
Risk Element

Contaminated refrigerant and oil may contain dangerous acid, which can cause burns to exposed eyes and skin.

Precautions to Eliminate/Reduce Risk

- Always use a decant machine to remove refrigerant from systems;
- Ensure that contaminated oil is placed into marked containers;
- Where appropriate wear correct personal protective equipment;
- If without personal risk, isolate all equipment both electrically and mechanically by closing shut off valves and by isolating the electrical supply.

Safe Working Method

Heat generated by a hermetic system burn out causes a percentage of the oil and refrigerant to break down and form acids and sludge, which contaminate the system.

These contaminants must be removed from the system or they will probably attack the replacement compressor motor windings and another burn out will result.

The liquid suction line filter method of clean up has been tested both in the laboratory and in the field. It has been found that it works very well. A filter drier in the suction line not only filters out sludge but the desiccant removes acid.

Refer to J & E Halls publication: '2-250 Semi-hermetic Compressor Motor Burnout' for the suggested procedure; **NOTE:**

- Refrigerant must **NOT** be allowed to escape into the atmosphere;
- A recovery machine must be used when removing the refrigerant from the system, the recovery machine then must be thoroughly cleaned after recovery is complete;
- Install a suitable suction line filter drier;
- Renew liquid line drier core or where applicable, the liquid line drier;
- Drain off the old oil and recharge the compressor with new oil;
- At the end of 24 / 48 hours the suction line drier must be removed and the liquid line drier cores or drier should be replaced;
- An oil sample should be taken and the oil should be checked using an appropriate test kit. If the Oil is found to be Acid then the oil must be changed left to run for another day or so, re-sampled and then retested.

This procedure must be carried out in accordance with the appropriate COSHH Assessment information and with reference to J & E Hall's Environmental management Procedures.