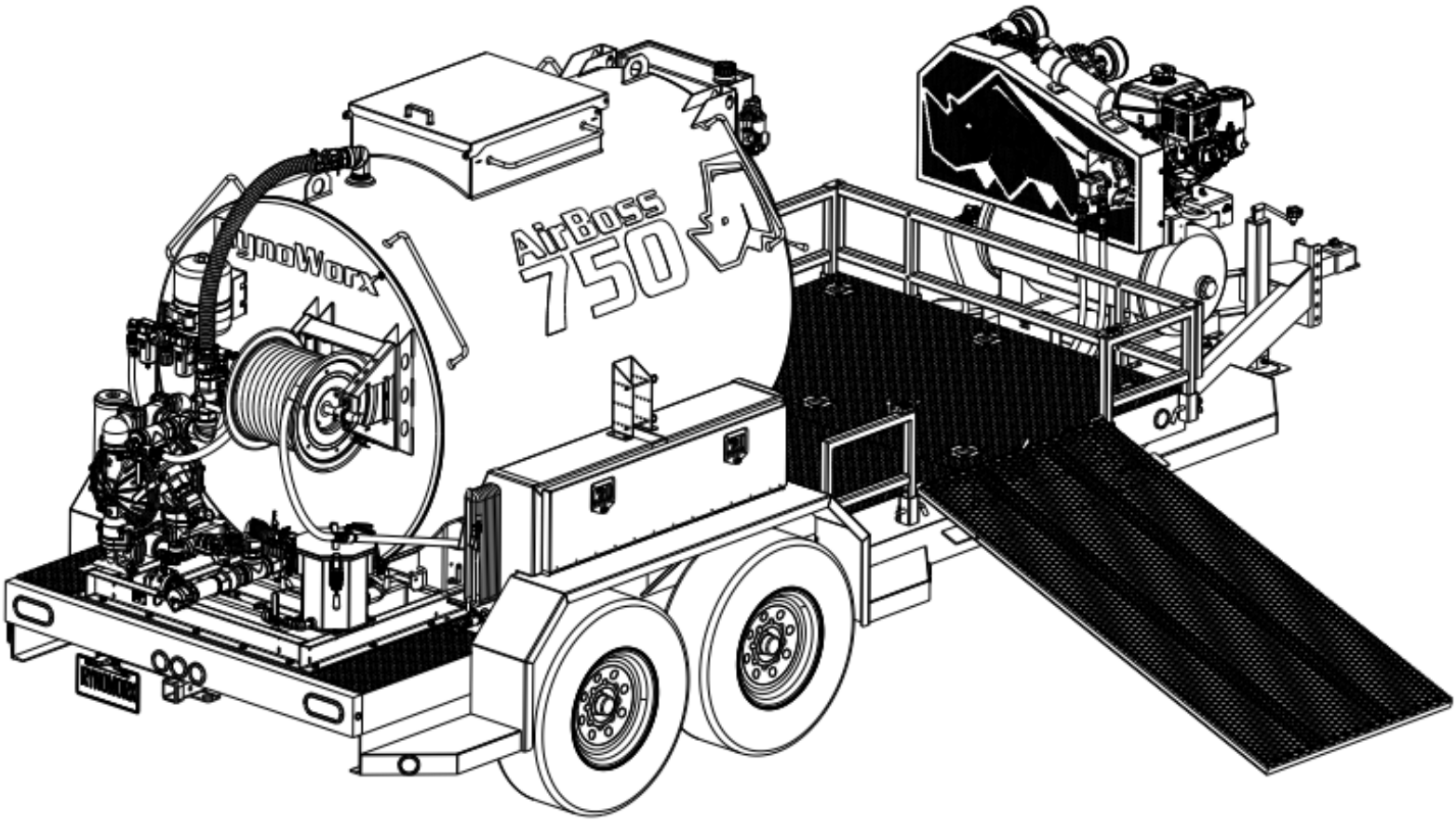
RynoWorx

AirBoss 575 / 750-V1
Operator's Manual



Skid Systems	
AirBoss575 Pro	RA-SSY-0032
AirBoss575 Elite	RA-SSY-0033
AirBoss750 Pro	RA-SSY-0035
AirBoss750 Elite	RA-SSY-0036

Trailer Packages		
AirBoss575 Pro	RA-TSY-0040	PKG A
AirBoss575 Pro	RA-TSY-0041	PKG B
AirBoss575 Elite	RA-TSY-0046	PKG A
AirBoss575 Elite	RA-TSY-0047	PKG B
AirBoss575 Elite	RA-TSY-0048	PKG C
AirBoss750 Pro	RA-TSY-0058	PKG A
AirBoss750 Pro	RA-TSY-0059	PKG B
AirBoss750 Elite	RA-TSY-0064	PKG A
AirBoss750 Elite	RA-TSY-0065	PKG B
*AirBoss750 Elite	RA-TSY-0066	PKG C

*Shown

Contents

1 Safety & General Information

⚠ Warnings

⚠ Failure to follow all safety precautions can result in serious injury or death

⚠ RynoWorx Inc. assumes no liability for any accident or injury incurred through improper use of machine

⚠ CHECK ENGINE, COMPRESSOR, FRL, AND HYDRAULIC OIL LEVELS BEFORE FIRST USE

⚠ Read all instructions and warnings in this manual as well as the engine manufacturer's manual before operating this equipment

⚠ Verify all seals and clamps for all connections are tightened before each use of this equipment

⚠ This equipment is designed for outdoor use only

⚠ Be sure to always wear personal protective equipment when operating this equipment. Eyes, Gloves, Hearing, Boots, Long Pant, Long Sleeves, etc.

⚠ Carefully read all Material Safety Data Sheets (SDS) for sealer products being used before operating this equipment. Refined coal tar, and Asphalt Emulsion sealers can cause health risks if not properly handled

⚠ Only genuine replacement parts should be used for any replacements or repairs. Do not attempt to modify or alter this product in any way

⚠ Observe all caution and warning signs on machine

⚠ Do not leave unattended when running

⚠ Never point the spray wand at another person

⚠ Keep all body parts out of lid opening when the unit is running

⚠ Keep hands and arms clear while opening and closing the lid

⚠ Keep the tank lid closed during operation

⚠ Do not let any sealer freeze or dry inside the unit's plumbing

⚠ Never enter the tank with sealer inside

⚠ Always drain the tank and let any residual sealer dry before entering the tank

⚠ Replace any hoses that show wear, fraying or splits. Be sure all joints are leak-proof

⚠ Shut down and allow compressor engine to cool prior to refilling the gas tank

⚠ Never operate near an open flame or use any type of flame to unclog the plumbing

⚠ Check all operation manuals for warnings, cautions and to ensure proper maintenance procedures are followed

⚠ Always turn the gas off on the engine before transporting

⚠ Only stainless-steel thread seal tape should be used, on the diaphragm pump plumbing components, as the parts are aluminum and stainless steel. Regular Teflon based thread seal tape will not work as well

2 Factory Calibrations:

Your AirBoss was calibrated using:

- 2.0 GPM tips with water
- 50 psi in the expansion tank
- Compressor regulator set to 90psi
- FRL regulator set to 90psi
- *Pneumatic hose reel regulator set to 10psi *if equipped
- *Water Pump regulator set to 20PSI *if equipped

Your AirBoss was factory tested for several hours, and calibrated to meet the following performance specifications:

- Engine kick-up RPM: 2800 RPM +/- 100
- Engine Kick-down RPM: 1800 RPM +/- 100
- Fill from 0 – 90 psi: 55-60 seconds
- Fill from 0 – 120 psi: 75-80 seconds
- Compressor CFM: 31.5 @ 125 psi (2105) 17 @ 125 psi (1105)
- Kick-down psi: 150 psi
- Kick-up psi: 110 psi

3 Technical Specifications:

	RA-SSY-0032 575 Pro	RA-SSY-0035 750 Pro	RA-SSY-0033 575 Elite	RA-SSY-0036 750 Elite
FLR (Filter, regulator, lubricator)	Yes	Yes	Yes	Yes
Compressor Oil Capacity (US qt / L)	2.1 / 2.0	2.1 / 2.0	2.1 / 2.0	2.1 / 2.0
Compressor Oil Grade (Conventional)	20 **or** 30 Weight	20 **OR** 30 Weight	20 **OR** 30 Weight	20 **OR** 30 Weight
Compressor Oil Grade (Synthetic)	ISO 46 / 68	ISO 46 / 68	ISO 46 / 68	ISO 46 / 68
Compressor Pump Model	1105	1105	2105	2105
Compressor Pump CFM	17 @ 125 psi	17 @ 125 psi	31.5 @ 125 psi	31.5 @ 125 psi
Compressor Pump Psi (Working / Max)	120 / 175	120 / 175	120 / 175	120 / 175
Compressor Tank Capacity (US gal / L)	30 Gallons	30 Gallons	30 Gallons	30 Gallons
Engine Displacement (cu. in. / cc)	26.2 / 429	26.2 / 429	26.2 / 429	26.2 / 429
Engine Oil Capacity (US qt / L)	1.4 / 1.3	1.4 / 1.3	1.4 / 1.3	1.4 / 1.3
Engine Oil Grade (Conventional)	5w30 / 10w30	5w30 / 10w30	5w30 / 10w30	5w30 / 10w30
Engine Oil Grade (Synthetic)	5w50 / 10w50	5w50 / 10w50	5w50 / 10w50	5w50 / 10w50
Engine Power (HP / KW)	14 / 10.4	14 / 10.4	14 / 10.4	14 / 10.4
Engine Torque (Ft lbs/Nm)	22.7 / 29.8	22.7 / 29.8	22.7 / 29.8	22.7 / 29.8
Expansion tank – psi	~50 psi	~50 psi	~50 psi	~50 psi
Fuel Tank Capacity (US qt / L)	7.8 / 7.4	7.8 / 7.4	7.8 / 7.4	7.8 / 7.4
Hydraulic Oil Capacity (US gallon / L)	5 / 18.9	5 / 18.9	5 / 18.9	5 / 18.9
Hydraulic Oil Grade	ISO 46 / 68	ISO 46 / 68	ISO 46 / 68	ISO 46 / 68
Spark plug gap (in / mm)	0.030 / 0.76	0.030 / 0.76	0.030 / 0.76	0.030 / 0.76
Tank Nominal Capacity – US GALLONS	575	750	575	750
Weight–AirBoss Extended Deck Trailer	5300	5400	5400	5500
Weight–30 or 60 Gallons of water	+300 lbs (30)	+300 lbs (30)	+600 lbs (60)	+600 lbs (60)
Weight–Filled Tank * Approx	+5750 lbs	+7500 lbs	+5750 lbs	+7500 lbs
Weight – AirBoss skid	2900 lbs	3000 lbs	3000 lbs	3100 lbs

4 Trailers: *if equipped

Be sure to follow all local towing laws

4.1 Towing Best Practices:

1. Stay Within Your Limits. Review the towing capacity of your specific vehicle and ensure it's capable of handling the weight of your trailer. Exceeding the maximum towing capacity can result in dangerous handling, insufficient braking performance, or serious damage to the vehicle's suspension, engine and drivetrain. In addition to ensuring your vehicle's towing capacity is sufficient for your trailer, also make sure your trailer hitch can handle your trailer's loaded weight. Your hitch should be labeled with the maximum trailer and maximum tongue weights it can safely support. Depending on the weight of your trailer, you should also follow your owner's manual's recommendations regarding the use of weight carrying or weight-distributing hitches.

   If you plan on also carrying extra cargo or several passengers, you should also ensure you're not overloading the tow vehicle itself. Refer to the gross vehicle weight rating (GVWR) issued for your vehicle and ensure your loaded vehicle does not exceed the manufacturer's rating. Likewise, ensure your loaded vehicle and loaded trailer do not exceed the gross combination weight rating (GCWR) set by the manufacturer.

2. Pack your trailer properly. Not only is it incredibly important to stay within the trailer's maximum load capacity, but it's also important to ensure any cargo is properly positioned. Not only do you want roughly 60% of the trailer's load placed over the front half of the trailer, you also should load it in a way that results in a tongue weight on conventional hitch trailers that is between 10-15% of the total weight of the loaded trailer. Ensure weight is evenly distributed on the left and right sides of the trailer. Once the load is properly distributed and an ideal tongue weight is achieved, all cargo should be secured to prevent the load from shifting.

3. Check your tires. This goes for both your tow vehicle and your trailer. Tires that are not properly inflated can negatively affect handling. Further, underinflated tires can create more rolling resistance, which not only forces the engine to work harder and consume more fuel, but also increases tire temperatures and may contribute to a blow-out. Refer to the tire pressure label placed in the driver's doorjamb for proper inflation pressures for the tow vehicle. Additionally, check the speed rating on the tires for both your tow vehicle and trailer, and ensure you never exceed that speed while on the road. Additionally, consider allowing more time to inspect your trailer's hub bearings before towing, and ensure they're in good order and properly greased.

4. Check your lights. The taillights and marker lamps on your trailer may seem superfluous, but they're quite important. Large trailers or loads may obscure the taillights on your tow vehicle. If the lights on your trailer aren't illuminated, other drivers may not see your vehicle, especially at night. Collisions can occur if the taillights are not working or are improperly connected. Have a partner stand behind the vehicle while it is in park to check the turn signals, taillights and brake lights function properly.

5. Check Your Brakes. Heavier trailers, or those designed to carry heavier loads, will usually incorporate a trailer brake system. Make sure the emergency "breakaway" cable is properly attached to your tow vehicle. In case your trailer somehow disconnects from the hitch, this cable is designed to trigger the brakes on the trailer and quickly bring it to a halt.

6. Adjust Your Mirrors. Before taking off, make sure your side view mirrors are adjusted to create a clear view that extends to the end of the trailer.

4.2 Trailer Specifications:

AirBoss trailers are fabricated by Weberlane.

750 Elite Spray System with Extended Trailer Package C: RA-TSY-0066
(RA-SSY-0036) + (RA-TRL-5012) = RA-TSY-0066

System Dimensions:	244 x 88 x 93”
GVWR:	15,600 lbs
Safety Break-Away System and Chains	✓
Axle Capacity	2 x 7,000 lbs E-Z Lube
Spring Axles	✓
LED Lights	✓
Adjustable Coupler	✓
Water Kit (Tank/ Pump)	✓
Water Tank Size	60 Gallons
Water Spray Hose	50'
Brush Box	✓
Tool Storage	✓
Metal Deck	✓
Deck Size	80x67"
Deck Rails	✓
Easy Access Deck Steps	✓
# Deck Tie Downs	9
Rear Hitch Receiver	✓
Extra Wide Fenders	✓
Ramp	✓
Ramp Size/ Type	72x38" Checker plate
Spring Assist on Ramp	✓
Spray Wand Holder with Drip Catch	✓
Hitch size	2 5/16"
Wheel size	16” 8 x 6.5
Tire size	ST 235/85R16

5 Required Tools

Your AirBoss spray system should arrive completely assembled. No tools are required to begin operation.

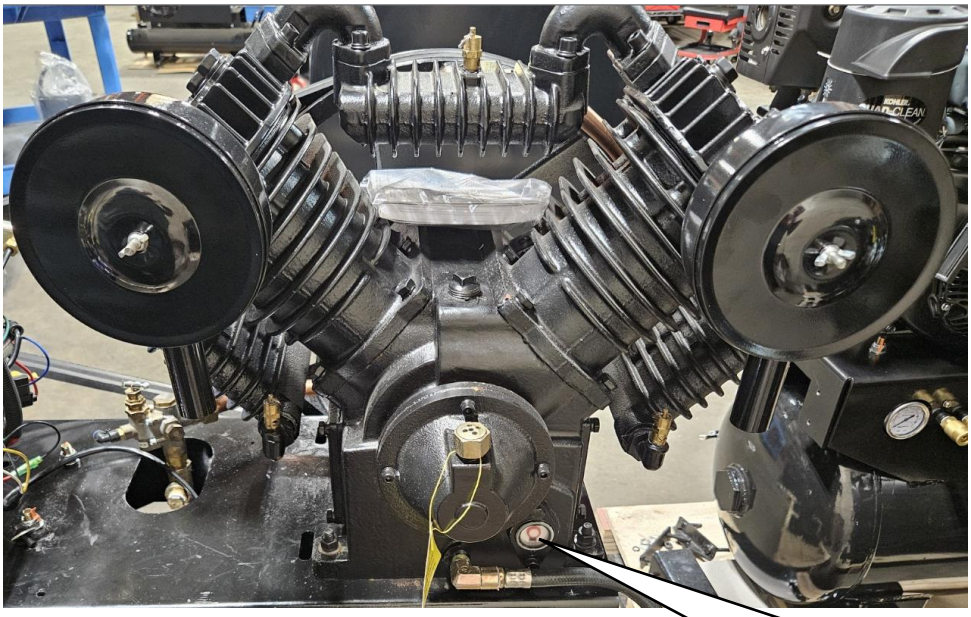
Suggested tools to have on hand:

- 12" Pipe Wrench (with 2.5" Jaw)
- Adjustable wrench (1.5” width) or Channel Lock pliers
- Ratchet set
- Allen Key Set
- Screwdriver Set
- Stainless steel thread tape
- Power Drill
- Drum or tote mixer
- 5 gallons of clean water for priming and cleaning (not including what you need to mix with your sealer)

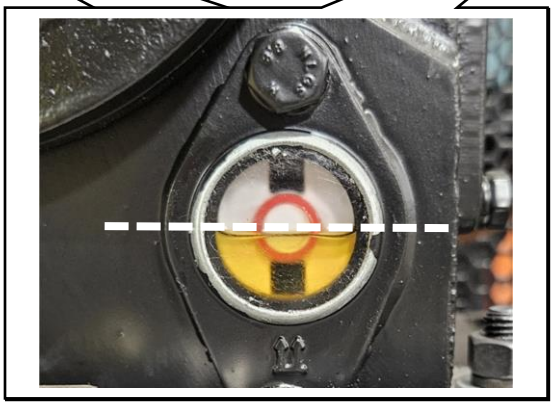
6 Compressor Details

Compressor oil should be level with the red dot at the center of the sight glass shown above.

2105



1105



Oil Sight Glass

Compressor Oil Capacity:
1105 (pro): 2.1 qt / 2.0 L
2105 (elite): 2.1 qt / 2.0 L

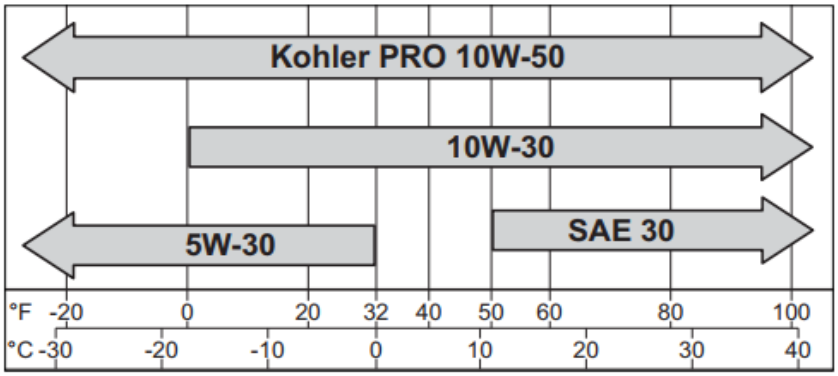
20 **OR** 30 weight compressor oil
- OR-
ISO 46 **OR** ISO 68 synthetic compressor oil

7 Engine Details

All AirBoss 575 and 750 systems are equipped with a Kohler CH440 engine.

REPAIRS/SERVICE PARTS
Kohler genuine service parts can be purchased from Kohler authorized dealers. To find a local Kohler authorized dealer visit KohlerEngines.com or call 1-800-544-2444 (U.S. and Canada).

