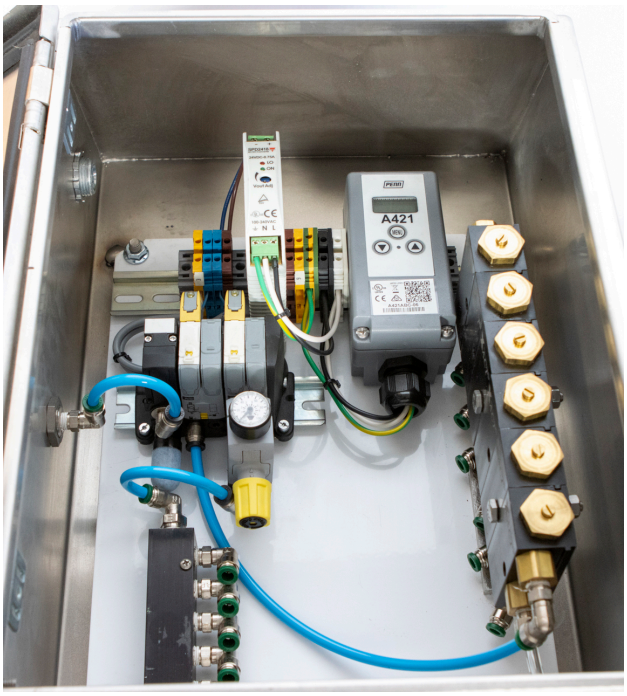
GOLD

Solutions Limited

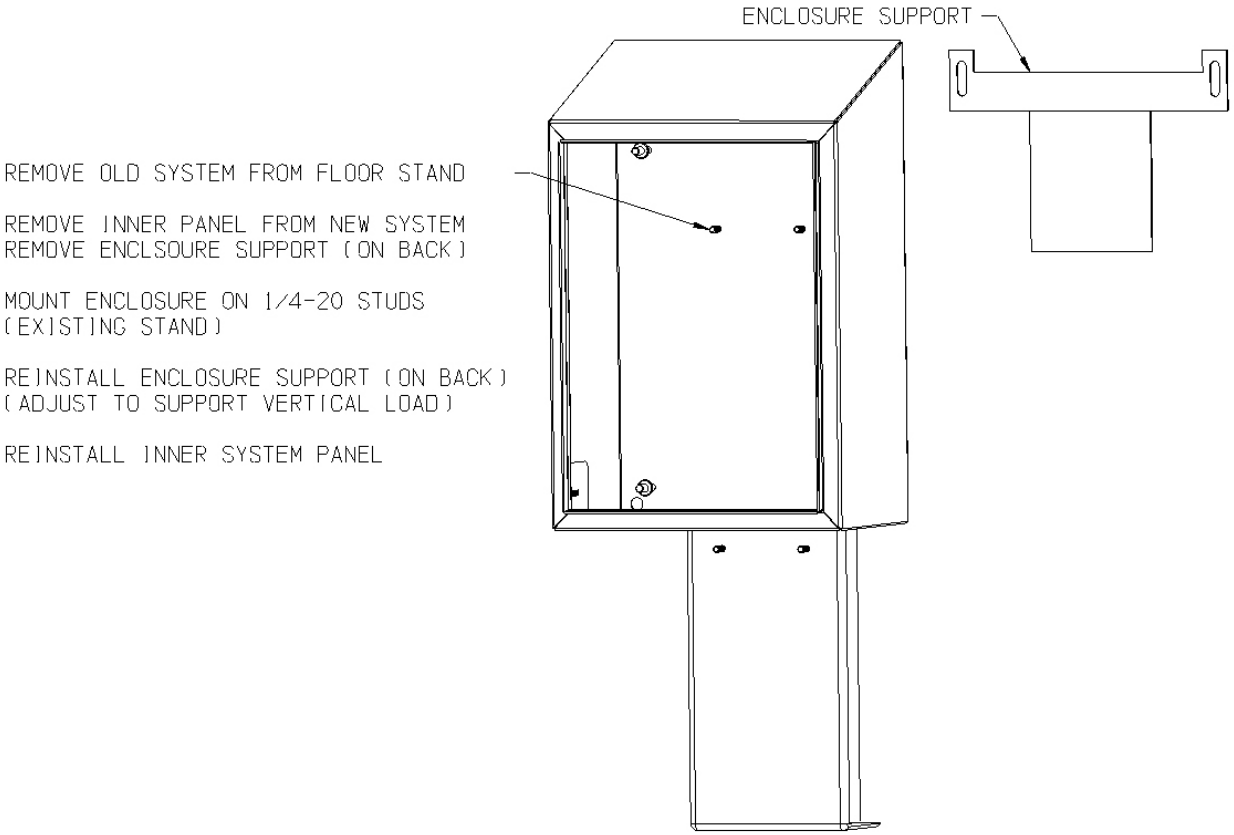
USER GUIDE: Stewart Oven Lubrication Retrofit System

