Before using this equipment, read, understand and follow all instructions in the Operator’s Manuals provided with this equipment. If the user and/or assistants cannot read or understand the warnings and instructions, the employer of the user and/or assistants must provide adequate and necessary training to ensure proper operation and compliance with all safety procedures pertaining to this equipment. If Operator’s Manuals have been lost, please visit www.marco.us, or contact Marco at 563.324.2519 for replacements. Failure to comply with the above warning could result in death or serious injury.
Company Profile
Since 1944, Marco has developed a strong tradition of providing innovative and reliable products and services to the surface preparation and protective coatings industries. We are the world’s premier provider of Abrasives, Blasting Equipment, Coating and Painting Equipment, Engineered Systems, Rental Equipment, Safety Equipment, Service, and Repair.

Through innovative designs and a total commitment to quality, Marco manufactures products that increase production rates, create a safer workplace, and reduce maintenance costs. Marco’s industry experience, manufacturing capabilities, legendary customer service, product availability, logistics services, and technology leadership is your assurance that we deliver high quality products and services, providing the best value to you, our customer.

The Marco Difference

• **Industry Experience** – With Marco on your team, you have access to expertise which can only come from decades of industry leadership. We have organized our engineering department, production specialists, customer operations, and safety support into a “Center of Competence.” As a Marco customer, you have access to hundreds of years of cumulative experience related to your operations.

• **Manufacturing Excellence** – Marco is a U.S. based, ISO 9001:2008 certified manufacturer of equipment for the Surface Preparation and Protective Coatings industries. Marco’s engineers benchmark the industry to ensure that we design and manufacture superior products that set the “Gold Standard” for performance, safety, and quality.

• **Legendary Customer Service** – Marco’s legendary customer service team is staffed by friendly, highly-trained individuals who are focused on providing the highest level of product support, order accuracy, and customer satisfaction.

• **Product Availability** – We stock over 10,000 SKU’s and have over 45 shipping locations to serve North American and International markets for all major brands of blasting and painting equipment. As the largest provider of surface preparation and protective coatings equipment in the world, our inventory levels and product availability are unmatched.

• **Logistics Services** – Marco’s in-house logistics team is dedicated to moving your shipment anywhere in the world. We move over 14,000 truckloads every year, allowing you to save on freight costs by leveraging our buying power. Lower your process costs with a single invoice, which includes product and freight.

• **Technology Leadership** – Our website provides: Operator’s Manuals, Part Numbers and Schematics Guides, MSDS information, and Features, Advantages, and Benefits Guides, providing access to information 24/7. Our Extranet application allows you to receive quotes and place orders online. Our Intranet maintains a complete record of your purchase history to assist with ongoing support of your existing equipment and future purchasing decisions.

Vision Statement
Marco is the world’s premier provider of Abrasives, Blasting Equipment, Coating and Painting Equipment, Engineered Systems, Rental Equipment, Safety Equipment, Service, and Repair.

Mission Statement
Marco provides strong leadership and innovation to the surface preparation and protective coatings industries. We dedicate our efforts to the continuous improvement of our products, services, processes, people, and most importantly, the quality of our customer’s experience.

Quality Policy
Marco is committed to providing superior quality in the design, manufacturing, distribution, rental, service, and repair of our products. Our ISO 9001:2008 certification extends throughout all operations in all locations. Continuous improvement of our processes and supply chain integration comprise the core of our business strategy for delivering exceptional quality and value in all Marco products and services.

Management Philosophy
We are a company dedicated to the success of every customer and associate. We discuss, debate, challenge, measure, and test our ideas. We will be boundless and limitless in our passion to improve. Through sound leadership and dedicated associates, we will ensure a long term, profitable future for Marco, our associates, customers, and suppliers.
DEFINITION OF TERMS

⚠️ DANGER

This is an example of danger. This indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ WARNING

This is an example of a warning. This indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠️ CAUTION

This is an example of a caution. This indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It can also be used to alert against unsafe practices.

⚠️ NOTICE

This is an example of a notice. This indicates policy or practice directly related to safety of personnel or protection of property.
HAZARD IDENTIFICATIONS

**WARNING**

Failure to comply with ANY WARNING listed below could result in death or serious injury.

