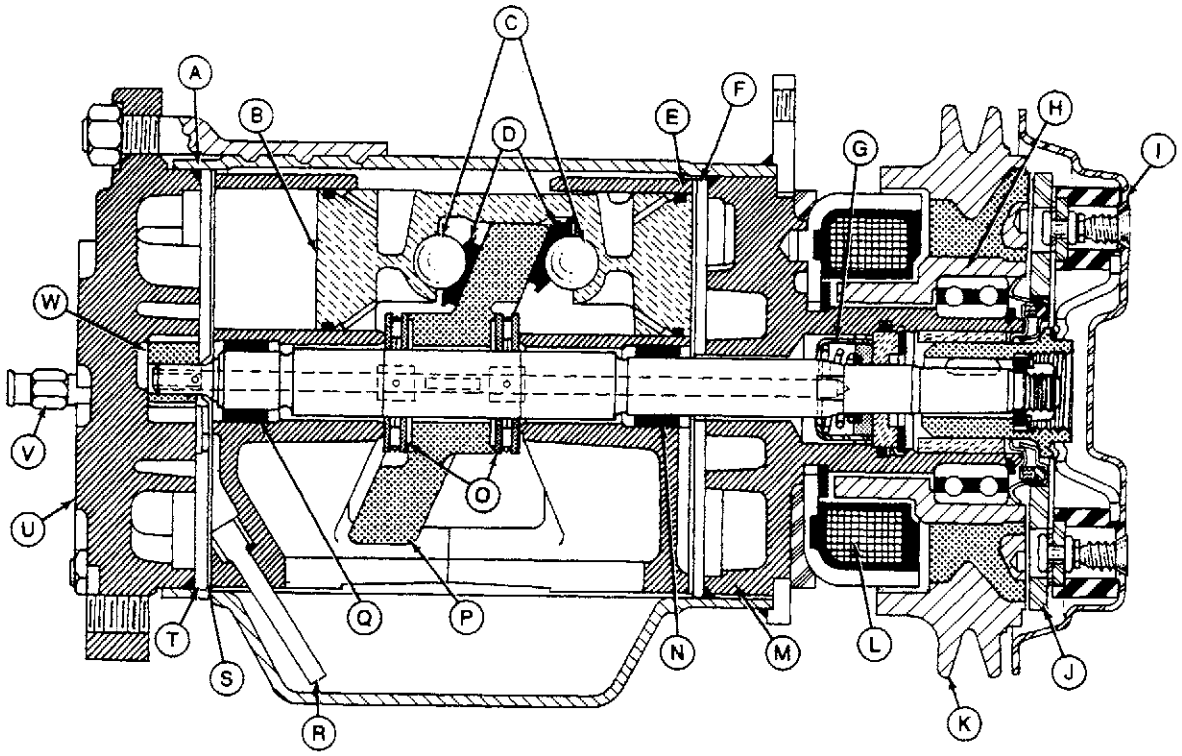
COMPRESSOR



R 25101N

A—O-Ring Seal
B—Piston
C—Drive Ball
D—Ball Shoe
E—Suction Reed
F—Front Discharge Valve Plate
G—Shaft Seal
H—Pulley Bearing
I —Dust Cover
J —Hub and Drive Plate Assembly
K—Pulley
L —Clutch Coil
M—Front Head
N—Mainshaft Front Bearing
O—Mainshaft Thrust Bearing
P —Swash Plate
Q—Mainshaft Rear Bearing
R —Oil Pick-Up Tube
S —Suction Reed
T —Rear Discharge Valve Plate
U—Rear Head
V —Relief Valve
W—Oil Pump

Fig. 9-Cross-Section of Delco (Frigidaire) Compressor

GENERAL INFORMATION

The compressor is a Delco (Frigidaire), horizontal, 3-piston, double-acting type (Fig. 9), and is belt-driven from the engine crankshaft.

