SPONGE-JET®
170-EX Feed Unit™
USER MANUAL

Sponge-Jet, Inc. (USA)
14 Patterson Lane
Newington, NH 03801

+1-603-610-7950
www.spongejet.com

CONTENTS

IMPORTANT NOTE: While parts, systems, components, operational procedures may be the same between equipment models, the images provided in this manual may vary from model to model.

All precautions for working in potentially explosive atmospheres apply; nothing in the checklist, this user manual or other communications from Sponge-Jet should be interpreted to replace or modify standard safe work practices.

This manual represents the following models and their approximate working capacity:

Model: 170-EX **Working Capacity:** 170 liters

English Language is Original Instructions.
Translated from Original Instructions.

PRE-OPERATION CHECKLIST

To be completed BEFORE all operations and all shifts in potentially hazardous (flammable) locations

This Pre-Operation Check List, the "Safety Checklist" in Unit's user manual, ALL specifications in manufacturer's certificate shall be observed. **NOTE:** They are supplemental to and do not replace local, state and federal statutory health and safety regulations, generally recognized safety and occupational health rules for power-driven equipment.

SPONGE-JET, ATEX CERTIFIED FEED UNITS ARE INTENDED FOR USE IN AREAS CATEGORIZED AS HAZARDOUS by ATEX DIRECTIVE 2014 / 34 / EU for work in potentially explosive environments as listed on the machinery nameplate. Ensure details on serial plate, such as ambient temperature range, and equipment rating are suitable for the application.

Any use beyond the limits specified in Unit's user manual or on Unit nameplate is considered incorrect. Prior to use, ensure the following items have been completed.

ACKNOWLEDGMENT:

Date: _____ Operator: _____

Maintain Safe working practices:

- ❏ All users must be trained and familiar with specific risks of the hazardous location and job-site as well as with working in potentially explosive atmospheres.
- ❏ Operators shall be familiar with using high-pressure equipment, abrasive blasting equipment, respiratory protection and normal operating instructions of the Unit.
- ❏ The Unit shall only be managed, maintained and operated by qualified personnel. Qualified personnel are individuals who, due to their training, experience and knowledge of applicable health and safety regulations and standards, are qualified to identify and take necessary action(s) to avoid possible hazards during operation.
- ❏ The operating organization must ensure that personnel tasked with operation, maintenance and servicing Unit have read, understand and are compliant with all operating instructions listed in this check list, Safety Checklist and ALL specifications in manufacturer's certificate.
- ❏ Ensure all operators working in hazardous areas understand risks of static discharge and ignition hazards, and follow company safety procedures.
- ❏ Ensure dust is removed from exterior of Unit and regular checks are made on exterior of Unit and on actuator.
- ❏ Periodically wipe down exterior of Unit and media actuator with a moist cloth.
- ❏ Do not blast with coiled hoses.
- ❏ Inspect blast hose for loose covers, kinks, bulges, or soft spots which might indicate broken or dis-placed reinforcement. If issues are found, take hose out of service and replace.
- ❏ Supply air hose must be grounded and suitable for use in specified hazardous area.
- ❏ Verify all electrical equipment is appropriate for use in the hazardous location.
- ❏ Liquid level of gauges must be checked. Liquid level must not drop below 75% of gauge diameter, nor shall it be replenished. Replace gauge if liquid filling drops below 75%.
- ❏ Before connecting Unit (1) verify compressed air supply, hoses, couplings and all accessories have been confirmed appropriate for use in the hazardous location, and (2) all pre-operation checklists (for compressed air supply, hoses, couplings and all accessories) have been completed.
- ❏ All repair and maintenance activities for Unit shall be performed outside of hazardous location or otherwise assessed for specific risks.
- ❏ Ensure the earthing clamp, whip-checks, clamps, wires, safety pins are inspected and in good working order. (See "Earthing Clamp" and "Continuity of Unit" sections for more details)
- ❏ Repeat all safety checks in this checklist and in the Safety Checklist each time unit is transported or repositioned.

PRE-OPERATION CHECKLIST *(Continued)*

Air compressors shall:

- ❏ Have filter on intake system to prevent ingress of dust or similar foreign material into parts where compression takes place;
- ❏ Use only lubricants which are resistant to carbonization;
- ❏ Provide compressed air with a maximum dew point of +10°C to maximize Unit life and install a refrigeration-type air dryer;
- ❏ Provide clean, dry air compliant to ISO standard 8573.1, quality class 4.5.5. This implies ≤25 micron particle size, ≤7°c (45°f) dew point and ≤25 mg/cbm maximum oil content.

Earthing Clamp:

- ❏ Unit shall be bonded according to facility and industry standard practices
- ❏ Confirm Unit is connected via earthing clamp to a designated, proven ground source;
- ❏ Confirm earthing clamp cable is correctly colored to the geographic region (e.g. Europe =Green, North America =Orange);
- ❏ Evaluate cleanliness and sharpness of the clamp points;
- ❏ Evaluate stiffness of the clamp springs;
- ❏ Examine earthing clamp assembly for (1) evidence of broken cable strands and (2) solidity of cable to attachments. Repair if necessary.

Continuity of Unit:


Earthing terminal

- ❏ Verify continuity from Nozzle to Nozzle Holder, from Blast Nozzle to Nozzle Liner, from Unit to Blast Hose and from Unit to Supply Line is according to facility, local, state and federal requirements.
- ❏ Visually confirm ALL earthing terminal assemblies are intact, are in good operating condition, and free of corrosion.
- ❏ Earthing terminals, hose coupling terminals excluded, shall be coated with conductive grease;
- ❏ Verify all conductive tape along the Blast Hose is intact and not ripped. Replace conductive tape where necessary.
- ❏ Confirm static-dissipating wheels are intact and in firm contact with the ground.
- ❏ Confirm all operator clothing, PPE and accessories are rated for static, flammability and all specific zone hazards.

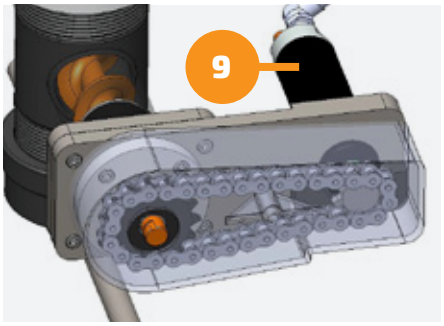
Approved Factory Equipment:

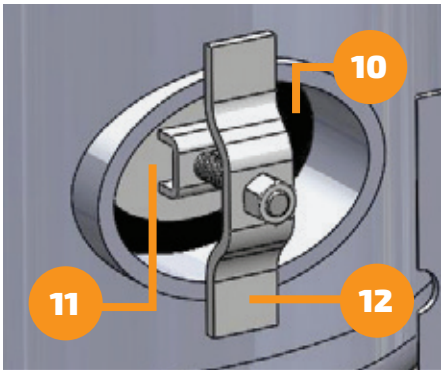
- ❏ Only Sponge-Jet approved replacement parts or accessories shall be used.
- ❏ The following commonly replaced, factory-approved items shall be verified prior to installation:
    - ❏ ATEX compliant or a non-sparking metal, positive feed Deadman
    - ❏ ATEX compliant pressure gauges
    - ❏ Brass or other non-sparking metal hose couplings
    - ❏ Brass or other non-sparking nozzle
    - ❏ Stainless steel, copper or other non-sparking metal safety pins and wire
    - ❏ Static-dissipating hoses (including blast hose, twinline and actuator hoses)

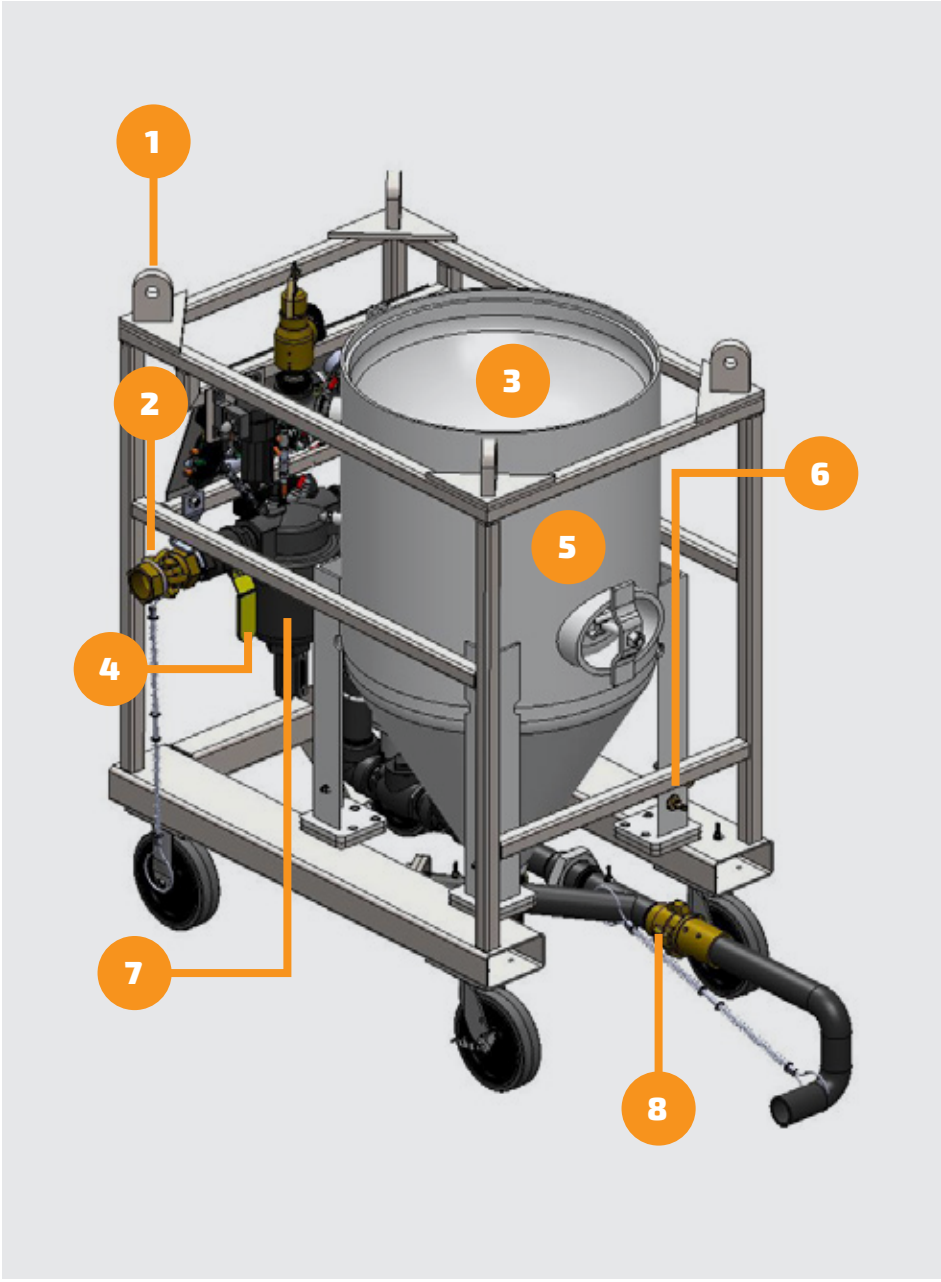
All precautions for working in potentially explosive atmospheres apply; nothing in this checklist, the user manual or other communications from Sponge-Jet should be interpreted to replace or modify standard safe work practices. Where this document is in direct conflict with local, state or federal requirements, regulatory requirements shall take precedence.

