IST International Surface Technologies

ISTblast
BEYOND THE SURFACE

PORTABLE PRESSURE BLASTER CABINETS

MODELS 346,646,1046 WITH SYSTEM RC-176, RC-186, OR COMBINED

646

346

1046

GENERAL INSTRUCTION MANUAL

2023-11-14

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GENERAL EXPLANATIONS

DEFINITION OF TERMS USED IN THIS MANUAL

Abrasive (also known as "media"): granular material used for blasting a surface.

Blow down (also known as "depressurize"): to expulse air automatically or manually from a pressurized vessel.

Control Handle: mandatory remote-control device used to start and stop the blaster.

Depressurize (also known as "blow down"): to expulse air automatically or manually from a pressurized vessel.

Pressure Hold System (also known as "manual blow-down system"): blasting system in which the pressure vessel stays pressurized when the control handle is released.

Pressure Release System (also known as "automatic blow-down system": blasting system in which the pressure vessel is automatically depressurized when the control handle is released.

Pressure Vessel: enclosed section of the blaster filled with pressurized air and abrasive during blasting operations.

Pressurize: to fill the pressure vessel with compressed air.

Properly Trained Person: a person who has successfully passed a training course in sandblasting pertaining mainly to the safe operation of stationary or portable Abrasive Blasters with capacities ranging from 1.5 ft^3 to 6.5 ft^3 and who has read this entire manual and understands it.

Silica : hazardous substance found in many naturally occurring abrasives. Dust produced by blasting with abrasives containing silica can cause respiratory diseases.

NOTE: Abrasives containing silica must NEVER be used in any blasting situation. Even if respiratory protective equipment is used, the resulting dust can cause respiratory disease.

SAFETY SYMBOLS

The safety symbols below are designed to ensure the safety and protection of the Abrasive Blaster operator and of anyone else nearby. The explanations provided apply to sandblasting equipment.

 OR 

WARNING : This symbol indicates a potentially dangerous situation that could result in serious injury or death if the instructions related to the symbol are not carried out. Throughout the manual, this warning triangle will appear to denote instructions requiring special attention.

 OR 

DANGER : This symbol indicates a potentially dangerous situation that WILL result in serious injury or death if the instructions related to the symbol are not carried out. Throughout the manual, this warning triangle will appear to denote instructions requiring special attention.

WARNINGS

WARNING

- **Anyone who will be running the Abrasive Blaster or who will be nearby during its operation must receive appropriate training in the safe operation of the equipment and must be cautioned about the potential hazards. Besides being adequately trained, anyone who will be running the Abrasive Blaster or who will be nearby during its operation must read, understand and follow all the procedures explained in the user manual. For replacement manuals, please contact your distributor or go to istsurface.com.**
- **Anyone who will be running the Abrasive Blaster or who will be nearby during its operation must use respiratory protection that meets OSHA and NIOSH standards for breathing apparatus and supplied air.**
- **Because they contain large amounts of accumulated energy, Pressurized Vessels can cause serious injury or death if safety procedures are ignored. Never perform maintenance on a pressurized Pressure Vessel or attempt to open it under any circumstances. Always depressurize the equipment and disconnect it properly from its air source before beginning maintenance. Never modify the Pressure Vessel or do grinding or welding on it under any circumstances. Otherwise, the ASME certification will be void. Damaged pressure vessels must NEVER be used.**
- **The appropriate Remote (Deadman) Control System must be used to operate the Abrasive Blaster. Abrasive Blasters must NEVER be used without Remote Controls. Bleeder-Type Control Handles must NEVER be used with RC-176 or RC-186 Series Blasters because they can create dangerous conditions where the blaster does not shut off when the handle is released.**
- **Anyone who will be running the Abrasive Blaster or who will be nearby during its operation must use the appropriate safety equipment as well as common sense to protect themselves. The required safety equipment includes, but is not limited to, hearing, eye, body and lung protection. Because of their weight, Abrasive Blasters and the objects being blasted can cause serious injury or death if they topple over. All OSHA and NIOSH safety requirements must be followed at all times.**
- **Only genuine ISTblast replacement parts must be used for maintenance on the Abrasive Blaster. The equipment must NEVER be altered under any circumstances. Using altered brand parts can create hazardous conditions and will void your warranty.**
- **Before using the Abrasive Blaster, inspect it and make sure it is in good working order. Malfunctioning or damaged equipment must NEVER be used.**
- **Only clean, cool, dry compressed air must be supplied to the Abrasive Blaster. Hazardous conditions can result if moisture or debris reaches the Remote Control System. Compressed air supplied to the Blaster must not exceed 150 psi.**
- **Using an air-line pressure regulator is strongly recommended.**
- **Abrasive Blasters must NEVER be used in locations that could be deemed potentially hazardous according to Article 500 of the National Electrical Code, NFPA 70. The Abrasive Blaster must NEVER be used in wet locations. Electrically controlled Abrasive Blasters must always be connected to a ground fault circuit interrupter (GFCI).**

HOW TO SET UP THE BLASTER

WARNING : The Operating Procedures described in this manual are intended to provide basic information about the safe operation of the features of ISTblast RC-176/RC-186 Series Abrasive Blasters. The Abrasive Blaster should be operated only by persons who are fully trained in abrasive blasting.

DANGER : Maintenance must NEVER be done on the Abrasive Blaster nor should anyone try to open it while it is pressurized. Otherwise, serious injury or death will result from the violent expulsion of compressed air and propelled objects.

INSPECT THE PRESSURE VESSEL

When your Abrasive Blaster arrives, remove the Handway Assembly and check if any foreign objects have fallen in through the pop-up opening. If so, remove them all, and then reinstall the Handway Assembly.

RE-TIGHTEN THE HANDWAY ASSEMBLY

Once you have pressurized the Abrasive Blaster for the first time, tighten the nut on the Handway Assembly. Also, whenever the Handway Assembly is removed for maintenance, you must tighten the nut again, prior to and following the next pressurization.

PURGE THE AIR SUPPLY HOSE

Before the Air Supply Hose is connected to the Abrasive Blaster, the hose must be purged of any moisture or debris. If there is standing water or moisture in the air line, the Abrasive Blaster will not perform optimally. Air supplied to the Abrasive Blaster must be cool, dry and clean.

ATTACH THE REMOTE CONTROL HANDLE

Using hose clamps or heavy wire ties, fasten the Remote Control Handle to the Blast Hose near the Nozzle.

Next, form a loop of Twinline/Control Cord where the first 6 inches of cord curve away from the Blast Hose, then the next 6 inches run parallel to the Blast Hose, and then the last 6 inches curve back to join the Blast Hose. At the location where the loop ends, fasten the Twinline/Control Cord to the Blast Hose by wrapping duct tape twice around the Twinline/Control Cord and then around the Blast Hose to form a strain-relief attachment. Do this only on the first connection near the Control Handle.

Fasten the rest of the Twinline/Control Cord to the blast hose by wrapping duct tape around the cord and the hose, every 3 feet, beginning at the Nozzle end of the Blast Hose.

BEFORE BLASTING

PRE–BLASTING INSPECTION

Before each use of the Abrasive Blaster, check and make sure it is in safe working condition. Inspect the seals, hoses and other components closely for wear or damage. Replace any damaged or worn component before you begin blasting.

WARNING: An Abrasive Blaster must NEVER be used if any of its components are damaged or worn. Replace all damaged or worn parts before using the equipment.

HOW TO ADD THE ABRASIVE

Before you fill the Abrasive Blaster, be sure that the Inlet Valve is closed and that the Pressure Vessel is depressurized. Pour the abrasive into the top of the Abrasive Blaster. Allow it to flow around the Pop-up and into the Pressure Vessel. Make sure you neither overfill nor allow foreign materials to enter. To prevent foreign items from getting inside, the use of a screen is recommended.

DANGER: NEVER reach inside while the Abrasive Blaster is being filled. The pop-up opening can close unexpectedly and cause serious injury or death.

WARNING: Abrasives containing silica must NEVER be used with ISTblast Abrasive Blasters.

WARNING: The Inlet Valve must NEVER be open while the Abrasive Blaster is being filled. Before you begin filling, always be sure to close it.

WARNING: NEVER use electrically conductive abrasives when the Abrasive Blaster is being used with Electrical Remote Control Systems, unless the sealed strain relief connectors have been changed.

WARNING: An Abrasive Blaster containing abrasive must NEVER be moved or transported.

ABOUT THE REMOTE CONTROL SYSTEM

An electrical or pneumatic Remote Control System (also referred to as "Deadman") must always be used with an Abrasive Blaster to start and stop blasting.

Electrical: On the Abrasive Blaster, the Remote Control Handle must be connected to the female twist-lock connector on the Abrasive Blaster. A 12 V DC power source (12-V battery or optional 120 V AC to 12 V DC converter) must be connected to the male twist-lock connector.

Pneumatic: The Remote Control twin-line hose must be connected to the Abrasive Blaster using the threaded or quick-disconnect fittings that are supplied. **The use of pneumatic remote control systems is only valid with hoses up to 115 feet.** Beyond that, you must use an Electrical Remote Control.

WARNING : The Abrasive Blaster must NEVER be operated without a Remote Control System.

DANGER : Caution must always be used around electrical sources to avoid electrical shock. Never operate electrically remote-controlled Abrasive Blasters in wet or other hazardous conditions.

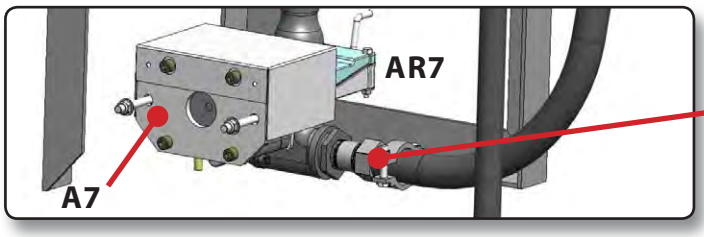
HOW TO CONNECT HOSES

Before you connect hoses to the Abrasive Blaster, be sure the Inlet Valve is closed and the compressed air supply is off. Next, connect the hose from the compressed air supply to the inlet on the Abrasive Blaster and use safety clips to secure it. **Using an air-line pressure regulator is strongly recommended.** Connect the blast hose to the coupling on the Metering Valve at the base of the Abrasive Blaster. Use safety clips to secure it.

WARNING : Safety devices, such as clips and whip checks (safety cables), must always be used to secure the hose.

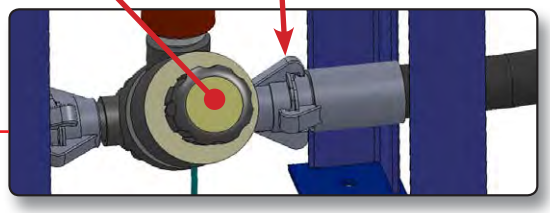
BEFORE BLASTING (END)

RC176 / RC186 PRESSURE VESSEL WITH DUAL CONTROL SYSTEM

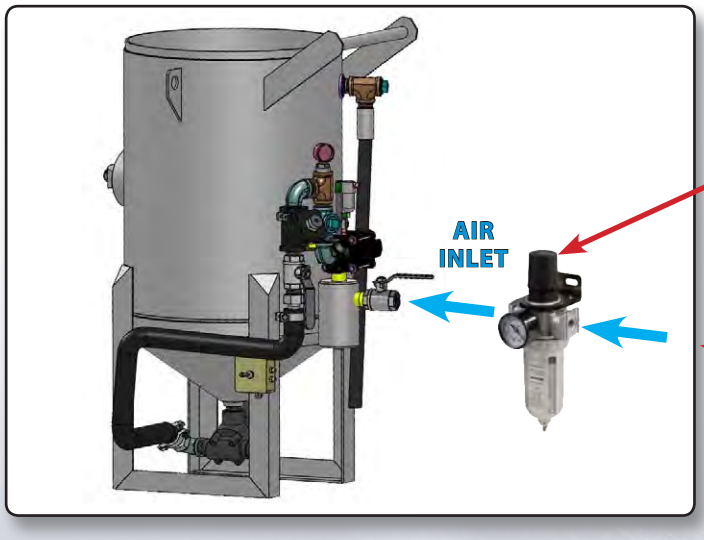


Connect the blasting hose to the abrasive valve.

MMV175



RC176 PRESSURE RELEASE SYSTEM ONLY



Install a 1¼ "air regulator (not included) to stabilize the internal pressure in the pressure vessel and in the sandblasting hose.

The main compressed air supply must be clean, dry and free of airborne contaminents. The inside diam. of the hoses must be 1¼" or more in order to leave enough air in the sandblasting hose.

BLASTING

PRESSURIZING THE ABRASIVE BLASTER

Before you pressurize the Abrasive Blaster, make sure that:

- All "BEFORE BLASTING" procedures have been carried out.
- The Inlet Valve is shut off.
- The Remote Control Handle is released.
- Each hose connection is secured and reinforced with a safety clip.
- The Abrasive Blaster is set up in a safe location, on level ground, and everyone nearby has been informed of its presence.
- Anyone who will be near the Abrasive Blaster is wearing the required safety equipment.
- The only persons who will be near the Abrasive Blaster are those who have received the proper training and who have read the manual and understand it.

Once these conditions are met, you can turn ON the compressed air source and position the pressurization/depressurization switch to "PRESSURIZED". At that point, the Abrasive Blaster is ready for blasting.

DANGER : Maintenance must NEVER be done on the Abrasive Blaster nor should anyone try to open it while it is pressurized. Otherwise, serious injury or death will result from the violent expulsion of compressed air and propelled objects.

The compressed air supplied to the Abrasive Blaster should NEVER exceed 150 psi.

WARNING : Activating the Remote Control Handle can cause the Blast Hose to kick back. Prepare by bracing yourself.

WARNING : Everyone who will be in the vicinity of the blasting operation must be adequately trained, must have read and understood the manual and must be wearing the necessary safety equipment.

HOW TO USE THE ABRASIVE BLASTER

- Once the abrasive blaster is pressurized, you are now ready to operate it.
- Refer to "How it works" section to familiarize yourself with its working principles.
- When you operate the abrasive blaster for the first time, it is necessary to adjust the AR7 abrasive metering valve. Refer to section " AR7 abrasive metering valve" for adjustments procedures.
- To start blasting operations, push the safety flap down and squeeze the remote control handle.
- When the abrasive flows through the blast hose, you may adjust the pressure regulator located at the air inlet to the desired working pressure.

HOW TO SHUT DOWN THE ABRASIVE BLASTER

- Once the blasting operations are done or the abrasive blaster is emptied, release the remote control handle and position the Pressurization/ Depressurization sswitch to "DEPRESSURIZED" to release compressed air from the abrasive blaster and allow to refill it.

DANGER : Respiratory diseases can result from airborne particles generated by abrasive blasting. Anyone involved in the blasting operation or in the vicinity must wear the appropriate NIOSH/OSHA-approved breathing apparatus. Abrasives containing silica must NEVER be used.

DANGER : Always stay clear of a Abrasive Blaster while it is running. When the Remote Control Handle is released, compressed air will rush out suddenly and violently from the exhaust valve.

WARNING : Only persons who have been fully trained in abrasive blasting should operate the Abrasive Blaster. This manual provides only basic information on the safe operation of the features of ISTblast RC-176/RC-186 Series Abrasive Blasters.

WARNING : You must NEVER point the Blast Nozzle towards anyone, including yourself, or towards the Abrasive Blaster.

WARNING : Make sure the Choke Valve is completely open during blasting to prevent damage to the equipment.

BLASTING (END)

HOW TO DRAIN THE MOISTURE SEPARATOR

The Moisture Separator must be drained periodically during blasting. To do so, slightly open the Drain Valve to force the moisture out. Then, close the drain valve firmly to ensure the peneumatic circuits is airtight.

WARNING : The Abrasive Blaster must receive clean, cool, dry compressed air to run properly. Depending on the quality of the air being supplied, the Moisture Separator included with the Abrasive Blaster may not have the capacity to ensure this is the case.

HOW TO SHUT DOWN THE ABRASIVE BLASTER

Once the blasting operations are done or the abrasive blaster is emptied, release the remote control handle and position the Pressurization/Depressurization sswitch to “DEPRESSURIZED” to release compressed air from the abrasive blaster and allow to refill it.

