SOW: Repair and Refurbishment of an RF Shielded Door – NRL Bldg59 Room 411A.

NRL has an Electromagnetic Shielded Enclosure originally manufactured in 1974, by LectroMagnetics Inc. This enclosure has a pneumatic door that, when closed, provides electromagnetic isolation to equipment operating inside the enclosure. This pneumatic door is in need of maintenance to restore the door to an operational condition. This procurement package seeks the services of a qualified company that can restore the door to operation.

Services required:

1. Repair and replace as needed all pneumatic valves, relays, controls and tubing required to operate the door.
2. Repair and replace if needed the inflatable bladder within the pneumatic door.
3. Recoat as needed the contact region on both sides of the pneumatic door to ensure a good electromagnetic isolation seal.
4. Provide a drawing package that documents the pneumatic controls and operation of the door to include the periodic maintenance schedule required to keep the door in good working order.

Door Specifications:

Room: Lectroshield Electromagnetic Shielded Enclosure
Manuf: LectroMagnetics Inc, Los Angeles CA 90016
Model: LSW-11187-853
Manuf Date: 8-74
Location: NRL, Bldg59, Room411A
Door Opening: 6'W x 7'H
Door size: 80.5"W x 81.5"H – with expandable bladder
Closure : manual
Documentation: None Exists

Current Door Operation / Problems:

When door is open ~ 45PSI is seen on the air pressure gauge outside the door.
When the door is fully closed – a closure switch senses door is closed and immediately begins inflating door. The air pressure drops to 10PSI to fill the bladder – but never does and air can be heard leaking from the system. The inspection panel was removed and it was observed that the two valves that fill the bladder are leaking air when the door is inflating. Also observed was the fact that the valves to fill the bladder may have been replaced since the door was originally installed.

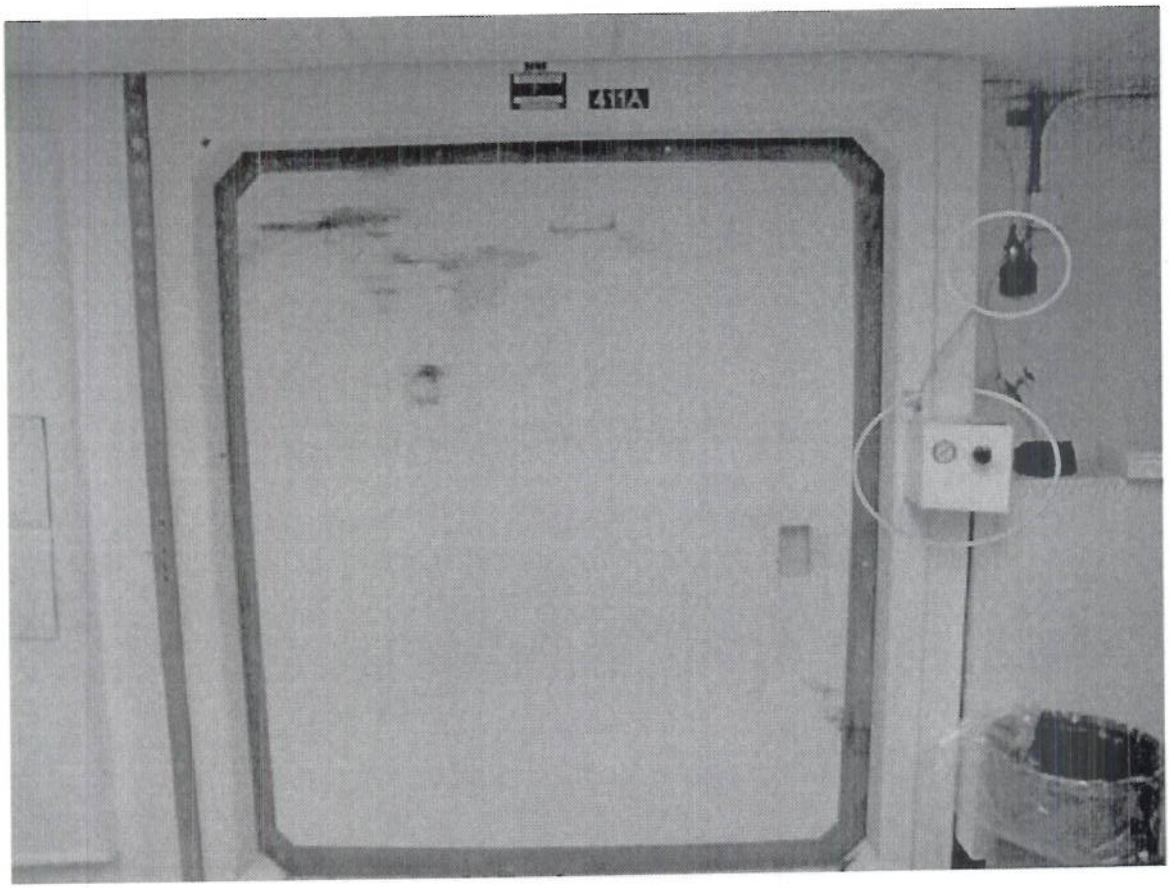
Door Operation Controls:

Outside room:
Single control box ~ 12x12x8 – contains pressure gauge and single black control knob
- Pull out knob – system armed for operation
- Push in – system in bypass mode – door will deflate

Inside Room:
Control Box with two control knobs – one red / one black
- Pull both knobs out – system armed for operation
- Push in black knob – door will deflate
- Red knob labeled – emergency exit – not sure how it operates

