Front Left Air Mix Damper Control Servo Motor	-	-	Cannot be used
Front Right Air Mix Damper Control Servo Motor	-	-	Cannot be used
Front Left Air Outlet Damper Control Servo Motor	-	-	Cannot be used
Front Right Air Outlet Damper Control Servo Motor	-	-	Cannot be used
Air Inlet Damper Control Servo Motor	This test activates the air inlet damper control servo motor. (No. 1 blower damper servo sub-assembly)	128: Min 384: Max	Operate with the ignition switch ON.
Front Air Mix Damper Control Servo Motor	This test activates the front air mix damper control servo motor. (No. 1 air conditioning radiator damper servo sub-assembly (air mix))	128: Min 384: Max	Operate with the ignition switch ON.
Front Air Outlet Damper Control Servo Motor	This test activates the front air outlet damper control servo motor. (No. 1 air conditioning radiator damper servo sub-assembly (mode))	128: Min 384: Max	Operate with the ignition switch ON.

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
Fr Control Rear Air Outlet Damper Servo Motor	-	-	Cannot be used
Heating Electric Expansion Valve	This test activates heating electric expansion valve to a target position. (Heating electric expansion valve (magnet valve assembly))	0%: Min. 100%: Max.	• Ignition switch ON (READY) • EV Mode • Blower: Manual Hi • Set Temperature: Manual Hi • Ambient Temperature: -10°C (14.0°F) or more than -10°C (14.0°F) • A/C Switch: OFF • Air Inlet Mode: Outside Air • Engine Coolant Temperature: 40°C (104°F) or less than 40°C (104°F)
Cooling Electric Expansion Valve	This test activates cooling electric expansion valve to a target position. (Cooling electric expansion valve (cooler expansion valve))	0%: Min. 100%: Max.	• Ignition switch ON (READY) • Blower: Manual Hi • Set Temperature: Manual Lo • Ambient Temperature: 0°C (32°F) or more than 0°C (32°F)
Low Pressure Magnetic Valve	This test activates the low pressure magnetic valve ON/OFF. (Low pressure magnetic valve (No. 3 magnet valve assembly))	OFF: Valve Off ON: Valve On	Operate with the ignition switch ON (READY) and the vehicle stopped.
High Pressure Magnetic Valve	This test activates the high pressure magnetic valve ON/OFF. (High pressure magnetic valve (No. 2 magnet valve assembly))	OFF: Valve Off ON: Valve On	Operate with the ignition switch ON (READY) and the vehicle stopped.
Front Evaporator Magnetic Valve	This test activates the front evaporator magnetic valve ON/OFF. (Evaporator front magnetic valve (No. 1 magnet valve assembly))	OFF: Valve Off ON: Valve On	Operate with the ignition switch ON (READY) and the vehicle stopped.

(b) Engine

Powertrain > Engine > Active Test

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
Control the Engine Cooling Fan Duty Ratio	Control the cooling fan	0 to 100%	Perform this test when vehicle is stopped.