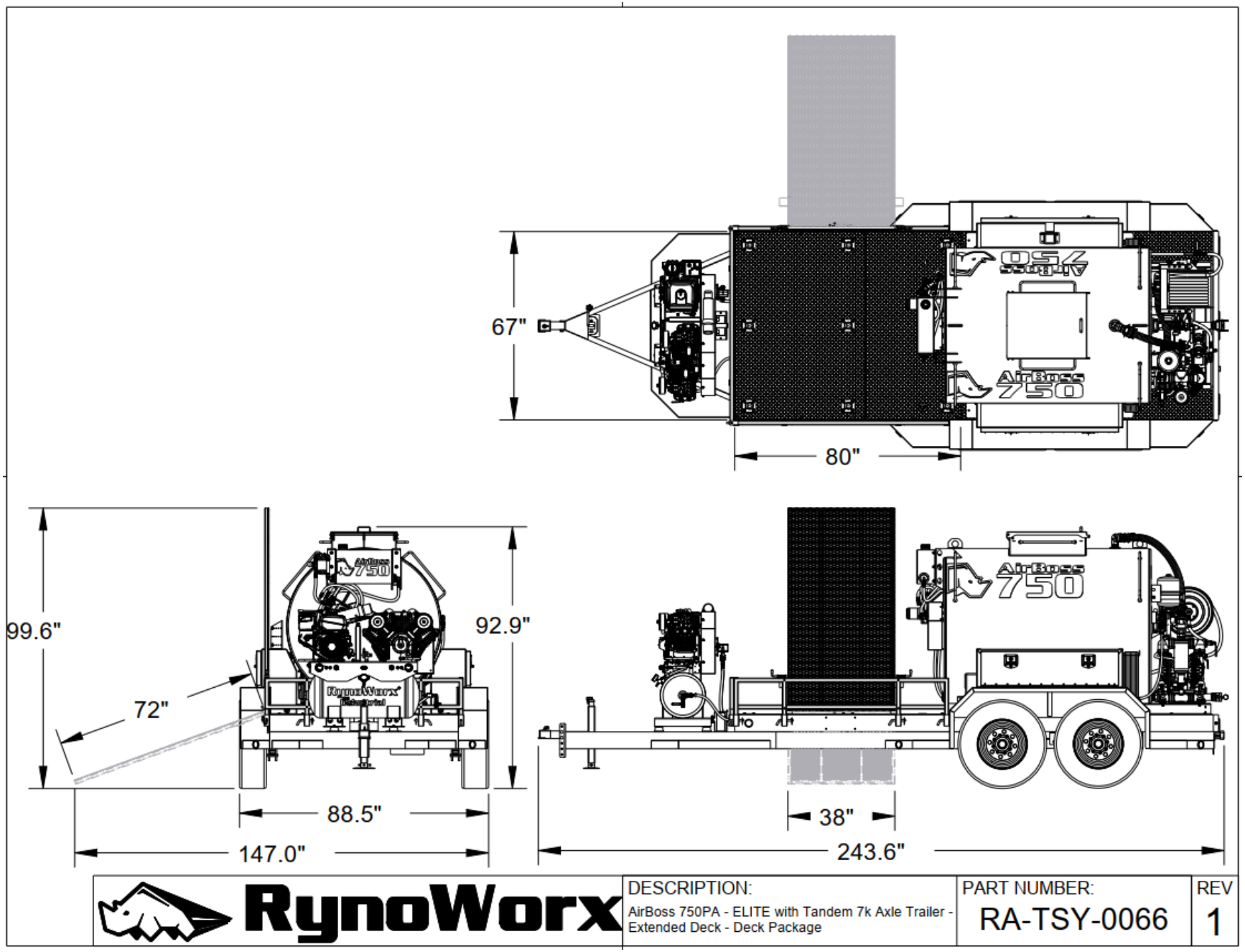
OIL RECOMMENDATIONS
All-season KOHLER® PRO 10W-50 Synthetic Oil is the ideal oil for KOHLER engines. It is specifically formulated to extend the oil change interval to 300 Hours. Contact your Kohler authorized dealer for availability. 300-Hour oil change intervals are exclusive to and only authorized on KOHLER engines that utilize the KOHLER PRO 10W-50 Synthetic Oil. Alternative engine oils may be used with KOHLER engines but require 100-Hour oil change intervals for proper maintenance. Oil must be API (American Petroleum Institute) service class SJ or higher. Select viscosity based on air temperature at time of operation as shown below.



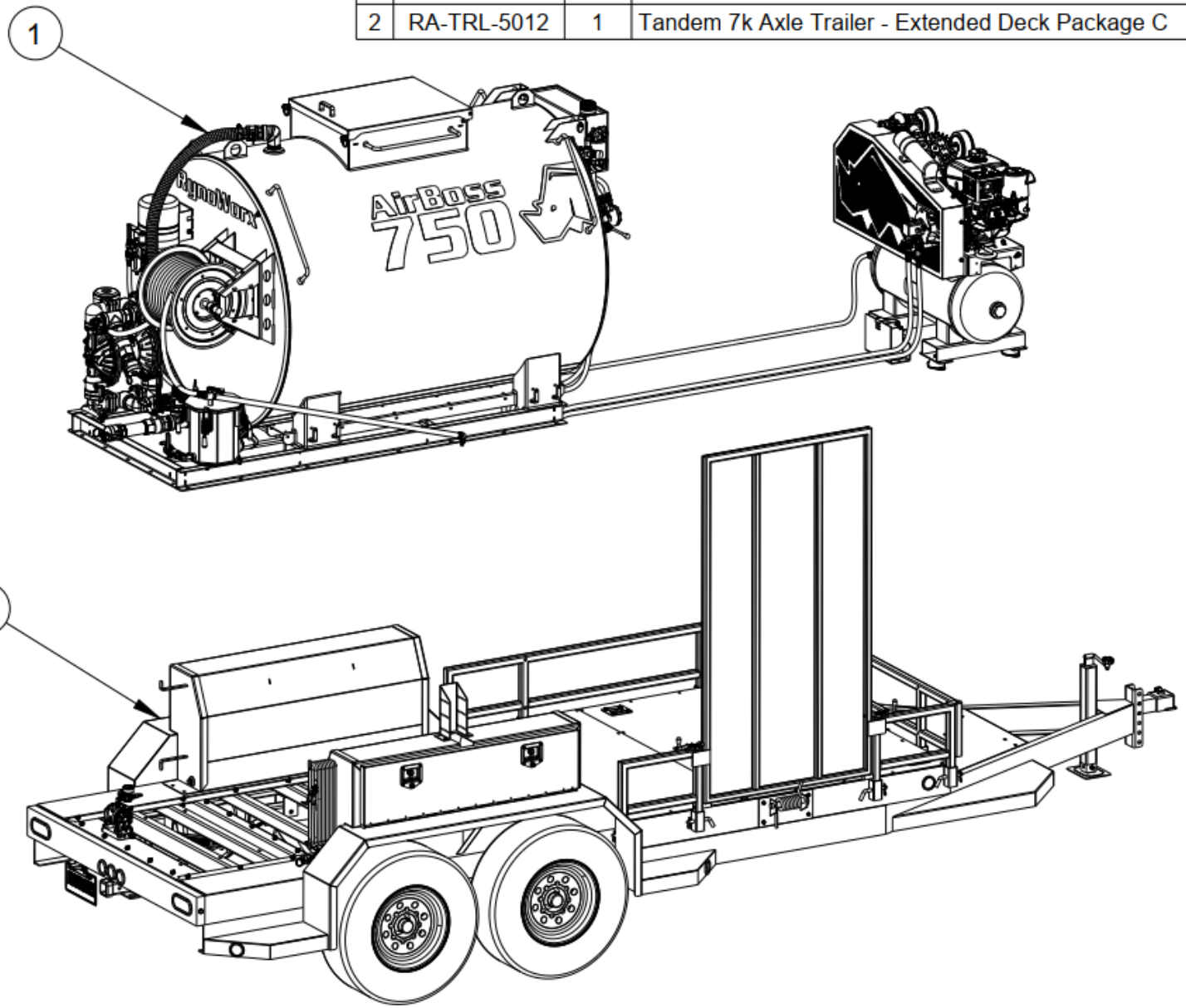
FUEL RECOMMENDATIONS
⚠ WARNING
● Explosive Fuel can cause fires and severe burns.
● Do not fill fuel tank while engine is hot or running.
● Gasoline is extremely flammable, and the vapors can explode if ignited. Store gasoline only in approved containers, in well ventilated, unoccupied buildings, away from sparks or flames. Spilled fuel could ignite if it encounters hot parts or sparks from ignition. Never use gasoline as a cleaning agent.

NOTE: E15, E20 and E85 are NOT approved and should NOT be used; effects of old, stale, or contaminated fuel are not warrantable.
Fuel must meet these requirements:
● Clean, fresh, unleaded gasoline.
● Octane rating of 87 (R+M)/2 or higher.
● Research Octane Number (RON) 90 octane minimum.
● Gasoline up to 10% ethyl alcohol, 90% unleaded is acceptable.
● Methyl Tertiary Butyl Ether (MTBE) and unleaded gasoline blend (max 15% MTBE by volume) are approved.
● do not add oil to gasoline.
● do not overfill fuel tank.
● do not use gasoline older than 30 days.

8 PART DIAGRAMS



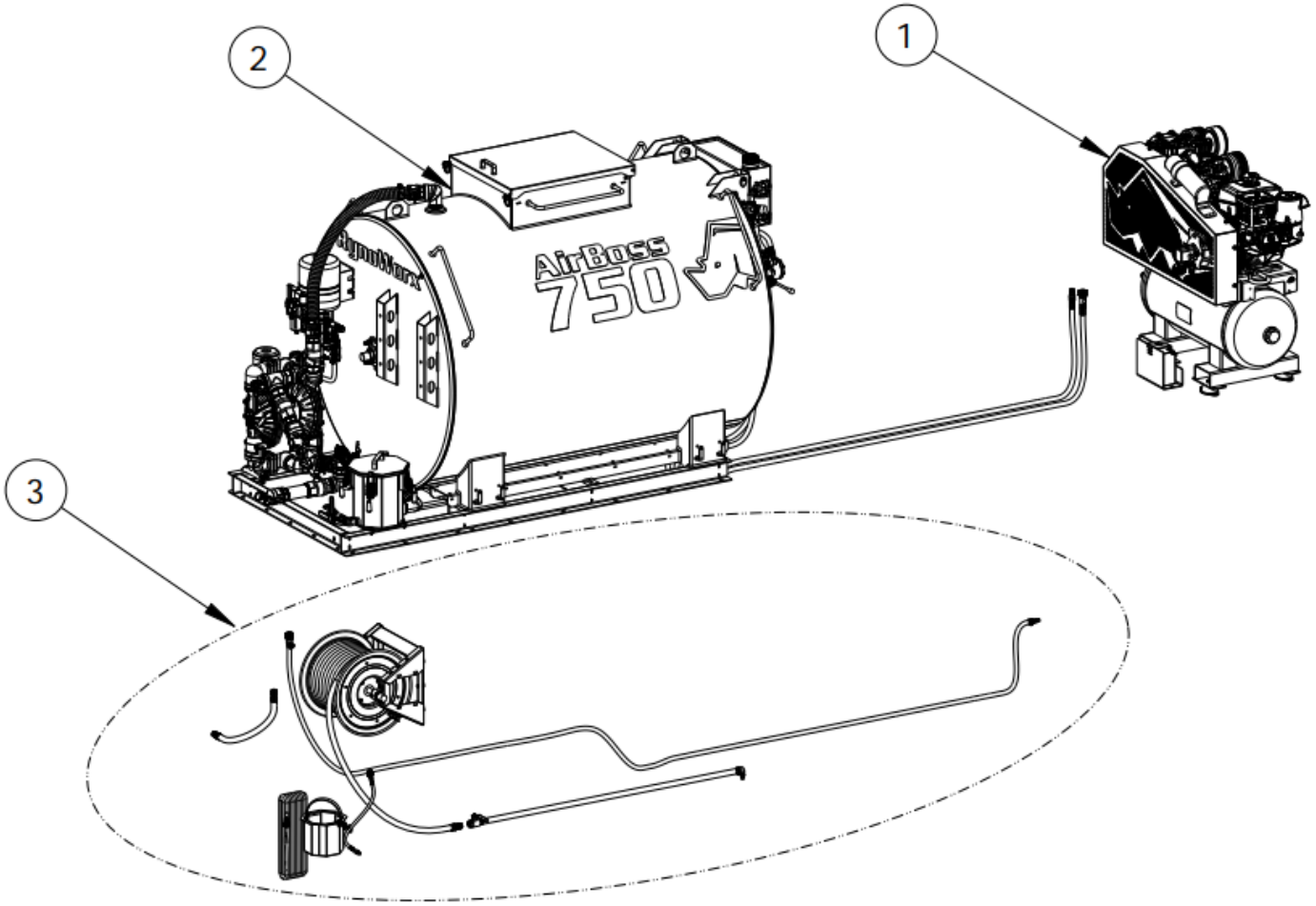
No	PN	Qty	Description
1	RA-SSY-0036	1	AirBoss750PA - Elite
2	RA-TRL-5012	1	Tandem 7k Axle Trailer - Extended Deck Package C



RynoWorx	DESCRIPTION:	PART NUMBER:	REV
	AirBoss 750PA - Elite with Tandem 7k Axle Trailer - Extended - Deck Package C	RA-TSY-0066	1

I1

No	PN	Qty	Description
1	RA-CMP-0014	1	30 Gallon Compressor with 27 CFM Pump and Hydraulic Assembly
2	RA-SSA-0004	1	750 Gallon Tank with 2" Pump Subassembly
3	RA-SSB-0003	1	Elite Package - Power Hose Reel, Hose, Wand, and Accessories



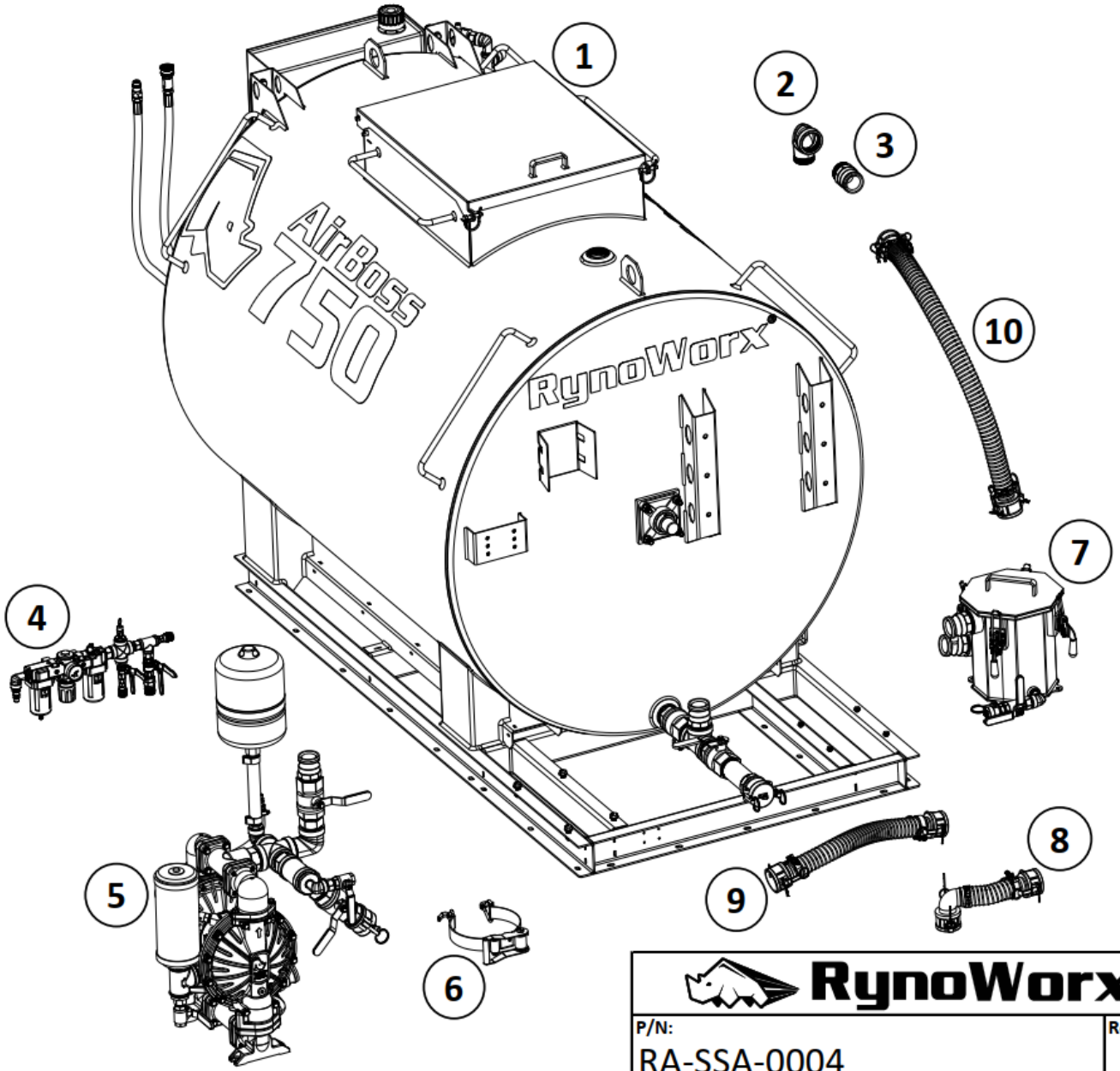
RynoWorx

DESCRIPTION: AirBoss750PA - Elite

PART NUMBER: RA-SSY-0036

REV 1

No	P/N	Qty	Description
1	RA-TNK-5005	1	750 Gallon Sealcoat Tank Assembly with Hydraulic Agitation
2	RC-FIT-0143	1	2" NPT 90 Degree Street Elbow - SS304
3	RC-FIT-0058	1	2" NPT Male Camlock - Aluminum - 200 Type F
4	RA-FRL-5001	1	FRL with Fittings for 2" Systems
5	RA-PFA-0007	1	Pump with Fitting Assembly - 2" Air Op Pump
6	RC-STR-0001	1	Propane Tank Ratchet Strap
7	RA-FPT-0006	1	Filter Pot Assembly with 2" Fittings
8	RA-HFA-0060	1	2" Intake Hose Assembly - Tank to Filter Pot
9	RA-HFA-0045	1	2" Intake Hose Assembly - Filter Pot to 2" Pump
10	RA-HFA-0046	1	2" Return Hose Assembly



RynoWorx

P/N:	Rev:
RA-SSA-0004	1

Description:

750 Gallon Tank with 2" Pump Subassembly

9 OPERATION

9.1 Operation Guidelines

- The AirBoss system was pre-tested for leaks before shipping, however, we recommend that you test the system using WATER to ensure you do not have leaks before moving onto sealant
- The air-pump is self-priming
- Flush clean water through the pump and hoses at the end of each day
- Place any used spray tips into a soapy water solution at the end of each day
- Do not let sealant dry onto the spray tips
- Clean the spray tips with soft nylon brushes only
- Have clean water available at the job site for emergency rinsing
- Clean the strainer daily to ensure proper sealant flow
- Check the engine oil levels daily
- Check the compressor oil levels daily
- Check the hydraulic oil levels daily *if equipped
- Check the FRL oil levels daily *if equipped

⚠ WARNING
● Turn the engine off for extended work stoppages (10+ minutes), such as breaks, lunches, or other unplanned work stoppages
● avoid recirculating for more than 10 minutes at a time
NOTE: Apart from wasting fuel, this may cause your sealant to become foamy, which can introduce excessive air into the lines and can cause inconsistent spray intensity.
● Foamy sealant can take an hour or more to return to a useable state.
● Set fuel control to OFF while traveling (if equipped)

Spray Tips

Each system ships with 3 sizes of spray tips (80/50, 80/70, 80/100). The spray wand (RA-SWA-0005) included with your AirBoss will have an 80/20 tip installed on it for a total of FOUR tips.

