



SPONGE-JET[®] **B-VAC Pro 4[™]** USER MANUAL



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

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

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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.

This manual represents the following models:

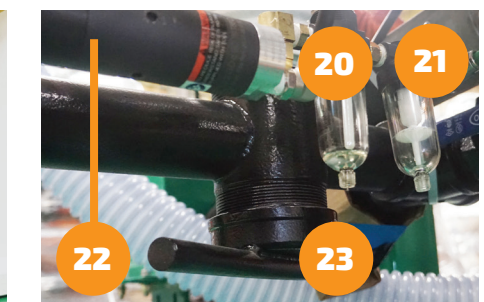
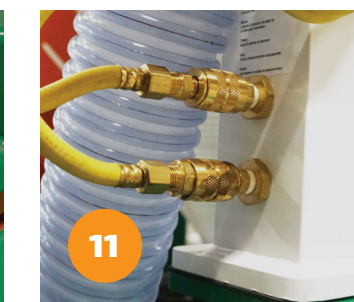
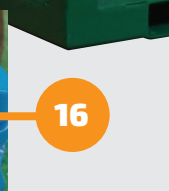
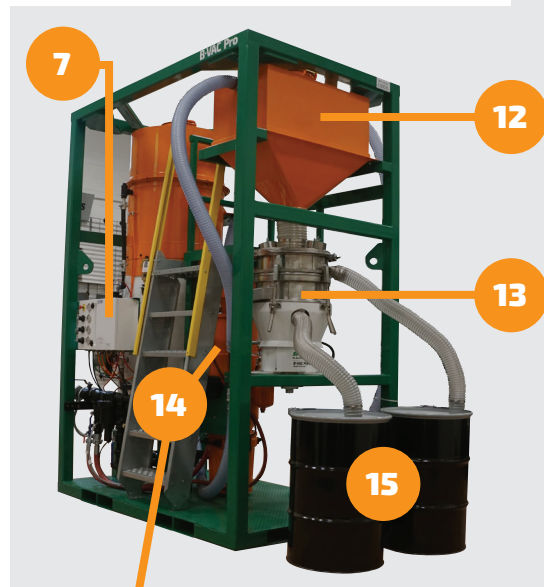
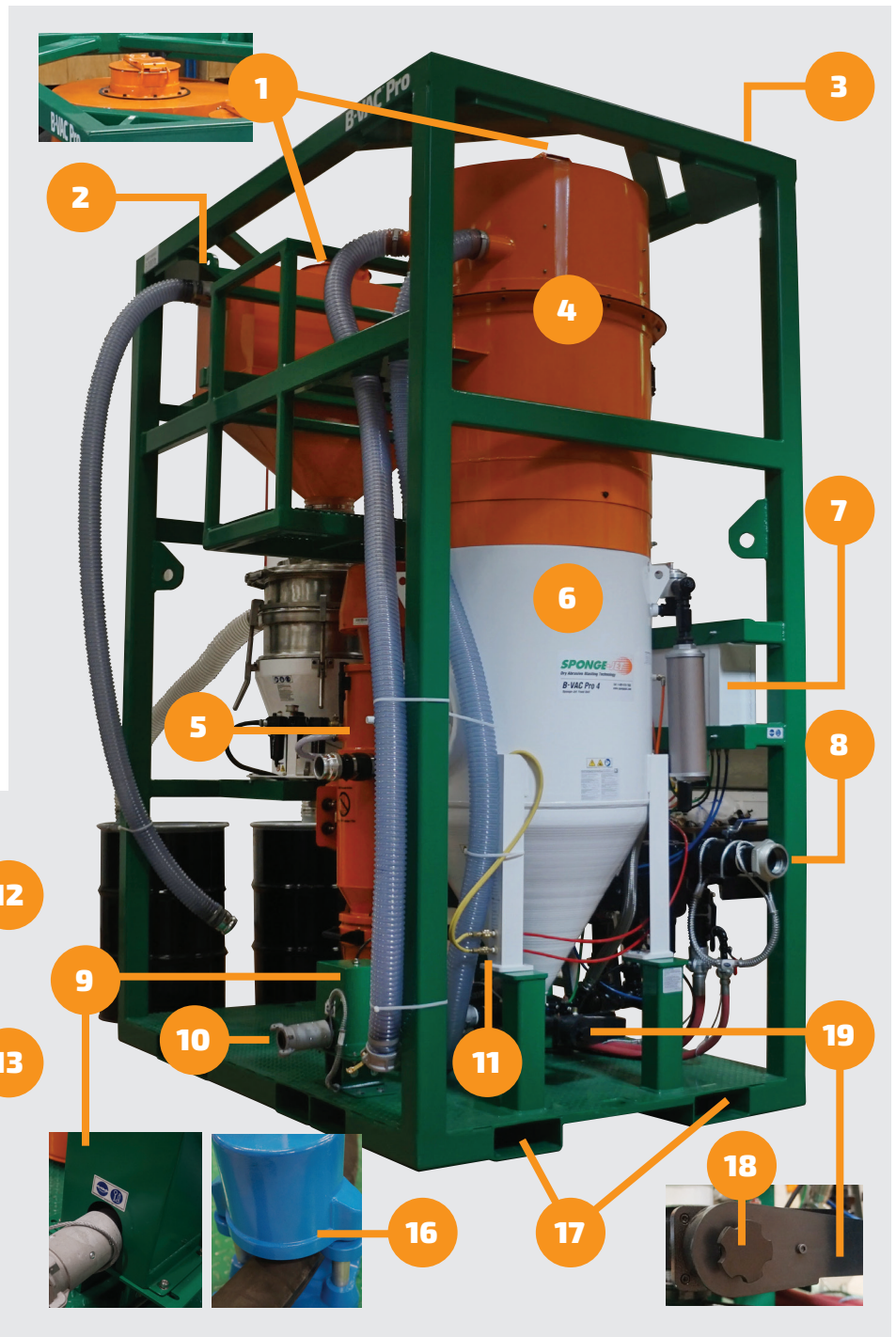
Model: B-VAC Pro 4 **Weight:** 2950 kg (6500 lb)

English Language is Original Instructions.
Translated from Original Instructions.

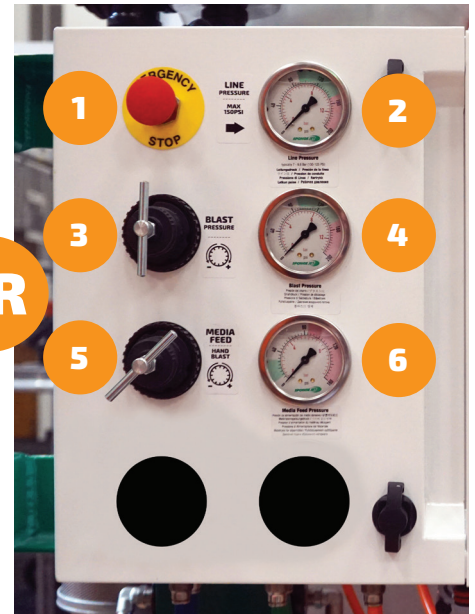
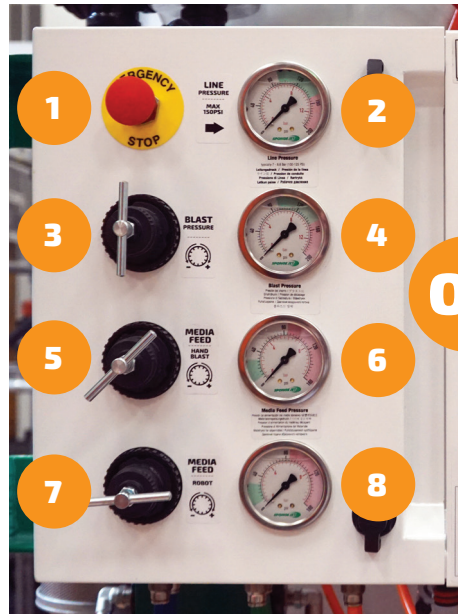
1.0

