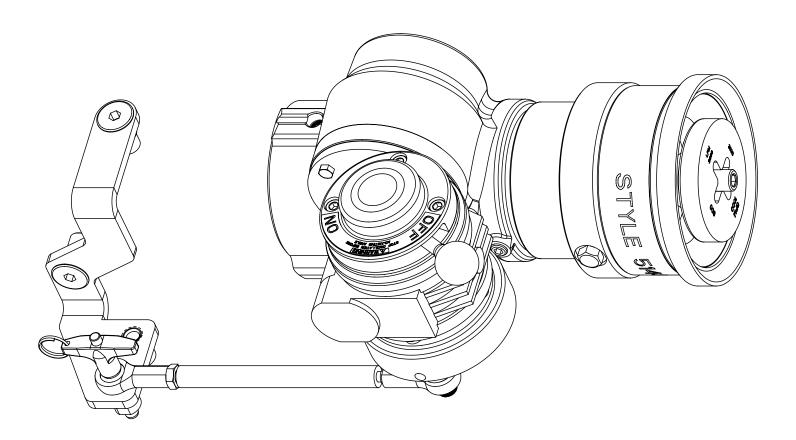# AKRON®
BRASS COMPANY

STYLE 5148 MERCURYMASTER OSCILLATING NOZZLE
INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

The following is intended to provide the basic instructions for installation, operation, and maintenance. Read and understand these operating instructions before use.

⚠ **WARNING** Read and follow the operating instructions before use.
⚠ **WARNING** For firefighting use only.

Product Ratings

Mechanical Specifications:

Parameter	US Measure	Metric Measure
Maximum Flow Rate	1000 GPM	3800 LPM
Maximum Pressure	150 PSI	10 Bar
Mass (includes bracket and trunnions)	12 Lbs.	5.4 kg

Tools Required
- Hammer
- 1/8" Punch
- 5/8" Open end wrench
- 1/4" Allen wrench

Product Warnings

⚠ **DANGER**	• Indicates a hazardous situation which, if not avoided, WILL result in death or serious injury.
⚠ **WARNING**	• Indicates a hazardous situation which, if not avoided, COULD result in death or serious injury.
⚠ **CAUTION**	• Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
NOTICE	• Addresses practices not related to personal injury.

⚠ **WARNING** • This product is intended for use with MercuryMaster 1000 portable monitor only. Read and follow the operating instructions for the Style 3446 monitor before use.

⚠ **WARNING** • Read and follow the operating instructions for Style 5148, 1000gpm before use.

⚠ **WARNING** • Use only for firefighting by trained operators.

⚠ **WARNING** • Do not exceed the maximum pressure or flow ratings for the monitor.

⚠ **WARNING** • Make sure monitor les are fully deployed, and all three spikes ae in contact with the ground and safety strap is secure before use.

⚠ **WARNING** • Make sure the monitor is pointed in a safe direction before flowing the water.

⚠ **WARNING** • Make sure the monitor valve is closed when advancing the monitor. Do not move or lift the monitor while flowing.

⚠ **WARNING** • The MercuryMaster monitor is supplied with a 3" ball valve. Open and close the valve slowly. Opening and closing the valve too quickly may result in damage to other equipment, which can result in an injury to the operator or others.

⚠ **WARNING** • Do not alter any components in any way.

⚠ **WARNING** • Charge the unit slowly. Rapid charging may cause a pressure surge with the potential to cause injury or damage to the unit.

⚠ **WARNING** • At pressures below the rated pressure indicated on the label, the nozzle will have reduced flow and reach. Be sure you have enough flow and pressure for the situation (See IFSTA and NFPA manuals for guidelines).

⚠ **WARNING** • At pressures below the rated pressure, the oscillating nozzle may not oscillate. Obstructions to the flow through the nozzle will also cause the nozzle to not oscillate.

⚠ **WARNING** • Not for use on electrical fires. May cause electrocution.

⚠ **WARNING** • Ensure the thread on the nozzle swivel is matched to the thread on the MercuryMaster outlet. Do not use thread adapters between the monitor and nozzle.

⚠ **WARNING** • Read and follow the tip pressure and flows in the operating instructions before use.

⚠ **WARNING** • Before operating the oscillating nozzle, make sure the connecting rod shown in Figure 5 is parallel with the water way. Failure to do so may cause the oscillating mechanism to bind during operation.

⚠ **WARNING** • Do not adjust oscillating angle while oscillating.

⚠ CAUTION • If any tags or bands on the nozzle are worn or damaged and cannot be easily read, they should be replaced.

⚠ CAUTION • For use with fresh water or standard firefighting foams only. Not recommended for use with salt water. After use with foam or salt water, flush with fresh water.

⚠ CAUTION • Do not over tighten the nozzle onto the mating connections.

⚠ CAUTION • The nozzle is configured for optimum performance. Do not alter in any manner.

⚠ CAUTION • Your nozzle should be inspected prior to and after each use to ensure it is in good operating condition.