1.0 BASIC COMPONENTS

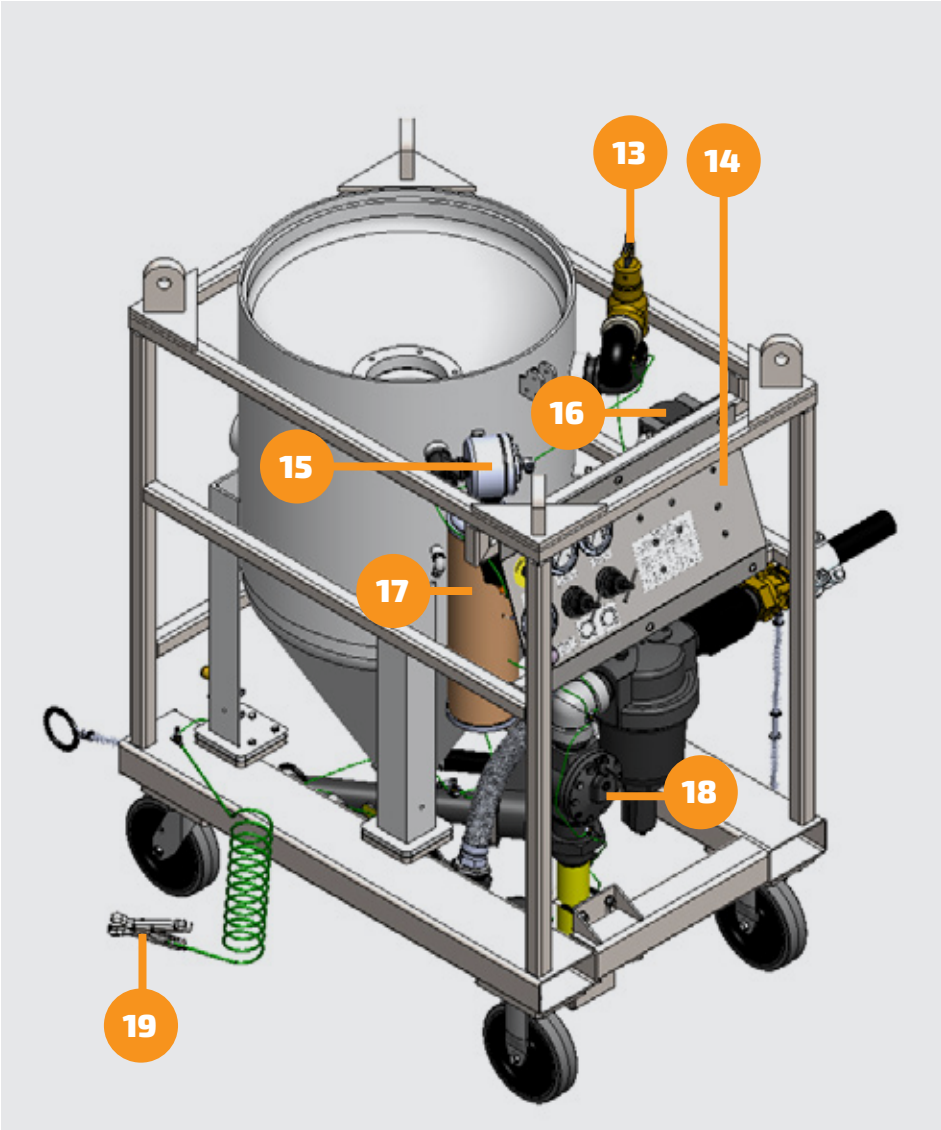
1 **Certified Lifting Point (4x)**
2 **Supply Line Connection**
3 **Hopper**
4 **Main Air Ball Valve**
5 **Pressure Vessel**
6 **Twinline Quick Connect Fittings**
7 **Secondary Water Separator**
8 **Blast Hose Connection**
9 **Air Motor**
10 **Gasket**
11 **Handhole Cover**
12 **Crab Assembly**

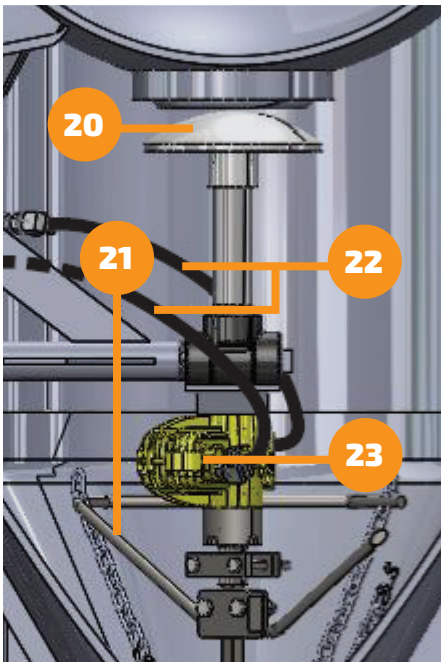


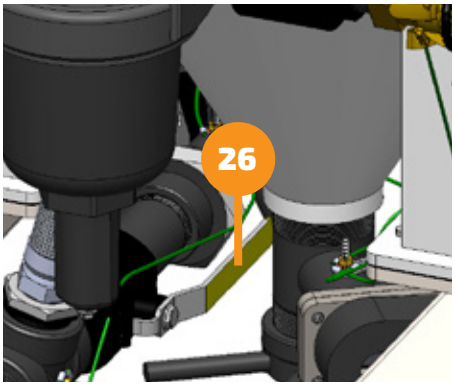


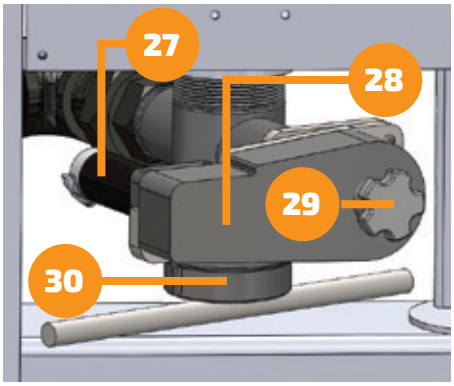


13 **Safety Valve**
14 **Control Panel**
15 **Exhaust Valve**
16 **Control Panel**
Moisture Separator
17 **Exhaust Muffler**
18 **On/Off Blast Pressure Regulator**
19 **Earthing Clamp**
20 **Pop-up**
21 **Actuator Tree and Chain**
22 **Actuator Control Line**
23 **Media Actuator**
24 **Air Motor Lubricator**
25 **Air Motor Moisture Separator**
26 **Choke Valve**
27 **Air Motor**
28 **Auger Chain Guard**
29 **Manual Rotation Knob**
30 **Clean Out Trap**