BASIC COMPONENTS

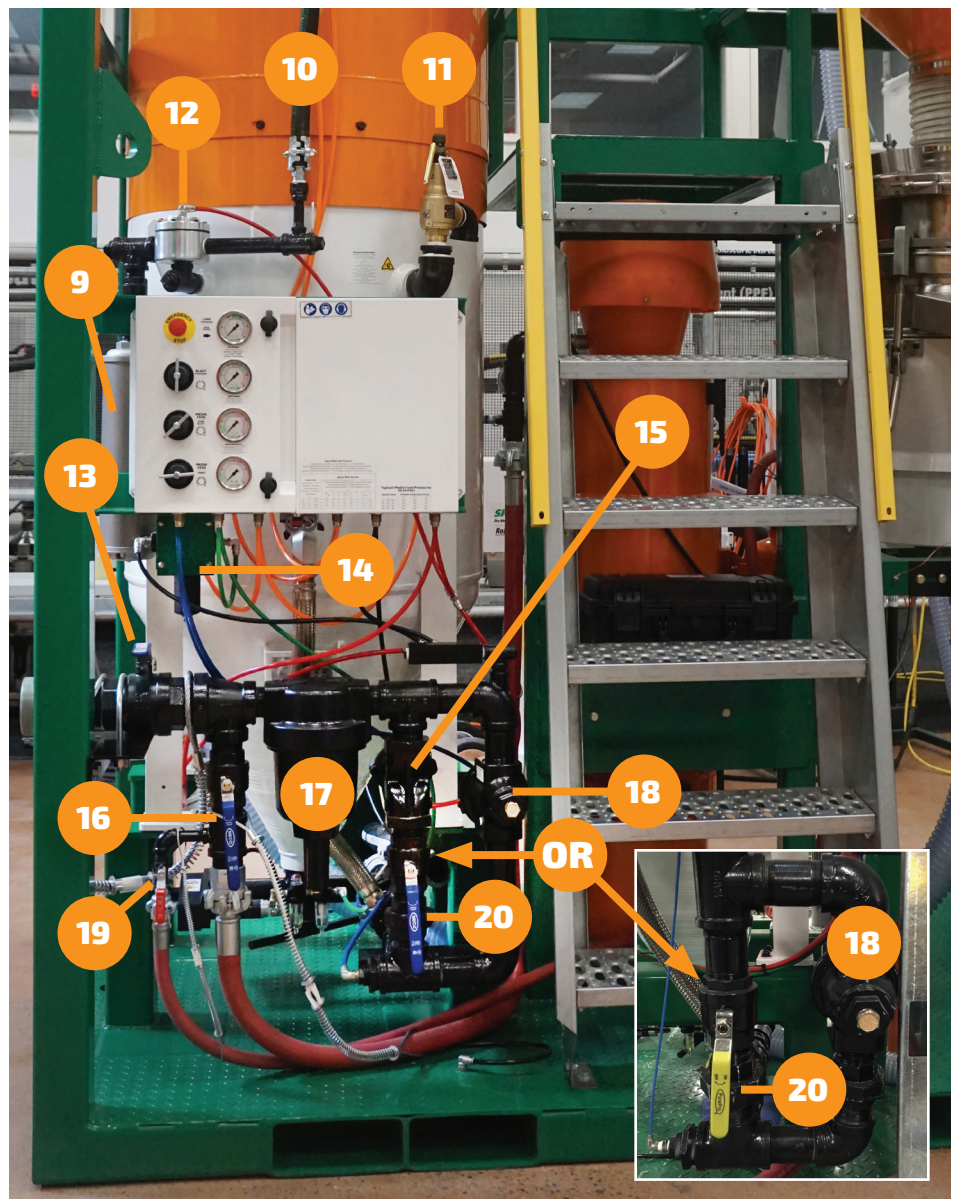
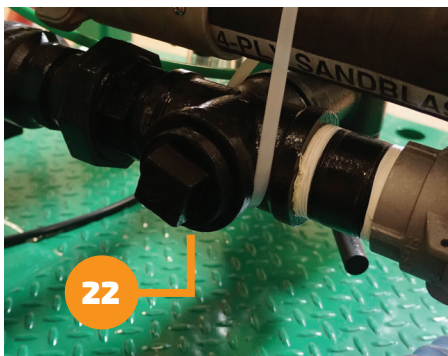
- 1 Inspection Hatch
- 2 Vacuum Hose Connector
- 3 Certified Lifting Point (4x)
- 4 Feed Unit Cyclone Storage Silo
- 5 Vacuum
- 6 Pressure Vessel
- 7 Control Panel
- 8 Supply Line Connection
- 9 Pinch Valve Cover
- 10 Blast Host Connection
- 11 Twinline Quick Connect Fittings
- 12 Recovery/Recycler Storage Silo
- 13 50-P Sponge-Jet Recycler
- 14 Vacuum Bypass
- 15 Waste Drums
- 16 Pinch Valve
- 17 Fork Pocket (12x)
- 18 Manual Rotation Knob
- 19 Auger Chain Guard
- 20 Air Motor Lubricator
- 21 Air Motor Moisture Separator
- 22 Air Motor
- 23 Clean Out Trap



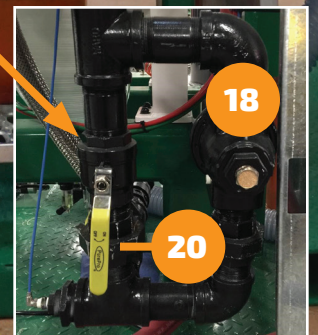
- 1 Emergency Stop Button
- 2 Line Pressure Gauge
- 3 Blast Pressure Regulator Adjustment
- 4 Blast Pressure Gauge
- 5 Media Feed Pressure Adjustment (Hand Blasting)
- 6 Media Feed Pressure Gauge (Hand Blasting)
- 7 Media Feed Pressure Adjustment (Robot) - Some Units
- 8 Media Feed Pressure Gauge (Robot) - Some Units
- 9 Exhaust Muffler
- 10 Hopper Relief Hose
- 11 Safety Relief Valve
- 12 Exhaust Valve
- 13 Main Air Ball Valve
- 14 Control Panel Moisture Separator On/Off Control Valve
- 15 Primary Vacuum Air Ball Valve
- 16 Primary Vacuum Air Ball Valve
- 17 Secondary Water Separator
- 18 Blast Pressure Regulator
- 19 Primary Recycler Air Ball Valve
- 20 Bypass Valve
- 21 Choke Valve
- 22 Auger Tunnel End Cap



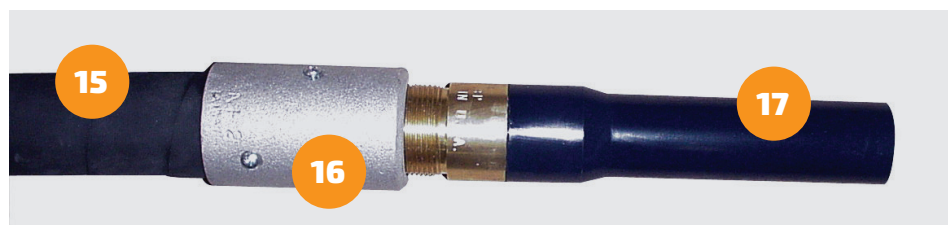
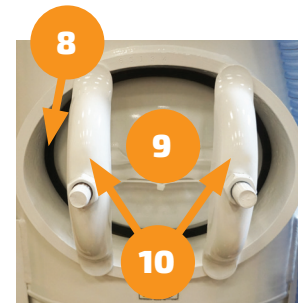
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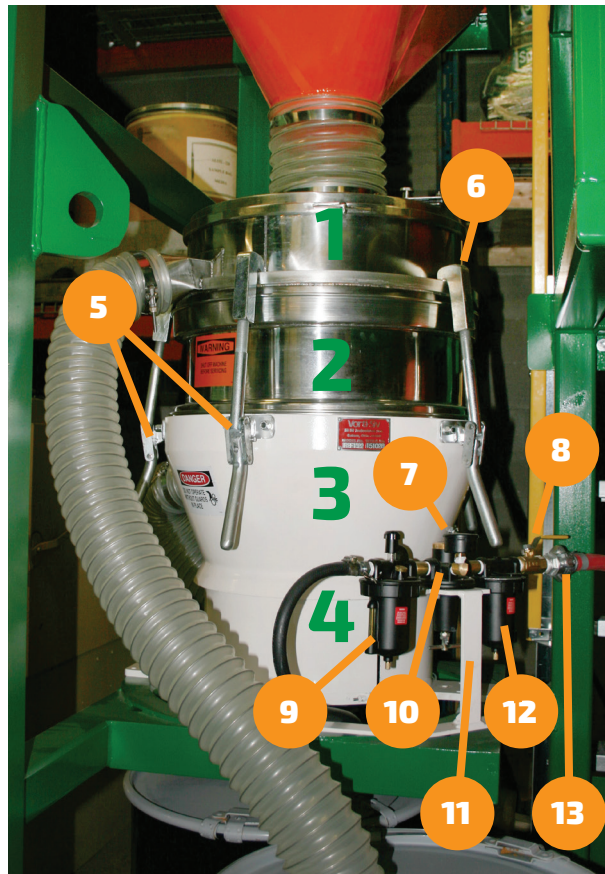
OR