- OSHA sets exposure limits to protect workers from exposure to respirable crystalline silica, 29 CFR 1910.1053. Airborne dust could increase the exposure levels beyond permissible limits. Breathing dust containing silica could cause silicosis, a fatal lung disease. Breathing dust during abrasive blasting operations, post-blast cleaning operations, and/or servicing equipment within the abrasive blasting area may expose an individual to conditions that could cause asbestosis, lead poisoning and/or other serious or fatal diseases. Harmful dust containing toxic material from abrasives or surfaces being abrasive blasted can remain suspended in the air for long periods of time after abrasive blasting has ceased. A NIOSH-approved, well-maintained, respirator designed for the specific operation being performed must be used by anyone abrasive blasting, handling or using the abrasive, and anyone in the area of the dust.

- Contact NIOSH and OSHA offices to determine the proper respirator for your specific application. The air supplied to the respirator must be at least Grade D quality as described in Compressed Gas Association Commodity Specification G-7.1 and as specified by OSHA Regulation 1910.134. Ensure air filter and respirator system hoses are not connected to non-air sources or in-plant lines that may contain nitrogen, oxygen, acetylene or other non-breathable gases. Before removing respirator, use an air monitoring instrument to determine if the atmosphere is safe to breathe.

- You must comply with all OSHA, local, City, State, Province, Country and jurisdiction regulations, ordinances and standards, related to your particular work area and environment. Keep unprotected individuals out of the work area.

- Abrasive blasting operators must receive thorough training on the use of abrasive resistant attire which includes: supplied-air respirator, abrasive blasting suit, safety shoes, gloves, ear protection and eye protection. Protect the operator and bystanders by complying with NIOSH and OSHA Safety Standards.

- Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions.

- OSHA requires abrasive blasting nozzles be equipped with an operating valve, which shall be designed to be held open only by continuous hand pressure and shall close immediately upon release of hand pressure (i.e., a “deadman” control). The valve shall not be modified in any manner that would allow it to remain open without the application of continuous hand pressure by the operator. Failure to comply with the above warning could result in release of high speed abrasive and compressed air resulting in death or serious injury. OSHA 29CFR 1910.244(b)

- Point the abrasive blasting nozzle only at the surface being abrasive blasted. Never point the abrasive blasting nozzle or abrasive stream at yourself or others.

- Unless otherwise specified, maximum working pressure of abrasive blasting pots and related components must not exceed 150 psi. Exceeding maximum working pressure of 150 psi could cause the abrasive blasting pot and components to burst. Failure to comply with the above warning could result in death or serious injury.

- Never weld, grind or drill on the abrasive blasting pot (or any pressure vessel). Doing so will void ASME certification and manufacturer’s warranty. Welding, grinding or drilling on the abrasive blasting pot (or any pressure vessel) could weaken the vessel causing it to burst. Failure to comply with the above warning could result in death or serious injury. (ASME Pressure Vessel Code, Section VIII, Division 1)

- This equipment is not intended for use in any area that might be considered a hazardous location, as described in the National Electric Code NFPA 70, Article 500. Use of this equipment in a hazardous location could cause an explosion or electrocution.

- Never attempt to move an abrasive blasting pot containing abrasive. Never attempt to manually move abrasive blasting pots greater than 6.5 cubic foot capacity. Always use at least two capable people to manually move an abrasive blasting pot on flat, smooth surfaces. A mechanical lifting device must be used if an abrasive blasting pot is moved in any other manner.
HAZARD IDENTIFICATIONS

**WARNING**

Failure to comply with ANY WARNING listed below could result in death or serious injury.

- This product is not for use in wet environments. Always use a Ground Fault Interrupter Circuit (GFIC) for all electrical power source connections. Use of this product in wet environments could create a shock or electrocution hazard.

- Frozen moisture could cause restrictions and obstructions in pneumatic control lines. Any restriction or obstruction in the pneumatic control lines could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air. In conditions where moisture may freeze in the control lines an antifreeze injection system approved for this application can be installed.