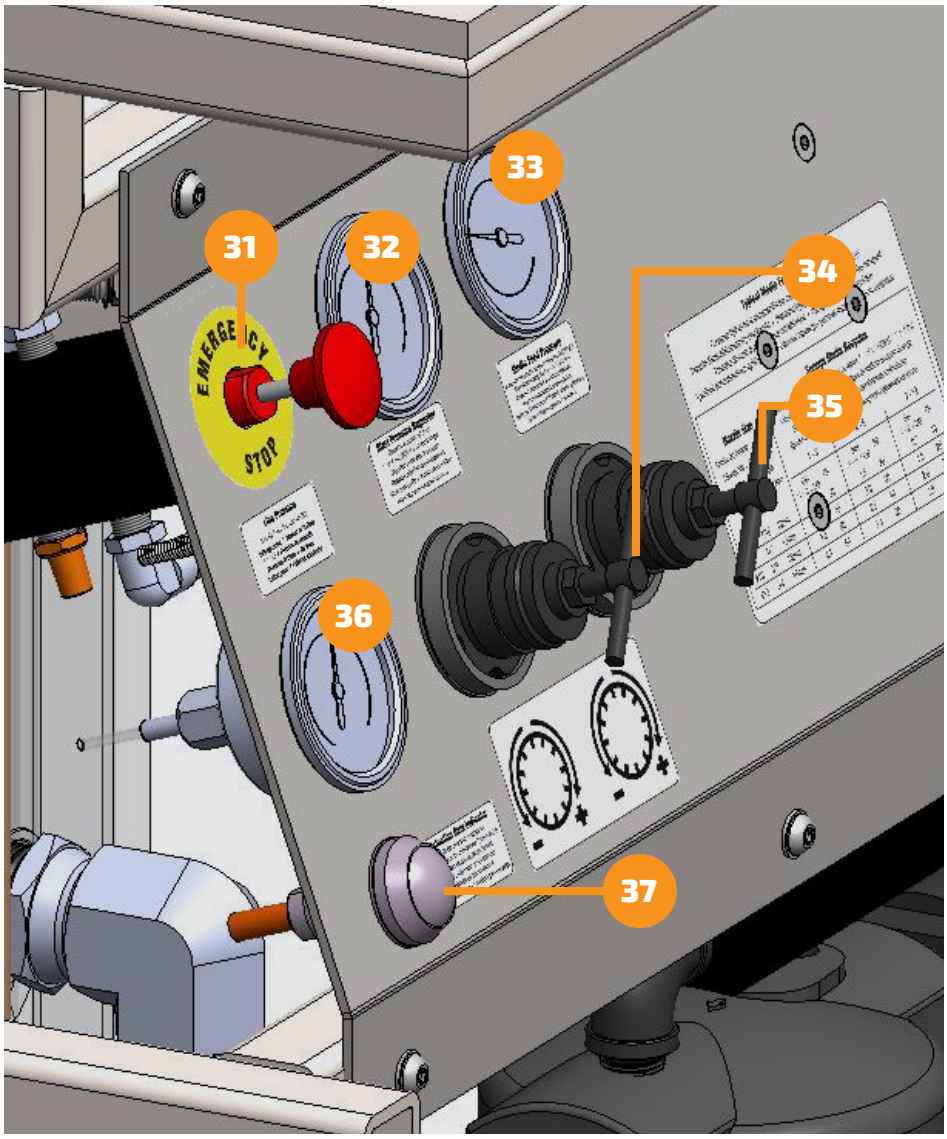








31 **Emergency Stop Button**
32 **Blast Pressure Gauge**
33 **Media Feed Gauge**
34 **Blast Pressure Adjustment**
35 **Media Feed Adjustment**
36 **Line Pressure Gauge**
37 **Actuation Rate Indicator Eye**
38 **Blast Hose**
39 **Blast Hose Grounding Cable**
40 **Ground Screw**
41 **Nozzle Holder**
42 **Nozzle**
43 **Twinline**
44 **Twinline Connection**
45 **Deadman Handle**



2.0 SAFETY CHECKLIST

The safety of you and others is extremely important.

There are important safety messages in this manual and on your product. Always read and obey safety messages.

This is a safety alert symbol. This symbol alerts to hazards that can injure or kill you and/or others. The safety alert symbol and words like "Caution" and "Danger" precede all safety messages. These words mean:

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.

Survey environment for hazards; read manual and instructions before operating and follow ALL safety practices in accordance with ALL applicable local regulations.

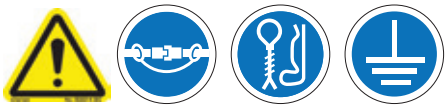
ENSURE CAPACITY OF THE CUSTOMER-INSTALLED OVER-PRESSURE RELIEF VALVE EQUALS OR EXCEEDS CAPACITY OF THE COMPRESSED AIR SUPPLY.

FACTORY-SUPPLIED OVERPRESSURE RELIEF VALVE IS RATED ≤ 45M³/MIN (1600 SCFM). CONFIRM INSTALLED OVERPRESSURE RELIEF VALVE ON UNIT IS SUITABLE FOR THE RATING OF THE COMPRESSED AIR SUPPLY.

Location and usage of the Emergency Stop Button should be understood before operation. Pushing in the Emergency Stop Button stops operation; Pulling it out allows for operation. DO NOT pull Emergency Stop Button and press Deadman until ALL operators are fully prepared to blast and nozzle(s) are under operator control.

This Unit is a pressurized system. Only trained operators should adjust, maintain and repair it. Visit www.spongejet.com for information on training.

Inbound pressure should never exceed the listed Maximum Working Pressure on the data plate. To prevent electrostatic buildup and possible electric discharge, the unit and work piece must be properly grounded/bonded.



WARNING
Secure ALL safety restraints. Whip-check, safety pins, wire, grounding straps and hose couplings must be properly secured before operating. Failure to do so may result in serious injury or death.

WARNING
Eye, hearing and respiratory personal protective equipment required for operators and others in close proximity to blasting. Failure to do so may result in serious injury.

WARNING
Sudden media discharge and loud noise. Keep hands and face free from area. ALWAYS use proper respiratory, hearing and eye protection equipment.

The operator and anyone within 1m (3ft) of the nozzle can be exposed to sound emission in excess of 120 dB(A).

Never point **Blast Nozzle** towards yourself or others.

WARNING
ONLY use Sponge-Jet approved positive-feed Deadman control handles. DO NOT reverse twinlines. Failure to comply will override safety controls, cause unintentional start-up and unreliable shutdown—which may lead to serious injury or death.

Prior to each use refer to this Unit's "Pre-Operation Check List" and inspect ALL equipment.

Never operate unit with any worn or malfunctioning components.

All pneumatic lines should be inspected for holes, wear and proper fit.

Safety pins (wire) and whip-checks should be fitted at all Air Supply Hose and **Blast Hose** couplings to prevent accidental disconnection.

Do not operate without **Auger Chain Guard** in place.

Never weld or make modifications to the pressure vessel as this will void certifications.

CAUTION
Crush hazard. Lock wheels before operating. Unit may roll, resulting in personal injury.

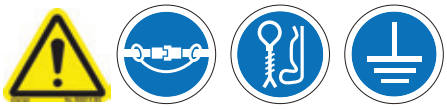
CAUTION
Ignition hazard. Unit shall be moved to operating location without impact or dragging.

CAUTION
Static discharge hazard. When moving Unit by its wheels, speed shall be <1 m/s (2.2 mph) and shall be by walking (not towed by vehicle).

WARNING
Hand-hole MUST be securely fastened. Improper seal may result in serious injury.

WARNING
Do not operate with guards removed. Moving parts may cut, pinch, or crush. Keep clear of moving parts.

WARNING
Pressurized system. Release air pressure before servicing. Failure to comply may result in serious injury.



WARNING
Secure ALL safety restraints. Whip-check, safety pins, wire, grounding straps and hose couplings must be properly secured before operating. Failure to do so may result in serious injury or death.

Keep hands clear from Pop-up when **Deadman** is first being pressed.

WARNING
Pinch point. Moving unit may cut, pinch or cause dismemberment; keep clear of moving parts.

3.0 REQUIREMENTS

3.1 Air Supply/Compressor

Clean, dry, compressed air must be supplied in adequate volume and pressure to accommodate nozzle size at the desired blast pressure.

Highest rated pressure for models in this manual is 10.3bar (150psi).

**Always check vessel rating located on Unit's data-plate.*

NOTE: High-humidity environments require additional moisture separators.

(METRIC) M³/MIN REQUIREMENTS

Nozzle Size		4.1bar	4.8bar	5.5bar	6.2bar	6.9bar	8.3bar	9.7bar
No. 6	Nozzle	3.6	4.0	4.6	4.9	5.5	6.2	7.1
9.5mm	Feed Unit	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	Reserve	0.9	1.0	1.1	1.2	1.3	1.5	1.6
	Total	**5.6**	**6.2**	**6.8**	**7.2**	**8.0**	**8.8**	**9.8**
No. 7	Nozzle	4.8	5.5	6.1	6.8	7.2	8.5	9.8
11mm	Feed Unit	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	Reserve	1.2	1.3	1.5	1.6	1.7	1.9	2.2
	Total	**7.1**	**7.9**	**8.7**	**9.5**	**10.0**	**11.5**	**13.1**
No. 8	Nozzle	6.3	7.1	7.9	8.7	9.6	11.1	12.7
12.5mm	Feed Unit	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	Reserve	1.5	1.7	1.8	2.0	2.1	2.4	2.8
	Total	**9.0**	**9.9**	**10.9**	**11.9**	**12.8**	**14.7**	**16.6**
No. 10	Nozzle	10.1	11.4	12.8	14.3	15.5	17.3	19.8
15mm	Feed Unit	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	Reserve	2.2	2.5	2.8	3.1	3.3	3.7	4.2
	Total	**13.4**	**15.1**	**16.7**	**18.5**	**20.0**	**22.1**	**25.1**
No. 12	Nozzle	14.2	16.3	18.4	19.8	22.6	28.6	32.8
18mm	Feed Unit	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	Reserve	3.1	3.5	3.9	4.2	4.8	5.9	6.8
	Total	**18.3**	**20.9**	**23.4**	**25.1**	**28.5**	**35.7**	**40.7**

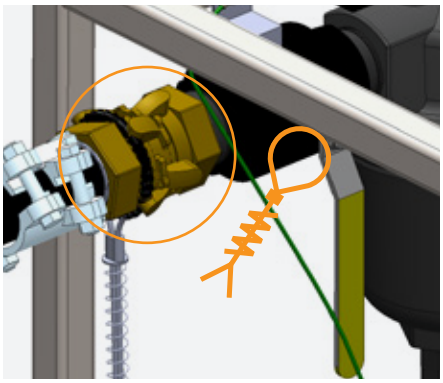
(IMPERIAL) CFM REQUIREMENTS

Nozzle Size		60psi	70psi	80psi	90psi	100psi	120psi	140psi
No. 6 3/8in	Nozzle	126	143	161	173	196	220	253
	Feed Unit	40	40	40	40	40	40	40
	Reserve	33	37	40	43	47	52	59
	Total	**199**	**220**	**241**	**256**	**283**	**312**	**352**
No. 7 7/16in	Nozzle	170	194	217	240	254	300	344
	Feed Unit	40	40	40	40	40	40	40
	Reserve	42	47	51	56	59	68	77
	Total	**252**	**281**	**308**	**336**	**353**	**408**	**461**
No. 8 1/2in	Nozzle	224	252	280	309	338	392	450
	Feed Unit	40	40	40	40	40	40	40
	Reserve	53	58	64	70	76	86	98
	Total	**317**	**350**	**384**	**419**	**454**	**518**	**588**
No. 10 5/8in	Nozzle	356	404	452	504	548	611	701
	Feed Unit	40	40	40	40	40	40	40
	Reserve	79	89	98	109	118	130	148
	Total	**475**	**533**	**590**	**653**	**706**	**781**	**889**
No. 12 3/4in	Nozzle	500	575	650	700	800	1,010	1,159
	Feed Unit	40	40	40	40	40	40	40
	Reserve	108	123	138	148	168	210	240
	Total	**648**	**738**	**828**	**888**	**1,008**	**1,260**	**1,439**

3.2 Air Supply Requirements

This Unit uses a 50mm (2in) standard pipe typically fitted with a 50mm (2in) universal 4-lug coupling.

