

FireHawk® M7 and FireHawk M7XT Control Modules

MAINTENANCE AND REPAIR



For More Information, call 1-800-MSA-2222 or Visit Our Website at www.MSAafety.com

MINE SAFETY APPLIANCES COMPANY
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REPLACEMENT KITS AND PARTS LIST

Replacement Kits

FireHawk M7 Control Module Protective Boot Kit*		
10089272	Control Module Protective Boot Kit, w/ buttons	
FireHawk M7 Control Module Gauge & LCD Lens Covers		
10090220	Control Module Gauge & LCD Lens Covers, pack of 5 each	
FireHawk M7 Control Module Back-Up Ring Kit		
10090961	635277	pack of 10
FireHawk M7 Control Module O-Ring Kit		
10090962	638167	pack of 10
Jam Nut		
10090219	10003606	pack of 5

Parts List for FireHawk M7

	Item	P/N	Description
Without Quick-Fill System	1	10091146	2216 psi w/ Thermistor
		10091147	2216 psi
		10091148	2216 psi w/Thermistor & Telemetry
		10091149	2216 psi w/Telemetry
		10091150	3000 psi w/Thermistor
		10091201	3000 psi
		10091202	3000 psi w/Thermistor & Telemetry
		10091203	3000 psi w/Telemetry
		10091204	4500 psi w/Thermistor
		10091205	4500 psi
		10091206	4500 psi w/Thermistor & Telemetry
	10091207	4500 psi w/Telemetry	
	2	10089272	Control Module Protective Boot Kit, with buttons
3	10090220	Control Module Gauge & LCD Lens Covers	
4	638167	O-Ring	
5	635277	Back-up Ring	
6	10003606	Jam nut	
9	10082852	High Pressure Hose	
Both	10016029	Tether	
With Quick-Fill System	7	10091208	2216 psi w/Thermistor
		10091209	2216 psi
		10091210	2216 psi w/Thermistor & Telemetry
		10091211	2216 psi w/Telemetry
		10091212	4500 psi w/Thermistor
		10091213	4500 psi
		10091214	4500 psi w/Thermistor & Telemetry
		10091215	4500 psi w/Telemetry
	3	10090220	Control Module Gauge & LCD Lens Covers
	4	638167	O-Ring
5	635277	Back-up Ring	
8	801164	Dust Cover	
10	10083121	High Pressure Hose for Quick-Fill	