HOW TO DISCONNECT THE AIR SUPPLY HOSE

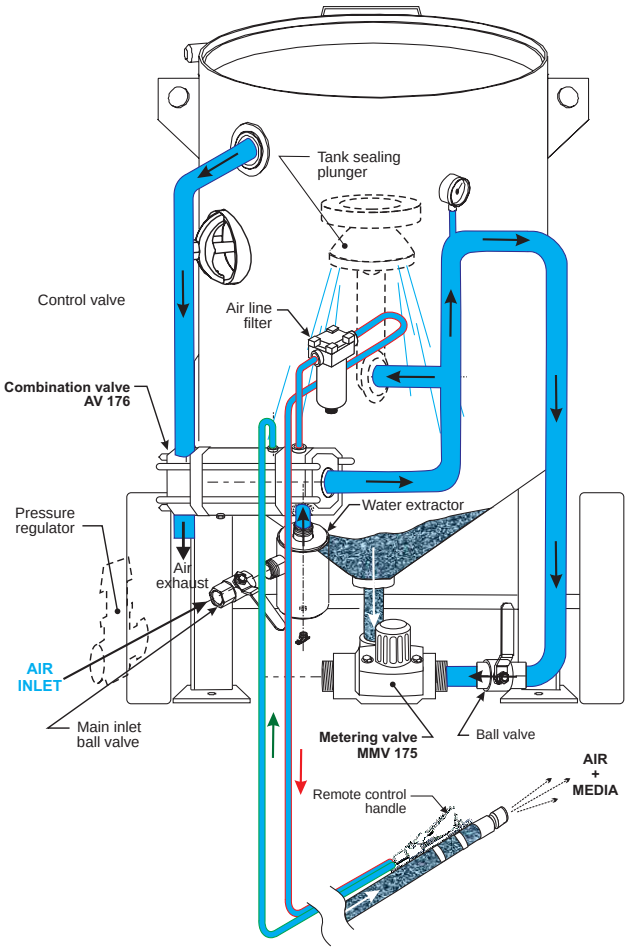
Even once you have depressurized the Abrasive Blaster and shut off the Inlet Valve, the Compressed Air Supply Hose may still contain pressure, which must be expelled before you disconnect the hose.

To do so, shut off the compressed air at its source and exhaust. Slowly open the Inlet Valve on the Abrasive Blaster. This will allow the compressed air stored in the Compressed Air Supply Hose to exhaust through the Drain Valve. Once the sound of air escaping through the Drain Valve has stopped, squeeze the Compressed Air Supply Hose and make sure there is no more compressed air left inside. Once this is done, you can disconnect it.

DANGER : Compressed Air Supply Hoses must NEVER be disconnected until the “HOW TO DISCONNECT THE AIR SUPPLY HOSE” procedures have been carried out. Otherwise, the hose could blow off violently and injure or kill someone in the area.

RC 176 PRESSURE RELEASE SYSTEM

HOW IT WORKS



IMPORTANT :

A PRESSURE REGULATOR SHOULD BE INSTALLED ON THE AIRLINE FROM AIR COMPRESSOR

When the main air-line ball valve is ON, air is supplied to the AV-176 Combination Air Intake and Exhaust Valve, which is usually closed.

When the Remote Control Handle on the dual air line is depressed, the AV-176 Combination Valve will be activated, so the air can flow in. This forces the Plunger Pop-up Valve to seal the filling port and close the exhaust section of the Combination Valve at the same time, thus pressurizing the Pressure Vessel.

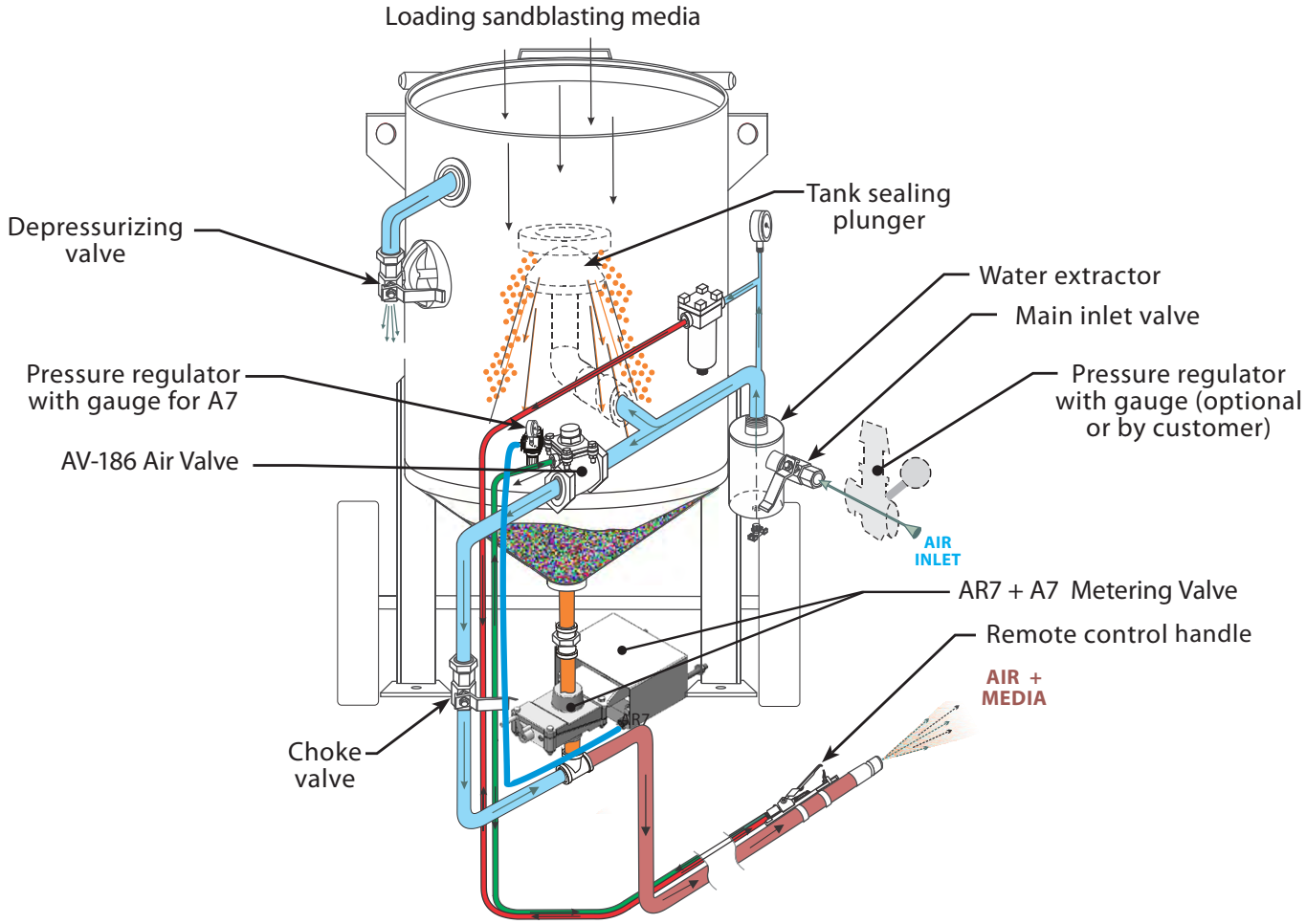
When the Control Handle is released, blasting will stop and the Pressure Vessel will automatically depressurize.

When you have finished blasting, always be sure to close the main inlet air-line ball valve.

WARNING **THE PRESSURE VESSEL MUST NEVER BE LEFT PRESSURIZED WHEN NOT IN USE.**

RC 186 PRESSURE HOLD SYSTEM

HOW IT WORKS



IMPORTANT :

A PRESSURE REGULATOR SHOULD BE PLACED ON THE AIR LINE FROM THE AIR COMPRESSOR

Make sure the main air-line ball valve is turned on. The Vessel will be pressurized, so the air can flow to the AV-186 Air Valve.

To begin blasting, depress the Remote Control Handle on the Blasting Hose near the Nozzle end. The Air Valve and the AR7+A6 Abrasive Metering Valve will then open, and blasting will begin.

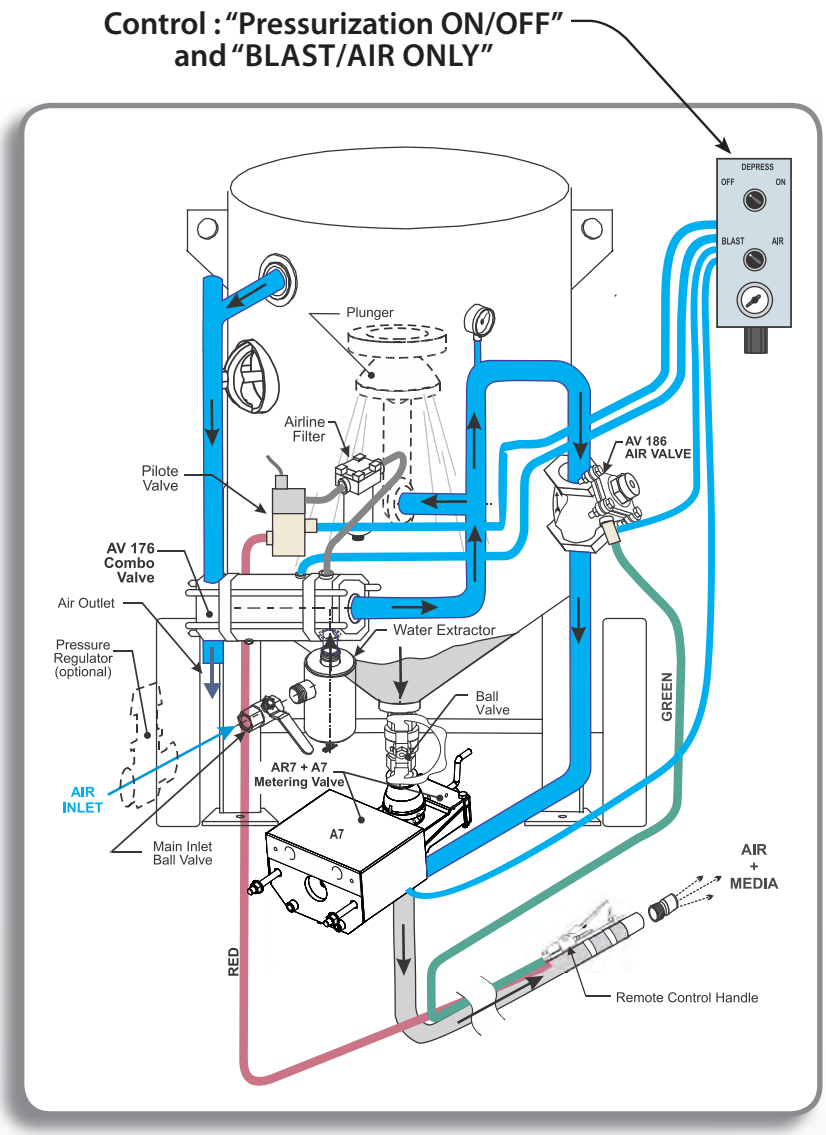
To stop blasting, release the Remote Control Handle. The Air Valve and the Abrasive Metering Valve will then close to interrupt the blasting stream; however, the Pressure Vessel will stay pressurized.

When you have finished blasting or when you need to refill the Pressure Vessel with abrasive, depressurize the Vessel. To do so, first make sure the Control Handle is released. Next, close the main inlet air-line ball valve, and then slowly turn the manual depressurizing ball valve.

WARNING THE PRESSURE VESSEL MUST NEVER BE LEFT PRESSURIZED WHEN NOT IN USE.

RC176/RC186 DUAL CONTROL SYSTEM

HOW IT WORKS



The air line feeds air to an AV-176 Combination Air Intake and Exhaust Valve, which is usually closed.

Turning the Vessel Pressurizing Switch to PRESSURIZED activates the AV-176 Combination Valve, leaving the airflow penetrating and pressurizing the vessel. Once pressurized, the Vessel is ready for blasting.

Before blasting begins, close all the doors of the sandblast booth equipped with a safety door switch.

Blasting can begin only once all the doors are closed. To begin, press on the Remote Control Handle on the Blasting Hose near the Nozzle end. The AV186 Air Valve and the AR7 Abrasive Metering Valve will then open, and blasting will begin.

When the Remote Control Handle is reelased, the blasting STOP, the Pressure Vessel will stay pressurized, ready to resume blasting when the Remote Control Handle is pressed again.

When the blasting operation is complete or when the pressure vessel needs to be filled with abrasive, the operator releases the control handle. In order to depressurize the tank, the operator must put the "PRESSURIZATION" switch in the OFF position.

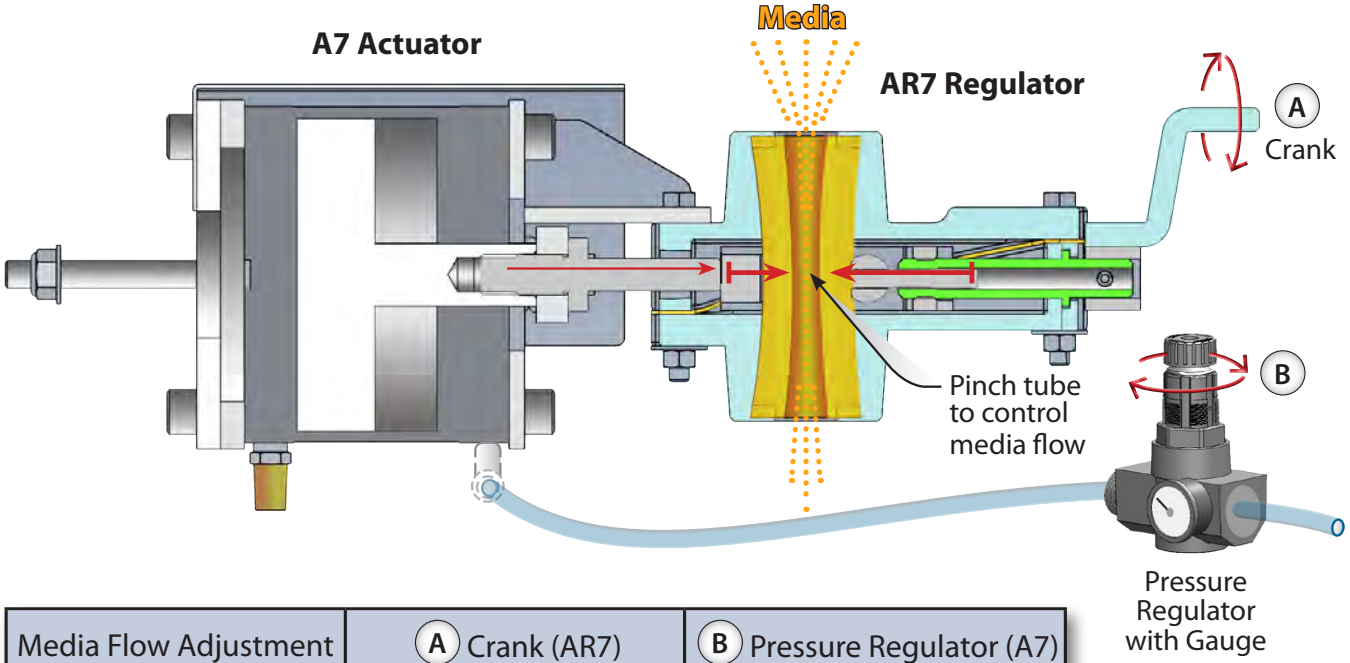
The "SANDBLAST/AIR ONLY" switch temporarily cuts off the flow of sandblasting media (AIR ONLY) and causes the nozzle to only blow air in order to clean the part(s), for example.

WARNING **THE PRESSURE VESSEL MUST NEVER BE LEFT PRESSURIZED WHEN NOT IN USE.**

The Pressure Vessel should be depressurized and the air-line supply turned OFF.