Larger hoses decrease pressure loss.



Nozzle	Orifice	Recommended Air Line I.D.
#6	9.5mm (3/8in)	50mm (2in)
#7	11mm (7/16in)	50mm (2in)
#8	12.5mm (1/2in)	76mm (3in)
#10	16mm (5/8in)	76mm (3in)
#12	19mm (3/4in)	76mm (3in)

3.3 Blast Hoses

Extensions up to 30m (100ft) should have minimum 38mm (1.5in) I.D.

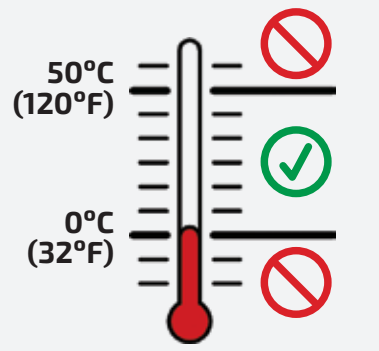
Extensions over 30m (100ft) should have minimum 50mm (2.0in) I.D. Blast Hose Extension. Larger hoses decrease pressure loss.

3.4 Ambient Temperature

Operating temperature range is 0°c (32°f) to 50°c (120°f).

NOTE: Ice build-up from moisture may require thawing prior to operation.

II 3 G Ex h IIC T5 Gc T_a = -20°c to 60°c
II 3 D Ex h IIIC T100 °C Dc T_a = -20°c to 60°c



3.5 Containment

Sponge-Jet Sponge Media™ must be contained to be efficiently recycled. Use plastic sheeting or mesh. Projects involving hazardous materials, high wind load or other challenging conditions may require more complex containment and negative air dust collection.

NOTE: Pre-cleaning the blast area can minimize dust and debris which can also cause equipment malfunctions.

Always follow local, state and federal guidelines concerning proper containment, ventilation and monitoring procedures.

WARNING
Eye, hearing and respiratory personal protective equipment required for operators and others in close proximity to blasting. Failure to do so may result in serious injury.

4.0 OPERATION

This equipment is designed to be operated in a manner consistent only with instructions contained in this manual.

Before Feed Unit Pressurization and Operation

Verify the Emergency Stop Button is pressed.

CAUTION
Crush hazard. Lock wheels before operating. Unit may roll, resulting in personal injury.

All pneumatic lines should be inspected for holes, wear and proper fit.

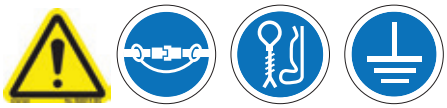
Safety pins (wire) and whip-checks should be fitted at all Air Supply Hose and **Blast Hose** couplings to prevent accidental disconnection.

WARNING
Hand-hole MUST be securely fastened. Improper seal may result in serious injury.

Do not operate without **Auger Chain Guard** in place.

WARNING
Do not operate with guards removed. Moving parts may cut, pinch, or crush. Keep clear of moving parts.

WARNING
Pressurized system. Release air pressure before servicing. Failure to comply may result in serious injury.



WARNING
Secure ALL safety restraints. Whip-check, safety pins, wire, grounding straps and hose couplings must be properly secured before operating. Failure to do so may result in serious injury or death.

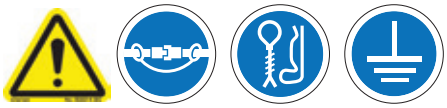
Keep hands clear from Pop-up when **Deadman** is first being pressed.

WARNING
Pinch point. Moving unit may cut, pinch or cause dismemberment, keep clear of moving parts.

WARNING
Eye, hearing and respiratory personal protective equipment required for operators and others in close proximity to blasting. Failure to do so may result in serious injury.

4.1 Operation of Feed Unit

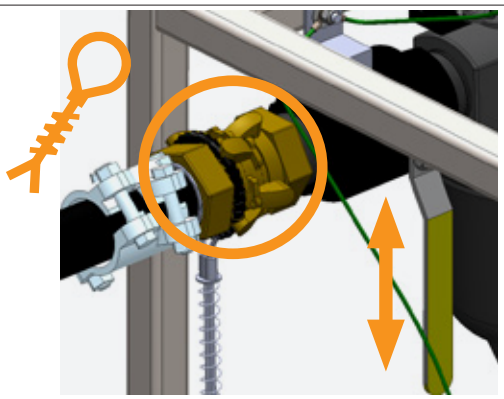
Inspect all **Blast Hose** and connections. Repair or replace worn or damaged components. Ensure all couplings are equipped with coupling gaskets, safety pins and whip-checks. Confirm all are properly installed.



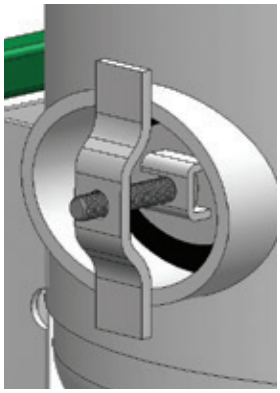
WARNING

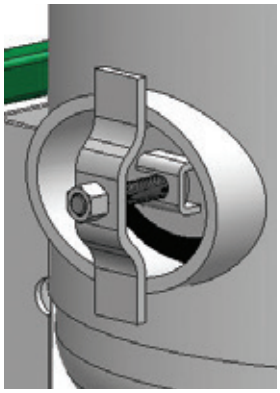
Secure ALL safety restraints. Whip-check, safety wire, grounding straps and hose couplings must be properly secured before operating. Failure to do so may result in serious injury or death.

Connect compressor to **Supply Line Connection** and secure safety pins and whip-check.

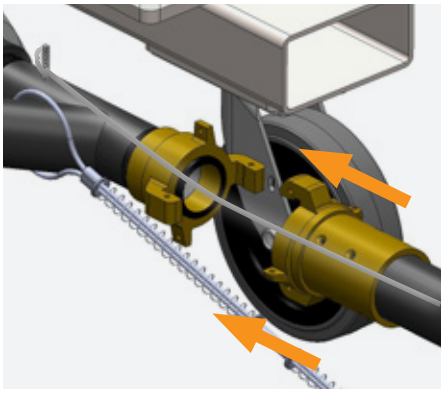


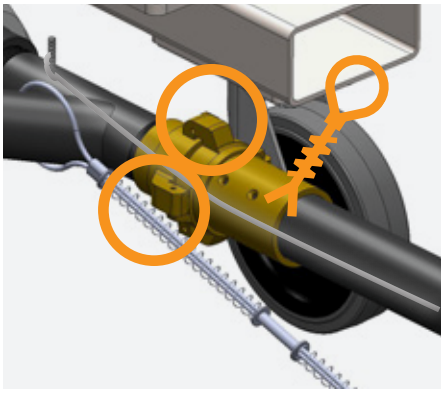
Attach **Handhole Cover** with gasket.



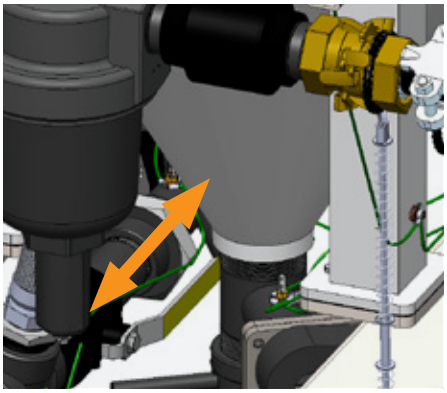


Connect **Blast Hose** and secure with twisted wire.

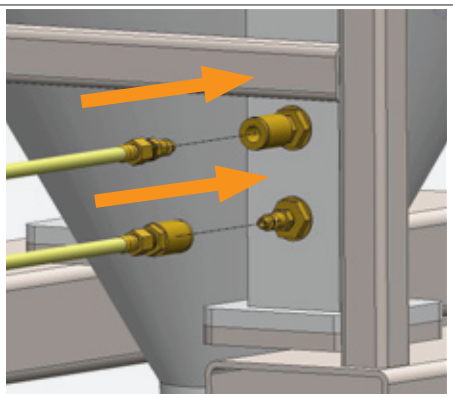


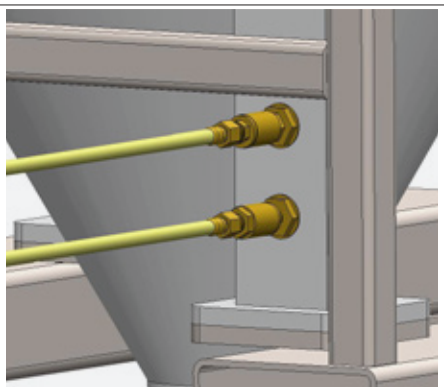


Confirm **Choke Valve** is open.



