The following is intended to provide the basic instructions for installation, operating and maintenance of the FireFox.

**TOOLS REQUIRED**
- Utility knife
- Medium Phillips screwdriver
- Small Phillips screwdriver
- 1/2 inch hex head wrench
- Electricians pliers (multipurpose, stripping and crimping)

**PRODUCT RATINGS**

**Maximum motor current draw:**
- 12 volt versions: 14.0 amps each for elevation and rotation motors
  - 3.0 amps for nozzle pattern motor
- 24 volt versions: 7.5 amps each for elevation and rotation motors
  - 1.5 amps for nozzle pattern motor

**Normal operating current (depending on operating conditions - pressure, flow, etc.):**
- 12 volt versions: 3 - 10 amps each for elevation and rotation motors
  - 0.7 amps for nozzle pattern motor
- 24 volt versions: 2 - 5 amps each for elevation and rotation motors
  - 0.4 amps for nozzle pattern motor

**Minimum Voltage:** (Truck engine must be operating for proper voltage requirement.)
- All 12 volt motors: 11.5 volts while operating
- All 24 volt motors: 23 volts while operating

**Mass:** 31 lbs. (17.7 kg)

**Maximum Flow:** 500 GPM (1420 lpm)

**Maximum Pressure:** 200 PSI (14 bar)

**Noise Emission:** 91 Db @1m with maximum flow
PRODUCT WARNINGS

**WARNING:** The maximum flow of the IceFox is 500 GPM. The center of the waterway outlet is 10.75 inches from the bottom of the inlet. Ensure these values and an appropriate safety factor is used to determine a proper support structure.

**WARNING:** Aim the FireFox in a safe direction before pumping water through it.

**WARNING:** Although the logic box includes a water resistant coating it is important to keep water out of the control and logic boxes. Prolonged exposure to water will cause damage. When the cover of the control or logic box is removed check that the O-Ring under the cover is intact and free of dirt and debris.

**WARNING:** The IceFox uses current limiting for both the monitor and nozzle stops. Use only appropriate Akron Brass nozzles.

**WARNING:** Do not use the electric controls when the override cranks are being used or are in position for use.

**WARNING:** If any tags or bands are worn or damaged and cannot be easily read, they should be replaced.

**WARNING:** Disconnect power and disable flow before maintenance.

**WARNING:** Keep all personnel out of the Danger Zone (Figure 4), in front of the outlet of the monitor when the water source is attached. Dangerous flow velocities can cause serious injury.

**WARNING:** The IceFox monitor contains moving parts. Keep hand, finger and objects away from pinch points.

**WARNING:** Not designed for explosive environments.

**WARNING:** Exceeding the maximum pressure and flow of the monitor or nozzle may cause damage.

**WARNING:** Do not disconnect monitor from quick disconnect base while flowing.

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**Figure 1**

**DIMENSIONAL LAYOUT**

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**TOP VIEW**

**SIDE VIEW**
GENERAL INSTRUCTIONS

• Review the instructions, wiring diagram, component layout and rotational stops diagram before installing this unit. This unit operates on 12 or 24 volt DC depending on the unit chosen. All electrical current flows through the wires. The monitor does not act as a ground.
• Not recommended for use in salt water applications.
• Drain the IceFox monitor and nozzle after use to prevent “freeze damage”.
• Ensure that the thread in the nozzle swivel matches the thread on the IceFox outlet. Do not overtighten the nozzle onto them IceFox.
• The IceFox monitor, nozzle, logic box, control boxes and field adjustable rotation stops are made for optimal performance. Do not alter in any manner.
• Do not install shutoffs on the outlet of the IceFox.
• Mount the logic box, control boxes out of Danger Zone (Figure 4).

ELECTRICAL INSTALLATION INSTRUCTIONS

A. CONTROL BOXES AND JOYSTICK WIRING ATTACHMENT

Connect the 8 position connector (Delphi 12047937) from the Logic Box to the control cable. See figure 5A

B. MONITOR WIRING HARNESS ATTACHMENT

These instructions are to attach the monitor wiring harness to the logic box.

Connect the 12 position connector (Deutsch DT06-125A-E008) from the logic box to the monitor wiring harness. See figure 5A

C. BATTERY ATTACHMENT

The battery connections should be the last connection made.

Connect the 2 position connector (Delphi 1216000) to the vehicle battery. Pin A is ground, Pin B is +12 v DC. See figure 5A.

D. MECHANICAL MONITOR ATTACHMENT

The Monitor is to be mounted on the waterway with a 2” OR 2 1/2” NPT thread. The front of the monitor is shown in Figure 4. The 2 1/2” NPT inlet will have a Logo etched on the front. The 2” NPT Inlet will have the Latch Pin Hole facing the front.

