

AUTOBOX[®] (CB-ABX) USER MANUAL

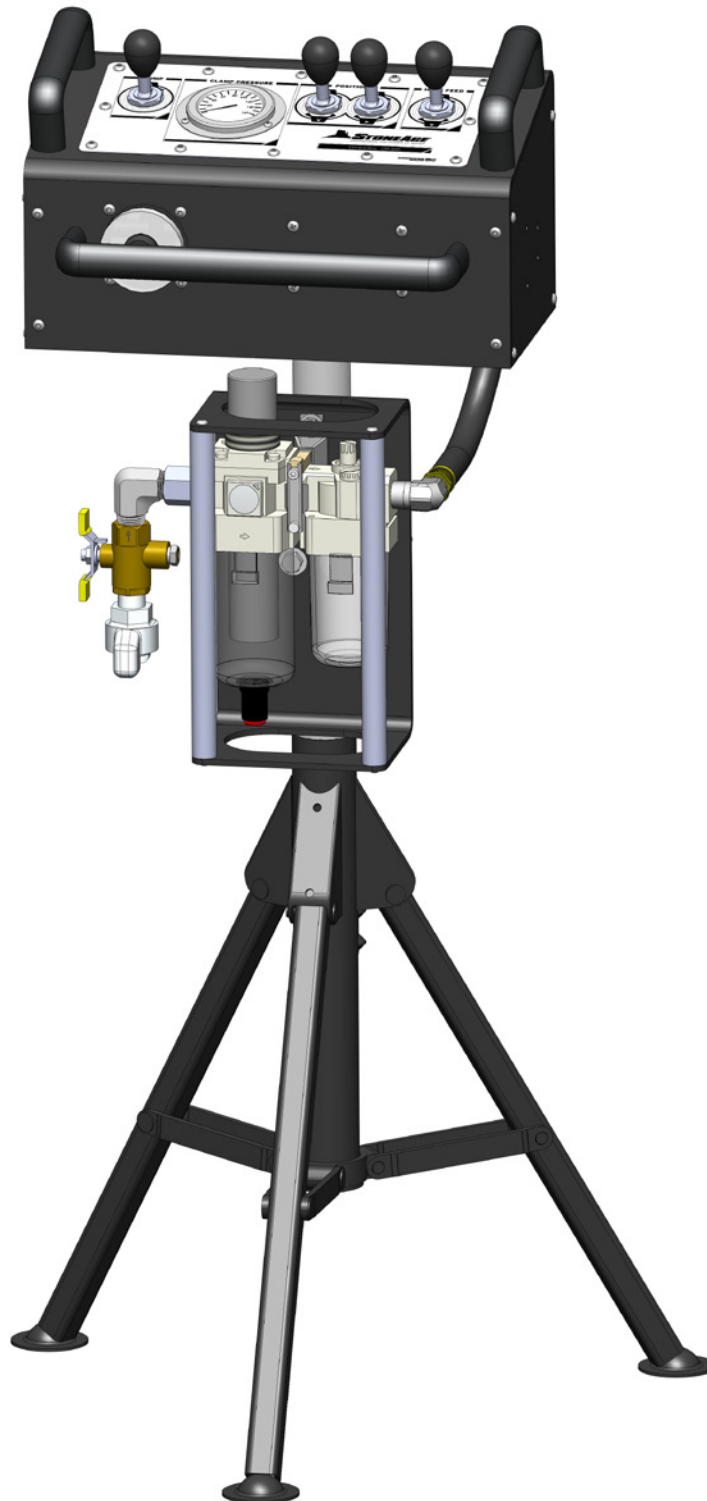


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MANUFACTURER'S INFORMATION

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Durango, CO 81303
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Toll Free: 866-795-1586
www.stoneagetools.com

Andrew Birt Consulting Ltd.
UK

This manual must be used in accordance with all applicable national laws. The manual shall be regarded as a part of the machine and shall be kept for reference until the final dismantling of the machine, as defined by applicable national law(s).

SPECIFICATIONS

Control Box Weight:	43 lbs (19.5 kg) (Includes Control Box, FRL, and stand)
Maximum Air Supply Pressure:	125 psi (0.86 MPa)
System Operating Pressure:	100 psi (0.70 MPa)
Recommended Operational Temperature Range:	-20 °F to 140 °F (-29 °C to 60 °C)

DESCRIPTION OF EQUIPMENT AND INTENDED USE

The CB-ABX comprises a Control Box, Filter-Regulator-Lubricator (FRL) Assembly, and portable tripod stand. The Control Box is used on both the ABX-2L-V2 and ABX-500-V2

The AUTOBOX® Control Box (CB-ABX) must not be put into service within the European Community ("EC") until the final machinery into which it is to be incorporated has been declared in conformity with the Machinery Directive and all other applicable EC Directives.

KEY FEATURES:

- Pneumatic pilot valve for a user supplied high pressure water dump valve
- A pressure regulator and gauge for hose clamp, X-Y positioner controls, and hose feed forward and reverse.
- The FRL Assembly conditions the air supply to the ABX. Both the FRL and control box disassembly from the stand for transport.

**CE DECLARATION OF INCORPORATION
OF PARTLY COMPLETED MACHINERY**

We: StoneAge, Inc. 466 South Skyline Drive Durango, CO 81303, USA
Declare that this "partly completed machinery" supplied with this declaration:
Equipment: AUTOBOX[®] Control Box
Model name: CB-ABX Is in accordance with the following Directives: and

- is designed and manufactured solely as a non-functional component to be incorporated into a machine requiring completion;
- must not be put into service within the European Community ("EC") until the final machinery into which it is to be incorporated has been declared in conformity with the Machinery Directive and all other applicable EC Directives; and
- is designed and manufactured to comply with the 2006/42/EC Essential Health and Safety Requirements of the Machinery Directives and the relevant parts of the following specifications:
EN ISO 12100:2010 Safety of machinery - General principles for design - Risk assessment and risk reduction

I hereby declare that the equipment named above has been tested and found to comply with the relevant sections of the above referenced specifications and directives.

Signed Andrew B. Birt. Date 07/01/2015

Andrew Birt
Independent Dealer Manager
StoneAge, Inc., Worcester, UK

The technical file for the AUTOBOX[®] Control Box (CB-ABX) User Manual is maintained at: StoneAge, Inc. 466 South Skyline Drive, Durango, CO 81303, USA



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WARNING AND SAFETY INSTRUCTIONS

OPERATOR TRAINING

Managers, Supervisors, and Operators **MUST** be trained in Health and Safety Awareness of High-pressure Water Jetting and hold a copy the Water Jetting Association (WJA) Code of Practice, or equivalent (see www.waterjetting.org.uk).

Operators **MUST** be trained to identify and understand all applicable standards for the equipment supplied. Operators should be trained in manual handling techniques to prevent bodily injury.

StoneAge has designed and manufactured this equipment considering all hazards associated with its operation. StoneAge assessed these risks and incorporated safety features in the design. StoneAge **WILL NOT** accept responsibility for the results of misuse.

IT IS THE RESPONSIBILITY OF THE INSTALLER/OPERATOR to conduct a job specific risk assessment prior to use. Job specific risk assessment **MUST** be repeated for each different set up, material, and location.

The risk assessment **MUST** conform to the Health and Safety at Work Act 1974 and other relevant Health and Safety legislation.

Operators **MUST** read, understand, and follow the Operational and Training Requirements (Section 7.0) of WJTA-IMCA's Recommended Practices For The Use Of High-pressure Water jetting Equipment, or equivalent.

Operators **MUST** read, understand and follow the Warnings, Safety Information, Assembly, Installation, Connection, Operation, Transport, Handling, Storage, and Maintenance Instructions detailed in this manual.

The risk assessment **MUST** consider potential material or substance hazards including:

- Aerosols
- Biological and microbiological (viral or bacterial) agents
- Combustible materials
- Dusts
- Explosion
- Fibers
- Flammable substances
- Fluids
- Fumes
- Gases
- Mists
- Oxidizing Agents

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

Use of Personal Protective Equipment (PPE) is dependent on the working pressure of water and the cleaning application. Managers, Supervisors, and Operators **MUST** carry out a job specific risk assessment to define the exact requirements for PPE. See Protective Equipment for Personnel (Section 6) of WJTA-IMCA's Recommended Practices For The Use Of High-pressure Water jetting Equipment for additional information.

Hygiene - Operators are advised to wash thoroughly after all water jetting operations to remove any waterblast residue which may contain traces of harmful substances.

First aid provision - users **MUST** be provided with suitable first aid facilities at the operation site.

PPE may include:

- **Eye protection:** Full face visor
- **Foot protection:** Kevlar® brand or steel toe capped, waterproof, non-slip safety boots
- **Hand protection:** Waterproof gloves
- **Ear protection:** Ear protection for a minimum of 85 dBA
- **Head protection:** Hard hat that accepts a full face visor and ear protection
- **Body protection:** Multi-layer waterproof clothing approved for water jetting
- **Hose protection:** Hose shroud
- **Respiratory protection:** May be required; refer to job specific risk assessment

SAFETY LABEL DEFINITIONS

Maximum operating air pressure is 100 psi (0.7 MPa). Never exceed 125 psi (0.86 MPa) supply pressure. Exceeding 125 psi (0.86 MPa) supply pressure may result in injury to the Operator and/or damage to the equipment.

CAUTION

**Inlet air not to exceed
125 psi
[0.86 MPa].**

**Set system
pressure to
100 psi max
[0.7 MPa].**

⚠ WARNING

Operations with this equipment can be potentially hazardous. Caution **MUST** be exercised prior to and during machine and water jet tool use. Please read and follow all of these instructions, in addition to the guidelines in the WJTA Recommended Practices handbook, available online at www.wjta.org. Deviating from safety instructions and recommended practices can lead to severe injury and/or death.

- Do not exceed the maximum operating pressure specified for any component in a system. The immediate work area **MUST** be marked off to keep out untrained persons.
- Inspect the equipment for visible signs of deterioration, damage, and improper assembly. Do not operate until repaired. Make sure all threaded connections are tight and free of leaks.
- Users of the CB-ABX Control Box **MUST** be trained and/or experienced in the use and application of high-pressure technology and cleaning, as well as all associated safety measures, according to the WJTA Recommended Practices for the use of High-pressure Water Jetting Equipment.
- The CB-ABX Control Box should be located in a safe location where the operator has good visibility of the pipe and hose. The AUTOBOX® (ABX-500-V2), ABX-2L-V2 and Control Box **MUST** be supervised at all times and should never be left unattended.
- Do not fully release the hose clamp (decreasing pressure to zero) during operation, or the AUTOBOX® Hose Tractors will release the hose and may create a dangerous runaway hose condition, which can result in severe injury and/or death.
- Always de-energize the system before performing service or replacing any parts. Failure to do so can result in severe injury and/or death.
- When moving the CB-ABX Control Box lift with care to prevent bodily injury.