AR7 NORMALLY CLOSED ABRASIVE REGULATOR WITH A7 ACTUATOR

ABRASIVE MEDIA FLOW ADJUSTMENT



Media Flow Adjustment	(A) Crank (AR7)	(B) Pressure Regulator (A7)
More media in the mix	Turn counterclokwise	Increase pressure
Less media in the mix	Turn clokwise	Decrease pressure

Follow the procedure below to adjust your abrasive media valve:

1. Set the A7 Actuator Pressure Regulator (B) to 80 psi.
2. Activate sandblasting by pressing on the foot pedal (blast cabinet) or the remote-control handle (blast pot).
3. Open completely the Abrasive Regulator by turning the crank (a) counterclockwise until the end of course.
4. Make three (3) complete turns clockwise to close the Regulator approximately halfway.
5. Release the sandblasting pedal/remote control handle.
6. Set the A7 Actuator Pressure Regulator (B) to 40 psi, which should be its normal working pressure.
7. Activate the sandblasting again, wait for approximately 10 seconds and observe the blast jet (see references below for the proper adjustment).
8. If the blast jet has too much media, a micro adjustment can be made by slightly releasing pressure on the A7 Actuator Pressure Regulator (B) (**do not set it below 35 psi**).
9. If the blast jet doesn't have enough media or if the micro adjustment on Step 8 cannot adjust the proper flow, keep pinching or unpinching the tube by turning the crank (a) half turn at the time, until desired blast jet is obtained.

How to determine the ideal abrasive media flow:

- ✓ **Ideal flow:** The flow is constant, even, stable, white color and you can see through.
- ✓ **Too much media in the flow:** The flow is unstable, pulsating or jerky. Strangle the tube a little bit more and check again.
- ✓ **Not enough media in the flow:** The flow is transparent and not powerful enough to produce desired result. Release the tube and check again.

MAINTENANCE

SANDBLASTING EQUIPMENT

DAILY MAINTENANCE & OPERATION

- Inspect Personal Protective Equipment (PPE) (1). Service or replace when needed.
- Arrange blast hose (5) in a way to avoid overlaps and steep curves.

WEEKLY MAINTENANCE

- Inspect and service remote control handle and hose (2).
- Inspect blast nozzle (3) and replace when needed.
- Inspect whip blast hose (4) for leaks and replace when needed.
- Inspect "whip" blast hose (the last section near the nozzle) (4) for leaks and replace when needed. The wall of the whip hose is thinner than other sections to facilitate handling, but it wears out faster.

MONTHLY MAINTENANCE

- Inspect blast hose (5), couplings (6) and gaskets for soft spots and premature wear. Replace when needed.
- Inspect air hose (7), couplings and gaskets for soft spots and premature wear. Replace when needed.

REPLACE WHEN NEEDED

- Refer to Nozzle, Hose, and Coupling Selection Guide.

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BLAST NOZZLE INSPECTION - MAINTENANCE SCHEDULE

Nozzle: check the nozzle regularly for wear using a drill bit
1/8" larger than the original nozzle diameter

IT GOES THROUGH

WORN NOZZLE
TO BE REPLACED

DOES NOT GOES THROUGH

NOZZLE IN GOOD SHAPE

The inside diameter should never exceed 1/8" of wear

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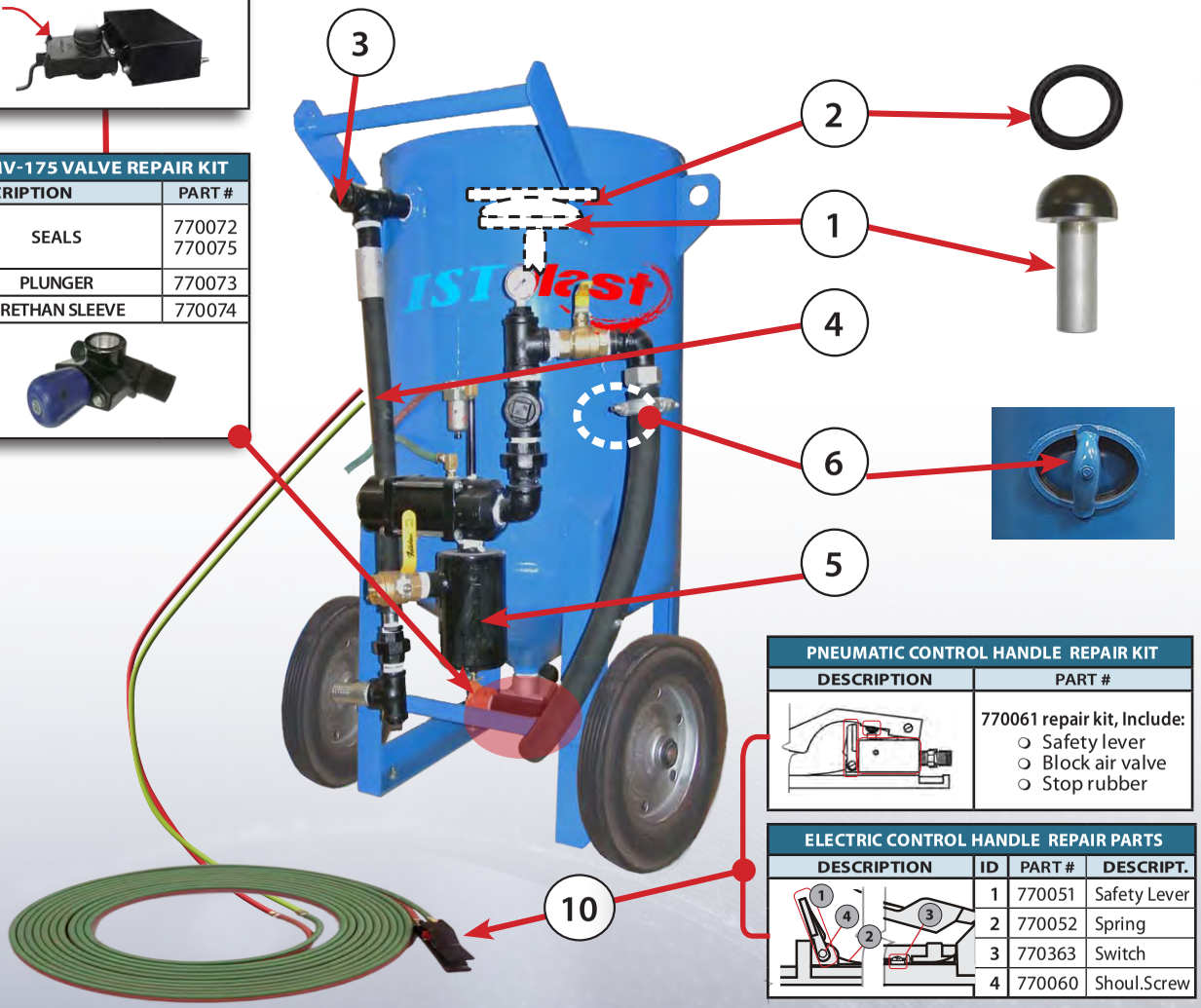
SANDBLAST POT - MAINTENANCE SCHEDULE

PRESSURE VESSEL WITH SYSTEM RC176, 186 & DUAL

AR-7 + A7 VALVE REPAIR KIT	
DESCRIPTION	PART #
AR7 REGULATION TUBE	618228

MMV-175 VALVE REPAIR KIT	
DESCRIPTION	PART #
SEALS	770072 770075
PLUNGER	770073
URETHAN SLEEVE	770074



PNEUMATIC CONTROL HANDLE REPAIR KIT	
DESCRIPTION	PART #
	770061 repair kit, Include: ❍ Safety lever ❍ Block air valve ❍ Stop rubber

ELECTRIC CONTROL HANDLE REPAIR PARTS			
DESCRIPTION	ID	PART #	DESCRIPT.
	1	770051	Safety Lever
	2	770052	Spring
	3	770363	Switch
	4	770060	Shoul.Screw

MONTHLY

- ❍ Empty water separator (5)
- ❍ Inspect remote control handle and service if needed (10)

6 MONTHS

- ❍ Verify the inside the plug (3)
- ❍ Verify the depressurizing hose at pinch point (4)
- ❍ Verify the plunger for excessive wear and air leaks when the vessel is pressurized (2)
- ❍ Verify the O-Ring for excessive wear and air leaks when the vessel is pressurized (1)
- ❍ Verify the AR-7 regulation tube

12 MONTHS

- ❍ Verify integrity of the cover sealing gasket (6)
- ❍ Verify integrity of the trap sealing gasket (7)

RECOMMENDED SPARE PARTS

#	DESCRIPTION	PART #
1	5" Plunger	610044
2	PPB 646 O-Ring (6.5 cu.ft.)	740100
	PPB 1046 O-Ring (10 cu.ft.)	740104
3	Plumbing plug 1 ¼"	630844
4	¾" SBH hose	606003
6	Access door gasket	740101

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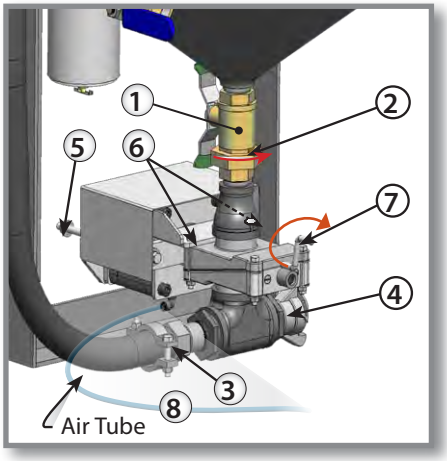
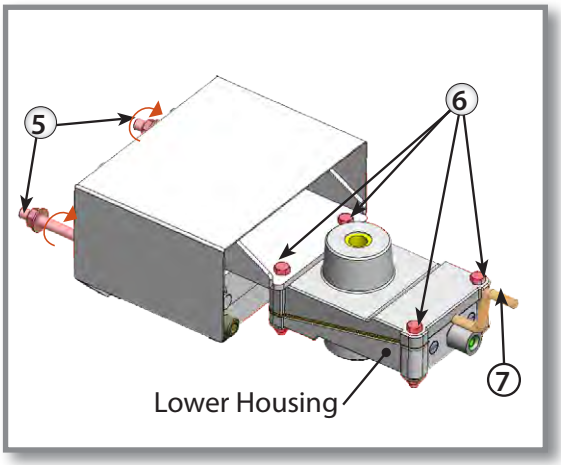
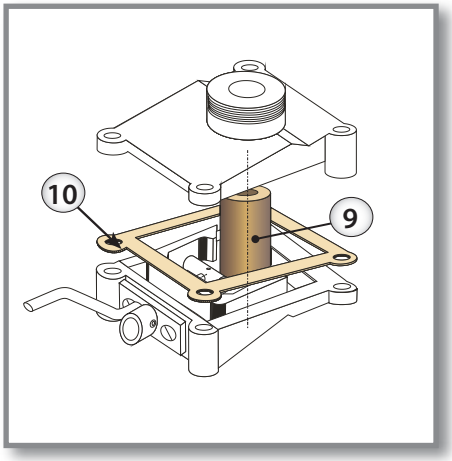
AR7 & A7 DISASSEMBLY / REASSEMBLY PROCEDURES

MAINTENANCE

Change the rubber tube (9) and the gasket (10) between the top and bottom housing once a year or when needed.







WARNING: The pressure vessel must be depressurized and emptied before proceeding with below maintenance procedures.

1. Tighten both screws (5) until the end of the course to compress the springs, by alternating screws, 3-4 turns at the time, to ensure the plate remains straight.

2. Remove the 4 link bolts (6) located at the upper housing of the AR7 to release the lower housing.

3. Remove the regulation tube (9) and replace it with a new. Before reassembling the AR7 check the gasket (10) and replace it if necessary.

4. Reassemble the AR7 + A7 kit in place by tightening the 4 link bolts (6).

5. Turn the AR7 crank (7) three (3) complete turns clockwise to close the Regulator approximately halfway.

6. Untighten both screws (5) until the end of the course to release the springs, by alternating screws, 3-4 turns at the time, to ensure the plate remains straight.

7. Follow the media flow adjustment as indicated on the previous page, starting on Step 7 (ensure all previous steps are taken into account).

NOTE: The ball valve (1) allows to stop the flow of abrasive media to carry out troubleshooting when the pressure vessel contains media. The hexagonal coupling (2) allows to unscrew and replace the AR7 abrasive regulation valve and its A7 actuator.

TROUBLESHOOTING

TROUBLESHOOTING

ABRASIVE BLASTER

TYPE OF FAILURE	POSSIBLE CAUSE	SOLUTION
ABRASIVE NOT FLOWING DURING BLASTING (AIR ONLY)	The Pressure vessel is empty.	Depressurize the pressure vessel, add media and check again.
	The «Blast On / Air Only Switch» (if equipped) is set to «Air Only» mode and is preventing the abrasive from flowing.	Turn the switch to «Blast On» allowing the media regulator to release media in the push line.
	The Abrasive Regulator is closed or not properly adjusted.	Turn the adjustment crank counterclockwise, half turn at the time, to allow more media in the mix.
	There is a blockage in the Abrasive Regulator.	Have a second qualified person to assist. Activate the control handle and ask a qualified person to alternate open/close the «choke valve» for 3-5 times until the obstruction is released. Minor obstructions, such as paint chips, a bit of wet abrasive or a piece of paper, will be forced through the Regulator and out the nozzle. Turn the Regulator back to the required blast setting and check if the obstruction has been removed. If the blockage persists, release the remote-control handle, depressurize the vessel and proceed to disassembling the Regulator and removing the blockage manually.
	The pressurized vessel has an air leak and the pressure inside the vessel is less than the one on the push line.	Check for air leaks (plunger seal, maintenance door, and/or quick-depress valve) and service your blast pot.
	The abrasive media is contaminated with humitidy, which prevent it from flowing through the Regulator.	Empty your pressurized vessel from media, clean the reservoir through the maintenance door, and replace with new media. Consider servicing and/or adding air dryer and/or dessicant filter on your airline.
ABRASIVE STREAM TOO HEAVY OR THROBBING DURING BLASTING	**Note : When Auto-depress systems first start up, they may throb for a while if there is an accumulation of abrasive in the blast hose from a previous operation. This is normal, and no corrective action is needed.**	
	The Choke Valve is partially closed. The Abrasive Blaster should be operated ONLY with the Choke Valve fully open.	Open the Choke Valve and check again.
	The Abrasive Regulator needs adjusting.	Turn the adjustment crank clockwise to restrict media in the mix. If your unit is equipped with a Actuator that closes the Regulator when the unit is not blasting, be sure to adjust the Regulator only while blasting.
	The rubber tube inside the regulator is worn or ultimately pierced.	Disassemble the Regulator, clean any accumulation of media in it and change the rubber tube. If the rubber tube as a perforation, the media can flow freely in the Regulator and therefore can create wear on all the other inner mechanical parts. Proceed to a complete inspection of the push line before using the unit again.

TROUBLESHOOTING (CONT'D)

ABRASIVE BLASTER (CONT'D)

TYPE OF FAILURE	POSSIBLE CAUSE	SOLUTION
LOW PRESSURE AT THE NOZZLE	1. The air compressor is too small or the load button is not activated.	Verify your compressor or contact a IST representative.
	2. The Nozzle is worn out, creating too much demand for the compressor.	Follow the maintenance procedure on your blast nozzle and replace your nozzle if needed.
	3. The hose supplying air to the blaster is too small.	The blast hose ID (Interiore Diameter) needs to be the same as the outlet of your piping and valves. Change your blast hose or contact your IST representative.
	4. There is a hole in the blast hose.	Follow the maintenance procedure on your blast hose and replace your hose if needed.
	5. The pop-up is not sealing properly.	Follow the maintenance procedure on your blast pot and change your plunger and/or your plunger seal to ensure there is no leak in your pressure vessel.
	6. There are one or more leaks in the Handway Assembly.	Proceed to a full maintenance on your blast pot and blast nozzle.
	7. The Inlet Air Valve is dirty or blocked.	Follow the maintenance procedure on your air valve, and service or replace if needed.
	8. The lower plunger (if equipped) in the Inlet Air Valve is damaged, faulty or worn out.	
	9. The Choke Valve is partially closed. The Abrasive Blaster should be operated ONLY with the Choke Valve fully open. Doing otherwise will cause damage to the Abrasive Blaster.	Open your choke valve and check again.
	10. The AR7 Abrasive Metering Valve is open too far.	Follow the maintenance procedure on your AR7 Abrasive Metering Valve. Either the rubber tube must be replaced or the valve should be inspected in case of failure.
	11. The Nozzle is blocked.	Follow the maintenance procedure on your blast nozzle and replace your nozzle if needed.
BLAST MACHINE TURNS ON ACCIDENTALLY OR UNEXPECTEDLY	**1. The safety flap, lever or lock button on the Control Handle is damaged or missing.**	Immediately close the air inlet valve on your blast pot and contact your IST representative.

