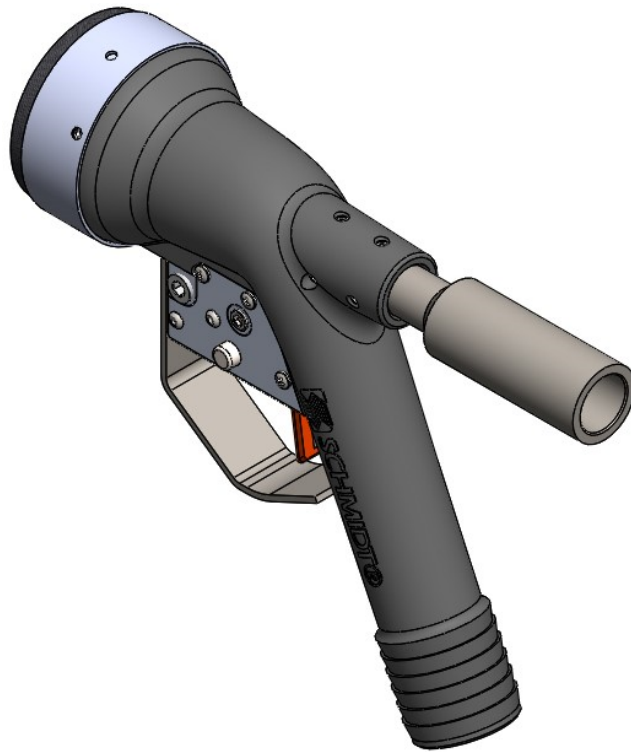


MiniBRS G2 TRIGGER VACUUM WORKHEAD

OPERATION AND MAINTENANCE MANUAL

MAY 2021



SCHMIDT®

SAVE THIS MANUAL AND MAKE AVAILABLE
TO ALL USERS OF THIS EQUIPMENT!

Manual Part Number 7200-360



Website

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1.0 RULES FOR SAFER OPERATION

- 1.1 **KNOW YOUR EQUIPMENT.** Do Not operate this equipment in a manner other than its intended application. Do Not operate this equipment or any other Schmidt® equipment without following the *Rules for Safer Operation* and all the operating procedures and instructions. Learn the applications and limitations as well as the specific potential hazards related to this machine. Failure to do so could result in serious injury or death.
- 1.2 **RECEIVE PROPER TRAINING.** Do Not operate this equipment unless you have received operational and maintenance training. Begin by thoroughly reading and understanding this operation and maintenance manual and all included information. Consult an authorized Schmidt distributor or Axxiom Manufacturing, Inc.
- 1.3 **USE PROPER PERSONAL PROTECTIVE EQUIPMENT.** Do Not operate or perform maintenance on this equipment without wearing OSHA approved eye, ear, foot, and lung protection. Reference OSHA 29 CFR 1910.
- 1.4 **ADHERE TO ALL REGULATIONS.** Do Not operate this equipment without observing all local, state, and federal safety regulations including, but not limited to, OSHA (Occupational Health and Safety Administration).
- 1.5 **ALWAYS USE CORRECT REPLACEMENT PARTS AND ACCESSORIES.** Do Not use replacement parts that are not Schmidt® original factory replacement parts. Non-original parts may not fit properly and can cause equipment damage and/or failure which can result in serious injury to operating personnel. Consult Axxiom Manufacturing, Inc.
- 1.6 **SAVE THIS OPERATION AND MAINTENANCE MANUAL.** Refer to this operation and maintenance manual as needed as well as any additional information included from other manufacturers. Never permit anyone to operate this equipment without having him/her first read this manual and receive proper training. Make this manual readily available to all operating and maintenance personnel. If the manual becomes lost or illegible replace it immediately. This operation and maintenance manual should be read periodically to maintain the highest skill level; it may prevent a serious accident.