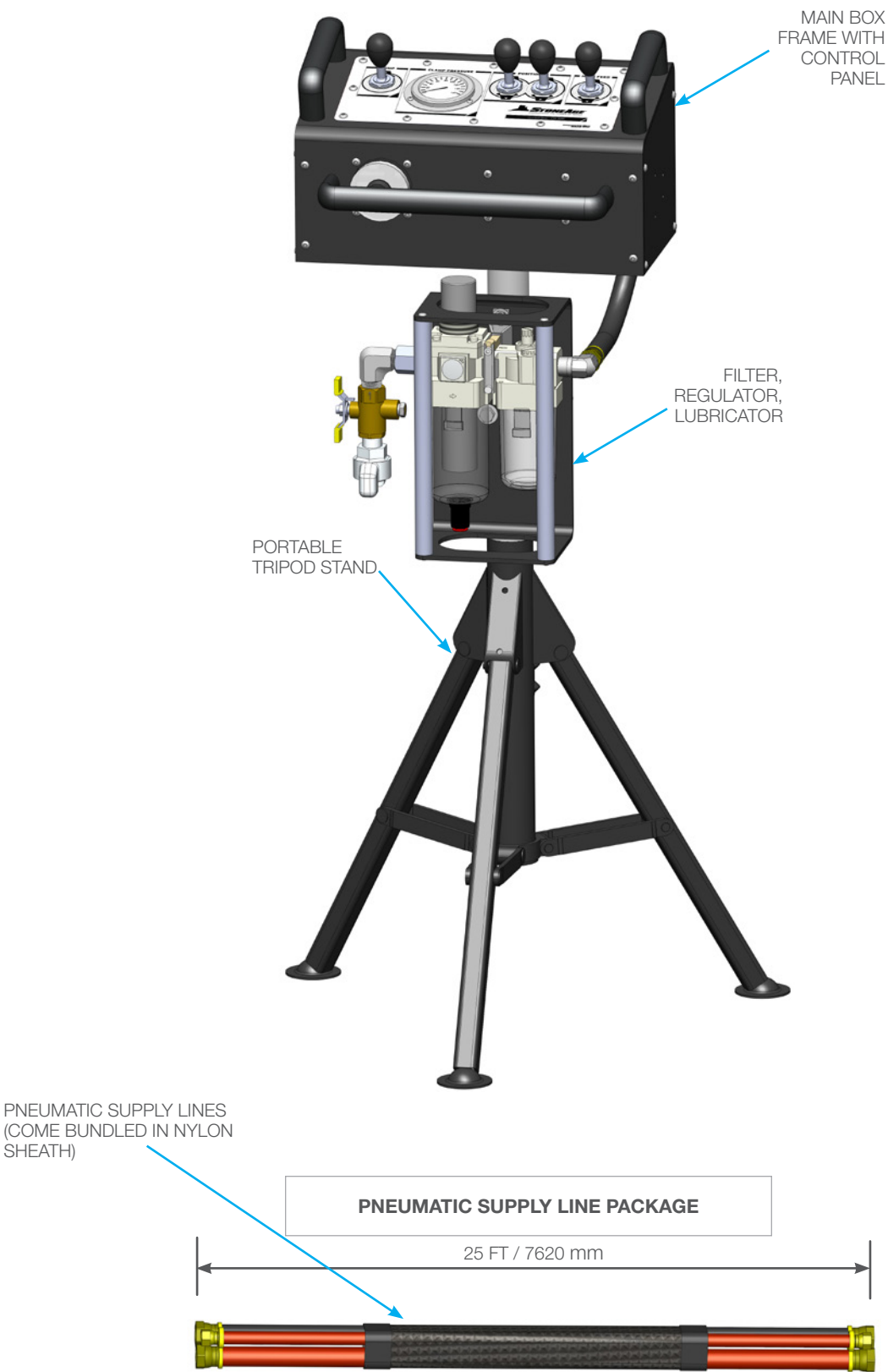
PRE-RUN SAFETY CHECK

Refer to WJTA-IMCA's, Recommended Practices For The Use Of High-pressure Water Jetting Equipment and/or The Water Jetting Association's, WJA Code of Practice for additional safety information.

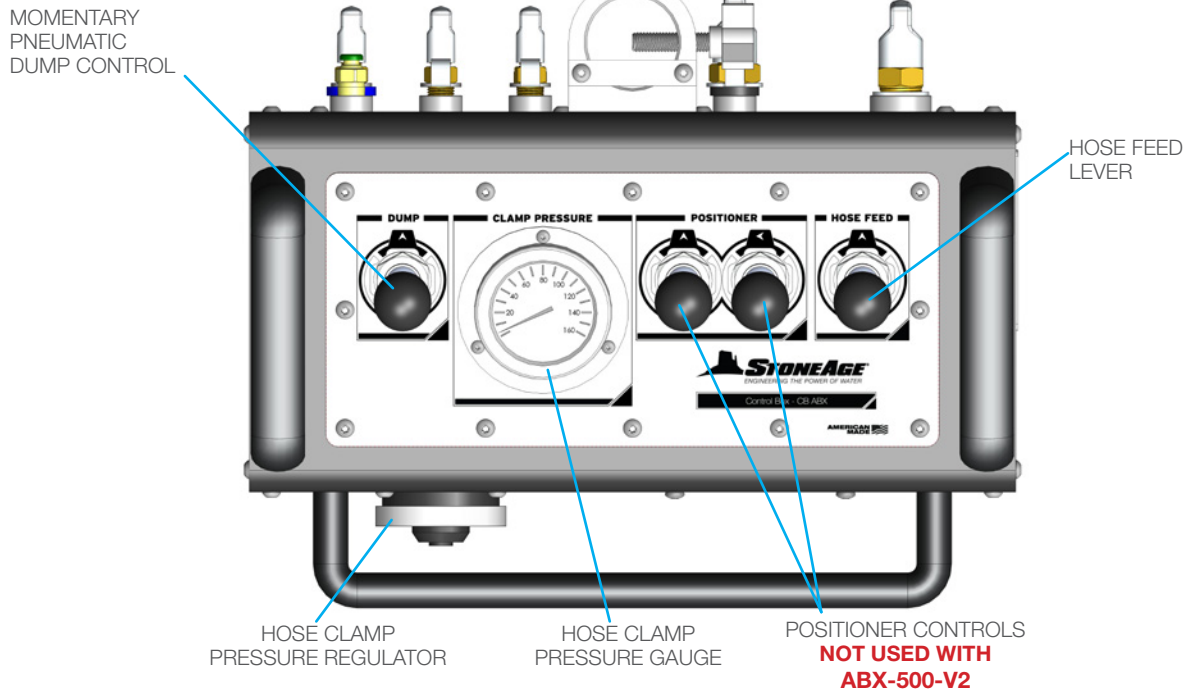
- Complete a job specific risk assessment and act on the resulting actions.
- Ensure the waterblasting zone is properly barricaded and that warning signs are posted.
- Adhere to all site safety procedures.
- Ensure no personnel are in the waterblasting zone.
- Ensure the work place is free of unnecessary objects (e.g. loose parts, hoses, tools).
- Ensure all operators are using the correct Personal Protective Equipment (PPE).
- Ensure that an anti-withdrawal device (back-out preventer), whip checks (hose whips), and all other applicable safety devices are installed and set-up properly.
- Check that the air hoses are properly connected and tight.
- Check all hoses and accessories for damage prior to use. Do not use damaged items. Only high quality hoses intended for waterblast applications should be used as high-pressure hoses.
- Ensure that operators never connect, disconnect, or tighten hoses, adapters, or accessories with the high-pressure water pump unit running.
- Test the Control Box before operating with high-pressure water to verify the control valves move the hose in the intended direction, and that the dump valve is working properly.
- Check all threaded air fitting connections for tightness.

CB-ABX CONTROL BOX OVERVIEW

CB-ABX CONTROL BOX, FRL, AND STAND ASSEMBLY

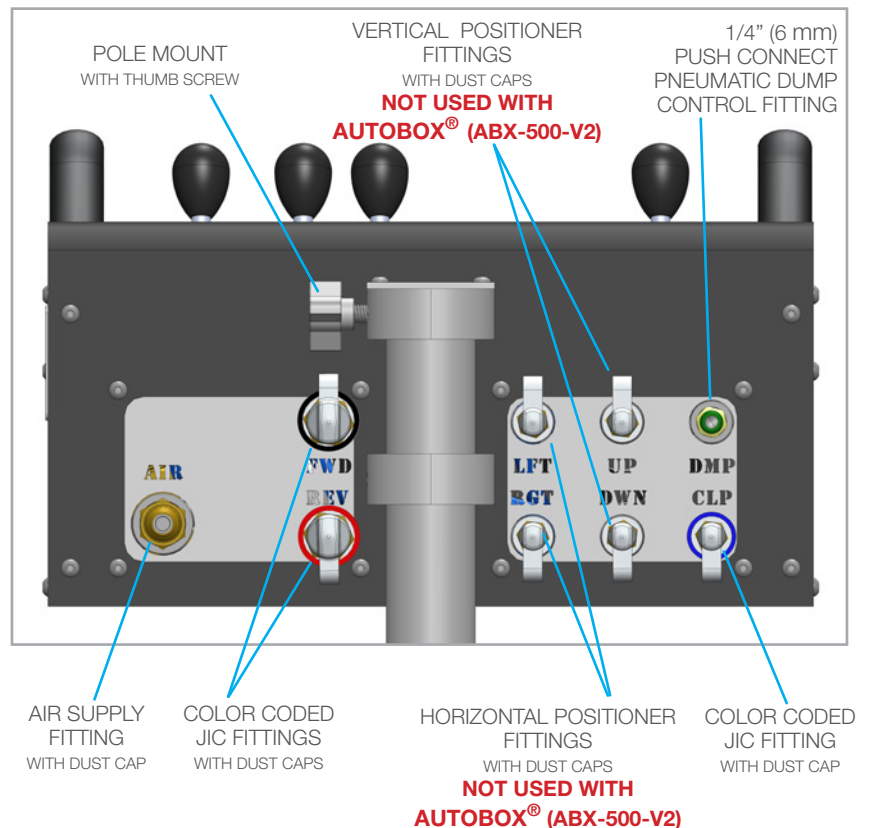
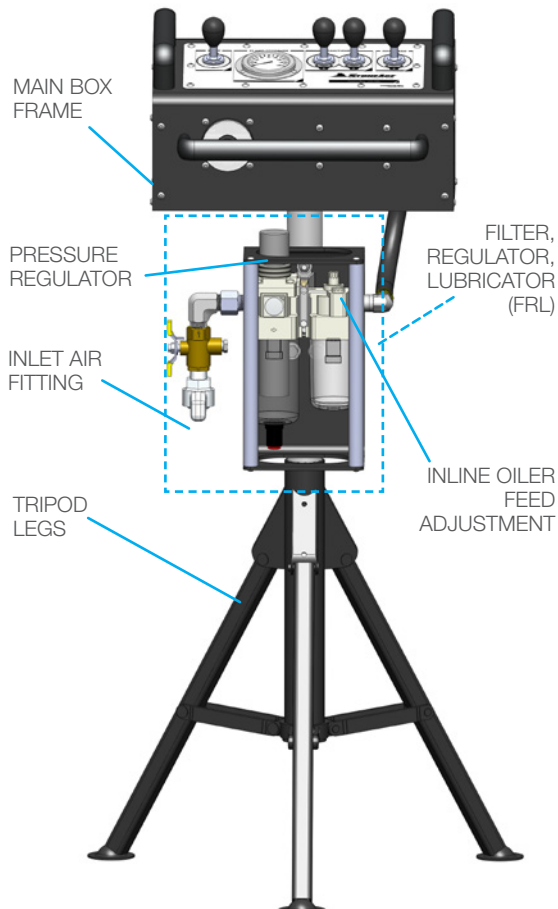


CB-ABX CONTROL BOX
TOP VIEW



CB-ABX CONTROL BOX
FRONT VIEW

CB-ABX CONTROL BOX
REAR VIEW



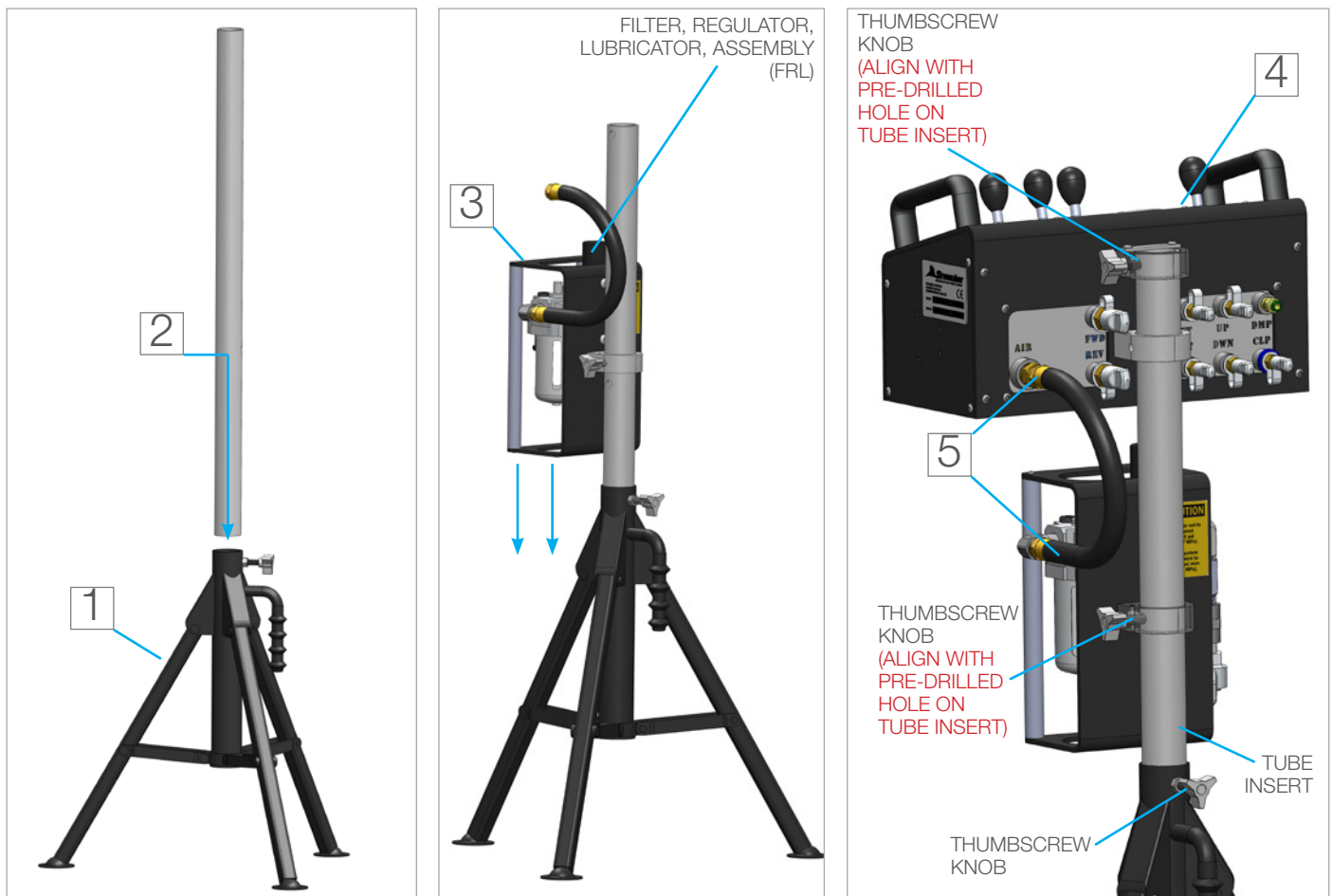
CONTROL BOX SET-UP

ASSEMBLE CONTROL BOX, FRL, AND TRIPOD BASE

1. Setup the tripod base in a location with good visibility to the bundle face, but at a safe distance away from waterblast zone.
2. Slide the vertical tube into the tripod base. Secure with the supplied thumbscrew knob. Note: The vertical tube has a hole through one wall that the thumbscrew must engage.
3. Slide the Filter, Regulator, Lubricator (FRL) assembly over the vertical tube down to the tripod base. Secure with the supplied thumbscrew knob.
4. Slide the Control Box over the vertical tube. The Control Box has a stop that keeps it located at the top of the vertical tube. Secure with the supplied thumbscrew knob.
5. Install the short 1/2 in. (13 mm) I.D. hose between the FRL and the Control Box.

