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## Risk Element

- Asphyxiation;
- Oil leakage;
- Refrigerant leakage.

### Precautions to Eliminate/Reduce Risk

- Make sure all refrigerant has been removed from the particular section of system before breaking into it;
- Make sure suction and crank case pressures are at balance before breaking into compressor;
- Clear up any spillage of oil immediately;
- Works to be carried out in conjunction with COSHH and J & E Hall technical information section 5;
- Wear correct personal protective equipment;
- Action in an Emergency;
- Isolate leakage if without risk;
- Ventilate area;
- Extinguish any naked flames.

### Safe Working Method There Are Four Main Procedures:

#### 1. Charge Oil into a Compressor through a Filler Port

- Carry out a pump down;
- Allow compressor to stand for short time to allow any refrigerant to boil out of the oil;
- Remove oil filler plug from compressor;
- Charge required amount of oil using clean, dry receptacles, i.e. oil can or funnel;
- Refit oil plug and evacuate air from compressor using a suitable vacuum pump.

#### 2. Charge Oil by Means of Vacuum

- Carry out pump down;
- Fit length of suitable tube with flare fitting (1/4", 3/8", etc.) to the oil charging valve on the compressor & insert other end of tube into can of clean refrigeration oil;
- Connect hose to the vacuum pump and the compressor suction/discharge isolation valves as required;
- Draw vacuum on compressor;
- Open oil charging line, drawing required amount of oil into compressor;
- Close oil charging line and remove oil charging line, replacing oil charging valve caps;
- Reseal the oil drum & clean area of all waste;
- Complete compressor evacuation;
- Re-commission system.

### **3. Charge Oil into a System or Compressor by Use of a Hand Pump**

This method is usually used for larger compressors or multi compressor packs using oil control systems:

- Connect flexible line the from hand pump to oil inlet SOV of oil reservoir or appropriate port on compressor;
- Connect inlet connection of hand pump into oil can and purge air from lines;
- Open inlet SOV on oil reservoir and pump in required amount of oil;
- Back seat oil inlet SOV and disconnect hand pump, etc.;
- Monitor condition and operation of system.

### **4. Charge Oil into a System or Compressor by Aux Oil Pump**

This method is used for larger compressors or multi compressor packs using oil control systems:

- Connect inlet connection of Aux oil pump into oil can and purge air from lines;
- Open inlet SOV on oil reservoir and pump in required amount of oil;
- Back seat oil inlet SOV;
- Monitor condition and operation of system.

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