E. THE ROTATIONAL AND ELEVATION STOPS SET THE BOUNDARIES FOR THE AREA IN WHICH THE MONITOR IS ALLOWED TO TRAVEL. The monitor is shipped with rotation stops at 90° right, and at 90° left. All other positions are achieved by switching the factory set stop and the plug in the desired stop location. Both the stops and the plugs have a 1/4 inch hex head. Refer to Figure 4 to determine which stop location is needed for the desired rotation. The elevation stop sets the upper limit of the elevation. The monitor is shipped with elevation stops at 90° above horizontal and 45° below horizontal to meet NFPA. All other vertical positions are achieved by switching plugs and stops to the desired locations as indicated in Figure 4.
OPERATING INSTRUCTIONS

A. CONTROL BOX CONTROL OPERATION
   To change the nozzle pattern toward the straight stream or fog position press the proper toggle switch toward straight or fog respectively. To change the horizontal monitor position toward the right or left press the proper toggle switch toward right or left respectively. To change the vertical monitor position upward or downward press the proper toggle switch toward raise or lower respectively.

B. JOYSTICK
   To change the nozzle pattern toward the straight stream or fog press the corresponding button on top of the Joystick. To change the horizontal position right or left move the Joystick towards the appropriate direction. To change the vertical position up or down move the Joystick forward for down and backwards for up.

F. QUICK DISCONNECT
   The IceFox is designed for a quick disconnect inlet. If equipped with a quick disconnect inlet, first mount the inlet on the 2” NPT piping. Make sure the latch pin on the inlet is facing towards the front (see figure 4). Place the monitor into the inlet so the two guide pins line up with the groove. Slide the monitor all the way in and rotate 15° clockwise until the latch pin locks in place. To remove the monitor, pull the latch pin, rotate the monitor 15° counterclockwise, and lift the monitor out of the inlet.
   ! Warning: Make sure the monitor is in locked in place before flowing water. The latch pin must be flush with the housing.

G. MANUAL OVERRIDE CONTROLS
   THE MANUAL OVERRIDE CONTROL IS TO BE USED WHEN THE POWER TO THE MONITOR IS OFF. A 1/4 inch Allen wrench will actuate the overrides. To use the manual override insert the hex head end of the override crank in the hexagon shaped hole. Then rotate or spin the override crank either clockwise or counterclockwise to aim the monitor in the desired direction.
   WHEN THE OVERRIDE CRANKS ARE NO LONGER IN USE PUT THEM BACK IN THE STORAGE POSITION. DO NOT USE THE ELECTRIC CONTROLS WHEN THE OVERRIDE CRANKS ARE BEING USED OR ARE IN POSITION FOR USE.
MAINTENANCE INSTRUCTIONS

Your IceFox monitor and nozzle should be inspected prior to and after each use, to ensure it is in good operating condition and properly lubricated. Periodically, an unanticipated incident occurs where the IceFox is misused in a manner that is inconsistent with standard operating practices. A partial list of potential misuse includes:

- Operating above maximum rated pressure and flow.
- Not draining, and allowing water to freeze inside.
- Operating in a corrosive environment.
- Having the IceFox nozzle hit a fixed object during operating or transportation.
- Other misuse that might be unique to your specific environment.

Also there are many “tell tale” signs that indicate repair is in order, such as:

- Controls that are either inoperable or difficult to operate.
- Excessive wear.
- Poor discharge performance.
- Waterway leaks

If any of the above situations are encountered, the IceFox should be taken out of service, repaired, and tested by a qualified technician before placing it back in service.

MOTOR REPLACEMENT

To replace either the horizontal or vertical rotational motors:

1. Disconnect Power from the unit.
2. Loosen and remove the four socket screws (Item 49 on the Parts List) from the gearbox housing (19).
3. Slowly remove the motor assembly (15) and gearbox housing (19) from the unit.
   
   **IMPORTANT:** Make sure the internal gear, (Item 25 on the Parts List), remains in place, (hold with a screwdriver), to avoid gear alignment problems.
4. Loosen and remove the four socket head capscrews (21) from the inside of the gearbox housing that hold the housing and the motor assembly together.
5. Remove gearbox housing (19) from the motor assembly (15).
6. Replace o-ring seal (18) on the gearbox housing (19).
7. Attach the new motor assembly (15) to the gearbox housing (19) making sure all four screws (21) are tight.
8. Install the motor and gearbox housing assembly to the unit making sure all four socket screws (49) are tight. It may be necessary to rotate the motor slightly to get the motor gear to line up with the gears inside the gearbox.
9. Restore power to the unit.
10. Test the operation of the unit.

Call Akron Brass Customer Service Department if any problems are encountered.
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