



RETA Ohio General Meeting Minutes

April 4, 2013

In Attendance:

Kris Lippencott

Chad Rader

Aaron Allen

Chris Cost

Jeff Sutton

John Nichols

Darrel Young

Tim Burton

Administrative Notes

Send in Ohio.org articles of incorporation, then open a bank account. Transfer "at large" members to Ohio members. Spend money on RETA books to pass around as study material. Scholarship assistance available. Grow email member list. Ask if there are any email addresses we would like to include on the meeting invites.

When planning future RETA meetings, Susan Brown can provide a list of speakers. Todd Metzker recommends getting in touch with manufacturer reps Vilter, FES, Frick, Teikoku, Evapco. Also call Lee Pyle @ SCS Tracer and Protexus (Paperless PSM).

FEHR has a very good RETA presentation prepared. Plan ahead to reserve the isolation valve manifold for August 2014. Chicago Chapter used this as the main topic for their 8 hour training day.

*Reserve valve assembly June 2014. Only need to pay freight.

Meeting Notes

Refrigerating Specialties – Todd Metzker – RETA recruiting chair

One complete turn on adjustment stem is 20psi when working with Range A Regulators

Range A – How to adjust

Start with the stem all the way out.

Turn ½ turn to get to adjustment range, this is about 5psi operating pressure set point.

“Think **in** to increase”

Turn 1 additional for 20psi (each 300° revolution)

Turn ½ additional turn and set point is near 25-30psi

*adjust packing nut ¼ turn or 1/8 turn before adjusting stem or a stem fracture may occur.

A4AO is usually range V

A4AS is direct acting solenoid to adjust regulator set point

- Works more reliably than A4AM
- Typically used on tight control applications (ie 35° water)

R507 & R404A eat gaskets and are often different size than ammonia valves.

If you have valves that fail every 2 years or less then valve is failing prematurely, and is an application problem – often valve is oversized, and wears out due to opening/closing excessively.

When selecting liquid solenoid valve sizes, keep in mind that:

5° subcooling increases 20% solenoid capacity

10° subcooling increases 47% solenoid capacity

20° subcooling increases 150% solenoid capacity

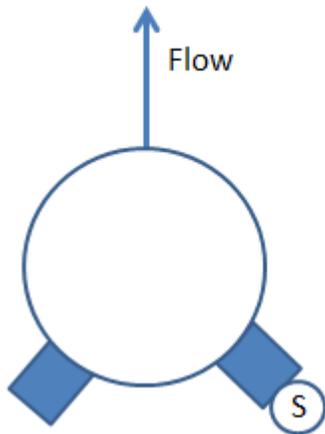
Valves are not supposed to make noise, no chatter or high pitch humming is normal – investigate, repair or replace.

Wire draw (black lines across valve v-port or throttling plug) is usually due to an oversized valve*.

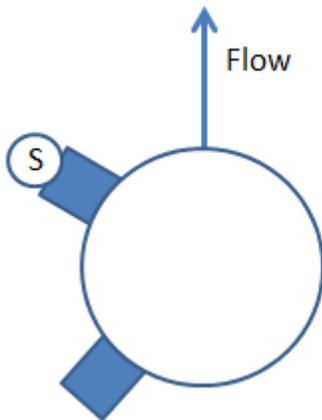
Wire draw is often found on solenoids with subcooling .

Parts are often more expensive to replace than a whole valve. Parts wearing on a valve body can wear out the valve body. When inspecting a valve for replacement parts, inspect the body also or you can end up installing new parts into a bad valve body.

Top View



A4AS



A4AB

When identifying A4AS valves from A4AB valves (without using the name plate) the top view of which adaptor plates are utilized. See the different parts used in the above top view of the valve.

The solenoid enclosing tubes are rated for 200,000 cycles. The expected lifetime remaining can be estimated based on energizes for each application. How many cycles do your solenoid stems have left?

Inspect bottom of solenoid stem seat – if black then possible wire draw is occurring – black due to high velocity and heat. Factory recommends to evaluate the application and verify valve size is correct before ordering replacement valves with these markings.

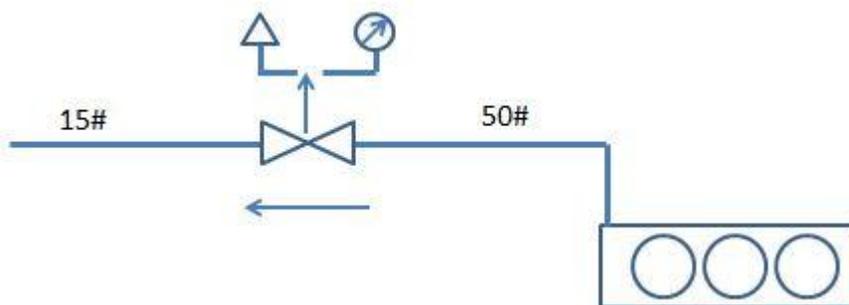
When removing top main modulating stem cover verify direct acting adjustment stem is penetrating past the flat nut *especially on 5" valves.

Diaphragm replacement kits say "this side up". The complete valves that come from the factory do not have these notes written on the parts. You can tell which way is up by comparing to the drawing below:



Oil & dirt travels along the inside walls of pipe (often traveling through the regulator inlet port and then collect on top of the diaphragm). New valves have a sensing extension tube to collect gas from closer to center of pipe. (If dirty – whole valve needs disassembled and cleaned).

If you find that small adjustments on the stem make big pressure swings, then check for dirt in inlet pressure port sensing tube, and clean as necessary.



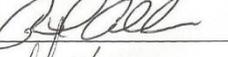
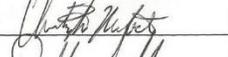
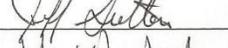
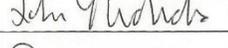
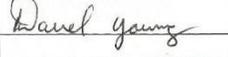
If having trouble with a valve send to factory for post mortem inspection.

If you suspect regulator valve is oversized, you can confirm the valve is oversized by closing downstream (outlet side) isolation valve by 50%. If the regulator valve stops chatting, then the valve is most likely oversized.

The factory recommend isolation valve and control valve exercising to maximize valve life expectancy.

The question was posted to the audience, what frequency valves should be exercised to ensure they operate when you need them. As a group we feel critical “king” valves should be exercised annually. Control valves and solenoid valves should be manually operated with never seize every 1 to 2 years. Other isolation valves should be exercised every 1 to 5 years. It was noted that seal caps should be used where possible to maximize stem life.

Sign-in Sheet
RETA Ohio General Meeting
April 4, 2013

| | Name | Signature | Company | Phone | Email |
|-----|-----------------|---|---------------------|----------------|-------------------------------|
| 1. | Kris Lippencott |  | GFS | (937) 525-7135 | kris.lippencott@gfs.com |
| 2. | CHAD RABER |  | Garbon Food SERVICE | (937) 525-7243 | CHAD.RABER@GFS.COM |
| 3. | Aaron Allen |  | General Mills Inc. | 740-256-2170 | aaron.allen@gemills.com |
| 4. | Chris Cost |  | Henry & David | 740 334 7957 | ccost@windstream.net |
| 5. | Jeff Sutton |  | SUTTON & ASSOC | 614-487-9096 | jeff@suttonandassoc.com |
| 6. | John Nichols |  | Sygnia | 614-403-3291 | Nichols hd 37 at Yahoo.com |
| 7. | Darrel Young |  | Sygnia | 740 794 1722 | Young valley farm @ yahoo.com |
| 8. | TIM BULTON |  | SUTTON | 614 512-4689 | Tim@suttonandassoc.com |
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