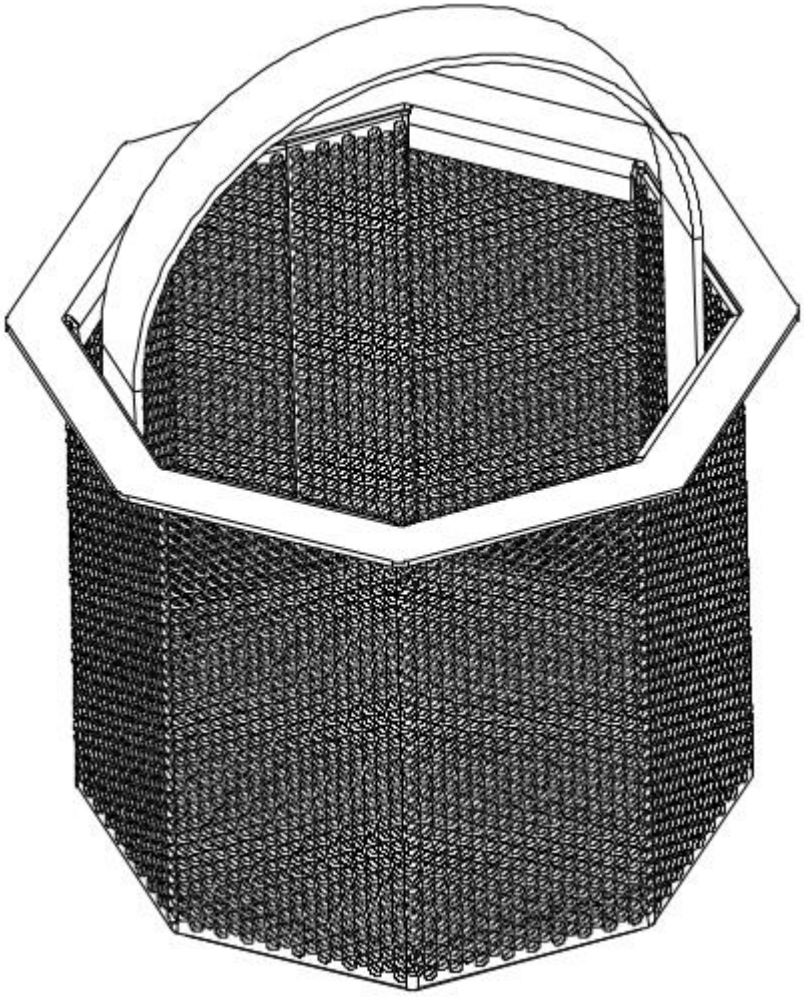
The 80/20 tip is what all our benchmarks were completed with (see the specifications chart for details). The 2 numbers are used to designate the spray tip size denote the spray fan angle and tip flow when sprayed at 40 psi (for example, an 80/20 has an 80° spray fan angle and has approximately 2.0 GPM of flow when sprayed at 40 psi). Increasing or decreasing the regulator pressure will also increase or decrease the tip flow rate from the 40 psi rating.

9.2 Filter baskets

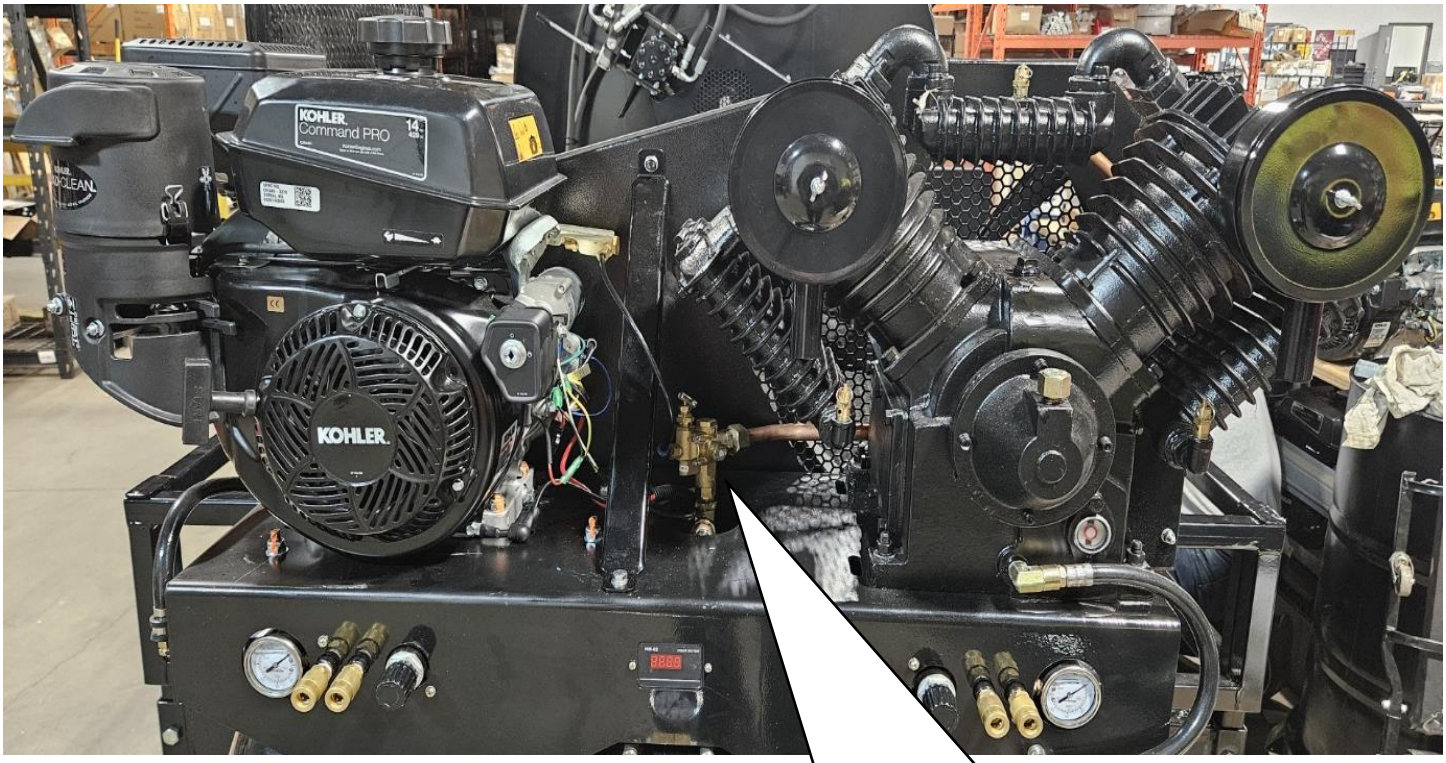
Your system comes with 2 sizes of filter baskets. 4 mm (approx. 5/32”) and 5.5 mm (approx. 7/32”). We recommend using the larger basket for emulsion and sealers with more solid, and the smaller filter for coal tar sealers.

If you find that you are getting a lot of clogs in your spray tips, we suggest:

- Recirculating more to get a more uniform consistency
- Adding more water and recirculate
- Changing to a larger spray tip size
- Using the smaller filter basket and cleaning it more often



9.3 Compressor Operation



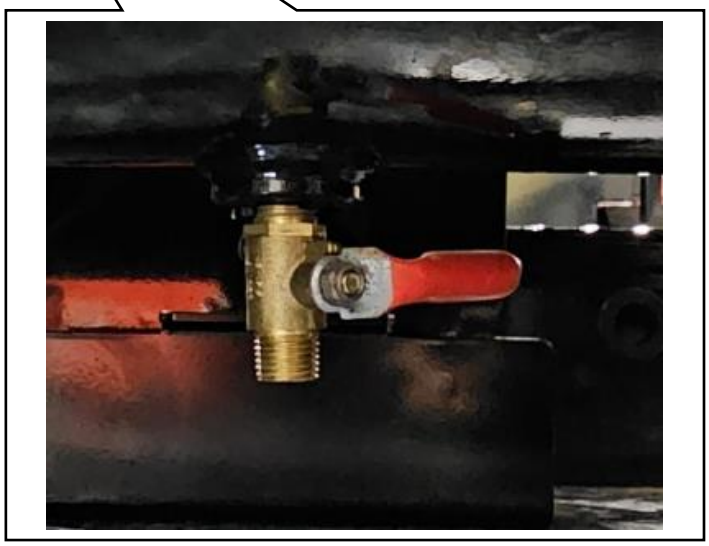
Auto Idle Throttle Control (kick-down)
Your AirBoss Spray system is equipped with an auto idle kickdown to lower engine RPM when the compressor tanks are full. This hose runs from the brass valve to the throttle on your engine. This sensor is attached between the compressor and the tank. It will reduce the engine RPM automatically when the target PSI has been achieved.

You can cycle your kickdown manually for testing purposes by toggling the silver lever on the kickdown.

9.3.1 Compressor & Air Tanks:

NOTE: You must fully open the pressure relief valve at the bottom of the tank at the end of each day. Condensation and sediment can form and shorten the life of the tanks.

It is normal for this water to be brown in colour.

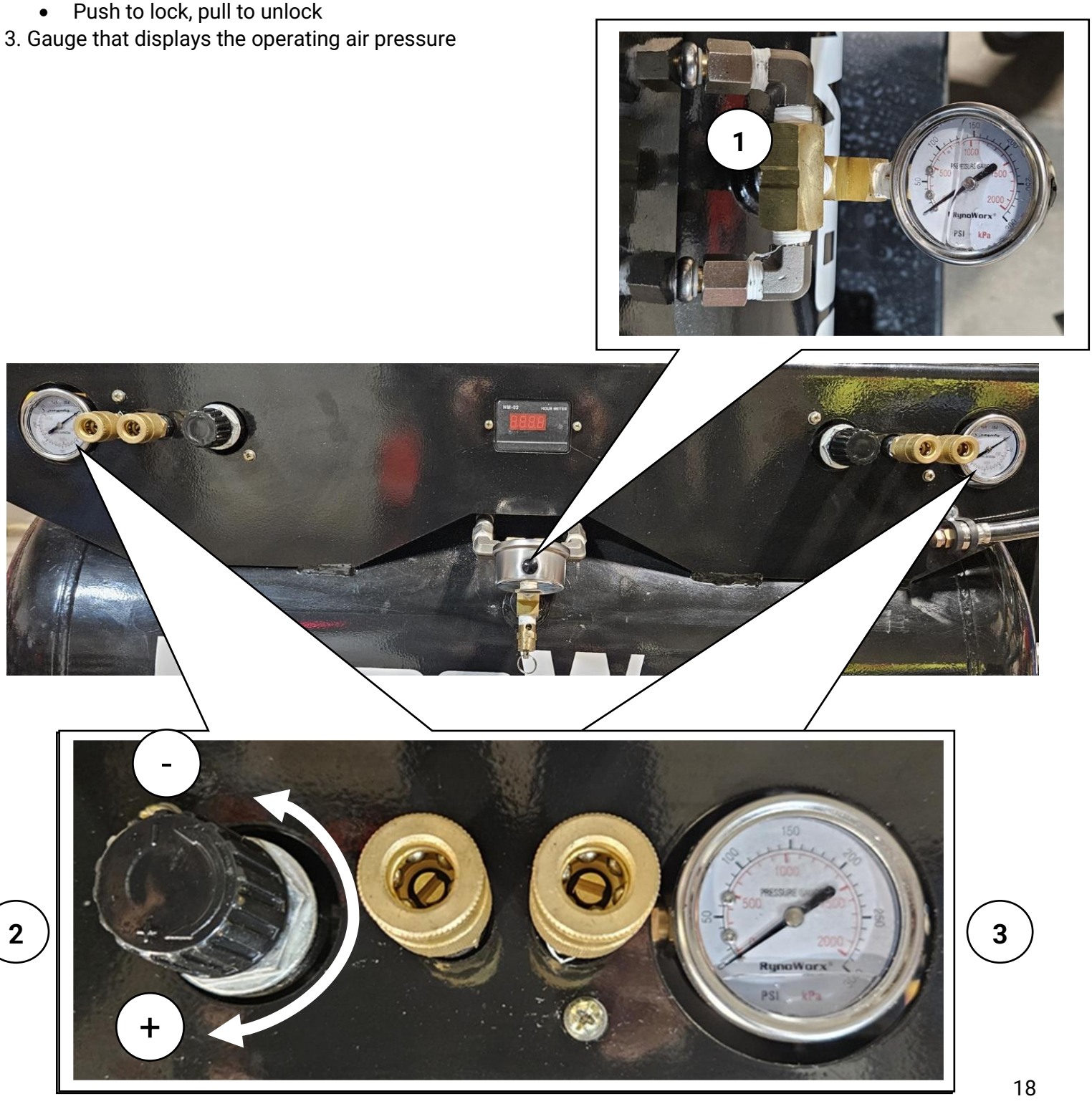


9.3.2 Setting the desired pressure:

**NOTE: These regulators do NOT control any of the AirBoss equipment. There is another regulator on the FRL that controls the equipment.

These regulators are only for extra air lines / tools connected to the compressor directly.

1. Gauge that displays the current pressure in the tanks
2. Regulator valve to adjust desired operating air pressure
    - Clockwise to increase pressure, counter-clockwise to decrease
    - Push to lock, pull to unlock
3. Gauge that displays the operating air pressure

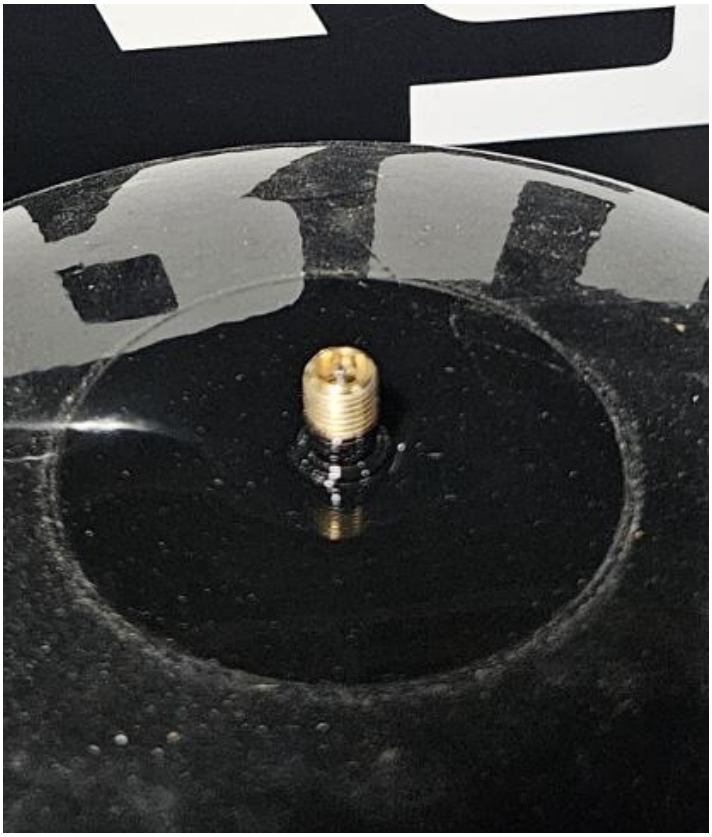


9.4 Expansion tank:

Your AirBoss is equipped with an expansion tank that helps to minimize pulses created by the diaphragm pump. This expansion tank has a bladder inside that can be charged with air to help dial in the perfect amount a dampening.

The expansion tank is pre-charged with 50psi from the factory. You may find that you prefer increasing or decreasing this amount if you are operating a very high or very low pressures from your AirBoss. 50psi was found to be a sweet spot that covers most of the typical operating pressures you will encounter.

The valve is a Shrader style valve – the same as equipped on all cars and trucks. It can be accessed by unscrewing the plastic cover on the top of the tank.

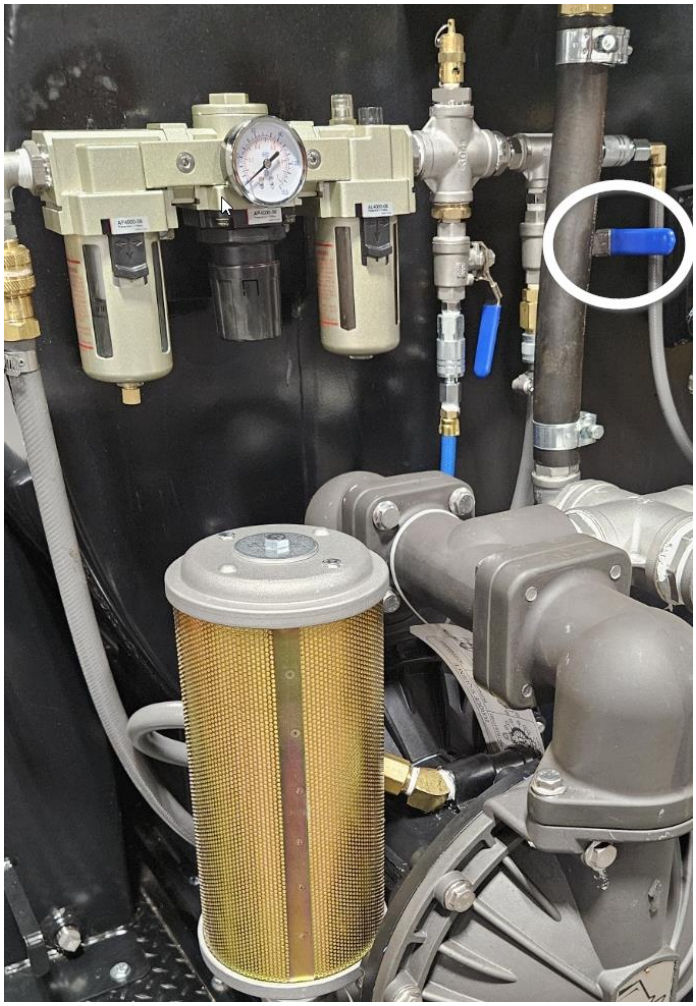


9.5 Airline Valve:

The AirBoss unit is equipped with a ball valve to control the air flow to the diaphragm pump. This valve should be closed when not in use, and open during all operations.

THE PUMP CANNOT WORK WITH THE VALVE CLOSED.

