RLX REMOTE CONTROL HANDLE

O. M. 10574

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⚠ WARNING

Do not use this equipment before READING this MANUAL and UNDERSTANDING its contents.

These WARNINGS are included for the health and safety of the operator and those in the immediate vicinity.

Electronic files include a Preface containing the same important information as in the orange cover.

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1.0 INTRODUCTION

1.1 Scope of Manual

1.1.1 This owner's manual covers the installation, operation, maintenance, troubleshooting, and replacement parts for the following models of Clemco RLX pneumatic and electric control handles:

Description	Stock No.
RLX Pneumatic	10565
RLX Pneumatic with ACS Toggle Switch	07625
RLX Electric w/Lo-Profile Connector	10840
RLX Electric w/Twist-Lock Connector	05801

1.1.2 This manual contains instructions common to both the pneumatic and electric control handles. Read the common instructions before proceeding to the section relating specifically to the pneumatic or electric model.

1.1.3 This manual covers the RLX remote control handle only, which is the activator of Clemco remote control systems. The operator must be trained in the safe operation of the remote control system, blast machine, and all other equipment used. They must be aware of the hazards associated with abrasive blasting. To ensure safe blasting before using the control handle, read the manuals for the specific blast machine, remote controls, and accessories used.

1.1.4 The current RLX, earlier RLX, and Recova-Loks are interchangeable when used as complete units.

1.2 Safety Alerts

1.2.1 Clemco uses safety alert signal words based on ANSI Z535.4-2011, to alert the user of a potentially hazardous situation that may be encountered while operating this equipment. ANSI's definitions of the signal words are as follows:

This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

NOTICE

Notice indicates information that is considered important, but not hazard-related, if not avoided, can result in property damage.

⚠ CAUTION

Caution indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

⚠ WARNING

Warning indicates a hazardous situation that, if not avoided, could result in death or serious injury.

⚠ DANGER

Danger indicates a hazardous situation that, if not avoided, will result in death or serious injury.

1.3 Table of Contents

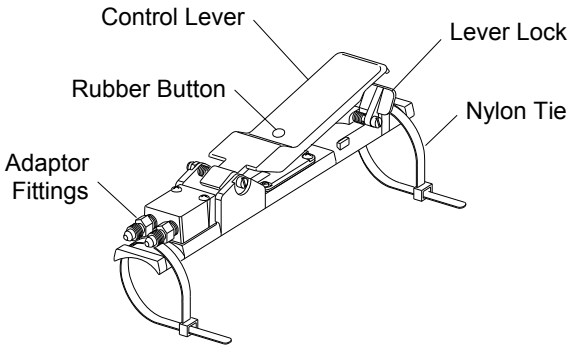
1.4 General Description

1.4.1 The principal components of the remote control handles are shown in Figure 1. The control handle is the main activator of Clemco remote control systems. When the control lever is up, it is in the nonblast position. Pressing the control lever down activates the remote controls.

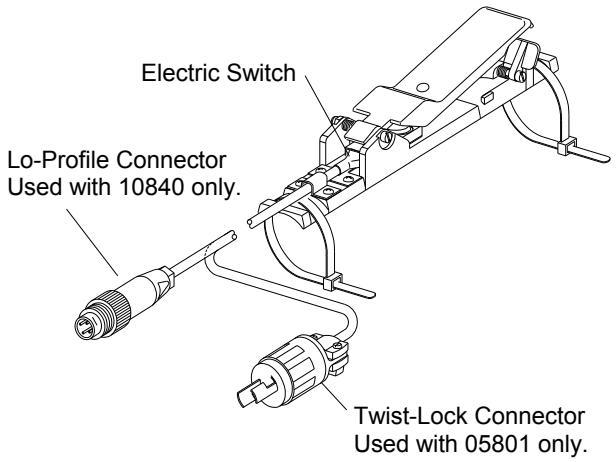
1.4.2 A remote control system is an OSHA-required safety device. Pressing the control lever down activates the remote controls. When the operator intentionally or unintentionally removes handheld pressure from the control handle, the machine deactivates, stopping air and abrasive flow through the nozzle. The remote control system “fails to safe,” which means the remote controls deactivate the blast machine if any interruption in the control air circuit occurs for reasons such as a break in the control line, the compressor stops running, or if the operator drops the blast hose

⚠ WARNING

Never modify or substitute remote control parts. Parts from different manufacturers are not compatible with Clemco equipment. If ANY part of the remote control system is altered, involuntary activation, which may cause serious injury, can occur.



Pneumatic RLX



Electric RLX

Figure 1

1.5 Operating Principles

1.5.1 Pneumatic control handle

1.5.1.1 Pneumatic remote controls operate on the return-air or completed-circuit principle. When the control lever is up, control air from the blast machine travels along the outbound twinline hose and vents through the exhaust port located under the control lever. As long as air exhausts through the port, the remote control system remains inactive. When the control lever is pressed, it seals the exhaust port so air in the outbound line returns through the inbound line to

activate the remote control valves, which start the blasting. When the handle is released, air exhausts from the return line, the remote control system deactivates, and blasting stops.

1.5.2 Electric control handle

1.5.2.1 Electric (electric over pneumatic) controls are recommended when the nozzle and remote control handle are farther than 100 feet from the blast machine. Pressure drop of pneumatic systems over longer distances increases response time, which prevents fast, safe operation. Contact your local Clemco Distributor for additional information.

1.5.2.2 When the control lever is up, control air from the blast machine travels to the control panel and stops. As long as air does not pass through the panel, the remote control system remains inactive. From the panel, a 12-volt electrical current is sent through the control cord to a switch mounted under the control lever. When the control lever is pressed, it makes contact with the switch and engages solenoids within the panel. Doing so passes control air through the panel to activate the pneumatic remote controls, which starts the blasting. When the control lever is released, control air immediately exhausts from the panel, deactivates the remote controls, and blasting stops.

1.6 Abrasive Cutoff System (ACS) Option

1.6.1 The ACS is a separate control that operates an air-actuated abrasive metering valve. The ACS closes the metering valve independently of the blasting, so air without abrasive exits the nozzle. The operator uses this feature for blowdown. If an application requires frequent choking of the blast machine, the line could control an air valve plumbed into the blast machine pusher line, enabling the operator to choke the machine from the control handle.