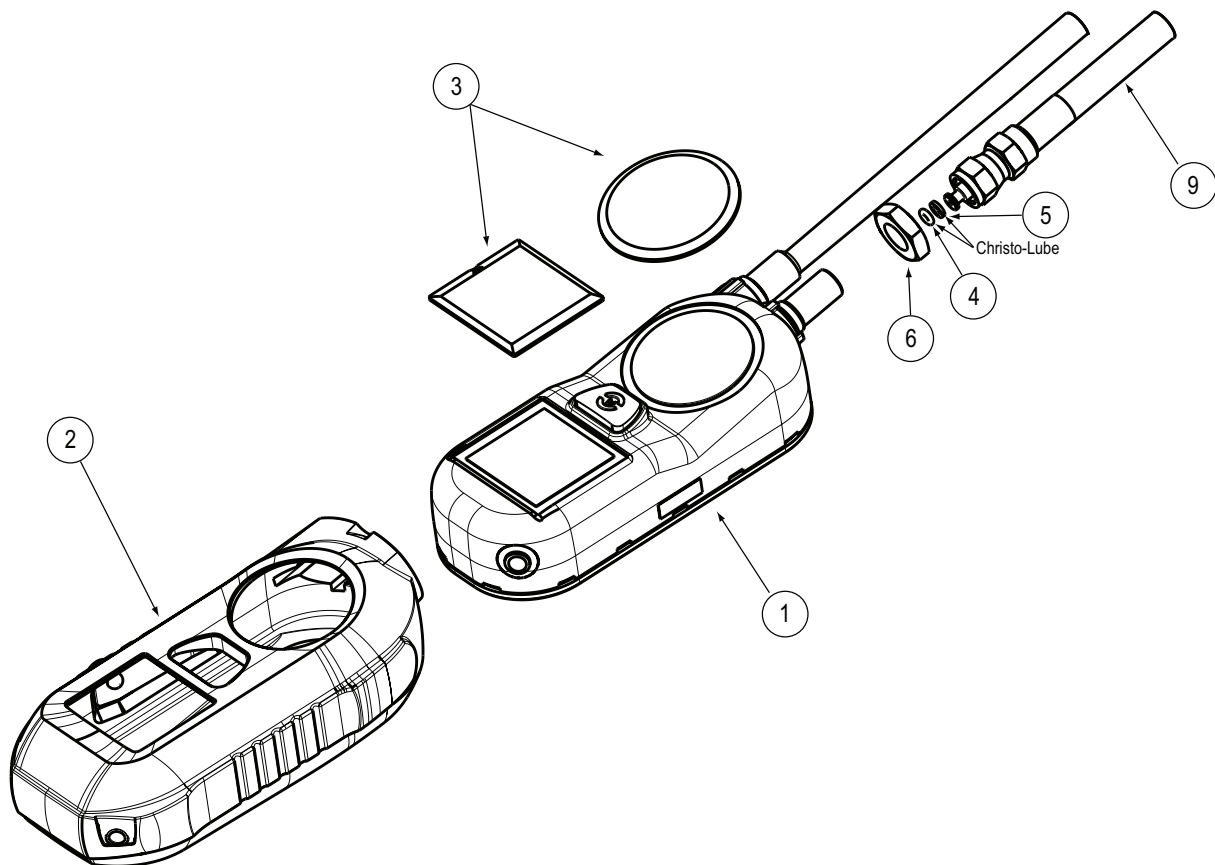
Parts List for FireHawk M7XT

	Item	Part Number	Description
without Quick-Fill System	1	10145945	2216 psi with Thermistor
		10145946	2216 psi
		10145947	2216 psi with Thermistor and Telemetry
		10145948	2216 psi with Telemetry
		10145949	4500 psi with Thermistor
		10145969	4500 psi
		10145970	4500 psi with Thermistor and Telemetry
		10145971	4500 psi with Telemetry
	2	10089272	Control Module Protective Boot Kit with Buttons
3	10090220	Control Module Gauge and LCD Lens Covers	
4	638167	O-ring	
5	635277	Back-up Ring	
6	10003606	Jam Nut	
9	10082852	High Pressure Hose	
Both		10016029	Tether
with Quick-Fill System	7	10145972	2216 psi with Thermistor
		10145973	2216 psi
		10145974	2216 psi with Thermistor and Telemetry
		10145975	2216 psi with Telemetry
		10145976	4500 psi with Thermistor
		10145977	4500 psi
		10145978	4500 psi with Thermistor and Telemetry
	10145979	4500 psi with Telemetry	
	3	10090220	Control Module Gauge and LCD Lens Covers
	4	638167	O-ring
5	635277	Back-up Ring	
8	801164	Jam Nut	
10	10083121	High Pressure Hose for Quick-Fill	

