

# FireHawk® M7XT ExtendAire™ II EBSS (Emergency Breathing Support System)

## INSTALLATION, REPAIR AND SERVICE



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# EXTENDAIRE II INSTALLATION

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### Installing the FireHawk M7XT ExtendAire II EBSS Conversion Kit

The following installation instructions are for upgrading a FireHawk M7XT Air Mask to include EBSS capability. This upgrade shall be performed by a certified CARE Technician according to the procedure outlined in this manual.

#### FireHawk M7XT ExtendAire II EBSS Conversion Upgrade Kit includes:

- Pouch, P/N 10105836
- ExtendAire II Manifold and Intermediate Pressure Hose and Dust Cover, P/N 10105834
- Hose Restraint Strap, P/N 10105837
- Two (2) Screws, P/N 10052622
- Instructions, P/N 10158013
- ExtendAire II Upgrade Program Log, P/N 10158557
- NIOSH Label, P/N 10158386

| REPLACEMENT KITS |  |
|------------------|--|
| P/N              | Description  |
| 10158085         | FireHawk M7XT ExtendAire II EBSS Conversion Kit  |
| 10111351         | Dust Cover with Screws, Lubricated O-ring  |
| 10111406         | Complete Manifold Assembly with Dust Cover, Quick-Connect Fittings, Hose Assembly, and Coil Pins |
| 10111407         | Complete Manifold Assembly less Quick-Connect Fittings   |
| 10111404         | Pouch Kit with Instructions  |
| 10105837         | Hose Restraint Kit   |
| 637945           | Male Quick-Connect Kit   |
| 637946           | Female Quick-Connect Kit   |

#### Required Tools:

Phillips Screwdriver

#### Preparing the Air Mask

**NOTE:** Depressurize the air mask before installing the FireHawk M7XT ExtendAire II EBSS Kit.

- Close the cylinder valve.
- Squeeze the shut-off button.
- Open the bypass.
- Disconnect the Audi-Larm™ Audible Alarm.

#### ⚠ WARNING

**DO NOT attempt to maintain or repair the air mask while pressurized. Attempting to disassemble a pressurized air mask can cause parts to become airborne or swing at very high rates of speed. Failure to follow this warning can result in serious personal injury or death.**

1. Remove the cylinder from the backplate.



2. Remove the pull-strap from the friction buckle on the left shoulder strap.



3. Angle the left tri-bar and remove it from the backplate.



4. Remove the center tri-bar(s) from lumbar pad or rescue belt if present.

#### Installation

1. With the back of the pouch facing up, feed straps through backplate (front to back) using the side handle and left tri-bar slot in backplate.



2. Loop the straps back through the plastic hardware on the back of pouch. Be sure that the sewn tucks on the web ends are completely through the plastic hardware.

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4. Remove the center tri-bar(s) from the lumbar pad or rescue belt, if present.



5. Remove and discard the protective cap from the end of the hose.

**NOTE:** The blue o-ring on the ExtendAire II emergency breathing hose comes from the factory with lubricant applied. Use care to keep the o-ring free from dirt and debris once the protective cap is removed.

6. Feed the hose through the loop in the hose restraint strap.

**For air masks with a swiveling lumbar pad or FireHawk Rescue Belt II:** The orientation of the hose restraint strap must match the example in the picture. Notice that the folds are facing down.



**For air masks with a standard waist belt:** The orientation of the hose restraint strap must match the example in the picture. Notice that the folds are facing up.



7. Feed the hose restraint strap under the high pressure hose and power cable, then attach the hose restraint to the backplate as described below.

**For air masks with swiveling lumbar pad or FireHawk Rescue Belt II:** Insert the right fold-over side of the hose restraint strap into the right center slot in the backplate.



**For air masks with a standard waist belt or with a Rescue Belt I:** Insert the right fold-over side of the hose restraint strap into the left center tri-bar slot in the backplate and then back up through the right center tri-bar slot.



**For air masks with a swiveling lumbar pad or Rescue Belt II:** Install the center lumbar pad tri-bars by angling them into the center slots in the backplate.



### ⚠ CAUTION

**DO NOT** use a screwdriver or pliers to install the lumbar pad tri-bars into the backplate.

Hose restraint installed with a swiveling lumbar pad.



