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Model Year Start: 2023	Model: Prius	Prod Date Range: [12/2022 -]
Title: HEATING / AIR CONDITIONING: AIR CONDITIONING SYSTEM (for HEV Model): DATA LIST / ACTIVE TEST; 2023 - 2024 MY Prius [12/2022 -]		

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	<ul style="list-style-type: none"> Solar sensor (cooler thermistor)*3 Front left side solar sensor (automatic light control sensor)*4 	0 to 6553.5 W/m ²	<ul style="list-style-type: none"> Solar sensor (cooler thermistor) value increases as brightness increases*3 Front left side solar sensor (automatic light control sensor) value 	<ul style="list-style-type: none"> Solar sensor (cooler thermistor) circuit malfunction*3 Solar sensor (automatic light control sensor) circuit malfunction*4

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
			increases as brightness increases*4	
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	<ul style="list-style-type: none"> Solar sensor (automatic light control sensor) circuit malfunction *4
Engine Coolant Temperature Sensor	Engine coolant temperature sensor	-327.68 to 327.67°C	Actual engine coolant temperature displayed	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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.
Ambient Temperature Adjustment Value	Adjusted ambient temperature	-327.68 to 327.67°C	Adjust ambient temperature displayed	Air conditioning amplifier assembly circuit malfunction

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Front Right Air Outlet Temperature	Target air outlet temperature	-327.68 to 327.67°C	Target air outlet temperature displayed <ul style="list-style-type: none"> 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
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

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
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
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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Fresh: 220 (pulse) Recirculation: 256 (pulse) 	No. 1 blower damper servo sub-assembly circuit malfunction

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Air Outlet Damper Control Servo Motor Actual Pulse	No. 1 air conditioning radiator damper servo sub-assembly (mode) actual pulse	128 to 384	<ul style="list-style-type: none"> 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 Mix Damper	-	-	-	Cannot be used

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Control Servo Motor Target Pulse				
Front Control Rear Air Mix Damper Control Servo Motor Actual Pulse	-	-	-	Cannot be used
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: <ul style="list-style-type: none"> Compressor with motor assembly
Compressor Actual Speed	Compressor speed	0 to 10000 rpm	Actual compressor speed displayed	When compressor running: <ul style="list-style-type: none"> Compressor with motor assembly
PTC Request Count	-	-	-	Cannot be used
PTC Actual Driving Count	-	-	-	Cannot be used
Refrigerant Gas Type	Refrigerant gas type	R134a / Hfo1234yf	Refrigerant gas type displayed	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
PTC Driving Maximum Level	-	-	-	Cannot be used
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
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
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	-
Outside Air Mode Auto Switch Function	This function switches ON/OFF of the function to switch the suction opening to the outside air mode	OFF / ON	Customized value displayed	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
	automatically at the time of the ignition switch off.			
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	-
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.
Seat Temperature Auto Adjustment FL	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Seat Temperature Auto Adjustment FR	-	-	-	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	-
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

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Water Pump	-	-	-	Cannot be used
PTC Heater	-	-	-	Cannot be used
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.
Front Right Seat Blower	-	-	-	Although this item is displayed on the GTS, it is

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
				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.
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	-	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Front Air Mix Damper Control Servo Motor Initialization History Count	Displays the initialization history count	0 to 255	-	-
Front Air Outlet Damper Control Servo Motor Initialization History Count	Displays the initialization history count	0 to 255	-	-
Front Control Rear Air Mix Damper Control Servo Motor Initialization History Count	-	-	-	Cannot be used
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
Seat Temperature Auto Adjustment FL (Driver1)	-	-	-	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
Seat Temperature Auto Adjustment FR (Driver1)	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
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
Seat Temperature Auto Adjustment FL (Driver2)	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Seat Temperature Auto Adjustment FR (Driver2)	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
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
Seat Temperature Auto Adjustment FL (Driver3)	-	-	-	Although this item is displayed on the GTS, it is not applicable to the air conditioning system.
Seat Temperature Auto	-	-	-	Although this item is displayed on the GTS, it is

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	INSPECTION ITEM
Adjustment FR (Driver3)				not applicable to the air conditioning system.

*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](#)

*3: w/o Automatic Light Control

*4: w/ Automatic Light Control

(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: <ul style="list-style-type: none"> 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).

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.
Water Pump	-	-	Cannot be used
Compressor Target Speed	This test drives the compressor to selected target speed. (Compressor with motor assembly)	800: Min 10000: Max (every 100)	Operate with the ignition switch ON (READY) and the vehicle stopped.
PTC Heater	-	-	Cannot be used
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

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
			conditioning system.
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 Mix Damper Control Servo Motor	-	-	Cannot be used
Fr Control Rear Air Outlet Damper Servo Motor	-	-	Cannot be used

(b) Engine

Powertrain > Engine > Active Test

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
Control the Engine Cooling Fan	Control electric cooling fan motor	OFF/Low/High	Perform this test when vehicle is stopped.

