

DOC'S BLOCKS
AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

What causes a compressor to fail?

Answer:

A compressor that supplies air for an automotive service center runs every day and several times a day. They last for years. If the compressor on a car last 60,000 miles, it is considered old. WHY!!!

In reality, a shop compressor and an AC compressor is not that much different. The major difference is the automobile under hood temperatures are as much as 400 degrees. The cars compressor relies on returning oil to the compressor for lubrication. The cars condenser has to remove heat so the compressor will operate cooler and the system function. If all these factors are correct, it should last the life of the car.

When these elements get out of their operating ranges, the compressor has to work harder and it operates hotter. These conditions are more damaging to the compressor.

A compressor that is running to hot is caused by one or more of the following;

- A. Excessive high side pressure because of to much refrigerant, contamination of the refrigerant, dirty condenser, restricted condenser and too much or too little oil.
- B. A compressor that runs to hot will cause the seals to become damaged and start leaking.
- C. A system that has too much oil will allow oil to accumulate in the back of the compressor when at rest and then try to compress it when the system is turned on.
- D. Cooling systems that run hotter than normal but not considered to be running hot can cause the compressor to run too hot.

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- E. Too little oil will result in the compressor running dry of oil. This will cause excessive friction in the compressor and its failure.
- F. Last but not least is how the AC unit is turned on and off. The best way to use an AC system is to turn it on and never turn it off.