SECTION 12-03B Compressor and Clutch—10P15F

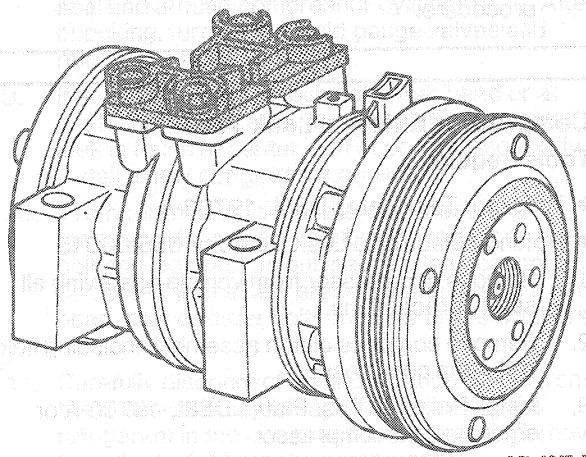
VEHICLE APPLICATION

Taurus SHO.

DESCRIPTION AND OPERATION

The 10P15F compressor is a 10 cylinder axial design compressor with mounting brackets for tangential mounting. The compressor shaft is driven by a belt from the engine accessory drive. Five double acting pistons, positioned axially around the compressor shaft, are actuated by a swashplate that is pressed on the compressor shaft. The swashplate uses the rotating action of the shaft to provide a reciprocating driving force to each of the five pistons. This driving force is applied, through balls and shoes, to the mid-point of each of the five double ended pistons.

Compressor—10P15F



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Reed-type suction and discharge valve plates are located between the cylinder assembly and the head at each end of the compressor. The heads are connected with each other by gas-tight passageways which direct refrigerant gas to a common output.

A magnetic clutch is used to drive the compressor shaft. When voltage is applied to the clutch field coil, the clutch plate and hub assembly, (which is solidly coupled to the compressor shaft) is drawn by magnetic force toward the pulley which rotates freely on the compressor front head casting. The magnetic force locks the clutch plate and hub assembly and the pulley together as one unit. The compressor shaft then turns with the pulley. When voltage is removed from the clutch field coil, a rubber bushing in the clutch plate and hub assembly moves the clutch plate away from the pulley, and the compressor shaft ceases to rotate.