1.6.2 Pneumatic ACS control: The pneumatic ACS switch is mounted on the control handle. A separate air line connects to the ACS switch to operate the abrasive metering valve. Refer to the remote control systems manual for operating instructions.

1.6.3 Electric ACS control: The electric ACS cutoff switch is an integral part of the control cord, not the control handle. The rocker switch is wired into the cord several inches from the RLX connector and protected with a rubber-type covering. The system utilizes a standard electric RLX. Refer to the remote control systems manual for operating instructions.

2.0 INSTALLATION

2.1 Band Control Handle to Blast Hose

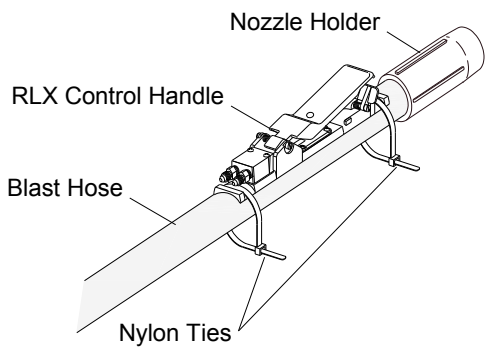
⚠ WARNING

Use the RLX control handle only with Clemco remote control systems. This control handle was designed to operate only Clemco remote controls that include the use of an airflow restricting orifice in the air supply to the handle. Using this control handle on other brands of remote controls may cause involuntary activation of the blast machine or some other malfunction, which can result in serious injury.

⚠ WARNING

Moist air that freezes can cause blockage at the control handle or in the control lines. Blockage can cause involuntary activation of the remote controls or prevent the controls from deactivating upon release of the control handle. This situation can result in serious injury or death. If remote controls are operated in freezing or near freezing weather, install a Clemco Antifreeze Injector, stock no. 05537, on the remote control-air supply line. Clemco electric remote controls have an antifreeze injector mounted on the control panel cover.

2.1.1 Band the control handle to the blast hose close to the nozzle holder, as shown in Figure 2, using the two nylon ties provided. After the control is firmly attached, clip the tie ends to avoid snags or interference with the operation of the control handle.



Pneumatic control handle shown. Use same method to attach electric control handle.

Figure 2

2.2 Attach Controls to Handle

2.2.1 Pneumatic controls

⚠ WARNING

Electric remote controls are recommended when the nozzle and remote control handle are farther than 100 feet from the blast machine. Pressure loss of pneumatic systems over longer distances increases actuation time, which prevents fast, safe operation. Contact your Clemco Distributor for information on converting to electric controls.

2.2.1.1 Attach the 50-foot twinline hose to the two fittings on the control handle, as shown in Figure 3. Either side of the hose can be attached to either fitting.

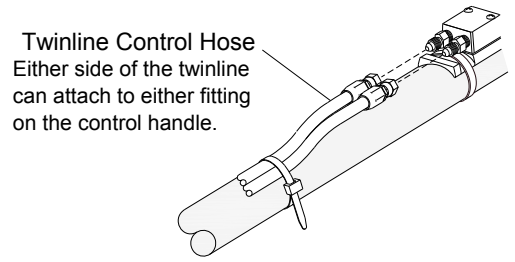


Figure 3

2.2.1.2 When using the ACS option, attach the 50-foot single-line control hose to the fitting on the ACS switch mounted on the control handle, as shown in Figure 4.

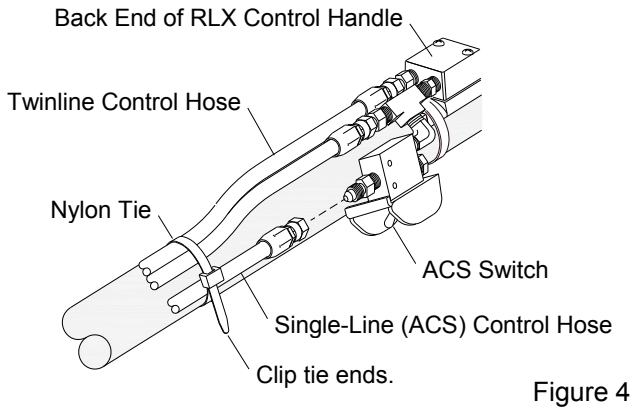


Figure 4

2.2.1.3 Make sure all fittings are tight. Leaks will cause the system to malfunction.

2.2.1.4 Working from the control handle back, band or tape the twinline hose to the blast hose every four to six feet and as close to the couplings as possible.

2.2.2 Electric controls

⚠ WARNING

The maximum recommended total length of control cord is 300 feet. Distances greater than 300 feet will cause electrical resistance and may cause the controls to malfunction. If an application requires greater distance, Clemco suggest that appropriate cord with larger gauge wire be provided by the user.

2.2.2.1 Wrap the whipcord from the electric control handle loosely around the blast hose as shown in Figure 5, and then connect it to the control cord. The cord must have ample slack and be wrapped as described. Too little slack will cause excessive strain on the cord and may pull the wires out of the connectors or switch when the hose is curved or pulled.

NOTICE

Provide enough slack at all cord connections to prevent the cord from pulling out of the connectors when the blast hose is pulled or dragged. Band the cord to the blast hose on both sides of all connections.

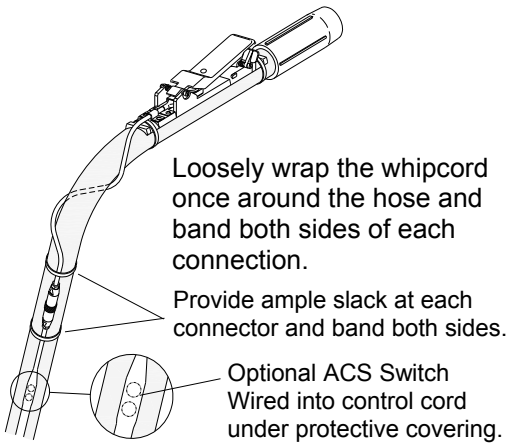


Figure 5

2.2.2.2 Working from the control handle back, band the cord to the blast hose every four to six feet, and on both sides of each cord connection.