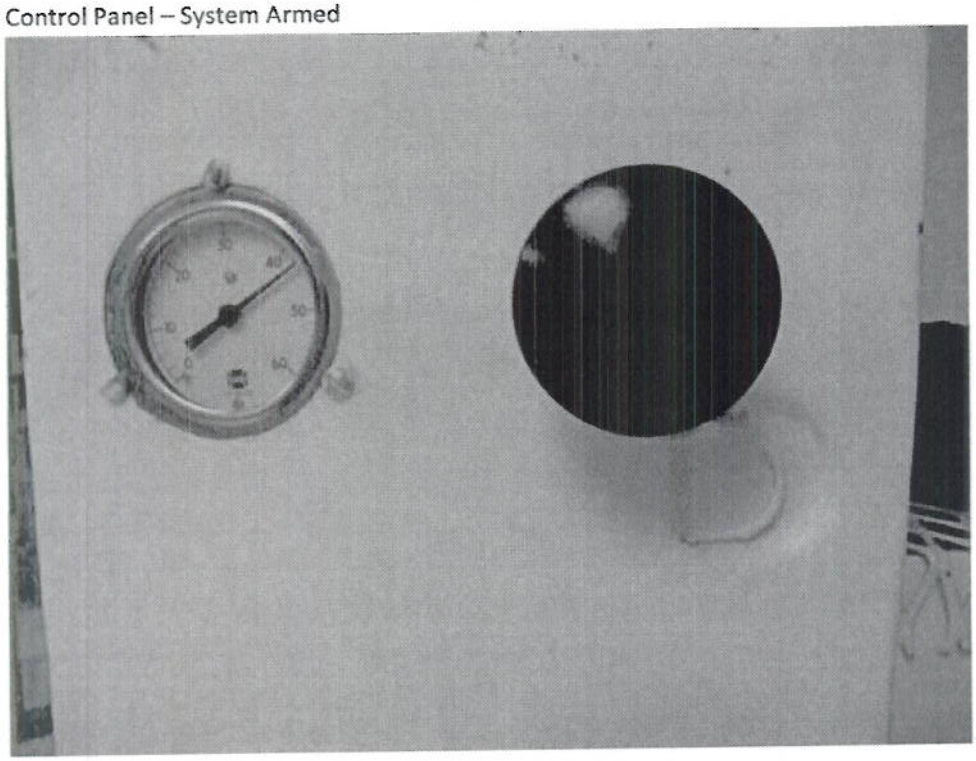
Indicator Light
- Has a red lens
- Assume will turn on when door is fully inflated.

Label Plate on enclosure:

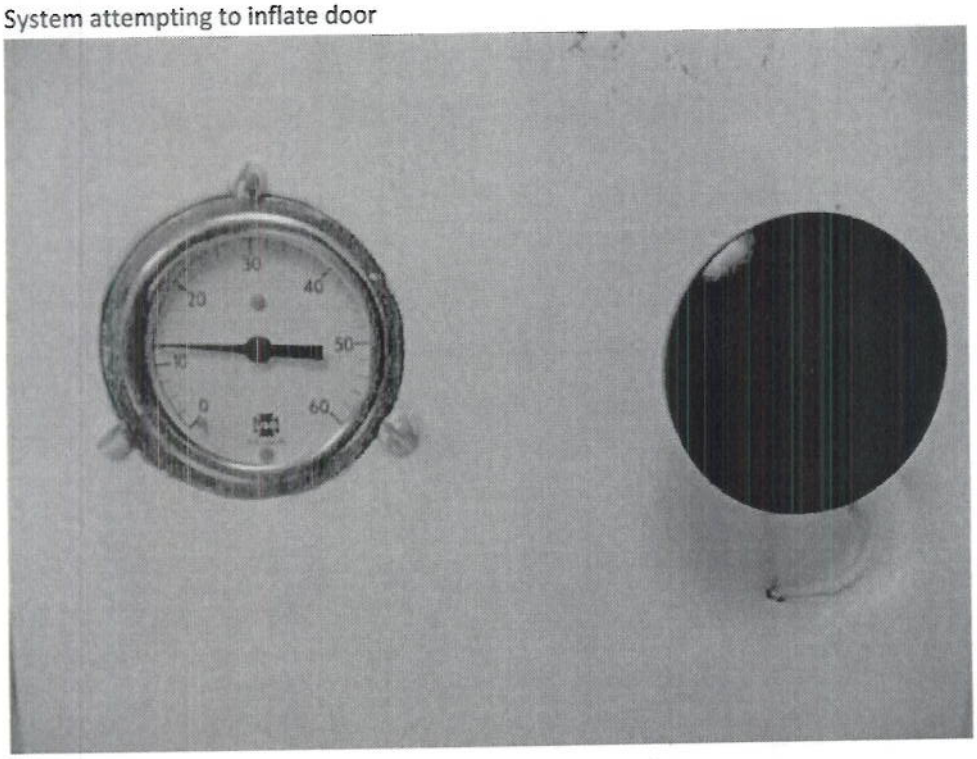


Entrance to enclosure – 6ft wide x 7ft tall, with control box and pressure switch identified