- 1 Vacuum Ejector
- 2 Vacuum Filter Silo
- 3 Vacuum Dust Bin
- 4 Vacuum Supply Line Gauge
- 5 Secondary Vacuum On/Off Valve
- 6 Differential Pressure Gauge
- 7 Vacuum Pressure Gauge
- 8 Gasket
- 9 Handhole Cover
- 10 Crab Assembly
- 11 Media Actuator
- 12 Actuator Tree and Chain
- 13 Pop-up
- 14 Twinline
- 15 Blast Hose
- 16 Nozzle Holder
- 17 Nozzle
- 18 Twinline Connection
- 19 Deadman Handle



- 1 Dome Lid & Upper Main Rim
- 2 Lower Main Rim
- 3 Vibratory Section
- 4 Safety Skirt
- 5 Pan Clamp
- 6 Pan Clamp Hook
- 7 Pressure Gauge
- 8 Secondary Recycler
- 9 Air Ball Valve
- 10 Lubricator
- 11 Regulator
- 12 Bracket
- 13 Air Filter
- 14 Supply Line Connection
- 15 Fine Particle Downspout
- 16 Reusable Media Downspout
- 17 Large Particle Downspout
- 18 Muffler



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 SAFETY RELIEF VALVE EQUALS OR EXCEEDS CAPACITY OF COMPRESSED AIR SUPPLY.



FACTORY-SUPPLIED SAFETY RELIEF VALVE IS RATED $\leq 45\text{M}^3/\text{MIN}$ (1600 SCFM). CONFIRM INSTALLED SAFETY RELIEF VALVE ON UNIT IS SUITABLE FOR THE RATING OF COMPRESSED AIR SUPPLY.



Location and usage of Emergency Stop Button should be understood before operation. Pressing 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.

Inspect ALL equipment prior to each shift.

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.

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

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



CAUTION

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



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

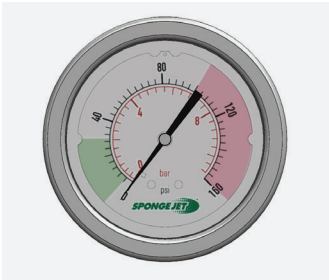
3.1

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 Feed Unit is 10.3 bar or (150psi).
- Highest rated pressure for Vacuum is 8 bar (115 psi).
- Highest rated pressure for Recycler is 3.5 bar (50 psi).

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



NOTE: High-humidity environments require additional moisture separators.

IF USING WITH ROBOTICA:
Double air supply requirement

(METRIC) M3/MIN REQUIREMENTS

Nozzle Size		4.1bar	4.8bar	5.5bar	6.2bar	6.9bar	8.3bar
No. 6 9.5mm	Nozzle	3.6	4.0	4.6	4.9	5.5	6.2
	B-VAC	8.1	8.1	8.1	8.1	8.1	8.1
	Reserve	2.3	2.4	2.5	2.6	2.7	2.9
	Total	14.0	14.5	15.1	15.6	16.3	17.1
No. 7 11mm	Nozzle	4.8	5.5	6.1	6.8	7.2	8.5
	B-VAC	8.1	8.1	8.1	8.1	8.1	8.1
	Reserve	2.6	2.7	2.8	3.0	3.1	3.3
	Total	15.5	16.3	17.0	17.8	18.3	19.9
No. 8 12.5mm	Nozzle	6.3	7.1	7.9	8.7	9.6	11.1
	B-VAC	8.1	8.1	8.1	8.1	8.1	8.1
	Reserve	2.9	3.0	3.2	3.4	3.5	3.8
	Total	17.3	18.2	19.2	20.2	21.2	23.0
No. 10 15mm	Nozzle	10.1	11.4	12.8	14.3	15.5	17.3
	B-VAC	8.1	8.1	8.1	8.1	8.1	8.1
	Reserve	3.6	3.9	4.2	4.5	4.7	5.1
	Total	21.8	23.4	25.0	26.8	28.3	30.4
No. 12 18mm	Nozzle	14.2	16.3	18.4	19.8	22.6	28.6
	B-VAC	8.1	8.1	8.1	8.1	8.1	8.1
	Reserve	4.4	4.9	5.3	5.6	6.1	7.3
	Total	26.7	29.2	31.8	33.5	36.8	44.0

(IMPERIAL) CFM REQUIREMENTS

Nozzle Size		60psi	70psi	80psi	90psi	100psi	120psi
No. 6 3/8in	Nozzle	126	143	161	173	196	220
	B-VAC	285	285	285	285	285	285
	Reserve	82	86	89	92	96	101
	Total	493	514	535	550	577	606
No. 7 7/16in	Nozzle	170	194	217	240	254	300
	B-VAC	285	285	285	285	285	285
	Reserve	91	96	100	105	108	117
	Total	546	575	602	630	647	702
No. 8 1/2in	Nozzle	224	252	280	309	338	392
	B-VAC	285	285	285	285	285	285
	Reserve	102	107	113	119	125	135
	Total	611	644	678	713	748	812
No. 10 5/8in	Nozzle	356	404	452	504	548	611
	B-VAC	285	285	285	285	285	285
	Reserve	128	138	147	158	167	179
	Total	769	827	884	947	1,000	1,075
No. 12 3/4in	Nozzle	500	575	650	700	800	1,010
	B-VAC	285	285	285	285	285	285
	Reserve	157	172	187	197	217	259
	Total	942	1,032	1,122	1,182	1,302	1,554

3.2

Air Supply Requirements

This Unit uses a 75mm (3in) standard pipe typically fit with a 75mm (3in) Boss™ fitting. 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 Hose

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

Vacuum Hose

Optimum performance is achieved by having largest diameter vacuum hose closest to B-VAC, and smaller diameter hose near pick up location. Long lengths of narrow hose may result in reduced vacuum pressures with high wear in hose. Optimum vacuum hose configuration from B-VAC is:

20m (65ft) of 88mm (3.5in) diameter hose connected to 40m (130ft) of 76mm (3in) hose, connected to 40m (130ft) of 63mm (2.5in) hose.

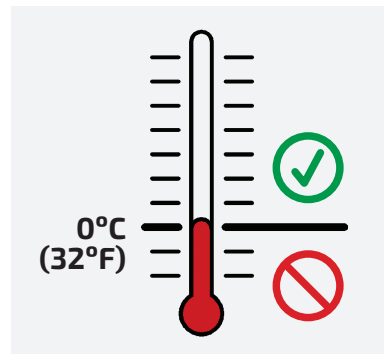
Vacuum hose operates best when used horizontally or vertically; use on gradual slopes (*like stairs*) should be avoided.

3.4

Operating 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.



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 is 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 Pressurization and Operation

Verify **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.



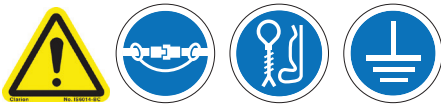
WARNING

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.



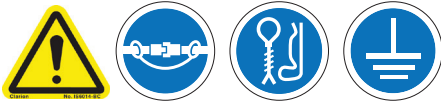
WARNING

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

4.1

Operation (Start-up of Unit)

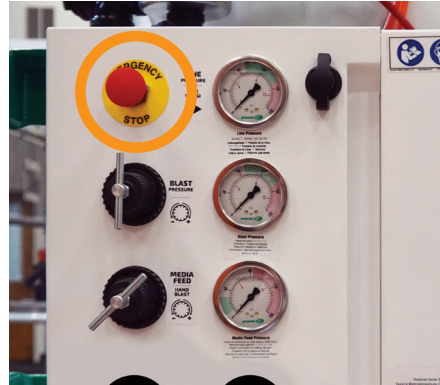
Inspect all **Blast Hose** and connections. Repair or replace worn or damaged components. Ensure all couplings are equipped with coupling gaskets, safety pins and whip-checks. Confirm all are properly installed.



