

AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

Does a compressor need to be replaced just because the clutch burned out? Or the reverse!

Answer:

Whenever a part fails in the air conditioning system, the most important part of the repair is why did this happen.

A clutch is made up of three pieces: the field coil, the pulley and bearing, and the hub and disc. If the hub and disc burns up and the pulley is scored, they must be replaced. In many cases, the bearing will fail and the pulley will rub on the field coil and burn the coil out. Again it must be replaced. That's one end of it.

If a compressor seizes up, it will have to be replaced. If the clutch doesn't seem to be bad, does the clutch need to be replaced? If the clutch burns up, does the compressor need to be replaced?

These are examples of the results of heat. Heat causes pressures to be higher and put more of a load on the compressor. If the clutch can't hold contact to the pulley, it will slip and burn up. If the heat of the compressor melts the grease in the pulley bearing, it, in time, will burn up. If the compressor fails as results of the added friction and needs to be replaced, did heat cause the grease in the pulley bearing to melt?

In both cases, heat was the villain.

General Motors and Ford do not sell compressors without clutches. Most imports will come with a clutch if purchased from the dealer. New compressors for imports purchased from aftermarket sources will likely come without a clutch. There is a mix with remanufacturers. Some come without a clutch and some companies don't sell compressors without a clutch.

The reason imports are a problem to find compressors with a clutch is that one part number of compressor could have six or eight different clutches. To stock compressors with clutches would cause a large inventory with little movement.

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In view of all this, yes, always replace the compressor assembly, regardless of which part fails.

The job isn't done with replacement. It still has to be ascertained as to where the heat came from. If that is not identified, what is to stop the replacement from doing the same thing?