3.0 OPERATION

3.1 Setup

3.1.1 Setup the blast machine and remote controls as instructed in the corresponding manuals.

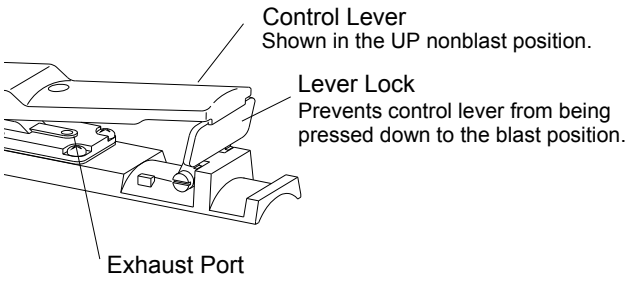
⚠ WARNING

Do not operate this equipment before reading the instruction manuals for all equipment.

3.2 Daily Inspection

3.2.1 With the air off, before beginning blasting.

3.2.1.1 Make sure the control lever is in the up (no blast) position, as shown in Figure 6.



The lever lock must be pulled down before the control lever can be pressed.

Figure 6

3.2.1.2 Make sure the control lever does not seal the exhaust port on pneumatic controls, or will not engage the switch on electric controls, unless the safety lever lock is folded down.

⚠ WARNING

Malfunctioning control handles can cause unintentional actuation of a blast machine or prevent a machine from deactivating upon release. Malfunctioning control handles must be taken out of service immediately and repaired or replaced. Serious injury or death can result from unintentional blasting.

3.2.1.3 Make sure the control lever and lever lock return to the UP position when the handle is released.

3.2.1.4 Both the control lever and safety lever lock must move freely with no drag or binding.

3.2.2 With the air ON and while blasting, check the pneumatic control handle for leaks.

3.3 Blasting Attire

⚠ WARNING

Before blasting, test the coating and substrate for toxic materials, such as lead or other heavy metals, or asbestos. These hazards require special measures to protect the operators and the environment.

Obtain a safety data sheet (SDS) for the blast abrasive to identify hazardous substances. Silica sand (crystalline) can cause silicosis, lung cancer, and breathing problems in exposed workers. Slag abrasives may contain trace amounts of toxic metals such as arsenic, beryllium, and cadmium. Any abrasive dust has potential to cause lung disease.

Abrasive blasting operations can create high levels of dust and noise. No dust is safe to breathe. Abrasive blasting can produce harmful dust. Failure to wear NIOSH-approved respirators can result in serious lung disease or death. The respirators must be properly fitted and maintained NIOSH-approved, Type CE supplied-air respirators approved for abrasive blasting.

During abrasive blasting, abrasive particles and dust in the area around the blast machine and blast nozzle become airborne. Everyone working in the vicinity of abrasive blasting must wear properly maintained, NIOSH-approved, respiratory protection and eye protection appropriate for the job site hazards.

Loud noise generated by the use of compressed air can cause hearing damage. Everyone in the blasting area must wear approved hearing protection.

It is the employer's responsibility to train employees to identify hazardous substances and to provide suitable policies, procedures, monitoring, recordkeeping, and personal protective equipment.

3.3.1 Operators and **anyone else who may be exposed to the hazards generated by the blasting process** must wear appropriate protective gear, including abrasive-resistant clothing, leather gloves, eye and hearing protection, and a NIOSH-approved Type CE supplied-air respirator.

3.3.2 Don protective blasting attire outside the blast area in a clean nonhazardous environment, free of contaminants, and where the air is safe to breathe.

3.3.3 When finished blasting and after cleanup is completed, remove the respirator and protective clothing outside the respirator-use area in a clean environment where the air is safe to breathe.

3.4 Blasting

3.4.1 Refer to the blast machine and remote control owner's manual to prepare the blast machine for operation.

3.4.2 Don protective blasting attire per Section 3.3.

3.4.3 Clemco remote controls have a safety petcock to prevent unintentional blasting. When the blast operator is ready to blast, the operator or the machine tender must close the safety petcock. Closing the petcock prepares the machine for remote operation and activation by the control handle. Air should be heard escaping from the exhaust port under the control lever but from nowhere else. The air escaping at the control handle is an audible signal meaning air is supplied to the blast machine, which will activate when the lever is pressed.

3.4.4 Hold the blast hose securely and point the nozzle only at objects intended to be blasted.

⚠ WARNING

Be prepared for recoil from the blast hose. Blasting will begin within a few seconds after pressing the control lever.

3.4.5 Fold down the safety lever lock and press the control lever as shown in Figure 7. Within seconds, the remote controls will respond and blasting begins.

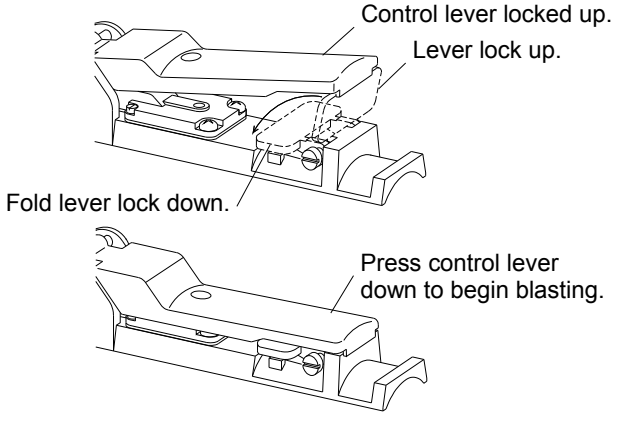


Figure 7

⚠ WARNING

OSHA requires the use of remote controls on all blast machines when an operator controls the nozzle. To comply with OSHA regulations, the control lever must be held down manually. Do not tie down the control lever or attempt to bypass any part of the remote control system. Doing so will defeat the purpose of the fail-to-safe feature of the remote control. Serious injury or death can result from uncontrolled blasting. Ref. 29 CFR 1910.244 (b).

