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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): UTILITY; 2023 - 2024 MY Prius Prime [03/2023 -]		

UTILITY

REFRIGERANT SHORTAGE CHECK USING GTS

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

Measurement Condition:

ITEM	CONDITION
Vehicle Condition	Ignition switch ON (READY)
A/C Switch	On
Ambient Temperature*1	0 to 49°C (32 to 120°F)
Air Conditioning Air Inlet Temperature*2	25 to 35°C (77 to 95°F)
Set Temperature	MAX COLD
Recirculation/fresh Control Switch	Recirculation
Air Vent Damper Position	FACE
Blower Speed	HI

HINT:

*1: This inspection can be judged correctly only if the ambient temperature is within a range of 0 to 49°C (32 to 120°F). Therefore, postpone the test if the temperature is low.

*2: This inspection can be judged correctly only if the air inlet temperature is within a range of 25 to 35°C (77 to 95°F). Therefore, postpone the test if the temperature is out of range.

(b) Using the GTS, check the amount of refrigerant.

Body Electrical > Air Conditioner > Utility

TESTER DISPLAY
Refrigerant Gas Volume Check

NOTICE:

If the conditions for the inspection are not met, "Refrigerant incorrect" will be displayed on the GTS. Confirm the conditions of the inspection and perform the check again.

HINT:

- If the amount of refrigerant is insufficient, "Refrigerant shortage" is displayed on the GTS and the indicator light on the A/C switch turns off.
- When performing this inspection, a DTC will not be output even if "Refrigerant shortage" is displayed on the GTS.

Result:

RESULT	AMOUNT OF REFRIGERANT	CORRECTIVE ACTION
Refrigerant shortage	Insufficient	1. Check for refrigerant leaks using a halogen leak detector, and repair if necessary. 2. Evacuate the air conditioning system and charge it with the appropriate volume of new or purified refrigerant.

RESULT	AMOUNT OF REFRIGERANT	CORRECTIVE ACTION
		Click here INFO
Refrigerant correct	Correct	-
Refrigerant incorrect	Incorrect	Confirm the conditions of the inspection and perform the check again.

REFRIGERANT PRESSURE HISTORY CLEAR

(a) Press the A/C OFF switch.

(b) According to the GTS display, perform refrigerant pressure history clear.

Body Electrical > Air Conditioner > Utility

TESTER DISPLAY
Refrigerant Pressure History Clear

A/C OPERATION LIMIT HISTORY COUNT CLEAR

(a) Press the A/C OFF switch.

(b) According to the GTS display, perform A/C operation limit history count clear.

Body Electrical > Air Conditioner > Utility

TESTER DISPLAY
A/C Operation Limit History Count Clear

MY SETTINGS INITIALIZATION

(a) Press the A/C OFF switch.

(b) According to the GTS display, perform My Settings initialization.

Body Electrical > Air Conditioner > Utility

TESTER DISPLAY
My Settings Initialization

REFRIGERANT RECOVERY PREPARATION MODE

Perform this procedure to enter refrigerant recovery preparation mode when recovering refrigerant.

NOTICE:

- Before entering refrigerant recovery preparation mode, make sure to confirm that no DTCs are output.
- Make sure to turn the ignition switch off after refrigerant recovery preparation mode is complete.
- After turning the ignition switch off, make sure to wait 3 minutes to allow the refrigerant to be recovered more easily.

(a) Refrigerant recovery preparation mode using panel diagnosis

(1) Set the vehicle to the following conditions.

Measurement Condition:

ITEM	CONDITION
Blower Speed	HI

ITEM	CONDITION
Set Temperature	MAX COLD

(2) Turn the ignition switch off.

(3) Within 30 seconds of turning the ignition switch to ON (READY), alternately press the "recirculation/fresh" switch then "AUTO" switch for 4 sets within 10 seconds.

