



ESG Service Information

File In/With: 155.16-OM1 (1200)

SI0042

New

11-02

Equipment Affected: YIA Absorption Chillers

Checking Single Stage (YIA) Solenoid Valves for Leakage

General

The solenoid valves installed on IsoFlow, Single Stage Absorption units can experience internal bypassing during the life of the unit. These valves are identified on the flow diagram on the last page of YORK Form 155.16-OM1 as 2SOL and 3SOL. Due to possible bypassing, an additional check should be carried out during each jobsite visit. Follow the below procedures for checking each valve for leakage. If you suspect a valve is leaking, replace it at the earliest chiller shutdown. An internally leaking valve can result in aggressive corrosion in the line downstream of the valve outlet. If this situation is not corrected, an air leak will eventually result.

How to tell if the valves are internally bypassing:

2SOL:

The only time this valve should be opened is during the first two minutes of a NORMAL Automatic Decrystallization (ADC) mode, or when the refrigerant temp at RT#8 is below 35.5°F (1.9°C). Be sure these conditions do not exist before checking the 2SOL valve. The check for internal bypassing is simple. Feel the line just downstream of the valve - it should NOT be cold. If the temperature of the line downstream of the valve is the same temperature as just before the valve, suspect bypass. An infrared thermometer can be used to compare temperatures. A YORK Service technician should do this check initially. If the jobsite has an operator, they should be trained to do this check periodically.

3SOL:

This valve opens automatically when the refrigerant level float switch (1F) opens and the leaving chilled water temperature is less than 5°F (2.8°C) above setpoint. Be sure this condition does not exist before checking the 3SOL solenoid valve. To check for the solenoid bypass, feel the line downstream of the valve. The location of this check must be made on the vertical section of line about 12 inches (300 mm) below where it enters the evaporator spill box. If the temperature is appreciatively greater than the temperature of the evaporator spill box, suspect bypass. An infrared thermometer can be used to compare the temperatures. A YORK Service technician should do this check initially. If the jobsite has an operator, they should be trained to do this check periodically.