3.5 Operation of ACS Abrasive Cutoff Switch

For pneumatic operation – Section 3.5.3; Figure 8
For electric operation – Section 3.5.4; Figure 9

3.5.1 The ACS serves three purposes:

1. Clearing abrasive from the blast hose when blasting is finished. This is helpful in a lot of applications and necessary when the blast hose is vertical to prevent abrasive from collecting in low spots in the blast hose, eliminating excessive abrasive slugging at startup.

2. Blowing abrasive off the blasted surface. Small amounts of residual abrasive may exit the nozzle with the air, requiring blowing off or otherwise cleaning the surface outside the blasting area prior to painting.

3. Assisting in drying the surface after it is washed down.

⚠ WARNING

OSHA sets exposure limits for people and the environment. Airborne dust can increase the exposure levels beyond permissible limits. OSHA prohibits blowing with compressed air as a cleaning method for lead-based paint dust or other hazardous dust, unless the compressed air is used in conjunction with a ventilation system designed to capture the volume of airborne dust created by the compressed air, Ref. 29 CFR 1926 (h). The ACS is for blowing off abrasive from a blasted surface, NOT for general area cleanup.

3.5.2 The abrasive cutoff switch can be opened or closed at any time, but will not operate the metering valve unless the control handle is pressed.

3.5.3 Pneumatic operation – Figure 8

3.5.3.1 Blast mode: Moving the ACS toggle away from the nozzle to the ON (CYL port) position, sends control air to the abrasive metering valve and opens the valve so that the blast machine operates normally, with air and abrasive coming out the nozzle.

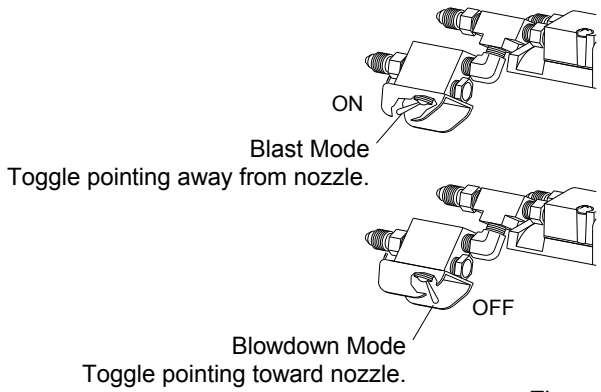


Figure 8

3.5.3.2 Blowdown mode: Moving the ACS toggle toward the nozzle, to the OFF position, cuts off the control air to the abrasive metering valve, closes the valve and stops the abrasive flow. This action allows air alone to exit the nozzle, which is useful for clearing the blast hose before shutting down, and blowing abrasive and water off the blasted surface.

3.5.4 Electric operation – Figure 9

3.5.4.1 Blast mode: Pressing the ACS button furthest from the control handle is the ON position, which opens the metering valve so that the blast machine operates normally, with air and abrasive coming out the nozzle.

3.5.4.2 Blowdown mode: Pressing the ACS button closest to the control handle is the OFF position, which closes the metering valve and stops the abrasive flow. This action allows air alone to exit the nozzle.

3.6 Stop Blasting

3.6.1 To stop blasting, release the control lever.

3.6.2 When the control lever is released, the safety lever lock will return to the full UP position to lock the lever in the up (nonblast) position.

3.6.3 Make sure the safety lever lock is up and that it prevents the control lever from engaging.

3.6.4 Always open the safety petcock during work breaks and before filling the blast machine. Opening the petcock prevents unintentional blasting. Refer to the remote control owner's manual for the location of the safety petcock.

⚠ WARNING

When approaching an idle blast machine and before loading the machine with abrasive, check to make sure the safety petcock is open. This step is especially important if one worker (a machine tender) loads the machine with abrasive while another (the blast operator) controls the blasting. The blast operator can pressurize the machine before the machine tender has moved away from the machine. During pressurization, abrasive can be forced out of the top of the machine and cause injury.

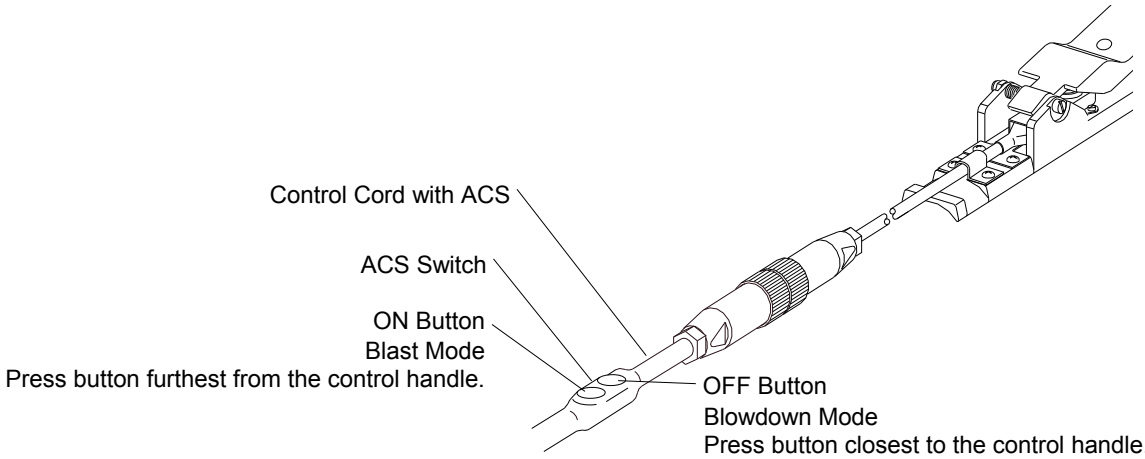


Figure 9

4.0 MAINTENANCE

⚠ WARNING

Malfunctioning control handles can cause unintentional actuation of a blast machine or prevent a machine from deactivating upon release. Malfunctioning control handles must be taken out of service immediately and repaired or replaced. Serious injury or death can result from unintentional blasting.

A service kit is available for the RLX control handle. To avoid unscheduled downtime, a kit should be kept on hand. Refer to Section 6.0 for replacement parts.

4.1 Inspection

4.1.1 The RLX control handle is a safety device. Inspect it before and after each use to make sure it functions properly.