- Do not cut, obstruct, restrict or pinch pneumatic control lines. Doing so could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air.

- Use of Marco remote control switches with other manufacturer’s remote control systems could cause unintended activation of remote control systems resulting in the release of high speed abrasive and compressed air. Only Marco remote control switches should be used with Marco remote control systems.

- Always be certain to have secure footing when abrasive blasting. There is a recoil hazard when abrasive blasting starts that may cause user to fall and misdirect the abrasive stream at operator or bystander.

- Never use an abrasive blasting pot or attachments as a climbing device. The person could slip and fall. The abrasive blasting pot could become unstable and tip over.

- For equipment manufactured by entities other than Marco, you must consult the Original Equipment Manufacturer operator’s manuals, information, training, instructions and warnings, for the proper and intended use of all equipment.

- Flammable fumes, such as solvent and paint fumes in the work area can present an ignition or explosion hazard if allowed to collect in adequate concentrations. To reduce conditions that could result in a fire or an explosion, provide adequate ventilation, eliminate all ignition or spark sources, keep the work area free of debris, store solvents and solvent contaminated rags in approved containers, follow proper grounding procedures, do not plug/unplug power cord or turn on/off power switches when flammable fumes are present, keep a working fire extinguisher or provide another fire suppression system in the work area. Cease all operations and correct condition if a spark or ignition source is identified during operation.

- Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

- Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts.

- Surfaces of heated supply tanks, drums and/or lines as well as the adjoining plumbing may become hot during normal use. Do not touch these heated surfaces without proper protection. Deactivate and allow sufficient time for all surfaces to cool before attempting any maintenance.

- High-pressure fluid from gun, hose leaks, or ruptured components can pierce skin and can cause a serious injury that may result in amputation. Do not point gun or spray tip at anyone or at any part of the body. Keep clear of any leaks or ruptures. Depressurize the entire system before attempting cleaning, inspecting, or servicing equipment.

- Exposure to toxic fluids or fumes may occur during the normal operation of this system. Before attempting to fill, use, or service this system, read SDS's to know the specific hazards of the fluids you are using. Always use proper Personal Protective Equipment when attempting to fill, use, or service this system.

- The use of this product for any purpose other than originally intended or altered from its original design is prohibited.

- Never hang objects from the abrasive blasting pot handle. Doing so may cause the abrasive blasting pot to become unstable and tip over.
HAZARD IDENTIFICATIONS

⚠️ CAUTION

Failure to comply with ANY CAUTION listed below may result in minor or moderate injury.

- Static electricity can be generated by abrasive moving through the abrasive blasting hose causing a shock hazard. Prior to use, ground the abrasive blasting pot and abrasive blasting nozzle to dissipate static electricity.
- High decibel noise levels are generated during the abrasive blasting process which may cause loss of hearing. Ensure appropriate Personal Protective Equipment and hearing protection is in use.

⚠️ NOTICE

Failure to comply with ANY NOTICE listed below could pose a hazard to personnel or property.

- See Air & Abrasive Consumption Chart for estimated abrasive consumption rates and required air flow (cubic feet per minute). Your system must meet these minimum requirements to ensure proper function and performance.
- Always use abrasive that is dry and properly screened. This will reduce the potential for obstructions to enter the remote control system, abrasive metering valve and abrasive blasting nozzle.
- Moisture build-up occurs when air is compressed. Any moisture within the abrasive blasting system will cause abrasive to clump, clogging metering valves, hoses and nozzles. Install an appropriately sized moisture separator at the inlet of the abrasive blasting system. Leave the moisture separator petcock slightly open to allow for constant release of water. If insufficient volume of air exists and petcock is unable to be left open (at all times) petcock should be opened frequently to release water.
- To reduce abrasive intrusion in the air supply hose, depressurize the abrasive blasting pot before shutting off air supply from compressor.
- Inspect abrasive blasting nozzle before placing into service. Damage to abrasive blasting nozzle liner or jacket may occur during shipping. If you receive a damaged abrasive blasting nozzle, contact your distributor immediately for replacement. Abrasive blasting nozzle liners are made of fragile materials and can be damaged by rough handling and striking against hard surfaces. Never use a damaged abrasive blasting nozzle.
- Abrasive blasting at optimal pressure for the abrasive used is critical to productivity. Example: For an abrasive with an optimal abrasive blasting pressure of 100 psi at the abrasive blasting nozzle, one pound per square inch of pressure loss will reduce abrasive blasting efficiency by 1.5%. A 10 psi reduction in air pressure will cause a 15% loss of efficiency. Use a Needle Pressure Gauge to identify pressure drops in your system. Consult with your abrasive supplier for the requirements of your abrasive.
- Replace abrasive blasting nozzle if liner or jacket is cracked or damaged. Replace abrasive blasting nozzle if original orifice size has worn 1/16” or more. Determine abrasive blasting nozzle wear by inserting a drill bit 1/16” larger than original size of abrasive blasting nozzle orifice. If the drill bit passes through abrasive blasting nozzle, replacement is needed.
Failure to comply with ANY NOTICE listed below could pose a hazard to personnel or property.