TROUBLESHOOTING (CONT'D)

ABRASIVE BLASTER (END)

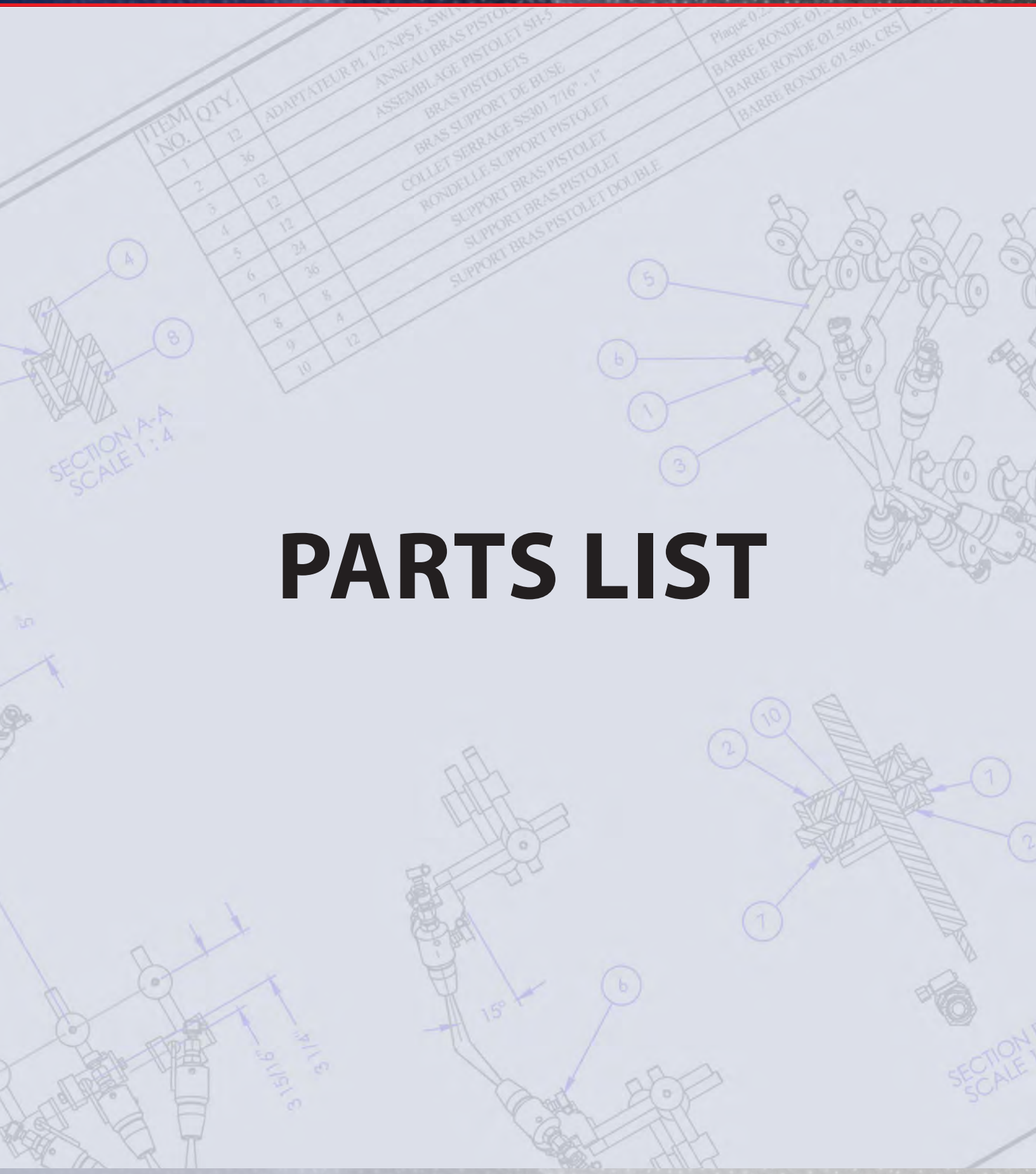
TYPE OF FAILURE	POSSIBLE CAUSE	SOLUTION
BLAST MACHINE TURNS OFF TOO SLOWLY OR DOES NOT TURN OFF WHEN CONTROL HANDLE IS RELEASED	1. The Pneumatic Control Handle (if equipped) is faulty, damaged or worn out.	Service your control handle and replace the connexion cord. If the problem persists, contact your IST representative.
	2. .The Electrical Control Handle (if equipped) is faulty, damaged or worn out.	Service your control handle and replace the connexion cord. If the problem persists, contact your IST representative.
	3. The Electrical Control Cord (if equipped) is faulty, damaged or worn out.	
	4. The Air Valve (if equipped) needs servicing due to insufficient lubrication, or it is jammed, faulty, damaged or worn out.	Follow the maintenance procedure on your air valve, and replace if needed.
	5. The Combination Valve Assembly (if equipped) is not seating properly because it is faulty, damaged or worn out.	Follow the maintenance procedure on your combo air valve, and replace if needed.
ABRASIVE BLASTER DOES NOT TURN ON OR IS SLOW TO START	1. The air compressor is too small or the load button is not activated.	Verify your compressor or contact a IST representative.
	2. The Nozzle is worn out, creating too much demand for the compressor.	Follow the maintenance procedure on your blast nozzle and replace your nozzle if needed.
	3. The hose supplying air to the blaster is too small.	The blast hose ID (Interiore Diameter) needs to be the same as the outlet of your piping and valves. Change your blast hose or contact your IST representative.
	4. There are one or more leaks in the control hoses and/or fittings.	Proceed to a full maintenance on your blast pot and blast nozzle.
	5. The Nozzle is blocked.	Follow the maintenance procedure on your blast nozzle and replace your nozzle if needed.
	6. The Inlet Air Valve is dirty or blocked.	Follow the maintenance procedure on your air valve, and replace if needed.
	7. The Pneumatic Control Handle (if equipped) is faulty, damaged or worn out.	Service your control handle and replace the connexion cord. If the problem persists, contact your IST representative.
	8. The Electrical Control Handle (if equipped) is faulty, damaged or worn out	
	9. The Electrical Control coil or coils (if equipped) are faulty.	
	10. The Power Source (battery or AC-DC converter) is not generating enough power to open the electrical control valves (if equipped).	Service the power converter box or replace if needed.
	11. The Control Valve (if equipped) needs servicing due to insufficient lubrication, or it is jammed, faulty, damaged or worn out.	Follow the maintenance procedure on your air valve, and service or replace if needed.

TROUBLESHOOTING (END)

BLAST ON/AIR ONLY

TYPE OF FAILURE	POSSIBLE CAUSE	SOLUTION
ABRASIVE STOPS FLOWING BUT AIR BLAST CONTINUES WHEN CONTROL HANDLE IS RELEASED	1. The switch is set to "Air Only"	Turn the switch to "Blast On"
	2. The lower plunger in the AV-176 or AV-186 Air Valve is faulty, damaged or worn out.	Follow the maintenance procedure on your combo air valve, and replace if needed.
	3. The piston seal in the AV-176 or AV-186 is faulty, damaged or worn out.	
	4. The O-ring in the AV-176 or AV-186 Valve is faulty, damaged or worn out.	

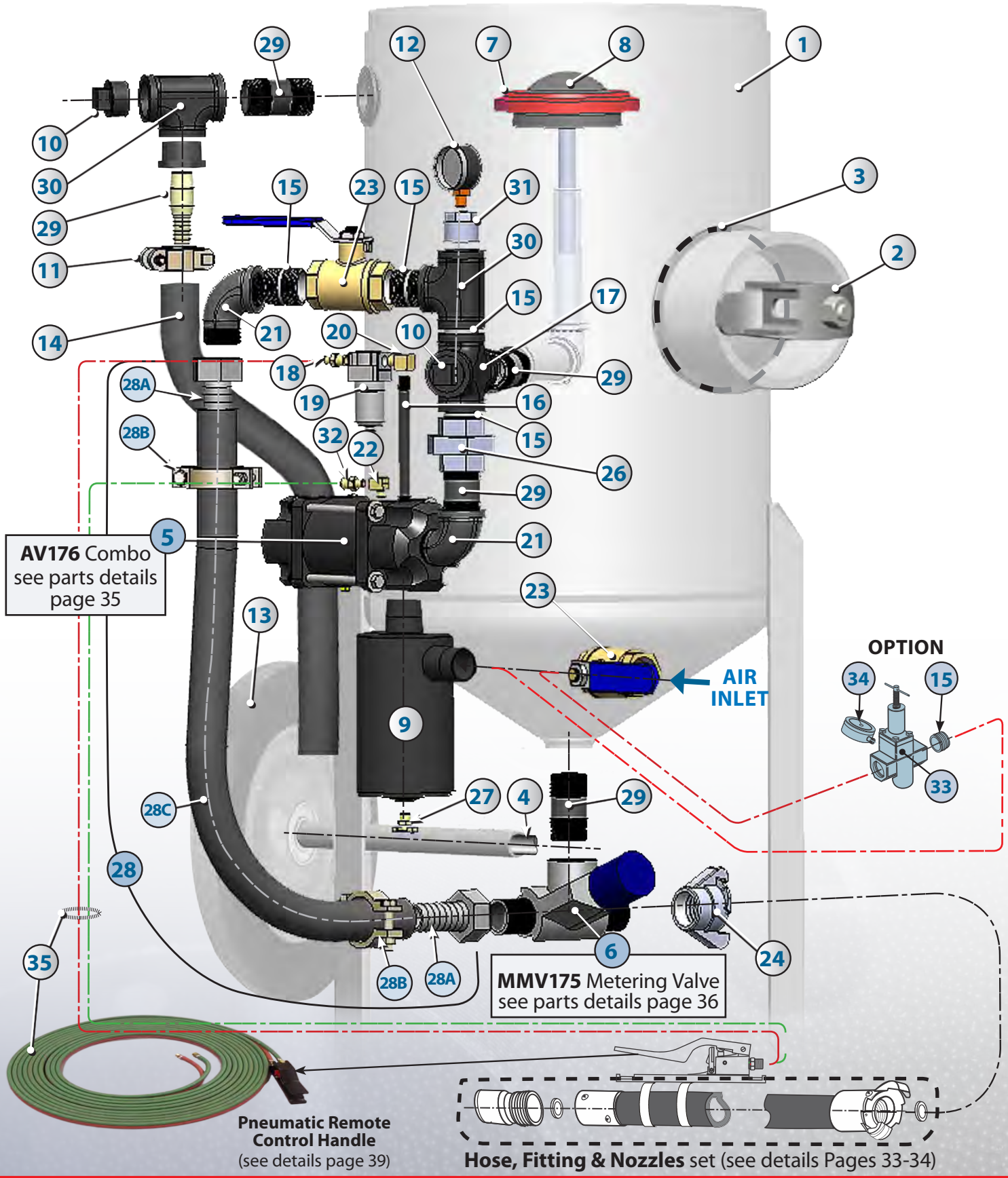
DANGER : The Abrasive Blaster must NEVER be opened while it is pressurized. Extreme caution is required when troubleshooting involves pressurizing the Abrasive Blaster. Only experienced, qualified persons should perform troubleshooting procedures.


ITEM NO.
QTY.
ADAPTATEUR PL 1/2 NPS F. SWA
ANNEAU BRAS PISTOLET SH-5
ASSEMBLAGE PISTOLET SH-5
BRAS PISTOLETS
BRAS SUPPORT DE BUSE
COLLET SERRAGE SS301 7/16" - 1"
RONDELLE SUPPORT PISTOLET
SUPPORT BRAS PISTOLET
SUPPORT BRAS PISTOLET
SUPPORT BRAS PISTOLET DOUBLE
SECTION A-A
SCALE 1 : 4
15°

PARTS LIST

SANDBLASTERS PPB-346/646/1046 • RC-176 PRESSURE RELEASE SYSTEM

EXPLODED VIEW



SANDBLASTERS PPB-346/646/1046 • RC-176 PRESSURE RELEASE SYSTEM

PARTS LIST

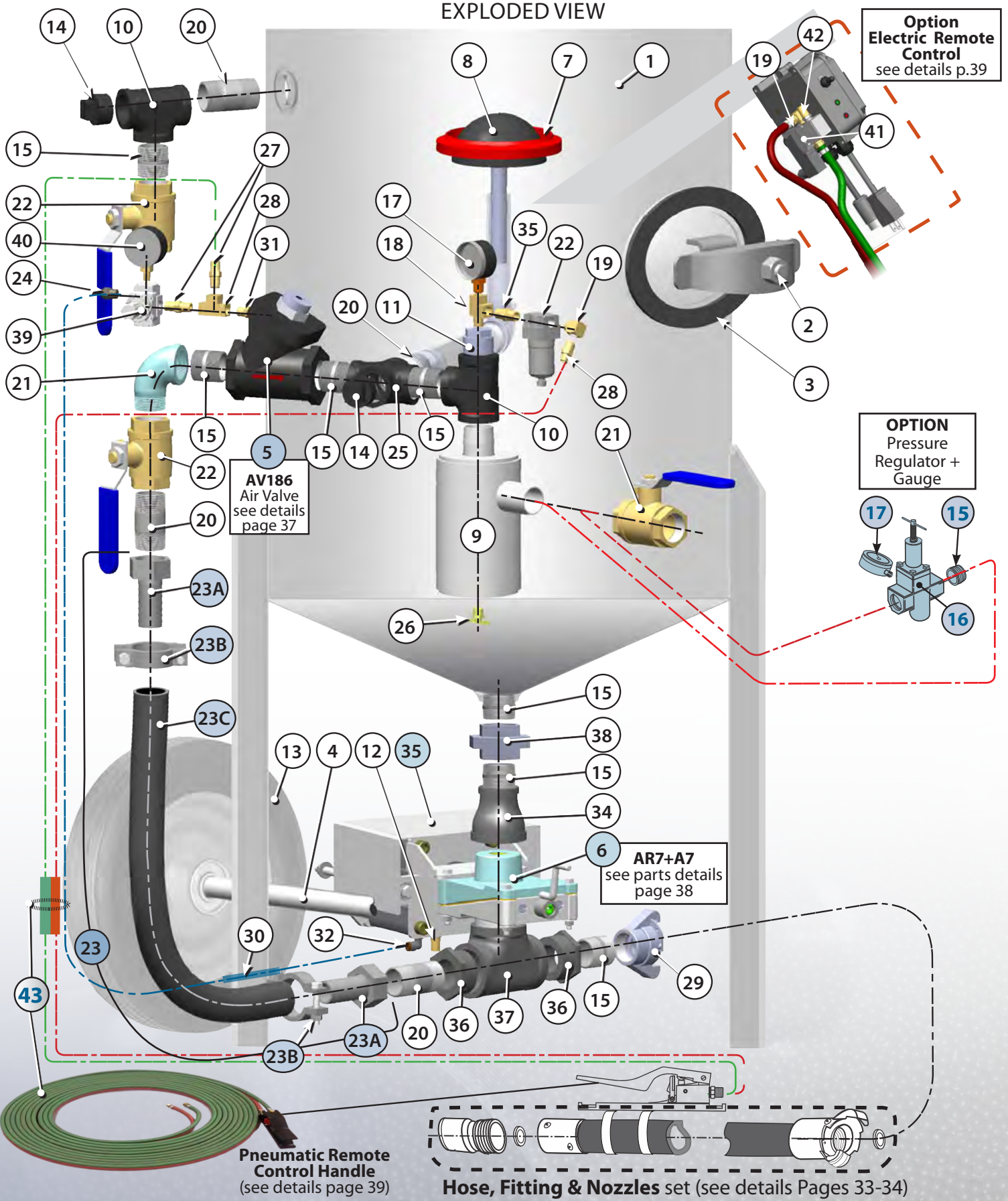
#	STOCK	DESCRIPTION
1	713000	PRESSURE VESSEL ONLY (346)
	723000	PRESSURE VESSEL ONLY (646)
	733000	PRESSURE VESSEL ONLY (1046)
2	740102	ACCESS DOOR KIT
3	740101	ACCESS DOOR GASKET
4	740001	AXLE (MODEL 346)
	740002	AXLE (MODEL 646-1046)
5	608821	COMBO VALVE AV-176[1]
6	770070	MMV-175 METERING VALVE[2]
7	740100	"O" RING
	740104	"O" RING FOR 10 pi[3]
8	610044	5" PLUNGER
9	611053	1¼" MOISTURE SEPARATOR
10	630884	1¼" PLUG
11	607051	¾"NH- ALUM. NOZZLE HOLDER
12	611022	¼" NTP GAUGE
13	740006	15" WHEEL
14	606003	¾" SBH HOSE
15	630801	1¼" NIPPLE CLOSE
16	630111	¼" x 6" NIPPLE