- The control lever must not engage unless the lever lock is pulled down.
- The **lever** must raise to the full UP position when released.
- The **lever lock** must return to the UP position when the lever is released.
- Both the lever and safety lever lock must move freely with no drag or binding.

4.2 Cleaning

4.2.1 Periodically clean around the springs, control lever, and lever lock to make sure the unit is free of abrasive and debris that can cause the lever or lever lock to bind.

4.3 Spring Replacement

4.3.1 Follow the instructions in Section 4.4 to replace the lever lock spring and Section 4.5 to replace the control lever spring.

4.4 Lever Lock Replacement – Figure 10

4.4.1 Remove the lock nut from the shoulder screw. Before removing the screw, note the positions of the spacers and spring, as shown in Figure 10. The bent end of the spring is toward the inside, forcing the lever lock up. The straight end is toward the outside, facing down and against the spring tab.

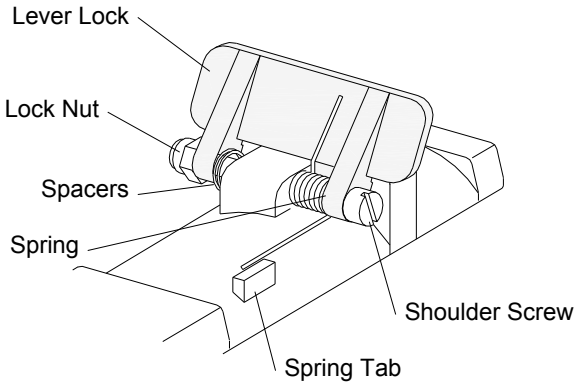


Figure 10

4.4.2 Install a new lever lock and spring, and reassemble in reverse order.

4.4.3 Make sure the safety lever lock moves freely, returns to the full UP position, and that the control lever will not engage unless the lever lock is pulled down.

4.5 Control Lever Replacement – Figure 11

4.5.1 Remove the lock nut from the shoulder screw. Before removing the screw, note the positions of the spacers and spring as shown in Figure 11. The bent end of the spring is against the control lever, facing up. The straight end is against the body, facing down. The spring and spacers must be placed correctly when reinstalling the handle.

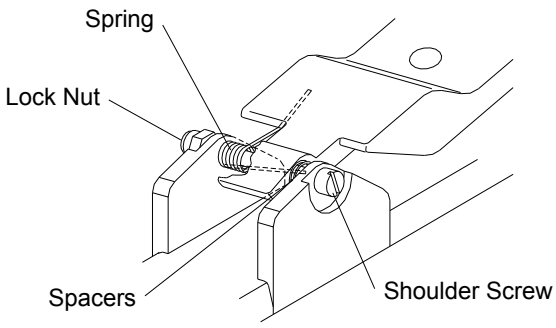


Figure 11

4.5.2 Install a new control lever and spring, and reassemble in reverse order.

4.5.3 Make sure the lever moves freely, raises to full UP position, and does not engage unless the lever lock is pulled down.

4.6 Pneumatic Control Handle

4.6.1 Rubber button replacement – Figure 12

4.6.1.1 Carefully cut the old button from the underside of the handle.

4.6.1.2 Install the new button, stem first, by pushing it from the underside of the control lever. Pull the stem to seat the button.

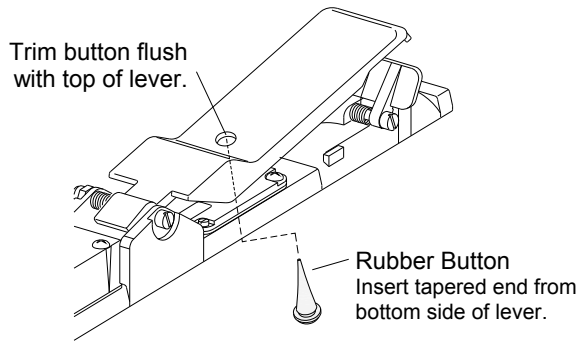


Figure 12

4.6.1.3 Trim the button stem flush with top of the lever.

4.6.2 Gasket replacement – Figure 13

4.6.2.1 Remove the control lever per Section 4.5.

4.6.2.2 Remove the six screws holding the pneumatic adaptor to the body.

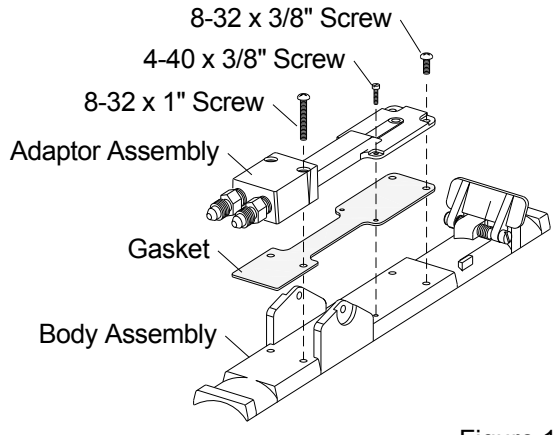


Figure 13

4.6.2.3 Install a new gasket.

4.6.2.4 Place the pneumatic adaptor on the gasket and loosely tighten all screws before tightening them evenly to compress the gasket.

4.6.2.5 Reassemble the control lever, making sure the spacers and spring are in place.

4.6.2.6 Make sure the lever moves freely, raises to full UP position, and does not engage unless the lever lock is pulled down.

4.7 Electric Control Handle

4.7.1 Replace lo-profile connector – Figure 14

4.7.1.1 Unscrew the compression nut from the connector shell and slide the nut, thrust washer, and gasket on the cord and away from the shell.