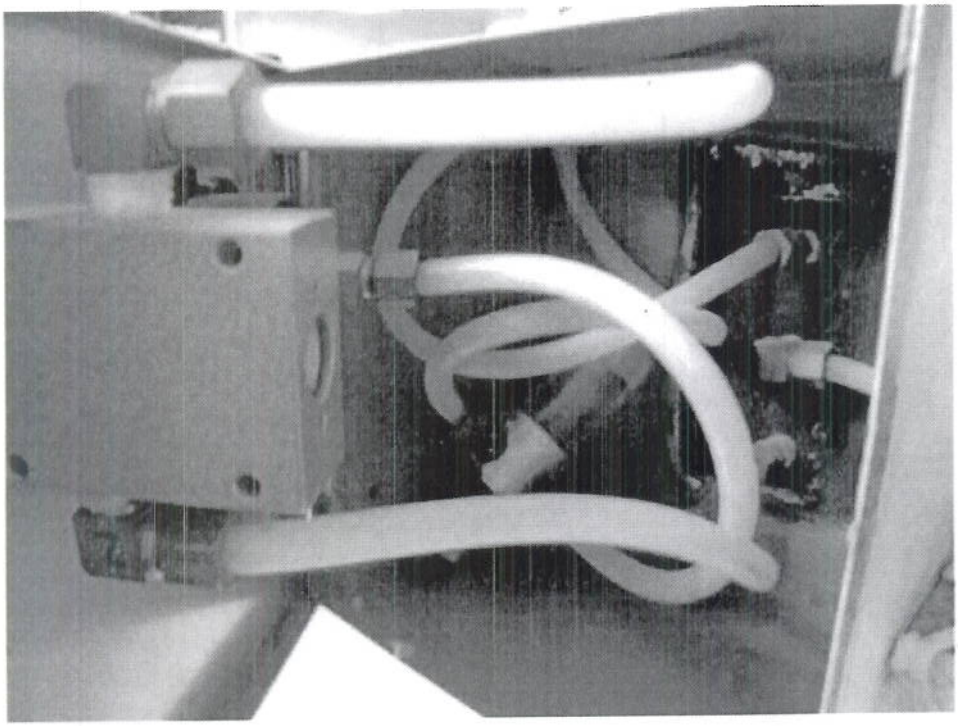
Control Panel – System Armed

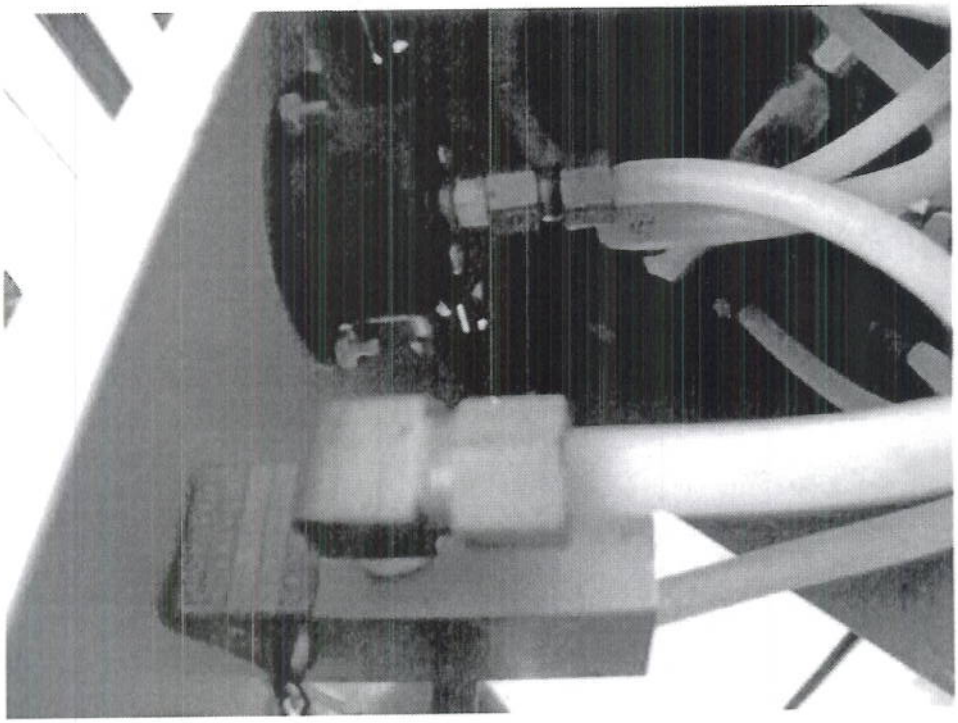


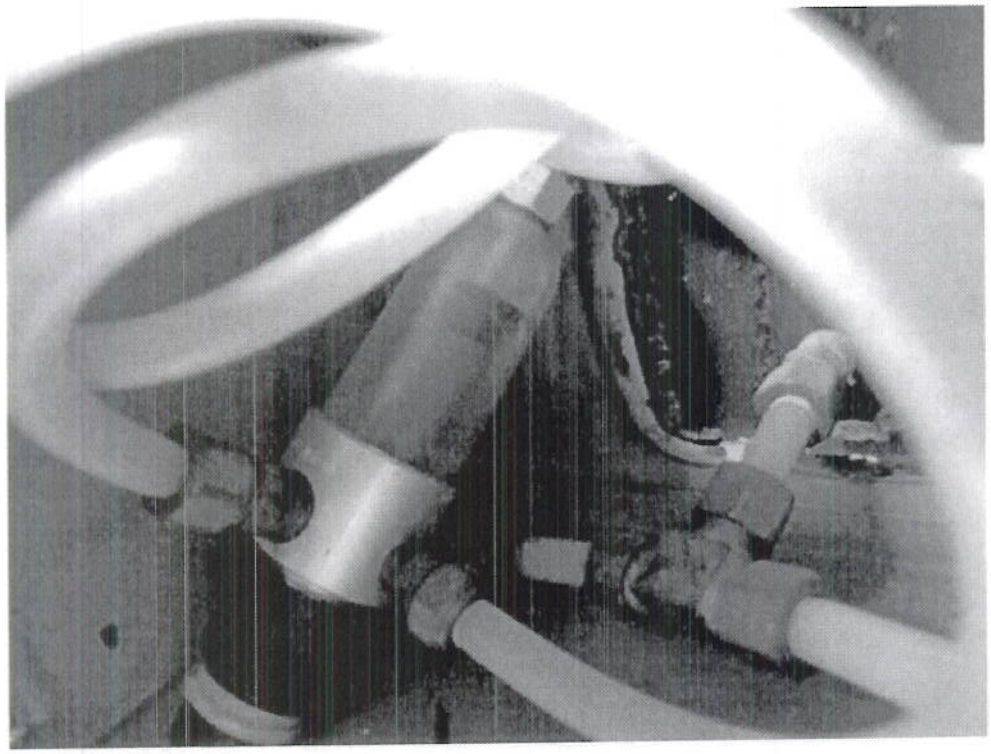