Connect Return and Supply
Twinline Quick Connect Fittings.



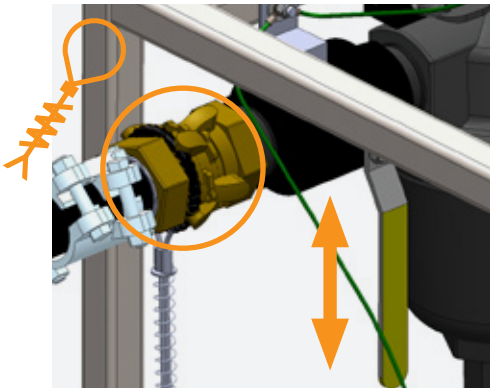


Fill Feed Unit through **Hopper.**

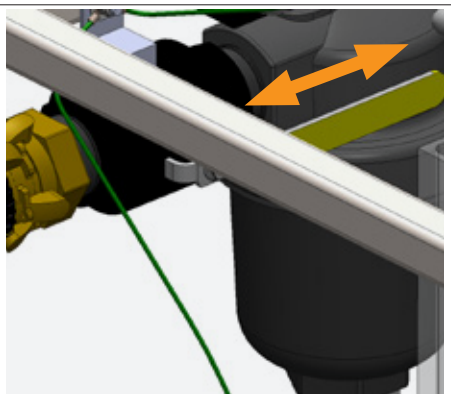
WARNING
Pinch point. Moving part may cut, pinch or cause dismemberment, keep clear of moving pop-up.

WARNING
Eye, hearing and respiratory personal protective equipment required for operators and others in close proximity to blasting. Failure to do so may result in serious injury.

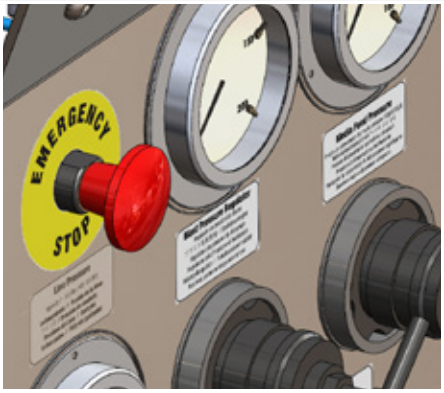
Check **Main Air Ball Valve** is closed, then charge supply line.

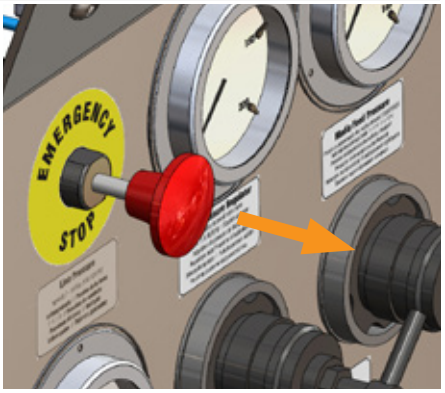


Open **Main Air Ball Valve.**

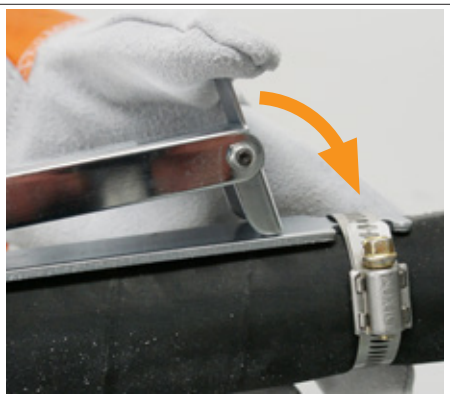


Pull out **Emergency Stop Button**.



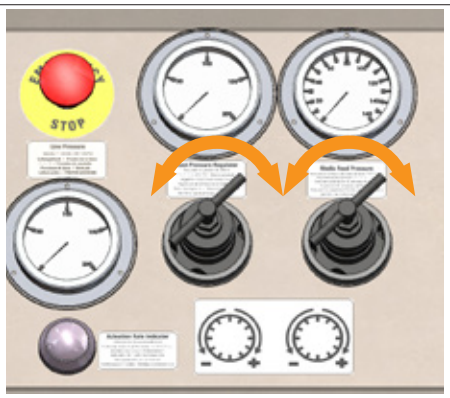


To begin blasting, unlock **Deadman Handle** by pressing down safety flap.



Press **Deadman Handle** down and wait 5 to 10 seconds for Sponge Media to flow.

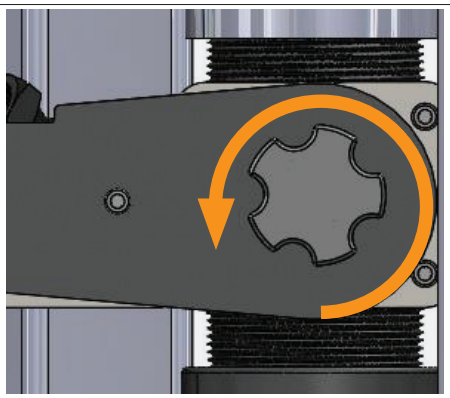
Adjust **Blast Pressure** and **Media Feed Pressure** to desired levels.

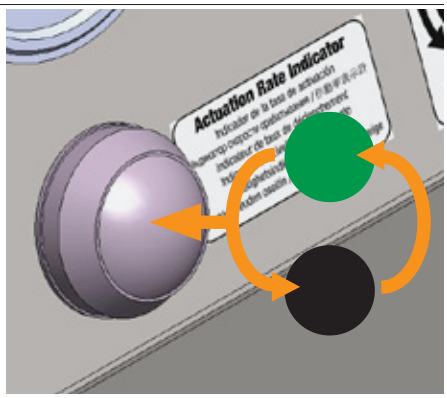


Typical Media Feed Pressures

Nozzle Size		Sponge Media Recycles 1-3		4-6		Working Mix 7-12	
		bar	*psi*	*bar*	*psi*	*bar*	*psi*
#7	10mm (7/16in)	2.0	30	1.5	20	0.7	10
#8	12mm (1/2in)	2.8	40	2.0	30	1.5	20
#10	15mm (5/8in)	3.4	50	2.8	40	2.0	30
#12	18mm (3/4in)	4.1	60	3.4	50	2.8	40

Confirm **Manual Rotation Knob** is rotating and **Actuation Rate Indicator Eye** is functioning - by seeing it cycle between black and green.





Prepare surface to desired condition.

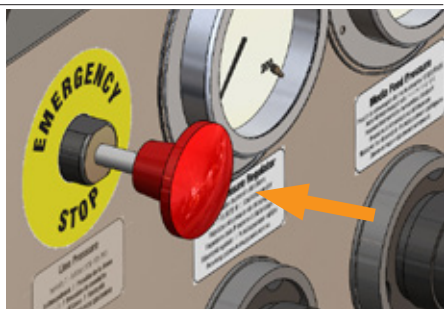
4.2 (Non-Maintenance) Shutdown of Unit

For normal shutdown during operation...

Release **Deadman Handle**.

OR

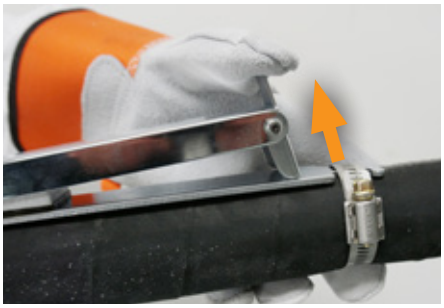
Push in **Emergency Stop Button**.

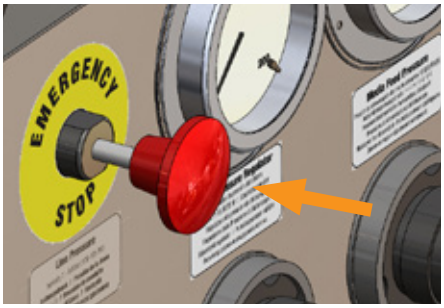


4.3 (Maintenance/Long-Term) Shutdown of Unit

For shutdowns to conduct inspection, maintenance or for extended non-use...

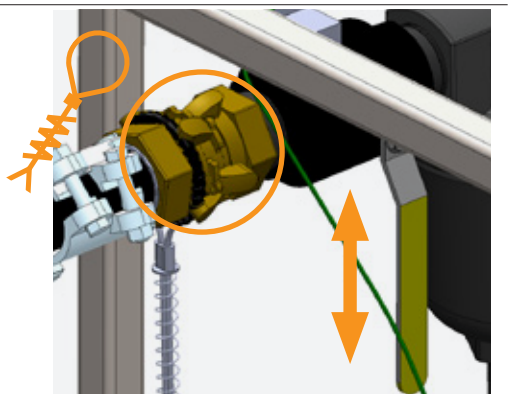
Release **Deadman** Handle, then push in **Emergency Stop Button**.



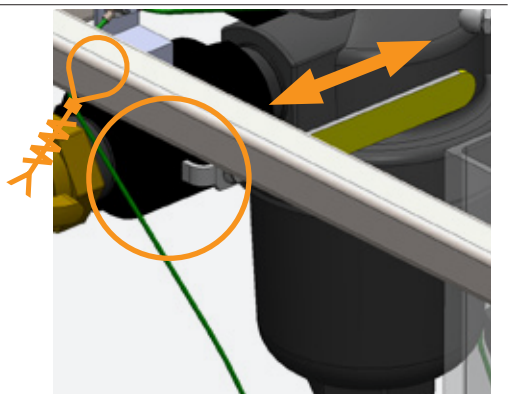


Shut off inbound supply of air from its source.

Shut off **Main Air Ball Valve**.



Open **Main Air Ball Valve**.