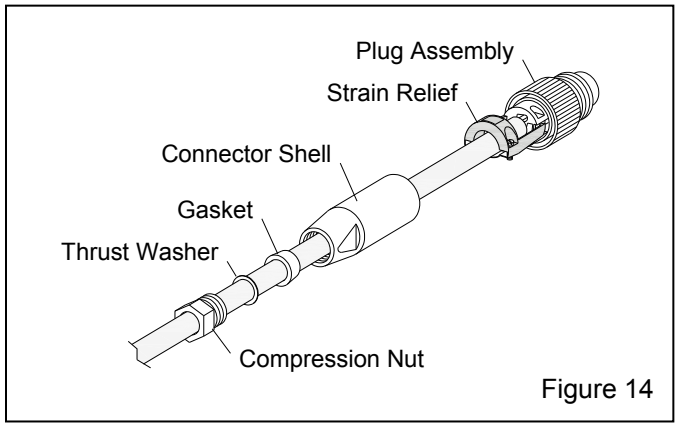


Figure 14

4.7.1.2 Unscrew the shell from the plug assembly.

4.7.1.3 Refer to Figure 15 and loosen the strain relief screws to remove the grip on the cord. Pry the strain relief clips apart and pull the relief away from the plug assembly.

4.7.1.4 Loosen the setscrew holding with wires into the plug assembly and remove the cord from the plug assembly.

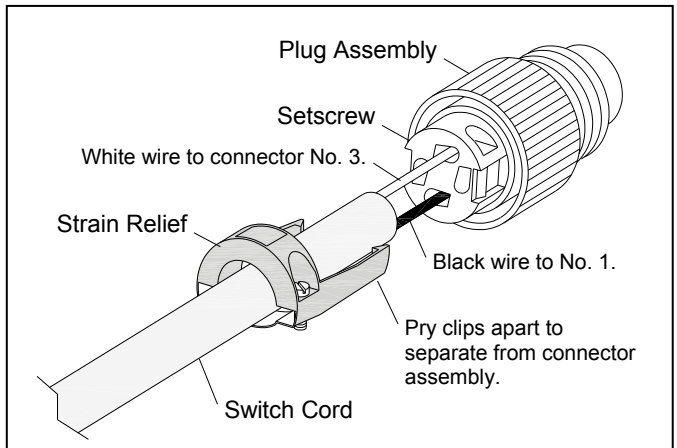


Figure 15

4.7.1.5 If replacing the switch, refer to Section 4.7.3. If replacing the lo-profile connector, reassembly in reverse order, making sure the white wire goes to connector No. 3 and the black wire to connector No. 1.

NOTICE

Provide ample slack in the wires between the plug assembly and strain relief before the strain relief clamp is tightened on the cord. Too little slack or too little pressure on the strain relief can cause the wires to pull loose when tugging on blast hose.

4.7.2 Replace twist-lock connector – Figure 16

Plug style may differ from that shown; basic installation process is the same.

4.7.2.1 Loosen the screws on the strain relief and pull the relief away from the cord to remove its grip on the cord.

4.7.2.2 Loosen the two front screws and slide the shell off the plug.

4.7.2.3 Remove the two leads from the screw terminals and remove the plug.

4.7.2.4 Slide the shell off the cord.

4.7.2.5 If replacing the switch, refer to Section 4.7.3. If replacing the plug, reassembly in reverse order. Either cord lead can go on either terminal.

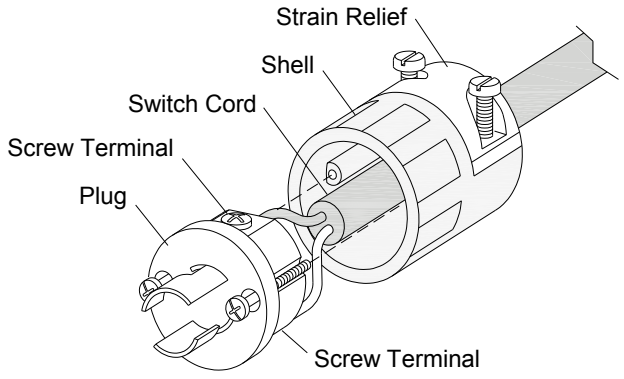


Figure 16

4.7.3 Replace switch and cord

4.7.3.1 Remove the control lever per Section 4.5.

4.7.3.2 Remove screws holding the switch and cord clamp as shown in Figure 17 and remove the switch.

4.7.3.3 Remove the plug from the switch cord per one of the following sections:

- 4.7.1 to replace lo-profile connector
- 4.7.2 to replace twist-lock connector

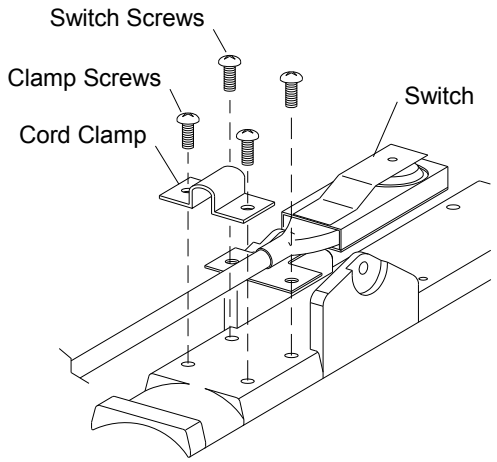


Figure 17

4.7.3.4 Replace the switch making sure the clamp screws and switch screws are secure.

4.7.3.5 Install the plug per one of the following sections:

- 4.7.1 to replace lo-profile connector
- 4.7.2 to replace twist-lock connector

4.7.3.6 Reassemble the handle per Section 4.5. Making sure that the springs are in place, the control lever and lever lock move freely, and the lever will not engage unless the lever lock is down.

5.0 TROUBLESHOOTING

Section 5.1 troubleshoots common symptoms for both the pneumatic and electric control handles. Section 5.2 covers the pneumatic control handle; Section 5.3 is for the electric control handle. Section 5.4 pertains to the optional ACS feature. Refer to the appropriate remote control manual for malfunctions in the remote control system.

5.1 Common Symptoms for Pneumatic and Electric Control Handles

5.1.1 Control lever fails to return up (nonblast position) when released

5.1.1.1 Inspect the lever for damage or abrasive that may cause binding against the body.

5.1.1.2 Inspect the spring for damage or fatigue.

5.1.1.3 Replace the lever or spring as necessary.

5.1.2 Lever lock fails to return to fully up position when control lever is released

5.1.2.1 Inspect the lever lock for damage or buildup of debris or abrasive that can cause binding.

5.1.2.2 Inspect the spring for damage or fatigue.

5.1.2.3 Replace lever lock or spring as necessary.

5.2 Pneumatic Control Handle

5.2.1 Remote controls do not activate when control lever is pressed

5.2.1.1 Make sure the compressor is ON and all air-supply valves to the machine are open.

5.2.1.2 Make sure the safety petcock is closed.

5.2.1.3 Check control lines and fittings for air leaks.

5.2.1.4 Inspect the rubber button for wear or damage, and make sure it seals the exhaust port in the pneumatic adaptor when the handle is pressed.