System attempting to inflate door

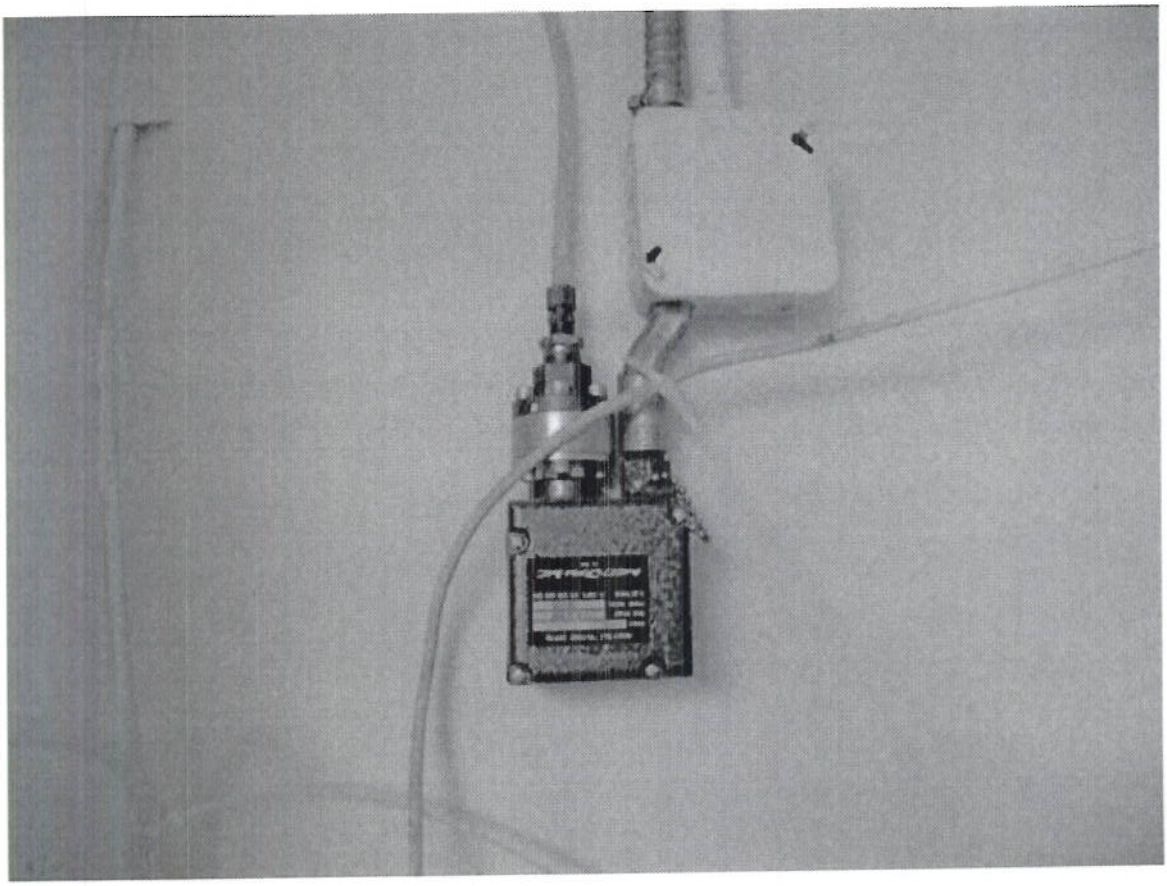


Inside Control box on outside of chamber

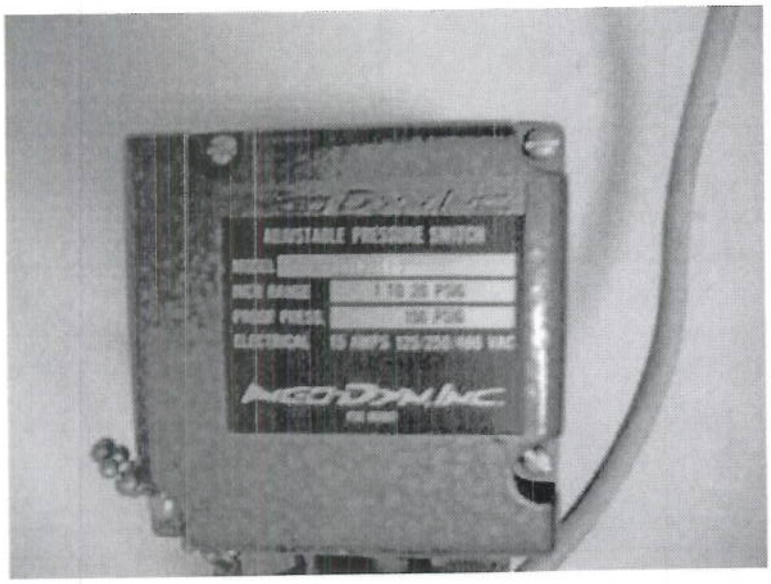




