



**STYLE 3491 Severe Duty Electric Mining Water Cannon
INSTALLATION, AND OPERATING INSTRUCTIONS
AUSTRALIAN ONLY**

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

Tools Required

- o Utility knife
- o Medium Phillips screwdriver
- o Small Phillips screwdriver
- o Electrician's pliers (multipurpose, stripping and crimping)
- o Medium flat screwdriver
- o Small flat screwdriver
- o 1/2 inch hex head wrench

PRODUCT RATINGS

Maximum motor current draw:

- | | |
|------------------|---|
| 12 volt versions | 15.0 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: 57 lbs. (26 kg)

Maximum Flow: 750 GPM (2840 lpm)

Maximum Pressure: 200 PSI (14 bar)

Noise Emission: 91 Db @1m with maximum flow

PRODUCT WARNINGS

WARNING: The maximum flow of the Severe Duty is 750 GPM. The center of the waterway outlet is 8.25 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 Severe Duty 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 logic box. Prolonged exposure to water will cause damage. When the cover of the logic box is removed check that the O-Ring under the cover is intact and free of dirt and debris.

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

WARNING: Make the connection of the vehicle and auxiliary battery the final step.

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 from the front of the outlet of the monitor when the water source is attached. Dangerous flow velocities can cause serious injury.
- WARNING:** The Severe Duty 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.



WARRANTY AND DISCLAIMER

We warrant Akron Brass products for a period of one (1) year after purchase against defects in materials or workmanship. Akron Brass will repair or replace product which fails to satisfy this warranty. Repair or replacement shall be at the discretion of Akron Brass. Products must be promptly returned to Akron Brass for warranty service. We will not be responsible for: wear and tear, any improper installation, use, maintenance or storage; negligence of the owner or user; repair or modification after delivery; failure to follow our instructions or recommendations; or anything else beyond our control. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, OTHER THAN THOSE INCLUDED IN THIS WARRANTY STATEMENT, AND WE DISCLAIM ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. Further, we will not be responsible for any consequential, incidental or indirect damages (including, but not limited to, any loss of profits) from any cause whatsoever. No person has authority to change this warranty.

GENERAL INSTRUCTIONS

- Review the instructions, wiring diagram, component layout and rotational stops diagram before installing this unit. This unit operates on 12 volt DC or 24 volt DC depending on the unit chosen. All electrical current flows through the wires. The monitor does not act as a ground.
- For use with water or standard fire fighting foams only. After use with foam, flush with fresh water.
- Drain the Severe Duty monitor and nozzle after use to prevent “freeze damage” in cold weather.
- Ensure that the thread in the nozzle swivel matches the thread on the Severe Duty outlet. Do not overtighten the nozzle onto the Severe Duty Monitor.
- The Severe Duty monitor, nozzle, logic box, control boxes, optional battery, 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 Severe Duty.
- Mount the logic box, control boxes out of range from the monitor travel.

INSTALLATION INSTRUCTIONS

A. ELECTRICAL INSTALLATION

STEP 1 Plug the joystick cable connector into the logic box connector marked “JOYSTICK”

STEP 2 Plug the monitor harness connector to the logic box connector marked “MONITOR”

STEP 3 Connect vehicle power to the logic box connector marked “POWER”

NOTE: Adequately sized wire must be used based on the current requirements of the monitor. See Chart below (Figure 1)

Based on Vehicle Power of 13.8V (12V system) and 27.6V (24V system) and max currents of 30A (12V system) or 15A (24V system).

Wire Lengths (Ft.)	Wire Size (AWG)	
	12V	24V
10	14	16
20	12	14
30	10	12
40	8	10
50	8	10

FIGURE 1

STEP 4 Connect optional water valve harness to logic box connector marked “VALVE” if supplied.

B. MECHANICAL MONITOR ATTACHMENT

The Monitor is to be mounted on the waterway with a 2 1/2" NPT thread. The monitor may have an optional 3" or 4" flange with a short nipple.

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, 320° can be achieved by switching the factory set stop and the plug in the desired stop location. Both the stops and the plugs have a 1/2 inch hex head. Refer to Page 7 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 65° below horizontal. An optional stop at 20° below horizontal can be achieved by switching plugs and stops to the desired locations as indicated in figure 5.