2.0 GENERAL INFORMATION

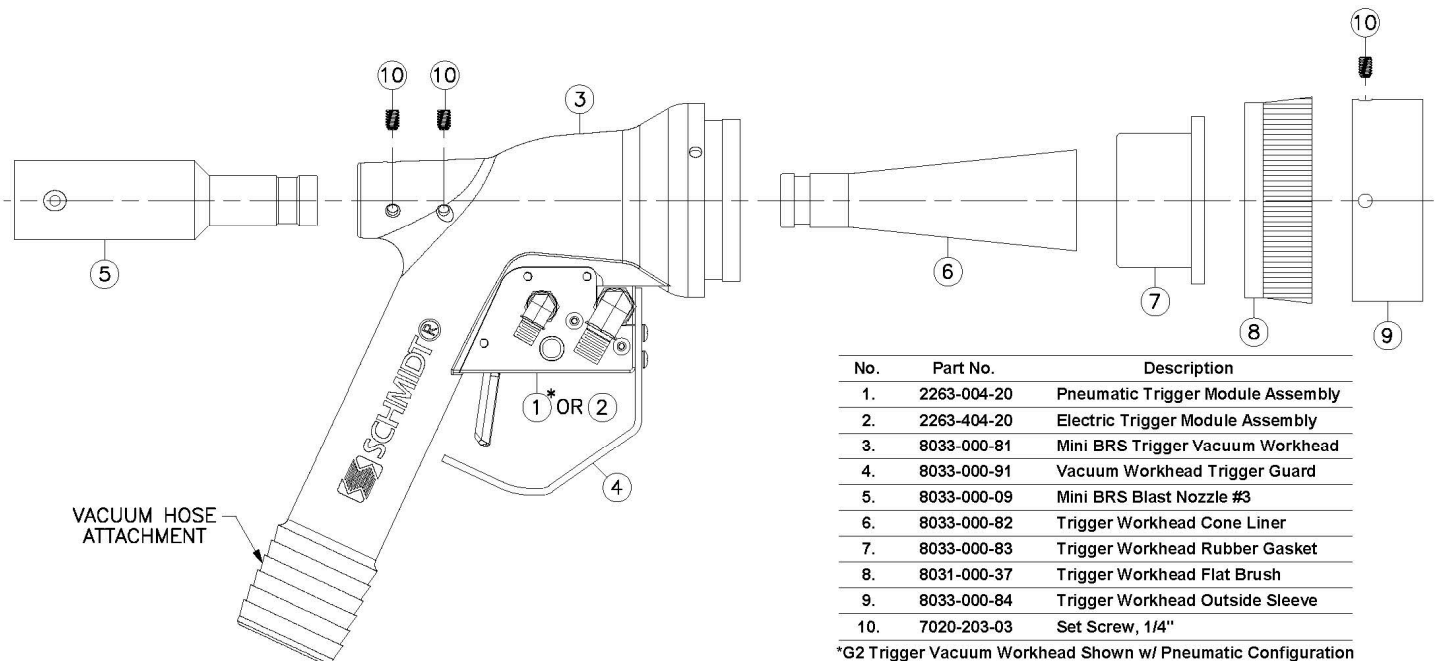
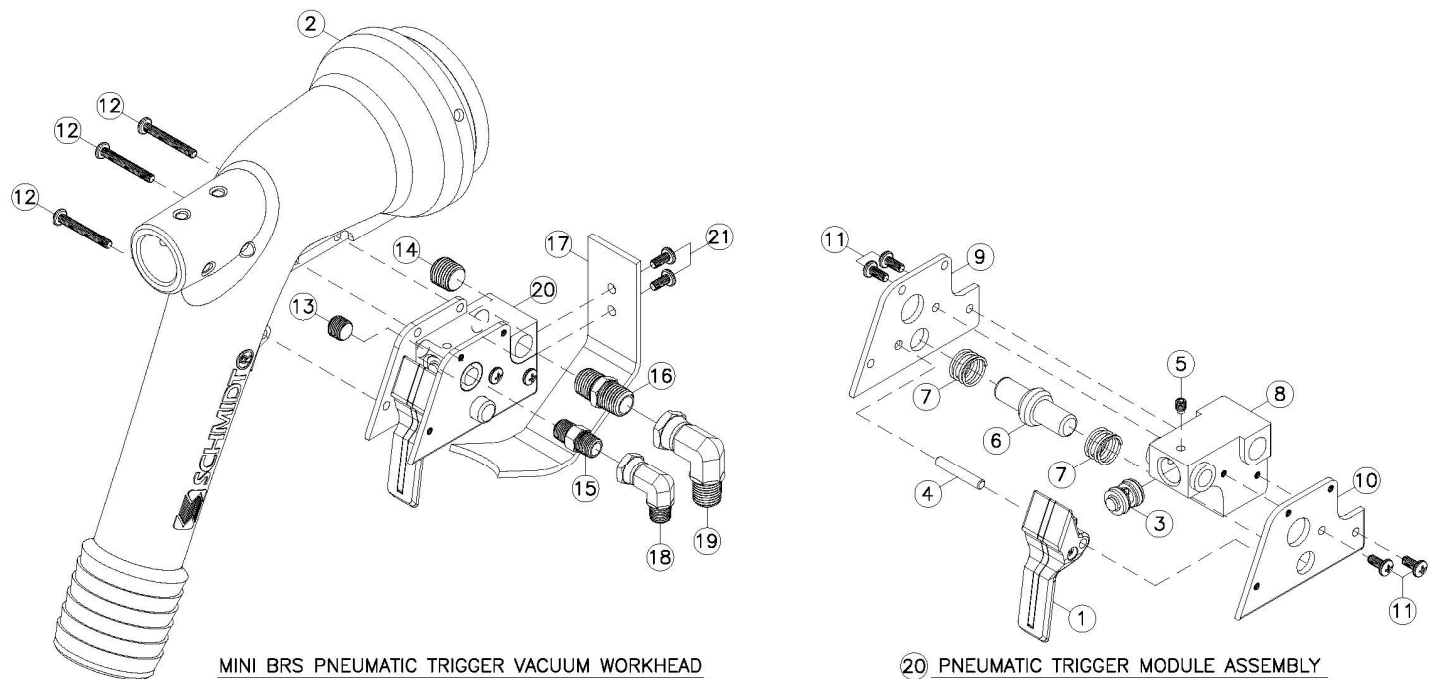