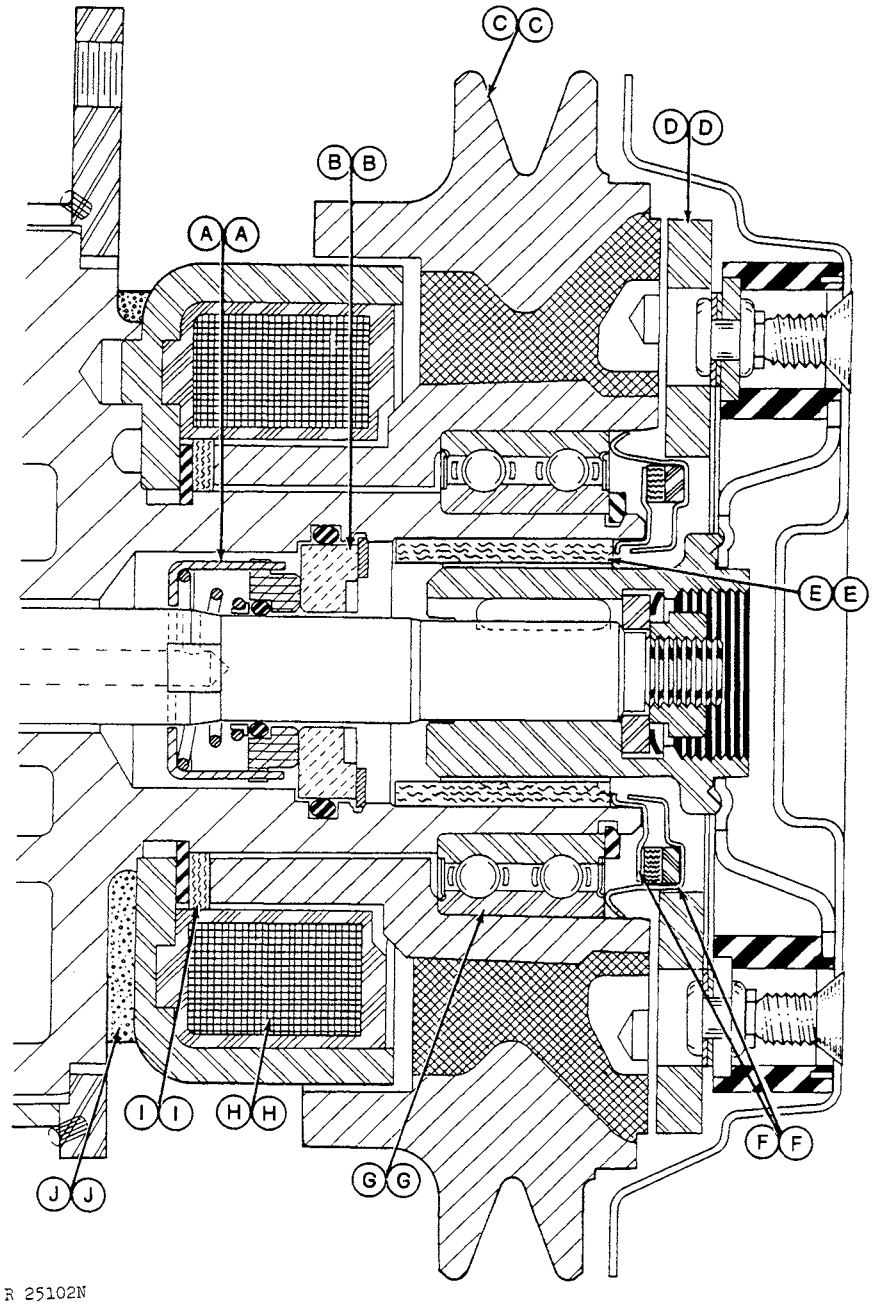
Pistons (B) are mounted axially around the compressor shaft and driven by a swash plate (P).

Reed-type suction and discharge valves are mounted in valve plates (S and T) between the cylinder assembly and the head at each end of the compressor. The heads are connected by gas-tight passage ways which direct refrigerant gas to a common outlet.

An oil pump (W) mounted at the rear of the compressor picks up oil from the bottom of the compressor oil sump and pumps the oil to the internal working parts of the compressor.

Operation of the compressor is controlled by the temperature control switch, which electrically controls the magnetic clutch (J) on the compressor.