8. Insert the left swiveling lumbar pad tri-bar, left rescue belt tri-bar, or left waist belt tri-bar by angling it into the original slot on the backplate (shared with the pouch attachment).



**Connecting the ExtendAire II Intermediate Pressure Accessory Hose Assembly to the PR14 First Stage Regulator**

1. Position the air mask with the cylinder band facing up.

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2. Remove the two (2) screws in the first stage regulator bracket and remove the PR14 First Stage Regulator. Do not remove the regulator bracket from the backplate. Discard the screws.



3. Remove the lower u-clip and pressure relief valve from the first stage regulator. Discard the pressure relief valve.

4. Insert the hose into the port that previously contained the relief valve in the first stage regulator and reinstall the u-clip.



5. Install the PR14 First Stage Regulator into the bracket. Install two (2) new screws and tighten to 35-45 in. lbs.

6. Feed the left pull strap from lumbar pad, rescue belt, or waist belt through the top webbing loop located on the back of the pouch.



7. Fully extend the shoulder and pull-strap. Make sure the straps are untwisted.



8. Twist the pull-strap clockwise one-half turn. (left pull strap)



9. With the fold down, pass the pull-strap from back to front through the friction buckle.



10. Pass the strap over the bar and back through the buckle.



11. Remove the left waist belt pull-strap from the friction buckle. Feed the buckle through the lower loop in the pouch and re-attach the pull-strap.



**NOTE:** For rescue belts, pouch must be attached to the quick-release strap on the backside for the FireHawk Rescue Belt II (or to the auxiliary strap for the Rescue Belt I)



## EXTENDAIRE II REPAIR AND SERVICE

### ⚠ WARNING

Placing the regulator holder on the quick-release straps of the FireHawk Rescue Belt II will impede the use of the quick-release function of the rescue belt. Failure to follow this warning can result in serious personal injury or death.



**NOTE:** For rescue belts, the regulator holder must be moved from the auxiliary strap to the waist belt.

12. Coil the ExtendAire II System manifold and hose and insert into the pouch. Orient the manifold so that it is near the opening of the pouch.



13. Close the pouch and snap all three (3) snaps closed.



### ⚠ WARNING

DO NOT pressurize the system until all hoses and fittings are properly secured with u-clips. Pressurizing the system with unsecured hoses can cause the hoses to release explosively. Properly install and secure all hoses and fittings before pressuring the system. Failure to follow this warning can result in serious personal injury or death.

#### Checking for Leaks and Proper Operation

The air mask must hold system pressure without leaks to provide adequate protection.

1. Pressurize the air mask by attaching the Audi-Larm Audible Alarm Assembly to a fully charged cylinder.
2. Close the bypass on the Firehawk Second Stage Regulator and open the cylinder valve completely. The FireHawk M7 / M7XT Control Module or pressure gauge will indicate the pressure of the system.

3. Close the cylinder valve and watch the FireHawk M7 / M7XT Control Module or pressure gauge. There should not be a drop in pressure if the system is leak tight. (The maximum allowable pressure drop is 100 psi in 10 seconds)
4. If there is a noticeable decrease in pressure, a leak test is required before using the air mask.

#### REMOVING AND ATTACHING APPROVAL LABELS

Installation of the ExtendAire II EBSS upgrade kit requires the FireHawk M7XT SCBA to have a new approval label. This new approval label includes NIOSH compliant approval numbers along with the necessary Cautions and Limitations associated with the use of EBSS.

##### Removing the existing NIOSH approval label

1. Remove the compressed air cylinder from the backplate.



2. Locate the NIOSH Approval label and peel away from the surface of the back plate.

3. Remove any residue adhesive material from the backplate surface. This can be done by wiping the surface down with a clean soft cloth that is dampened with isopropyl (rubbing) alcohol or acetone.

### ⚠ CAUTION

Work in a well-ventilated area, and wear the appropriate gloves.

##### Attaching the new NIOSH Approval Label

**NOTE:** The new NIOSH Approval Label, PN 10158386 is supplied with the conversion kit.

1. Peel away the protective backing from the underside of the label.



2. Carefully locate and position the new label onto the backplate at the same location as the label that was removed. Once in place, rub fingers over the entire surface of the label to assure that it is completely smooth and attached.