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.

Press **Emergency Stop Button**.



Connect compressor to
Supply Line Connection.



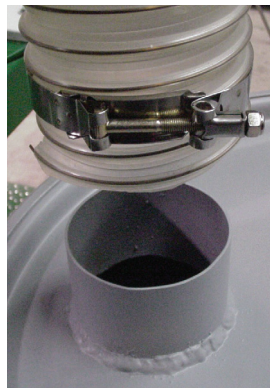
(1) Attach **Handhole Cover**
with gasket properly centered.

(2) Center **Crab Assembly** parts on
handhole rim.

(3) Tighten nuts with wrench.



Connect Vacuum Hose to **Large Particle Downspout** and **Fine Particle Downspout** to each **Waste Drum**.
Replace/empty drums when 2/3 full.



Connect outbound Vacuum Hose to **Recycler Cyclone Storage Silo**



Check **Pan Clamps** for tightness. They should not exceed 14kg (30lb) at each end of handle; adjust by turning (1) **Pan Clamp Hook**.



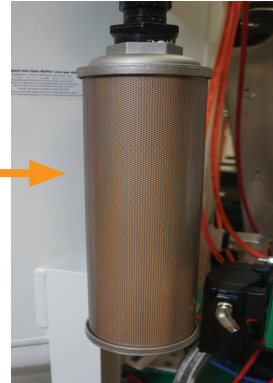
Insert **Whipline** through **Pinch Valve**; connect Blast Hose and secure with safety pins.



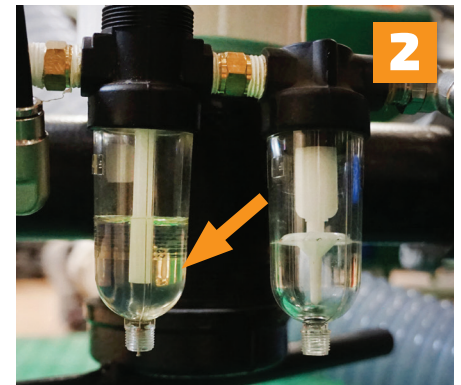
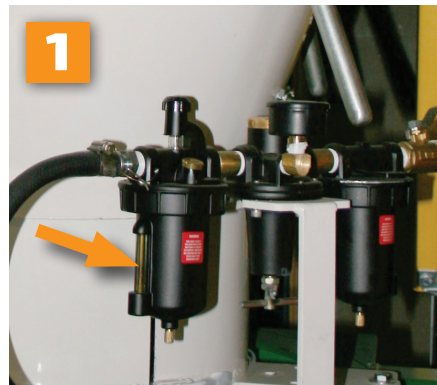
Connect Return and Supply
Twinline Quick Connect Fittings.



Inspect and clean **Exhaust Muffler.**



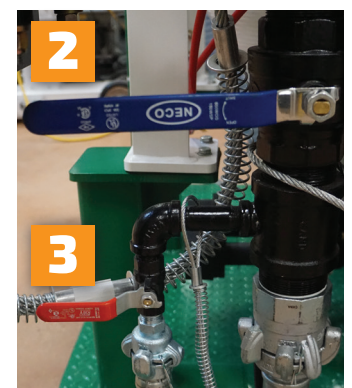
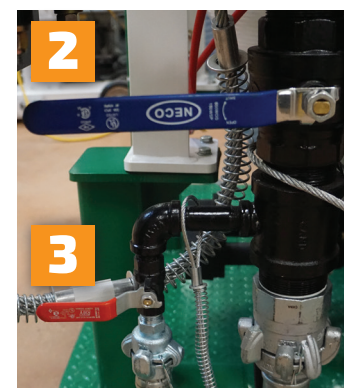
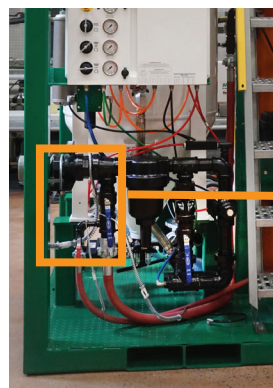
Confirm adequate pneumatic tool oil is present in (1) **Recycler Lubricator** and (2) **Auger Air Motor Lubricator**.



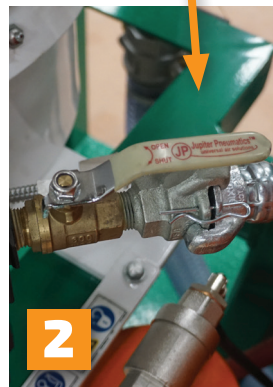
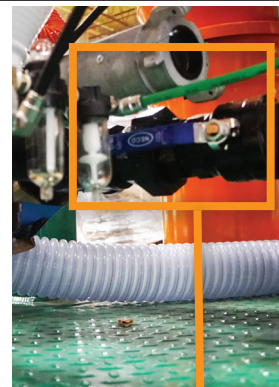
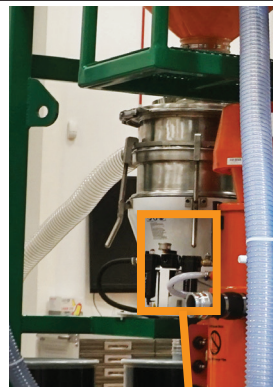
If adding lubricant, first depressurize unit and close all Supply Valves.

Close (1) **Main Air Ball Valve**,
(2) **Primary Vacuum Air Ball Valve**
and (3) **Primary Recycler Air Ball Valve**.

Add Lubricant, using SAE 5W (ISO NON-DETERGENT OIL ONLY).



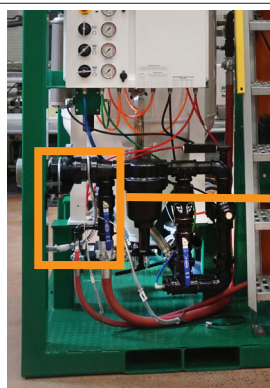
Open (1) **Secondary Vacuum Air Ball Valve**, (2) **Secondary Recycler Air Ball Valve**, and (3) **Choke Valve**.



Open **Main Air Ball Valve**.

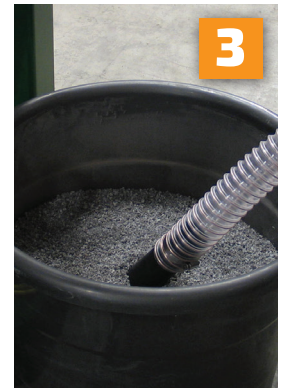
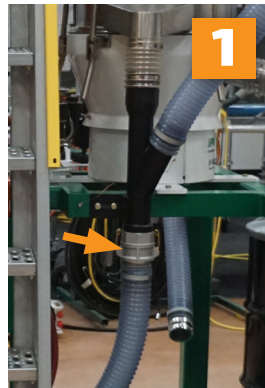


Open (1) **Primary Vacuum Air Ball Valve** and (2) **Primary Recycler Air Ball Valve**



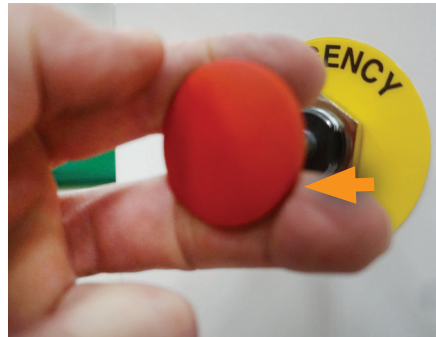
Load unit*: disconnect hose from **Vacuum Bypass** and vacuum new/used media into **Recovery/Recycler Storage Silo**. **Do not Overfill**. Approximately (20) Sponge Media bags fill **470-SJ Pressure Vessel**, and fills **Feed Unit Cyclone Storage Silo** (near top of silo actuator) to 2/3 full. After first load, add approximately (1) bag per hour for hand blasting; (2-3) for Robot Blasting.