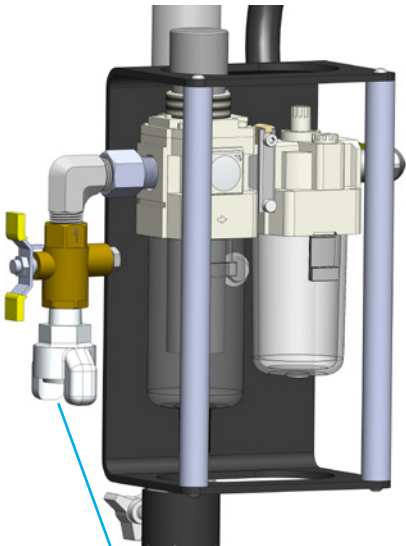
NOTICE

The vertical tube has a hole through one wall that the thumbscrew must engage.



AIR SUPPLY AND LUBRICATOR SETTING

1. The Control Box is supplied with a twist claw style inlet coupling (Chicago style) located on the side of the FRL Assembly. Connect a compatible compressed air line (not included) according to the Manufacturer's instructions. If another pneumatic connection is preferred, this fitting can be removed and any male 1/2 in (13 mm) NPT fitting may be used.
2. Using the regulator adjust the operating air pressure to 100 psi (0.7 MPa) for the application.

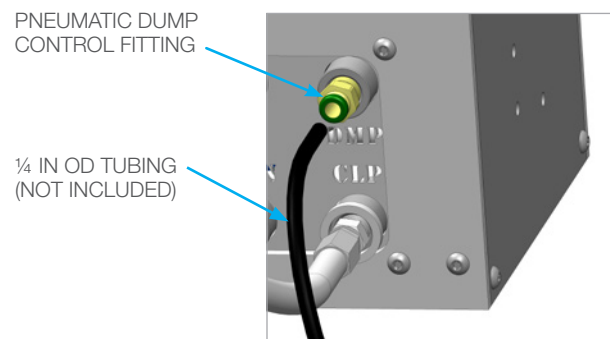


AIR SUPPLY FITTING

A universal **AIR SUPPLY FITTING** (Chicago style) is located on the back of the Control Box. Connect a compatible compressed air line (not included) according to the Manufacturer's instructions. If another pneumatic connection is preferred, this fitting can be removed and any male 1/2 in NPT fitting may be used.

PNEUMATIC DUMP CONTROL FITTING AND LINE

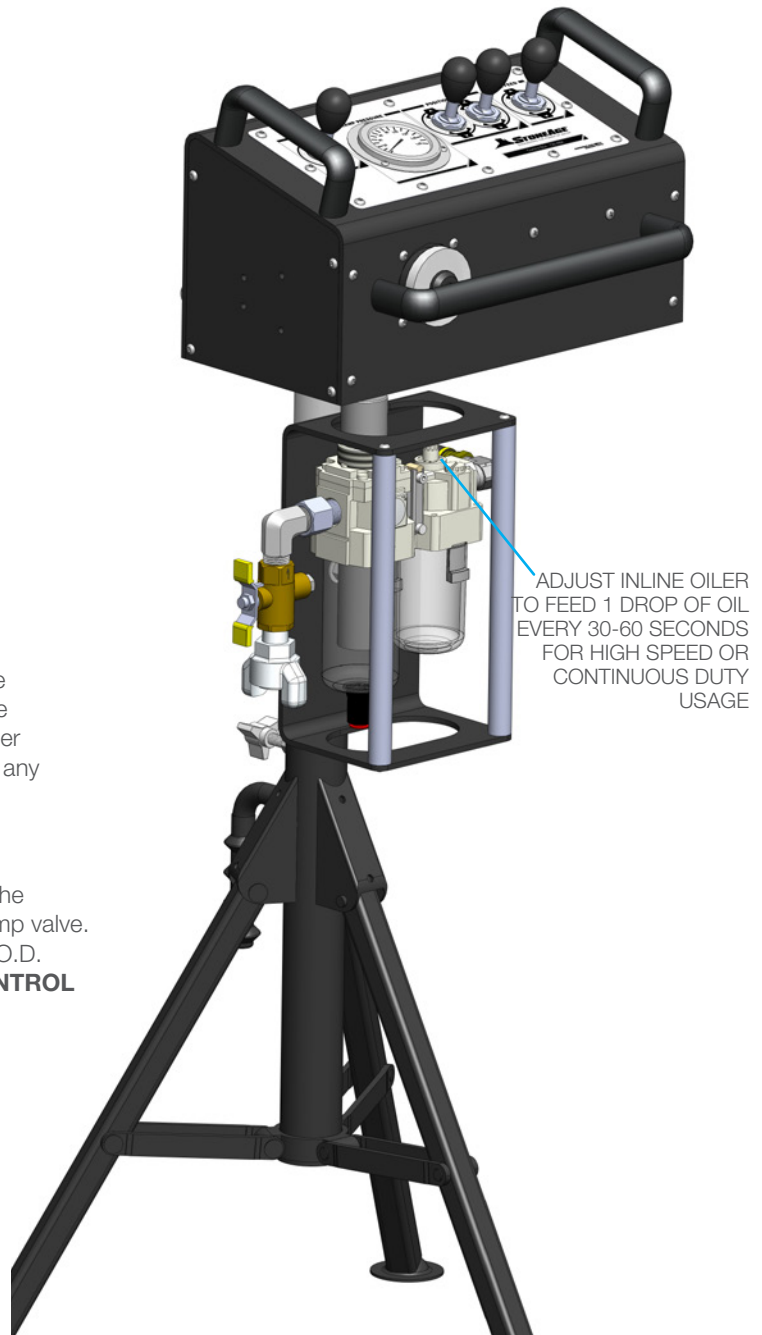
A **MOMENTARY PNEUMATIC DUMP CONTROL** is located on the Control Box panel and can be set up to control an air actuated dump valve. To utilize the toggle, the end user will need to install 1/4 in. (6 mm) O.D. nylon tubing (not included) between the **PNEUMATIC DUMP CONTROL FITTING** and the pneumatic dump valve.



CONTROL BOX REAR VIEW

⚠ WARNING

Maximum operating air pressure is 100 psi (0.7 MPa). Never exceed 125 psi (0.86 MPa) supply pressure. Exceeding 125 psi (0.86 MPa) supply pressure may result in injury to the Operator and/or damage to the equipment.



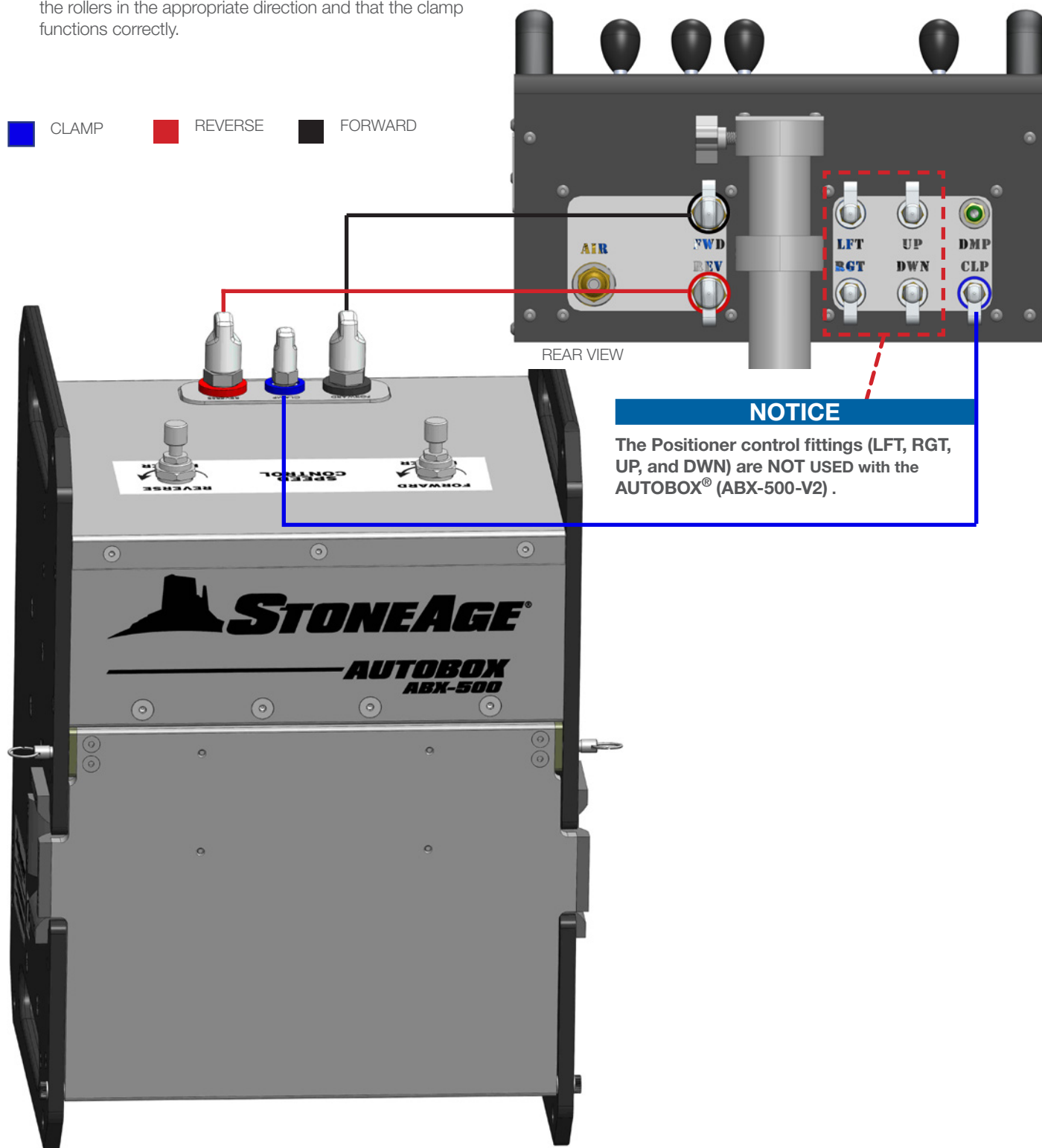
ADJUST INLINE OILER TO FEED 1 DROP OF OIL EVERY 30-60 SECONDS FOR HIGH SPEED OR CONTINUOUS DUTY USAGE

CONTROL BOX TO AUTOBOX® (ABX-500-V2) HOSE TRACTOR ASSEMBLY

PNEUMATIC SUPPLY LINE CONNECTIONS





1. Remove the dust caps from the Joint Industry Council (JIC) fittings of the AUTOBOX® (ABX-500-V2) and the CB-ABX Control Box.
2. Connect the AUTOBOX® (ABX-500-V2) to the CB-ABX Control Box with two 1/2 in. (13 mm) JIC hoses and one 1/4 in. (6 mm) JIC hose. Verify the Control Box rotates the rollers in the appropriate direction and that the clamp functions correctly.
3. Test the CB-ABX Control Box before operating the AUTOBOX® (ABX-500-V2) with high pressure water to verify the control valves move the hose in the intended direction, and that the dump valve is working properly.

