

TECH TIP

COMMON REASONS FOR COMPRESSOR FAILURE



AUTO-KOOL

TECHNICAL BULLETIN REF# 0191

DON'T JUST CHANGE THE PART, BUT FIND THE REASON FOR THE FAILURE!

Compressor failure occurs when a component within the A/C system malfunctions. Various factors can contribute to the failure of an A/C component, including low refrigerant charge, issues with electronic fans or fan clutches, restricted condensers (either internally or externally), voltage grounding problems, low oil levels in the system, and more. The following are common causes of compressor failure, whether original or replacement:

- **System Low Refrigerant:** A system that leaks or that is undercharged will limit the amount of oil that is returned to a compressor. Oil is a vital lubricant and it helps keep the compressor cool.
- **Old oil or contamination that remains and was not completely flushed out of the system during service:** Old oil or contaminants will quickly destroy a new compressor.
- **The Condenser is not operating at peak efficiency:** Low operating efficiency can be caused by clogging, lack of air flow through the condenser, a poor air dam or fan, or a blocked condenser (parallel flow with contaminants). Such issues also increase head pressure.
- **Incorrect oil levels or oil type:** Not using the correct oil and proper amount in the system WILL cause the compressor to fail. Note: the system does not need any additional oil. Be sure to use only the specified amount of oil.
- **Do not overuse dye:** If there is too much dye in the system it can have a clogging effect (1/4oz is sufficient if the system is clean).



Burnt clutch caused by high pressure or voltage issue.



Burnt clutch caused by high pressure or voltage issue.



External rust/oxidation usually caused by excessive environmental exposure.



Contamination in suction line shows system contains debris.



Pop off valve cover missing usually caused by high pressure.



Case damage caused by high pressure from not changing condenser.

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