

Safety / Overcharging with refrigerant

Where a system has been dramatically overcharged with refrigerant, this may, in very rare cases, cause the compressor casing to rupture.

Immersion of the motor, piston and cylinder in refrigerant will have a hydraulic effect, preventing the compressor from starting i.e. locked rotor condition.

If for any reason the compressor protector does not operate, a high current in the motor windings will cause a rapid temperature rise, which rapidly causes excess pressure through vaporising liquid refrigerant.

When filling a refrigeration system with refrigerant the cylinder should never be left connected to the system even if the cylinder valve or manifold valve is closed. Any leakage from either of these valves will cause overcharging of the system, which can result in the hazards mentioned, above.