■ CLAMP ■ REVERSE ■ FORWARD



PNEUMATIC SUPPLY LINE CONNECTIONS

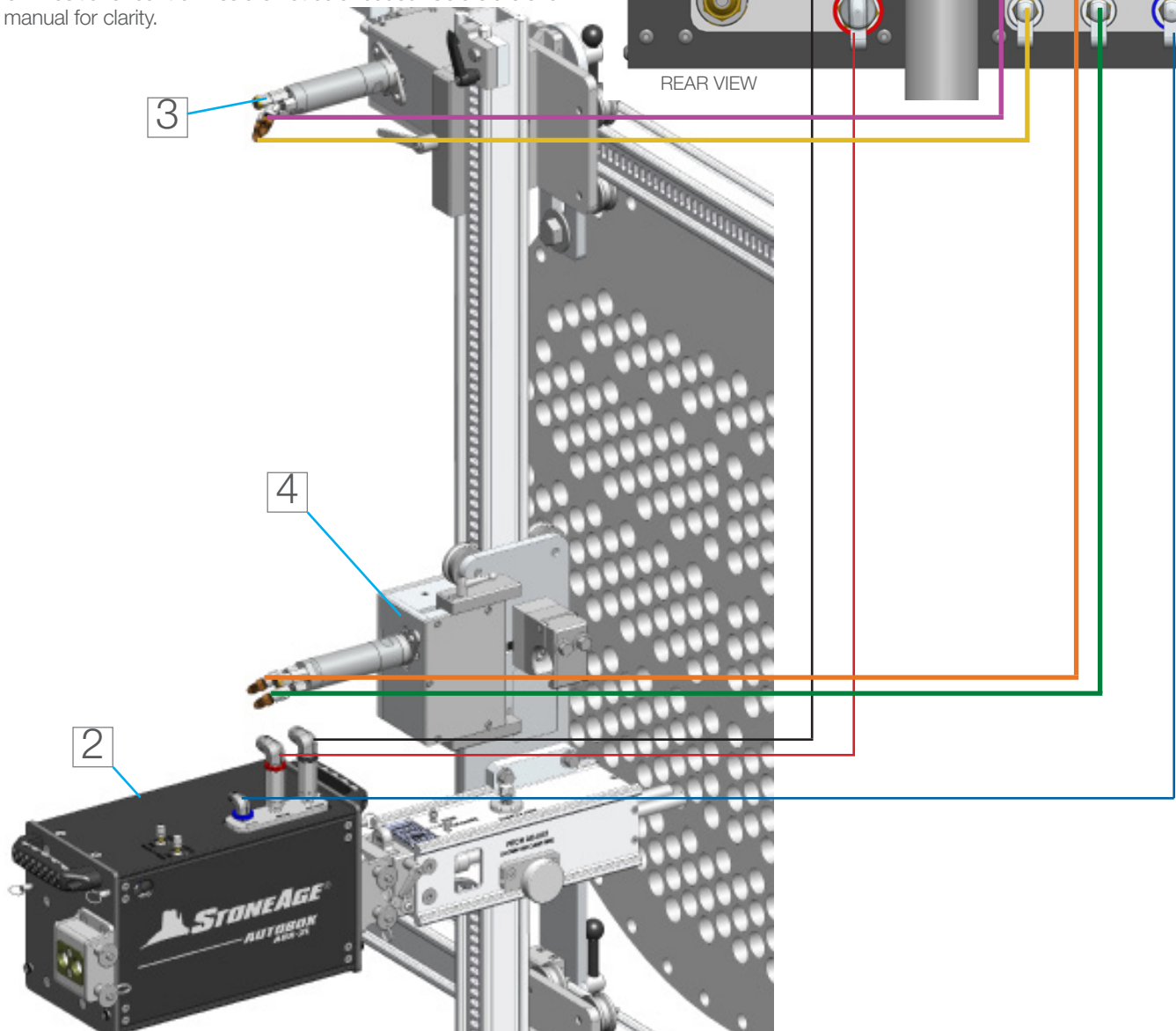
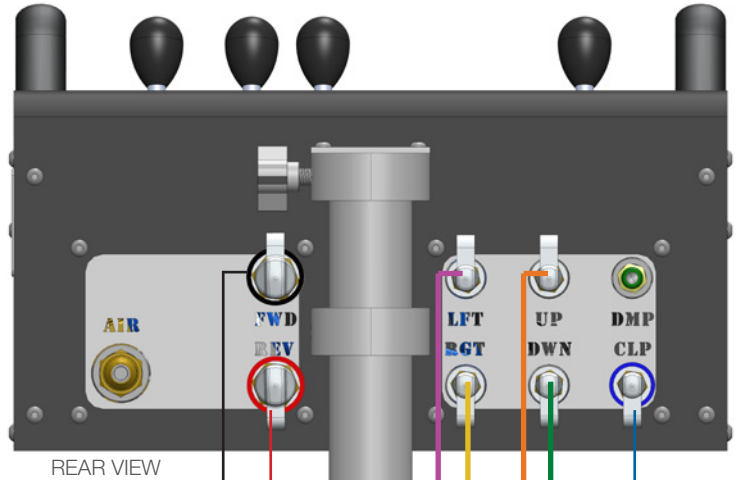
1. Remove the dust caps from the Joint Industry Council (JIC) fittings of the Control Box and the AUTOBOX® (ABX-2L-V2) Hose Tractor.
2. Connect the AUTOBOX® (ABX-2L-V2) Hose Tractor to the CB-ABX Control Box with two 1/2 in. (13 mm) JIC hoses and one 1/4 in. (6 mm) JIC hose. Verify the Control Box rotates the rollers in the appropriate direction and that the clamp functions correctly.
3. Connect the Horizontal Positioner drive air motor to the CB-ABX Control Box with two 1/4 in. (6 mm) JIC hoses. Verify the CB-ABX Control Box moves the Horizontal Carriage in the appropriate direction.

	LEFT		UP		FORWARD
	RIGHT		DOWN		REVERSE
			CLAMP		

NOTICE

The 4 Positioner control lines are not color coded. Colors are shown in manual for clarity.

4. Connect the vertical positioner drive air motor to the CB-ABX Control Box with two 1/4 in. (6 mm) JIC hoses. Verify the CB-ABX Control Box moves the vertical carriage in the appropriate direction.
5. Test the CB-ABX Control Box before operating the AUTOBOX® (ABX-2L-V2) Hose Tractor with high pressure water to verify the control valves move the hose in the intended direction, and that the dump valve is working properly.



OPERATION

CONTROL PANEL

HOSE FEED LEVER

The **HOSE FEED LEVER** will move the hose in the forward (feeding) and reverse (retracting) directions. The **OFF** position is at the spring centered middle position and will stop the Drive Rollers from turning. The speed controls are located on the AUTOBOX® (ABX-500-V2) and the AUTOBOX® (ABX-2L-V2) Hose Tractors. Speed is independently adjustable for Forward/Reverse. Minimum speed is .2ft/sec (6 cm/sec). Maximum speed is 3.0ft/sec (914 mm/sec).

POSITIONER CONTROLS

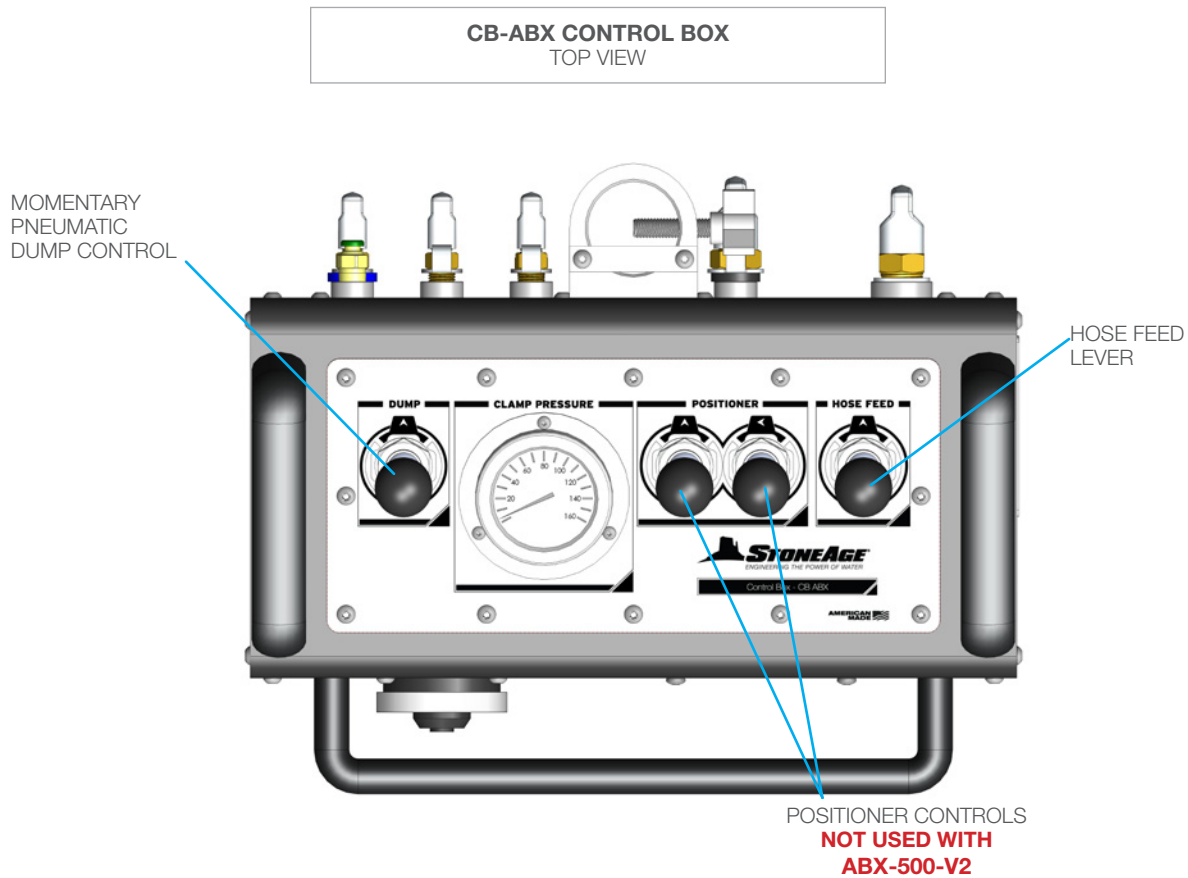
UP/DOWN will move the PRODRIVE Tractor (ABX-PRO) up and down the tube face bundle. Push forward to move the assembly UP, release to STOP the motion, push down to move the assembly down.

LEFT/RIGHT will move the PRODRIVE Tractor (ABX-PRO) from side to side along the tube face bundle. Push left to move the assembly to the LEFT, release the lever to STOP the motion, push RIGHT to move the assembly to the right.

MOMENTARY PNEUMATIC DUMP CONTROL

To use the **MOMENTARY PNEUMATIC DUMP CONTROL**, hold it in the **FORWARD** position to route the high-pressure water to the tool. Release the knob to divert the high-pressure water away from the tool.

To de-energize the system, release the **HOSE FEED LEVER** and release the **MOMENTARY PNEUMATIC DUMP CONTROL**. This will stop the Drive Rollers from moving and reroute the high-pressure water away from the AUTOBOX® (ABX-500-V2) Hose Tractor or AUTOBOX® (ABX-2L-V2) Hose Tractor.

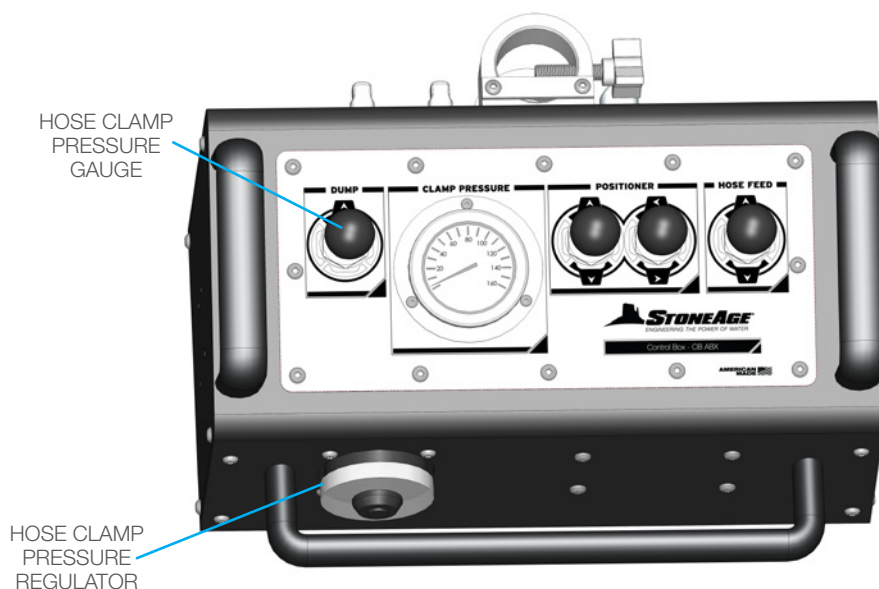


HOSE CLAMP

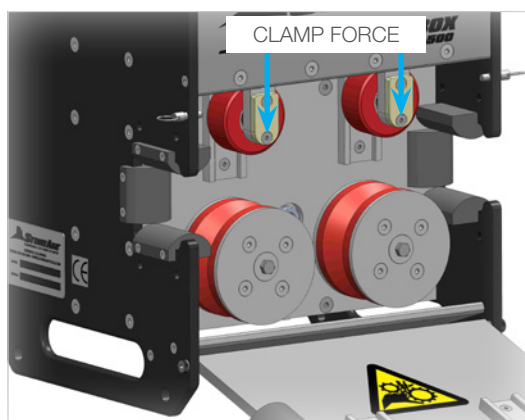
The clamp rollers are controlled by turning the **HOSE CLAMP PRESSURE REGULATOR**. Use the **HOSE CLAMP PRESSURE GAUGE** to record desired pressure for future use. Clamp force will not damage hoses or couplings. Proper clamp force will provide good control of the hose in forward and reverse directions, and keep the hose running in the groove of the drive rollers.