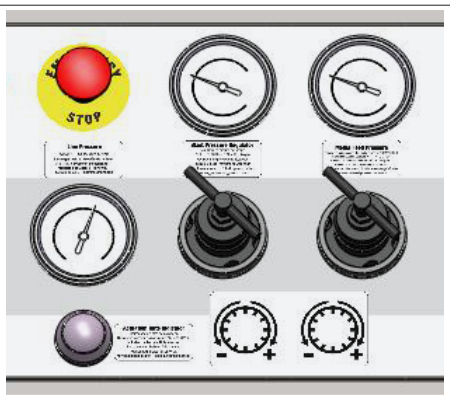
Point **Blast Nozzle** at working substrate (away from people); press safety flap and then press **Deadman Handle** down.

Keep **Deadman Handle** pressed down until all remaining air is vented.

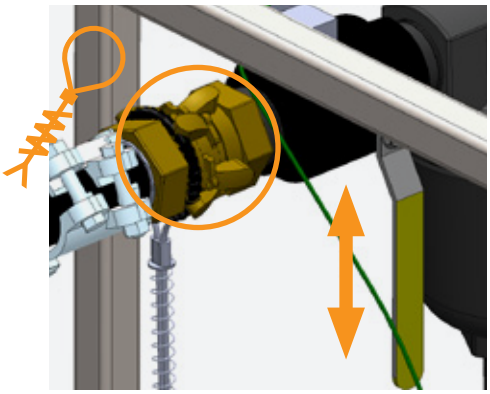
WARNING

Pressurized system. Release air pressure before servicing. Failure to comply may result in serious injury.

Once all **Control Panel** gauges read “0”psi, confirm supply line to the Unit is depressurized.



Close **Main Air Ball Valve**.



5.0 MAINTENANCE

Routine maintenance is required to provide long and reliable equipment life. This Unit must be shut down and fully depressurized prior to any maintenance.

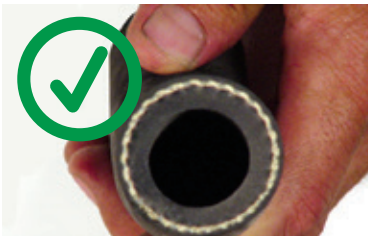
WARNING
Pressurized system. Release air pressure before servicing. Failure to comply may result in serious injury.

WARNING:
Ignition hazard. ALL repair/maintenance activities of unit shall be performed outside explosive environment. Failure to comply may result in death.

5.1 Prior to each use

Inspect **Blast Nozzle** for wear. Once nozzle throat has worn 1.5mm (1/16in) beyond its original intended diameter, it should be replaced.

Thoroughly inspect **Blast Hose** components and connections. Replace as needed. Ensure all couplings are properly equipped with coupling gaskets, wire and whip-checks.



5.2 Prior to each use

Confirm adequate pneumatic tool oil is present in **Air Motor Lubricator**.

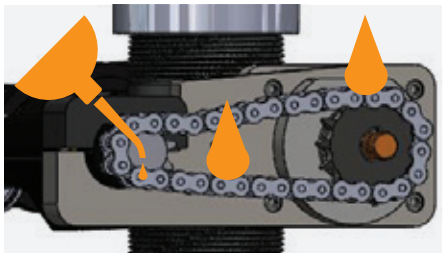
SE SAE 5W (ISO 32)
NON-DETERGENT OIL ONLY.

5.3 Performed monthly (or as needed)

Inspect and clean Exhaust Muffler. Replace when exhaust is slow. Remove any accumulated media in Exhaust Muffler and reinstall. **WARNING:** Do no operate equipment without Exhaust muffler in place.

Remove **Auger Chain Guard** and inspect **Auger Drive Chain.**

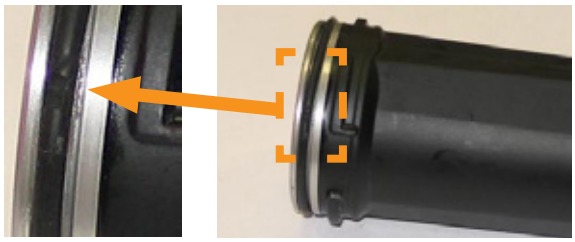
Apply lightweight lubricating oil as necessary.



5.3 Performed bi-monthly (or as needed)

Remove the lower, threaded portion of the **Secondary Water Separator, Control Panel Moisture Separator** and **Air Motor Moisture Separator** and inspect the interior and O-Ring.

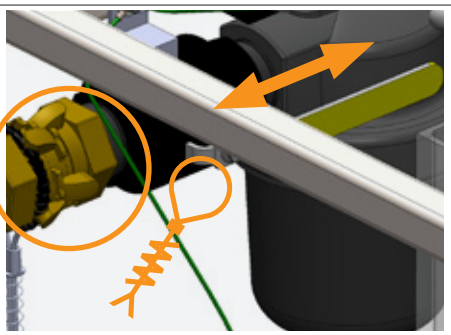
Remove any contaminants; replace O-Ring if needed and reinstall.



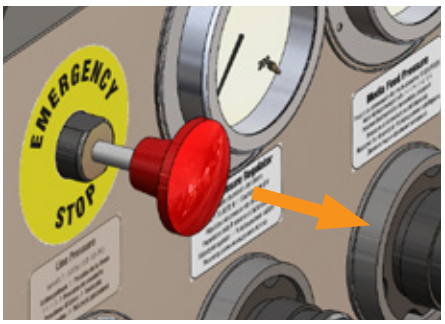
6.0 TROUBLESHOOTING

Unit does not operate when Deadman Handle is depressed

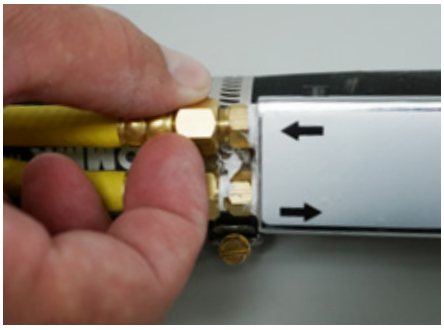
Check **Main Air Ball Valve** is open.



Check **Emergency Stop** Button is pulled out.

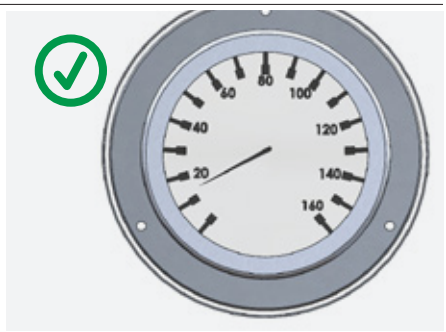


Check all **Twinline Quick Connect Fittings** are connected and secure.



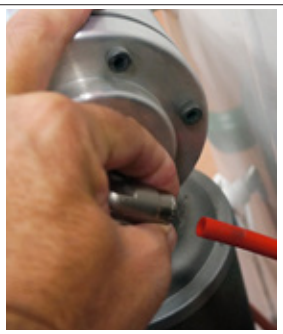
Check for damage to **Twinline.**

Check **Line Pressure** is adequate for operation using Section 3.1.

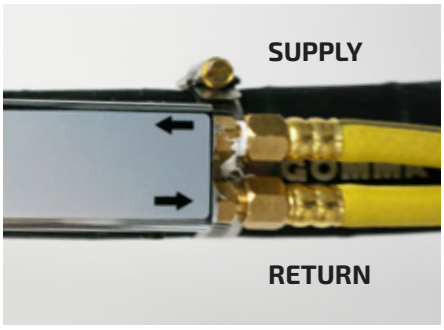


Unit does not operate when Deadman Handle is pressed continued.

Remove red air line from **Exhaust Valve**; cover with thumb, then press **Deadman Handle** (down).



IF no air is felt exiting red air line, trace air flow operation through **Twinline** and **Deadman Handle** checking for obstructions or leaks.

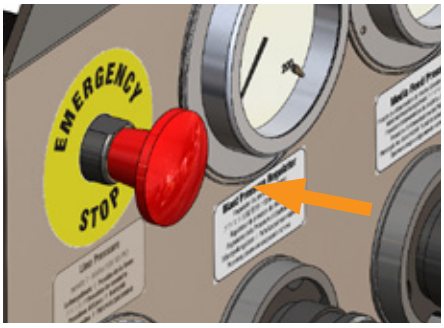
IF air is felt exiting red air line, place thumb on opening of red air line and press **Deadman Handle** (down).


IF unit starts (air exits nozzle) depressurize unit and replace **Exhaust Valve Diaphragm**.



Air will not stop exiting nozzle when Deadman Handle is released

Push in **Emergency Stop Button**.

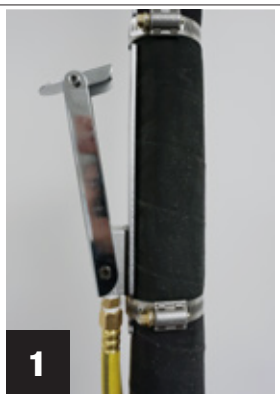


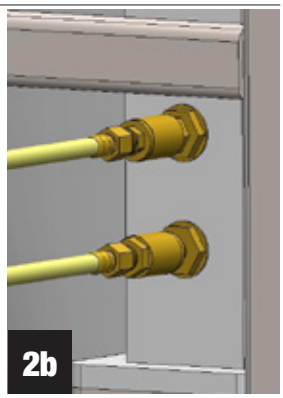
If unit stops, likely problems are:

1. Incorrect **Deadman**. Replace with Sponge-Jet **Deadman**.

2. **Twinline** air lines from unit to **Deadman** have been reversed.

3. **Deadman** is broken; replace with Sponge-Jet **Deadman**.