- See Air & Abrasive Consumption Chart for estimated abrasive consumption rates and required air flow (cubic feet per minute). Your system must meet these minimum requirements to ensure proper function and performance.

- When it comes to air & abrasive mixtures, more is not necessarily better. Optimum abrasive blasting efficiency takes place when a lean air & abrasive mixture is used. To correctly set the abrasive metering valve, begin with the valve fully closed and slowly increase the amount of abrasive entering the airstream. As you increase the abrasive flow, watch for a “blue flame” at the exit of the abrasive blasting nozzle. Faster cutting, reduced abrasive consumption and lower clean up costs, are benefits of the “blue flame”.

- Abrasive blasting at optimal pressure for the abrasive used is critical to productivity. Example: For an abrasive with an optimal abrasive blasting pressure of 100 psi at the abrasive blasting nozzle, one pound per square inch of pressure loss will reduce abrasive blasting efficiency by 1.5%. A 10 psi reduction in air pressure will cause a 15% loss of efficiency. Use a Needle Pressure Gauge to identify pressure drops in your system. Consult with your abrasive supplier for the requirements of your abrasive.

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**AIR & ABRASIVE CONSUMPTION CHART**

**NOTICE**

Inspect abrasive blasting nozzle before placing into service. Damage to abrasive blasting nozzle liners or jacket may occur during shipping. If you receive a damaged abrasive blasting nozzle, contact your distributor immediately for replacement. Abrasive blasting nozzles placed into service may not be returned. Abrasive blasting nozzle liners are made of fragile materials and can be damaged by rough handling and striking against hard surfaces. Never use a damaged abrasive blasting nozzle.

**NOTICE**

Replace abrasive blasting nozzle if liner or jacket is cracked or damaged. Replace abrasive blasting nozzle if original orifice size has worn 1/16” or more. Determine abrasive blasting nozzle wear by inserting a drill bit 1/16” larger than original size of abrasive blasting nozzle orifice. If the drill bit passes through abrasive blasting nozzle, replacement is needed.

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**“Blue Flame”**

**Air & Abrasive Consumption Chart***

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Pressure at the Nozzle (PSI)</th>
<th>Air (in cfm), Abrasive &amp; Compressor Requirements</th>
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<tr>
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<td>13</td>
</tr>
<tr>
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</table>

*Abrasive consumption is based on abrasive with a bulk density of 100 lbs per Cubic Foot

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**Blastmaster® 151E Remote Control Switch**
"THE BIG PICTURE"
DAILY PRE-OPERATION CHECKLIST

Daily Pre-operation Checklist

☐ 1. Abrasive
☐ 2. Air Compressor
☐ 3. Air Hose Couplings & Gaskets
☐ 4. Air Hose
☐ 5. Safety Cable
☐ 6. Ambient Air Pump*
☐ 7. Breathing Air Filter
☐ 8. CO Monitor
☐ 9. Breathing Line
☐ 10. Climate Control Device
☐ 11. Abrasive Blasting Suit
☐ 12. Gloves
☐ 13. Abrasive Blasting Nozzle
☐ 14. Lighting System*
☐ 15. Abrasive Blasting Nozzle Holder
☐ 16. Remote Control Switch
☐ 17. Supplied-Air Respirator
☐ 18. Control Line
☐ 19. Abrasive Blasting Hose
☐ 20. Abrasive Blasting Hose Couplings & Gaskets
☐ 21. Abrasive Metering Valve
☐ 22. Remote Control System
☐ 23. Moisture Separator
☐ 24. Abrasive Blasting Pot Exhaust Muffler
☐ 25. Abrasive Blasting Pot
☐ 26. Abrasive Blasting Pot Screen
☐ 27. Abrasive Blasting Pot Lid
☐ 28. Aftercooler*