⚠ WARNING

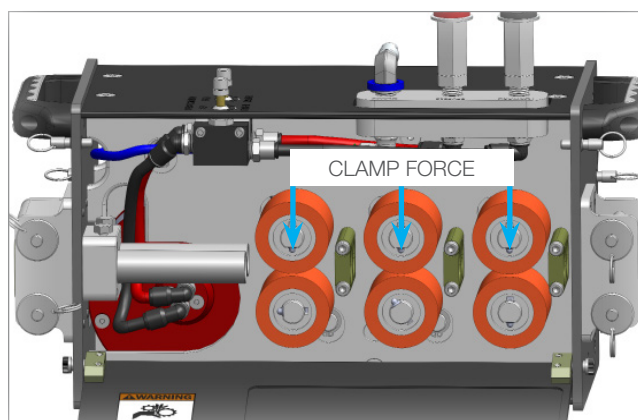
Do not fully release the hose clamp (decreasing pressure to zero) during operation, or the AUTOBOX® (ABX-500-V2) Hose Tractor will release the hose and may create a dangerous runaway hose condition, which can result in severe injury and/or death.



AUTOBOX® (ABX-500-V2) HOSE TRACTOR



AUTOBOX® (ABX-2L-V2) HOSE TRACTOR



TEST RUN PROCEDURE

- Perform the **PRE-RUN SAFETY CHECK (SEE PAGE 6)**.
- Operate the high-pressure hose and waterjet tool at full pressure to test the clamp force. Proper clamp force will provide good control of the hose in forward and reverse directions, and keep the hose running in the groove of the drive rollers.
- Adjust the hose feed speed controls. Proper forward and reverse speeds will vary, depending on the type of material being removed and the pipe or vessel size and/or shape. Adjustment of the hose feed speed controls may be necessary during operation in order to optimize cleaning and overall productivity.
- Operate the high-pressure water at full pressure and use the **MOMENTARY PNEUMATIC DUMP CONTROL TOGGLE** to verify that the dump valve is working properly.

MAINTENANCE

Maintenance Item	Frequency	Maintenance Required
Lubricant level of Filter, Regulator, Lubricator	Before each use	For average conditions, the use of high quality SAE #10 (S.U.V. 150-200 SEC @ 100°F) oil is recommended. Other lubricants, as specified by the maker of the equipment to be lubricated, may be used if not heavier than SAE #40 (S.U.V. 800 SEC @100°F).
Lubricant level of Filter, Regulator, Lubricator	Cessation of oil dripping through the sight dome	If both air and oil are kept clean, and the oil level is never allowed below end of tube in the bowl, the lubricator should provide long periods of unattended service. Cessation of oil dripping through the sight dome, irrespective of knob adjustment, is an indication that cleaning is necessary. To clean, it is not necessary to remove lubricator from the line. Depressurize and disassemble. In most instances, cleaning is needed only in the oil metering area. Pull off adjusting knob, unscrew sight dome assembly, remove inner drip spout and clean with household soap. PLASTIC BOWLS AND SIGHT DOME MUST BE CLEANED WITH HOUSEHOLD SOAP ONLY.
Lubricant level of Filter, Regulator, Lubricator	Intermittent Adjustments	The adjustment knob is factory set so that, when turned fully clockwise, no oil is delivered to the venturi for atomization, and the equipment is not being lubricated. To adjust the oil drip rate, turn on the air, start flow and set knob to obtain the desired drip rate, which is visible through the sight dome. As a start, one to two drops per minute is suggested, correct lubrication is a matter of experience and demand. Clockwise rotation of knob decreases oil feed rate. To check lubrication, hold thumbnail or a mirror near the equipment exhaust. A heavy film indicates over-lubrication and the drip rate should be reduced by turning knob to a lower setting.
FWD, REV, LFT, RGT, UP, DOWN fittings	After each use	Apply a small amount of air tool oil directly into FWD, REV, LFT, RGT, UP, DOWN fittings. Then, briefly operate the controls at slow speed for a short duration in each direction to coat the interior parts of the motor. Install the dust caps onto all three fittings to keep moisture and dirt out. NOTICE Do not add oil to the Clamp (CLP) fitting, as oil may accumulate in the air cylinders and prevent them from fully retracting.

Contact StoneAge for Safety Data Sheets for material usage, a complete list of spare part numbers, and service instructions for the CB-ABX Control Box.

STORAGE, TRANSPORTATION, AND HANDLING

When moving the CB-ABX, lift with care to prevent bodily injury.

The CB-ABX is shipped in a custom wooden crate and should be stored upright in the same crate between jobs.

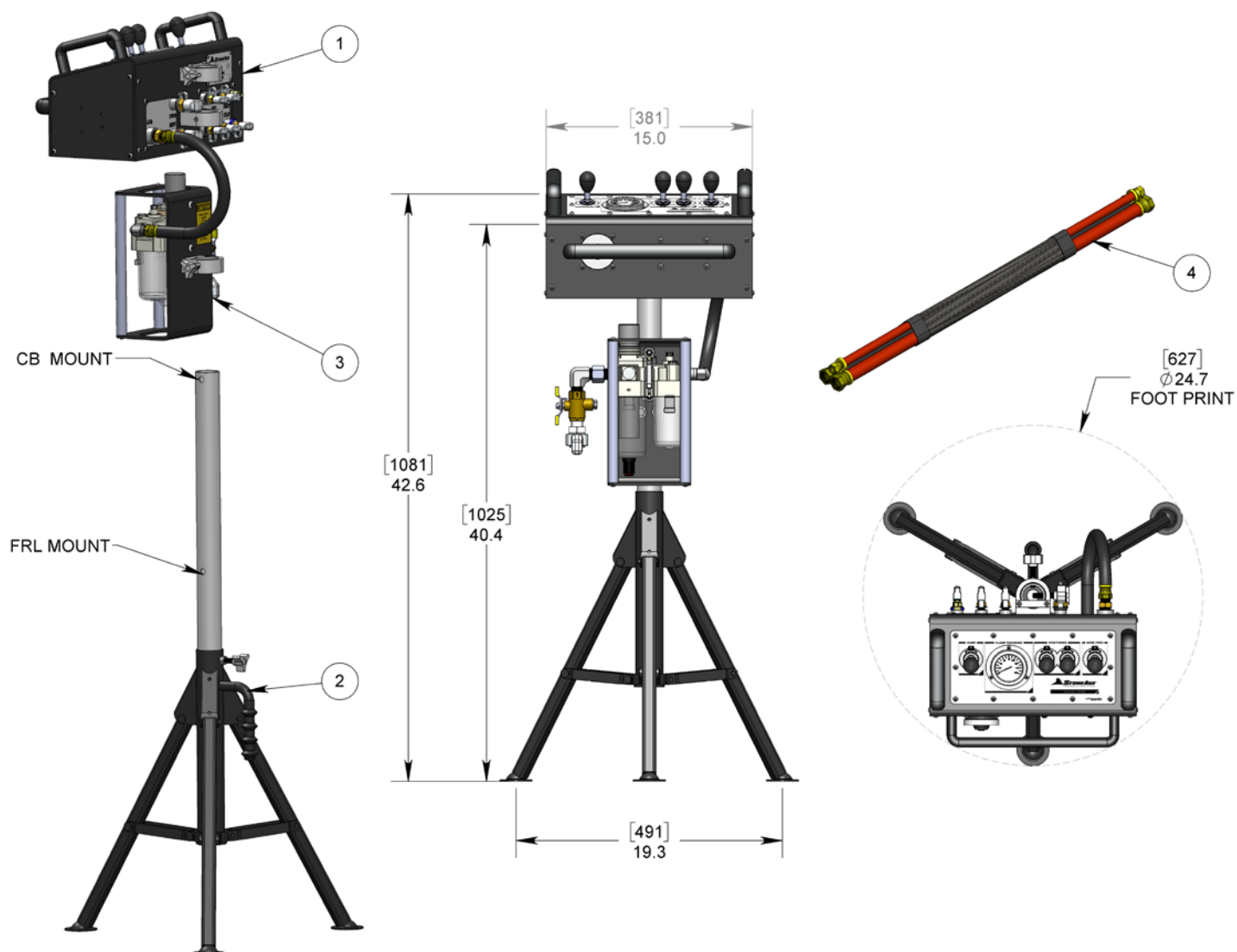
When storing the unit, use compressed air to blow out the air lines to remove debris and moisture. Use mild soapy water to clean the machine in order to remove corrosive materials. Install the dust caps onto all three fittings to keep moisture and dirt out.

NOTICE

Do not add oil to the clamp fitting, as oil may accumulate in the air cylinders and prevent them from fully retracting.

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Loctite® and Threadlocker Blue 242® are registered trademarks of Henke AG & Co. KGaA.

AUTOBOX® (CB-ABX)
CONTROL BOX

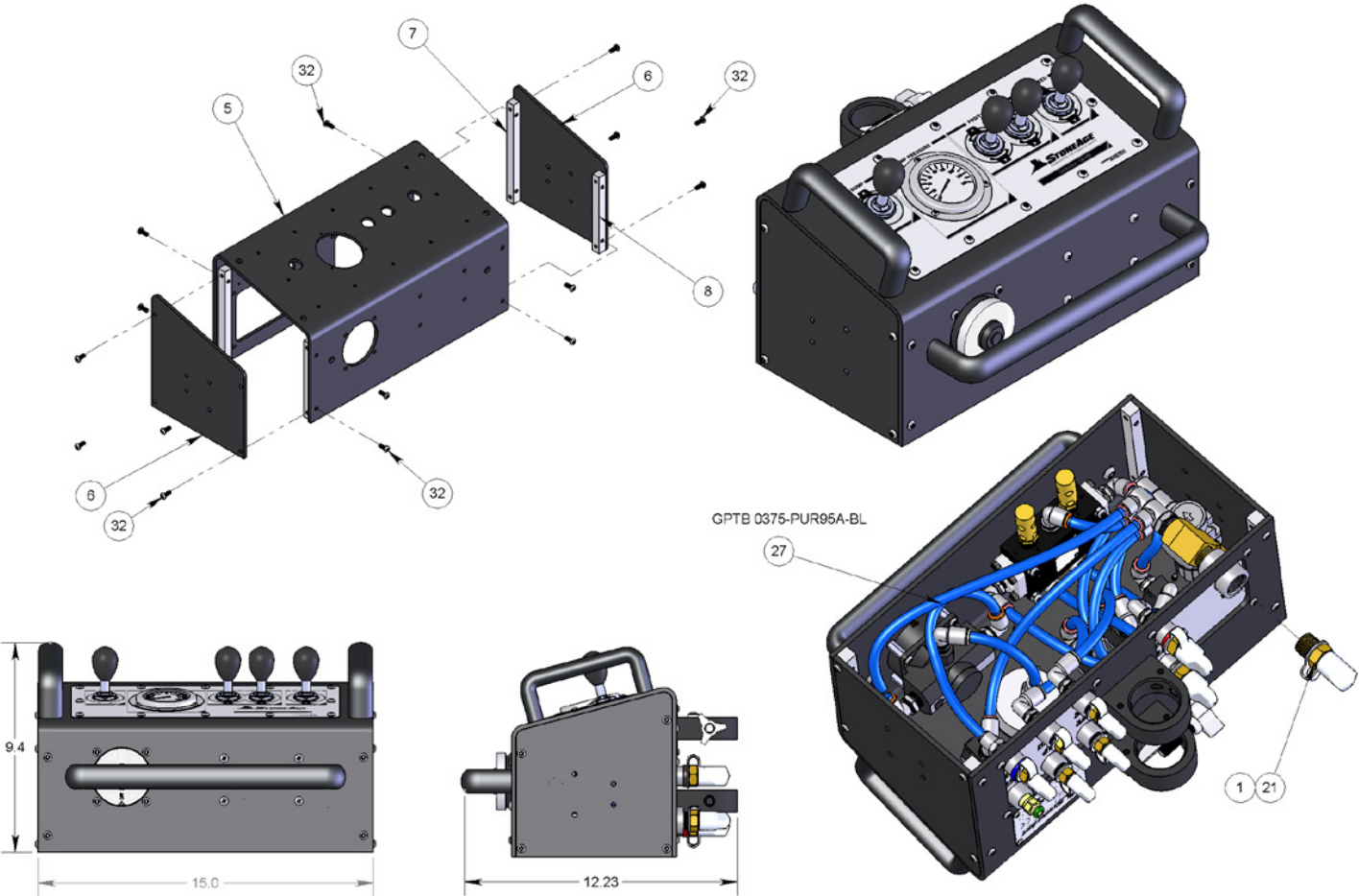


NOTES:

1. ASSEMBLY REFERENCE DIMENSION SHOWN (MM) / INCHES.

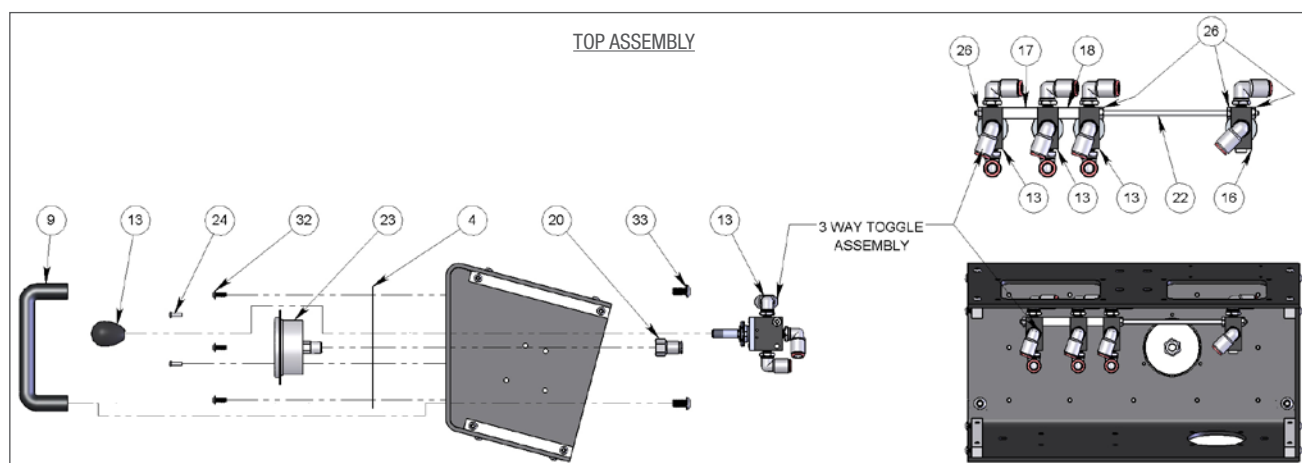
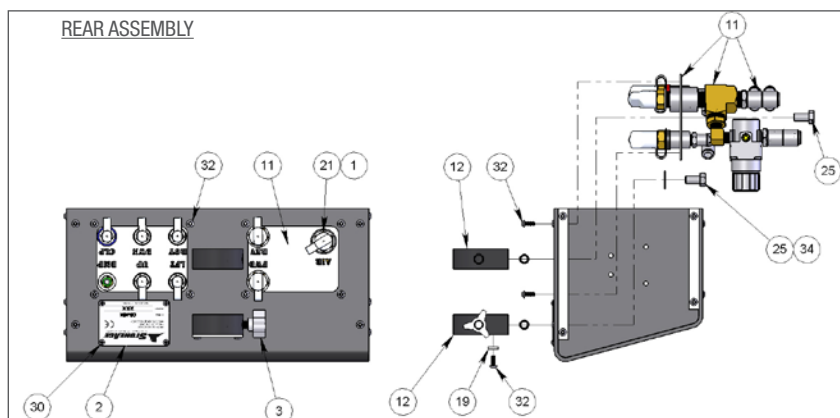
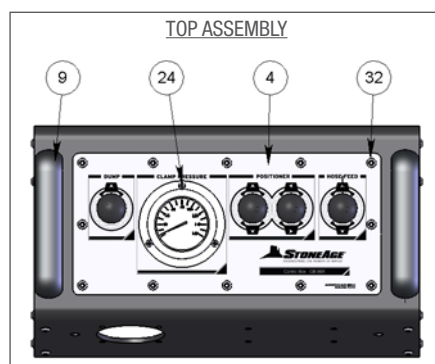
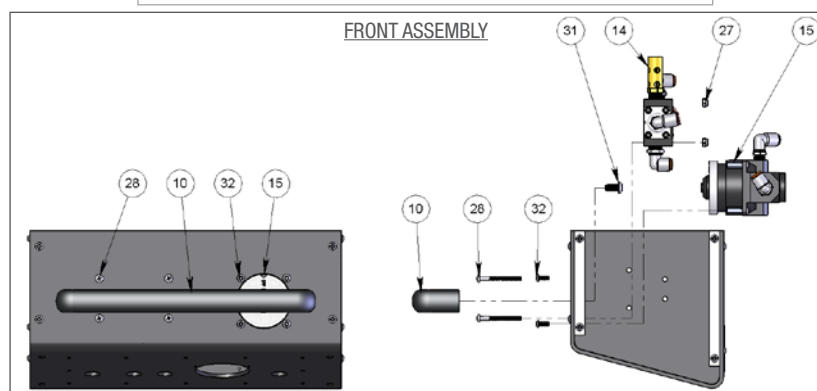
#	PART NUMBER	QTY.
1	CB 300 CONTROL BOX ASSEMBLY	1
2	CB 301 CB STAND ASSEMBLY	1
3	CB 310 FRL ASSEMBLY	1
4	CB 370-25 ABX HOSE BUNDLE ASSEMBLY	1

AUTOBOX® (CB 300)
CONTROL BOX ASSEMBLY
(CONTINUED ON NEXT PAGE)



#	PART NUMBER	QTY.
1	BR 167 DUST CAP	1
5	CB 321 CB FRAME	1
6	CB 322 SIDE PLATE	2
7	CB 323 BRACE REAR	2
8	CB 324 BRACE FRONT	2
21	CB 355 FTG P8J8 BRASS MALE TO MALE	1
32	GTB 319-02-32 BHTS .19-32 X .50 LG TORX-SS	42

AUTOBOX® (CB 300)
CONTROL BOX ASSEMBLY (CONTINUED)



#	PART NUMBER	QTY.
1	BR 167 DUST CAP	1
2	CB 304-001 CE SERIAL PLATE	1
3	CB 314 3-LOBE KNOB	1
4	CB 320 GRAPHIC OVERLAY	1
9	CB 325 HANDLE TOP	2
10	CB 326 HANDLE FRONT	1
11	CB 327-001 COUPLER PLATE, REAR ASSEMBLY	1
12	CB 328-001 POLE MOUNT	2
13	CB 333-HD PNEUM3WAYASSY	3

14	CB 334 RY3 AAA PILOTED SPOOL VALVE ASSY	1
15	CB 335 REG ASSY	1
16	CB 337-HD PNEUM3WAYASSY - DUMP	1
17	CB 344 SPACER #10 1-1_4LONG	1
18	CB 345 SPACER #10 3_4LONG	1
19	CB 347 CAP PLATE	1
20	CB 349 FTG P4F PL6 STRAIGHT	1
21	CB 355 FTG P8J8 BRASS MALE TO MALE	1
22	CB 361 10-24 THREADED ROD	1
23	CB 548-SS GAUGE	1
24	CB 554 BSHCS .138-32 X .50 SS	3

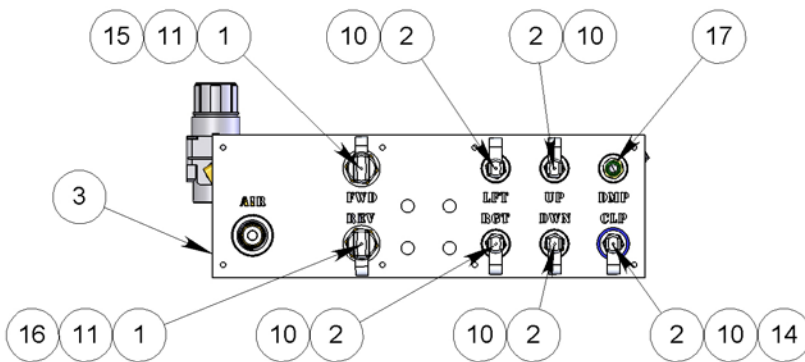
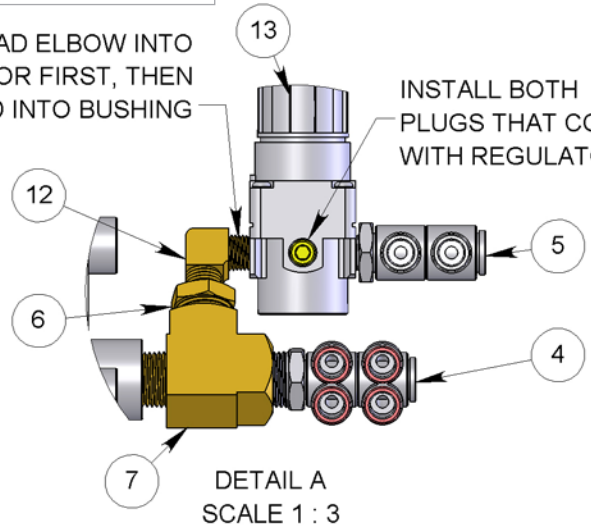
25	GB 337-03 BOLT, HEX .37-16 X .75 SS	4
26	GN 319-H HEX NUT SS	4
27	GN 319-L NYLOK NUT SS (HC 025.1)	4
28	GPH 319-08 PHPMS 10-24 X 2.00 SS	4
30	GSB 313-0075 BHCS 6-32 X .188 LG SS	4
31	GSB 3M8-16-1.25 BHCS M8X1.25 X 16 SS	2
32	GTB 319-02-32 BHTS .19-32 X .50 LG TORX-SS	42
33	GTB 331-025 BHTS .31-18 X .63 LG TORX-SS	4
34	GW 337-F FLAT WASHER SS	2

PARTS DIAGRAM

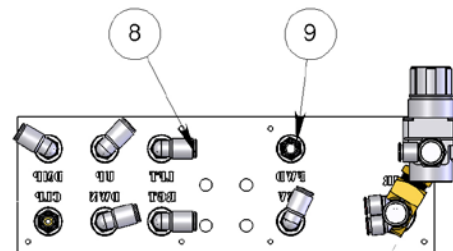
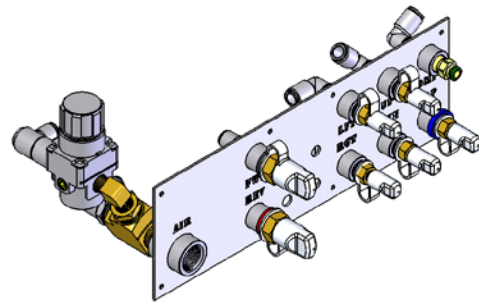
AUTOBOX® (CB 327-001) COUPLER PLATE, REAR ASSEMBLY