*Refer to *Addendum* for other loading options.



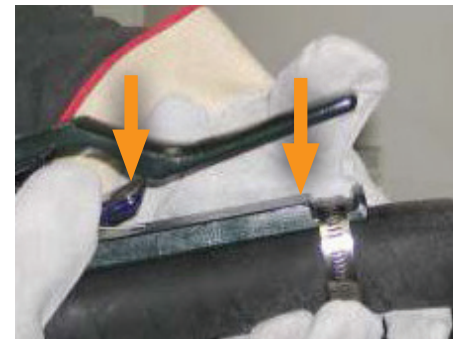
To begin blasting, pull **Emergency Stop Button**

DO NOT pull **Emergency Stop Button** and press **Deadman** until ALL operators are fully prepared to blast and nozzle(s) are under operator control.



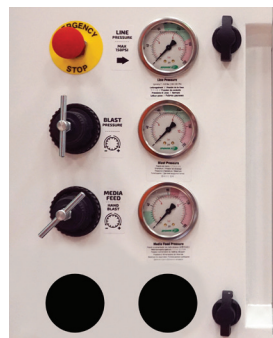
Unlock **Deadman** by pressing safety flap down, and holding down **Deadman Handle**

Wait 5 - 10 seconds for Sponge Media to flow. Do not release **Deadman Handle**, as it can create hose blockage.



Allow pressure gauges to stabilize; adjust **Blast Pressure** and **Media Feed Pressure** to desired levels.

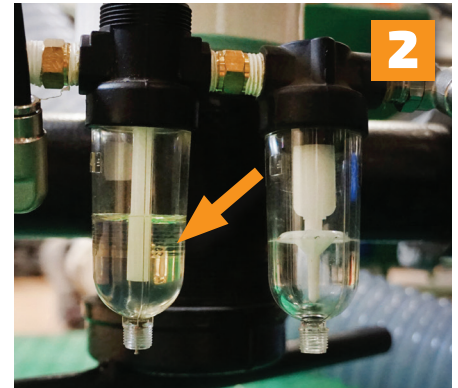
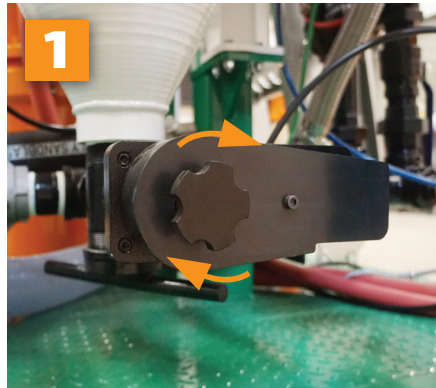
Note: Some units include a **Bypass Valve**. When open, air supply runs directly to blast hose for high-pressure/high-efficiency blasting; when closed, air supply is directed through **Blast Pressure Regulator** (see page 4 #18), where air can be adjusted to higher or lower pressures as desired.



TYPICAL MEDIA FEED PRESSURES

Nozzle Size			Sponge Media Recycles					
			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

(1) Confirm **Manual Rotation Knob** is rotating. (2) Confirm **Air Motor Lubricator** rate is 1-2 drops per minute.



OPERATING TIPS:

- Check top screen of Recycler for obstructions (*duct tape, paint chips, etc*).
- When vacuuming, air/media ratio should be at least 60%/40% air flow through hose. Avoid rapid vacuuming of media, especially on long runs. Use of a Pickup Tool (*not the open hose*) is strongly recommended.
- Continuously monitor quantity of material in waste drums and storage silos to avoid overflow.
- Add new media at approximately (1) bag per hour for hand blasting (*or 2-3 bags per hour when Robot blasting*) to maintain a uniform, working media mix.
- Monitor level in lubricator.
- Avoid vacuuming foreign objects/debris which may create clogs or equipment jams.
- Inspect and monitor for vacuum and system leaks.
- Monitor both Inspection Hatches to avoid over-filling silos.
- If applicable, cycle Vacuum Filter Cleaning Lever (*or depressurize and re-pressurize Vacuum Air Ball Valve*) once every 2 hours.
- Never vacuum water or other liquids – it will destroy the vacuum filter.

4.2

Shut Down of Unit

Normal shutdown is by releasing **Deadman Handle**. Alternatively **Emergency Stop Button** may be used.

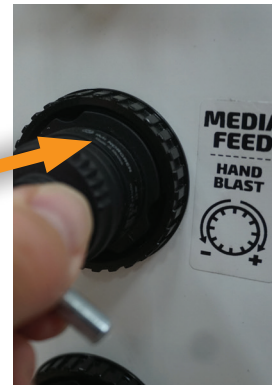
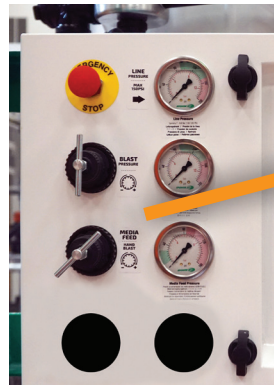
NOTE: During inspection, maintenance or any non-operational activity, always press **Emergency Stop Button**.



4.3

End of Shift Shut Down

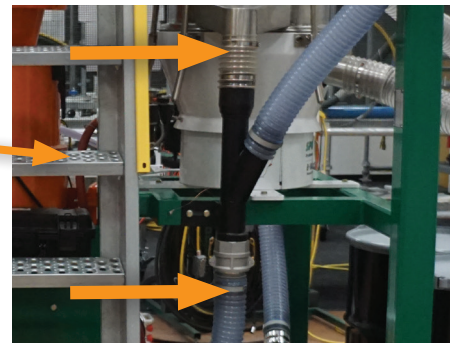
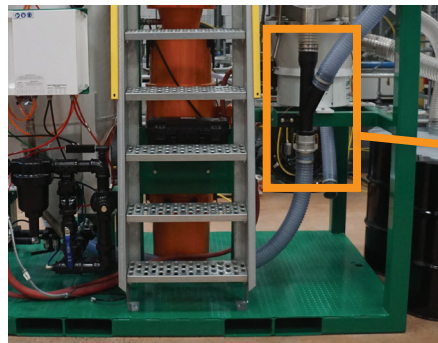
Turn Media Feed to "Zero", then depress **Deadman Handle** until Sponge Media stops flowing through nozzle (typically 15-45 seconds).



Press **Emergency-Stop Button**.

Vacuum all remaining media from containment area.

Allow all media to process through Recycler into **Feed Unit Cyclone Storage Silo** until no Sponge Media is visible in hose.



Close **Primary Recycler Air Ball Valve**.

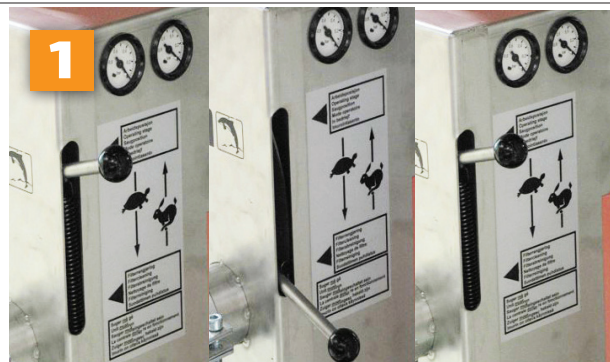
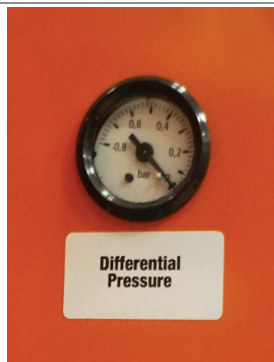


Confirm all gauges read "zero. Check Vacuum Differential Pressure.
If >0.1 bar, increase frequency of filter cleaning. Clean Vacuum filter by:

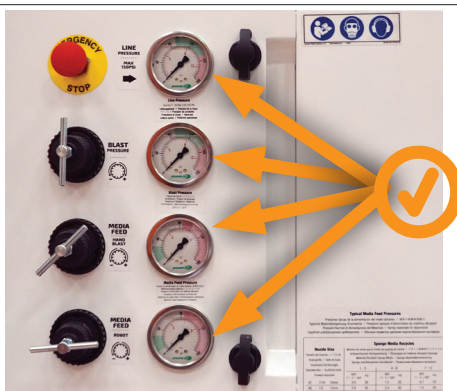
(1) lowering Filter Cleaning Lever and then raising it.