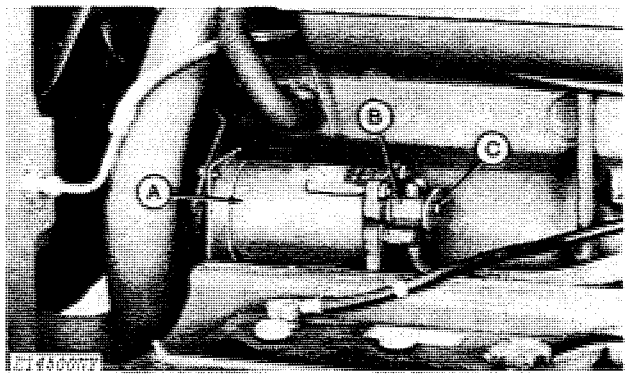
The compressor is fitted with a high pressure relief valve (V) which opens whenever the compressor discharge pressure exceeds 440 psi (30 bar) (31 kg/cm²).



AA—Shaft Seal
BB—Seal Seat
CC—Pulley
DD—Hub and Drive Plate Assembly
EE—Felt Seal
FF—Pulley Bearing Front Shield
GG—Pulley Bearing
HH—Coil and Coil Housing Assembly
II —Felt Seal
JJ —Rubber Gasket

Fig. 10-Cross-Section of Compressor Clutch Assembly

REMOVAL



A—Compressor
B—Fittings
C—Retaining Plate Cap Screw

Fig. 11-Compressor Mounting

If the compressor is operable, operate for 10 minutes by running engine at 1900 rpm with temperature control set for maximum cooling and blower speed on high position, before removing compressor. This allows the refrigerant oil to be circulated in the system and more nearly gives the correct quantity of oil in the compressor.

Shut-off engine and discharge refrigerant from system as instructed in DISCHARGING THE SYSTEM on page 90-10-10.

1. Remove retaining plate cap screw (C, Fig. 11) and retaining plate.

2. Remove fittings (B) from compressor (C) and cover openings with caplugs.

3. Cover compressor opening immediately to prevent entry of moisture and dirt into the compressor.

4. Disconnect compressor clutch coil wires and remove compressor drive belt.

5. Remove compressor from the mounting bracket. Drain and measure oil from compressor.

REPAIR

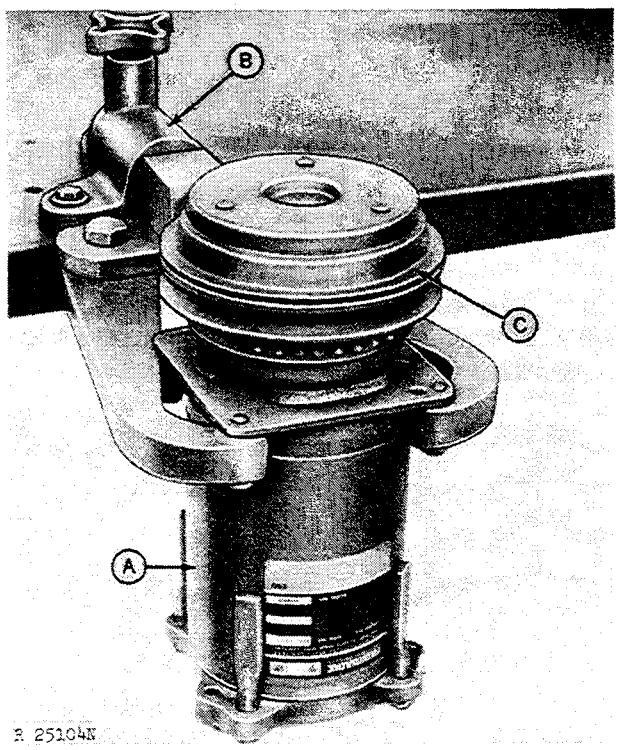
Test the compressor for leaks before starting disassembly. Refer to LEAK TESTING COMPRESSOR, page 90-10-25.

A compressor that has an internal leak (discharge to suction side), will require replacement or rebuilding. External leaks can usually be corrected by installing a new shaft seal assembly.

Major repairs or testing should be done only by a qualified refrigeration serviceman who has the necessary tools and equipment.

Compressor Hub and Drive Plate Assembly

Removal



A—Compressor
B—Bench Fixture
C—Dust Cover

Fig. 12-Compressor Dust Cover

Mount the compressor (A, Fig. 12) vertically in a No. D-01006AA (JDM-16) Bench Holding Fixture (B) or any other suitable fixture. Remove the three dust cover attaching screws, and pull off dust cover (C).