

DOC'S BLOCKS
AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

Can heavy-duty radiators cause compressors to fail?

Answer:

Yes! Radiators are most often addressed as a problem solver to an overheating engine. Three and four row radiators will be used to replace a two-row radiator to cure a problem. There is no consideration is to how this action will effect other components.

This action most often is found on a vehicle with a diesel engine but not limited to them. Engines must run hot enough for them to reach their maximum operating horsepower. If the engine runs to cool, engine components will fail.

Conversely, fan clutches free wheel when the temperature is low enough not to require airflow. This allows the engine to run at a normal temperature.

The condenser requires airflow regardless of what the engine needs. If the fan blade doesn't draw air, the high side pressure will increase and overheat the compressor. During summer months and extended slow speed driving, compressors will fail. Failure is not as apt to happen at highway speeds. Ram air will aid in preventing compressor failure.

The cure to this condition is to install an electric fan in front of the condenser and wire it to the clutch circuit. When the AC is turned on, the fan will run. The AC only adds about fifteen degrees to the engine temperature so it is not enough heat to affect the fan clutch.