#	STOCK	DESCRIPTION	
17	630838	1¼" CROSS	
18	632214	¼" x ⅛" HEX NIPPLE	
19	611035	¼" AIR LINE FILTER	
20	632232	¼" BRASS STREET ELBOW	
21	630851	1¼" X 90° ELBOW MF	
22	632026	⅛" BRASS STREET ELBOW	
23	608105	1¼" BALL VALVE	
24	607075T	1¼" NYLON TANK COUPLING	
26	630890	1¼" UNION PA	
27	608230	¼" DRAIN COCK VALVE	
28	770100	PUSH LINE HOSE ASS'Y (28A-B-C)	
28A	607088	1¼" HOSE INSERT SWIVEL	
28B	607087	1¼" DOUBLE BOLT CLAMP	
28C	770101	1¼" x 30" PUSH LINE HOSE	
29	630805	1¼" x 3" NIPPLE	
30	630840	1¼" x 1¼" ''T"	
31	630864	1¼"x ¼" COUPLING	
32	632214	⅛" x ¼" REDUCER NIPPLE	
33	**608025**	1¼" PRESSURE REGULATOR (OPTION)	
34	**611022**	¼" MTP GAUGE (OPTION)	
35	**606192**	HOSE DUAL RED & GREEN 15'	C/W FITTINGS & CLIPS (EACH END)
	606191	HOSE DUAL RED & GREEN 30'	
	606193	HOSE DUAL RED & GREEN 55'	
	606199	HOSE DUAL RED & GREEN 70'	
	606203	HOSE DUAL RED & GREEN 80'	
	606202	HOSE DUAL RED & GREEN. 90'	
	606195	HOSE DUAL RED & GREEN105'	
	606205	*HOSE DUAL RED & GREEN 115'	

[1]See details parts page 35
[2]See details parts page 36
**For more than 115', you must use Electrical Remote Control*

SANDBLASTERS PPB-346/646/1046 • RC-186 PRESSURE HOLD SYSTEM

EXPLODED VIEW



SANDBLASTERS PPB-346/646/1046 • RC-186 PRESSURE HOLD SYSTEM

PARTS LIST

#	STOCK	DESCRIPTION
1	713000	PRESSURE VESSEL ONLY (346)
	723000	PRESSURE VESSEL ONLY (646/1046)
2	740102	ACCESS DOOR KIT
3	740101	ACCESS DOOR GASKET
4	740001	AXLE (MODEL 346)
	740002	AXLE (MODEL 646/1046)
5	608822	AIR VALVE AV-186[1]
6	608043	ABRASIVE REGULATOR AR-7[2]
7	740100	"O" RING
	740104	"O" RING FOR 10 pi[3]
8	610044	5" PLUNGER
9	611053	1¼" MOISTURE SEPARATOR
10	630840	1¼" "T" COUPLING
11	630864	1¼" x ¼" REDUCER
12	608117	¼" MUFFLER
13	740006	15" WHEEL (346-646)
14	630884	1¼" PLUG
15	630801	1¼" NIPPLE
16	608025	1¼" PRESSURE REGULATOR (OPTION)
17	611022	¼" MTP GAUGE (OPTION)
18	632224	¼" "T" STREET
19	632232	¼" STREET ELBOW
20	630805	NIPPLE 3" x 1¼"
21	608105	1¼" BALL VALVE
22	611035	AIR LINE FILTER

#	STOCK	DESCRIPTION	
23	770100	PUSH LINE ASSEMBLY (24A-B-C)	
23A	607088	HOSE INSERT SWIVEL 1¼"	
23B	607087	DOUBLE BOLT CLAMP	
23C	770101	PUSH LINE HOSE 30" X 1¼"	
24	919583	¼" MPT x 5⁄16" TU PUSH-IN	
25	630838	1¼" COUPLING CROSS	
26	608230	DRAIN COCK VALVE	
27	632214	¼" x ⅛" NIPPLE REDUCTOR	
28	632018	⅛" "T" STREET	
29	607075T	TANK COUPLING 1¼" NCV	
30	919584	5⁄16" POLYESTER BLUE TUBE	
31	632002	⅛" HEX. NIPPLE	
32	324560	¼" PUSH-IN @ 90°	
34	631160	2" X 1¼" REDUCER	
35	608042	COMPLETE A7 ACTUATOR[3]	
36	631151	2" X 1¼" ADAPTER	
37	631135	2" "T"	
38	630890	1¼" PA UNION	
39	608015	¼" MINI AIR REGULATOR 0-125 PSI	
40	611018	⅛" 0-160 PSI PRESSURE GAUGE	
41	612454	¼" 12V SOLENOID VALVE	
42	608117	¼" MUFFLER	
43	606192	HOSE DUAL RED & GREEN 15'	C/W FITTINGS & CLIPS (EACH END)
	606191	HOSE DUAL RED & GREEN 30'	
	606193	HOSE DUAL RED & GREEN 55'	
	606199	HOSE DUAL RED & GREEN 70'	
	606203	HOSE DUAL RED & GREEN 80'	
	606202	HOSE DUAL RED & GREEN 90'	
	606195	HOSE DUAL RED & GREEN 105'	
	606205	*HOSE DUAL RED & GREEN 115'	

[1]See details parts page 37

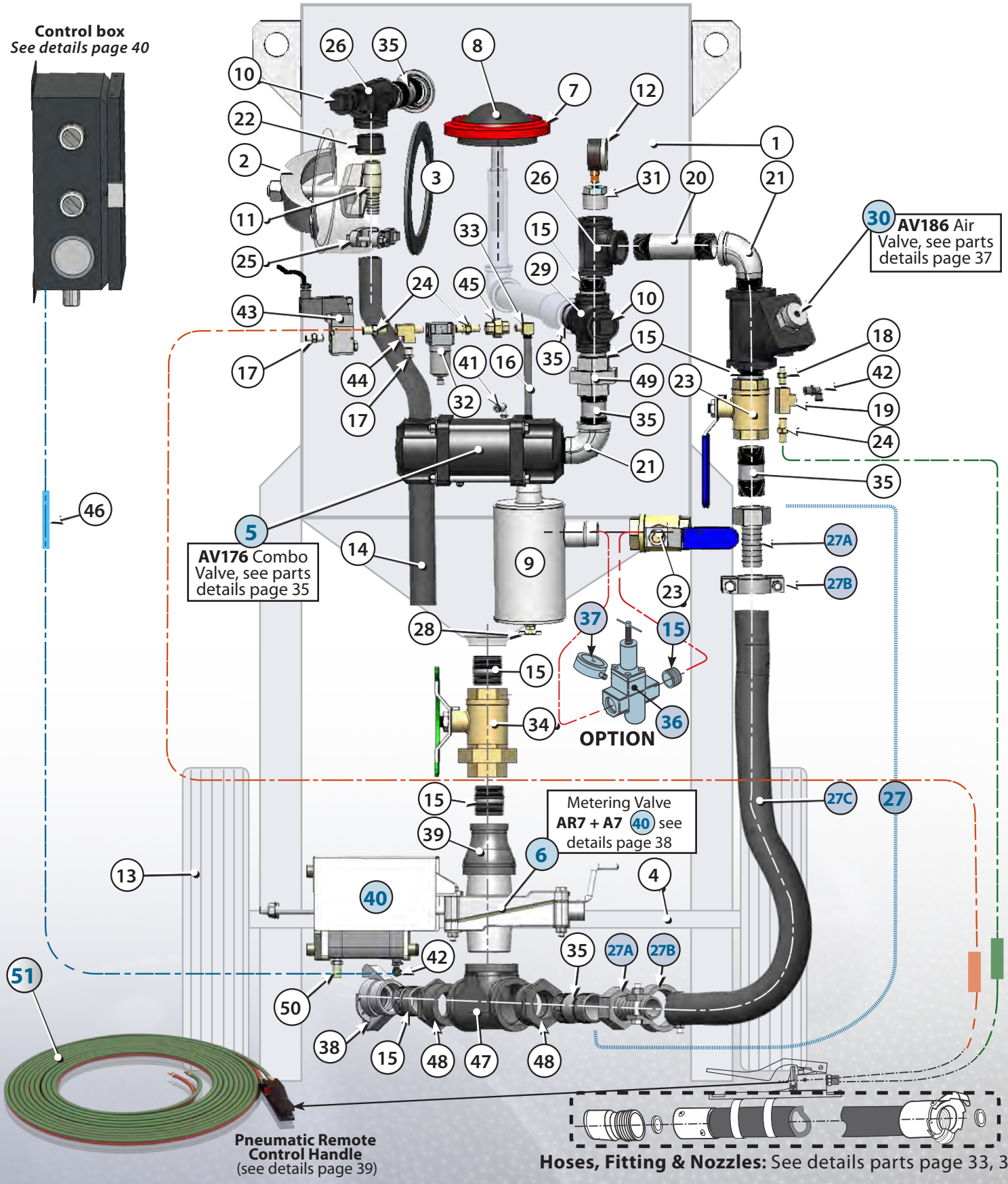
[2]See details parts page 38

[3]See details parts page 38

**For more than 115', you must use an Electrical Remote Control*

SANDBLASTERS PPB-346/646/1046 • RC-176/186 DOUBLE CONTROL

EXPLODED VIEW



SANDBLASTERS PPB-346/646/1046 • RC-176/186 COMBINED SYSTEM

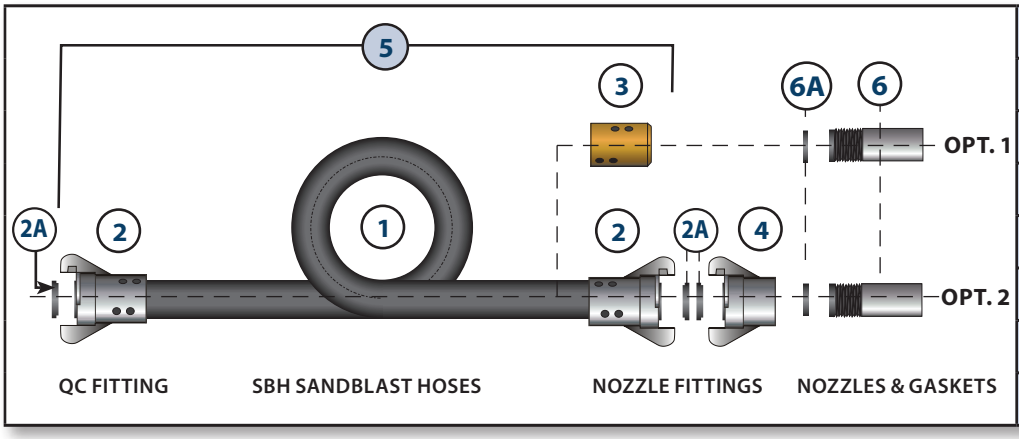
PARTS LIST

#	STOCK	DESCRIPTION
1	723000	PRESSURE VESSEL ONLY (646)
	733000	PRESSURE VESSEL ONLY (1046)
2	740102	ACCESS DOOR KIT
3	740101	ACCESS DOOR GASKET
4	619091	4" AXLE
5	608822	COMBO VALVE AV-186[1]
6	608043	ABRASIVE REGULATOR AR7[2]
7	740100	"O" RING
	740104	"O" RING FOR 10 pi.cu.
8	610044	5" PLUNGER
9	611053	1¼" MOISTURE SEPARATOR
10	630884	1¼" PLUG
11	630570	¾" HOSE BARB FITTING
12	611022	¼" NTP GAUGE
13	740006	15" WHEEL (346-646)
14	606003	¾" SBH HOSE
15	630801	1¼" PA NIPPLE
16	630111	6" x ¼" MPT NIPPLE
17	324558	¼" MTP x ¼" TU PUSH-IN FITTING
18	632214	⅛" x ¼" MTP REDUCER
19	632224	¼" FPT "T"
20	630809	5" x 1¼" PA NIPPLE
21	630851	1¼" x 90° ELBOW MF
22	630861	1¼" TO ¾" REDUCER
23	608105	1¼" BALL VALVE
24	632202	¼" HEX. NIPPLE
25	607086	1" DOUBLE BOLT CLAMP HOSE
26	630840	1¼" "T"
27	770100	PUSH LINE HOSE ASS'Y (27-A-B-C)
27A	607088	¼" SWIVEL HOSE INSERT C/W GASKET
27B	607087	¼" DOUBLE BOLT CLAMP
27C	770101	30" x 1¼" PUSH LINE HOSE

#	STOCK	DESCRIPTION	
28	608230	¼" DRAIN COCK VALVE	
29	630838	1¼" COUPLING CROSS	
30	608821	AV 176 AIR VALVE ASS'Y[3]	
31	630864	1¼" x ¼" REDUCER	
32	611035	¼" AIR LINE MINI FILTER	
33	632232	¼" x 90° MF ELBOW	
34	908847	1¼" BALL VALVE UNION END	
35	630805	3" x 1¼" NIPPLE	
36	608025	1¼" PRESSURE REGULATOR (OPTION)	
37	611022	¼" MTP GAUGE (OPTION)	
38	607075	1¼" NVC NYLON TANK COUPLING	
39	631160	2" x 1¼" REDUCER	
40	608042	ACTUATOR A7 (COMPLETE)[4]	
47	324561	90° ⅛" NPT ¼" TU FITTING PUSH-IN	
48	632202	¼" NIPPLE	
49	324560	¼" @ 90° PUSH-IN	
50	608534	TAC3 PILOT VALVE	
51	606192	HOSE DUAL RED & GREEN 15'	C/W FITTINGS & CLIPS (EACH END)
	606191	HOSE DUAL RED & GREEN 30'	
	606193	HOSE DUAL RED & GREEN 55'	
	606199	HOSE DUAL RED & GREEN 70'	
	606203	HOSE DUAL RED & GREEN 80'	
	606202	HOSE DUAL RED & GREEN 90'	
	606195	HOSE DUAL RED & GREEN 105'	
	606205	*HOSE DUAL RED & GREEN 115'	

[1]See parts details page 35
[2]See parts details page 38
[3]See parts details page 37
[4]See parts details page 38
**For more than 115', you must use an Electrical Remote Control*

SANDBLASTER MODEL 346/646/1046: NOZZLES & HOSES



1	SANDBLAST HOSES
2	HOSE FITTING (CHICAGO)
2A	HOSE FITTING GASKET
3	THREADED NOZZLE FITTING
4	QC THREADED NOZZLE FITTING
5	PRE-ASSEMBLED HOSE SET
6	THREADED NOZZLE
6A	GASKET THREADED NOZZLE

BULK SANDBLAST HOSES
(LENGTH OF 12.5', 25' & 50' ONLY)

	MODEL	INSIDE DIAMETER	OUTSIDE DIAMETER
606004	SBHW-1 ¼" whip	1 ¼"	1 ⅞"
606005	SBH-1"	1"	1 31/32"
606006	SBH-1 ¼"	1 ¼"	2 5/32"
606007	SBH-1 ½"	1 ½"	2 ⅜"
606008	SBH-2"	2"	2 ⅞"

HOSES FITTINGS


(CHICAGO)

Part Nb.	Model	SBH I.D.	SBH O.D.
607005	QC	1"	1 31/32"
607007		1¼"	2 5/32"
607009		1½"	2 ⅜"

FITTING GASKETS*

Part Nb.	Model	Hose I.D.
618000	QCW	1"
618001		1¼"
618003		1½"

** The gasket is included with hose fittings.*

OPTION 1: THREADED NOZZLE FITTINGS

	Model	Hose I.D.	Thread 1"-¼ NPS	Thread 2"-4½ UNC
3	NH-1	1"	607018	407020
	NH-1¼	1¼"	607019	407021
	NH-1½	1½"	607054	N/A

OPTION 2: QUICK CONNECT NOZZLE COUPLINGS

	Part Nb.	Model	Hose I.D.	Thread
4	607075	TC-1¼"	1¼"	1"-¼ NPS
	907011	TC-1½"	1½"	

Nozzle couplings are primarily used by operators who need to regularly change nozzles, but this type of connection could cause wear on the hose and / or nozzle.

