

# **COMPRESSOR FAILURE**

Manufacturers warranty for compressors is usually for 12 months covering material or manufacturing faults. They will not accept a warranty claim that can be attributed to an installation fault or bad workshop practices.

Apart from a material fault, compressor failure can **always** be attributed to one of the following:

- Lack of lubrication
- Contamination
- Excess high pressure
- Incorrect application

## **Lack of lubrication**

The oil mixes with the refrigerant and is distributed around the system by the gas flow. Therefore, compressors ***rely totally*** on the gas/oil returning to it for lubrication. So if the system gets low on gas, the compressor starts to suffer from oil starvation. As little as a 25% loss of gas charge can start to damage the compressor. When replacing system components it is imperative to add a measured amount of oil. (See manufacturers recommendations). An air-conditioning system should contain a full charge of pure refrigerant and clean oil. (1/4 oz UV Dye) Anything else will cause compressor failure eventually, because of excess high pressure or loss of lubrication. We recommend that prior to installation of any compressor (new or remanufactured) the installer should: Drain the oil from the compressor and refill with the correct amount of the specified oil, normally approx 2-3-oz's.

## **Contamination**

Some common forms of contamination are:

- Desiccant from receiver driers breaking up
- Debris or dirt from previous compressor repair
- Incorrect specification oil
- Moisture

To remove any of the above the system must be flushed, the receiver drier and TXV (thermal expansion device) changed.

## **Excess high pressure**

Excess high pressure will put an undue strain on the compressor leading to breakage of internal parts. Some common reasons for excess pressure are:

- Insufficient condensing of gas
- Cooling fin blockage on condenser/radiator

- Failure of cooling fans, pressure switch or related wiring

If you think lack of condensing is a problem, cool the condenser with water and observe the high pressure gauge. If the pressure drops to an acceptable level then the problem is indeed lack of condensing.

- System blockages, which can cause extremely, high-pressure to build up very quickly. High-pressure switches will help to protect the compressor but may not be enough to avoid some damage.
- Overcharging system with refrigerant. Care must be taken to ensure the correct amount of refrigerant is put in to the system.
- Contaminated or incorrect refrigerant. Never use any other type of gas than that of which the system was designed or converted for.
- **This will be R12 or R134A.**

### **Incorrect application**

Incorrect application is unlikely to be a problem unless you are designing your own system or the compressor you have fitted is different from the original.

### **If you do not have a flushing kit**

*In our experience most warranty claims on compressors are in this category. A flushing kit including solvent will usually cost much less than one compressor. Please ask our sales staff for a flushing kit to be added to your order.*