* Optional or alternative device. Ask your Marco Representative for more details.

Abrasive – Select the correct Abrasive (1) for the application. Review the MSDS (Material Safety Data Sheet) to ensure the correct PPE (Personal Protective Equipment) and Environmental Controls have been selected and are in place.

Air Compressor – Select an Air Compressor (2) of adequate size to support all equipment requirements. Refer to “Air & Abrasive Consumption Chart” for Abrasive Blasting Nozzle (13) air consumption requirements. Before connecting Air Hose (4), sample the air being produced by the air compressor (2) to ensure it is free of petroleum contaminants.

Air Hose, and Air Hose Couplings & Gaskets – Select Air Hoses (4) of sufficient size to support all subsequent volumetric requirements and with a sufficient PSI (pound per square inch) rating. Inspect all Air Hoses (4), and Air Hose Couplings & Gaskets (3) for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Hose, Abrasive Blasting Hose Couplings & Gaskets, and Abrasive Blasting Nozzle Holder – Select an Abrasive Blasting Hose (19) that has an inner diameter 3 to 4 times larger than your Abrasive Blasting Nozzle (13). Inspect Abrasive Blasting Hose (19), Abrasive Blasting Hose Couplings & Gaskets (20), and Abrasive Blasting Nozzle Holder (15) for damage or wear. Repair or replace damaged or worn components.

Safety Cables – Install a Safety Cable (5) at each Abrasive Blasting Hose (19), and Air Hose (4) connection points.

Aftercooler and Moisture Separator – Ensure Aftercooler (28) is positioned on stable ground. Keep petcock drain of Moisture Separator (23) slightly open during use. Drain both devices after each use.

Supplied-Air Respirator, Breathing Line, Breathing Air Filter, Climate Control Device, CO Monitor, Ambient Air Pump – You MUST consult the Operator’s Manual supplied with your Respiratory Equipment (6, 7, 8, 9, 10, 17) for ALL applicable instructions and warnings. Inspect all Respiratory Equipment components for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Suit and Gloves – Select an abrasive-resistant Abrasive Blasting Suit (11) that is slightly oversized to allow ease of movement and allows air to flow around your body. Select abrasive-resistant Gloves (12) with a tight fit and a long cuff that overlaps the sleeve of the Abrasive Blasting Suit (11).

Abrasive Metering Valve and Abrasive Blasting Pot – Confirm Abrasive Blasting Pot (25) is positioned on stable ground. Inspect Abrasive Blasting Pot (25) and Abrasive Metering Valve (21) for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Pot Screen and Abrasive Blasting Pot Lid – Always use an Abrasive Blasting Pot Screen (26) when filling Abrasive Blasting Pot (25) with Abrasive (1) to prevent debris from entering the Abrasive Blasting Pot (25). Remove Abrasive Blasting Pot Lid (27) before operating the Abrasive Blasting Pot (25). Install Abrasive Blasting Pot Lid (27) after use to protect the Abrasive Blasting Pot’s (25) interior.

Remote Control System, Remote Control Switch, Control Line, – Inspect Remote Control System (22) and Control Line (18) for damage or wear. Repair or replace damaged or worn components. Ensure Control Line (18) fittings connected to the Remote Control System (22) are tight and free of leaks. Ensure Remote Control Switch (16) is functioning properly. Consult Remote Control Switch Operator’s Manual for applicable instructions.