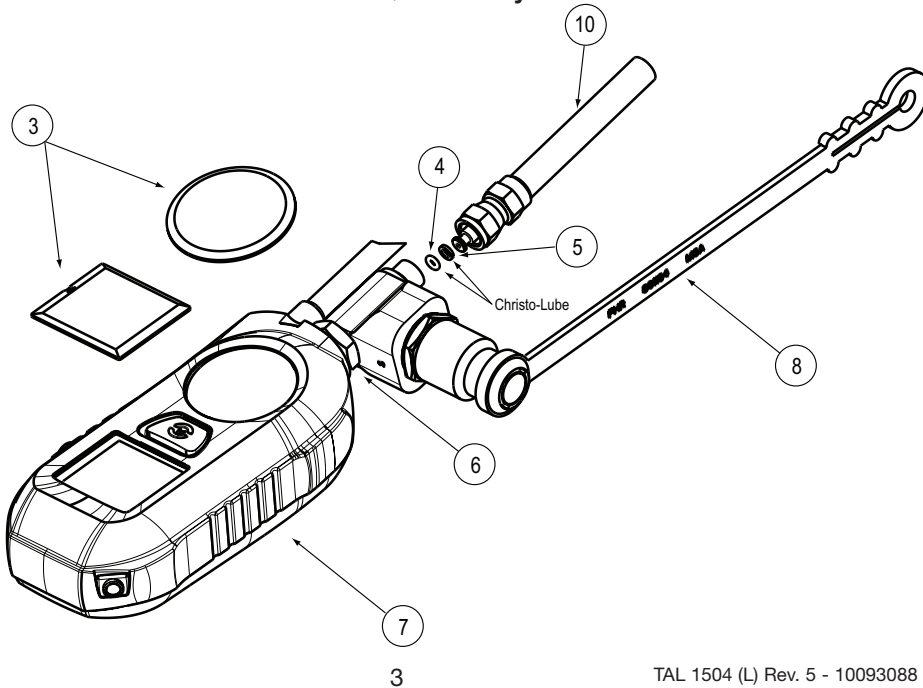
CONTROL MODULES

Exploded Views

FireHawk M7 and FireHawk M7XT Control Module without Quick-Fill System



FireHawk M7 and FireHawk M7XT Control Module with Quick-Fill System



CONTROL MODULES

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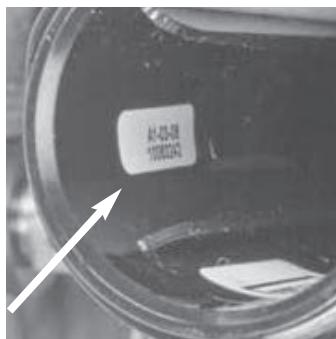
Note: The FireHawk M7 Control Module is hermetically sealed at the factory and is not field serviceable. Replace damaged or malfunctioning FireHawk M7 Control Modules.

LABEL LOCATION

On the FireHawk M7 Control Module, the label can be seen by pulling back the rubber boot on the side opposite of the yellow reset button.



On the FireHawk M7 Power Module, the label can be found inside the battery tube by removing the battery cap.



LABEL INFORMATION

The label will show an alphanumeric code that includes product revision and date code. An example of this is “A1-02-08,” This example shows a product revision “A1” and date code “02-08.”

PASS Module Revision Compatibility for FireHawk M7
Only one combination of modules, revision A revision B, is not compatible. All other revision combinations of control and power modules are compatible with each other.

If non-compatible revisions are connected, an error code “ERR116,” will display on the FireHawk M7 Control Module LCD display during the startup sequence. If this occurs, the modules must be disconnected and removed from service until the correct revision is installed.

PASS Module Revision Compatibility for FireHawk M7XT

The FireHawk M7XT Control Module is not compatible with previous versions of the power module. Connecting to noncompatible power modules will result in ERR PMXT being displayed on the control module LCD screen. Should this occur, the modules must be disconnected and removed from service until the correct modules can be assembled.

When ordering a replacement FireHawk M7 or FireHawk M7XT Control Module or FireHawk M7 or FireHawk M7XT Power Module, specify the current revision control module and power module being used to ensure compatibility.

To replace the FireHawk M7 or FireHawk M7XT Control Module or FireHawk M7 or FireHawk M7XT Power Module see FireHawk M7 or FireHawk M7XT Control Module Maintenance and Repair, P/N 10093088 or FireHawk M7 Power Module Maintenance and Repair, P/N 10093087 for instructions.

If you have any questions, please contact MSA Customer Service at 1-877-672-3473 or 412-967-3000.

CONTROL MODULES

DISASSEMBLY

Removing the FireHawk M7 or FireHawk M7XT Control Module

1. Use a **7/16" wrench** to remove the PR-14 First Stage Regulator from the carrier.



Note: Use extra care when disconnecting the power and data cable to avoid damage to the pins or socket.

2. Disconnect the power and data cable from the FireHawk M7 or FireHawk M7XT Power Module.



3. Remove and discard the o-ring.



4. Disconnect the high-pressure hose from the FireHawk M7 or FireHawk M7XT Control Module.

Note: If equipped with Quick-Fill system, disconnect the high-pressure hose from the Quick-Fill manifold.