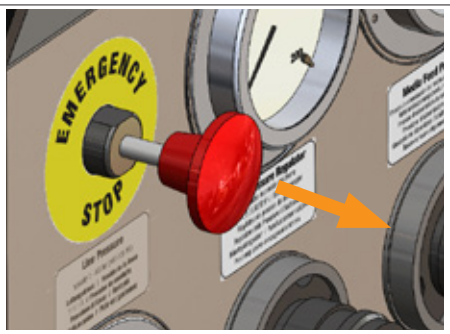


If Unit does not stop, likely problem is:

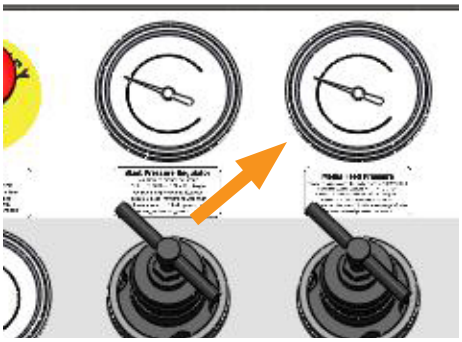
On/Off Blast Pressure Regulator is malfunctioning. Contact a Sponge-Jet representative

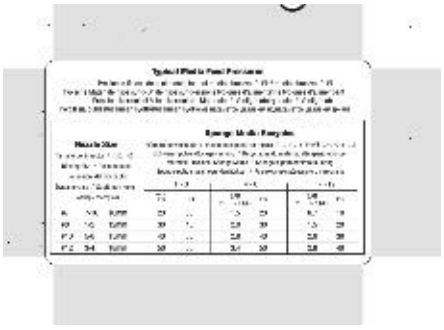
Auger will not begin rotating

Check **Emergency Stop** Button is pulled out.



Confirm **Media Feed Pressure** Gauge reads consistently with **Typical Media Feed Pressure** label or chart at below.

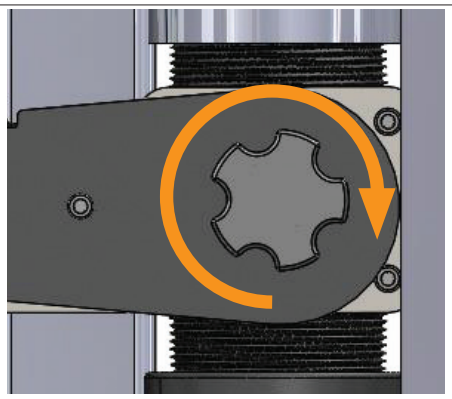




Nozzle Size		**Sponge Media Recycles**				**Working Mix**	
		1-3		**4-6**		**7-12**	
		bar	*psi*	*bar*	*psi*	*bar*	*psi*
#7	10mm (7/16in)	2.0	30	1.5	20	0.7	10
#8	12mm (1/2in)	2.8	40	2.0	30	1.5	20
#10	15mm (5/8in)	3.4	50	2.8	40	2.0	30
#12	18mm (3/4in)	4.1	60	3.4	50	2.8	40

Turn **Manual Rotation Knob** clockwise to confirm free rotation.

If excessive force is required, clear obstruction (see next section).

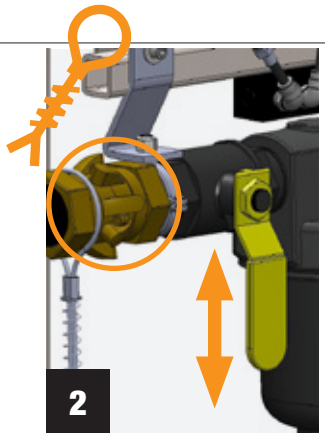


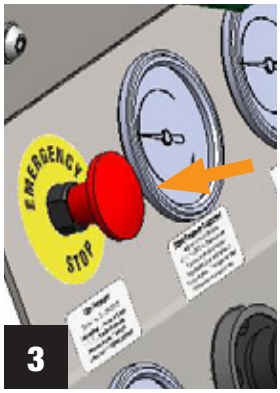
Auger stops rotating during normal operation

1. Release **Deadman Handle** and depressurize unit.

2. Close **Main Air Ball Valve.**

3. Push in **Emergency Stop** Button.



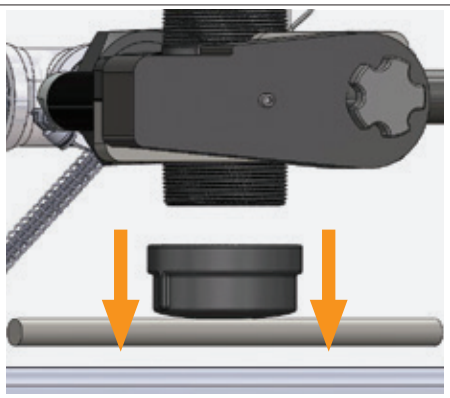


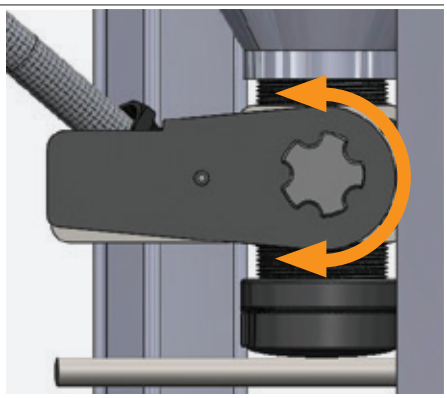
Remove **Clean Out Trap.**

Rotate **Manual Rotation Knob** clockwise and counter-clockwise until obstruction falls out.

Auger should move smoothly.

Replace **Clean Out Trap.**

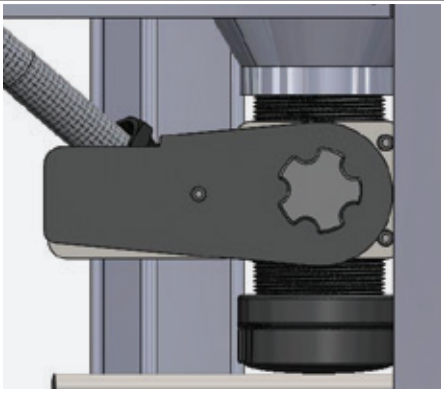


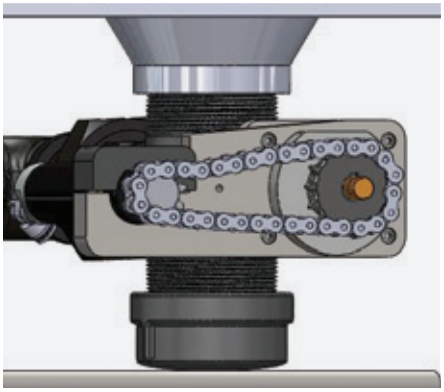


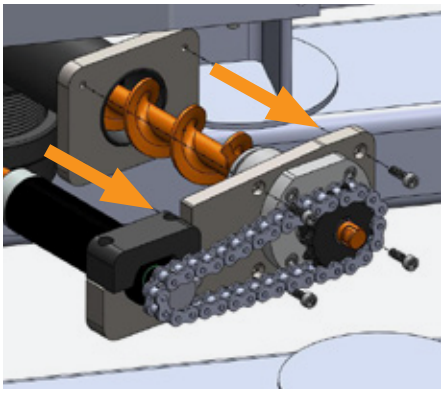
If obstruction cannot be cleared:

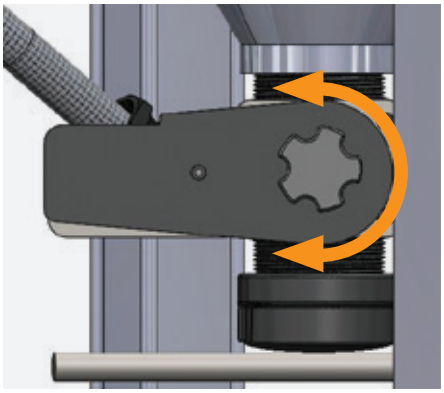
Remove **Auger Chain Guard**. Remove four outside screws, pull **Auger** from unit and remove obstruction.

Reassemble **Auger**; replace four outside screws, and test for smooth rotation. Re-install **Auger Chain Guard.**



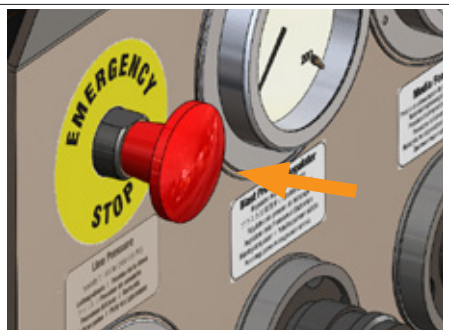






Air will not stop exiting nozzle when Deadman Handle is released

Push in **Emergency Stop Button**.

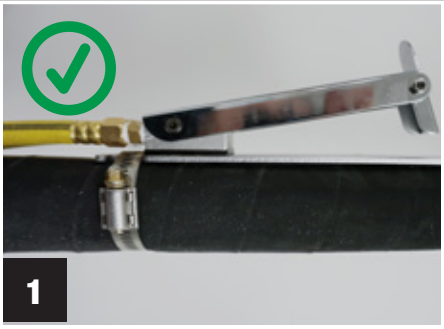


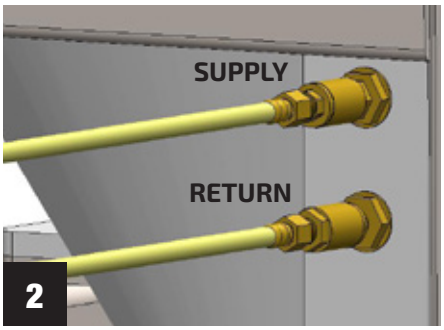
IF UNIT STOPS, likely problems are:

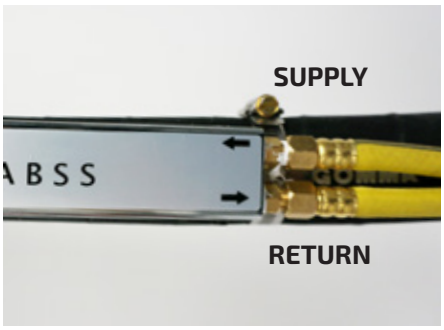
1. Incorrect **Deadman**.
Replace with Sponge-Jet ATEX certified **Deadman.**

2. **Twinline** air lines from unit to **Deadman** have been reversed.