Figure 2.0 – G2 Trigger Vacuum Workhead General Assembly

- 2.1 The G2 Trigger Vacuum Workhead is an optional accessory that when used in closed blasting mode allows for blasting with simultaneous vacuum recovery. The blast abrasive is contained within the vacuum workhead (#3) where it is recovered by the vacuum system.
- 2.2 The blast hose attaches to the vacuum workhead (#3) via the blast nozzle (#5). The cone liner (#6), rubber gasket (#7), and flat brush (#8) are inserted into the working end of the vacuum workhead and are wearable items. Wear items should be inspected periodically and replaced as needed. The outside sleeve (#9) reinforces the brush bristles allowing it to retain its shape when blasting a surface.
- 2.3 The G2 Trigger Vacuum Workhead comes in two different configurations—pneumatic or electric. The *pneumatic* G2 Trigger Vacuum Workhead requires a clean air supply at a minimum of 55 psig for proper operation of blast system components. The *electric* G2 Vacuum Workhead operates on a 12V or 24VDC supply voltage for the electric blast controls.

3.0 PNEUMATIC TRIGGER VACUUM WORKHEAD



MINI BRS PNEUMATIC TRIGGER VACUUM WORKHEAD

⑳ PNEUMATIC TRIGGER MODULE ASSEMBLY

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
	8033-000-80	Mini BRS Pneumatic Trigger Vacuum Workhead	7. *	2263-004-07	Safety Button Spring	15.	3031-300-00	Hex Nipple, 1/8" x 1/8" w/ Ball Seat
1.	2263-004-01	Workhead Trigger	8.	2263-004-11	Trigger Module Body	16.	3031-302-02	Hex Nipple, 1/4" x 1/4" w/ Ball Seat
2.	8033-000-81	Trigger Vacuum Workhead	9.	2263-004-12	Trigger Module Plate (Left Side)	17.	8033-000-91	Workhead Trigger Guard
3. *	2263-002-03	Trigger Module Cartridge Assembly	10.	2263-004-13	Trigger Module Plate (Right Side)	18.	4203-500-00	90° Swivel, 1/8" x 1/8"
4.	2263-004-04	Trigger Pin	11.	2263-004-14	Phillips Head Screw, 3/8" Lg.	19.	4203-502-02	90° Swivel, 1/4" x 1/4"
5. *	2263-004-05	Cartridge Assembly Set Screw	12.	2263-004-15	Phillips Head Screw, 1-1/4" Lg.	20.	2263-004-20	Pneumatic Trigger Module Assy.
6.	2263-004-06	Trigger Module Safety Button	13.	3032-100	Socket Plug, 1/8"	21.	2263-004-14	Phillips Head Screw, 3/8" Lg.
			14.	3032-102	Socket Plug, 1/4"			* Included in Replacement Parts Kit (Part No. 2263-004-99)

Figure 3.1 – G2 Pneumatic Trigger Vacuum Workhead Assembly

3.1 DISASSEMBLY PROCEDURE. Refer to Figure 3.1 above.

The tools required for this procedure include: 3/32" allen wrench, 7/16" and 9/16" wrenches, #2 phillips screwdriver, and pliers.

