

COUPLING MECHANISM FOR A COMPRESSORABSTRACT

A coupling mechanism for a compressor of an automotive air conditioning system which is equipped with a safety mechanism for preventing damage to the engine due to compressor failure or malfunction. A front end plate with a tubular extension which extends in the direction parallel to the axis of rotation of the drive shaft is attached to one end of the compressor housing. A pulley is rotatably supported on said extension by means of a bearing. At its terminal end, the drive shaft is connected to an armature which includes a centrally located hole through which the drive shaft extends. The armature is connected by means of a bolt and a nut and rotates with the drive shaft. The pulley transmits rotational motion from the engine to the drive shaft through an armature plate by means of coupling plate members which are interposed between the pulley and the armature plate. Coupling plate members include breakaway portions which may be easily broken if excessive torque is applied due to compressor failure or malfunction. If the compressor failure or malfunction occurs and the drive shaft stops rotating, damage to the engine is avoided because the excessive torque applied by the pulley causes the breakaway portions of the coupling plate members to break and allows the pulley and coupling members to be disconnected from each other. This allows each to continue to rotate independently without contacting or biting each other.