OPEN



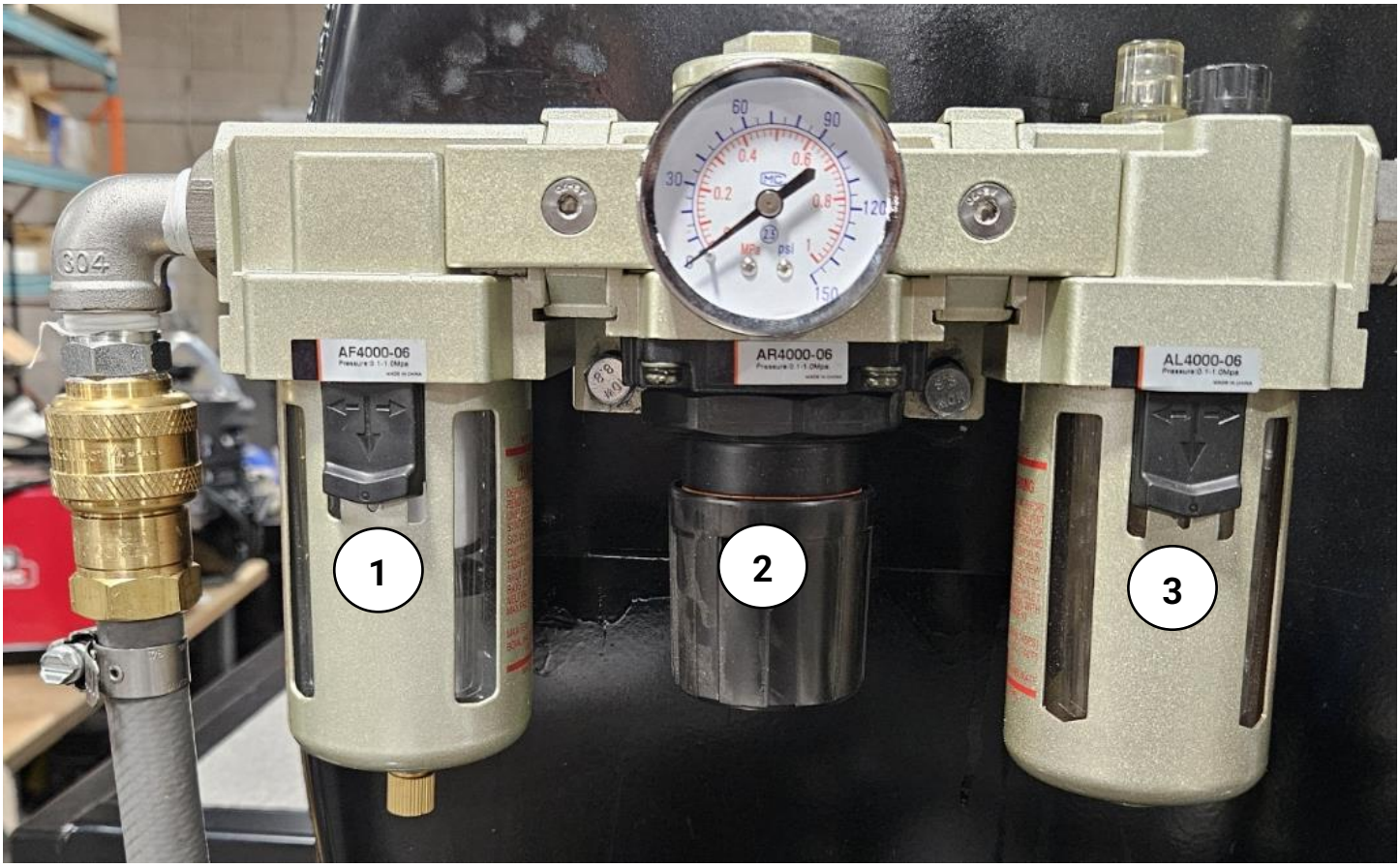
CLOSED

9.6 FRL (Filter, Regulator, Lubricator):

The FRL filters water, regulates the air pressure, and provides a small amount of oil to lubricate pneumatic parts.

1. During normal operation, water will collect in the reservoir and will need to be emptied. It must be emptied daily by pushing upwards on the bottom of the vial.
2. The Regulator is the same as the regulator on the compressor. It allows extra control right next to the pneumatic equipment. Typically, the regulator at the compressor will be set higher than this regulator.
3. The lubricator injects a small amount of oil into the air stream to lubricate and extend the life of pneumatic parts in the diaphragm pump, water pump, powered hose reel (if equipped), and any other air tool you may connect. The reservoir needs to be refilled periodically.

This is the master regulator for all the factory attached equipment on the AirBoss.



10 INPUT & OUTPUT “sides”

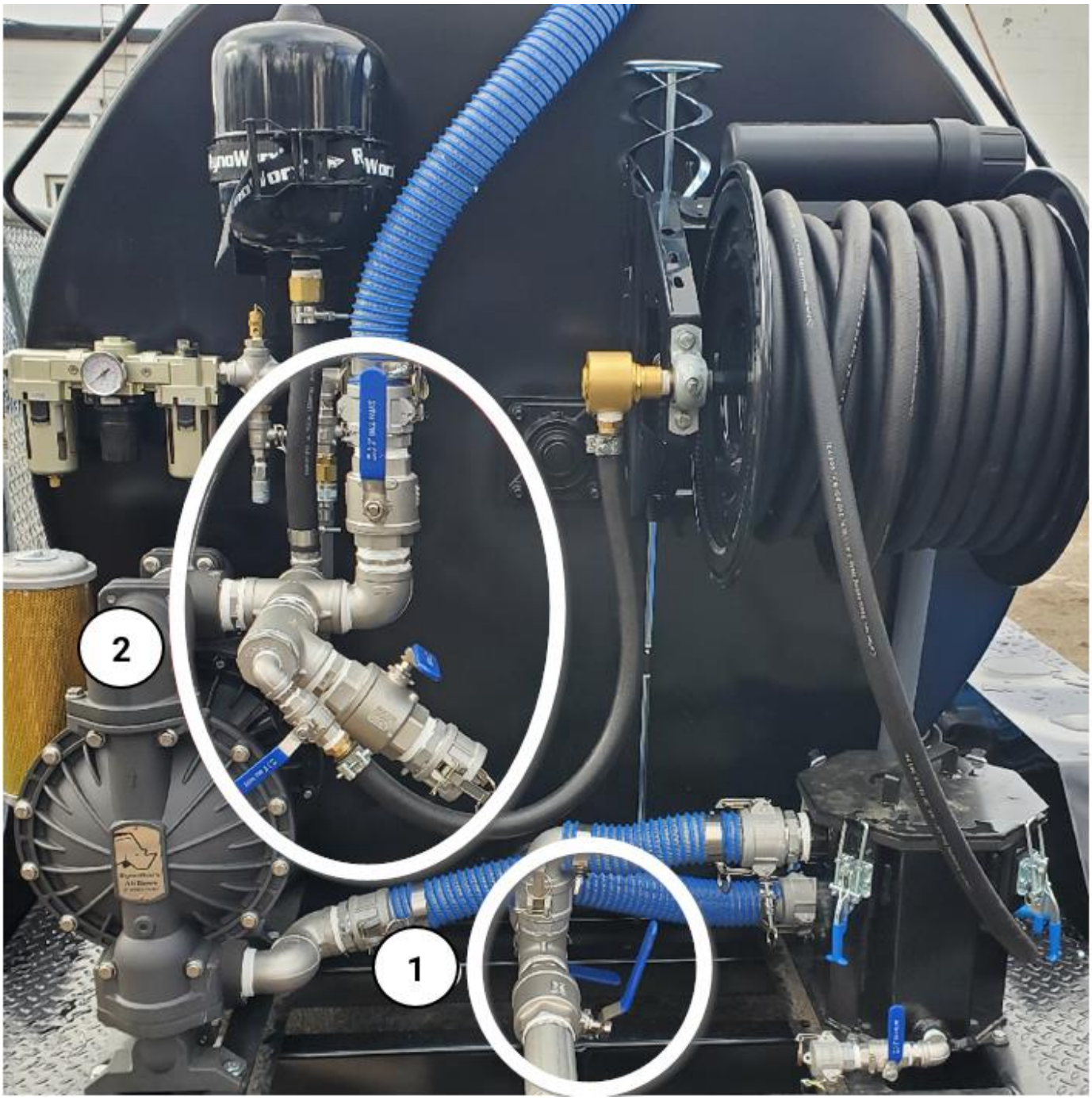
There are two “sides” to your AirBoss plumbing.

1. Input - The input side of the AirBoss contains 2 valves

- Primary input valve controls flow from the main tank
- Secondary input valve controls flow from a 3rd party source such as a barrels, totes, or other containers
- Opening both input valves will allow the main tank to drain

2. Output – The output side of the AirBoss contains 3 valves

- Recirculation output valve directs flow back into the main tank
- Spray output valve directly flow out to the hose reel and spray wand
- Auxiliary output valve directs flow out to 3rd party connections such as a spray bar, or hoses to load other tanks, totes, barrels, etc.



10.1 Valves:

Your AirBoss uses ball valves. Ball valves have several advantages:

- Resistant to high pressure
- Easy to operate, only needing a quarter turn
- Easy to see if it's open or closed, or somewhere in between
- Easy to partially open, if needed

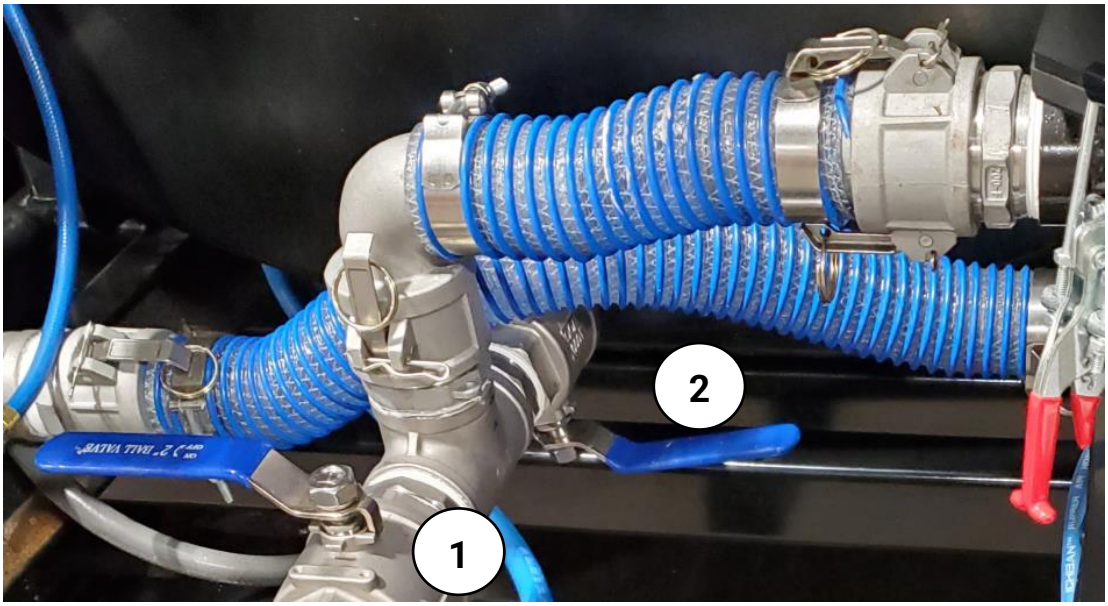
Ball valves are open when the handle is parallel with the plumbing and are closed when the handle is perpendicular to the plumbing.

CLOSED

OPEN

10.2 Traveling:

We recommend closing ALL valves before traveling.
Both input valves are closed:



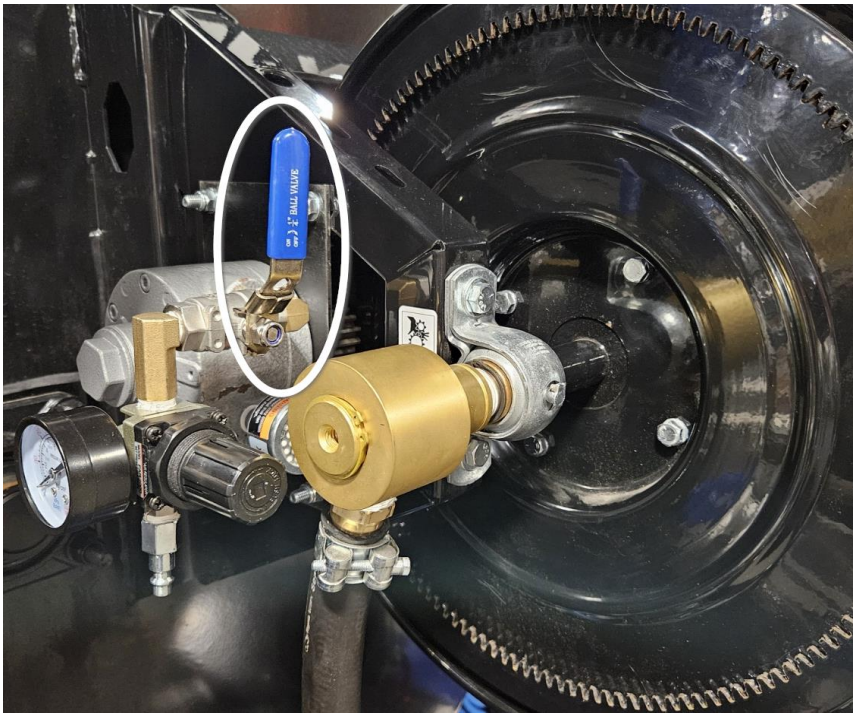
11 Features

11.1 Powered Hose Reel (If equipped)

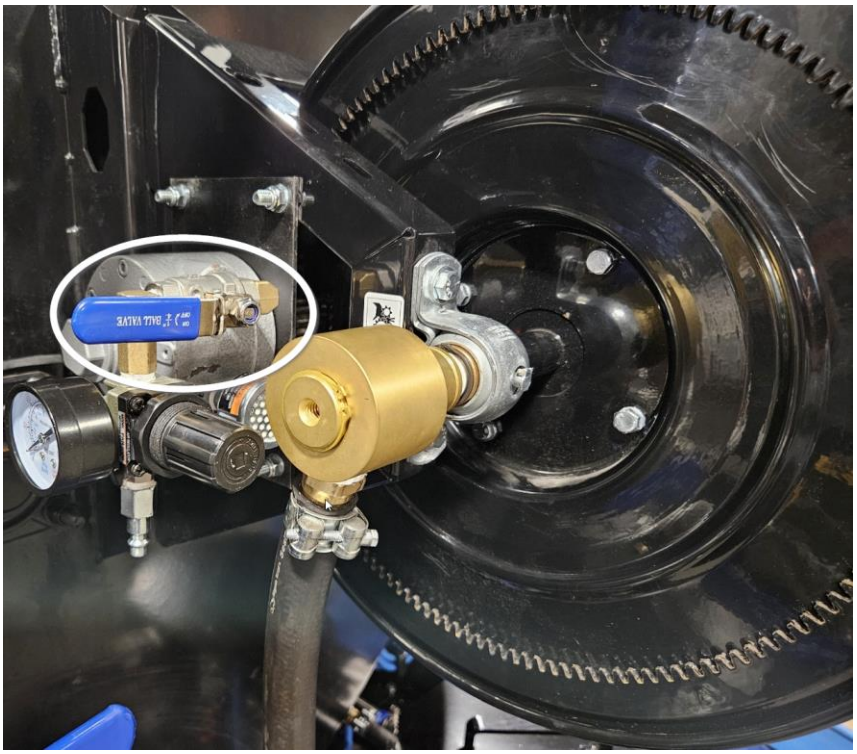
The RA-SSY-0033 (575 Elite) and RA-SSY-0036 (750 Elite) come with a pneumatic powered hose reel.

The Hose Reel regulator should be set to 10-15psi max. Setting the regulator higher could result in damage to the reel, hose, or injury to operators.

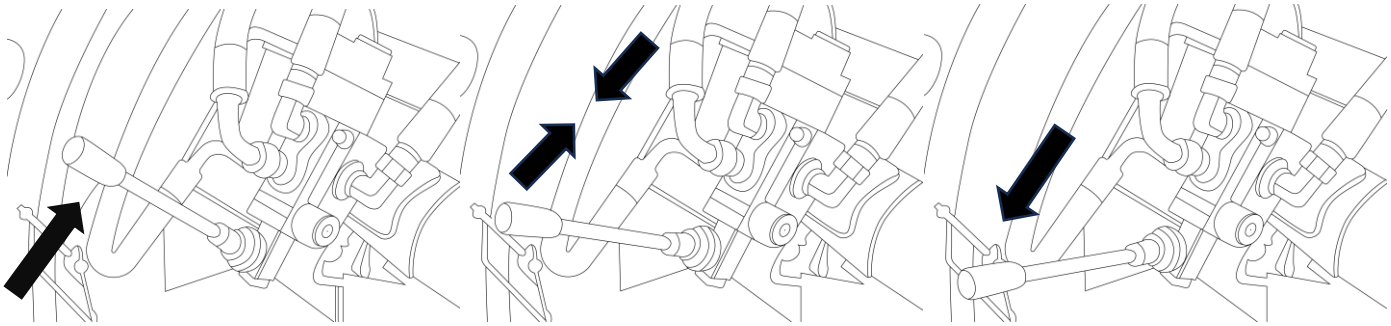
Valve Closed



Valve open



11.2 Hydraulic Agitation:



Forward Off Reverse

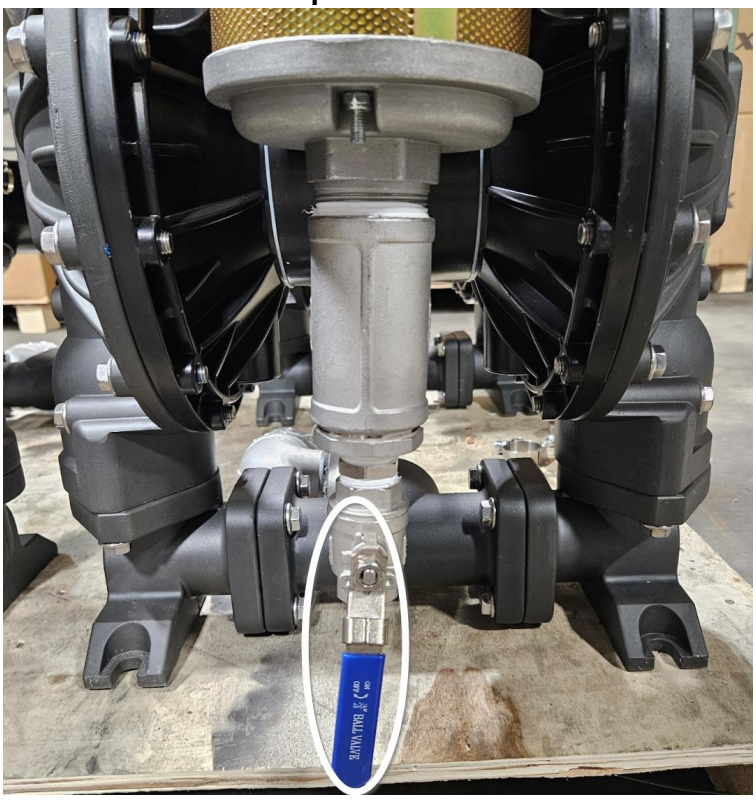
	**⚠ WARNING**
	Rotating Parts can cause severe injury.
Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate engine with covers, shrouds, or guards removed.	

11.3 Muffler Drain Valve

The muffler generates moisture during operation. This moisture is collected in the plumbing below the muffler. This need to be drained regularly (see maintenance schedule)

Closed:

Open:



11.4 Water Pump & Water Tanks *if equipped

Depending on which trailer unit you have you may have 30 or 60 gallons of water storage. You will also have an **A**ir **O**perated **D**ouble **D**iaphragm (AODD) pump. This water pump will come with 50' of water line.

The pump is controlled by the valve on the FLR:

Closed (Off) Open (On)

The water fill port is located on the top of the trailer deck, on the driver's side.

Regulator is located on the water pump. It should be set to 20psi.

The pump is located at the rear of the trailer, next to the sealer pump, under the input valves.

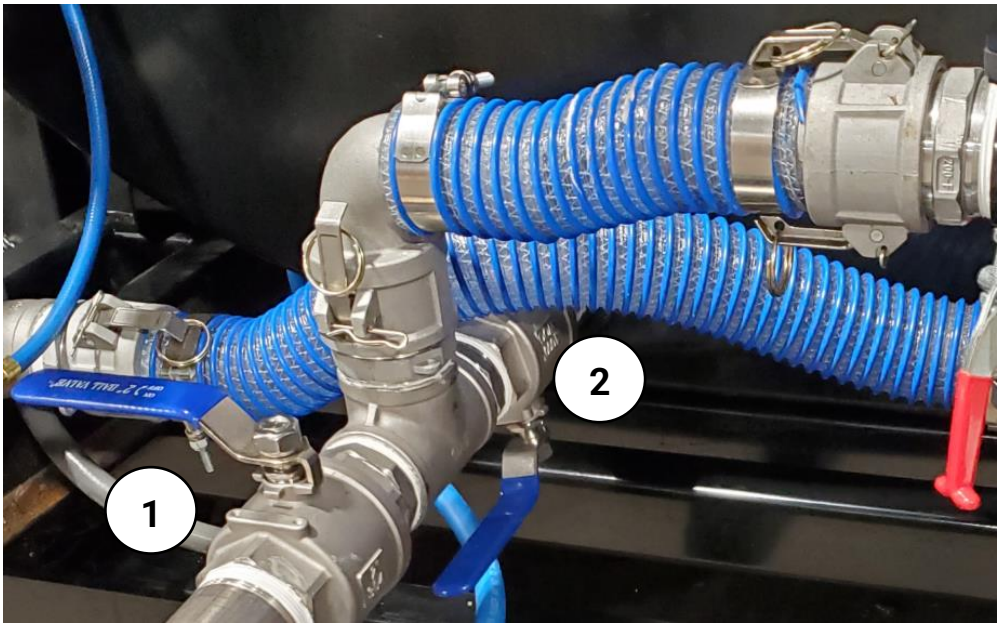
12 System Modes

12.1 Input Modes

12.1.1 Main Tank

This is going to be the way you will be operating most of the time. Feeding from your main tank.