- 3.1.1 Remove the (2) phillips head screws (#21) to detach the trigger guard (#17) from the pneumatic trigger module (#20).
- 3.1.2 Remove both the 1/4" and 1/8" hex nipple fittings (#15, #16) and 90° swivel fittings (#18, #19) from the trigger module body (#8).
- 3.1.3 Remove the (3) phillips head screws (#12) to unfasten the trigger module assembly (#20) from vacuum workhead (#2).
- 3.1.4 Remove the (2) phillips head screws (#11) to detach the right module plate (#10).
- 3.1.5 Remove the trigger (#1) and the attached trigger pin (#4), safety button (#6), and both springs (#7).
- 3.1.6 Remove the cartridge set screw (#5) from the trigger module body (#8) and pull out the cartridge assembly (#3).
- 3.1.7 Discard the old cartridge assembly (#3), cartridge set screw (#5), and both springs (#7).

3.2 REASSEMBLY PROCEDURE. Refer to Figure 3.1 above.

The tools required for this procedure include: 3/32" allen wrench, 7/16" and 9/16" wrenches, #2 phillips screwdriver, and pliers.

- 3.2.1 Clean the module body (#8) by removing all debris from the cartridge cavity and adjacent 1/8" and 1/4" cavities.
- 3.2.2 Check the vacuum workhead (#2), trigger (#1), and cartridge cavity for cracks or defects. Replace if needed.
- 3.2.3 Rotate the cartridge assembly (#3) until the set screw hole is facing upwards. The set screw hole on the cartridge assembly should align with the set screw hole on top of the module body (#8). Insert the beveled end of the cartridge assembly first and push until it bottoms.
- 3.2.4 Install cartridge set screw (#5) to lock the cartridge assembly (#8) in place. Tighten firmly, but do not over tighten.
- 3.2.5 Place a spring (#7) over each end of the safety button shank (#6).
- 3.2.6 Insert one end of the safety button shank (#6) with spring (#7) into the safety button hole on the left module plate (#9).
- 3.2.7 Check to ensure that the trigger pin (#4) is centered with the trigger (#1) and adjust accordingly. It may be necessary to loosen the phillips screw on the trigger to reposition the trigger pin. Retighten the phillips screw, but do not over tighten.
- 3.2.8 Insert the left end of the trigger pin (#4) (with attached trigger) into the trigger pin cavity on the left module plate (#9).
- 3.2.9 Align the holes in the right module plate (#10) with the safety button (#6), trigger pin (#4) and hex fitting cavities.
- 3.2.10 Press down on the right module plate (#10) to compress springs (#7) and loosely install the phillips head screws (#11).
- 3.2.11 Check to ensure that the trigger pin (#4) remains positioned within the trigger pin cavity on both the left and right module plates (#9, #10) and adjust if necessary. Tighten the phillips head screws (#11), but do not over tighten.

- 3.2.12 Fit the trigger module assembly onto the vacuum workhead (#2). The (3) phillips head screws (#12) must first be inserted through the mating holes in the left module plate (#9) before tightening. Do not overtighten as it may strip the threads in the right module plate (#10).
- 3.2.13 Reinstall the 1/4" and 1/8" hex nipple fittings (#15, #16) making sure that the ball seat end is facing outward. Use thread sealant tape on the opposite (non-ball seat) end to mitigate air leaks.
Note: The hex nipple fittings (#15, #16) and socket plugs (#13, #14) can be installed on the opposite side for left-handed operation.
- 3.2.14 Reinstall the 1/4" and 1/8" 90° swivel fittings (#18, #19). No thread sealer is required since fittings are flared.
- 3.2.15 Reinstall the trigger guard (#17).
- 3.2.16 Proceed to Section 3.3 for installation instructions.

3.3 INSTALLATION. Refer to Figure 3.1 on the previous page.

- 3.3.1 The *pneumatic* G2 Trigger Vacuum Workhead works in junction with a twinline hose assembly. The twinline hose assembly consists of two color coded 3/16" air lines. The air supply line is orange and the signal/vent line is black. Each hose contains a male flared swivel fitting on one end and a female flared rigid fitting at the other. The supply (orange) line of the twinline has 1/4" fittings, and the signal/vent (black) line has 1/8" fittings. The G2 Trigger Vacuum Workhead has matching 1/8" and 1/4" male fittings (#15, #16). It is important that the hoses have the correct sized fittings to help mitigate the mating connections from being installed incorrectly on the pneumatic trigger module (#20). Connecting the air supply to the incorrect port will stop the signal from venting and will not allow the blast operation to stop when the vacuum workhead trigger (#1) is released.