HINT:

"recirculation/fresh"→"AUTO"→"recirculation/fresh"→"AUTO"→"recirculation/fresh"→"AUTO"→"recirculation/fresh"→"AUTO"

(4) Within 10 seconds, set the temperature to 18.5°C (61°F) then alternately press the "recirculation/fresh" switch then "AUTO" switch for 4 sets within 10 seconds.

(5) Check that the set temperature display has automatically switched from 18.5°C (61°F) to MAX COLD.

HINT:

- The blower switch display switches automatically from HI to OFF during refrigerant recovery preparation mode.
- The blower switch display switches automatically to HI after refrigerant recovery preparation mode is complete.

(b) Refrigerant recovery preparation mode using the GTS

(1) Connect the GTS to the DLC3.

(2) Turn the ignition switch ON (READY).

(3) Set the vehicle to the following conditions.[*]

Measurement Condition:

ITEM	CONDITION
Blower Speed	HI

(4) Perform with [*] condition.

Body Electrical > Air Conditioner > Utility

TESTER DISPLAY
Refrigerant Recovery Preparation Mode

(5) Check that the blower switch display has automatically switched from HI to OFF.

HINT:

- The blower switch display switches automatically from HI to OFF during refrigerant recovery preparation mode.
- The blower switch display switches automatically to HI after refrigerant recovery preparation mode is complete.
- The refrigerant recovery preparation mode condition can be checked using the GTS.

REFRIGERANT FILLING MODE

If the specified amount of refrigerant is not charged with the ignition switch off when charging the specified amount of refrigerant, enter refrigerant charging mode.

NOTICE:

- When the outside temperature is 0°C or less, refrigerant charging mode cannot be used.
- If refrigerant is charged in conditions other than the check conditions, a vehicle control history (X210F excessive refrigerant charging history) may be output. When vehicle control history (X210F excessive refrigerant charging history) is output, drain the refrigerant gas, reenter refrigerant charging mode and charge the refrigerant again.
- A DTC may be output if the vehicle is driven while in refrigerant charging mode. Be sure to turn the ignition switch off after refrigerant charging mode is complete.

HINT:

- If the specified amount of refrigerant is not charged, enter refrigerant charging mode.

- Switching to refrigerant charging mode will cause the air conditioning settings to switch automatically to the set temperature MAX COLD.

(a) Refrigerant charging mode using panel diagnosis

(1) Set the vehicle to the following conditions.

Measurement Condition:

ITEM	CONDITION
Set Temperature	MAX COLD
Ambient temperature	0°C (32°F) or higher

(2) Turn the ignition switch off.

(3) Within 30 seconds of turning the ignition switch to ON (READY), alternately press the "recirculation/fresh" switch then "AUTO" switch for 4 sets within 10 seconds.

HINT:

"recirculation/fresh"→"AUTO"→"recirculation/fresh"→"AUTO"→"recirculation/fresh"→"AUTO"→"recirculation/fresh"→"AUTO"

(4) Within 10 seconds, set the temperature to 18.0°C (60°F) then alternately press the "recirculation/fresh" switch then "AUTO" switch for 4 sets within 10 seconds.

(5) Check that the set temperature display has automatically switched from 18.5°C (61°F) to MAX COLD.

(6) After refrigerant charging is complete, turn the ignition switch off.

(b) Refrigerant charging mode using the GTS

(1) Set the vehicle to the following conditions.[*]

Measurement Condition:

ITEM	CONDITION
Blower speed	LO
Temperature setting	Other than MAX COLD
Ambient temperature	0°C (32°F) or higher
A/C switch	On

(2) Connect the GTS to the DLC3.

(3) Turn the ignition switch ON (READY).

(4) Perform with [*] condition.

Body Electrical > Air Conditioner > Utility

TESTER DISPLAY
Refrigerant Filling Mode

(5) Check that the air conditioning settings have switched automatically to the set temperature MAX COLD.

(6) After refrigerant charging is complete, turn the ignition switch off.