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Title: HEATING / AIR CONDITIONING: REFRIGERANT (for HFO-1234yf(R1234yf)): PRECAUTION; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

PRECAUTION

PRECAUTIONS FOR REFRIGERANT HFO-1234yf (R1234yf)

(a) Compatibility

(1) The parts used in the refrigerant cycle, the compressor oil, etc. of an HFO-1234yf (R1234yf) system are not compatible with a conventional HFC-134a (R134a) system.

(b) HFO-1234yf (R1234yf) Refrigerant

(1) Always use HFO-1234yf (R1234yf) as the refrigerant.

CAUTION:

- Do not charge the system with refrigerant near open flame, as HFO-1234yf (R1234yf) is combustible.
- When charging the system with refrigerant, make sure that the area is well ventilated (especially be careful in areas where the gas can easily accumulate, such as under lifts and in garage pits, as the gas is heavier than air).
- Follow any local regulations regarding combustible gases.
- Be sure to use a refrigerant recovery unit that is compatible with HFO-1234yf (R1234yf) systems.
- High pressure gas is used for the air conditioning system. Be sure to follow the procedure described in the repair manual.

HINT:

The shape of the service port for refrigerant charging has an exclusive design conforming to international standards for HFO-1234yf (R1234yf) to prevent improper refrigerant charging.

(c) Compressor Oil

(1) Always use ND-OIL 11 as the compressor oil.

NOTICE:

The oil used for HFC-134a (R134a) systems (ND-OIL 8) does not work well in HFO-1234yf (R1234yf) systems. If the oil used for HFC-134a (R134a) systems (ND-OIL 8) is used in an HFO-1234yf (R1234yf) system, it will result in degradation of the refrigerant and deterioration of resin parts.

(2) When parts of the air conditioning system are removed, quickly block off any areas that are exposed to the outside air with plugs, vinyl tape, etc., as the oil used for HFO-1234yf (R1234yf) systems absorbs moisture easily.

(3) Do not allow the compressor oil to spray, as the oil used for HFO-1234yf (R1234yf) systems has harmful effects on acrylic resins.

(d) Evacuation

(1) When evacuating the system, be sure to use a refrigerant recovery unit, refrigerant recycler and refrigerant charger that are compatible with HFO-1234yf (R1234yf) systems.

(e) Refrigerant Gas Leak Inspection

(1) Use a gas leak detector to check for refrigerant gas leaks.

HINT:

Be sure to use a gas leak detector that is compatible with HFO-1234yf (R1234yf) systems.

(2) Turn the ignition switch off when checking for refrigerant leaks.

HINT:

- If the engine is running when checking for leaks, the leaking gas will be diluted by the air from the fan and blower, making detection more difficult.
- If the air conditioning system is operating when checking for leaks, the refrigerant pressure in the system will decrease, making it harder for gas to leak.
- If the air conditioning system is operating when checking for leaks, the electronic gas leak detector may react to a sudden change in humidity due to the humid air coming from the drain cooler hose and a faulty judgment may be made.

PRECAUTIONS RELATED TO REMOVAL AND INSTALLATION OF PARTS

(a) If refrigerant gets in your eyes

(1) Do not rub your eyes with your hands or a cloth.

(2) Consult an eye doctor.

(b) Handling of Refrigerant (Container)

(1) Do not heat the container. If the container is directly heated or put into boiling water, the pressure inside the container will become abnormally high and the container may burst.

(2) Do not drop or strike the container.

(3) Do not bring the container anywhere near your face. Always wear eye protection.

(c) Pipe Installation

(1) Always use new O-rings.

HINT:

When removing an O-ring, use an object with a soft tip so as not to damage the piping.

(2) Apply a sufficient amount of compressor oil (ND-OIL 11) to the O-ring.

(3) Route the hoses in the way they are naturally shaped. Do not twist or forcibly bend the hoses.

(4) Do not use cloth gloves, etc. as fibers attached to O-rings can lead to refrigerant gas leaks.