1. Close the valve at the at the middle of the AirBoss, valve on top, closest to the rear of the unit
2. Open the valve at the bottom middle of the tank, valve on the bottom

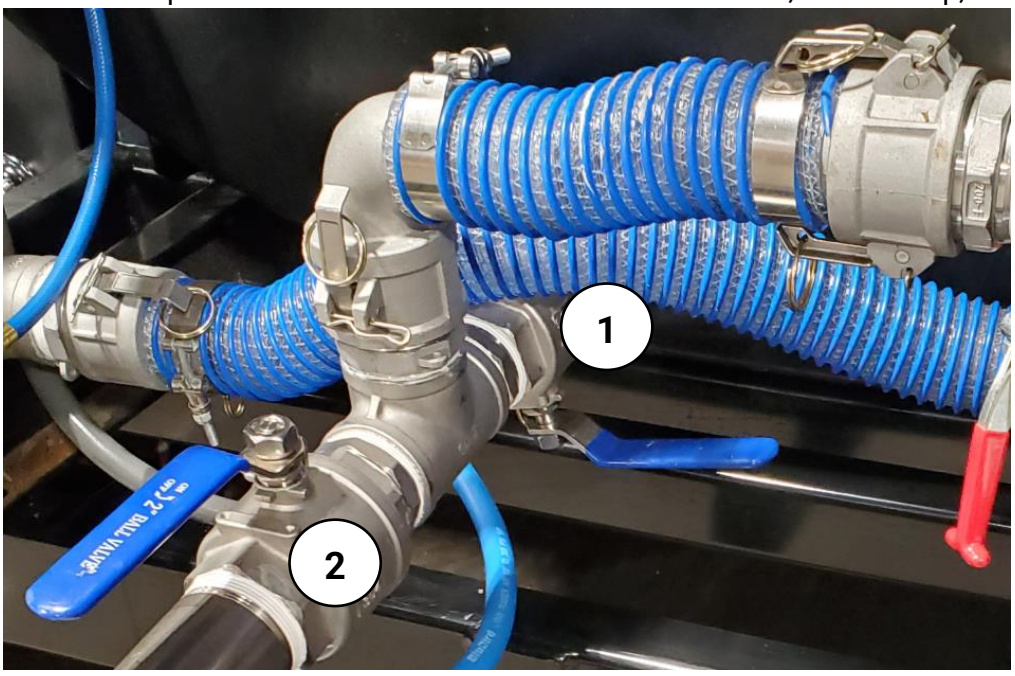


12.1.2 Secondary Input Source/ Transfer

This is primarily going to be for re-filling your main tank from a secondary source, such as a barrel or tote

However, this secondary source can also be used for general spraying as well (spraying directly from a tote or barrel)

1. Close the valve at the bottom middle of the tank, valve handle on the bottom
2. Open the valve at the at the middle of the AirBoss, valve on top, closest to the rear of the unit

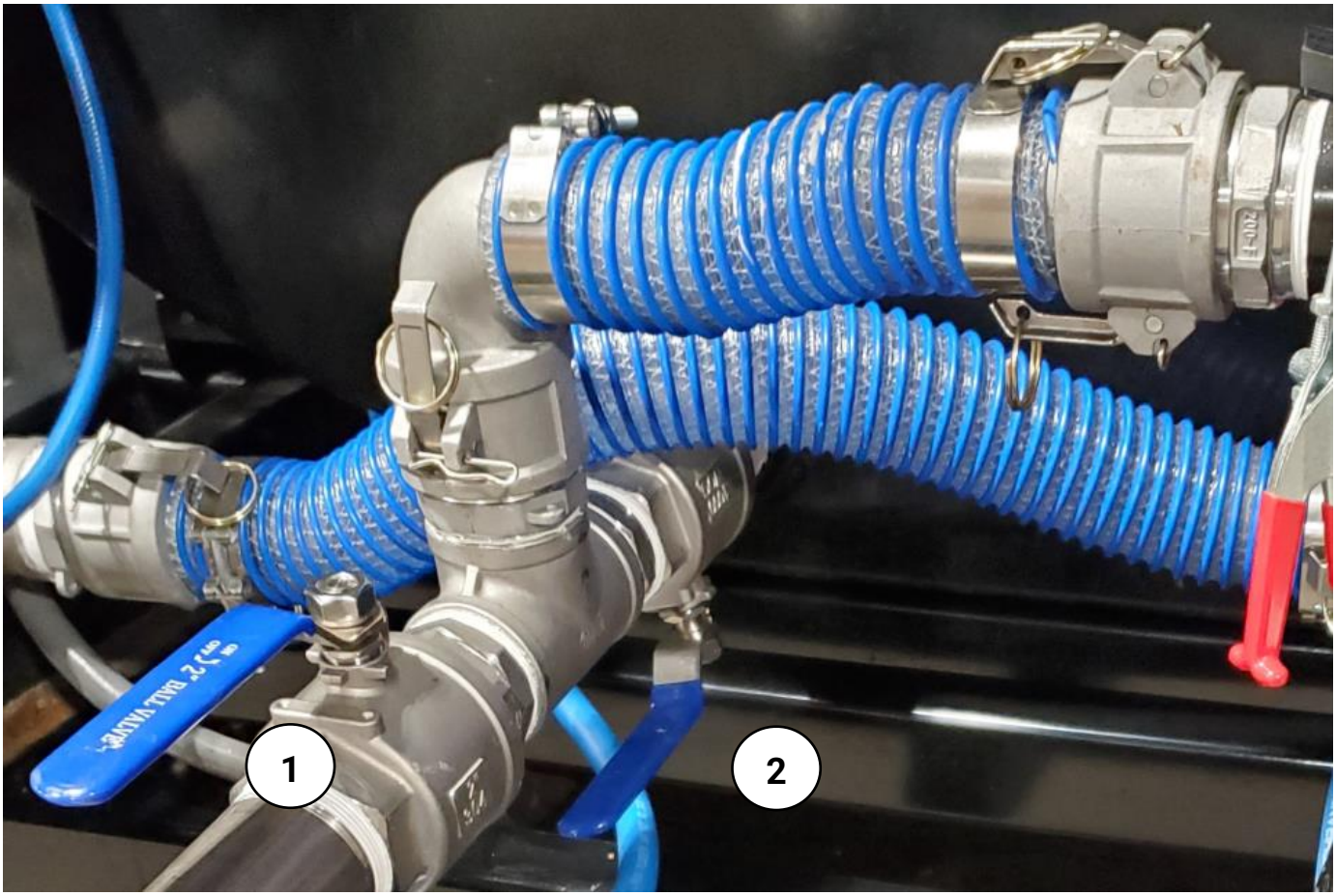


12.1.3 Manual Emptying of main tank

*controlled via both input valves

Opening BOTH input valves will allow you to drain the contents main tank out the back of the unit.

1) Open the valve at the at the middle of the AirBoss, valve on top, closest to the rear of the unit
2) Open the valve at the bottom middle of the tank, valve on the bottom



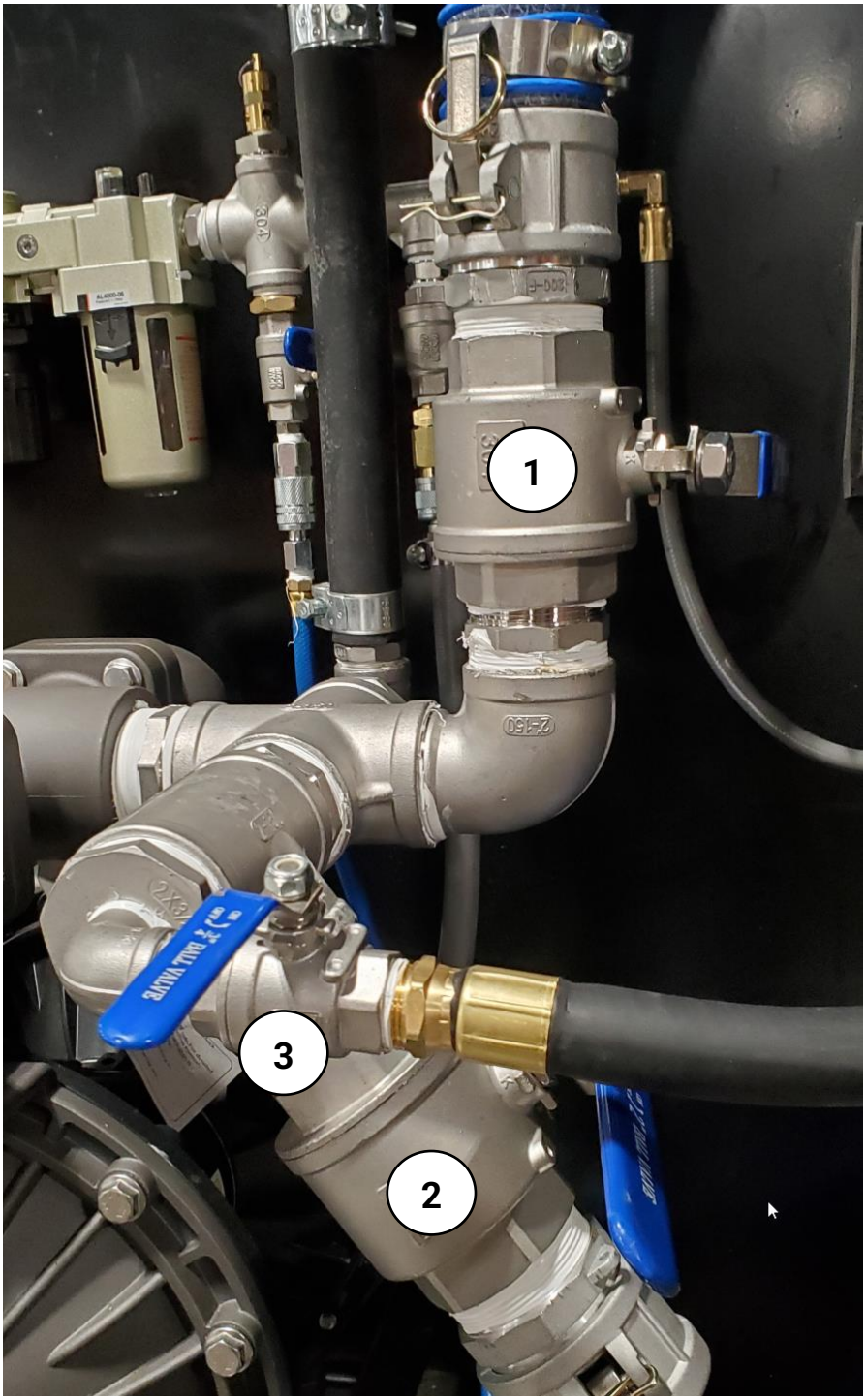
12.2 Output Modes

12.2.1 Traveling Mode

We recommend closing ALL valves before traveling.

All 3 output valves are closed

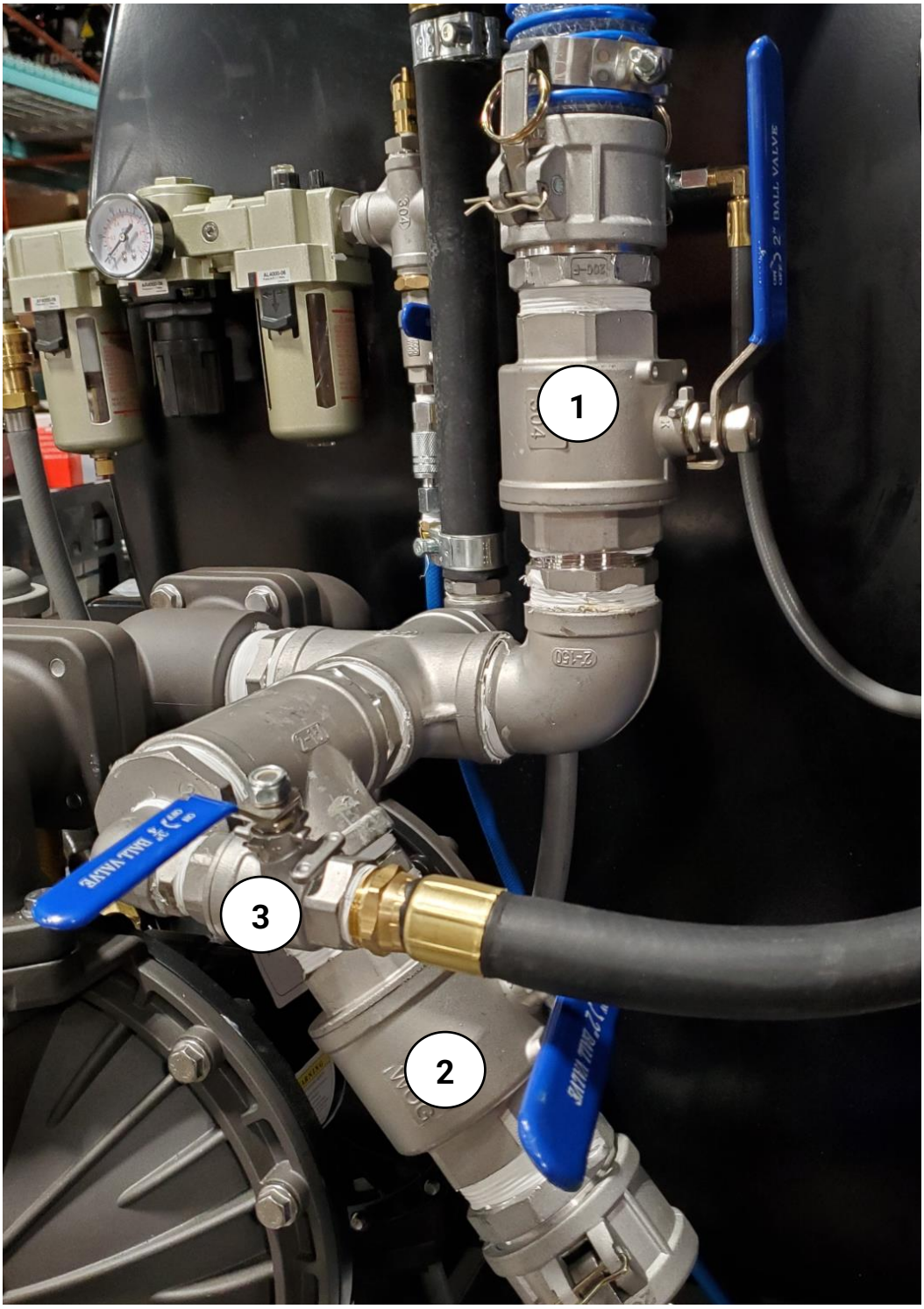
1. Recirculation valve closed
2. Secondary output valve closed
3. Spray output valve closed



12.2.2 Recirculation Mode

This will output back into the main tank to help mix your product before beginning work. Recirculating and activating the hydraulic agitation is the best way to mix your sealer and ensure uniform consistency.

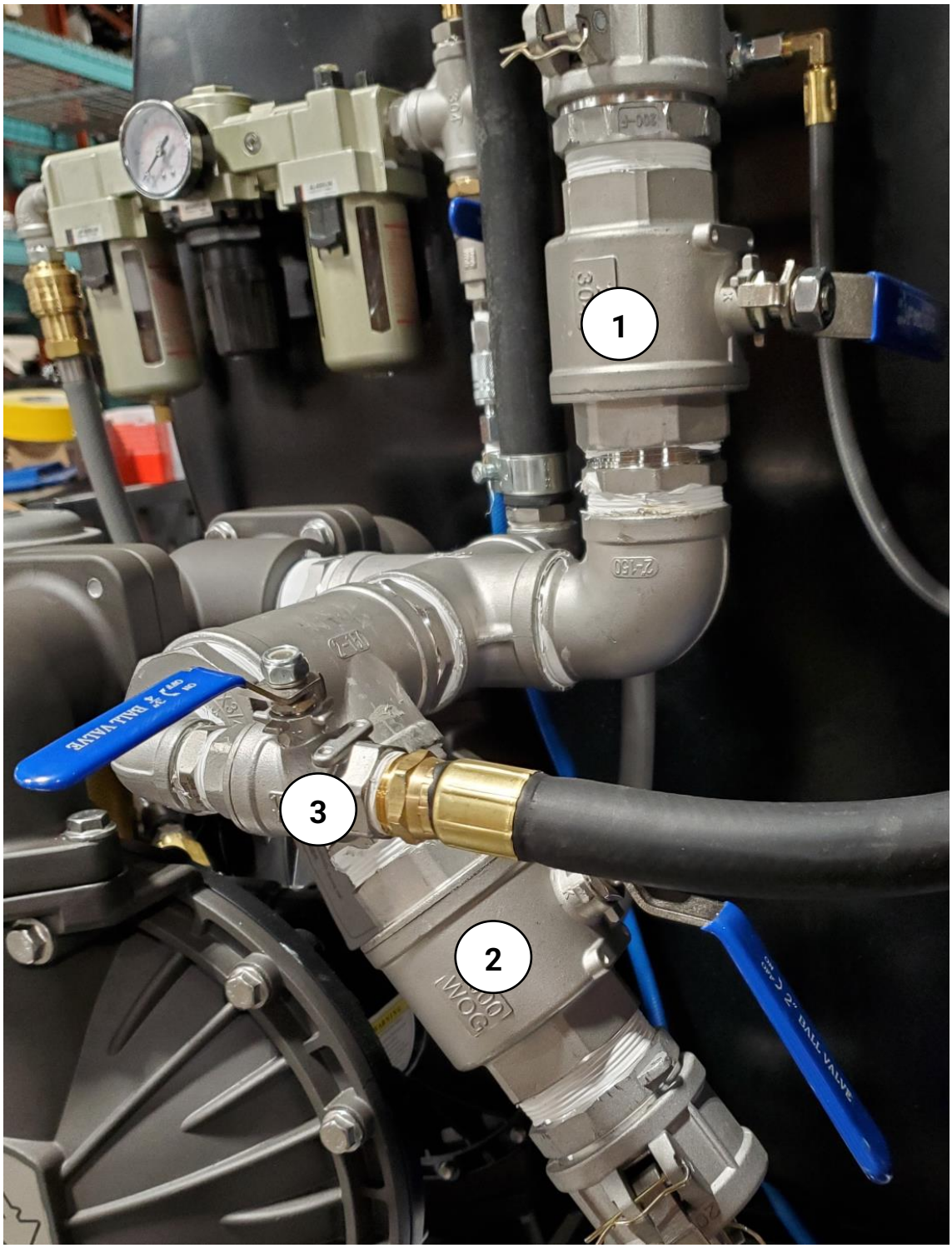
1. Open the recirculation output valve (with the blue hose running to the tank)
2. Close the secondary output valve (Pointing downwards at 5 o'clock with a metal cam lock cap)
3. Close the spray output valve (smaller valve leading to the hose reel)



12.2.3 Secondary Output

This mode will allow you to use your AirBoss to fill 3rd party containers such as barrels, totes, tanks, or other AirBoss. This is the fastest way to transfer the contents of your tank elsewhere.

