



# Expansion Valve Removal and Installation Instructions – Block Union Type

Prior to the installation of this DENSO First Time Fit® Expansion Valve kit, you must read these instructions completely.

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## Definition of Terms

**⚠WARNING:** Describes precautions that should be observed in order to prevent injury or death to the user during installation.

**⚠CAUTION:** Describes precautions that should be observed in order to prevent damage to the vehicle or its components, which may occur during installation if sufficient care is not taken.

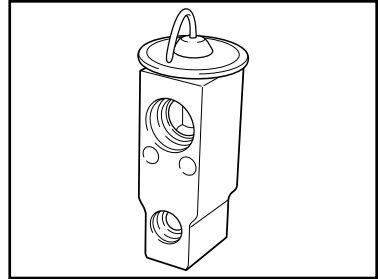
**NOTE:** Provides additional information that facilitates installation work.

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## General Service Information and Requirements

**⚠CAUTION:** Only trained personnel who have a thorough knowledge of automotive air conditioning systems, the proper tools and an appropriate workspace should perform repairs to a vehicle's air conditioning system. In addition, only personnel trained in an approved refrigerant-handling program may recover refrigerant from and charge refrigerant to an automotive air conditioning system.

**⚠WARNING:** Tests under controlled conditions have indicated that some refrigerants can result in combustion when exposed to an ignition source. Shop air should not be used for leak checking.



**BLOCK UNION TYPE**

### REQUIRED TOOLS:

- Safety Goggles
- Assorted Hand Tools
- Refrigerant Recovery Machine
- Charging Station / A/C Manifold Gauge Set
- Vacuum Pump
- Electronic Leak Detector
- Torque Wrench

### SAFETY PRECAUTIONS

- Always wear safety goggles.
- Avoid skin contact with refrigerant or refrigerant oil.
- Work in a well-ventilated area.
- Never release refrigerant into the atmosphere.
- Never expose refrigerant container to direct heat or temperature in excess of 125°F.
- Never expose refrigerant to an open flame.

**NOTE:** Do not remove protective caps from the expansion valve until it is ready for installation.

## Expansion Valve Removal

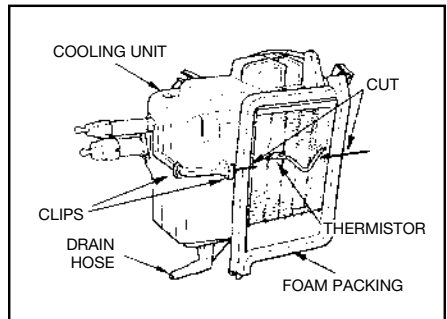
The information below explains necessary procedures and tools to remove and install BLOCK type expansion valves.

**NOTE:** For more detailed instructions please refer to the vehicle manufacturer's service manual.

1. Identify the type of refrigerant before working on the vehicle.
2. Using a certified refrigerant recovery machine, reclaim the refrigerant in accordance with any federal, state or local regulations from the A/C system.
3. Remove the cooling unit following the vehicle manufacturer's recommended procedures.

**⚠ CAUTION:** When handling the cooling unit and its components, be careful not to deform the cooling fins or piping. Be sure to note all wiring harness and harness clip locations for reassembly. Do not disturb the location of the thermistor. If the thermistor is removed from the evaporator core, it must be reinserted in exactly the same location for the cooling unit to operate optimally.

4. Separate the cooling unit's case and remove the evaporator assembly following the vehicle manufacturer's recommended procedures.



**⚠ CAUTION:** Carefully slice the foam packing of the evaporator case along the mating joint of the evaporator case halves where it will be separated.

**NOTE:** To remove the clips holding the evaporator case halves together, insert a flat blade screwdriver into the hooked end of the clip. Gently pull the clip away from its seat and remove.

5. Loosen and remove the fasteners securing the tube assembly and expansion valve to the evaporator.
6. Remove the tube assembly and expansion valve from the evaporator.

## Expansion Valve Installation

**NOTE:** For more detailed instructions please refer to the vehicle manufacturer's service manual.

1. Using the proper refrigerant oil, lubricate and install the new piping O-rings and or seals onto the tube assembly and the evaporator. Refer to the vehicle manufacturer's service manual or service bulletins for proper refrigerant oil.
2. Temporarily install the expansion valve onto the evaporator.
3. Temporarily install the tube assembly onto the expansion valve.
4. Temporarily install the original fasteners securing the tube assembly and expansion valve to the evaporator, checking for proper alignment.
5. Tighten and torque the fasteners. Refer to the vehicle manufacturer's service manual for proper torque.
6. Assemble the cooling unit to the original configuration following the vehicle manufacturer's recommended procedures.
7. Reinstall the cooling unit to the original configuration following the vehicle manufacturer's recommended procedures.
8. Evacuate and recharge A/C system.