Lighting System – Ensure the Lighting System (14) is connected to a proper power supply before use.
Description
A remote control switch gives an operator the ability to remotely activate and deactivate the remote control system at the abrasive blasting nozzle. An electric remote control switch reduces the cycle time required to activate and deactivate the remote control system compared to a pneumatic remote control switch. The reduced cycle time is most noticeable when the operator is working at distances greater than 100 feet from the abrasive blasting pot. The Blastmaster® 151E Remote Control Switch features a spring-assisted safety tab and control handle, providing a dual “Fail-to-Safe” design. Typical applications include blast rooms, blast yards, bridges, oil refineries, pipelines, railcar shops, shipyards, and storage tanks.

Operational Requirements
*The following may cause safety hazards or reduced performance:*

- Improper installation and/or maintenance of components.
- Use of anything other than hand pressure to activate Remote Control Switch.
- Use of electric control line smaller than 16 gauge wire.

Operating Instructions

**Before using:**
- Set up abrasive blasting blast pot and remote control system. (See Operator’s Manuals.)
- Inspect electric control line and connectors for cracks or abrasions.
- Inspect the remote control switch for damage. Ensure Safety Tab (1) and Handle (2) move freely without binding. Depress the handle. If the handle and safety tab are not returned to the UP position by the springs when released, remove remote control switch from service or repair it before using.

**During use:**
- To activate the remote control switch, move Safety Tab (1) forward to the DOWN position and move Handle (2) to the DOWN position. This will allow the boss on the handle to make contact with the micro switch.
- To deactivate the remote control switch, release the handle. The springs will return the handle and safety tab to the UP position.
- Monitor function of remote control switch components. Malfunctioning control handles must be taken out of service immediately and repaired or replaced.

**After use:**
- When abrasive blasting is concluded, inspect components for damage. Store abrasive blasting hose with remote control switch attached in an area clear of debris and abrasive.
**Installation**

1. Install Electric Connector (1) on to Electric Control Line (2) of Remote Control Switch (3).
2. Place Remote Control Switch (3) on Abrasive Blasting Hose (6) behind Nozzle Holder (4).
3. Place Nylon Band (5) on front of Remote Control Switch (3). Do not tighten Band completely.
4. Place Nylon Band (5) on rear of Remote Control Switch (3). Do not tighten Band completely.
5. Adjust location of Remote Control Switch (3) to a comfortable position on Abrasive Blasting Hose (6) and tighten Nylon Bands (5) to secure the Switch Assembly to the Abrasive Blasting Hose. Cut off excess tail of Nylon Bands.
6. Secure Electric Control Line (2) to Abrasive Blasting Hose (6) every 4 to 6 feet, and on each side of the hose connections. Provide adequate slack at each connection.
MAINTENANCE

Disassemble and Assemble Blastmaster® 151E Remote Control Switch

Maintenance of the Blastmaster® 151E Remote Control Switch is limited to the daily cleaning and the immediate replacement of damaged or worn parts.

**Disassemble:**
1) Remove Nut (7) from Shoulder Screw (9).
2) Slide Shoulder Screw (9) from Body (8).
3) Remove Washer (2), Handle (1), and Spring (14) from Body (8).
4) Remove Nut (10) from Shoulder Screw (13).
5) Remove Shoulder Screw (13) from Body (8).
6) Remove Washer (11), Spring (12), and Safety Tab (15) from Body (8).
7) Remove Screw (4) from Cord Grip (5).
8) Remove two Screws (3), and remove Micro Switch (6) from Body (8).

**Assemble:**
1) Place Micro Switch (6) on Body (8). Align holes in Micro Switch with Holes (B).
2) Install two Screws (3) in Holes (B).
3) Place Cord Grip (5) over power cord and align Cord Grip with Holes (C). Install two Screws (4) in Holes (C).
4) With flat side of Safety Tab (15) facing away, place offset leg of Spring (12) against Safety Tab and insert Shoulder Screw (13) in hole on right side of Safety Tab. Place assembled components on Body (8) with straight leg of Spring at Location (A) on body. Insert Shoulder Screw (13) through holes in Safety Tab (15) and Body (8).
5) Place Washers (11) and Nut (10) on Shoulder Screw (13) and tighten. Test movement of Safety Tab (15) by pulling down. If binding occurs, loosen Nut and repeat test.
6) Partially insert Shoulder Screw (9) in Body (8). Place Spring (14) on Shoulder Screw with straight leg of Spring (14) on the bottom facing Safety Tab (15).
7) Align Handle (1) with uprights and insert Shoulder Screw (9) through hole in Handle. Place Washer (2) on Shoulder Screw.
8) Install Nut (7) on to Shoulder Screw (9) and tighten. Test movement of Handle (1) by depressing Handle. If binding occurs, loosen Nut and repeat test.
MAINTENANCE