SANDBLASTER MODEL 346/646/1046: NOZZLES & HOSES (CONT'D)

5 HOSE AND FITTINGS PRE-ASSEMBLED KITS (INCLUDES 1, 2 AND 3)

Kits with two hose connections (QC-QC) to the end pieces can be used to make extensions. Assemblies that include a hose connector (QC) and a nozzle connector (NH) are those used to insert the nozzle.

The SBHW-1¼" Whip hose offers lightness and flexibility in use, but wears out faster because its wall is thinner than standard hoses. The Whip system is generally used at the "last length" blast hose in blast chambers and should be replaced more frequently.

1 SANDBLASTING HOSE			(2 3) FITTINGS	
Model	Inside Diam. (I.D.)	Hose length (feet)	QC-QC	QC-NH
SBH-1"	1"	12.5	606030	606029
		25	606036	606031
		50	606037	606032
SBH-1¼"	1¼"	50	606042	606040
SBH-1½"	1½"		606052	606050
SBHW-1¼''	1¼" Whip	12.5	606049	606053

6 THREADED NOZZLES SIMPLE VENTURI

Simple Venturi nozzles provide exceptional sanding performance. Their design is designed with a narrow entrance and a wide opening which considerably increases the velocity at the exit

DCV- TUNGSTEN CARBIDE*

BCV4- BORE CARBIDE*

Part #	Model	Orifice	Length	Thread
605203	DCV-3	3⁄16" Ø	4 1/4"	1¼" NPS
605204	DCV-4	1/4" Ø	5 1/4"	
605205	DCV-5	5/16" Ø	6"	
605206	DCV-6	3/8" Ø	6 3/4"	
605207	DCV-7	7/16" Ø	8"	
605208	DCV-8	1/2" Ø	9 1/4"	
605453	BCV4-3	3/16" Ø	4 1/8"	
605454	BCV4-4	1/4" Ø		
605455	BCV4-5	5/16" Ø		
605456	BCV4-6	3/8" Ø		
605457	BCV4-7	7/16" Ø		
605458	BCV4-8	1/2" Ø		

6 GASKET

Part #	Model	Thickness
618016	NW-1	¼"

** The gasket is included with the nozzles.*

THREADED NOZZLES DOUBLE VENTURI

Double Venturi nozzles provide increased performance compared to the Single Venturi nozzle. The hole inside the nozzle allows atmospheric air to be introduced, which considerably increases the velocity while reducing the loss of velocity.

BORON CARBIDE*

Part #	Model	Orifice	Length	Thread
405464	# 4	1/4" Ø	5 5/16"	50 mm
405465	# 5	5/16" Ø	6 11/16"	
405466	# 6	3/8" Ø	6 1/8"	
405467	# 7	7/16" Ø	8 15/32"	
405468	# 8	1/2" Ø	9 1/16"	

6 GASKET

Part #	Model	Thickness
407025	NW3	¼"

** Gasket sold separatly.*

SILICON CARBIDE

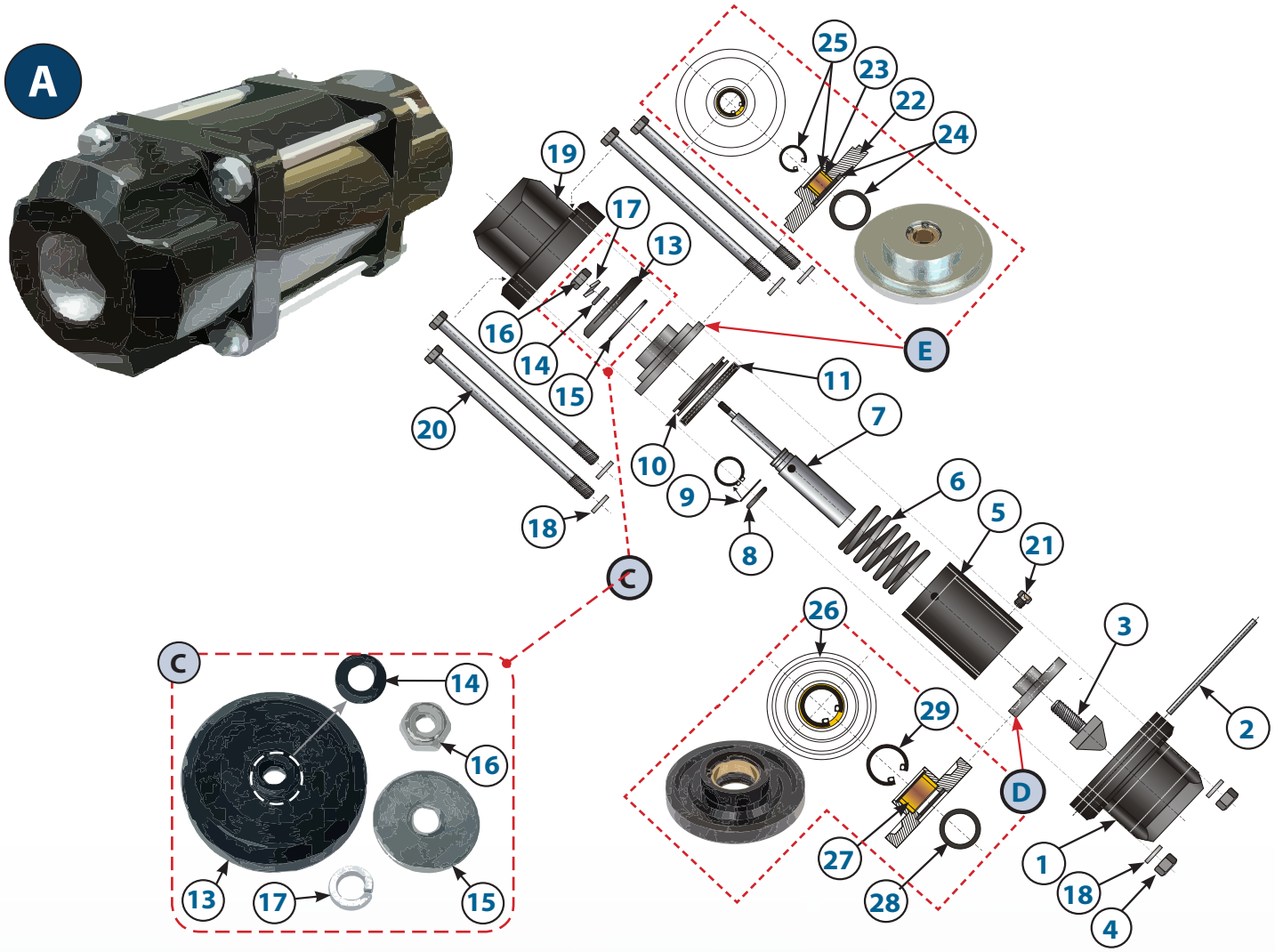
DOUBLE VENTURI NOZZLE

Part Nb	Model	Orifice	Length
905464	SCV-4	1/4" Ø	6"
905465	SCV-5	5/16" Ø	6¾"
905466	SCV-6	3/8" Ø	8"
905467	SCV-7	7/16" Ø	9¼"
905468	SCV-8	1/2" Ø	9¼"

Threaded nozzle 1¼" N.P.S., 1" Ø entry venturi orifice, use with NCV, all NH- except NH- ½"

SANDBLASTERS PPB-346/646/1046 : RC-176 PRESSURE RELEASE SYSTEM

AV-176 COMBINED VALVE

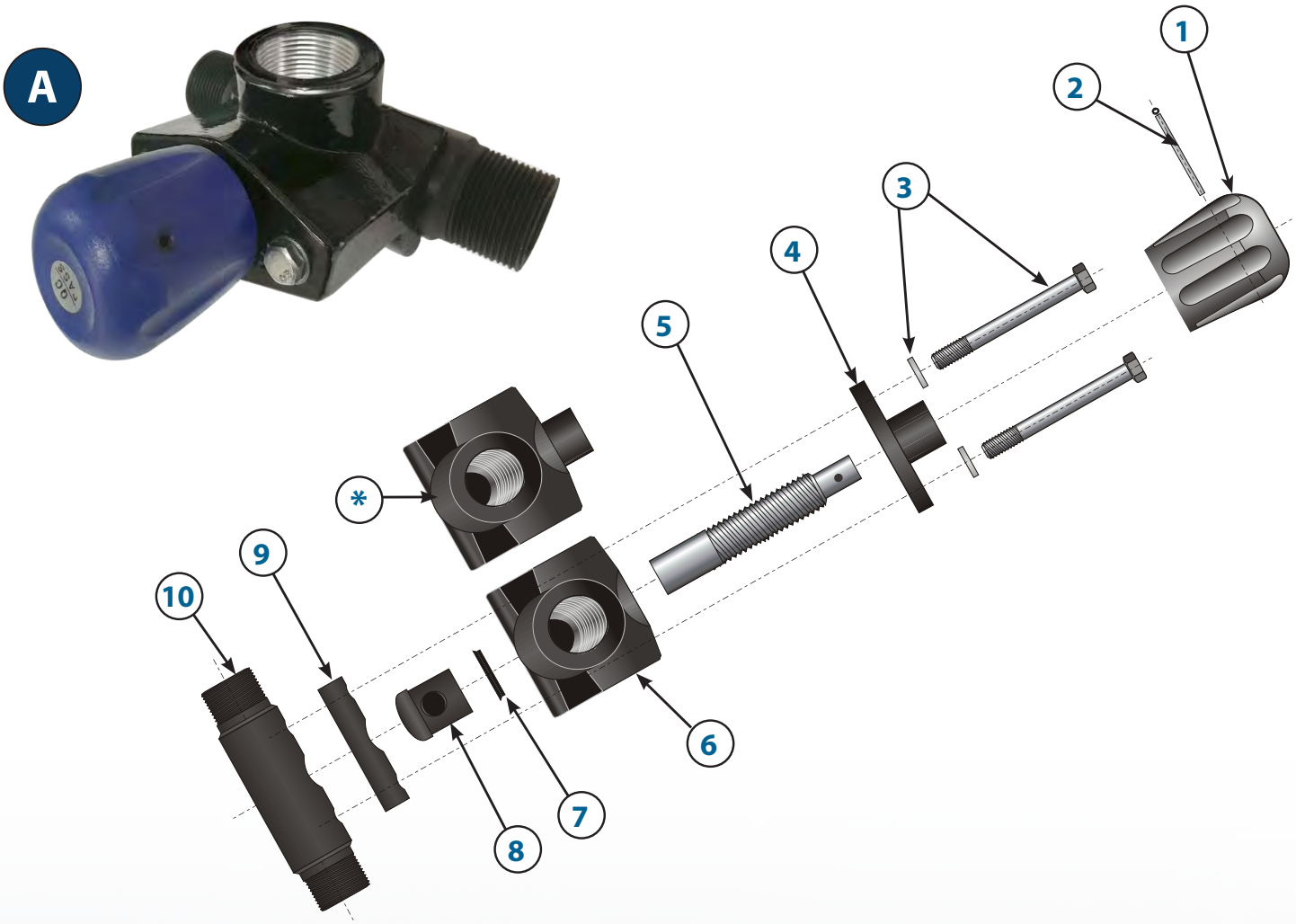


#	CODE	DESCRIPTION
A	608821	AV-176 COMPLETE VALVE ASS'Y
B	770182	GASKET KIT (8, 9, 11, 12, 13, 14, 16, 17, 24, 28, 29)
C	770183	CAP KIT (13, 14, 15, 16, 17)
D	770184	UPPER ROD ASS'Y (26, 27, 28, 29)
E	770185	LOWER ROD ASS'Y (22, 23, 24, 25)
1	770181	CAP
2	770191	ROD
3	770186	PINCH RAM
4	770199	NUT
5	770192	CYLINDER
6	770187	SPRING
7	770188	SHAFT
8	N/D	O-RING
9	N/D	CIRCLIP
10	770189	PISTON
11	770190	PISTON SEAL
12	N/D	VALVE CAP

#	CODE	DESCRIPTION
13	N/D	BASE
14	N/D	O-RING
15	N/D	FLAT WASHER
16	N/D	LOCKNUT
17	N/D	LOCK WASHER
18	770198	FLAT WASHER
19	770196	BASE
20	770197	HEX HEAD BOLT
21	770208	EXHAUST FILTER
22	770223	LOWER ROD GUIDE
23	770224	LOWER ROD GUIDE BUSH
24	770225	LOWER ROD SEAL
25	770226	CIRCLIP
26	770219	UPPER ROD GUIDE
27	770220	UPPER ROD GUIDE BUSH
28	N/D	UPPER ROD SEAL
29	N/D	CIRCLIP

SANDBLASTERS PPB-346/646/1046 : RC-176 PRESSURE RELEASE SYSTEM

MMV-175 ABRASIVE METERING VALVE

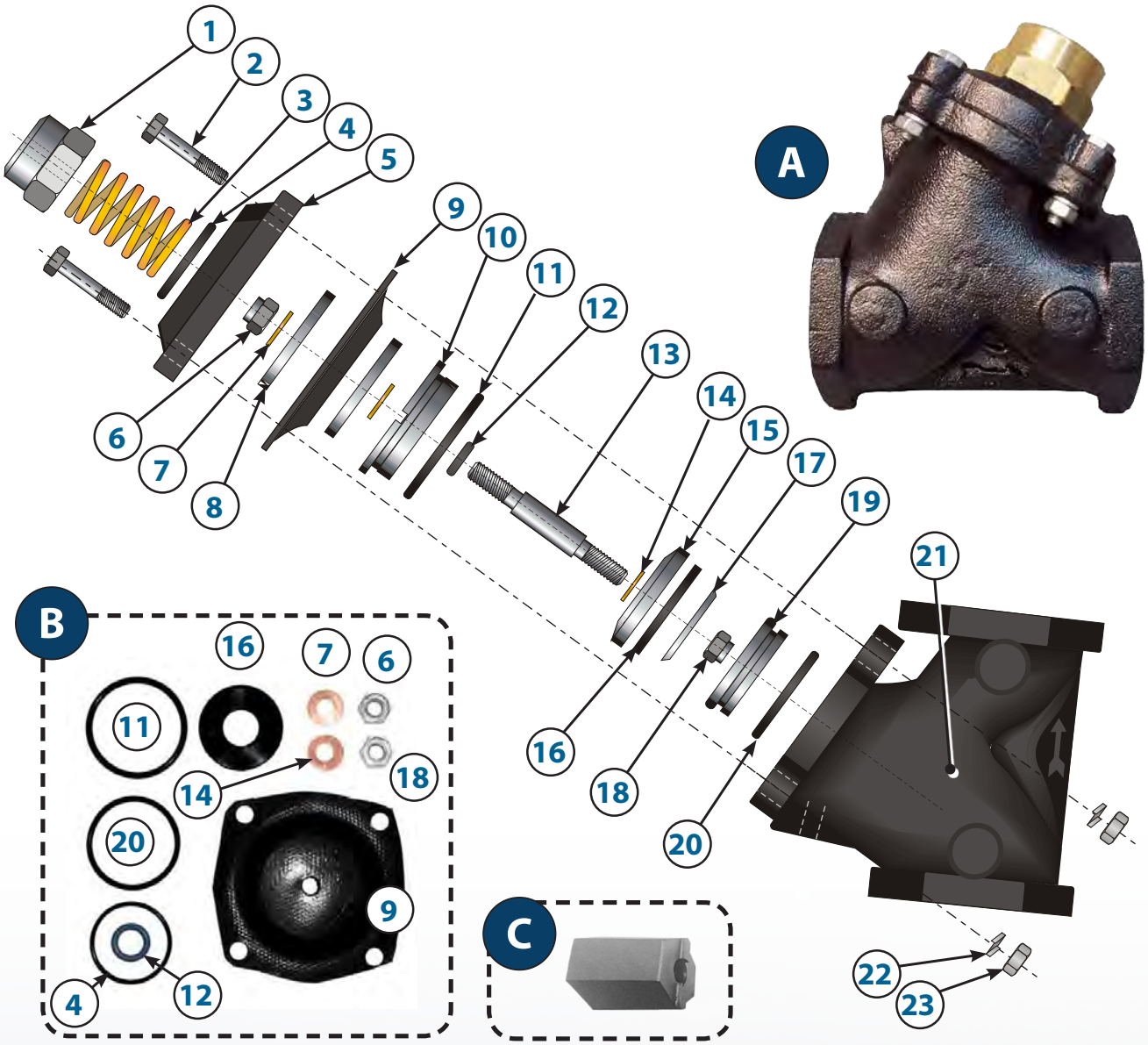


#	STOCK	DESCRIPTION	#	STOCK	DESCRIPTION
A	770070	MMV-175 COMPLETE ABRASIVE METERING VALVE ASSEMBLY			
1	770069	KNOB	6	770076	BODY
2	770079	ROLL PIN	7	770072	SEAL
3	770078	BOLT C/W WASHER	8	770074	URETHANE SLEEVE
4	770077	CAP	9	770075	GASKET
5	770073	PLUNGER	10	770071	PIPE NIPPLE 1¼" X 1¼" MALE