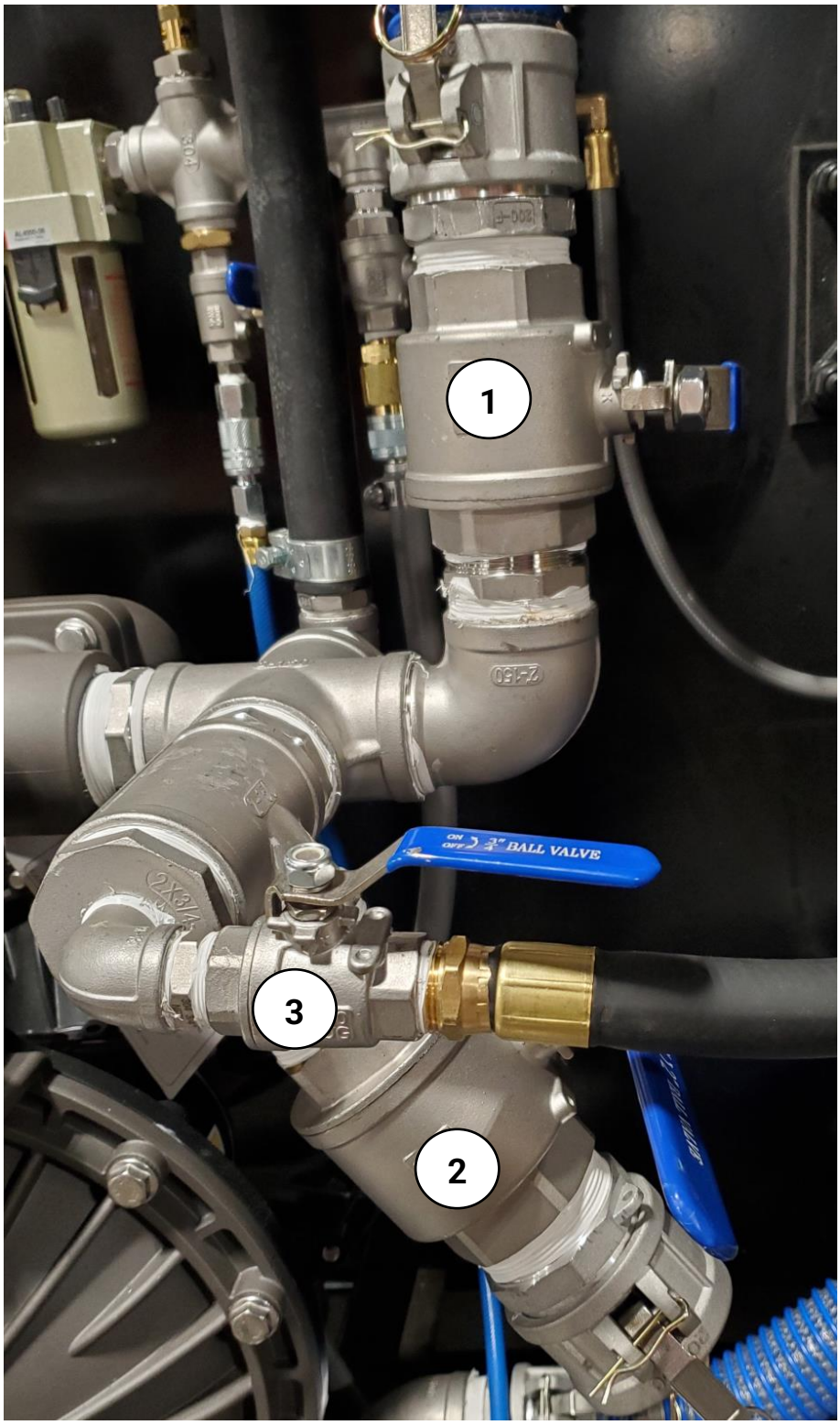
1. Close the recirculation output valve (with the blue hose running to the tank)
2. Open the secondary output valve (Pointing downwards at 5 o'clock with a metal cam lock cap)
3. Close the spray output valve (smaller valve leading to the hose reel)



12.2.4 Spray Mode

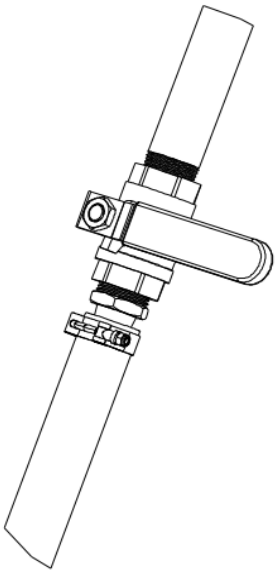
This is how you will be operating your system most of the time. Spraying through your spray wand.

1. Close the recirculation output valve (with the blue hose running to the tank)
2. Close the secondary output valve (Pointing downwards at 5 o'clock with a metal cam lock cap)
3. Open the spray output valve (smaller valve leading to the hose reel

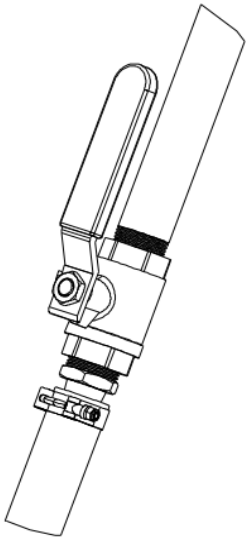


12.3 Spray Wand Operation

The spray wand included with this system has a ball valve handle to accurately control the flow of sealer. Please refer to the following diagram for the valve positions.



Spray wand valve closed



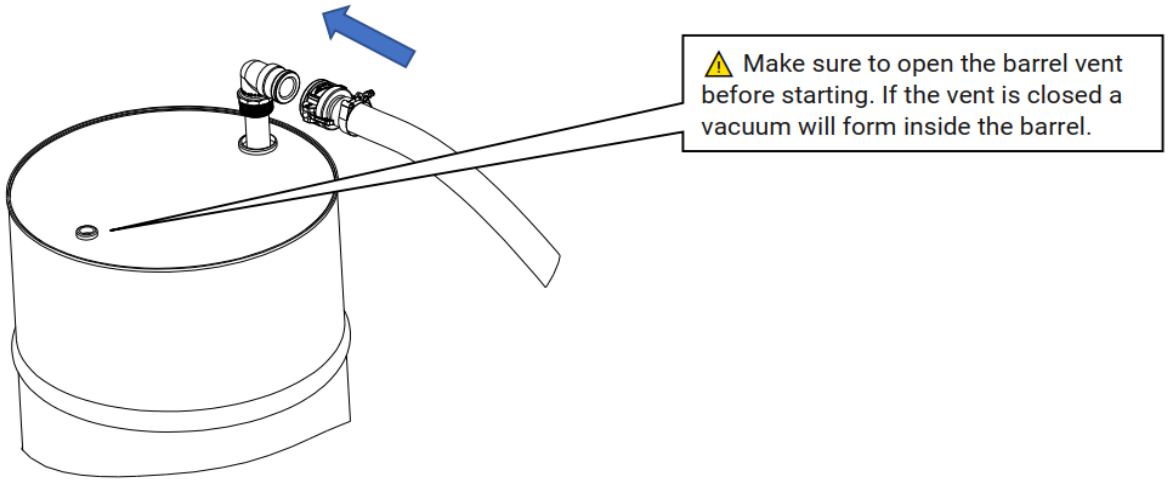
Spray wand valve open

13 Transferring

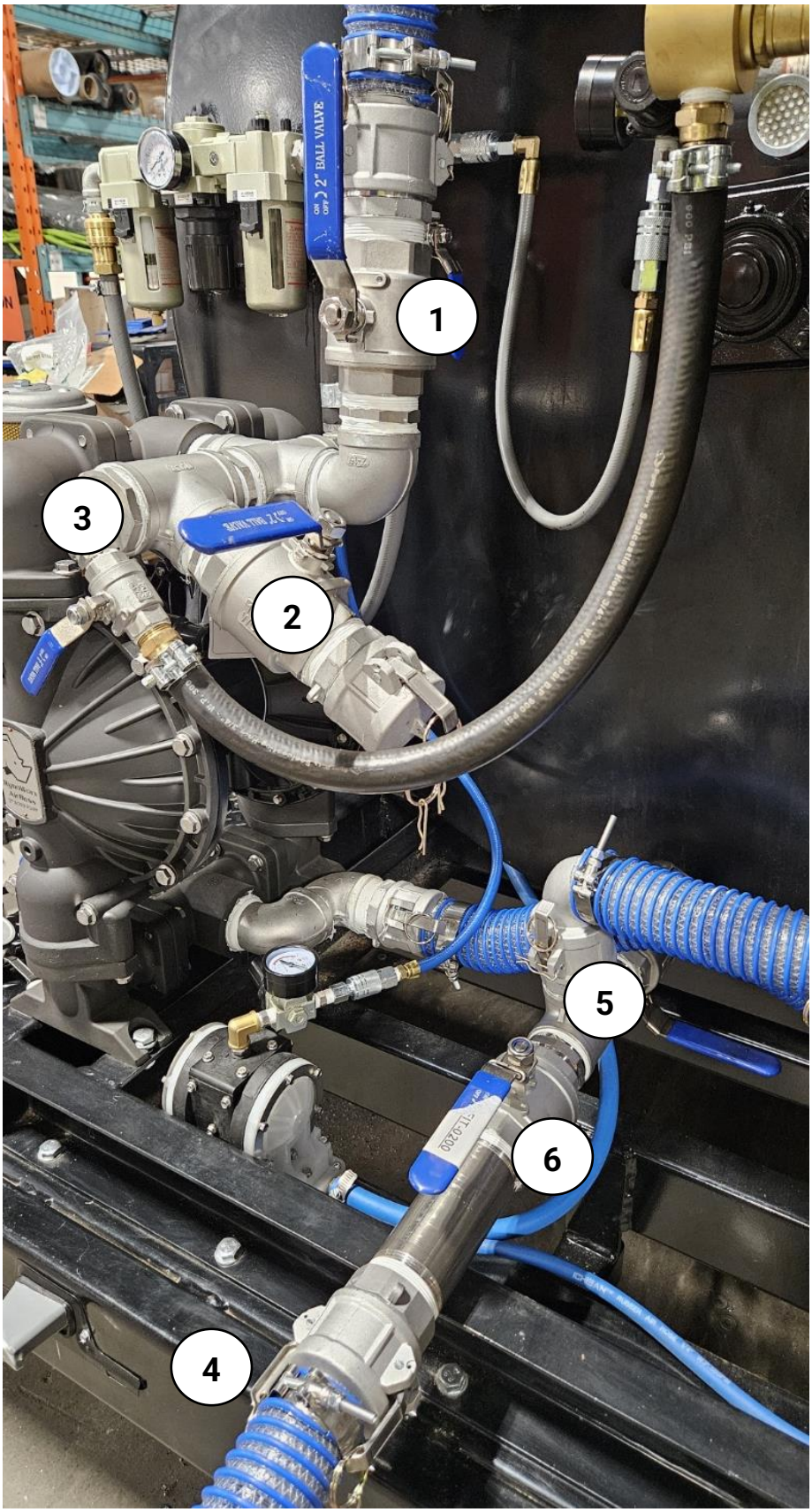
13.1 Sealer from a Drum
(Transfer kit sold separately)

Mix the sealer with a drum mixer for several minutes before transferring

1. Insert the transfer tube into the barrel's 2" NPT opening
2. Open any vents in the barrel
3. Connect the female cam lock on the 15' transfer hose to the transfer tube.

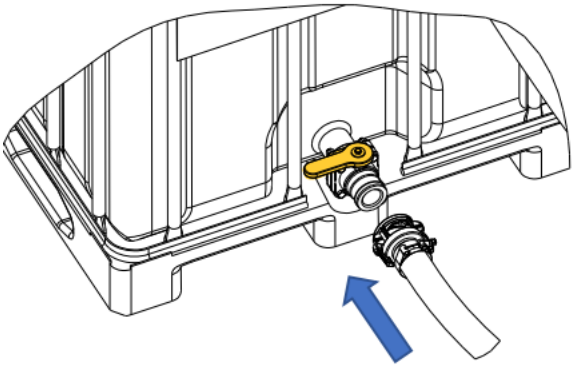


4. Set up the valves on the unit to prepare for transfer.
    1. Open the recirculation output valve (with the blue hose running to the tank)
    2. Close the secondary output valve (Pointing downwards at 5 o'clock with a metal cam lock cap)
    3. Close the spray output valve (smaller valve leading to the hose reel)
    4. Remove the cap at the end of the secondary input pipe & connect the transfer hose
    5. Close the valve at the bottom middle of the tank, valve on the bottom
    6. Open the valve at the at the middle of the AirBoss, valve on top, closest to the rear of the unit

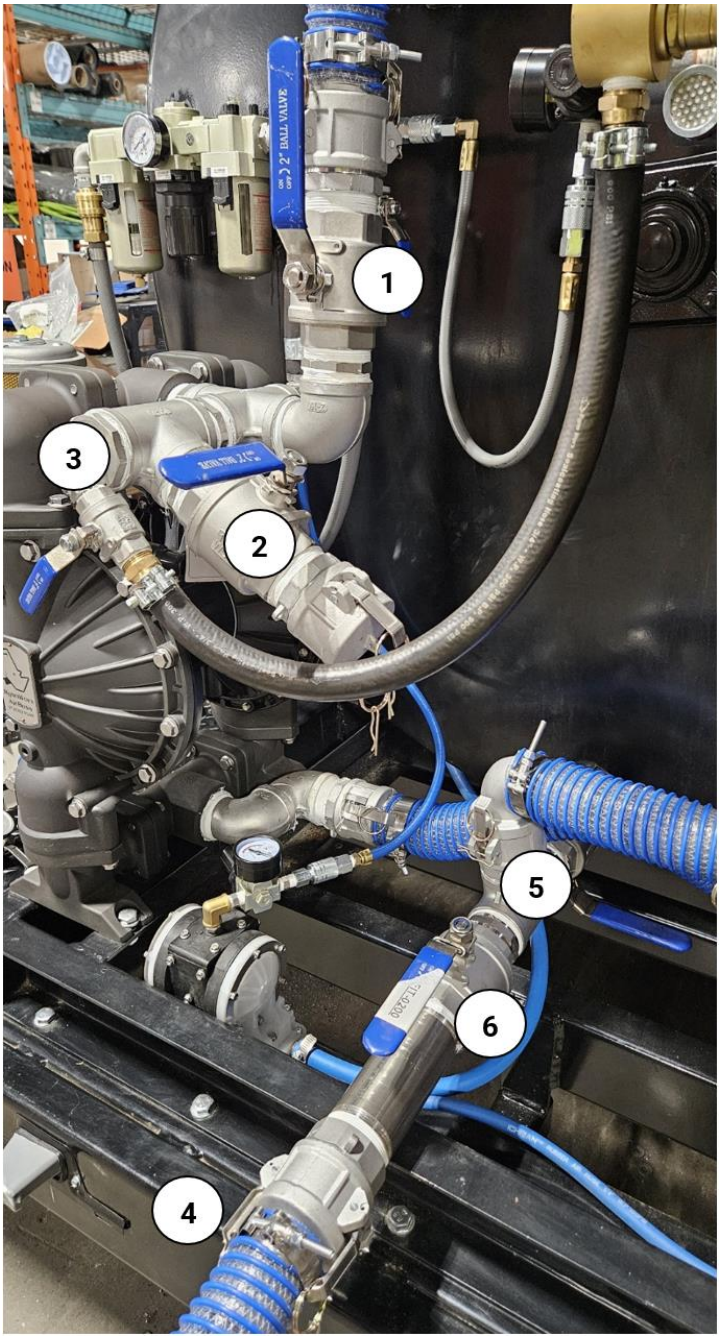


13.2 Transferring Sealer from a Tote
(Transfer kit sold separately)

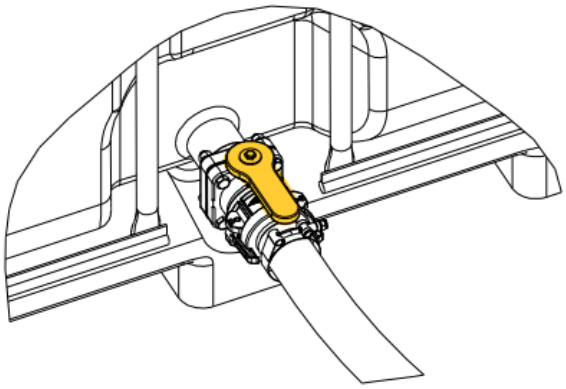
1. Mix the sealer with a drum mixer for several minutes before transferring
2. Connect the 2” female cam lock on the 15’ transfer hose to outlet port on the tote.



3. Set up the valves on the unit to prepare for transfer (RIGHT→)
    1. Open the recirculation output valve (with the blue hose running to the tank)
    2. Close the secondary output valve (Pointing downwards at 5 o’clock with a metal cam lock cap)
    3. Close the spray output valve (smaller valve leading to the hose reel)
    4. Remove the cap at the end of the secondary input pipe & connect the transfer hose
    5. Close the valve at the bottom middle of the tank, valve on the bottom
    6. Open the valve at the at the middle of the AirBoss, valve on top, closest to the rear of the unit



4. Open the valve at the tote outlet.



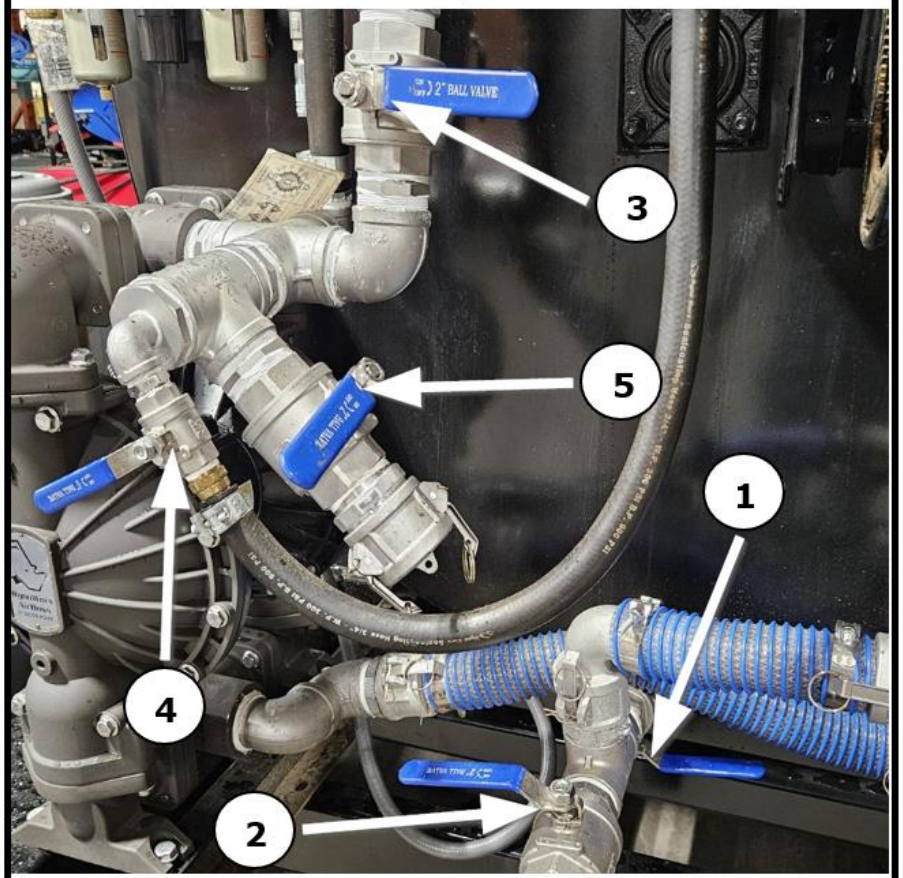
5. Loosen the lid on the top of the tote

AIRBOSS QUICK-START GUIDE

RynoWorx HOW-TO Videos

RynoWorx Support

Input Valves	Output Valves
1. Primary Valve (Tank)	3. Recirculation Valve (Mixing)
2. Secondary Valve (Barrel or Tote)	4. Spray Valve (Spraying)
	5. Secondary Output



Pre Check - Check the following fluid levels:

- Engine fuel
- Compressor oil level within red dot on sight glass
- Engine oil at "full" line of the dipstick.
- FRL oil full
- FRL water separator emptied
- Hydraulic Oil Levels
-

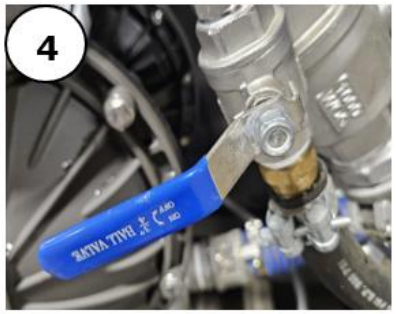
LOADING FROM BARREL OR TOTE:

Primary Input Closed

Secondary Input Open

Recirculate Output Open

Spray Output Closed



FAQ:

My AirBoss keeps kicking up and down even when it's not spraying. Shouldn't the pressure remain at 140?