Incorrect connection of the twinline hose to the G2 Trigger Vacuum Workhead can result in the inability to stop the blast operation which can result in serious injury or death.

- 3.3.2 Disconnect the twinline hose from the blast system and remove the existing deadman from the twinline.
- 3.3.3 Connect the 1/4" swivel fitting from the twinline to the 1/4" 90° swivel fitting (#19) on the pneumatic trigger module assembly (#20). No thread sealer is required since fittings are flared. The opposite end of the twinline connects to the blast system air supply.
- 3.3.4 Connect the 1/8" swivel fitting from the twinline to the 1/8" 90° swivel fitting (#18) on the pneumatic trigger module assembly (#20). No thread sealer is required since fittings are flared. The opposite end of the twinline is the signal air which starts the blast operation.
- 3.3.5 Remove the blast nozzle (#5) from the vacuum workhead (#2) by loosening the set screws (#10). Insert the blast hose into the blast nozzle until it bottoms. Secure the blast hose to the blast nozzle with screws. Reinstall the blast nozzle with attached blast hose to the vacuum workhead. **Refer to Figure 2.1 on Page 2.**
- 3.3.6 Attach the vacuum hose to the base of the vacuum workhead (#2) as shown in **Figure 2.1**.
- 3.3.7 Reconnect opposite ends of the twinline hose to the mating connections on the abrasive blast system.
- 3.3.8 To test the G2 Trigger Vacuum Workhead, press in the safety button (#6) and pull the trigger (#1) to activate the pneumatic trigger module (#20) and start the blast operation. Release the trigger to stop blasting.
- 3.3.9 Follow the setup and pre-operating instructions provided with the blast system, then retest the operation of the G2 Trigger Vacuum Workhead. Check for air leaks at all applicable connections and repair as required.

3.4 MAINTENANCE AND INSPECTION. Refer to Figure 3.1 on the previous page.

- 3.4.1 Dirty air supply and/or back flow situations can result in an accumulation of debris in the twinline and trigger module body (#8) which can result in malfunctions. Periodically disassemble and clean the G2 Trigger Vacuum Workhead. Refer to Sections 3.1 and 3.2 for assembly and disassembly instructions; and Section 5.0 for troubleshooting procedures.
- 3.4.2 Excessive abrasive found in the trigger module body (#8) indicates problems in the blast control system. Follow the troubleshooting procedures included in the blaster operation and maintenance manual under Section 11.0.

NOTES

4.0 ELECTRIC TRIGGER VACUUM WORKHEAD

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
	8033-000-80E	Mini BRS Electric Trigger Vacuum Workhead	7. *	2263-004-07	Safety Button Spring	15.	---	---
1.	2263-004-01	Workhead Trigger	8. *	2263-004-16	Trigger Spring	16.	---	---
2.	8033-000-81	Trigger Vacuum Workhead	9.	2263-404-12	Trigger Module Body (Left Side)	17.	8033-000-91	Workhead Trigger Guard
3.	2263-402-04	Electric Push-Button Switch	10.	2263-404-13	Trigger Module Body (Right Side)	18.	---	---
4.	2263-004-04	Trigger Pin	11.	2263-004-01C	Phillips Head Screw, 3/4" Lg.	19.	---	---
5.	2263-402-14	Electric Dust Cover	12.	2263-004-17	Phillips Head Screw, 1/2" Lg.	20.	2263-404-20	Electric Trigger Module Assembly
6.	2263-004-06	Trigger Module Safety Button	13.	---	---	21.	2263-004-14	Phillips Head Screw, 3/8" Lg.
			14.	---	---	22.	7109-301	Electric Plug, 3-Prong Twist Lock

* Included in Replacement Parts Kit (Part No. 2263-404-99)