SETUP INSTRUCTIONS



Most connections are "push" style for ease of removal / installation.

Reservoir includes 48" braided (3/8) suction hose (included on tank) to be attached to "Oil Inlet" AFTER system mounting.

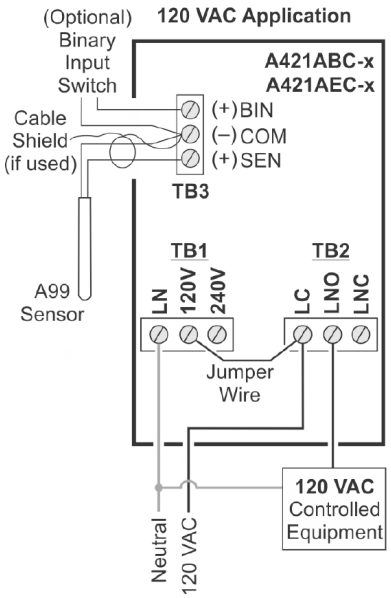


SETUP INSTRUCTIONS

Reservoir has 110VAC power line wired to an Immersion Heater. Heater is 1000W and will heat the reservoir quickly.

Unit shipped with labels for wire locations. The Low-Level Switch is "Open" when fluid is NOT present. Refer to Stewart Drawing 42A-BO-829 and reference I/9 (0 = Low).

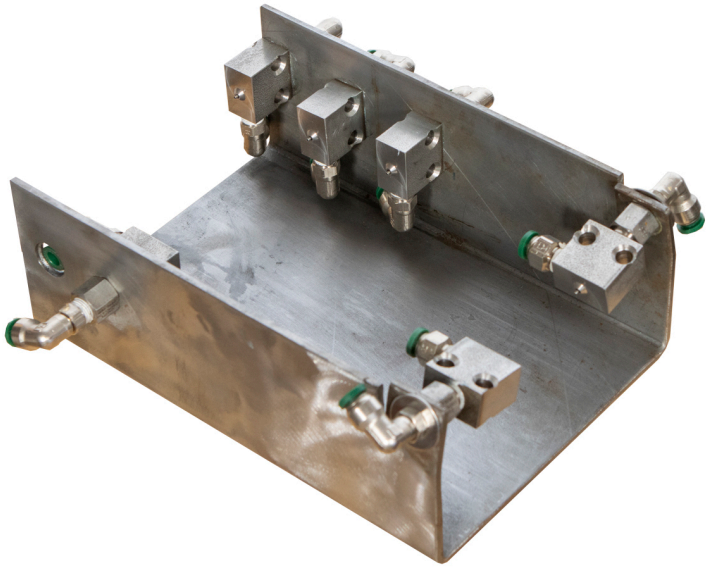
The Thermocouple sensor (A99) is mounted and wired to the reservoir. It will be the gray sheathed wire and labeled for connection to the TB3 terminal in the A421 control. Refer to A421 control manual for specifics. The A99 sensor is non-polar and either wire can be connected to the (-)COM or (+)SEN terminal.