NOTE: For models without this lever close (2) Primary Vacuum Air Ball Valve or (3) Secondary Vacuum Air Ball Valve to automatically clean filter.

If filter cleaning does not lower Differential Pressure <0.1 bar, replace filter.



Confirm all gauges read "zero.



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

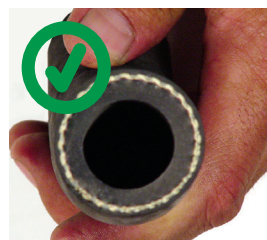
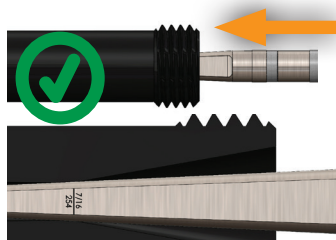
Pressurized system. Release air pressure before servicing. Failure to comply may result in serious injury.

5.1

Prior to Each Use

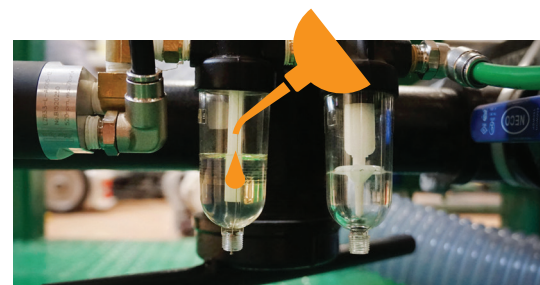
Inspect **Blast Nozzle** for wear. Once nozzle throat has worn 1.5mm (1/16in) beyond its original diameter, it should be replaced.

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



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

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



Inspect, clean, remove Sponge Media from **Exhaust Muffler**. Replace when exhaust is slow.



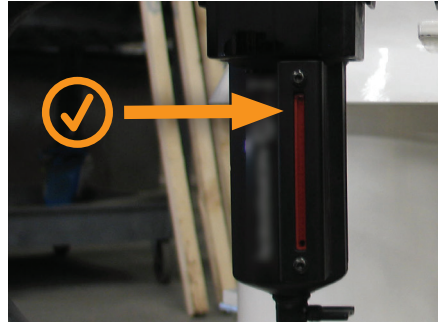
CAUTION: Do not operate unit without **Exhaust Muffler** installed.



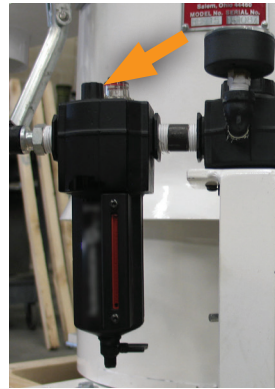
5.2

Check pneumatic oil level in Recycler Lubricator.

Every 24 Hours of Operation



Refill with pneumatic tool oil through fill port on top as required.

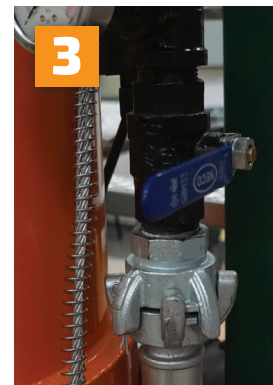
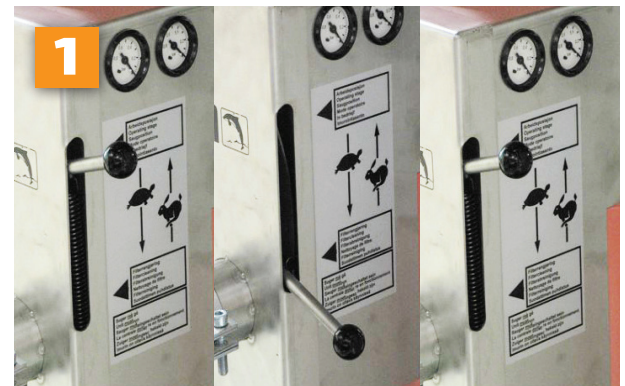


Check **Vacuum Differential Pressure**. If >0.1 bar, increase frequency of filter cleaning. Clean **Vacuum** filter by:

(1) lowering Filter Cleaning Lever and then raising it.

NOTE: For models without this lever close (2) **Primary Vacuum Air Ball Valve** or (3) **Secondary Vacuum Air Ball Valve** to automatically clean filter.

If filter cleaning does not lower **Differential Pressure** <0.1 bar, replace filter.



5.3

Every 80 Hours of Operation

Remove lower, threaded portion of
(1) **Secondary Water Separator** and
(2) **Control Panel Moisture Separator**
to visually inspect interior and O-Ring.

Visually inspect (3) **Air Motor
Moisture Separator**; **ONLY** remove
lower, threaded portion if contamination
is found.

For all above, remove contaminants;
replace O-Ring (*if needed*) and
reinstall.



5.4

Monthly (or as needed)

Inspect condition of **Auger Drive Chain**;
Apply lightweight lubricating oil as
necessary.



5.5

Monthly (or as needed) *continued*

Grease **Recycler**.

IMPORTANT: This unit was greased before shipment. Add grease using 1 to 2 pumps every 40 hours of operation. If the unit has not been used for one year, add 1 to 2 pumps of grease.

Unit pre-greased with Shell Gadus S2 V220 2 before shipping; use same or similar NLGI #2 grease.

DO NOT OVER GREASE.

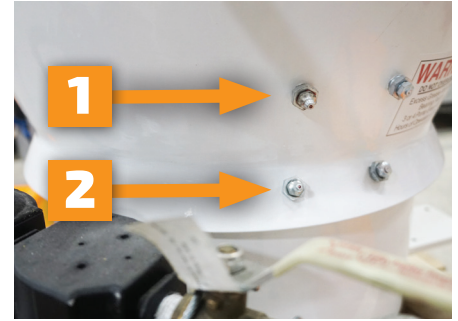
Check **Vacuum** suction:

1. While operating, allow hose to clear of media so flow is air only
2. Seal hose end and allow Vacuum level to stabilize.

Target Vacuum level should approach 3800mm WC (11 in of Hg).

If gauge indicates $\leq 70\%$ of target, check for leaks, confirm air supply to Vacuum (*during operation*) is between 6-8bar (90 -115psi)

Check filter performance and inspect for damage.



5.6

Check/Clear **Recycler** for obstructions or worn gaskets. Should **Recycler** require disassembly, reassemble as illustrated.

NOTE: Failure to properly assemble and fasten **Sieve Assembly** will reduce operating life.

1. Place **Fine Particle Downspout** in hole of **Vibratory Section**.

NOTE: Be sure **Downspout** is centered.

2. Place **Flat Gasket** into **Shallow Funnel**.

3. Place **Bottom Screen** (#16*mesh) on **Flat Gasket**. Mesh side up**

4. Place **Flat Gasket** on mesh of **Bottom Screen**.

5. Place **Main Rim** over **Flat Gasket**.

6. Place **Flat Gasket** on **Main Rim**.

7. Place **Top Screen** (#3* mesh) on **Flat Gasket**. Mesh side up**

8. Place **Flat Gasket** on **Top Screen**, (center on **Top Screen**).

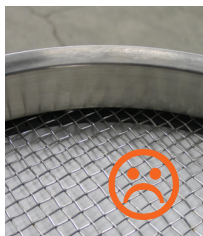
9. Place **Hopper** over **Flat Gasket**.

10. Attach (4) **Pan Clamps** to **Sieve Assembly**

***Top Screen** standard size is #3;
Bottom Screen standard size is #16 unless others are specified/provided.

**Screen must be assembled with mesh side up. Incorrect assembly causes poor operation.

Monthly (or as needed) *continued*



6.0

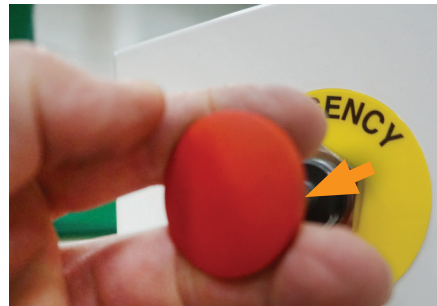
TROUBLESHOOTING

Unit does not operate when Deadman Handle is depressed

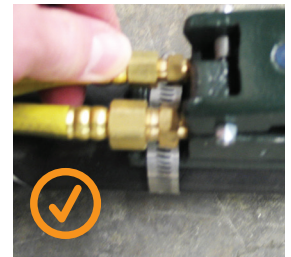
Confirm **Main Air Ball Valve** is open.



