



## **A/C Compressor and Magnetic Clutch Installation Instructions**

Prior to the installation of this DENSO First Time Fit® A/C compressor and magnetic clutch, 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.

### **WARRANTY**

- NOTE:** Information relating to maintaining the DENSO First Time Fit A/C compressor warranty.
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## **General Service Information & Requirements**

**⚠CAUTION:** Only trained/certified personnel who have a thorough knowledge of automotive air conditioning systems should perform repairs to the air conditioning system.

**⚠WARNING:** It has been determined that mixtures of R-134a and air can result in combustion when exposed to a spark. Shop air should not be used for leak checking since it contains moisture and can be combustible when used with R-134a.

### **REQUIRED TOOLS:**

- Safety Goggles
- Assorted Hand Tools
- Refrigerant Recovery Machine for specific (R-12/R-134a) refrigerant
- Charging Station / A/C Manifold Gauge Set for specific (R-12/R-134a) refrigerant
- Vacuum Pump for specific (R-12/R-134a) refrigerant
- Electronic Leak Detector
- Torque Wrench
- Belt Tension Gauge
- Magnetic Clutch Pressure Plate Remover

## SAFETY PRECAUTIONS

**⚠CAUTION:** DENSO compressors are sealed, pressurized and contain factory-specified amounts of refrigerant oil used in the original design of the unit. PRIOR to removal of shipping plates or unit installation, you must read these instructions.

- 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.

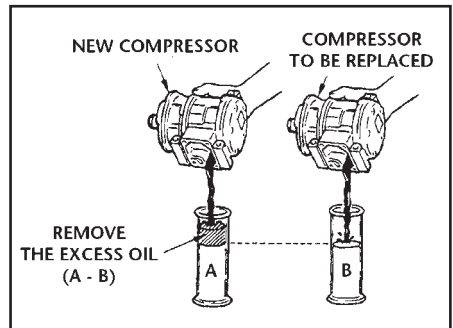
**NOTE:** Compressor type identification can be found on the rear housing which is opposite of the magnetic clutch.

## Compressor Removal Procedures

Before removal of the compressor, please refer to the appropriate manufacturer's service manual for complete instructions.

1. Disconnect negative ground (-) cable from battery.
2. Disconnect A/C compressor lead wire from the vehicle harness.
3. Using a certified refrigerant recovery machine, reclaim the old refrigerant from the A/C system.

Refrigerant		
Compressor Type	R-134a (HFC 134a)	R-12 (CFC 12)
Reciprocating – Swashplate	ND-OIL8	ND-OIL6
Rotary – ThroughVane	ND-OIL9	ND-OIL7



**Fig. 1**

4. Disconnect the suction and discharge hoses from the compressor and quickly cap the hose ends to reduce the amount of moisture entering the A/C system.
5. Loosen and remove the compressor drive belt.
6. Remove compressor mounting bolts and remove compressor.

**NOTE:** The compressor contains a complete system charge of refrigerant lubricant however, you must compare the level of compressor lubricant between the new compressor and the compressor being replaced (See Fig. 1).

# **Compressor Installation**

**NOTE:** Before installing the compressor, please refer to the appropriate manufacturer's service manual for complete instructions.

1. Place the compressor on a flat surface with the service valve in an upright position, hand turn the clutch pressure plate a minimum of ten (10) times to release lubricant from the compressor head.
2. Install the compressor to the engine and/or engine bracket, tighten and torque the bolts to factory specifications. Refer to appropriate manufacturer's service manual for correct bolt tightening sequence and torque.
3. Install compressor drive belt to compressor and tighten to factory specifications. Refer to appropriate manufacturer's service manual for correct bolt tightening sequence and torque.
4. Using the appropriate compressor oil, lubricate and install new O-ring(s) to the suction and discharge hoses. Connect and torque the hoses to compressor. Refer to the vehicle manufacturer's service manual for proper belt tension.
5. Connect A/C compressor lead wire to vehicle harness.
6. To insure system performance and protection, always install a new receiver drier or accumulator when replacing the compressor.

**WARRANTY NOTE:** Receiver drier or accumulator replacement is mandatory as a condition for warranty acceptance.

7. Connect negative ground (-) cable to battery.
8. Evacuate and recharge A/C system.
  - Protect eyes and skin during recharging by using safety glasses and appropriate handwear.
  - Connect manifold gauge set & vacuum pump / refrigerant charging station and evacuate A/C system for a minimum of 30 minutes at 60-75 cmHG (24-27 inHG) of vacuum.
  - Charge the A/C system with refrigerant per the factory specifications.
  - Use the appropriate electronic leak detector to check the compressor and hose connections for leaks.
  - DO NOT overcharge the A/C system.