The AC portion (TB1 & TB2) within the A421 control have been pre-wired for input voltage from included terminal blocks. The AC wiring from reservoir (yellow sheathed) should be connected to TB1 LN (White Wire) and TB2 LNO (Black Wire). These wires were pre-labelled when assembled for your reference. A pre-wired ground wire (with wire nut) is present for ground connection to reservoir.

Nozzle Installation and Plumbing:

This retrofit system comes with the nozzle assemblies pre-installed into a 57A-B1-916 bracket. The original bracket is welded to the track on both ends. You must grind off the welds on the original bracket and weld in place the new bracket assembly.



SETUP INSTRUCTIONS

Once the Main Cabinet, Reservoir, and Nozzle Bracket are installed, commence plumbing of air and oil lines. Lines are 1/4" Nylon (Parker NR-4-050) with a nominal pressure rating of 625 psi and 1200 psi burst. The pumps will dead head an NOT exceed the burst pressure rating (factor of safety).

You will have SIX air connections which are the "perpendicular" inlets on the nozzles. These go through the LEFT six-port gland on the Main Cabinet and connect to the push-to-connect elbows in the black aluminum air manifold (connected to regulated output).

You will have SIX oil connections which are "in-line" with the nozzle outlet (small tube). These go through the RIGHT six-port gland on the Main Cabinet and connect to the push-to-connect elbows on the bottom of each XACT pump.

Begin at the Nozzle Bracket end with each line. Extend a length of tubing to the Main Cabinet and give yourself enough length to breach the gland and connect to the fitting. Best practice is to go a little long and then trim again once inside the Main Cabinet.

Be certain that your push-in connection is seated fully. You will have ample tubing to complete the installation. There is over 250' of tubing provided (20' per connection). Metal detectable zip ties (100) were provided for a clean installation of tubing bundles.

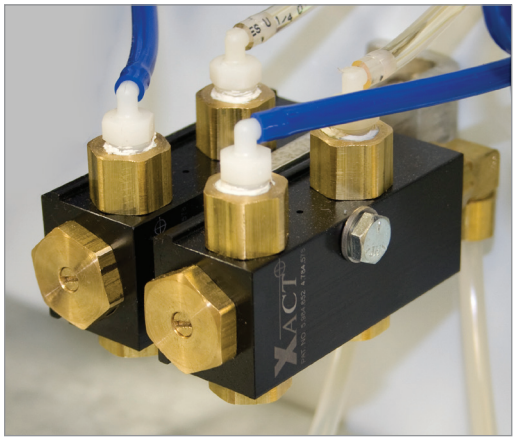
Once connected, start by verifying with the air circuit. Energize the control cabinet and provide 60+ psi of air to the air inlet. This will initiate the atomization spray air for the nozzles.

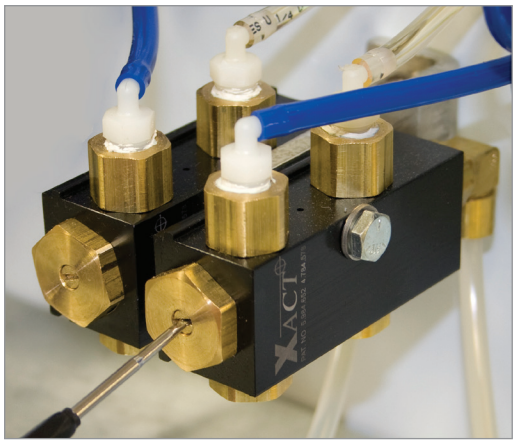
Ensure you have the braided suction line connected from the reservoir to the main cabinet. Fill the reservoir with lubricant. Prime the system by allowing the unit to rapid cycle with oil solenoid input. The system is self-priming and will draw the air from the line and draw 26" Hg vacuum on the line to the reservoir. Pumps are shipped at full stroke. Allow the system to prime and then once fluid reaches the nozzle outlet(s), refer to pump adjustment page to reduce output volume to each pump.