OPERATING INSTRUCTIONS

A. JOYSTICK WITH TRIGGER FOR VALVE

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. To open and close the valve, press the trigger to open the valve and release the trigger to close the valve. The valve can be maintained open by pressing the valve switch towards open. Note: When valve is maintained open, the trigger will not operate the valve.

B. LEARN MODE (OPTIONAL)

The stow position can learn a new position by pressing and holding the Stow button. When the monitor reaches the default stowed position (Straight Out), continue to hold the Stow button while operating the up or down button until the desired position. Let go of just the up or down button and that will be the new elevated stow position. While continuing to hold the stow button operating the left or right button until the desired position. Release both buttons. This will be the new stowed position. If the stowed button is released at any time during the process, stop and restart the sequence.

MAINTENANCE INSTRUCTIONS

Your Severe Duty monitor and nozzle should be inspected prior to and after each use, to ensure it is in good operating condition. The monitor joints were greased and sealed at assembly, there is no greasing to be done while in use.

SITUATIONS THAT MAY CAUSE IRRERPAIRABLE DAMAGE

- Operating above maximum rated pressure and flow.
- Not draining, and allowing water to freeze inside.
- Prolonged exposure to temperatures above 130°F (54°C), or below -25°F (-32°C).
- Having the nozzle hit a fixed object during operating or transportation.

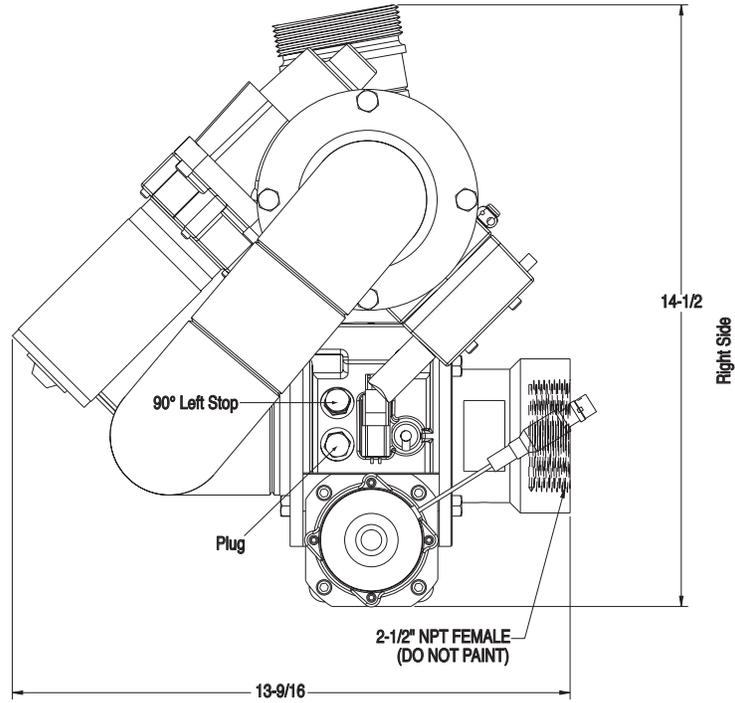
Also there are many "tell tale" signs that indicate repair is in order, such as:

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

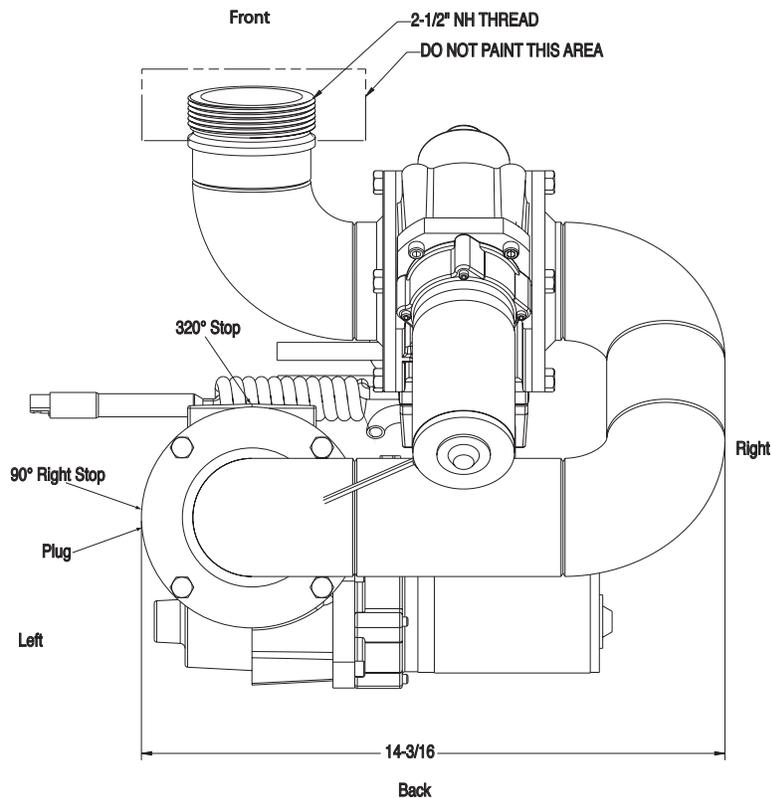
If any of the above situations are encountered, the Severe Duty should be taken out of service, repaired, and tested by a qualified technician before placing it back in service.