5.2.1.5 While the control lever is up, check for air escaping through the exhaust port in pneumatic adaptor. If no air escapes, the orifice (refer to the remote control systems manual for location of the orifice) is blocked or the line from the orifice to the control handle is blocked and must be cleared.

5.2.1.6 If air does vent from the exhaust port in the pneumatic adaptor, press the control lever and feel for and listen for air leaks any place on the handle. If there is a leak, it must be located and repaired. If no air escapes when the control lever is down, the problem is not in the control handle; refer to the appropriate remote control manual for malfunctions in the remote control system.

5.2.2 Remote controls do not deactivate when control lever is released

5.2.2.1 Inspect the pneumatic adaptor gasket for swelling, which restricts air flow through the handle exhaust port.

5.2.2.2 Inspect the exhaust port on the pneumatic adaptor; make sure it is clear of flashing or foreign obstruction that inhibits air from escaping through the opening.

5.2.2.3 Check control lines and fittings for blockage leaks.

5.2.2.4 Refer to the appropriate remote control manual for malfunctions in the remote control system.

5.3 Electric Control Handle

5.3.1 Remote controls do not activate when control lever is pressed

5.3.1.1 Faulty switch: The easiest way to check the switch is to substitute the control handle with one that is functioning properly. If this is not possible, turn off the compressed-air supply, disconnect the control handle at the control cord, and use one of the following methods to test the switch:

1. With the control lever down, check continuity across pins No. 1 and 3 in the lo-profile connector or across the two prongs if twist-lock connectors are used.

   If it fails the continuity test, the switch is faulty and must be replaced.

   If it passes the continuity test, the switch is good. Refer to the appropriate remote control system owner's manual to check for malfunctions in the remote control system.

2. Another method is to remove the control handle from the control cord and listen to the control panel and short across socket No. 1 and 3 on the extension cord. If the solenoid within the panel clicks, the fault is in the switch. Remove the old switch and install a replacement. If it does not click, the fault is some place in the system. Refer to the appropriate remote control system owner's manual to check for malfunctions in the remote control system.

5.3.2 Remote controls do not deactivate when control lever is released

5.3.2.1 Make sure the control lever disengages the switch when it is released.

5.3.2.2 Make sure the return spring raises the control lever fully up.

5.3.2.3 Remove the control handle from the cord. If the system deactivates the fault is in the switch; replace the switch. If the controls do not deactivate, the fault is some place in the system. Refer to the appropriate remote control system owner's manual to check for malfunctions in the remote control system.

5.4 Optional ACS Feature

5.4.1 No abrasive when ACS toggle is moved to ON, blast mode

5.4.1.1 Pneumatic

- Make sure the metering segment of the metering valve is not closed.
- Check for leak or blockage in the single-line hose or fittings from the control handle to the metering valve.
- Obstruction in abrasive metering valve or valve requires service. Refer to the metering valve manual to service the valve.
- Make sure the machine contains abrasive.

5.4.1.2 Electric

- Make sure the metering segment of the metering valve is not closed.
- Check for leaks or blockage in the hose or fittings from the control panel to the metering valve.
- Inspect the solenoid operating the metering valve per instructions in the electric remote-control-system manual.
- Inspect the ACS switch per instructions in the electric remote-control-system manual.
- Obstruction in abrasive metering valve or the valve requires service. Refer to the metering valve manual to service the valve.
- Make sure the machine contains abrasive.

5.4.2 Abrasive does not stop when ACS is moved to OFF blowdown mode

5.4.2.1 Pneumatic

- Brass filter on ACS switch dirty; clean or replace.
- Metering valve requires service. Refer to the metering valve manual to service the valve.

5.4.2.2 Electric

- Check the exhaust port on the bottom of the panel; air should momentarily exhaust from the port when the ACS switch is turned off. If it does not, check the following:
  - Obstruction in the line between the metering valve and the GRIT VALVE connection on the panel.
  - Faulty ACS switch.
  - Faulty solenoid.
- Metering valve requires service. Refer to the metering valve manual to service the valve.

6.0 REPLACEMENT PARTS

6.1 Pneumatic RLX – Figure 18

Item	Description	Stock No.
(-)	RLX pneumatic control handle assembly	10565
*	Service kit, pneumatic RLX (Fig. 18a)	22859
1.	Lever, control	10573
2.	Body	10568
3.	Pneumatic adaptor	10562
4.	Adaptor, 1/8" NPT, 2 required	01940
5.	Tie, nylon wire	02195

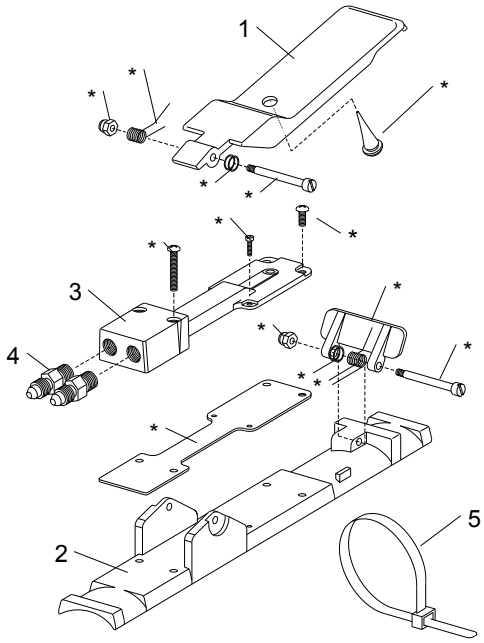


Figure 18

22859 SERVICE KIT
RLX PNEUMATIC CONTROL HANDLE

Item	Qty	Description
1.	1	Lever lock
2.	2	Spring
3.	2	Nut, 8-32 lock, ss
4.	4	Spacer washer, stainless steel
5.	2	Screw, 3/16" x 1-1/4" shoulder
6.	2	Screw, 8-32 x 1"
7.	2	Screw, 4-40 x 3/8"
8.	3	Rubber button
9.	1	Gasket, pneumatic adaptor
10.	2	Screw, 8-32 x 3/8"