Disassemble and Assemble Blastmaster® 151E Remote Control Switch
If the Blastmaster® 151E Remote Control Switch does not function properly, check the following:

<table>
<thead>
<tr>
<th>SYMPTOM (Cause)</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Control Switch will not activate when Remote Control Handle is depressed</td>
<td>Handle is not making contact with Micro Switch. Adjust height of Micro Switch per instructions in this manual.</td>
</tr>
<tr>
<td>(Damaged components, Switch requires adjustment, Damaged Electric Control Line, Remote Control Switch malfunction)</td>
<td>Inspect Micro Switch for visible damage. If protective covering is damaged, replace Micro Switch immediately. Test electric continuity of Micro Switch. Remove Micro Switch from Remote Control Body. Remove Electric Plug from Micro Switch. Test continuity of the Micro Switch by placing the electrodes on each wire and press Micro Switch. If no continuity is detected, replace Micro Switch. Inspect electric control line and connections for damage. Test electric continuity of power cord between Remote Control System and Remote Control Switch. Repair or replace damaged electric control line and connectors. Electrical resistance in electric control line. Replace power cord with larger gauge power cord. See remote control system Operator's Manual.</td>
</tr>
</tbody>
</table>
### TROUBLESHOOTING

**WARNING**
Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

**NOTICE**
Use a 16 gauge electric cord for lengths up to 100 feet. To reduce electrical resistance, use larger gauge electrical cord for distances greater than 100 feet.

<table>
<thead>
<tr>
<th>SYMPTOM (Cause)</th>
<th>ACTION</th>
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</thead>
<tbody>
<tr>
<td>Remote Control Switch will not deactivate when Remote Control Handle is released</td>
<td>Ensure Handle returns to the up position.</td>
</tr>
<tr>
<td>(Damaged components, Damaged Electric Control Line, Remote Control Switch malfunction)</td>
<td>Inspect Safety Tab and Springs for debris or damage. Replace damaged components immediately.</td>
</tr>
<tr>
<td></td>
<td>Inspect Micro Switch for visible damage. If protective covering is damaged replace Micro Switch immediately.</td>
</tr>
<tr>
<td></td>
<td>Test electric continuity of Micro Switch. Remove Micro Switch from Remote Control Body. Remove Electric Plug from Micro Switch. Test continuity of the Micro Switch by placing the electrodes on each wire. If continuity is detected without pressing Micro Switch, replace Micro Switch.</td>
</tr>
<tr>
<td></td>
<td>Inspect electric control line and connections for damage. Test electric continuity of electric control line between Remote Control System and Remote Control Switch. Repair or replace damaged remote control line and connectors.</td>
</tr>
<tr>
<td></td>
<td>See remote control system Operator's Manual.</td>
</tr>
</tbody>
</table>
### ASSEMBLY PART NUMBERS AND SCHEMATIC