5. Pull the power and data cable, and high-pressure hose through the shoulder strap.

Replacing the FireHawk M7 or FireHawk M7XT Control Module Boot and Buttons P/N 10089272

Quick-Fill System Note: The FireHawk M7 or FireHawk M7XT Control Module Boot and Buttons are not field replaceable on models equipped with Quick-Fill Systems.

2. Remove the FireHawk M7 or FireHawk M7XT Control Module. See Removing the FireHawk M7 or FireHawk M7XT Control Module for instructions.

3. Remove the existing boot.



4. Thread the power and data cable through the new boot.



5. Stretch the new boot onto the Control Module housing.

Note: If a button becomes dislodged while installing the boot, reinstall by sliding the button under the boot.

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Stretch the boot as needed to engage the button.

6. Reconnect the power and data cable and high-pressure hose. See **Installing the FireHawk M7 or FireHawk M7XT Control Module, steps 4-8** for instructions.
7. Leak test the connection. (See **Leak Testing, P/N 10093091**)
8. Pressurize the system and test button functions.

REASSEMBLY

Installing the FireHawk M7 or FireHawk M7XT Control Module

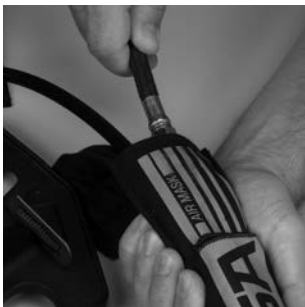
1. Beginning at the front, thread the power and data cable through the tether and shoulder strap, and high-pressure hose through the tether and shoulder strap.

Note: Use extra care when handling the power and data cable connector to avoid damage to the pins or connector.



Note: The power and data cable is curved to favor proper installation. Do not attempt to straighten the cable.

2. Pass the high-pressure hose through the shoulder strap and tether.



3. Install new Back-up and O-Rings
 - a. Apply a thin film of Christo-Lube lubricant to the back-up ring (P/N 635277).

- b. Install the back-up ring in the groove.



- c. Apply a thin film of Christo-Lube lubricant to the o-ring (P/N 638167).



- d. Place the o-ring in the groove.

4. Install the Jam Nut.
5. Connect the high-pressure hose.

Note: If equipped with a Quick-Fill system, reconnect the high-pressure hose to the Quick-Fill manifold.

- a. Use a torque wrench and **5/8" crow foot** to tighten the connector to **100-125 in lbs.**



- b. Turn the Jam Nut counterclockwise until it is butting against the connector.



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6. Use a **5/8" crow foot** to tighten the Jam Nut to **225 - 250 in lbs.**

Note: Turn the Jam Nut counterclockwise to tighten it against the Quick-Fill manifold.

7. Route the power and data cable through the channel on the carrier.



8. Reinstall the PR-14 Second Stage Regulator.



9. Use a torque wrench and **7/16" socket** to tighten the PR-14 mounting bolts to **35± 5 in lbs.**



Connecting the Power and Data Cable

1. Install a new o-ring. (P/N 10084774)

Note: Contact with the thread can damage the o-ring.

- a. Protect the o-ring with tape or a thin piece of paper.



- i. Apply a small amount of Christo-Lube lubricant to the o-ring.



- ii. Slip the o-ring over the thread.



- iii. Remove the protective tape or paper.

2. Carefully align the keyed connection.

Note: Use extra care when handling the power and data cable connector to avoid damage to the pins or connector.



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3. Hand tighten the connector until the o-ring is no longer visible.



4. Use a torque wrench and **thin 9/16" crow foot** to tighten the connector to **10 in lbs.**

Note: Do not over-tighten the power and data cable connector. Over-tightening the power and data cable connector can damage the connector, disabling the unit.

Note: For easier access, remove the Power Module from the Carrier before tightening.



Note: The control module executes a start up sequence when it receives power. Double-press the reset button to enter sleep mode.

Replacing Cover Lenses

P/N 10090220

If the lens cover exhibits moisture or dirt, remove the lens covers to clean properly. The covers can be cleaned by wiping them off with a mild soap solutions. Rinse the cover and dry completely before reinstalling.

1. Turn the boot inside out to remove the lenses.



2. Reinstall the boot.

3. Slide new lenses through cover openings until they seat.

