

York MRI Facility

Standard Operating Procedure #64-02

Compressor Alarm Response

1. Introduction

- 1.1. Research involving Magnetic Resonance Imaging (MRI) at high magnetic field strengths present unique hazards to both research subjects and individuals working within and around the MRI system. Consequently, the potential for serious personal injury is present due to the sheer size and strength of the static magnetic field along with the flexibility of the research system and associated peripheral hardware.
- 1.2. Working within and around the high field MRI requires in depth training on safety and Standard Operating Procedures, and documented proof of other necessary training. See SOP #30-02 "Safety Training Procedures".
- 1.3. It is imperative that all personnel who are within and around the York MRI Facility always keep in mind the potential safety risks, and act in accordance with the guidelines set out in the Standard Operating Procedures.

2. Compressor Alarm

- 2.1. There is an LED for the Compressor on the Siemens Alarm Panel located on the wall in front of the operator console. This LED will be green under normal conditions.
- 2.2. If the compressor goes down and is no longer functioning properly the compressor LED will turn red and an audible alarm will be emitted from the Siemens Alarm Panel.
- 2.3. The compressor is part of the Cold Head system that refrigerates the liquid helium in the MRI scanner. The MRI scanner cannot be run if the Cold Head/compressor is not functioning properly.

3. Compressor Alarm Response Procedure

- 3.1. In the event of a compressor alarm the following actions must be taken.
- 3.2. Press the "Acknowledge" button on the Siemens Alarm Panel to quiet the audible alarm.
- 3.3. In the equipment room, check the temperature of the chilled water in the primary loop (water cooled by the Carrier chiller).
 - 3.3.1. If the chilled water temperatures are below 15 °C, call Siemens Uptime Service at 1-800-359-6709 to inform them of the error.
 - 3.3.2. If the chilled water temperatures are above 15 °C, put the chiller into city bypass. Lift the cover labeled "chiller bypass switch", and toggle the Dump Valve to the ON position. Call York University Work Control Centre (PRB Dispatch) at Ext. 22401, and inform them that the dedicated MRI chiller in the Sherman Health Science Research Centre is down and requires immediate attention.