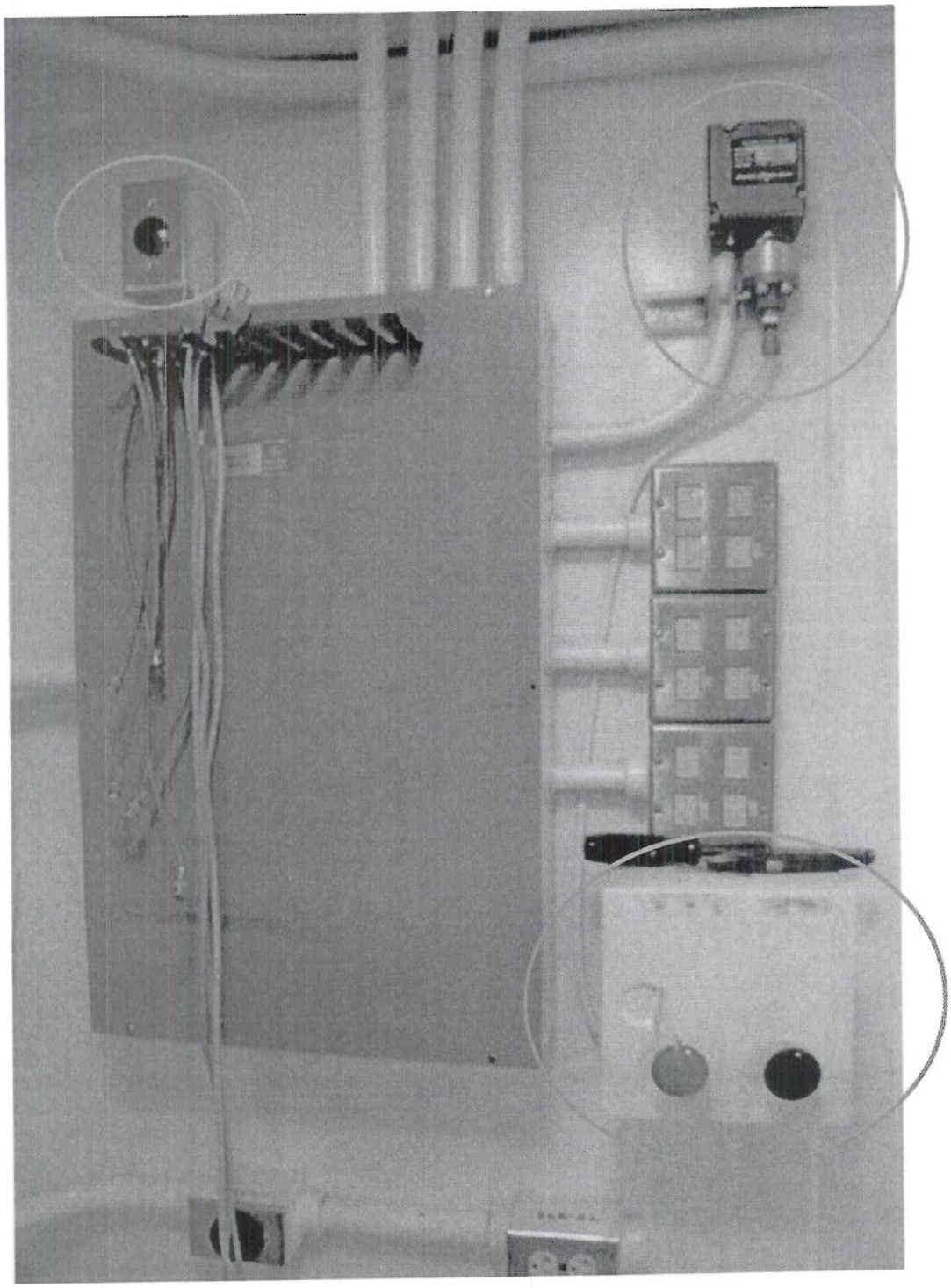




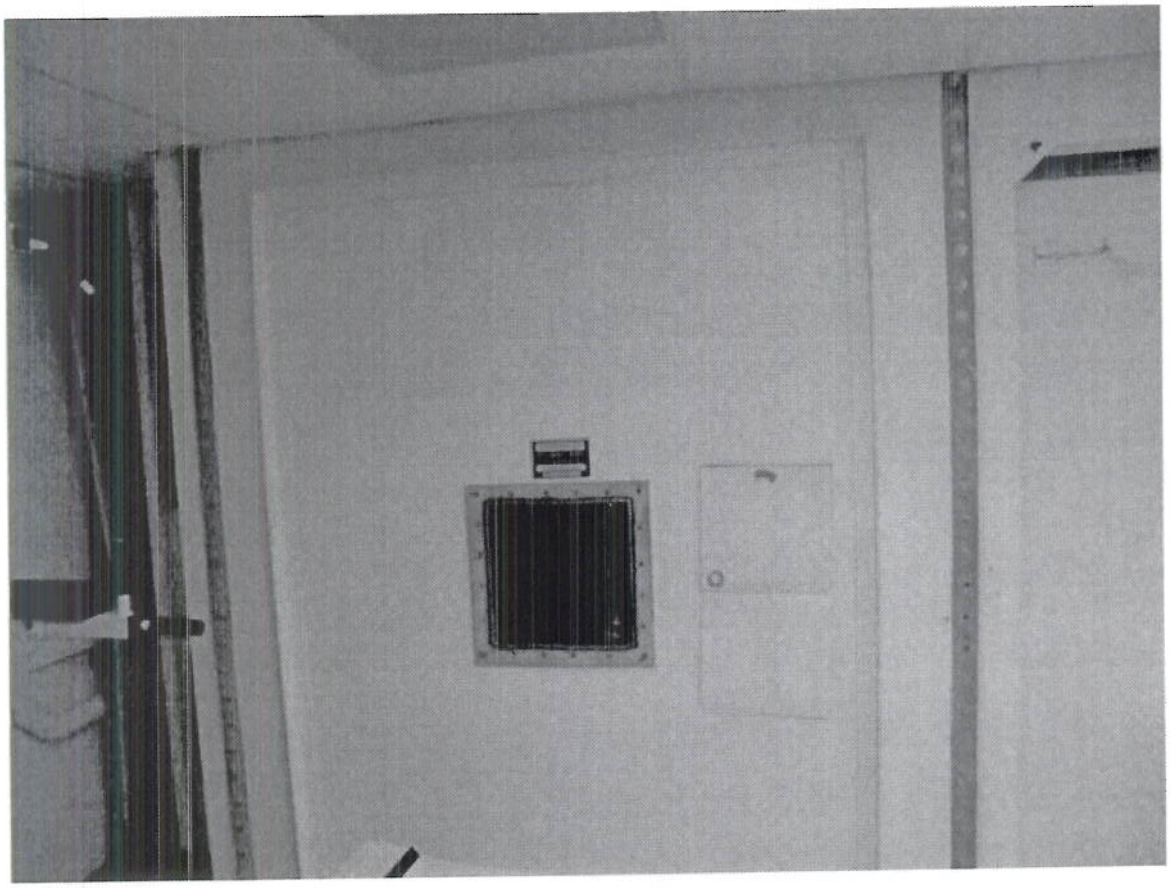
Pressure switch on outside wall

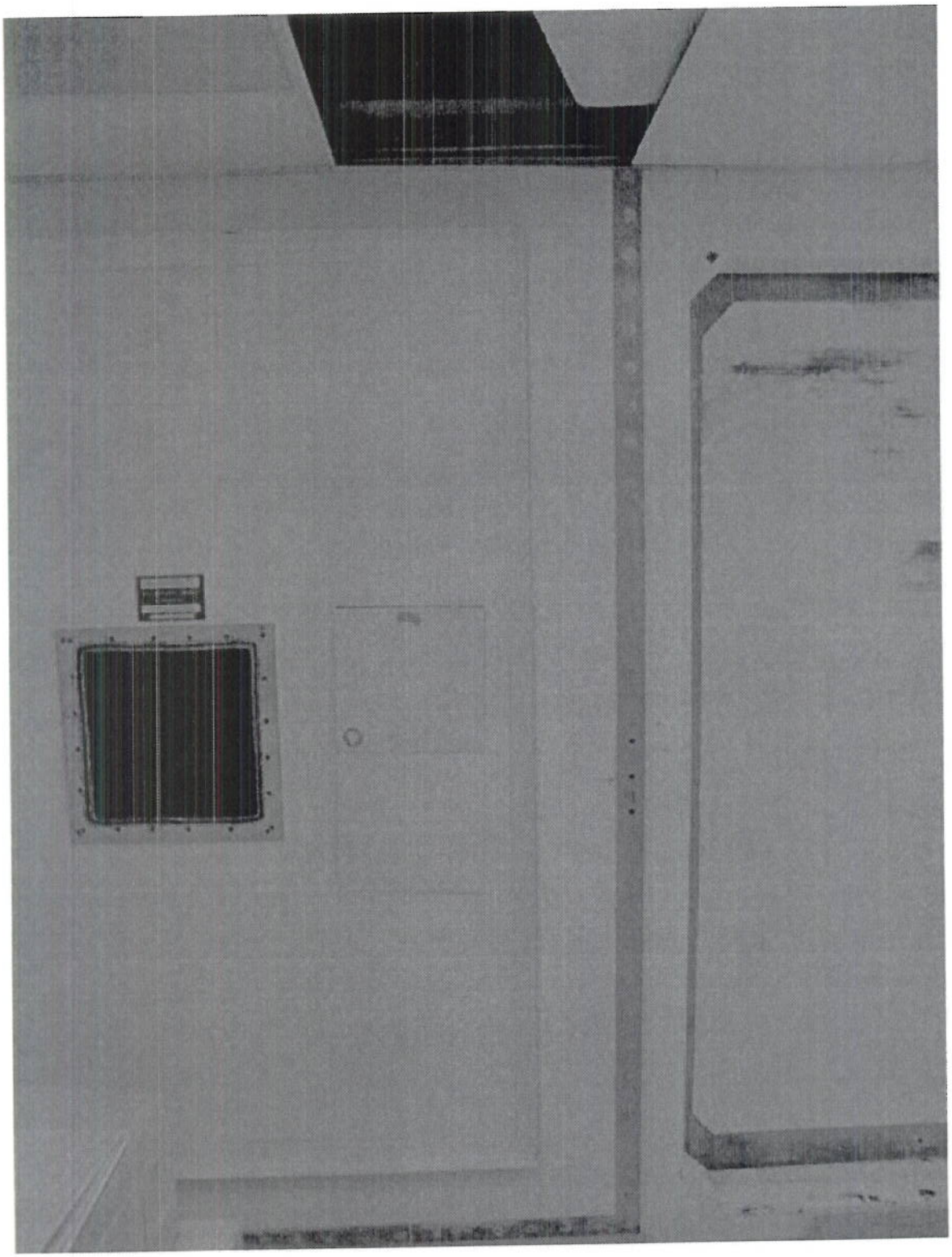


Inside Chamber – Pressure Switch(Top Right),
Inflation Indicator(Top Left) – should be red when system is fully inflated,
Control Box: Red Knob – Emergency Egress, Black Knob – Normal Egress