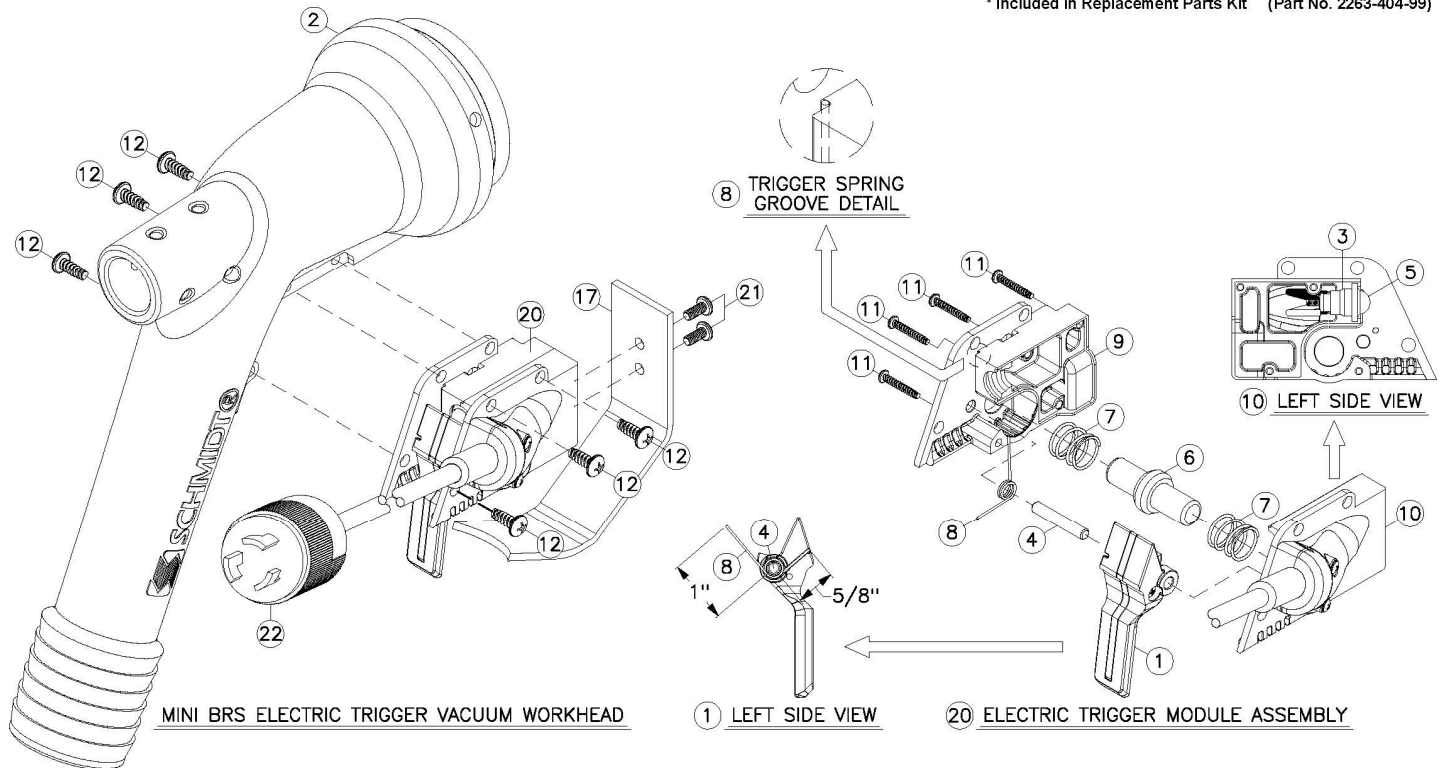


Figure 4.1 - G2 Electric Trigger Vacuum Workhead Assembly

4.1 DISASSEMBLY PROCEDURE. Refer to Figure 4.1 above.

The tools required for this procedure include: #2 phillips screwdriver.

- 4.1.1 Remove the (2) phillips head screws (#21) to detach the trigger guard (#17) from the electric trigger module (#20).
- 4.1.2 Remove the (6) phillips head screws (#12) to detach the trigger module assembly (#20) from the vacuum workhead (#2).
- 4.1.3 Remove the (4) phillips head screws (#11) to unfasten the left and right module bodies (#9, #10).
- 4.1.4 Remove the trigger (#1) and the attached trigger pin (#4), safety button (#6), trigger spring (#8), and both springs (#7).
- 4.1.5 Discard the old trigger spring (#8) and both springs (#7).

4.2 REASSEMBLY PROCEDURE. Refer to Figure 4.1 above.

The tools required for this procedure include: #2 phillips screwdriver and wire cutters.