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



Confirm all **Twin Line** connections are secure.



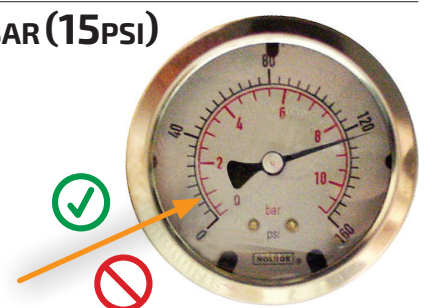
Check for damage to **Twin Line**.



Press **Deadman** and check **Line Pressure** is >1bar(15psi).



>1BAR (15PSI)

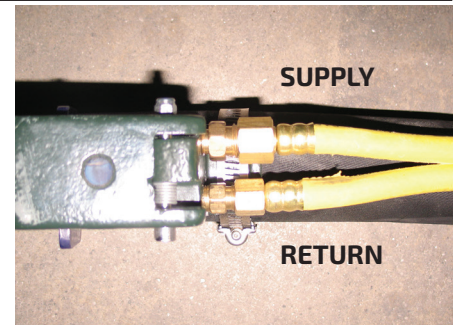


Unit does not operate when Deadman Handle is pressed continued.

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



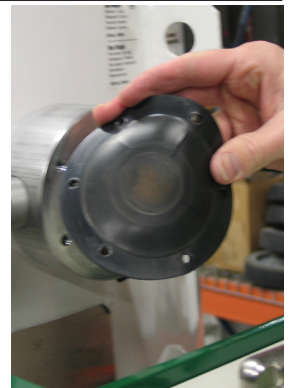
IF no air is felt exiting red air line, trace air flow operation through **Twinline** and **Deadman Handle** checking for obstructions or leaks.



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



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



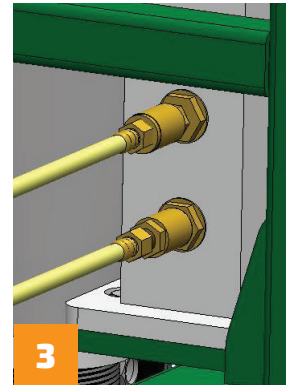
Air will not stop exiting nozzle when Deadman Handle is released

Press **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, **Blast Pressure Regulator** is malfunctioning.

CLOSE MAIN AIR BALL VALVE OR SHUT DOWN COMPRESSOR TO SHUT DOWN B-VAC.

Contact a Sponge-Jet representative.

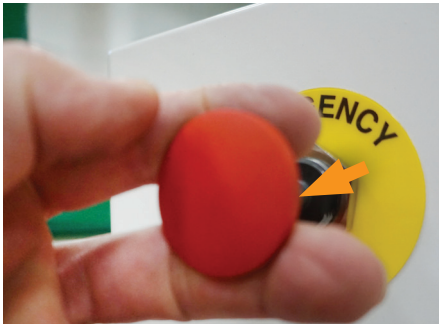


Exhaust Valve Diaphragm is damaged. Replace or contact a Sponge-Jet representative for assistance to temporarily repair.



Auger will not begin rotating

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



Typical Media Feed Pressures

Pressure is critical to the success of the media feed process. The pressure must be maintained at the correct level for the media feed to be effective. The pressure must be maintained at the correct level for the media feed to be effective. The pressure must be maintained at the correct level for the media feed to be effective.

Media Feed Size	Media Feed Pressure (PSI)	Media Feed Pressure (Bar)	Media Feed Pressure (MPa)
#7 10mm	2.0	30	2.0
#8 12mm	2.8	40	2.8
#10 15mm	3.4	50	3.4
#12 18mm	4.1	60	4.1

TYPICAL MEDIA FEED PRESSURES

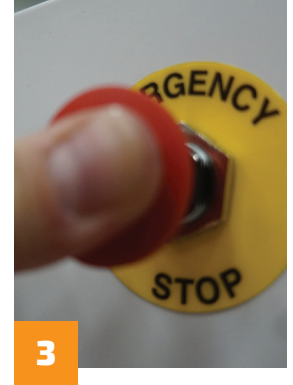
Nozzle Size			Sponge Media Recycles					
			1 – 3		4 – 6		7-12	
			Bar	PSI	Bar	PSI	Bar	PSI
#7	10mm	7/16in	2.0	30	1.5	20	0.7	10
#8	12mm	1/2in	2.8	40	2.0	30	1.5	20
#10	15mm	5/8in	3.4	50	2.8	40	2.0	30
#12	18mm	3/4in	4.1	60	3.4	50	2.8	40

Turn **Manual Rotation Knob** clockwise. 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. Press **Emergency Stop Button**.



Remove **Clean Out Trap**.

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

Auger should move smoothly.

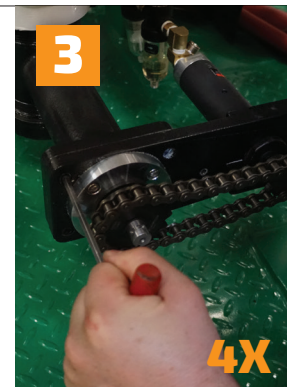
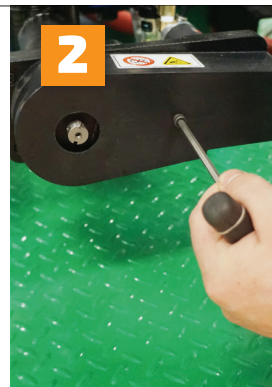
Replace **Clean Out Trap**.



If obstruction cannot be cleared through **Clean Out Trap**:

1. Remove **Manual Rotation Knob** by pressing in and rotating right.
2. Remove **Auger Chain Guard**.
3. Remove (4) Allen Cap Screws.
4. Disconnect (Green) Air Motor Supply Line.
5. Disconnect (Black) Air Motor Exhaust Line.
6. Pull **Auger** from unit, then remove obstruction.

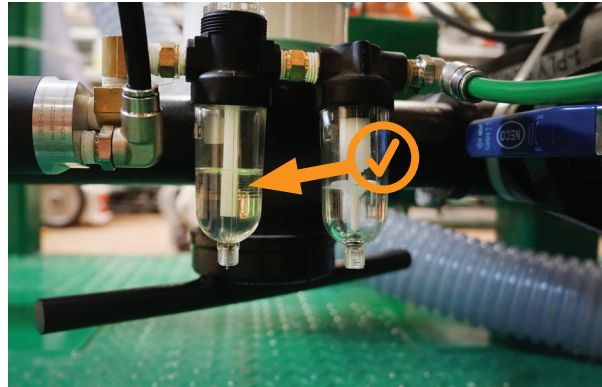
Reassemble Auger; replace (4) Allen Cap Screws, and test **Auger** for smooth rotation. Re-install **Auger Chain Guard**.



Air Motor performs inconsistently at lower media pressures

1. Check **Air Motor Lubricator** oil level. Refill as necessary.

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

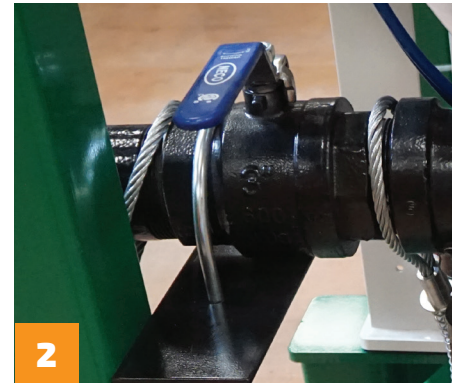


Air flow through nozzle suddenly stops

1. **Do not restart.** Immediately press **Emergency Stop Button**.