- This is normal. Once your unit kicks down to idle, the compressor pump is still making pressure. That pressure is being released through the loader valve. While this is happening, some of the pressure from your tank is also being released.

I can't seem to build up to full pressure.

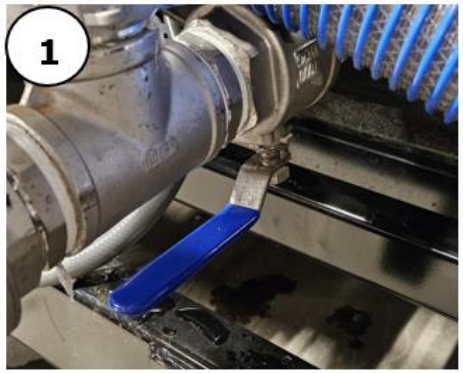
- This can happen if you are operating the pump without fluid. The most likely cause is that the main input valve is closed. Opening the valve should get your AirBoss running normally.
- This can also happen if your sealer is too thick. See next question for mixing and ratios.

I keep getting clogs in my spray tips or incomplete fan patterns when spraying.

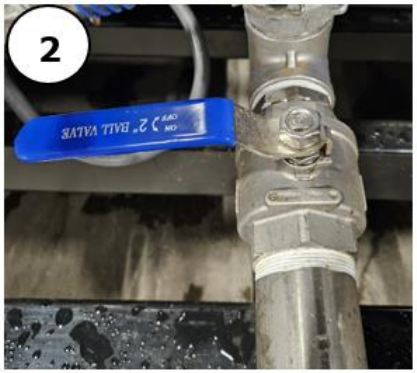
- Mix your sealer more before spraying. Put your unit into recirculation mode for 10-15 minutes.
- This may also be caused by excessively thick sealer. Your sealer should be the consistency of tomato soup. If it is any thicker than that, try adding 5 gallons of water to the top of the tank and recirculate for 5-10 minutes. Repeat until the appropriate consistency is achieved. Consider swapping to the smaller of the two filter baskets.

RECIRCULATING:

Primary Input Open



Secondary Input Closed

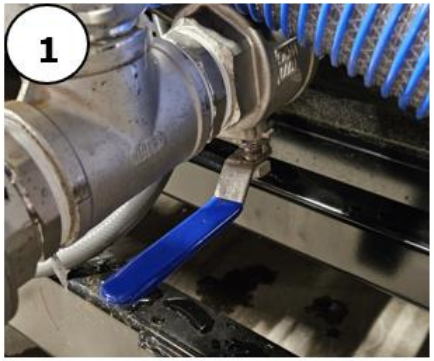


Recirculate Output Open

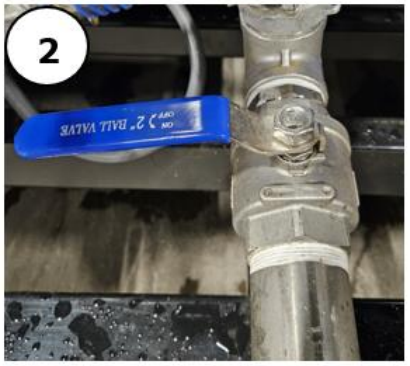
Spray Output Closed

SPRAYING:

Primary Input Open

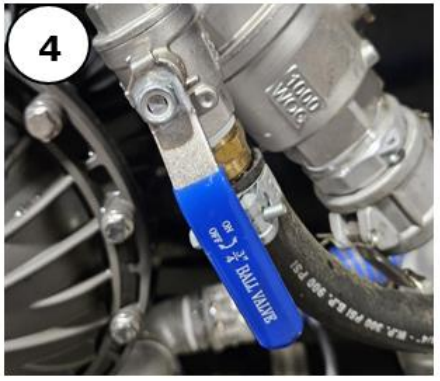


Secondary Input Closed

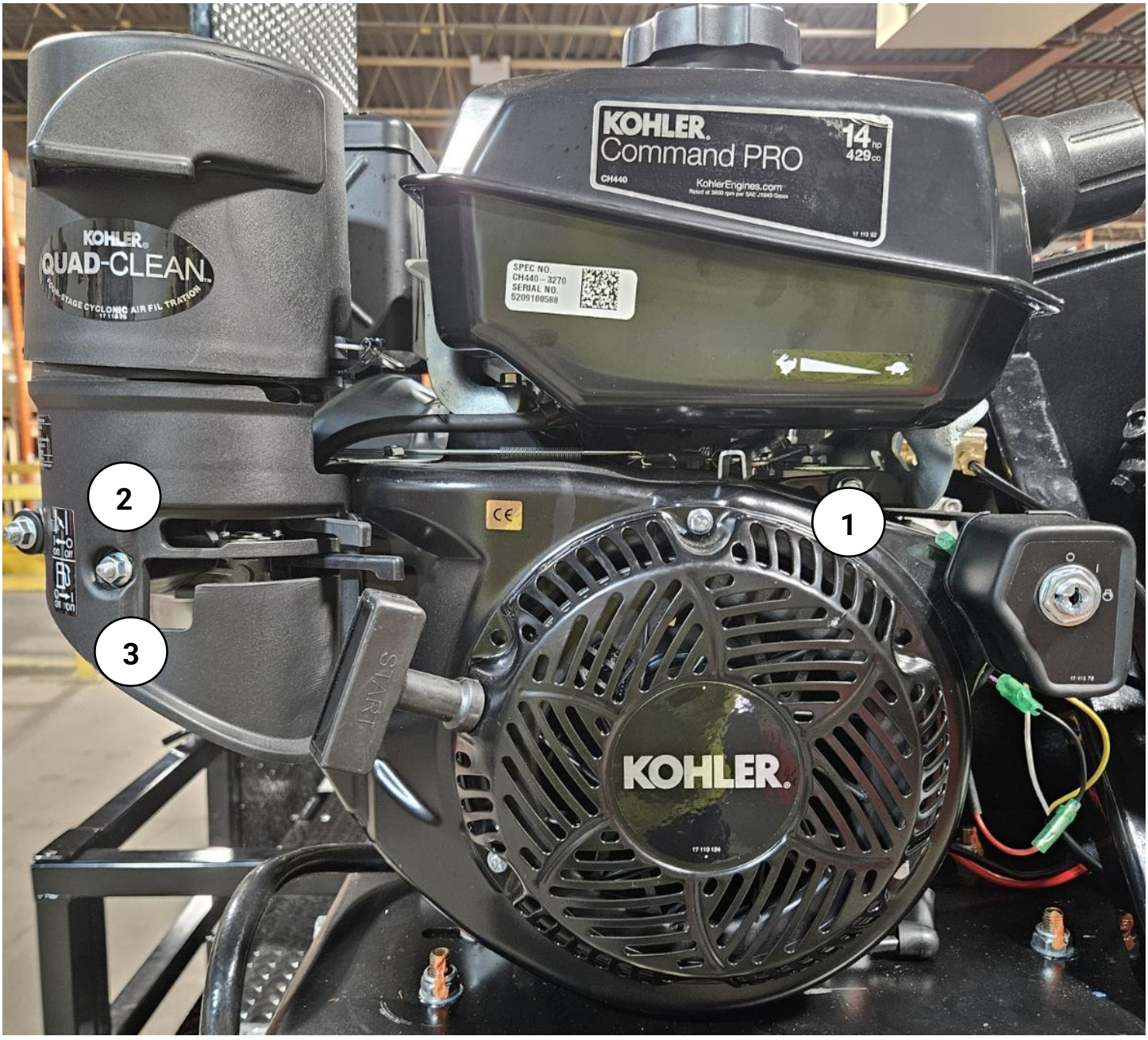


Recirculate Output Closed

Spray Output Open



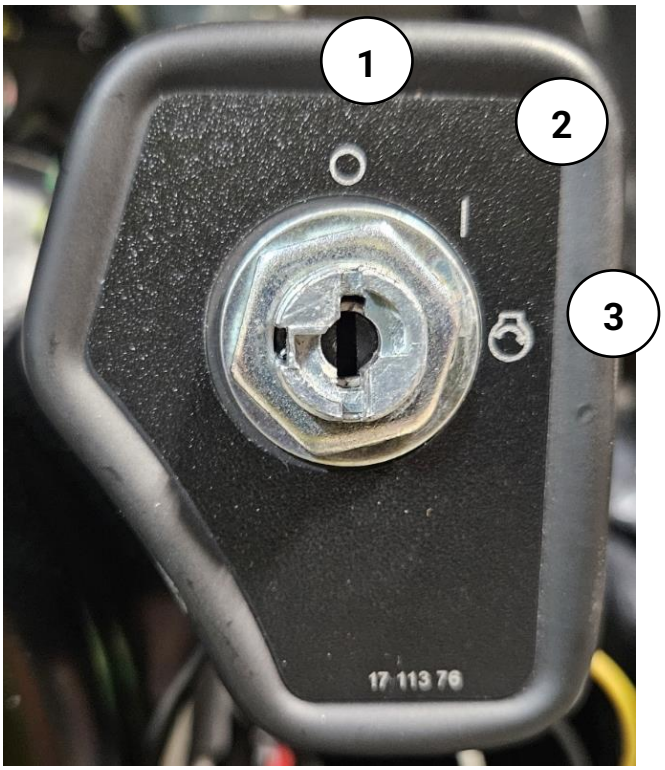
Kohler – CH440



1. **Engine RPM (automatically controlled)**
2. **Choke ← ON → OFF**
3. **Fuel → ON ← OFF**

CH440 Starting:

****MAKE SURE YOUR HYDRAULIC LINES ARE CONNECTED****
Failure to connect hydraulic lines will burn out the starter



1. **OFF / KILL**
2. **RUN**
3. **START**

1. Turn the fuel shut-off valve to ON position
2. Turn the engine on/off switch to ON position
3. Start the engine as follows:
   Cold engine:
   a. Place the choke control into the ON position
   Warm engine:
   a. Return the choke to OFF position as soon as the engine starts
   b. A warm engine usually does not require the choke on
4. Insert the key into the ignition
5. Turn the key to position 3 (start) and hold it there until the engine start
6. Once the engine engages, release the key, and it will automatically fall back to position 2 (run)
7. In the event that the engine starter does not work, you can start the engine using the manual pull chord.
   ***NOTE* - we recommend that you flip the silver lever on the kick down all the way to up make manual starting easier. Return the silver lever on the kick down back to it's original position once started or the kick down will not work correctly**

   a. Turn the key to position 2 (run)
   b. Slowly pull the starter handle until just past compression-STOP!
   c. Return the starter handle
   d. Firmly pull straight out to avoid excessive rope wear from the starter rope guide
   e. Repeat until the engine starts
8. Gradually return the choke control to OFF position after the engine starts and warms up. Engine/equipment may be operated during warm up period, but it may be necessary to leave the choke partially on until the engine warms up
9. Turn the key to position 1 (OFF) to turn off the engine.

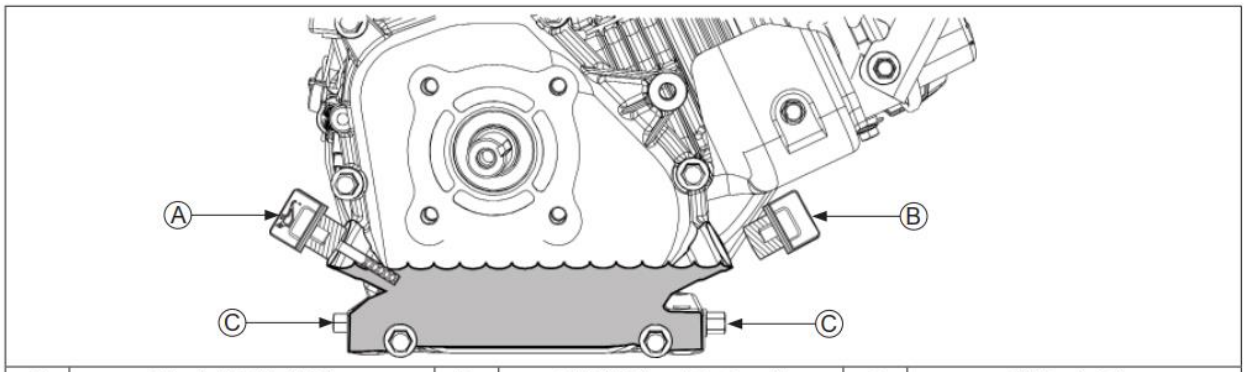
16 MAINTENANCE

Table A: Maintenance Schedule

Maintenance Procedure	Before Each Use	After Each Use	End of Day	Every 50 Hours	Every 100 Hours	Every 200 hours	Every 500 hours	Every 1000 hrs
Check Engine Oil Level	X							
Check Compressor Oil Level	X							
Check Hydraulic Oil Level	X							
Check FRL Oil level	X							
Check Fuel Level	X							
Close compressor tank drain valves (both)	X							
Check all connections for hoses, spray wands, belts, and transfer kits.	X							
Check sealer consistency, add water to compensate for evaporation.	X							
Use agitation cycle to circulate sealer for 2-3 minutes.	X							
Open / Close muffler drain valve	X	X	X					
Drain the reservoir on the inline water filter or FRL	X	X	X					
Clean spray tips		X	X					
Open both compressor tank drain valves			X					
Flush lines with water			X					
Clean filter basket strainer			X					
Inspect / clean air filter				X				
Inspect and tighten any clamps, screws, set screws, or other fasteners				X				
Grease diaphragm pump pumping chamber components				X				
Check the battery on the engine hour meter					X			
Inspect / replace air filter					X			
Change engine oil (conventional oil)					X			
Inspect agitation system: external gaskets and internal paddle mechanism including replaceable paddle gaskets, set screws, ensure gears are not moving, use thread locker on screws as needed					X			
Oil the agitation chain					X			
Inspect and tighten any clamps, screws, or other fasteners					X			
Change compressor oil					X			
Change Engine oil (Full synthetic oil only)					X			
Change Quad-Clean ™ air filter *						X		
Replace spark plug							X	
Change Hydraulic Fluid every 1000 hrs or every 2 years, whichever comes first *								X

16.1 Changing Engine Oil

Place the engine on a level surface and place a suitable container under the drain plug bolt



A	Dipstick/Oil Fill Plug	**B**	Oil Fill Plug (Optional)	**C**	Oil Drain Plug

1. Remove the oil filler cap
2. Remove the drain plug bolt and drain plug washer
3. Drain the oil into a suitable container

   Please dispose of used oil in a manner that is compatible with the environment. We suggest you take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground, or pour it down a drain.

4. Install the drain plug bolt with a new drain plug washer and tighten it to the specified torque
   a. Torque 18 N-m (13 ft. lb.)
5. Fill the crankcase with new oil, up to the point of overflowing filler neck, or to the FULL line on the dipstick
   Engine Oil Capacity:
   14HP CH440: 1.16qt / 1.1L
   Do not add commercial additives to the oil
   Do not mix gasoline into the oil

6. After adding the oil, check the oil level on the dip stick.
7. Install and tighten the oil filler cap securely
8. Make sure there are no oil leaks

16.2 Spark Plug Specifications

Engine is equipped with following spark plugs:

Gap	0.76 mm (0.030 in.)
Thread Size	14 mm
Reach	19.1 mm (3/4 in.)
Hex Size	15.9 mm (5/8 in.)

17 End of season maintenance

17.1 Trailer *if equipped

17.1.1 60 Gallon (dual tanks)

1. Drain the water tanks by removing the drain plug

2. Run the water pump until no more fluid come out of the spray hose. There is no risk running the water pump dry.
3. Replace the drain plug

17.1.2 30 Gallon (single tank)

1. Drain the water tank by removing hose clamp and removing the water hose. You may need to angle the plastic 90^{o} connector downwards.

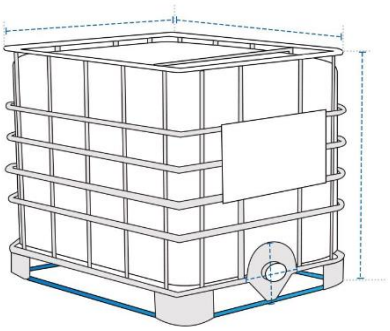
2. Run the water pump until no more fluid come out of the spray hose. There is no risk running the water pump dry.
3. Replace the hose and hose clamp

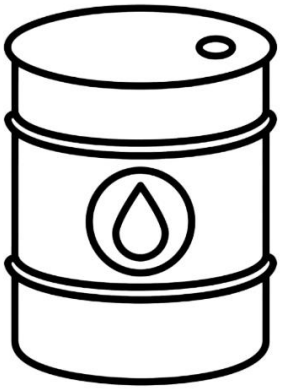
17.2 Spray Tank:

*See manual for valve configurations

1. Drain as much sealant from the tank into long term storage containers.
   This can be completed several ways (fastest to slowest):

- Using the secondary output and a transfer hose, pump the sealer into the container
- Open the main & secondary inputs, allow gravity to drain the sealer into the container
- Remove the spray tip from the spray wand, and spray directly into the storage container

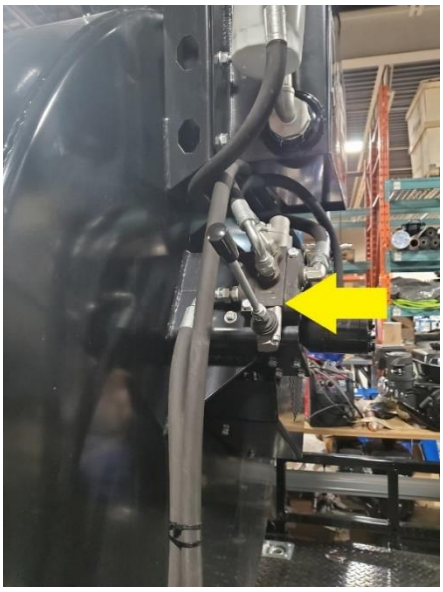




2. Once the sealer has been drained, close all the valves
3. Connect the drain hose to the filter pot

4. Open the filter pot drain valve and allow the sealer in the filter pot to empty
5. Close the filter pot drain
6. Disconnect and clean out the drain hose
7. Add roughly 50 gallons of water to your empty tank.

8. Initiate the hydraulic agitation system to rotate the mixing paddles forward and backward for several minutes to remove as much built-up material as possible from the side walls of the tank.

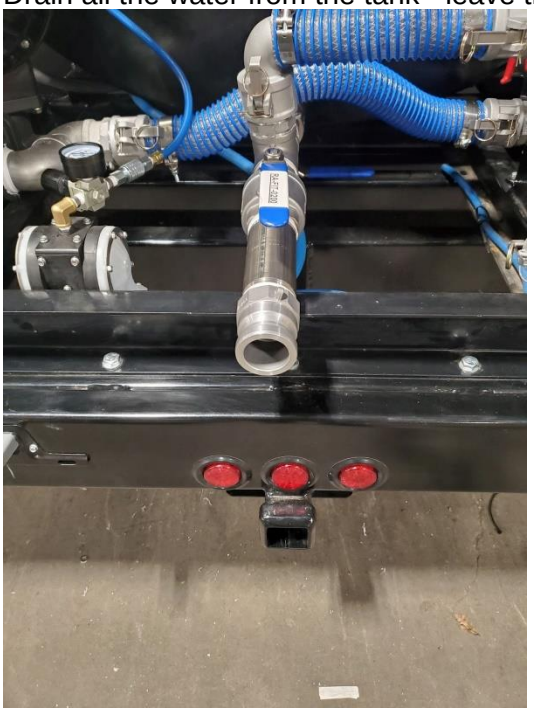


9. Recirculate for about 10 minutes.

10. Flush any sealer out of the spray hose by switching to spray mode and spraying into the storage container until you see water coming out of the spray wand.