- 4.2.1 Clean the left and right module bodies (#9, #10) by removing all debris from the body cavities.
- 4.2.2 Check vacuum workhead (#2), trigger (#1), and module bodies (#9, #10) for cracks/defects and replace if needed.
- 4.2.3 Check to ensure that the electric push-button switch (#3) is snugly inserted into the electric dust cover (#5) and position both items into their respective cavities on the right module body (#10) as shown in ⑩ “Left Side View.”
- 4.2.4 Verify that the trigger pin (#4) is centered with the trigger (#1) and adjust accordingly. It may be necessary to loosen the phillips screw on the trigger to reposition the trigger pin. Retighten the phillips screw, but do not over tighten.
- 4.2.5 Place the 5/8” leg of the trigger spring (#8) into the groove on the trigger (#1) as shown in ① “Left Side View.”
- 4.2.6 Insert the left end of the trigger pin (#4) (with attached trigger and spring) into the trigger pin cavity on the left module body (#9). The 1” leg of the trigger spring (#8) will push up against the groove as shown in ⑧ “Trigger Spring Groove Detail.” Slightly rotate the trigger (#1) clockwise until it is loosely locked into place by the safety button cavity.
- 4.2.7 Place a spring (#7) over each end of the safety button shank (#6).
- 4.2.8 Insert one end of the safety button shank (#6) with spring (#7) into the safety button hole on the left module body (#9).
- 4.2.9 Align the safety button (#6) hole, trigger pin (#4) cavity, and push-button switch (#3, #5) cavity on the right module body (#10) with their respective mating hole or cavity on the left module body (#9).

5.0 TROUBLESHOOTING	
Pneumatic G2 Trigger Vacuum Workhead <i>(Refer to Figure 3.1 on Page 3)</i>	Electric G2 Trigger Vacuum Workhead <i>(Refer to Figure 4.1 on Page 5)</i>
5.1 Air Leaks from the Vacuum Workhead Trigger Module Assembly (#20):	
<ol style="list-style-type: none"> 1. Defective cartridge assembly (#3). <i>Replace cartridge assembly.</i> 2. Twinline hose connected incorrectly. <i>Verify air supply connection to trigger module 1/4" male fitting (#19).</i> 	<i>Not Applicable</i>
5.2 Blast Outlet Air and Abrasive Will Not Shut Off when Workhead Trigger (#1) is Released:	
<ol style="list-style-type: none"> 1. Twinline hose connected incorrectly. <i>Verify air supply connection to trigger module 1/4" male fitting (#19).</i> 2. Debris blocking flow in black twinline signal/vent line. <i>Purge twinline hoses.</i> 3. Cartridge assembly (#3) is stuck in the "ON" position. <i>Defective cartridge assembly or trigger module body (#8); inspect and/or replace as needed.</i> 	<ol style="list-style-type: none"> 1. Defective electric push-button switch (#3) or electric wiring. <i>Check for an electric short.</i>
5.3 Blast Outlet Starts Unintentionally:	
<ol style="list-style-type: none"> 1. Workhead trigger (#1) is worn out. <i>Inspect and/or replace as needed.</i> 2. Trigger safety button (#6) and/or spring(s) (#7) are worn, missing, or broken. <i>Inspect and replace safety button and/or springs as needed.</i> 3. Defective cartridge assembly (#3). <i>Missing or damaged o-rings; replace cartridge assembly.</i> 	<ol style="list-style-type: none"> 1. Workhead trigger (#1) is worn out. <i>Inspect and/or replace as needed.</i> 2. Trigger safety button (#6) and/or spring(s) (#7, #8) are worn missing, or broken. <i>Inspect and replace safety button and/or springs as needed.</i> 3. Defective electric push-button switch (#3) or electric wiring. <i>Check for an electric short.</i>
5.4 Blast Outlet is Slow to Turn On or Will Not Turn On When Workhead Trigger (#1) is Pulled:	
<ol style="list-style-type: none"> 1. Debris blocking flow in black twinline signal/vent line. <i>Purge twinline hoses.</i> 2. Air leaks in twinline connections. <i>Tighten connections.</i> 3. Debris blocking flow through cartridge assembly (#3). <i>Purge cartridge assembly.</i> 	<ol style="list-style-type: none"> 1. No power or insufficient power source. <i>Check all electrical connections for proper mating. A power supply or transformer can be used if correct voltages are not readily available.</i>
5.5 If Problems Persist, Consult the Blaster Operation and Maintenance Manual for Further Troubleshooting Procedures.	