**Blastmaster® 151E Remote Control Switch**

<table>
<thead>
<tr>
<th>Item #</th>
<th>Part #</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>—</td>
<td>1015100</td>
<td>Blastmaster® 151E Remote Control Switch – Complete</td>
</tr>
<tr>
<td>—</td>
<td>1015125</td>
<td><strong>Blastmaster® 151E Remote Control Switch with Female Low Profile Plug – Complete</strong> <em>(Includes 1015100 and Item #12)</em></td>
</tr>
<tr>
<td>1</td>
<td>1015001</td>
<td>Handle</td>
</tr>
<tr>
<td>2</td>
<td>1015007</td>
<td>3/8” O.D. x 7/16” I.D. Washer <em>(Four Required)</em></td>
</tr>
<tr>
<td>3</td>
<td>1015014</td>
<td>8-32 x 3/8” Phillips Head Screw <em>(Four Required)</em></td>
</tr>
<tr>
<td>4</td>
<td>1015101</td>
<td>Electric Cord Clamp</td>
</tr>
<tr>
<td>5</td>
<td>1015006</td>
<td>8-32 UNC-2B Nylon Insert Lock Nut <em>(Two Required)</em></td>
</tr>
<tr>
<td>6</td>
<td>10104268</td>
<td>Micro Switch</td>
</tr>
<tr>
<td>7</td>
<td>1015015</td>
<td>Nylon Band - White <em>(Two Required)</em></td>
</tr>
<tr>
<td>8</td>
<td>1015002</td>
<td>Body</td>
</tr>
<tr>
<td>9</td>
<td>1015008</td>
<td>Shoulder Screw <em>(Two Required)</em></td>
</tr>
<tr>
<td>10</td>
<td>1015005</td>
<td>Spring <em>(Two Required)</em></td>
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<tr>
<td>11</td>
<td>1015003</td>
<td>Safety Tab</td>
</tr>
<tr>
<td>12</td>
<td>1015127</td>
<td>Female Low Profile 4-Pin Plug <em>(Optional)</em></td>
</tr>
<tr>
<td>—</td>
<td>105M063</td>
<td>Features and Specifications Guide – Blastmaster® 151E Remote Control Switch</td>
</tr>
<tr>
<td>—</td>
<td>106M063</td>
<td>Part Numbers and Schematics Guide – Blastmaster® 151E Remote Control Switch</td>
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<tr>
<td>—</td>
<td>1090063</td>
<td>Operator’s Manual – Blastmaster® 151E Remote Control Switch</td>
</tr>
<tr>
<td>—</td>
<td>1091045</td>
<td>Hazard Identification Tag</td>
</tr>
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</table>
Assembly Part Numbers And Schematic

Figure 1 Blastmaster® 151E Remote Control Switch
<table>
<thead>
<tr>
<th>DATE</th>
<th>TYPE OF SERVICE</th>
<th>PART NUMBER</th>
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</table>
ADDITIONAL TECHNICAL DATA

The associations listed below offer information, materials and videos pertaining to abrasive blasting and safe operating practices.

- **American Society for Testing and Materials (ASTM)**
  100 Barr Harbor Drive
  West Conshohocken, PA 19428-2959
  Phone: (610) 832-9855
  FAX: (610) 832-9555
  www.astm.org

- **Occupational Safety & Health Administration (OSHA)**
  United States
  Department of Labor
  200 Constitution Avenue
  Washington, DC 20210
  Phone: (800) 321-OSHA
  (800) 321-6742
  www.osha.gov

- **The National Board of Boiler & Pressure Vessel Inspectors**
  1055 Crupper Avenue
  Columbus, Ohio 4322
  Phone: (614) 888-8320
  FAX: (614) 888-0750
  www.nationalboard.org

- **National Association of Corrosion Engineers (NACE)**
  1440 South Creek Drive
  Houston, TX 77084-4906
  Phone: (281) 228-6200
  FAX: (281) 228-6300
  www.nace.org

- **The Society for Protective Coatings (SSPC)**
  40-24th Street, 6th Floor
  Pittsburgh, PA 15222-4656
  Phone: (412) 281-2331
  FAX: (412) 281-9992
  www.sspcc.org

- **American National Standards Institute (ANSI)**
  1899 L Street, NW, 11th Floor
  Washington, DC 20036
  Phone: (202) 293-8020
  FAX: (202) 293-9287
  wwwansi.org

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• 3425 East Locust Street
  Davenport, IA  52803
ph: 800.BLAST.IT (800.252.7848)
ph: 563.324.2519
fax: 563.324.6258

GULF STATES HEADQUARTERS
• 701 East Boulevard
  Deer Park, TX  77536
ph: 800.BLAST.IT (800.252.7848)
ph: 281.930.0905
fax: 281.542.0736

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FAX: 563.324.6258
WWW.MARCO.US
SALES@MARCO.US

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