# EXTENDAIRE II REPAIR AND SERVICE

## Recording and Documenting the EBSS Upgrade

Using the log entry form that was included in the ExtendAir II EBSS conversion kit, the CARE Technician shall record and document the serial number of the FireHawk M7XT SCBA(s) that are upgraded with EBSS. This information must be stored and maintained for a minimum period of 5 years.

## REPAIR AND SERVICE

The following repairs require that the cylinder be disconnected from the air mask. For additional illustrations and supplemental instructions, refer to the *FireHawk M7XT Installing the ExtendAir II EBSS Conversion Kit* section of this manual.

### Replacing the Dust Cover

To replace the dust cover, the ExtendAir II Dust Cover Kit, P/N 10111351, is required.

1. Remove the two (2) screws in the first stage regulator bracket and remove the PR14 First Stage Regulator. Do not remove the regulator bracket from the backplate. Discard the screws.
2. Remove the lower u-clip and the ExtendAir II emergency breathing hose from the PR14 First Stage Regulator.
3. Remove the ExtendAir II emergency breathing hose from the hose restraint and from the pouch.
4. Remove the old dust cover by sliding it down the hose and away from the manifold.
5. Install the new dust cover by sliding the dust cover over the hose until it reaches the manifold end of the hose assembly. Verify that the dust cover orientation is correct by placing the dust cover over the quick-connect fittings.
6. Feed the hose through the pouch and through the hose restraint. Verify that the hose restraint is securely attached to the backplate.

7. Before installing the hose into the first stage regulator, replace the o-ring on the hose fitting with the new o-ring provided in the replacement kit. Apply Christo-Lube to the o-ring. Insert the hose into the first stage regulator and replace the lower u-clip.



8. Install the PR14 First Stage Regulator into the bracket. Install two (2) new screws and tighten to 35-45 in.lbs.

### Replacing the Pouch

To replace the pouch, the ExtendAir II Pouch Kit, P/N 10111404, is required.

The ExtendAir II emergency breathing hose does not need to be removed from the first stage regulator in order to replace the pouch. To install the pouch, refer to the *Installing the FireHawk M7XT ExtendAir II EBSS Conversion Kit* section of this manual.

### Replacing the Hose Restraint

To replace the hose restraint, the ExtendAir II Hose Restraint Kit, P/N 10111405, is required.

1. Remove the two (2) screws in the first stage regulator bracket and remove the PR14 First Stage Regulator. Do not remove the regulator bracket from the backplate. Discard the screws.
2. Remove the lower u-clip and the ExtendAir II emergency breathing hose from the PR14 First Stage Regulator.
3. Slide the old hose restraint down the hose and away from the manifold to remove. Remove the hose restraint from the backplate and discard.
4. Feed the hose through the new hose restraint. Connect the hose restraint to the backplate.

**NOTE:** Be sure that the hose restraint orientation is correct. The orientation varies depending on the lumbar pad configuration. Refer to the *Installing the FireHawk M7XT ExtendAir II EBSS Conversion Kit* section of this manual for additional help.

5. Before installing the hose into the first stage regulator, replace the o-ring on the hose fitting with the new o-ring provided in the replacement kit. Apply Christo-Lube to the o-ring. Insert the hose into the first stage regulator and replace the lower u-clip.
6. Install the PR14 First Stage Regulator into the bracket. Install two (2) new screws and tighten to 35-45 in.lbs.

### Replacing the Hose and Manifold Assembly

To replace the entire hose and manifold assembly, the ExtendAir II Manifold and Hose Assembly Kit, P/N 10111406, is required.

If it is desired to salvage the quick-connect fittings and reuse them on a new hose and manifold assembly, the ExtendAir II Manifold and Hose Assembly, Less Fittings, Kit, P/N 10111407, is required.

To install the hose and manifold assembly, refer to the *Installing the FireHawk M7XT ExtendAir II EBSS Conversion Kit* section of this manual.

To reuse the quick-connect fittings on a new hose and manifold assembly:

1. Secure the manifold with a wrench or vise.
2. Remove the quick-connects using a 7/8" wrench.
3. Remove the o-ring from each quick-connect fitting, discard the o-rings.
4. Apply a small amount of Christo-Lube to the new o-rings provided with the kit.

5. Cover the threads of the quick-connect with a thread protector, tape, or paper to protect the o-ring while it is installed on each of the quick-connect fittings. Slide the o-ring over the threads and remove the thread protector tape or paper.



6. Tighten each quick-connect fitting to 70-75 in.lbs.