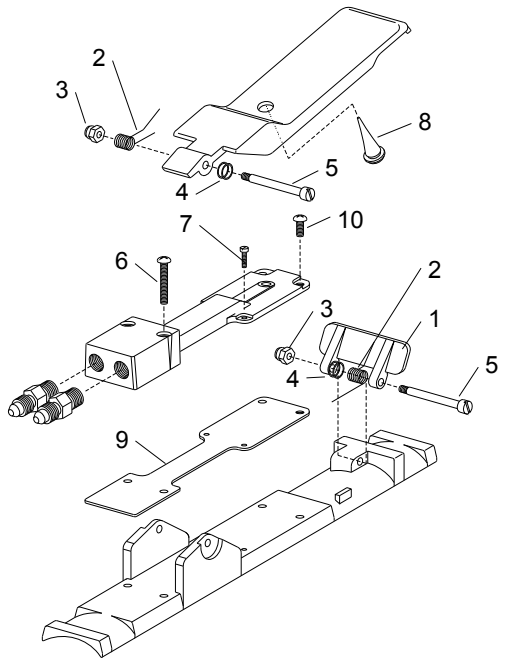


Figure 18a

6.2 Pneumatic RLX with ACS –Figure 19

Refer to Section 6.1 for standard RLX replacement parts.

Item	Description	Stock No.
(-)	RLX control handle assembly w/ ACS	07625
1.	RLX control handle, standard	10565
2.	Switch assembly, ACS pneumatic	07654
3.	Elbow, 1/8" NPT male	03085
4.	Tee, 1/8" NPT brass	02171
5.	Adaptor, 1/8" NPT	01940
6.	Guard, ACS pneumatic switch	07655
7.	Breather muffler, 1/8" NPT	07657
8.	Switch only, ACS	07658
9.	Connector, 1/8" NPT brass	01962

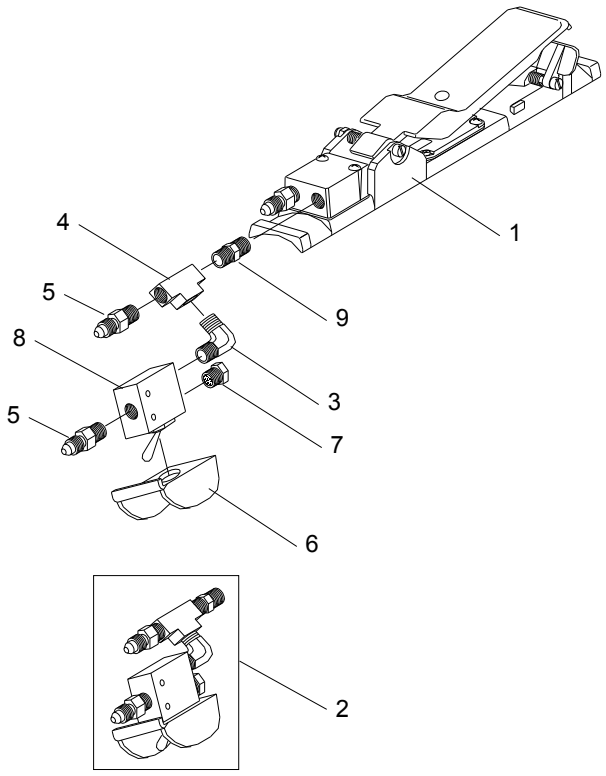


Figure 19

6.3 Electric RLX – Figure 20

Item	Description	Stock No.
(-)	RLX electric control handle w/ lo-profile connector	10840
(-)	RLX electric control handle w/ twist-lock connector	05801
1.	Lever, control	10573
2.	Body	10568
3.	Lever lock	10564
4.	Clamp, switch cord	05810
5.	Spring, lever, 2 required	05823
6.	Switch with cord	24842
7.	Screw, 8-32 X 3/8" rd. hd., 4 required	05814
8.	Nut, 8-32 lock, ss, 2 required	05815
9.	Spacer washer, stainless steel, 4 req'd	05434
10.	Screw, 3/16" X 1-1/4" shoulder, 2 req'd	05817
11.	Tie, nylon wire	02195
12.	Connector, lo-profile male (used with 10840 only)	10828
13.	Connector, twist-lock male (used with 05801 only)	02899

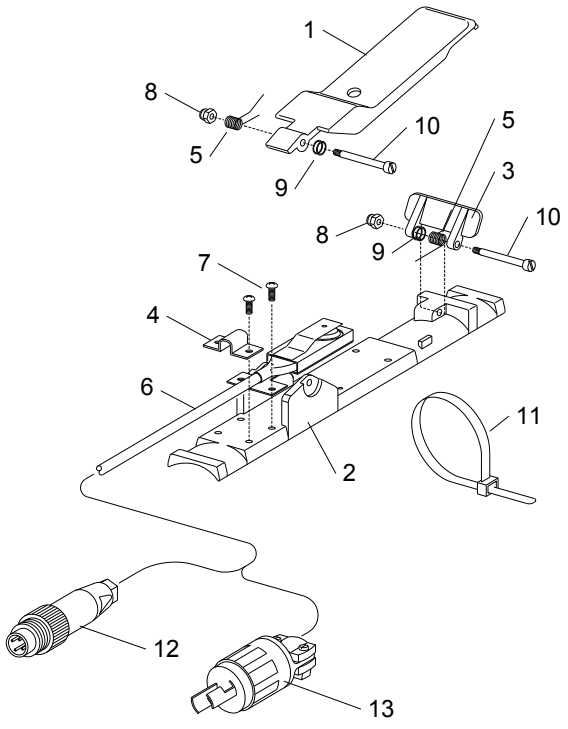


Figure 20