11. Aim the spray wand into the top of the main tank and spray for roughly 10 minutes.

12. Drain all the water from the tank - leave these 2 valves open for now



13. Drain the water from the filter pot by opening the filter pot drain valve
14. Remove and clean the filter basket
15. Replace the filter basket
16. Close the filter pot drain valve
17. Stop the engine.
18. Power wash both the inside and outside of the bulk tank.
19. Submerge spray tip(s) in soapy water for several minutes.

20. Clean the tips and quick connect fitting with a NYLON bristle brush (not brass or any other metal brush).

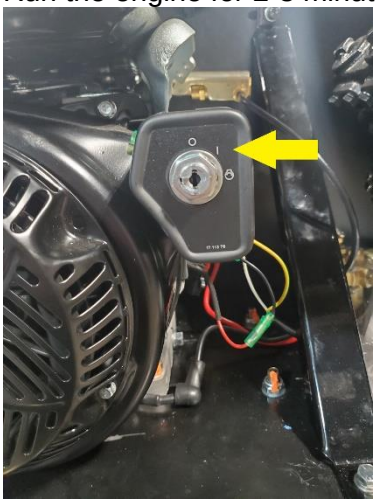
21. Close both the primary and secondary input valves
22. Pour 5-10 gallons of washer fluid into the tank

23. Run the system in spray mode to flush the water out of the spray hose. Once you see washer fluid coming out of the spray tip, point the spray wand back into the main tank for 1 minute.
24. Run the system in recirculate mode for 1 minute
25. Perform an oil change.

17.3 Kohler Engine:

1. Add fuel stabilizer to the gas tank.

1. Run the engine for 2-3 minutes to circulate the stabilizer.



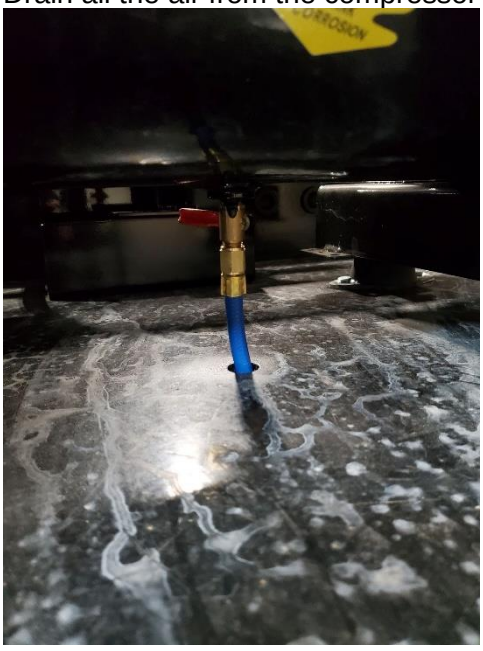
2. Remove the air filter cover.

3. Spray engine fogger into the air intake until you see heavy smoke. While continuing to spray, turn off the engine. Stop spraying once the engine has completely stopped

4. Clean the air filter
5. Re-install the air filter.

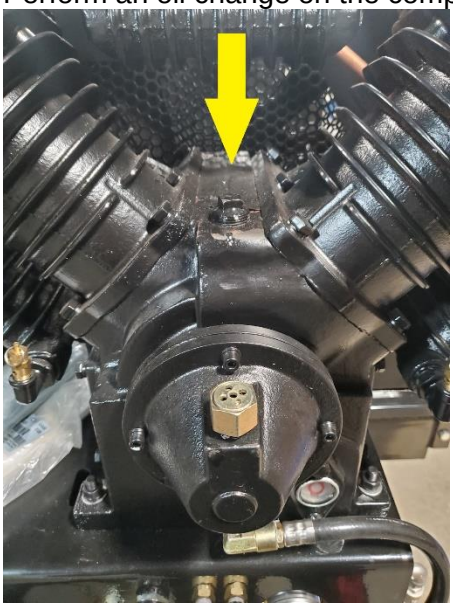
17.4 Compressor:

1. Drain all the air from the compressor unit.

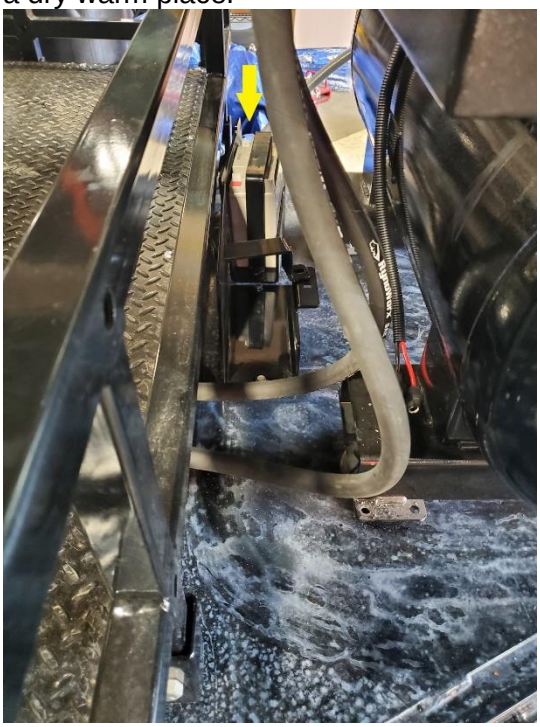


2. Close the vale once the air is expelled

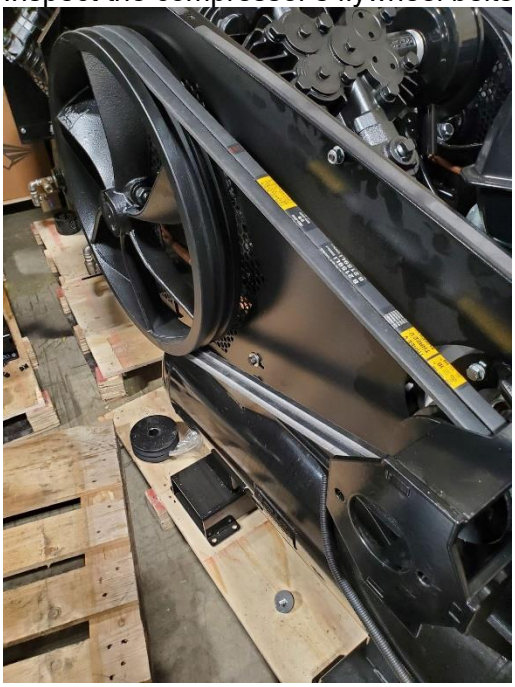
3. Perform an oil change on the compressor pump.



5. Detach the battery wires from the compressor’s battery pack and remove it from the system, store it in a dry warm place.

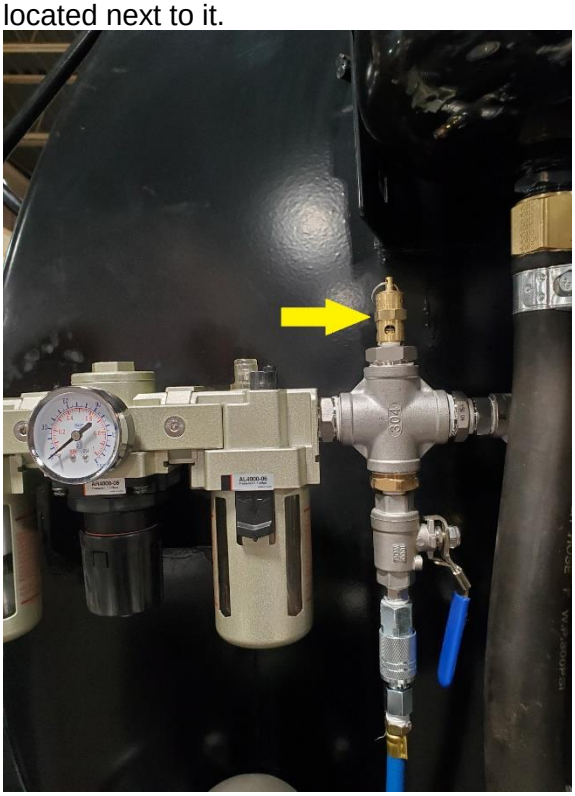


6. Inspect the compressor’s flywheel belts for any wear and tear.

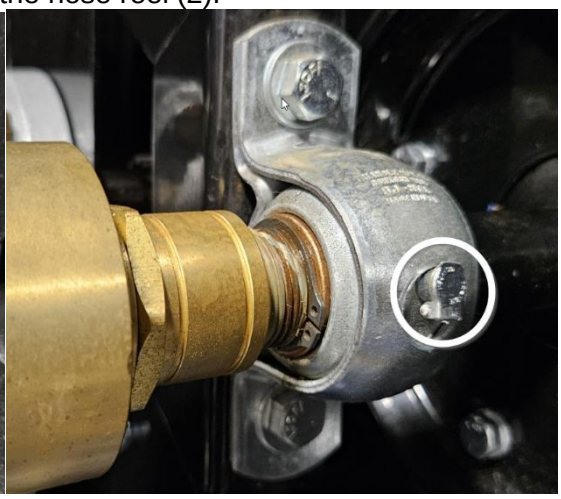


8. Drain the collected water from the moisture separator.

9. Release any pressure from the moisture separator by pulling the emergency pressure release valve located next to it.



11. Lubricate the chain
12. Lubricate the bearings on the tank (2) and the hose reel (2).

13. If possible, store equipment and sealing materials out of weather in a shed or garage.
    If this is not possible, cover it with a tarp and store it somewhere safe from external damage such as falling trees.

You have completed winterizing your AirBoss equipment and can safely put it away for the season with confidence that next season you will be able to get back to work with a clean and ready AirBoss unit ready to seal.

18 Troubleshooting:

My engine stalls when I slide the choke to off:

- The engine is cold, leave the choke on full for a minute or two, then slowly slide it to the off position Switching the choke suddenly may stall the engine

My engine stalls randomly, but then works again after a few minutes:

- Check the engine oil – your engine oil has a low oil sensor that turns off your engine automatically. If the oil is low, it can falsely trigger this while it's running
- Try loosening the gas cap – some gas caps have charcoal in them, if they get wet/saturated it can cause a vapour lock in your gas tank
- Reseat the spark plug cable
- Clean the air filter
- See the next point

My engine stalls when trying to kick back up to full speed from idle:

- This is most likely caused by the low idle speed being too low. When the engine tries to kick back up, a flood of fuel comes into the engine, and if the RPM is too low, it will flood the engine and induce a stall
- Try adjusting the low idle screw on the side of the carburetor, ¼ turn clockwise and see if the idle speed rises slightly Test the engine for improvement and Repeat ¼ turns until the idle rpm rises slightly
- The kickdown may need to be adjusted

My engine keeps changing from high speed to low speed on its own:

- This is normal. The engine speed is controlled by a "Throttle Kickdown" attached to the compressor. It will kick down to an idle speed when max pressure is hit, and kick up to full speed once the regulator pressure has been reached

My compressor keeps cycling from high to low, even when I'm not spraying:

- This is normal. Once your unit kicks down to idle, the compressor pump is still making pressure. That pressure is being released through the loader valve. While this is happening, some of the pressure from your tank is also being released

Showing 0 or low psi:

- Adjust the regulator to the desired pressure (90 PSI)

Burning rubber smell:

- Check the belt that connects the engine to the compressor pump
- Make sure there is no hoses or plastics sitting on the engine exhaust

Compressor oil is black:

- It is normal for oil to turn dark after a few hours of use. Continue to change the oil at regular service intervals laid out in the operator's manual

Compressor oil is milky:

- Compressor oil can get milky if you are operating in areas of high humidity. The only solution is to increase the frequency of oil change maintenance
- It can also get milky if operated under extremely cold temperatures (below freezing)

The system will not build all the way to full pressure:

- Make sure the air line valve is closed on the diaphragm pump
- Turn off the engine, wait for the kickdown and listen for any air leaking noises
- With the unit running, put your hand under each intake on the compressor pump They should both be sucking air into the pump. If one is not sucking, or if it is blowing, there may be a problem with your compressor pump
- Make sure your drain valves under the tanks are closed
- Check that the expansion tank is at 50 psi

Engine runs roughly:

- Ensure the choke is all the way off after warming up the engine
- Ensure your gas is fresh and has no additives
- Clean the air filter in the carburetor
- Reseat the spark plug cable
- Ensure spark plug is tight into the engine block
- Make sure the spark plug does not have oil residue on the probe
- double check spark plug gap
- increase min RPM

Spraying:

Many of the steps outlined in this document refer back to the quick start guide. The reason for this is that it is designed to highlight all of the possible troubleshooting points in trying to get your AirBoss up and running. Being able to spray requires all of the steps from the quick start to be confirmed as working.

- Make sure the filter basket is not clogged
- Make sure there is fluid in the filter pot, fill the filter pot with as much water as it will hold ~5 gallons
- Ensure the primary input valve is open, and the secondary input valve is closed
- Ensure the spray output valve is open, and the recirculation output valve is closed
- Ensure the spray wand valve is open
- Turn the paddle mixer a few times to loosen up any aggregate that may have settled to the bottom of the main tank
- close and re-open the diaphragm pump airline valve
- Ensure the air valve on the front of the diaphragm pump is open
- Check for blockages in the tank or any of the connections
- Use the tote mixer, to stir the sealant in the tank If mixing alone does not help, add a few gallons of water while mixing to thin out the material
- Consider using a larger spray tip
- Adjust regulator pressure – this is set to 90 psi factory setting
- Use a large poker to break away any blockages in the system

Recirculating:

Recirculating is the best way to keep your sealant mixed and prevent settling of aggregate. Many of the steps outlined in this document refer back to the quick start guide. The reason for this is that it is designed to highlight all of the possible failure points in trying to get your AirBoss up and running. Being able to recirculate requires all of the steps from the quick start to be confirmed as working.

- Make sure the filter basket is not clogged
- Make sure there is fluid in the filter pot, fill the filter pot with as much water as it will hold ~5 gallons
- Ensure the primary input valve is open, and the secondary input valve is closed
- Ensure the recirculation output valve is open, and the spray output valve is closed
- Turn the paddle mixer a few times to loosen up any aggregate that may have settled to the bottom of the main tank
- close and re-open the diaphragm pump airline valve
- Ensure the air valve on the front of your diaphragm pump is open
- Use the tote mixer, to stir the sealant in the tank
- If mixing alone does not help, add a few gallons of water while mixing
- Adjust regulator pressure – this is set to 90 psi from factory setting
- If there are engine starting/stalling/kickdown problems, see the Engine/Compressor section

Loading:

There are several things to consider when loading

- The height difference between the source container and the AirBoss
- The viscosity (thickness) of the sealant should be a tomato soup consistency
- The valve configurations on the AirBoss, make sure you have the correct valves opened and closed (see operators manual)
- Is the AirBoss operating as it should be? Test with water if you're unsure
- You must mix/stir your sealant until it is a uniform consistency before loading, spraying, and recirculating problems can be traced back to poor pre-mixing
- Check your manufacturer's suggested mix ratios for your product

19 FAQ:

My AirBoss keeps kicking up and down, even when not spraying shouldn't the pressure remain at 120 PSI ?

- This is normal. Once your unit kicks down to idle, the compressor pump is still making pressure. That pressure is being released through the loader valve While this is happening, some of the pressure from your tank is also being released

My AirBoss sometimes makes a "machine gun" noise while pumping

- This can happen when running water through your system. Your AirBoss is designed to run asphalt sealer through it, which is thicker than water Due to the slight manufacturing tolerances in the balls of your diaphragm pump, some may be slightly smaller than others, which can cause a slight vibration when running water through your system This noise should go away once you run sealant through your system

I can't seem to build up to full pressure

- This can happen if you are operating the pump without fluid. The most likely cause is that the main input valve is closed Opening the valve should get your AirBoss running normally
- This can also happen if your sealer is too thick – see the Manufacturer's mixing guide and ratios

I keep getting clogs in my spray tips, or incomplete fan patterns while spraying

- Mix your sealer more before spraying Put your unit into recirculation mode for 10-15 minutes
- This may also be caused by excessively thick sealers Your sealer should be the consistency of tomato soup. If it's any thicker than that, try adding 5 gallons of water to the top of the tank, and recirculate for 5-10 min, repeat until the appropriate constancy is achieved
- Consider swapping to the smaller of the two filter baskets

There is water / condensation in the glass tube on the diaphragm pump / FLR

- This is normal This is a water filter, designed to remove much of the water from entering into the pump mechanism Simply push the little button on the bottom to drain the liquid

Muffler is freezing over

- This can happen when the air temperature is low. The air coming out of the diaphragm pump is under a lot of pressure, and when it escapes, it also expands quickly and this can cause some freezing
- This can also happen when it's very hot

It's hard to rotate the paddle sweeper

- The paddles have rubber gaskets on them that slide against the tank Like a squeegee Once you rotate it will begin to get easier Rotate in one direction only. Changing direction forces the gaskets to bend in the opposite direction

It feels like there is an air leak at the front of the pump

- If the air leak coincides with the cycling of the diaphragm pump, it is most likely the exhaust air through the diffuser / muffler

My chain is loose

- Follow the instructional video on how to tighten the chain use QR code to reach the video

My chain sprocket seems to be coming off

- Tap the sprocket to relieve tension on the chain
- Tighten both set screws on the sprocket
- Consider using a blue thread locker on the set screws

My Airboss is pumping but no sealer comes out when I spray

- This would suggest that the sealer may be too thick to travel the length of the spray hose, thinning the material will allow the unit to spray
- Ensure the correct valves are open/closed
- Try removing the spray tip off of the wand
- See if recirculation works

I'm getting low pressure while I'm in spray mode

- Thin material to a better working consistency
- Check the regulator pressure
- Check for blockages in the wand or hose
- Check the filter put is clean and full
- Check all applicable valves are open

I'm getting sputtering material when I'm spraying

- Sealer is foamy or bubbly
- Blockage in the spray tip
- Diaphragm pump may only be pumping on one side
- Low fluid levels can cause sputtering - add a gallon of water

Compressor pump is not sucking any air

- The Reed valve is broken or out of place
- Cylinders are not firing properly

Compressor only seems to build up to 90 psi but never beyond that

- Adjust regulator
- Build pressure and turn off the unit to check for leaks
- Check compressor pump is sucking air
- Check braided line is intact
- Make sure release valves are all the way closed

Engine continually stalls

- Vapour lock due to carbon paper getting wet
- Carbs are loose
- Spark plug has oil on it
- Air filter needs to be cleaned
- Low fuel
- Low oil
- low engine rpm

There is a leak in my airline

- The airline will have to be replaced
- Check for leaks at the fittings on the pump and compressor

Oil leaking out of my compressor

- If the oil is overfilled it can get up inside the compressor heads and leak out from there
- Replace compressor
- Tighten drain plug

My filter pot is vacuumed shut

- Open the secondary output valve and gentle pry on the edge of the lid
- Close the main valve, open the secondary output valve, remove the cap on the tote transfer side and then open the valve to release the reverse pressure

How do I grease the pins in the diaphragm pump?

- Open top of the pump and grease the pins, follow the YouTube video

Should I charge my tanks up before spraying?

- Compressor tanks should be charged to 120 psi and the expansion tank should be at 50 psi

Contact Customer Support

- If you are unable to resolve the issue, contact support@rynoworxcom for assistance
- Provide them with details about the issue, your melter model, and the serial number of your melter