THREAD ELBOW INTO
REGULATOR FIRST, THEN
THREAD INTO BUSHING

INSTALL BOTH
PLUGS THAT COME
WITH REGULATOR



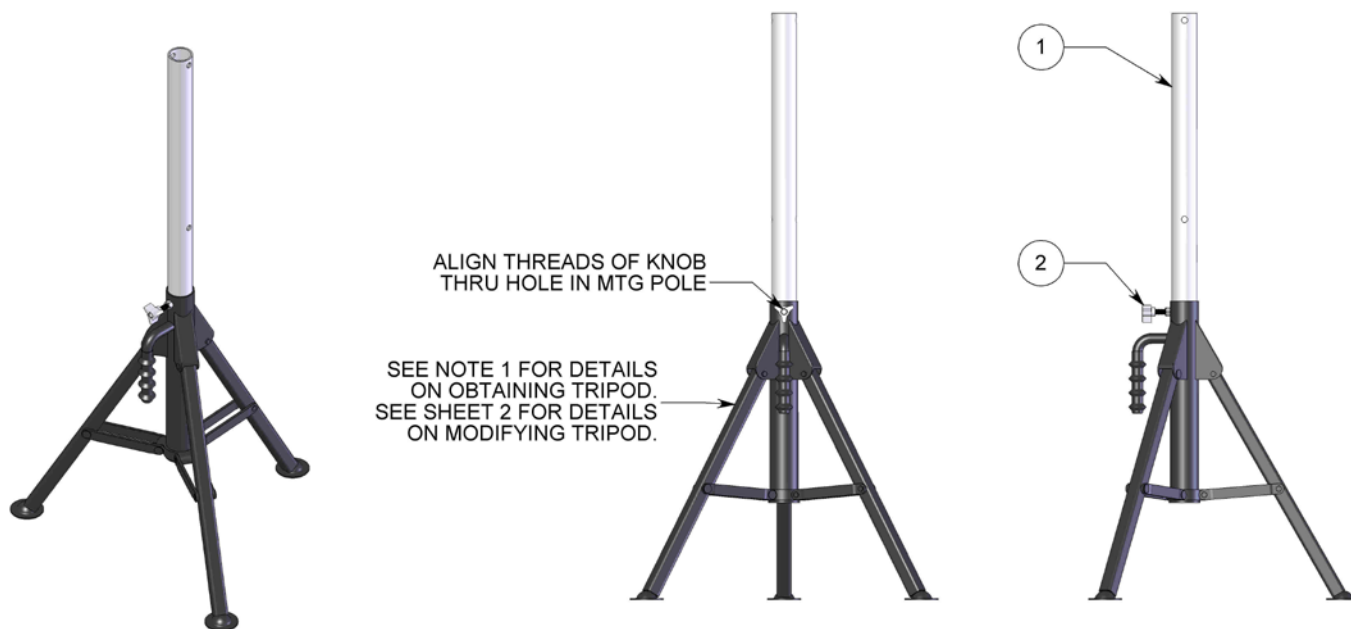
FRONT SIDE



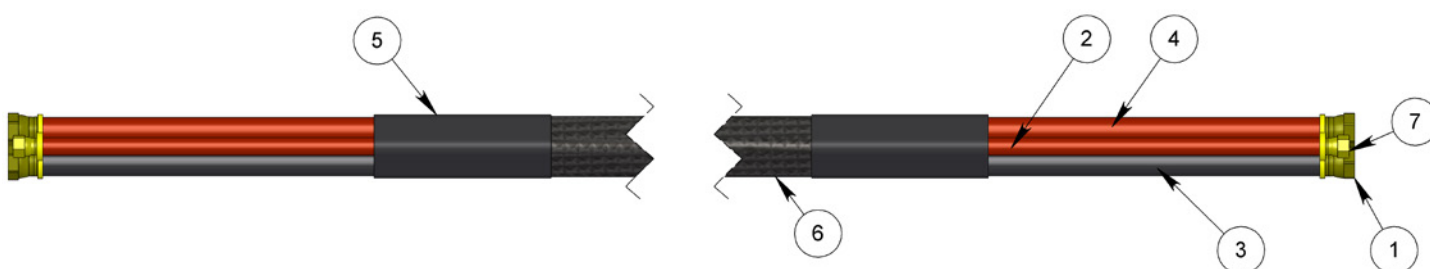
BACK SIDE

30°
NOMINAL

#	PART NUMBER	QTY.
1	BR 167 DUST CAP	2
2	BR 168 DUST CAP, J4	5
3	CB 327.1-001 COUPLER PLATE, REAR WELDMENT	1
4	CB 330 P8PL6 4-WAY MANIFOLD	1
5	CB 339 P4P6 MANIFOLD 2-WAY	1
6	CB 343 FTG P8P4 BUSHING	1
7	CB 346 FTG P8 T-FITTING	1
8	CB 351 FTG P4PL6 SWIVEL ELBOW	6
9	CB 354 FTG P4PL6 STRAIGHT	2
10	CB 356 FTG P4J4 BRASS MALE TO MALE	5
11	CB 357 FTG P4J8 BRASS MALE TO MALE	2
12	CB 365 FTG P4P4 ELBOW	1
13	CB 704 PRESSURE REGULATOR, 60 PSI	1
14	GP 011-B BLUE ID BAND MED	1
15	GP 011-BK BLACK ID BAND MED	1
16	GP 011-R RED ID BAND MED	1
17	SM 309 FITTING, BUSHING P4M PL4	1

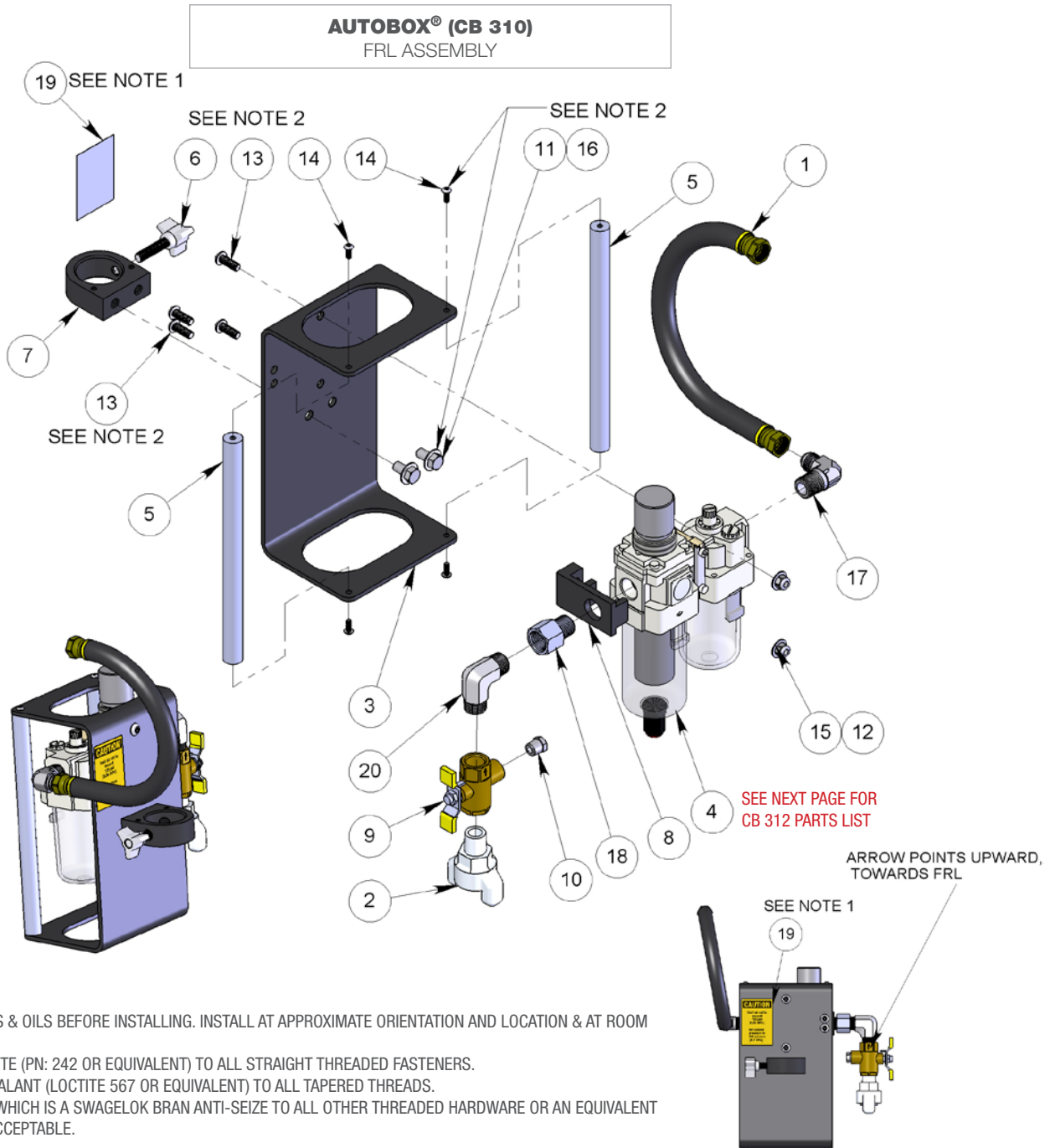
AUTOBOX® (CB 301)
 CB STAND ASSEMBLY


#	PART NUMBER	QTY.
1	CB 303 MTG POLE	1
2	CB 314 3-LOBE KNOB	1

AUTOBOX® (CB 370-25)
 CONTROL LINE ASSEMBLY


#	PART NUMBER	QTY.	UNITS
1	GP 053 1/2" PUSH-ON BRASS HOSE FITTING 1/2" JIC	4	
2	GPHO 0250-RUB-RD 1/4" ID X 1/2" OD PUSH-ON AIR HOSE, BUNA-N/PVC, 250 PSI, RED	1	25'
3	GPHO 0500-RUB-BK 1/2" ID X 3/4" OD PUSH-ON AIR HOSE, BUNA-N/PVC, 250 PSI, BLACK	1	25'
4	GPHO 0500-RUB-RD 1/2" ID X 3/4" OD PUSH-ON AIR HOSE, BUNA-N/PVC, 250 PSI, RED	1	25'
5	GPHS 2000-OLE-A-BK 2.00 DIA HEAVY DUTY MOISTURE SEAL HEAT-SHRINK	2	5"
6	GPSL 1750-NYL-G-BK 1.75 DIA BRAIDED EXPANDABLE HEAVY DUTY NYLON	1	24'
7	SRT 122 1/4" PUSH-ON BRASS HOSE FITTING 1/4" JIC	2	

PARTS DIAGRAM

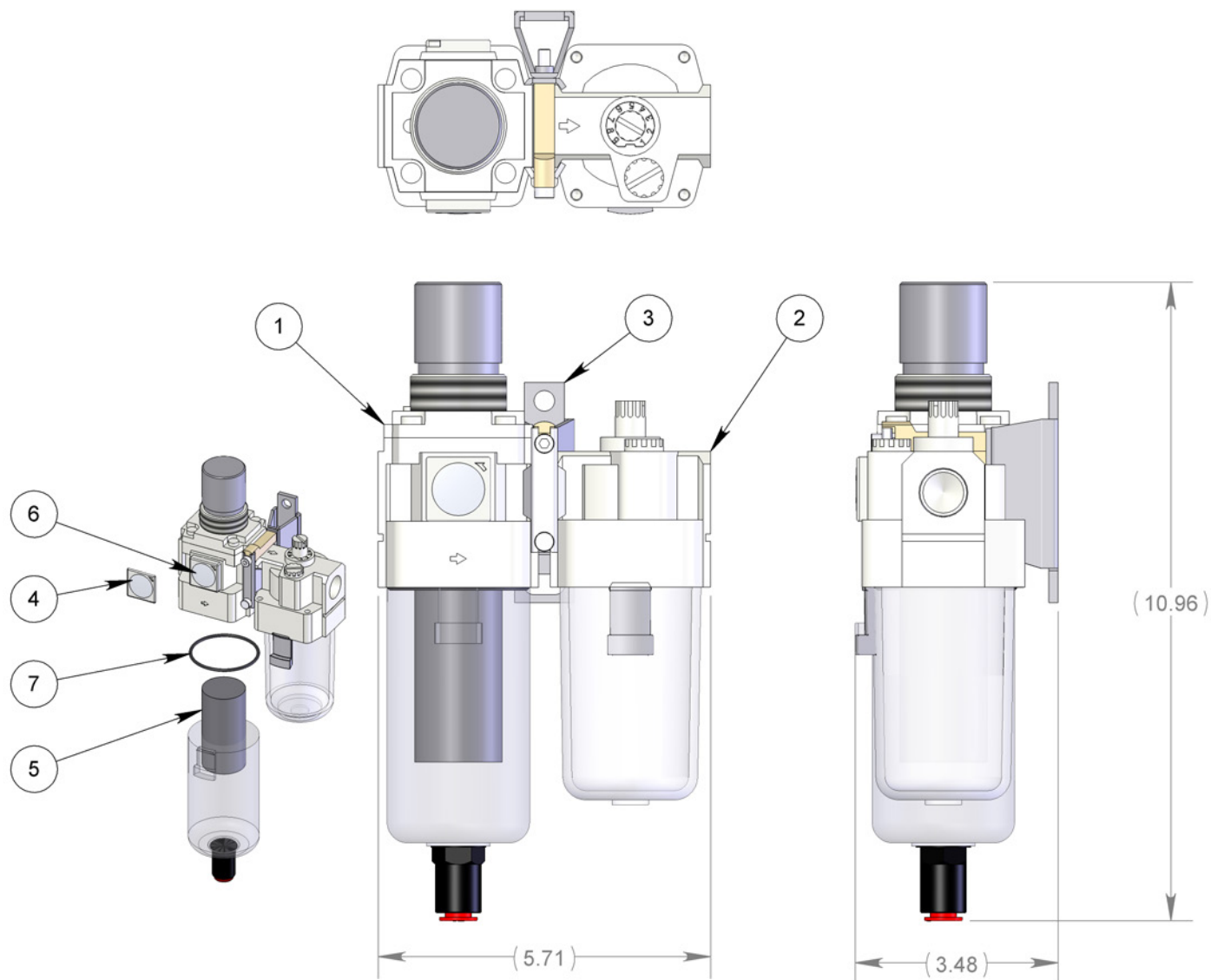


NOTES:

1. CLEAN ALL DEBRIS & OILS BEFORE INSTALLING. INSTALL AT APPROXIMATE ORIENTATION AND LOCATION & AT ROOM TEMP.
2. APPLY BLUE LOCTITE (PN: 242 OR EQUIVALENT) TO ALL STRAIGHT THREADED FASTENERS.
3. APPLY THREAD SEALANT (LOCTITE 567 OR EQUIVALENT) TO ALL TAPERED THREADS.
4. ADD BLUE GOOP WHICH IS A SWAGelok BRAN ANTI-SEIZE TO ALL OTHER THREADED HARDWARE OR AN EQUIVALENT ALTERNATIVE IS ACCEPTABLE.