(*) *With this kind of body, the part #4 is not required*

SANDBLASTERS PPB-346/646/1046 : RC-186 PRESSURE HOLD SYSTEM

AV-186 AIR VALVE - EXPLODED VIEW



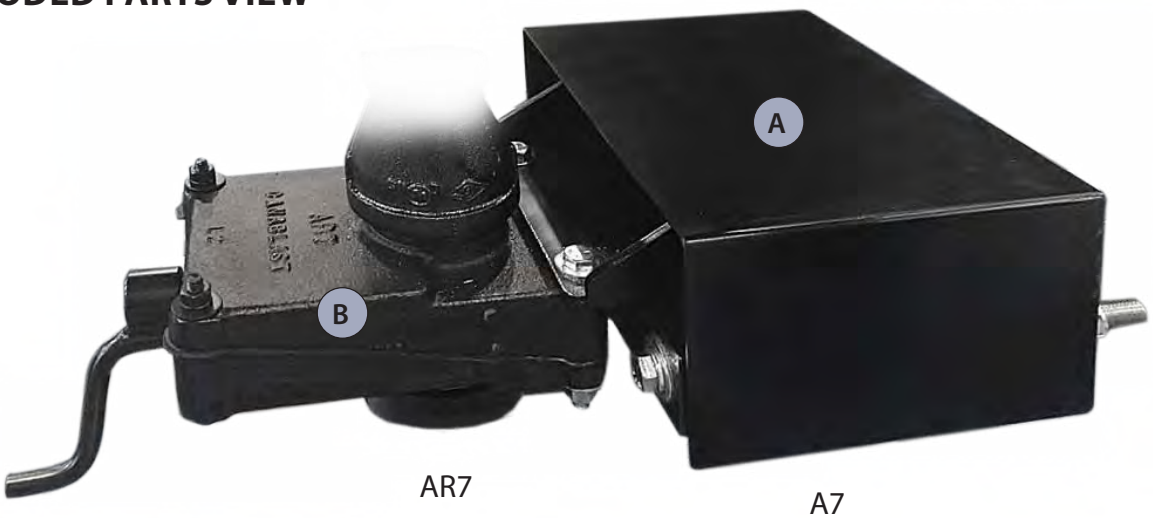
#	DESCRIPTION	1¼" Ø	1½" Ø
A	AV-186 AIR VALVE: COMPLETE VALVE ASSEMBLY	608822	908846
B	SERVICE KIT INCLUDES ITEMS : 4, 6, 7, 9, 11, 12, 14, 16,18, 20	608823	908944
C	SERVICE KIT INCLUDING THIS TOOL	608823A	908944A

#		DESCRIPTION	QTY
1	N-A	CAP	1
2	N-A	HEX MACHINE SCREW ¼" UNC X 35 MM	4
3	608825	SPRING	1
4	N-A	O-RING 31.5 mm x 2 mm	1
5	N-A	CAP	1
6	N-A	LOCK NUT 5/16" UNF	1
7	N-A	FLAT WASHER 8 mm	2
8	N-A	FLAT WASHER	2
9	N-A	DIAPHRAGM	1

#	PART #	DESCRIPTION	QTY
10	608826	GUIDE BUSH	1
11	N-A	O-RING 45 MM X 3 MM	2
12	N-A	O-RING 9 MM X 2.65 MM	2
13	N-A	SHAFT	1
14	N-A	FLAT WASHER	1
15	608955	SEAT HOLDER	1
16	N-A	RUBBER GASKET	1
17	608954	RETAINER	1
18	N-A	LOCK NUT 1/4" UNF	1
19	N-A	INNER BUSH	1
20	N-A	O-RING 34 MM X 1.8 MM	1
21	N-A	BODY	1
22	N-A	SPRING WASHER 1/4"	4
23	N-A	NUT 1/4" UNC	4

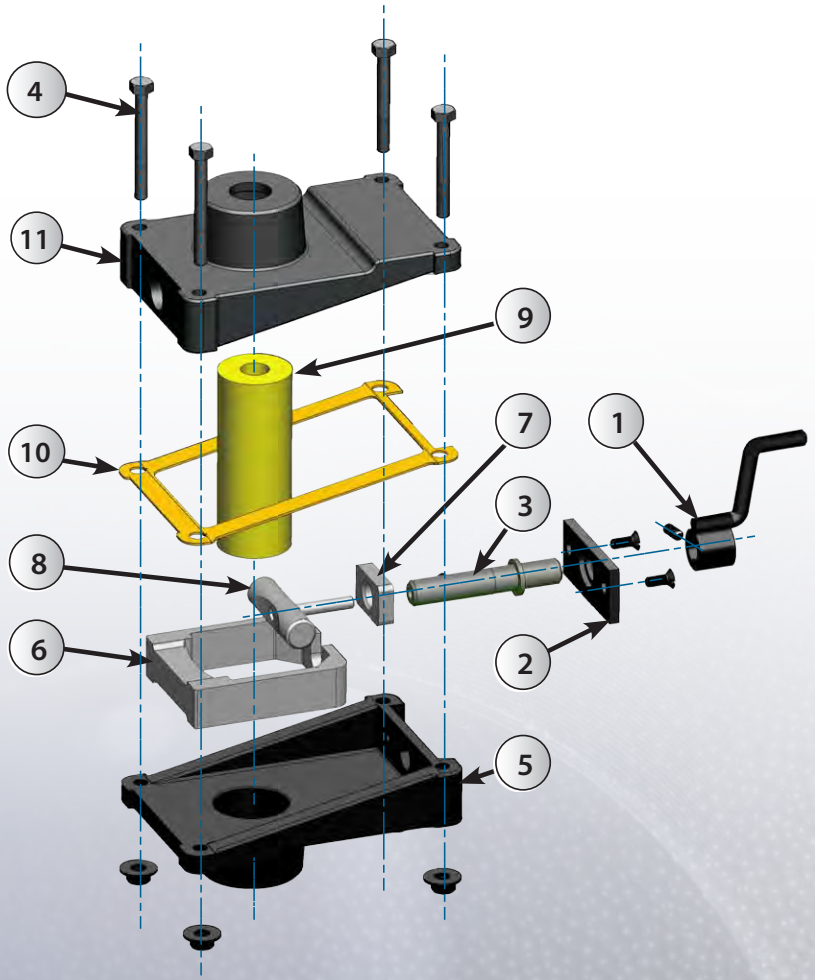
AR7 ABRASIVE REGULATOR & A7 REGULATOR

EXPLODED PARTS VIEW



AR7 A7

B AR7 REGULATOR

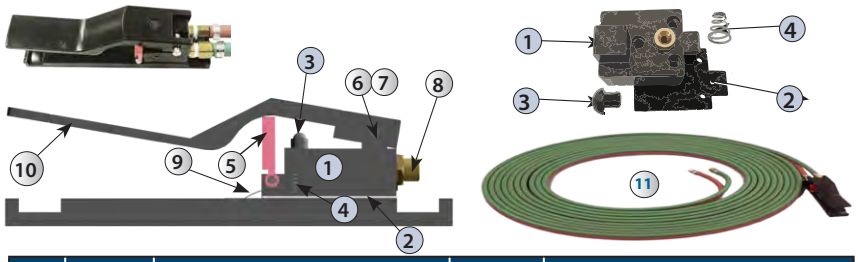


A	**608042**	**Complete A7 Actuator**
B	**608043**	**Complete AR7 regulator**
1	**608093**	Handle
2	**608091**	Retaining plate
3	**608039**	Regulating screw
4	**608096**	Bolts kit (include screw, washer, nut)
5	**608047**	Lower housing
6	**608037**	Pinch roller
7	**608040**	Regulating plate
8	**608036**	Regulation tube
9	**618228**	Rubber tube
10	**618231**	Gasket

PNEUMATIC REMOTE CONTROLS*

***Valid up to 115' max. Beyond that, you must use an electric remote control system.**

A STANDARD PNEUMATIC CONTROL HANDLE

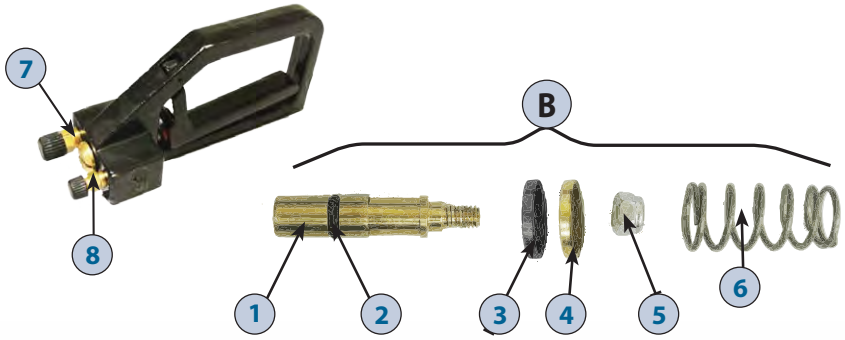


#	Part #	DESCRIPTION	Part #	DESCRIPTION
11	606192	15' RED & GREEN DOUBLE HOSE	606203	80' RED & GREEN DOUBLE HOSE
	606191	30' RED & GREEN DOUBLE HOSE	606202	90' RED & GREEN DOUBLE HOSE
	606193	55' RED & GREEN DOUBLE HOSE	606195	105' RED & GREEN DOUBLE HOSE
	606199	70' RED & GREEN DOUBLE HOSE	606205	115' RED & GREEN DOUBLE HOSE

Complete sets with fittings & fasteners (each end)

ID	PART #	DESCRIPTION
A	908006	Complete Pneumatic Remote Control
B	770061	Repair Kit For Control Handle (Includes items: 1, 2, 3, 4)
1	NPN	Manifold
2		Gasket
3		Plunger Plug
4		Plunger Spring
5	770062	Safety Lever Lock
6	770060	Shoulder Screw
7	770064	Locking Nut
8	632214	Hex. Nipple ¼'' x ⅛'' NPT (x2)
9	770052	Return Spring
10	908039	Remote Control Lever

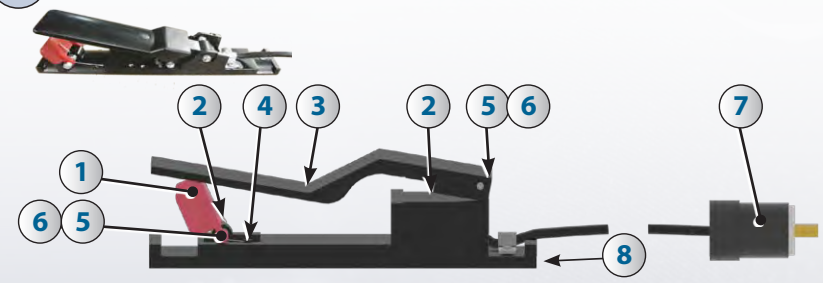
A PNEUMATIC "D" CONTROL HANDLE



A	608800	Complete Control Handle
B	608804	Repair Kit, includes parts 1 to 6
1	608806	Piston
2	608808	O Ring
3	PNP	Rubber Washer
4	608810	Washer
5	608809	Nut
6	608807	Spring
7	632201	Hexagonal Nipple· PL ¼"
8	632002	Hexagonal Nipple·· PL ⅛"

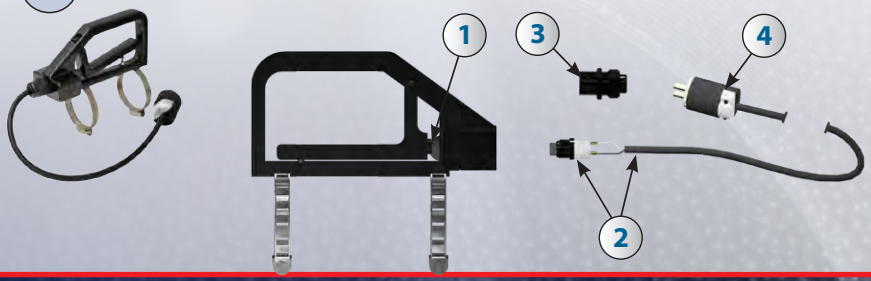
ELECTRICAL REMOTE CONTROLS SYSTEMS

C STANDARD ELECTRIC REMOTE CONTROL HANDLE



ID	PART #	DESCRIPTION
C	770160	Complete handle
1	770051	Safety Lavel
2	770052	Spring
3	770054	Handle
4	770063	Switch
5	770060	Shoulder Screw
6	770064	Locking Nut
7	616410	Electric Plug
8	770055	Base

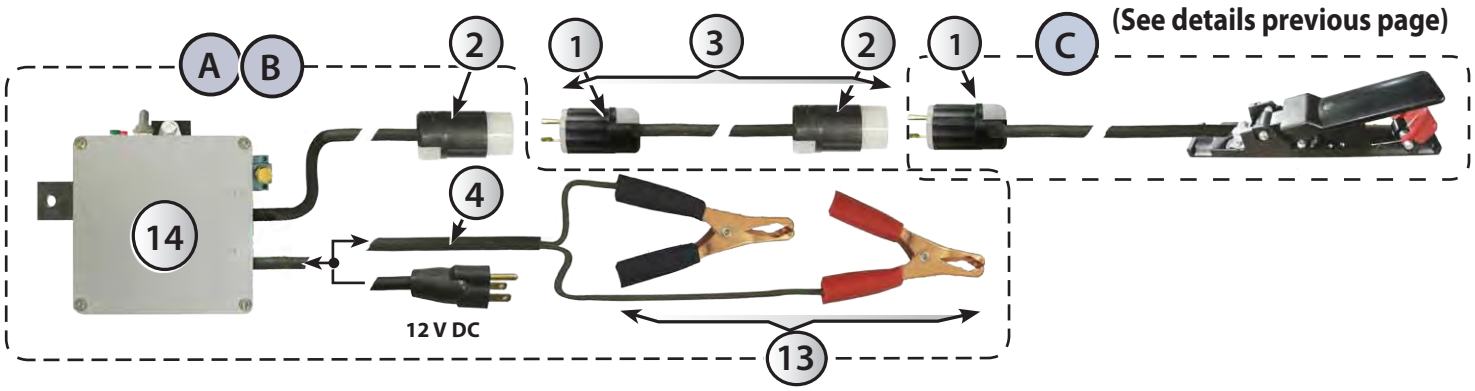
D D-HANDLE ELECTRIC REMOTE CONTROL



ID	PART #	DESCRIPTION
D	608801	Complete handle
1	NPN	Boot, Push Button
2	NPN	Switch, Push Button Assembly
3	NPN	Strain Relief Fitting
4	NPN	Male Twist-Lock Connector, 2 prong

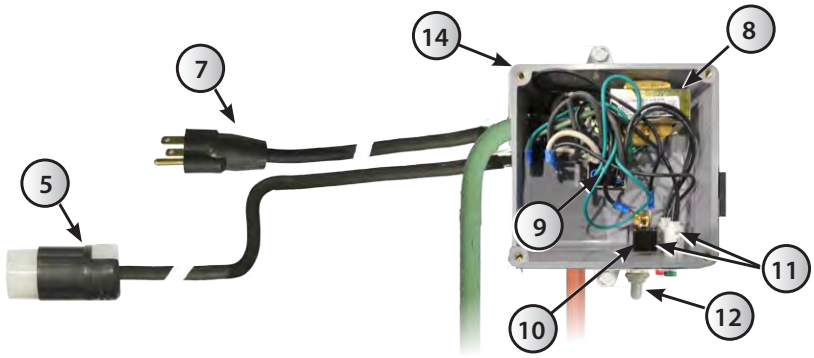
(See box details next page)

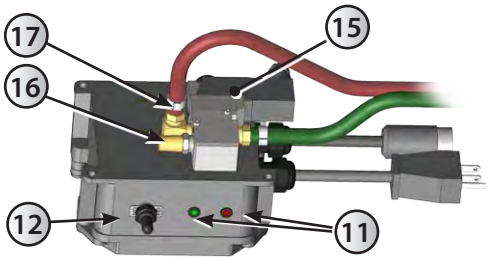
ELECTRICAL REMOTE CONTROLS SYSTEMS (CONT'D)



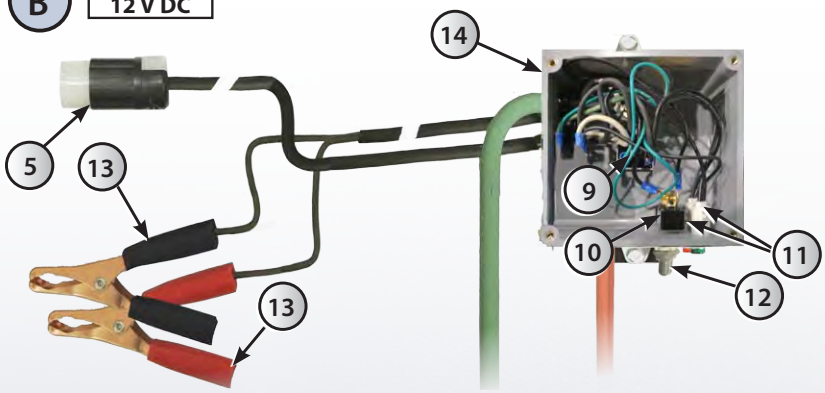
ELECTRICAL BOXES – PARTS DETAILS

A 120 V AC





B 12 V DC



COMMON PARTS LIST

#	PART #	DESCRIPTION
5	616410	Male Electric Plug
7	616585	Electric Plug & Wire
8	612445	120 -12 V Transformer
9	617240	Diodes
10	617014	E3 Switch
11	612443	12 V red indicator lamp
	612444	12 V green indicator lamp

#	PART #	DESCRIPTION
12	617019	Switch Protector E3
13	616105	12 V Clips (pair)
14	617336	Junction Box
15	642454	3-2 NC ¼" FPT Solenoid Valve
16	608117	¼" Muffler
17	632232	¼" Brass Elbow

REMOTE CONTROL BOX FOR 646/1046 SANDBLASTERS WITH RC176/RC-186 COMBO SYSTEM

A PRESSURIZED/DEPRESSURIZED VESSEL SWITCH

The depressurization switch allows the operator to fill up its pressure pot without the hassle of leaving the booth and taking off the safety equipment.