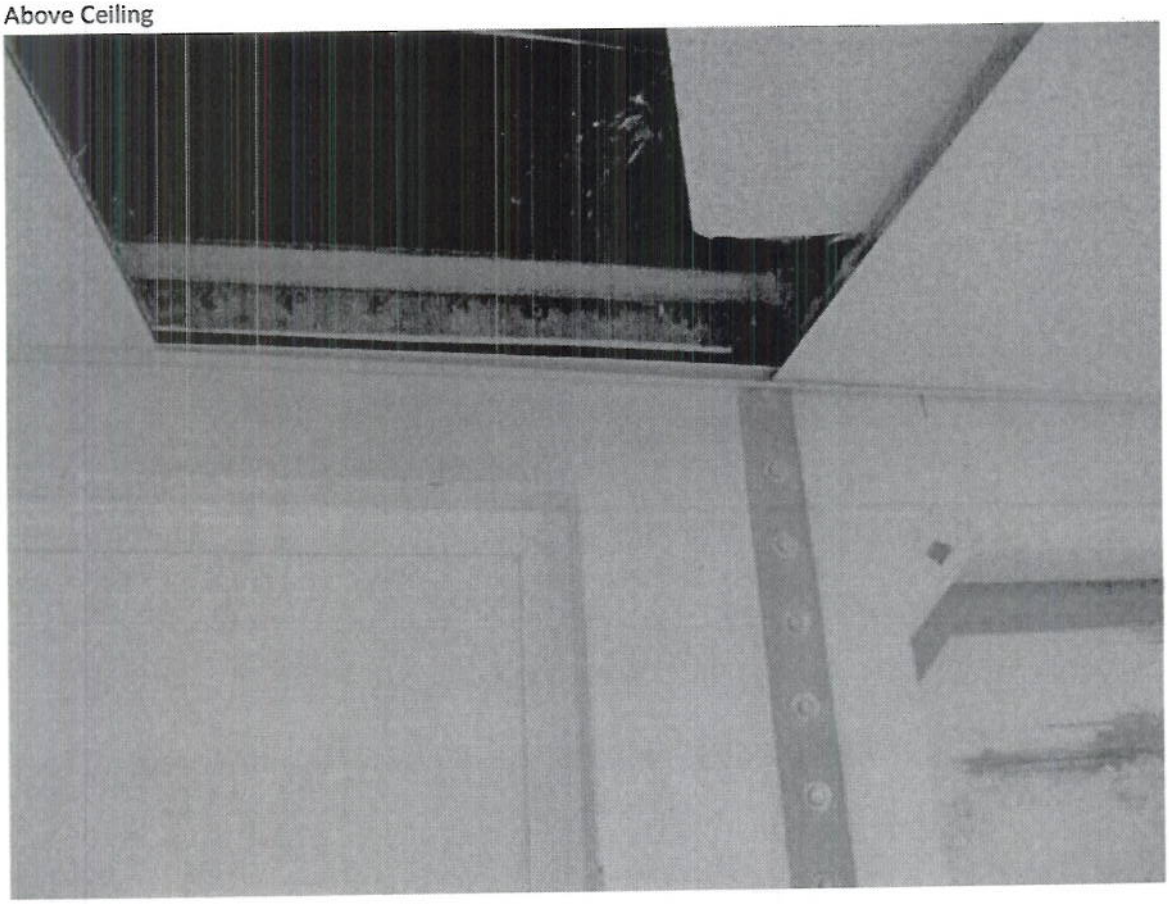
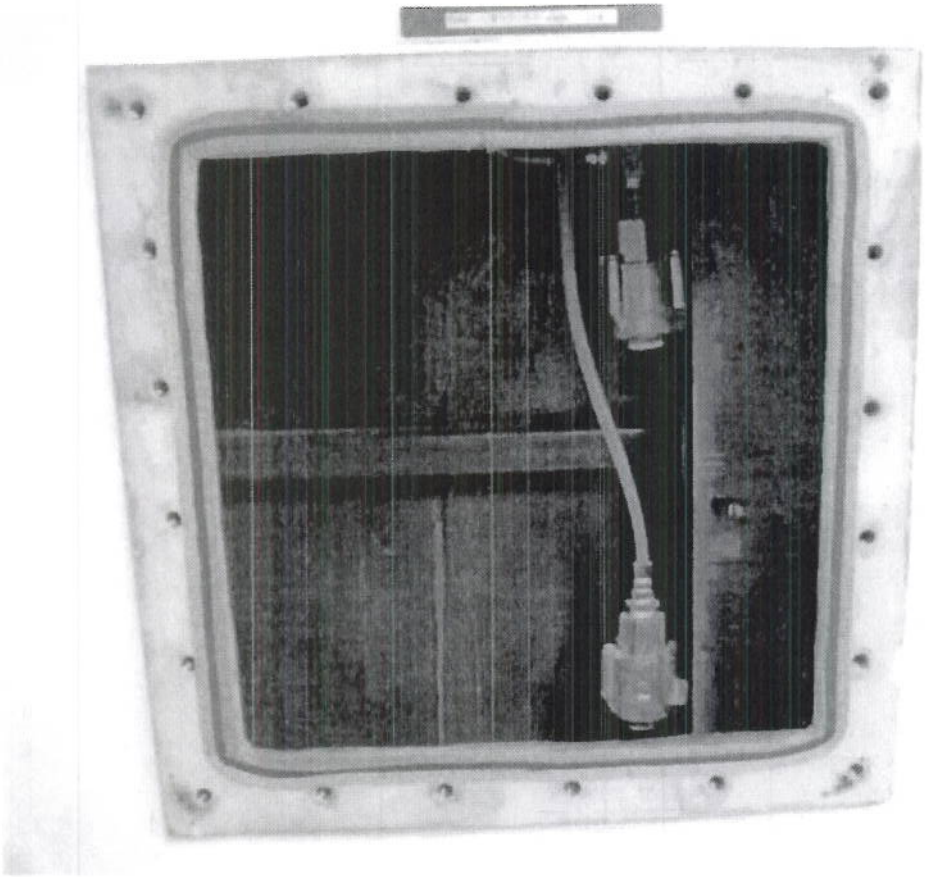
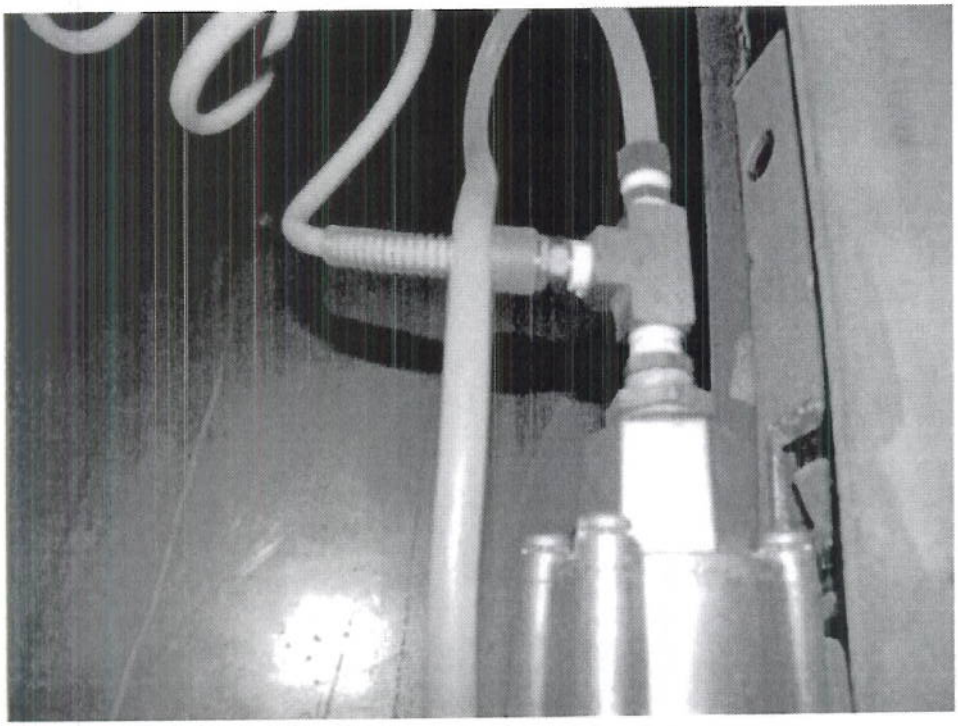