#	PART NUMBER	QTY.			
1	CB 052-14 HOSE ASSY (FOR CB ABX)	1	11	GB 337-03 BOLT, HEX .37-16 X .75 SS	2
2	CB 114 INLET FITTING	1	12	GN 331-L NYLOK NUT SS	2
3	CB 311 FRL FRAME	1	13	GSB 331-035 BHCS .31-18 X .88 LG SS	4
4	CB 312 GEN3 FILTER-REGULATOR-LUBRICATOR WITH GEN2 CLAMP	1	14	GTB 319-02-32 BHTS .19-32 X .50 LG TORX-SS	4
5	CB 313 ROD	2	15	GW 331-F FLAT WASHER SS	2
6	CB 314 3-LOBE KNOB	1	16	GW 337-F FLAT WASHER SS	2
7	CB 328-001 POLE MOUNT	1	17	HRS 573 FITTING 90 DEG P8J8	1
8	CB 395 FRL BRACKET	1	18	ML 077-P8 BUSHING	1
9	CB 792 VALVE, AUTODRAIN, P8	1	19	PL 156-125 CAUTION INLET AIR, 125PSI MAX	1
10	CB 793 BREATHER, SINTERED BRONZE, P4	1	20	SBT 292.1 FTG 90° ELBOW P8MP8M	1

AUTOBOX® (CB 312)
 GEN 3 FILTER, REGULATOR, LUBRICATOR WITH GEN 2 CLAMP



NOTICE

REV A

THE ORIGINAL SMC AC40A-N04DE-Z HAS BECOME OBSOLETE AND REPLACED WITH SMC AC40A-N04DE-Z-B. IT IS COMPLETELY INTERCHANGEABLE.

REV B

THE GEN3 CLAMPS IN THE SMC AC40A-N04DE-Z-B ASSY WERE FAILING. THE AAP1378 ASSY USES THE GEN2 CLAMP. IT IS COMPLETELY INTERCHANGEABLE.

#	PART NUMBER	QTY.
1	CB 312.1 GEN3 REGULATOR-FILTER AW40-N04DE-Z-B	1
2	CB 312.2 LUBRICATOR AL40-N04-Z-A	1
3	CB 312.3 SPACER W BRACKET, GEN2 Y400T	1
4	CB 312.1.4 LENS COVER FOR GAUGE	1
5	CB 312.1.6 FILTER	1
6	CB 312.1.7 GAUGE WITH LENS	1
7	CB 312.1.8 O RING	1

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TERMS AND CONDITIONS

1. Acceptance of Terms and Conditions. These Terms and Conditions shall operate as Seller's acceptance of Buyer's purchase order, and such acceptance is made expressly conditional on assent by Buyer to the Terms and Conditions. Such assent shall be deemed to have been given unless written notice of objection to any of such Terms and Conditions (including inconsistencies between Buyer's purchase order and this acceptance) is given by Buyer to Seller promptly on receipt hereof.

Seller desires to provide its Buyer with prompt and efficient service. However, to negotiate individually the terms of each sales contract would substantially impair Seller's ability to provide such service. Accordingly, products furnished and services rendered by Seller are sold only on the Terms and Conditions stated herein. Notwithstanding any Terms or Conditions on Buyer's order, Seller's performance of any contract is expressly made conditional on Buyer's agreement to Seller's Terms and Conditions of sale unless otherwise specifically agreed to in writing by Seller. In the absence of such agreement, commencement of performance, shipment and/or delivery shall be for Buyer's convenience only and shall not be deemed or construed to be an acceptance of Buyer's Terms and Conditions. PRODUCTS SOLD BY SELLER ARE DESIGNED AND INTENDED TO BE USED AT HIGH PRESSURES AND SPEEDS, AND MAY BE DANGEROUS IF OPERATED IMPROPERLY OR WITHOUT THE USE OF APPROPRIATE SAFETY DEVICES AND GUARDS. BUYER IS CAUTIONED TO CAREFULLY READ AND UNDERSTAND THESE TERMS AND CONDITIONS, AS THEY HAVE IMPORTANT LEGAL CONSEQUENCES.

2. Payment/Prices. Unless other arrangements have been made in writing between Seller and Buyer, payment for product delivered shall be made upon receipt of invoice. The prices shown on the face hereof are those currently in effect. Prices invoiced shall be per price list in effect at the time of shipment. Prices are subject to increase for inclusion of any and all taxes which are applicable and which arise from the sale, delivery or use of Seller's products or services and for the collection of which Seller is or may be responsible to any governmental authority unless acceptable exemption certificates are provided by Buyer in accordance with law. Buyer shall pay all charges for transportation and delivery and all excise, order, occupation, use or similar taxes, duties, levies, charges or surcharges applicable to the equipment or services being purchased, whether now in effect or hereafter imposed by any governmental authority, foreign or domestic.

3. Warranty. Subject to the limitations and conditions hereinafter set forth, Seller warrants to the original Buyer that its products are free from defects in workmanship and material for a period of one (1) year months from shipment. Seller's obligation under this warranty shall be limited to repairing, replacing or issuing a credit for, at Seller's option, any products or services it finds to be defective in material or workmanship. In no event shall Seller be liable for any incidental, consequential or indirect damages of any kind. THIS WARRANTY SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY FOR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. No statement or recommendation made by Seller or its representative to Buyer or User shall constitute a warranty by Seller or a waiver or modification to any of the provisions hereof or create any liability for Seller. All warranty claims are subject to the exclusions and limitations set forth below:

a. The warranty shall not apply if the product or service (1) has been subject to misuse, negligence or accident; (2) has not been installed or

operated in accordance with Seller's recommendations; (3) has been operated under more severe conditions than those specified for the particular product or service; (4) has been operated beyond the rated capacity of the product; or (5) has been repaired or altered outside Seller's facilities or in any way so as, in Seller's judgment, to affect its stability or reliability.

b. Products that Seller furnishes, but does not manufacture, carry only the warranty of the manufacturer of such products. Where other manufacturers' or suppliers' products used in Seller's products or services prove defective, Seller's liability shall exist only to the extent that Seller is able to recover from such manufacturers or suppliers for such defects.

c. Any warranty granted by Seller to the Buyer shall be deemed void if any goods covered by such warranty are used for any purpose not recommended or permitted. In addition, the Buyer shall indemnify Seller and hold Seller harmless from and against any and all claims, damages, losses, costs, expenses and other liability of whatever nature that Seller suffers or incurs by reason of any such unintended use.

d. Notice of defective product or service must be given in writing to Seller by Buyer or User within fifteen (15) business days following receipt of goods. Buyer or User shall keep such products or services in an unaltered condition for examination by Seller's representative. No goods may be returned for credit or adjustment without prior written permission from Seller.

4. Product Liability. Buyer specifically acknowledges that the products being purchased may be operated at high speeds and/or pressures, and that as such they may be inherently dangerous if not used correctly. Buyer shall be solely responsible for the safe operation of the products at all times and for determining the safety devices and guards that may be required for the safe operation of the products. Buyer shall undertake to specify and order all safety devices and guards necessary for the safe operation of the equipment covered. All safety devices and guards offered in Seller's quotations are recommended for purchase. Seller may provide necessary safety devices and guards not offered in this quotation at an extra price in accordance with the specifications of Buyer. Buyer shall at all times use and require its employees to use all necessary and appropriate safety devices, guards and proper safe operating procedures. Buyer shall not remove or modify any such devices, guards or warning signs and shall insist on safe operating practices on the part of its personnel. In no event shall Seller be responsible for any injuries to persons or property caused by defects in any equipment, including by way of illustration and not limitation, any pumps, compressors, fittings, connections, components, piping or hoses up to the point that same are connected to the product. Buyer agrees to indemnify and to save Seller harmless from any and all liability or obligation incurred by or against Seller, including costs and attorneys' fees, to or by any persons injured directly or indirectly in the operation of the equipment furnished under the following conditions:

a. if Buyer fails to purchase and use necessary and appropriate safety devices and guards as determined and/or recommended by Seller;

b. if Buyer fails to maintain in good working order such safety devices and guards as are purchased from Seller;

c. if Buyer adds, omits, repairs, modifies, replaces or substitutes any components on the equipment without permission from Seller;

d. if Buyer exceeds at any time the maximum safe loads, pressures or speeds recommended by Seller for the equipment furnished hereunder without the specific written consent of Seller; or

e. if Buyer otherwise fails to operate the product or equipment in accordance with Seller's printed instructions or otherwise negligently operates the equipment.

5. Delivery. Seller is not obligated to make delivery by a specified date, but will always use its best efforts to make delivery within the time requested. All deliveries are based on F.O.B. Seller's factory, unless specifically agreed otherwise, and Buyer shall pay all shipping costs and insurance from that point. Seller, in its sole discretion, will determine and arrange the means and manner of transportation of the products. Responsibility of Seller shall cease and Buyer assumes all risk of loss or damages upon Seller's delivery to and receipt by a common carrier. Carriers shall be responsible for goods lost or damaged in transit and Buyer shall immediately notify the carrier in writing of such loss or damage. At Buyer's request Seller will offer its assistance. THE PROPOSED SHIPMENT DATE IS AN ESTIMATE. UNDER NO CIRCUMSTANCES SHALL SELLER HAVE ANY LIABILITY WHATSOEVER FOR LOSS OF USE OR FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM DELAY REGARDLESS OF THE REASON(S). Shortages or errors must be reported within fifteen (15) business days from receipt of shipment to secure adjustment. No merchandise may be returned without securing written approval from Seller. Seller will notify Buyer promptly of any material delay and will specify the revised delivery date as soon as practicable. Seller shall not be liable for any delay in delivery or performance, or for any failure to manufacture, deliver or perform due to (a) any cause beyond its reasonable control; (b) any act of God, act of Buyer, act of civil or military authority, governmental priority, strike or other labor disturbance, flood, epidemic, war, riot, delay in transportation or car shortage; or (c) inability on account of any cause beyond the reasonable control of Seller to obtain necessary materials, components, services or facilities. In the event of any such delay, the date of delivery or of performance shall be extended for a period equal to the time lost by reason of the delay.

6. Technical Advice. All technical advice, recommendations and services of Seller are intended for use by persons having adequate skill, at their own risk, and Seller assumes no responsibility, and Buyer hereby waives all claims against Seller, for results obtained or damages incurred from the use of Seller's advice, recommendations and services.

7. Modification. These Terms and Conditions are intended by Seller and Buyer to constitute a final, complete and exclusive expression of agreement and cannot be supplemented or amended without Seller's prior written approval. Seller's waiver of any breach, or failure to enforce any of the Terms and Conditions at any time, shall not in any way affect, limit or waive Seller's right thereafter to enforce and compel strict compliance with every Term and Condition thereof. If any provisions of these Terms and Conditions are held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the other portions hereof.

8. Disputes. Buyer and Seller shall attempt in good faith promptly to resolve any dispute arising under these Terms and Conditions by negotiations between representatives who have authority to settle the controversy. If unsuccessful, Buyer and Seller shall further attempt in good faith to settle the dispute by nonbinding third-party mediation, with

fees and expenses of such mediation apportioned equally to each side. Any dispute not so resolved by negotiation or mediation may then be submitted to a court of competent jurisdiction in accordance with the terms hereof. These procedures are the exclusive procedures for the resolution of all such disputes between the parties. All sales, agreements for sale, offers to sell, proposals, acknowledgments and contracts of sale, including, but not limited to, purchase orders accepted by Seller, shall be considered a contract under the laws of the State of Colorado and the rights and duties of all persons, and the construction and effect of all provisions hereof shall be governed by and construed according to the laws of such state. A state or federal court located within the State of Colorado shall have sole and exclusive jurisdiction over any litigation concerning any such matters as well as any alleged defects of any products or equipment covered thereby or damages sustained as a result of such alleged defects. If any litigation is commenced between Seller and Buyer, or their personal representatives, concerning any provision hereof, the party prevailing in the litigation shall be entitled, in addition to such other relief that is granted, to a reasonable sum as and for their attorneys' fees and costs in such litigation or arbitration.

STONEAGE TRADEMARK LIST

View the list of StoneAge's trademarks and service marks and learn how the trademarks should be used. Use of StoneAge trademarks may be prohibited, unless expressly authorized.

<http://www.StoneAgetools.com/trademark-list/>

STONEAGE PATENT DATA

View the list of StoneAge's current U.S. patent numbers and descriptions.

<http://www.sapatents.com>



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