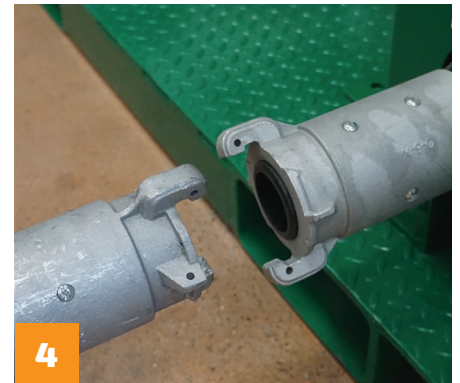
2. Depressurize unit and close **Main Air Ball Valve**.

**CAUTION: OBSTRUCTED
NOZZLES OR HOSES COULD BE
UNDER PRESSURE.**



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

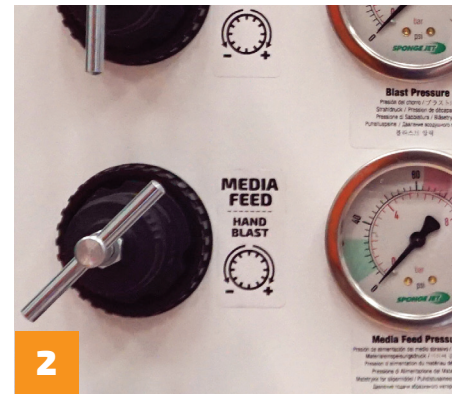
4. Disconnect all **Blast Hose** connections; inspect for and remove obstructions.



Too much Sponge Media exits Nozzle or is pulsing

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

2. Check **Media Feed Pressure** is within gauge recommended range (green).



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

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

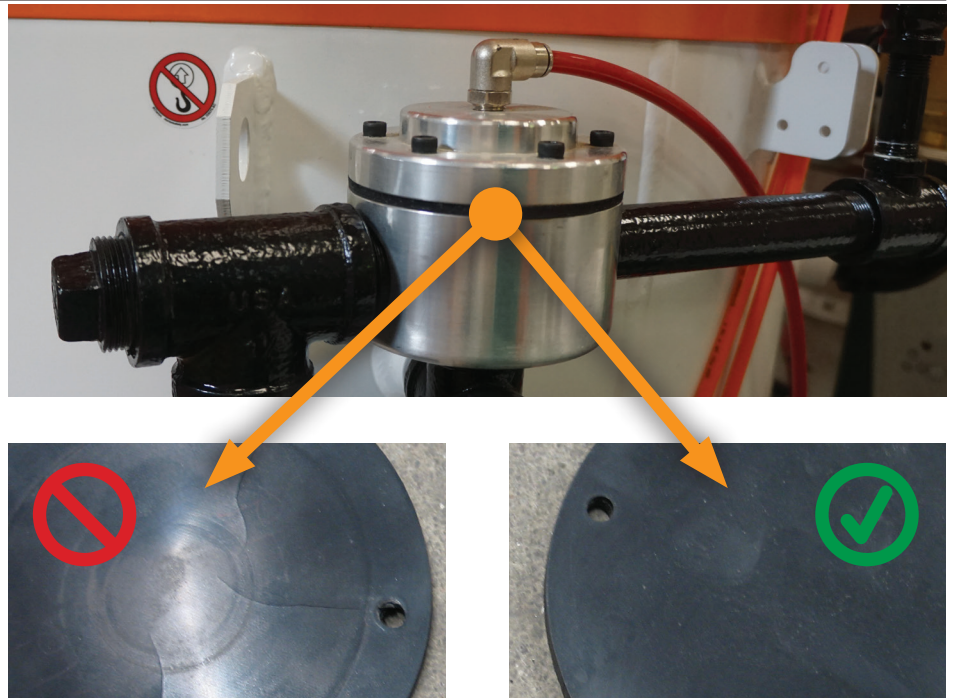
Repair, replace or tighten as necessary.



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

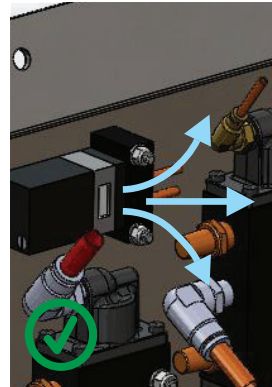
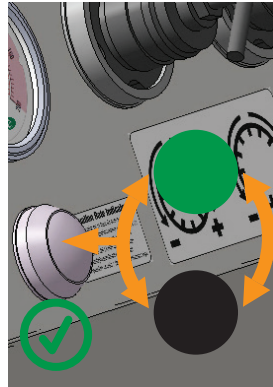
2. Remove **Exhaust Valve Cover**, inspect for and remove obstructions. Check Exhaust Diaphragm for rips or small holes.

Clean or replace as necessary.



Air flows through Nozzle without Sponge Media while Auger is rotating (on some models)

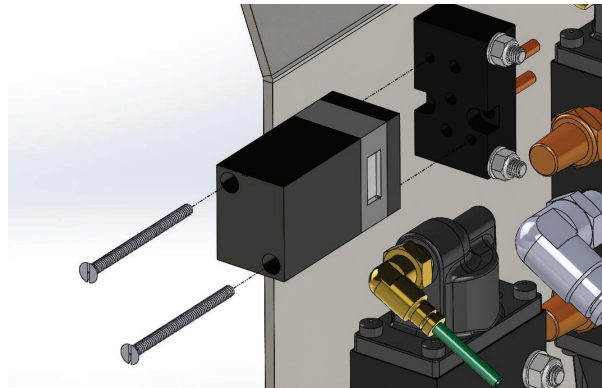
Check cycling of **Actuation Rate Indicator Eye** from green to black and for light pulse of air exiting exhaust port of Timer. Confirm Timer is set between 1.25-1.5.



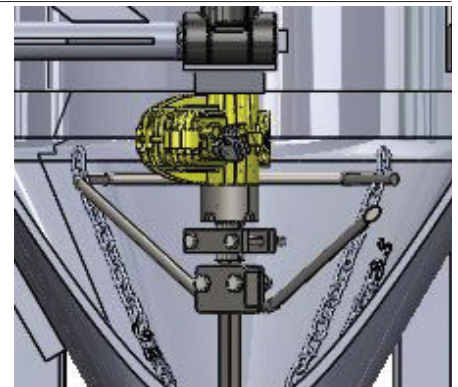
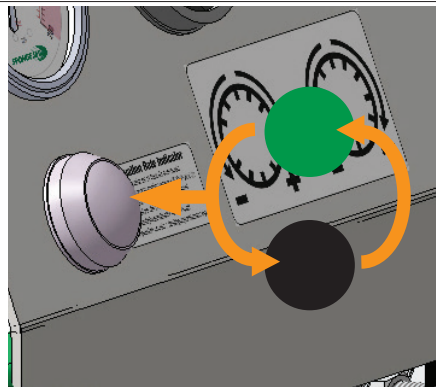
If Actuation Rate Indicator Eye and Timer produces light pulse of air, resume blasting.

If no light pulse of air is exiting exhaust 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

ADDENDUM

Media Loader (optional)

Certain B-VAC Pro models include this option which helps expedite filling B-VAC with new/used Sponge Media.

NOTE: both this unit and the **Vacuum** cannot operate simultaneously, so use only during media loading process or when not using vacuum.

NOTE: Never load wet media into the B-VAC Pro.

(A) Screen prepares media to flow through **By-Pass Hose**.

(B) Camlock fitting connects to hose leading to **Recovery/Recycler Storage Silo**

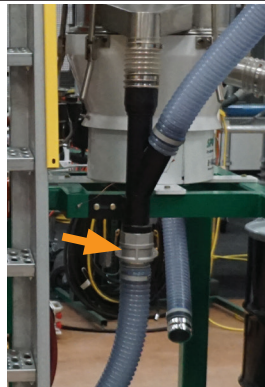


Load unit:

(1) disconnect hose under **By-Pass Hose** by opening camlock fitting handles.

(2) Connect hose to Media Loader; close camlock fitting handles.

(3) Move/press Sponge Media through grate, which draws media through hose and to **Recovery/Recycler Storage Silo**.



Do not Overfill. Approximately (20) Sponge Media bags fill **470-SJ Pressure Vessel** and fills **Feed Unit Cyclone Storage Silo** (near top of silo actuator) to 2/3 full. After first load, add approximately (1) bag per hour for hand blasting (or 2-3 bags per hour when using Robotica) to maintain a uniform working media mix.