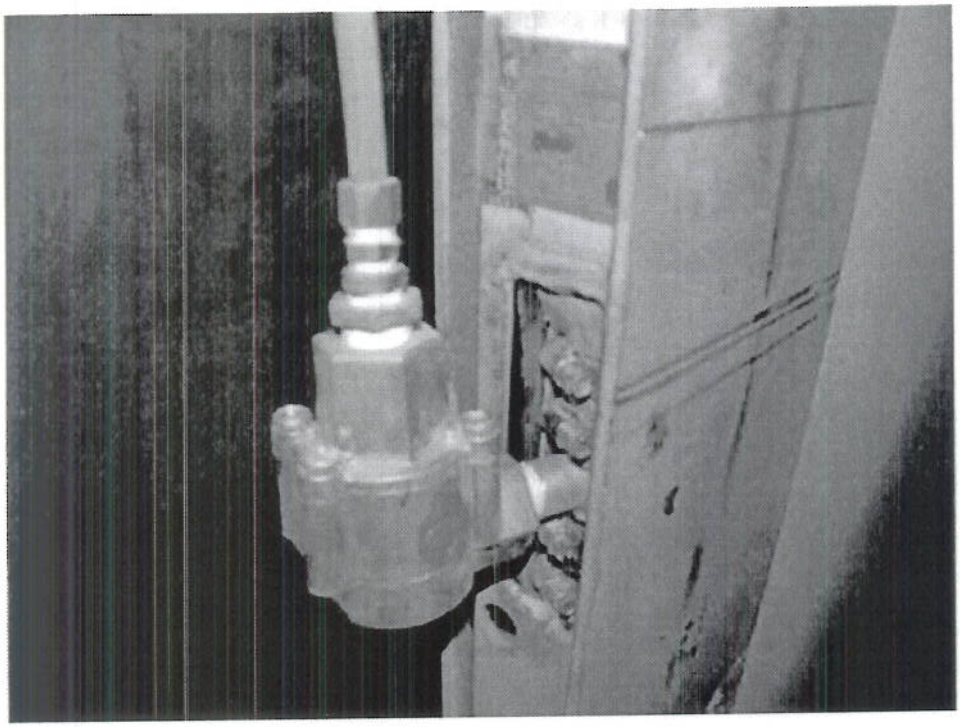


Door Access Panel





Above Ceiling



Inside Access panel