This switch controls the AV-176 Combo Air Valve to release the pressure inside the blast pot, allowing the plunger to fall and let the blast media contained into the recovery hopper to fill up the pot.

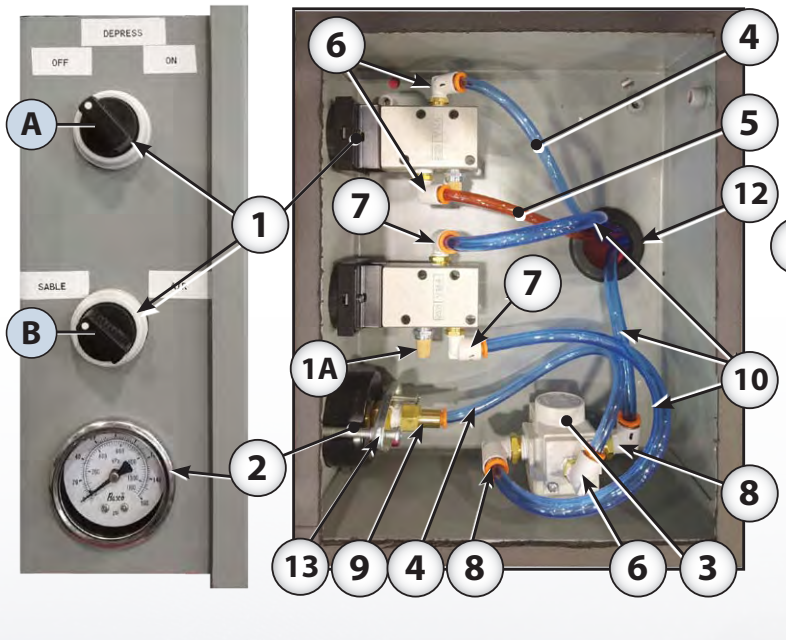
B BLAST ON/AIR ONLY SWITCH

A pneumatic cut-off switch is provided to turn your blast hose into a powerful air blower producing high velocity compressed air to blow dust off of the workpiece and to clean the floor by blowing abrasive media remains towards the nearest floor recovery hopper. This switch controls the opening and closing of the abrasive metering valve.

When sandblasting is completed, the operator simply places the switch to the "AIR ONLY" position, stopping the flow of abrasive. The air valve remains open so that only high-speed compressed air flows through the nozzle.

SIDE VIEW

INSIDE VIEW

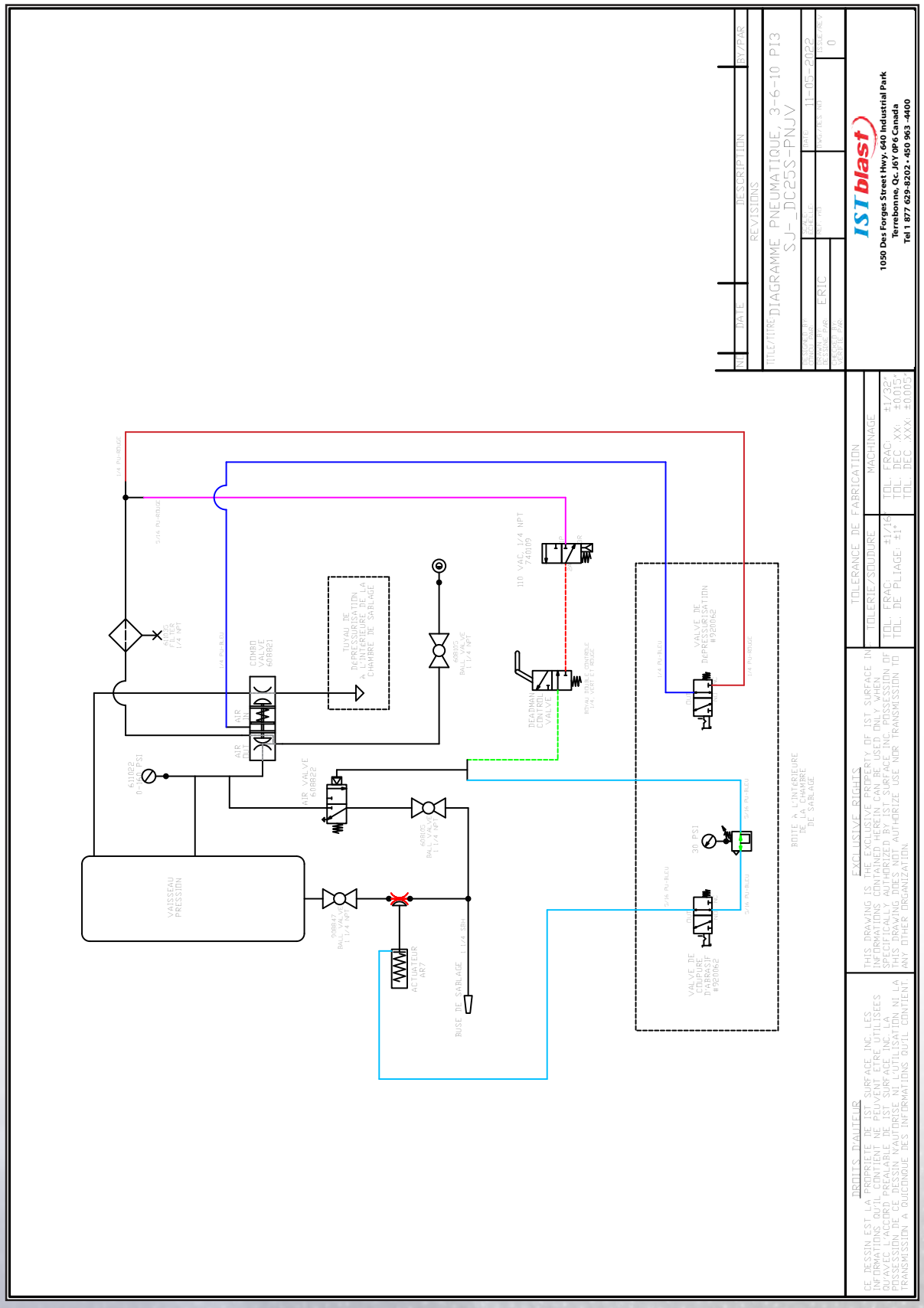


TOP VIEW

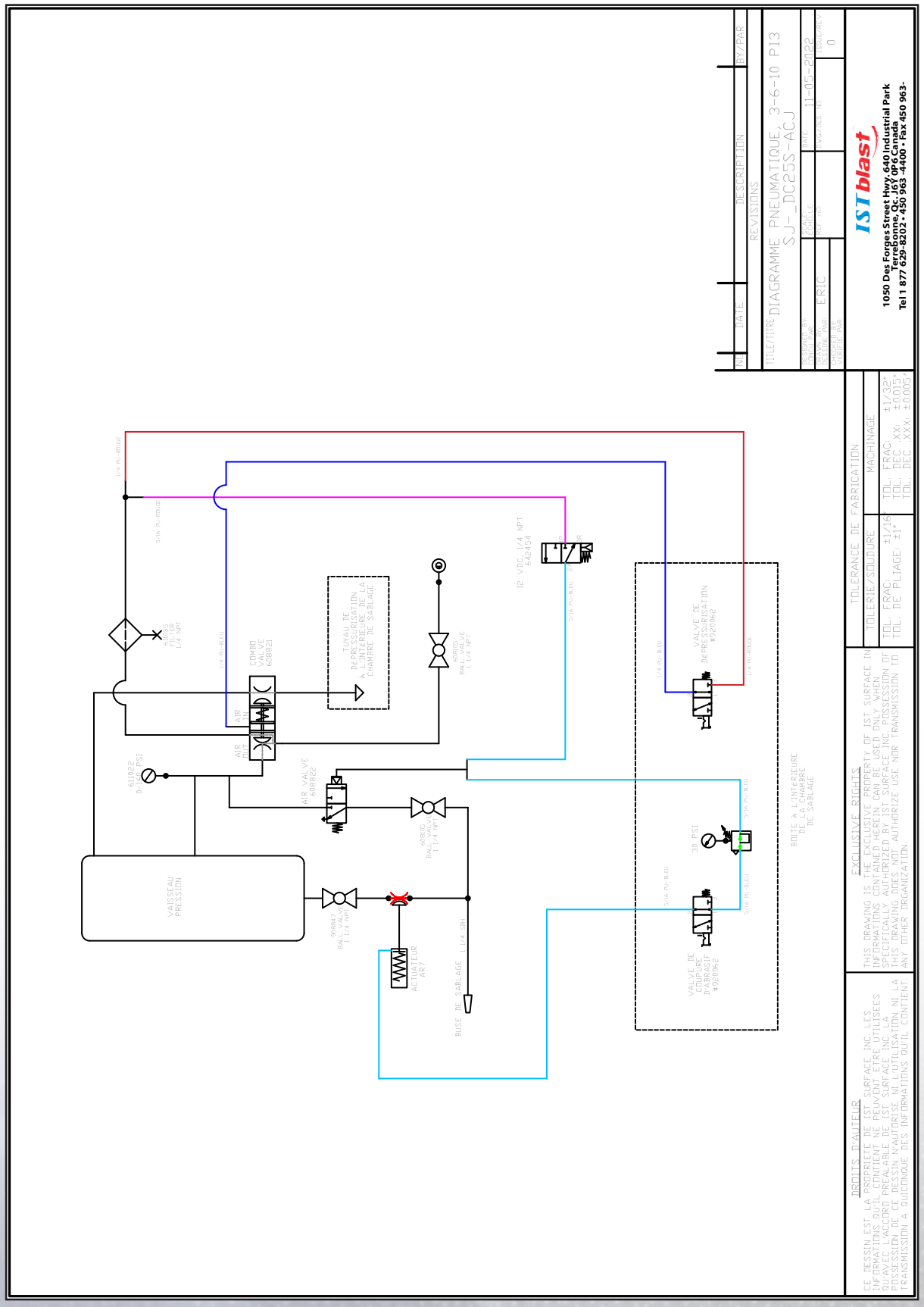
ID	Part #	Description
1	920062	PNEUMATIC SWITCH
1A	608284	MUFFLER
2	740013	⅛" PRESSURE GAUGE
3	608015	¼" PRESSURE REGULATOR
4	324571	¼" BLUE POLYESTER TUBE
5	324586	¼" RED POLYESTER TUBE
6	324561	90° ⅛" MTP - ¼"T. PUSH-IN FITTING

ID	Part #	Description
7	740009	90° ⅛" MTP - 5⁄16"T. PUSH-IN FITTING
8	908815	90° ¼" MTP - 5⁄16" T. PUSH-IN FITTING
9	324572	⅛" MTP - ¼"T. PUSH-IN FITTING
10	919584	5⁄16" BLUE POLYESTER TUBE
11	776130	10" H x 8" L x 4" D JUNCTION BOX
12	612452	1 3⁄16" ID BLACK PLASTIC PLUG
13	618131	SBH-1/2" X 1-5/16" GROMMET

PNEUMATIC DIAGRAM - PNEUMATIC REMOTE CONTROL



PNEUMATIC DIAGRAM - ELECTRICAL REMOTE CONTROL



ISTBLAST LIMITED WARRANTY

ISTblast warrants all equipment led in this manual which is manufactured by ISTblast and bearing its name, to be free from defects in material and workmanship on the date of sale by an authorized ISTblast dributor to the original purchaser for use. Notwithstanding any special, extended or limited warranty published by ISTblast will, for a period of TWELVE (12) months from the date of sale, repair or replace any part of the equipment determined by ISTblast to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with ISTblast's written recommendations.

This warranty does not cover, and ISTblast shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non- ISTblast component parts. Nor shall ISTblast be liable for malfunction, damage or wear caused by the incompatibility with ISTblast equipment with structures, accessories, equipment or materials not supplied by ISTblast, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by ISTblast.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized ISTblast dributor for verification of the claimed defect. If the claimed defect is verified, ISTblast will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser, transportation prepaid. If the inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

ISTblast's sole obligation and the buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought forward within one (1) year of the date of sale.

ISTblast MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY ISTblast. These items sold, but not manufactured by ISTblast (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. ISTblast will provide the purchaser with reasonable assance in making any claim for breach of these warranties.

LIMITATION OF LIABILITY

In no event will ISTblast be liable for indirect, incidental, special or consequential damages resulting from ISTblast supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of ISTblast, or otherwise.

Report all accidents or "near misses" which involve ISTblast products to:
Technical Assistance

1 877 629-8202

The following items are not covered under the ISTblast warranty policy:

ISTBLAST WARRANTY REGISTRATION

ISTblast would like to thank you for your recent purchase of our product line. Please complete the card below and either mail or fax it to our office so that we may start the warranty of your product and keep you up to date on the EPA regulations by fax. Again, thank you for your purchase and if you have any suggestions or comments, please feel free to contact our office.

COMPANY NAME : |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

ADDRESS : |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

CITY : |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__| **STATE/PROV. :** |__|__|__|__|__|__|__|__|__|

COUNTRY : |__|__|__|__|__|__|__|__|__|__|__|__|__|__| **ZIP CODE :**|__|__|__|__|__|__|__|__|__|__|__|

CONTACT : |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

TEL. NUMBER: |__|__|__| |__|__|__| - |__|__|__|__|

FAX NUMBER: |__|__|__| |__|__|__| - |__|__|__|__|

PURCHASE FROM:|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

DATE OF PURCHASE: |__|__| |__|__| |__|__|__|__|

Month Day Year

SERIAL NUMBER: |__|__| - |__|__|__| - |__|__|__|__| **MODEL NUMBER:** |__|__|__|__|__|__|

TYPE OF MEDIA USED: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|_

Which factors most influenced your decision to purchase this ISTblast unit?

|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

SUGGESTIONS ABOUT THE EQUIPMENT: ____

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IMPORTANT! Please complete and return within 30 days after purchase to activate the warranty.

PLEASE SEND THE COMPLETED FORM TO :

INTERNATIONAL SURFACE TECHNOLOGIES

info@istsurface.com