6.0 G2 TRIGGER VACUUM WORKHEAD – OPTIONAL ACCESSORIES
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The G2 Trigger Vacuum Workhead is standard equipped to blast flat surfaces at temperatures up to 150°F. However, additional accessories and blast head attachments are available depending on the required application. Consult Axxiom Manufacturing, Inc. or an authorized Schmidt® distributor for additional information regarding the options listed below.

6.1 CORNER ATTACHMENTS

Due to the shape of the flat brush attachment, it is difficult to maintain containment of the blast and vacuum operation when blasting corners. The inside corner brush and outside corner brush attachments are two separate brushes designed specifically for corner blasting operations. The tapered brushes maintain contact with the adjacent surfaces to maximize blast and vacuum efficiency. *See Figure 6.1 below for available options.*

6.2 HIGH TEMPERATURE

When blasting surfaces in excess of 150°F, the standard nylon bristle brushes begin to breakdown. As a result, high temperature brass brushes are available and recommended for surface temperatures up to 400°F. The high temperature option is available for the flat brush design, as well as the inside and outside corner brushes. *See Figure 6.1 below for available options.*

	Flat Brush	Inside Corner Brush	Outside Corner Brush
Standard <i>(Up to 150°F)</i>	8031-000-37 <i>(Brush Only)</i>	8033-000-115 <i>(Includes Adapter, Brush, Sleeve)</i>	8033-000-116 <i>(Includes Adapter, Brush, Sleeve)</i>
High Temperature <i>(Up to 400°F)</i>	8033-000-123 <i>(Includes Gasket)</i>	8033-000-124 <i>(Includes Adapter, Brush, Sleeve)</i>	8033-000-125 <i>(Includes Adapter, Brush, Sleeve)</i>

Figure 6.1 - G2 Trigger Vacuum Workhead Optional Accessories and Part Numbers

WARNING

- 1. Any person intending to operate this equipment or any person intending to be in the vicinity during its operation must receive proper training from his/her supervisor, employer and/or supplier. If this equipment is to be leased or rented, the supplier must assure that the lessee or renter has received proper training before the lessee or renter takes possession of the equipment. Consult Axxiom Manufacturing, Inc.**
- 2. Any person authorized to operate this equipment or any person intending to be in the vicinity during its operation and who is not capable of reading and understanding this manual must be fully trained regarding the *Rules for Safer Operation* and all operating procedures, and must be made aware of all the Dangers, Warnings, and Cautions identified herein. Consult Axxiom Manufacturing, Inc.**
- 3. Do Not operate any abrasive blaster or blast equipment before reading and completely understanding all the warnings, operating procedures and instructions, and the *Rules for Safer Operation* contained in this manual.**
- 4. Do Not operate any abrasive blaster or blast equipment without following the *Rules for Safer Operation* and all the operating procedures and instructions. Failure to properly use blast equipment could result in serious injury or death.**
- 5. Do Not perform any maintenance on any abrasive blaster or blast equipment while it is pressurized. Always depressurize the abrasive blaster vessel before loading abrasive or performing any maintenance.**
- 6. Do Not use abrasives containing free silica. Silica can cause silicosis or other related respiratory damage. All operators must wear personal protective equipment for all abrasive blasting operations. Observe all applicable local, state and federal safety regulations in conjunction with airline filters and respiratory protection. Reference OSHA 29 CFR 1910.134.**
- 7. Do Not enter areas during abrasive blasting operations without breathing protection. All personnel in the vicinity of abrasive blasting operations should wear NIOSH approved air fed respirators, hoods or helmets.**
- 8. Do Not modify or alter any abrasive blaster, blast equipment or controls thereof without written consent from Axxiom Manufacturing, Inc.**
- 9. Do Not use bleeder type deadman valves on any Schmidt® abrasive blaster. The use of A-BEC, Clemco or a similar bleeder type deadman valve can cause unintentional start-up without warning, which can result in serious personal injury.**
- 10. Do Not sell, rent, or operate abrasive blasters without remote controls. OSHA regulations require remote controls on all blast machines. Failure to use remote controls can cause serious injury or death to the operator(s) or other personnel in the blasting area. Reference OSHA 29 CFR 1910.244(b).**
- 11. Do Not repair or replace any portion of Schmidt® equipment using components that are not Schmidt® original factory replacement parts. Use of replacement components that are not Schmidt® original factory replacement parts may result in equipment failure which can result in serious personal injury and in addition will void all warranties.**