To replace either the horizontal or vertical rotational motors, see the technical service manual (#120960) for detailed instructions on motor and joint replacement.

Figure 2



Elevation Movement:
+90° -65° (Standard) Can Be Changed
By Customer To +90° -20°



NOTE: For 320° rotation remove both 90° Stop pins and replace with plugs. Remove plug at 320° location and install stop pin.

Figure 3

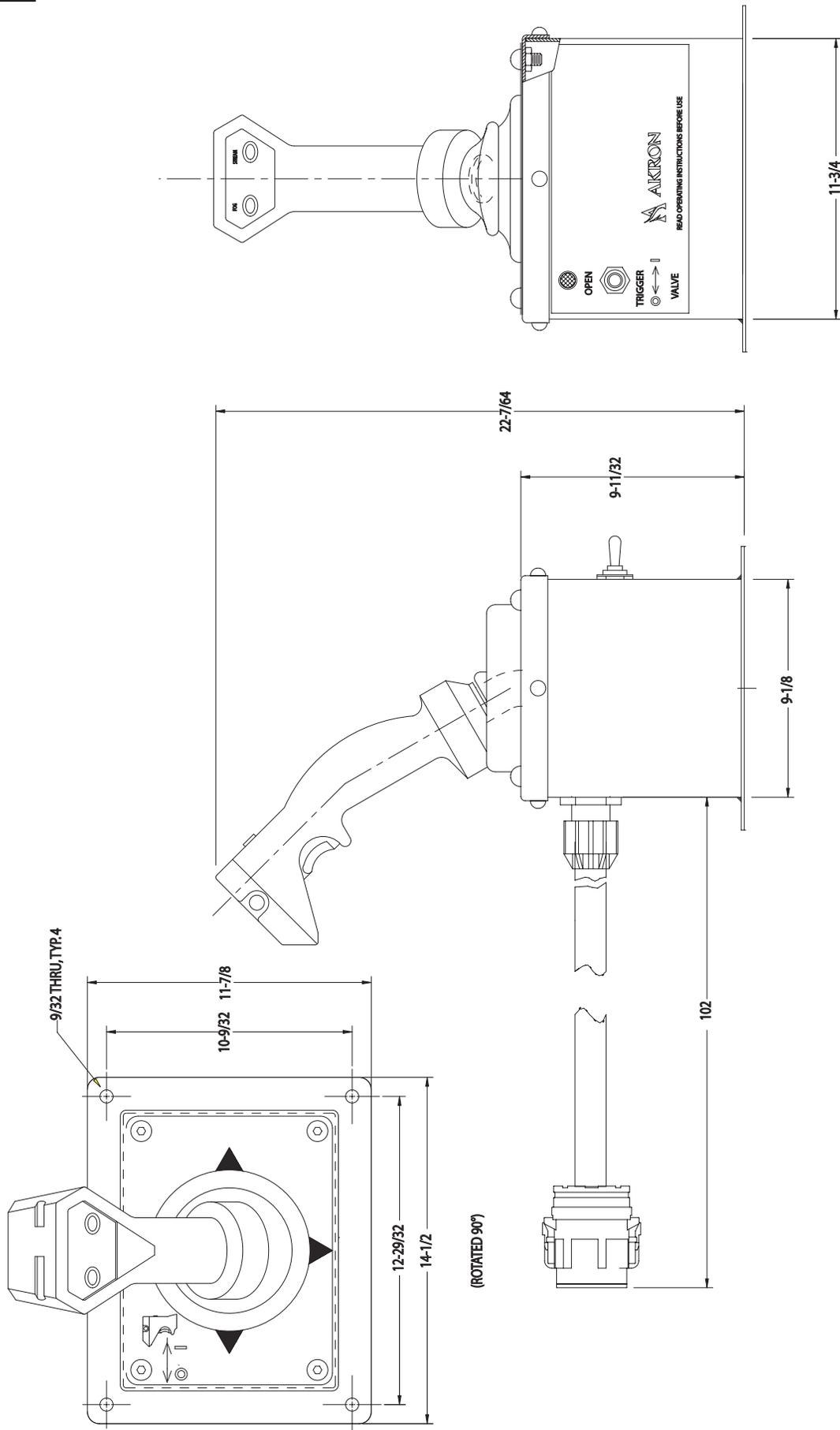


Figure 4

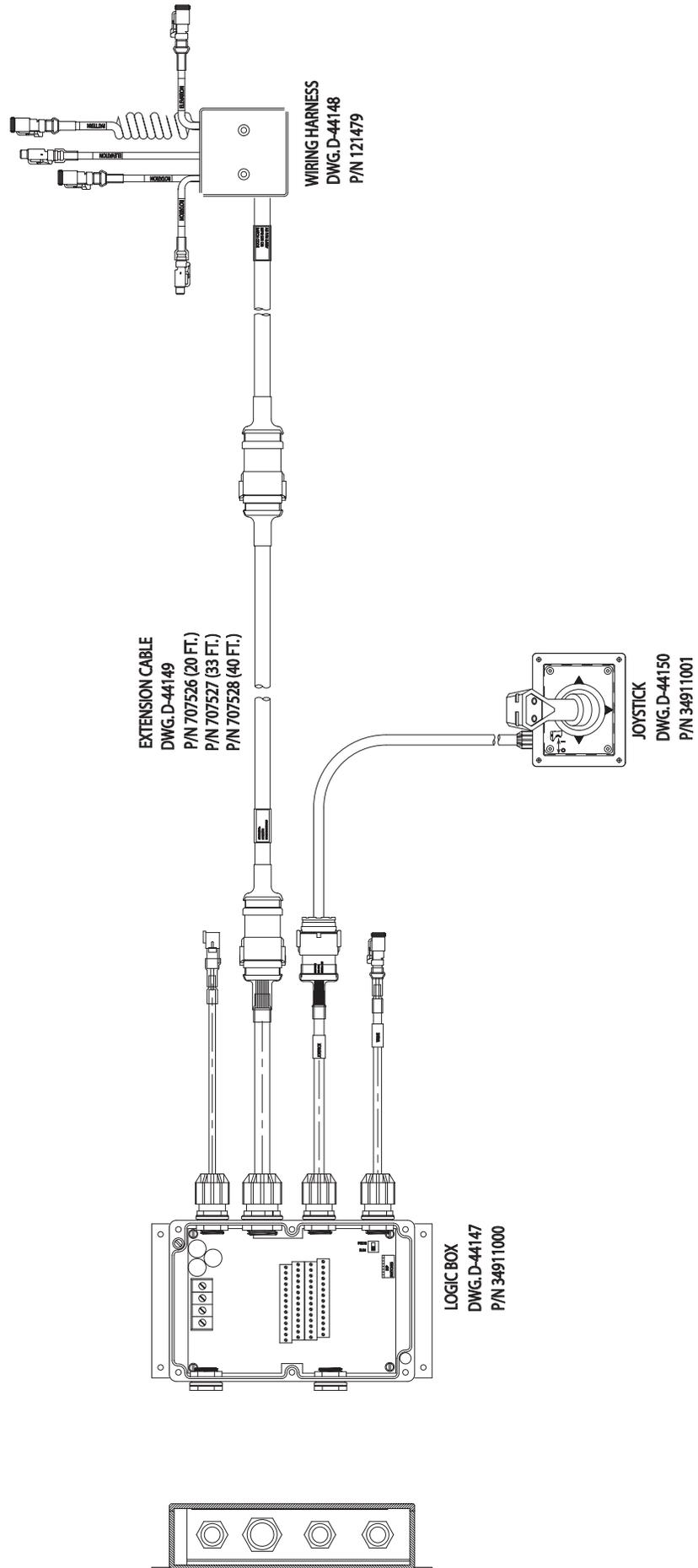


Figure 6

