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## Risk Element

- Asphyxiation;
- Toxic Effect;
- Oil Leakage/Spilling;
- Fire;
- Refrigerant Leakage;
- Explosive Environment.

Works to be carried out in conjunction with.

- “COSHH assessment Ammonia”;
- J & E Hall Section 5. “Refrigerant 717 (R717) Ammonia”.

## Precautions to Eliminate/Reduce Risk

- Before breaking into an ammonia system, 2 qualified/competent engineers must be in attendance;
- Make sure all refrigerant has been removed and vented from the particular section of system before breaking into it;
- Make sure the section of the system is at null pressure before breaking into compressor;
- Clear up any spillage of oil immediately;
- Wear correct protective personal equipment, safety foot wear, goggles, impervious overalls & gloves. Respirators must be readily available in case of emergency use;
- No smoking heat source or naked flames in the building or area whilst above work is carried out;
- Switch on mechanical ventilation if fitted;
- Obtain work permits where appropriate.

## Safe Working Method

- The carriage and disposal of waste refrigeration oil should only be undertaken after reference to the Hazardous Waste (England and Wales) Regulations 2005 and COSHH regulations. Personnel MUST ensure they are working within these regulations;
- Removal of oil from compressor or plant;
- Pump down system and isolate compressor or component;
- Allow short time for refrigerant to boil out of oil before breaking into the system, repeating the pump down procedure where required;
- Discharge waste oil into suitable sealable and marked container. Do not fill over 80% volume;
- Disposal of waste oil in accordance with the Hazardous Waste (England and Wales) Regulations 2005;
- Ensure containers are adequately sealed and marked with contents;
- Arrange for waste consignment note to be made out;
- Arrange collection of waste oil by registered waste carrier;
- Keep records of transfer notes for at least 3 years.