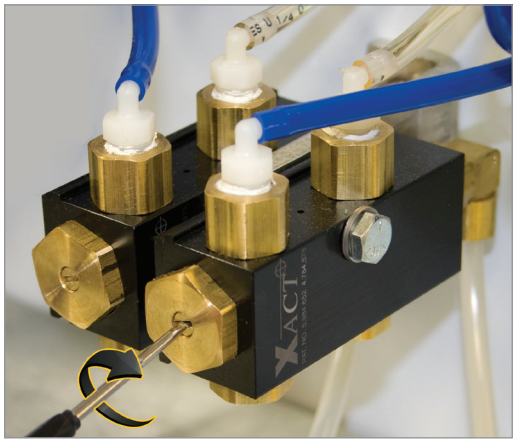
A QL30LDQ diffuse Beam (visible RED laser) has been provided along with a 5-pin M12 quick disconnect cable. This is to replace the existing line sensor. It is 10-30VDC and a direct replacement for the existing sensor. Benefit is adjustable sensing and a visible red laser (red dot) to allow for ease of targeting and increased accuracy.
https://info.bannerengineering.com/cs/groups/public/documents/literature/109027.pdf

Pump Adjustment

Modular Pneumatic Pumps







Pump Adjustment:

- Pumps are mechanically adjustable via adjustment cap
- A size 4-5 flat blade works best, larger will not fit
- To reduce volume turn the adjustment stem clockwise
- Each turn reduces the volume by 1/6 (.002 cu in)
- Pumps can be reduce to zero volume (OFF)
- Recommended standard volume is .004 cu in

To adjust to this setting:

1) Turn pumps “OFF” or in 6+ full turns
2) Increase pump volume (counterclockwise)
3) Turn two full rotations

ADJUSTING SPRAY PRESSURE

Regulator Adjustment:

- Regulators are mechanically adjustable via adjustment cap
- Caps pull down to unlock and snap up to lock
- To increase pressure turn the yellow cap clockwise
- Recommended standard pressure is 10-12 psi ONLY Modify this setting:

1) If you add more oil, increase to 15 psi
2) If you reduce oil, decrease to 5-8 psi
3) If you see "FOG" you are TOO HIGH!

Gauge Info:

Gauges read up to 100 psi. Never go above 20 psi (first marked numeric value of gauge). You should have the needle of the gauge below 20 psi when the system is active (Yellow LED illuminated on solenoid). If you see this value spike above 20 psi while in operation (as shown in figure to LEFT) simply reduce the pressure down to 10 psi and watch a few cycles to ensure the value is not too high.

There is a balance between oil volume and air pressure required to spray the oil without dripping or fog. If the desired spray pattern is not being achieved, return to base settings of 1-1/2 to 2 turns out on pump and 5-8 psi on gauge.

Lubricant Supply:

- System draws fluid (vacuum) from reservoir.
- Simply remove the filler cap from reservoir and fill (slowly) through the screened inlet.
- Sight gauge will indicate fluid level on front of reservoir. Reservoir holds 5+ gallons of fluid.
- System will draw fluid (and air) and self-prime once restarted. Ensure not too much air is drawn into the system by replacing the fluid supply before it is 100% depleted. A Low-Level Switch in the reservoir will set the alarm to indicate a small volume of oil remains in the reservoir.

Heat Control:

- Reservoir has a Thermostatic Control
- Refer to A421 Temperature Control Instructions
  https://cgproducts.johnsoncontrols.com/met_pdf/2476643019.pdf
- Set High Temp to 50°F, Low Temp to 40°F
- Fluid temperature will be warmer than indicated
- SF=0, ASd=0 to avoid overheating of reservoir

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