3. **Deadman** is broken; replace with Sponge-Jet ATEX certified **Deadman**.



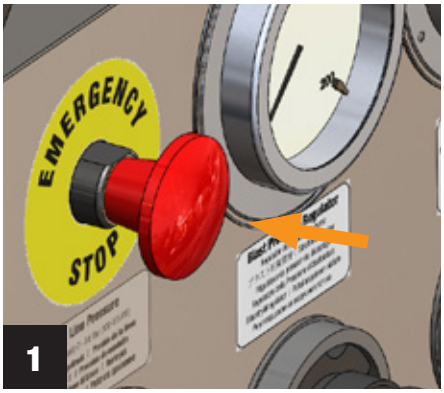


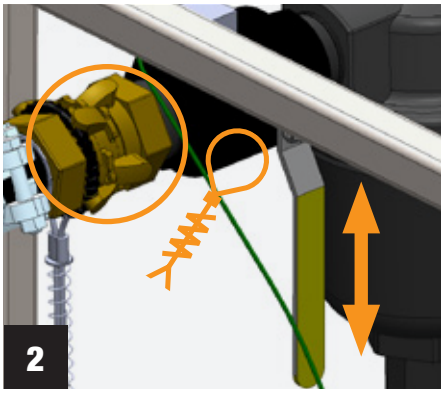


Air flow through nozzle suddenly stops

1. Do not restart. immediately press in **Emergency Stop** Button.

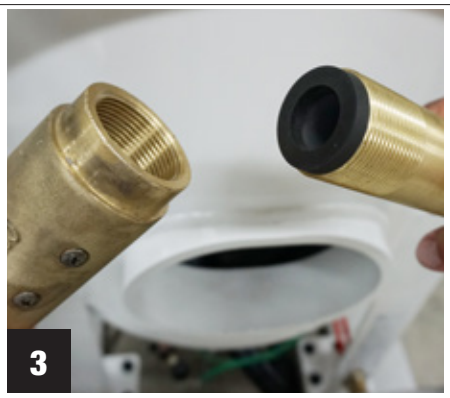
2. Depressurize unit and close **Main Air Ball Valve.**

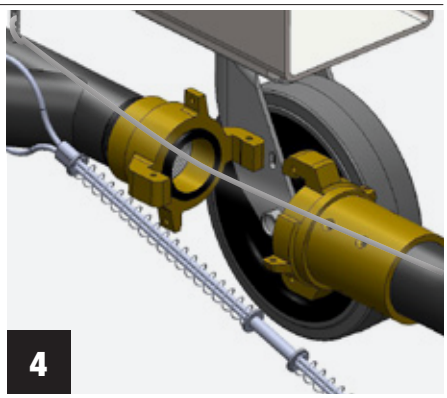




3. Remove **Blast Nozzle** from **Blast Hose;** inspect for and remove obstructions.

4. Disconnect all **Blast Hose** connections; inspect for and remove obstructions.

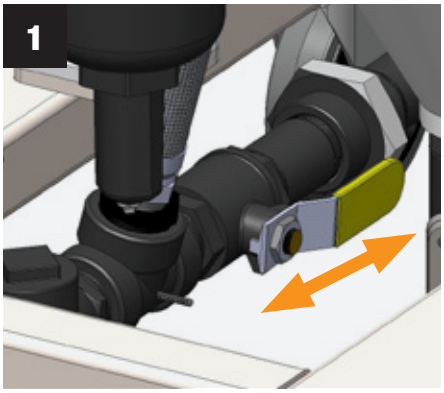


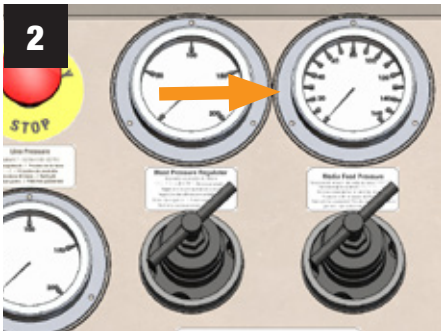


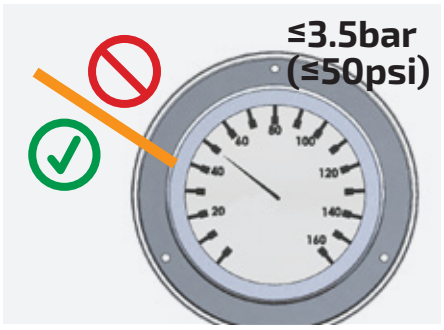
Too much Sponge Media exits Nozzle or is pulsing

1. Check **Choke Valve** is open.

2. Check **Media Feed Pressure** Gauge is within recommended range (see right).



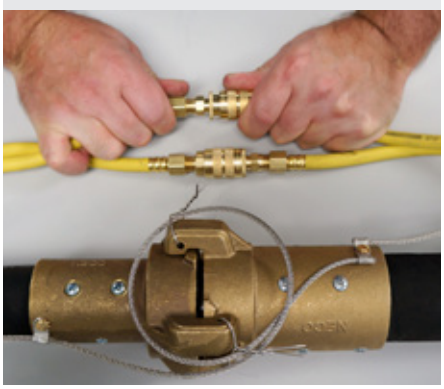


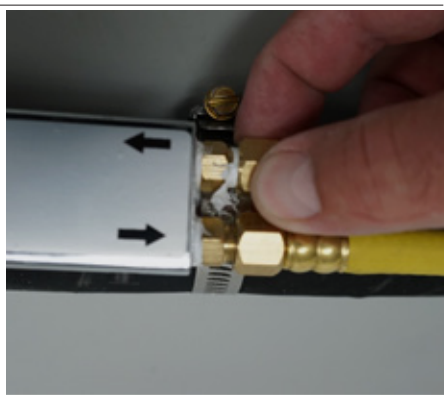


Blast Pressure increases and decreases continuously or Unit exhausts intermittently while blasting

1. Check for damage to **Twinline** and for air leaks at all fittings and connections.

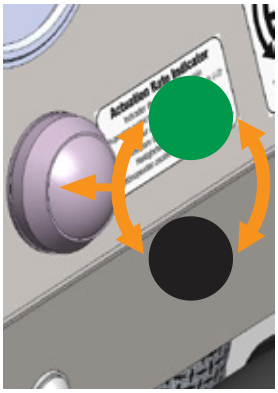
Repair, replace or tighten as necessary.

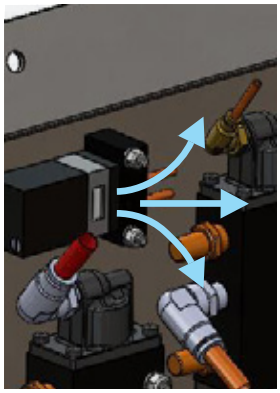




Air flows through Nozzle without Sponge Media while Auger is rotating

Check cycling of **Actuation Rate Indicator Eye** and for light pulse of air exiting front face of Timer. Confirm Timer is set between 1.25-1.5.

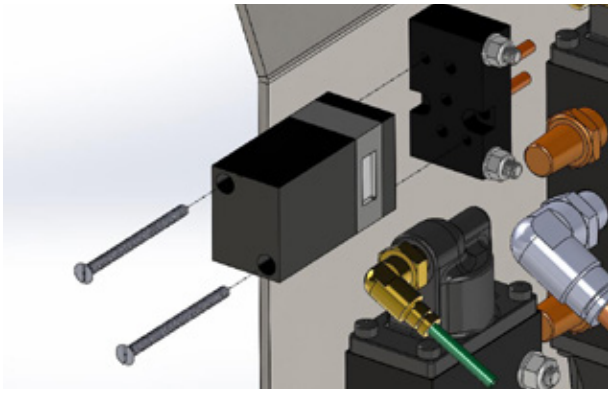




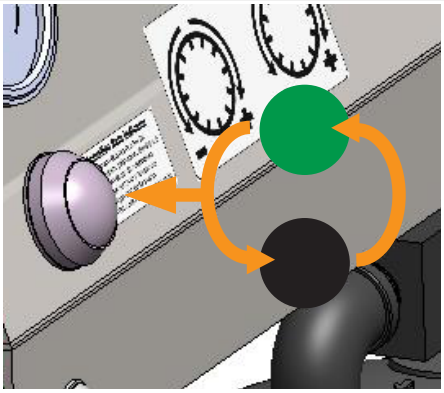
If Actuation Rate Indicator Eye and Timer test successfully, resume blasting.

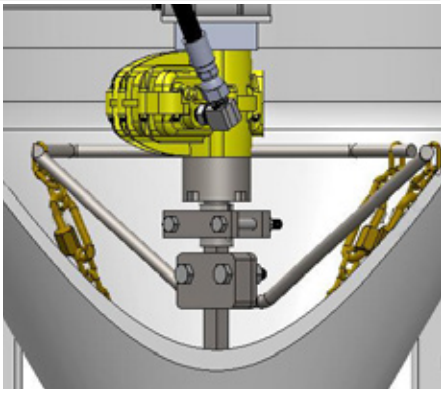
If no light pulse of air is exiting side of Timer…

Remove (2) nuts from **Timer** base, then remove (2) screws from **Timer** face; replace the **Timer**, matching airline positions prior to removal.



Confirm proper motion of **Actuation Indicator Eye** and a 45° back-and-forth motion of **Actuator Tree and Chain**.





NOTES

MODEL

SERIAL