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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): Recirculated/Fresh Air Modes Switch without User Input; 2023 - 2024 MY Prius [12/2022 -]		

Recirculated/Fresh Air Modes Switch without User Input

DESCRIPTION

If recirculation/fresh mode changes unintentionally and without permission, the following causes are possible.

SYMPTOM	FACTOR
<ul style="list-style-type: none"> Recirculation/fresh mode changes without permission Recirculation/fresh mode light blinks 	<ul style="list-style-type: none"> Customize setting* Change in ambient air temperature Decrease in refrigerant pressure Air conditioning pressure sensor circuit malfunction Engine coolant temperature (high)

*: for Mexico

PROCEDURE

1.	CONFIRM MODEL
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RESULT	PROCEED TO
for Mexico	A
except Mexico	B

B  **GO TO STEP 3**

A



2.	READ VALUE USING GTS
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(a) Read the Data List according to the display on the GTS.


Body Electrical > Air Conditioner > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Efficient Ventilation Mode	Function to automatically change ambient air induction and room circulation is set.	OFF / ON	Customized value displayed	-

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY
Efficient Ventilation Mode

RESULT	PROCEED TO
Efficient Ventilation Mode is set to "OFF"	A
Efficient Ventilation Mode is set to "ON"	B

B  **CUSTOMIZE SETTING (Efficient Ventilation Mode to "OFF")**

A


3.	READ VALUE USING GTS
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(a) Read the Data List according to the display on the GTS.

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
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

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY
Ambient Temperature Sensor

OK:

The value of the display does not change frequently.

NG  **GO TO OTHER DIAGNOSIS PROCEDURE (Ambient Temperature Display System)**

OK



4. READ VALUE USING GTS (COOLANT TEMPERATURE)

(a) Read the Data List according to the display on the GTS.

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).


Powertrain > Engine > Data List

TESTER DISPLAY
Coolant Temperature

OK:

The value of the display does not change frequently.

NG  **GO TO COOLING SYSTEM**

for M20A-FXS: Click here 

for 2ZR-FXE: Click here 

OK



5.	CHECK REFRIGERANT PRESSURE
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(a) Install a manifold gauge set.

for HFC-134a(R134a): Click here [INFO](#)

for HFO-1234yf(R1234yf): Click here [INFO](#)

(b) Prepare the vehicle according to the table below.

Measurement Condition:

ITEM	CONDITION
Doors	Fully open
A/C Switch	On
Recirculation/fresh Control Switch	Recirculation
Set Temperature	MAX COLD
Blower Speed	HI
Air Conditioning Air Inlet Temperature	25 to 35°C (77 to 95°F)

(c) Compare the values displayed in the Data List and on the manifold gauge.

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Regulator Pressure Sensor	Air conditioning pressure sensor	-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

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY
Regulator Pressure Sensor

OK:

The values displayed in the Data List and on the manifold gauge match.

OK ▶ INSPECT REFRIGERANT PRESSURE WITH MANIFOLD GAUGE SET

for HFC-134a(R134a): Click here [INFO](#)

for HFO-1234yf(R1234yf): Click here [INFO](#)

NG  **REPLACE AIR CONDITIONING PRESSURE SENSOR**

INFO

