A/C SYSTEM PRECAUTIONS

1990 Nissan 240SX

AIR CONDITIONING & HEAT
A/C System Precautions

* PLEASE READ THIS FIRST *

CAUTION: When discharging air conditioning system, use only approved refrigerant recovery/recycling equipment. Make every attempt to avoid discharging refrigerant into the atmosphere.

BEFORE OPENING THE SYSTEM

Before disconnecting any lines or fittings, the system must be completely discharged using approved refrigerant recovery/recycling equipment.

DISCHARGING A/C SYSTEM

NOTE: Recent findings by the EPA indicate that R-11, R-12 and R-113 are harmful to the Earths' protective Ozone layer. Make every attempt possible, to avoid discharging R-11, R-12 or R-113 into the atmosphere.

1) Remove service valve caps and install gauges. For high side gauge hose, Adapter (D81L-19703-A) must be used to connect to high side service valve.
2) Place open end of center hose in garage exhaust outlet or in a well ventilated area. Slightly open low side gauge valve and let refrigerant escape slowly without loosing refrigerant oil.
3) When system is nearly discharged, using approved refrigerant recovery/recycling equipment, open high side gauge valve to release any pressure trapped in compressor. Close valves immediately after discharging to prevent entry of moisture.

DISCONNECTING LINES & FITTINGS

1) After system is discharged, using approved refrigerant recovery/recycling equipment, carefully clean entire area around coupling nut to prevent dirt entering system. Always use two wrenches to avoid twisting or distorting lines and fittings (hold fitting with one wrench while loosening coupling nut with second wrench).
2) Cap or plug all LINES and FITTINGS immediately to prevent entry of air and moisture into system. Do not remove these caps until connections are being made.

COMPONENT REPLACEMENT

When components are replaced, system oil level must be adjusted. Add refrigeration oil to replacement component. See Compressor oil Check article, as well as, Component Oil Replacement Quantities" chart under "A/C SYSTEM SPECS" article in this section.

USING R-12 REFRIGERANT - SAFETY PRECAUTIONS

1) Always work in a well-ventilated, clean area. Refrigerant (R-12) is heavier than oxygen, and will displace oxygen in a confined

area. Always wear eye protection when working around air conditioning systems and R-12. The system's high pressure can cause severe injury to eyes and skin if a hose were to burst. R-12 evaporates quickly when exposed to atmosphere, freezing anything it contacts.

2) Use care when handling refrigerant containers. DO NOT drop or strike containers or expose refrigerant containers to excessive heat. Containers must never be heated more than 125°F (52°C). Never expose R-12 directly to open flame.

CAUTION: When R-12 is exposed to an open flame, drawn into a running engine, or detected with a Halide (propane) leak tester, poisonous phosgene gas is formed. Keep work areas ventilated and avoid running engines near work area.

USING INDIVIDUAL R-12 CANS

Disposable refrigerant cans (referred to as one pound cans) have a flat type seal or a screw type seal, and proper can tap must be used for each type. Be sure sealing gasket on can tap is in good condition. A proper safety can tap will prevent refrigerant from flowing back into open can, as tap has a one-way flow control.

NOTE: Recent findings by the EPA indicate that refrigerant is harmful to the Earth's protective Ozone layer. When discharging refrigerant avoid allowing refrigerant to enter the atmosphere. Refrigerant recovery system should be used when discharging the system.

MULTI-CAN DISPENSING VALVES

A multi-can dispensing valve allows attachment of several cans of refrigerant, and is a good substitute when a bulk container is not available. Cans are installed onto each leg of multi-can dispensing valve in the same manner as the individual cans, and each leg has its own can tap.

CAN TAP INSTALLATION FLAT TYPE SEAL CANS

On cam-lock or one-piece can taps, first turn the handle outward to the fully open position. Securely engage locking lugs over the can flange, and lock them in place by turning cam lock or locking nut. Screw tap assembly into adapter so sealing gasket is fully seated against the can top. Turn tap inward to pierce the can and close the tap. DO NOT open tap until ready to purge the service hose or dispense refrigerant into the system.

On 2-piece can taps, be certain tap handle is turned fully inward to the closed position. Check that locking base is turned to its outer limit. Securely engage locking lugs over the can flange. Turn entire tap assembly (without disturbing the closed setting) downward into the locking base to pierce the can. DO NOT open tap until ready to dispense into system.

SCREW TYPE SEAL CANS

Ensure can tap is fully closed. Screw refrigerant can into can tap fitting until tight. This will pierce the can. Connect tap to center hose on manifold gauge set. DO NOT open tap until ready to dispense R-12 into system.

WARNING: DO NOT open high side hand valve while air conditioning

system is in operation. This high pressure could rupture can or fitting at safety can valve, resulting in damage and personal injury.

CONNECTING LINES & FITTINGS

A new "O" ring should be used in all instances when connecting lines and fittings (dip "O" ring in clean refrigeration oil and make certain it is not twisted during installation). Always use two wrenches to avoid twisting or distorting lines and fittings, tighten coupling nuts securely.

PLACING SYSTEM IN OPERATION

After component replacement and/or system servicing has been completed and all connections have been made, proceed as follows:

1) Evacuate the system using a vacuum pump.
2) Charge the system with new R-12 (refrigerant) according to each individual vehicle as outlined in the GENERAL COOLING SYSTEM SERVICING article. Also see Refrigerant Capacity in this Section.
3) Leak test the system, with particular attention to all new connections and components.
4) Make a performance test of the system. Never assume that a recharging has automatically corrected a problem.

COMPRESSOR REMOVAL INFORMATION - ISOLATION METHOD

On systems which have compressors equipped with stem-type service valves (Tecumseh), it is possible to isolate the compressor for removal.

Isolating
Turn both high and low pressure manual valves to extreme clockwise (front seat) position. Loosen cap on high pressure manual valve connection to compressor and allow gas to escape until compressor is relieved of pressure.

COMPRESSOR REMOVAL INFORMATION - DISCHARGE METHOD

This procedure is to be used on vehicles which have compressor equipped with Schrader service valves. In these cases, the compressor cannot be isolated and the system must be discharged, using approved refrigerant recovery/recycling equipment, prior to compressor removal.