Periodically an unanticipated incident may occur where the nozzle is used in a manner that is inconsistent with standard operating practices from those listed in IFSTA. A partial list of potential misuses follows:
   • Operating above maximum rated pressure and flow.
   • Not draining and allowing water to freeze inside the nozzle.
   • Dropping the nozzle from a height where damage is incurred.
   • Prolonged exposure to temperatures above +130 degrees F, or below -25 degrees F.
   • Operating in a corrosive environment.
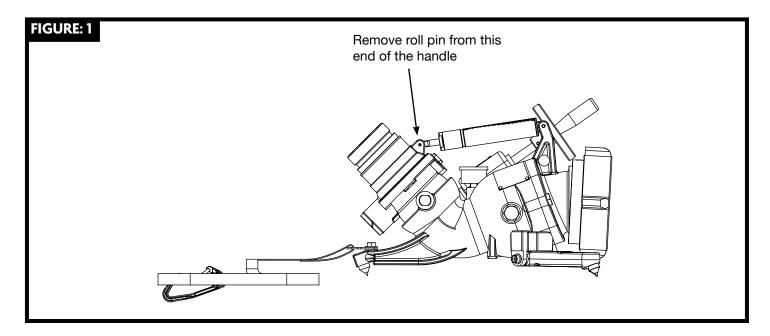   • Other misuse that might be unique to your specific firefighting environment.

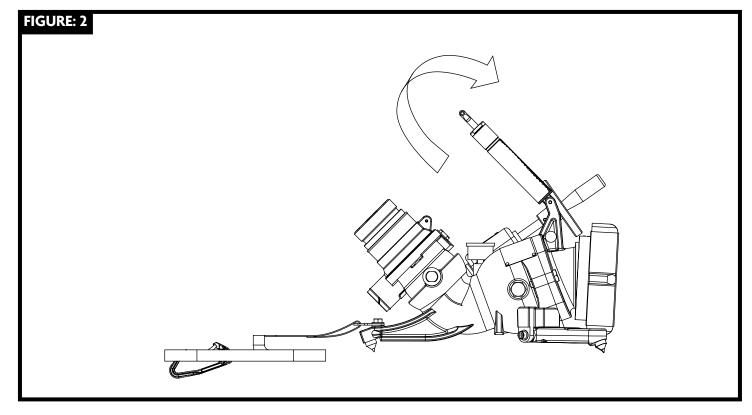There are many "tell-tale" signs that indicate nozzle repair is in order such as:
   • Controls that are either inoperable or difficult to operate.
   • Excessive wear.
   • Poor discharge performance.
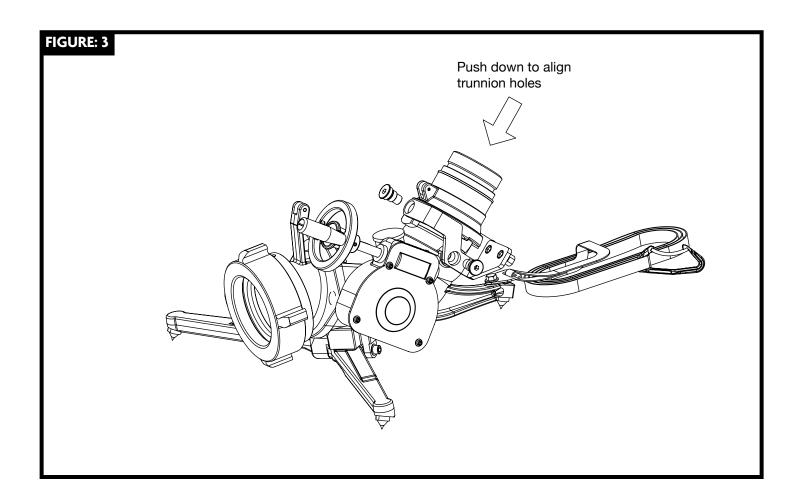   • Water leaks.

If any of the above situations are encountered the nozzle should be taken out of service and repaired and tested by qualified nozzle technicians prior to placing the nozzle back into service.
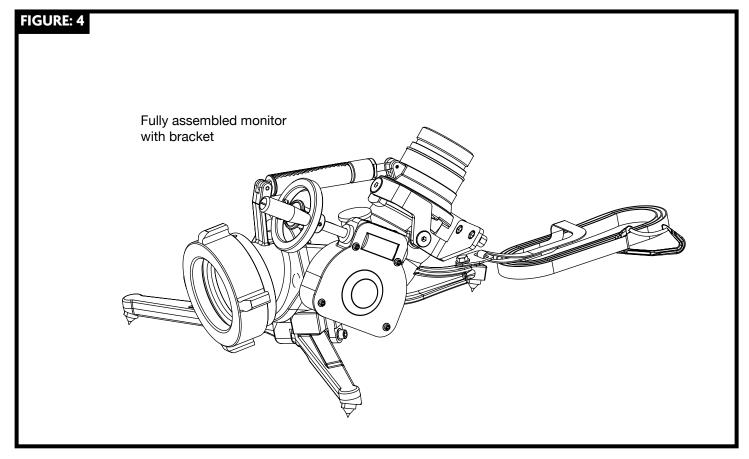
Bracket Installation

1. Using a hammer and a 1/8" punch remove the roll pin on the end of the handle closest to the outlet of the MercuryMaster as shown in Figure 1.
2. Rotate the handle upward and out of the way to gain access to the top trunnion as shown in Figure 2.
3. Using a 5/8" open end wrench remove the top trunnion and the trunnion on the right side of the MercuryMaster.
4. Position the bracket over the trunnion holes as shown in Figure 3.
5. Apply Permabond LM113 or equivalent to each new trunnion provided with the nozzle. The trunnions are easily installed by pushing down on the outlet of the MercuryMaster which will align the trunnion holes in the outlet. Tighten using the ¼" Allen wrench.
6. While tightening the trunnions make sure the outlet continues to smoothly rotate up and down and left to right. There should be no binding of the outlet in either plane of travel after the trunnions are tightened.
7. Reinstall the handle roll pin using a hammer and the 1/8" punch. The finished bracket installation is shown in Figure 4.
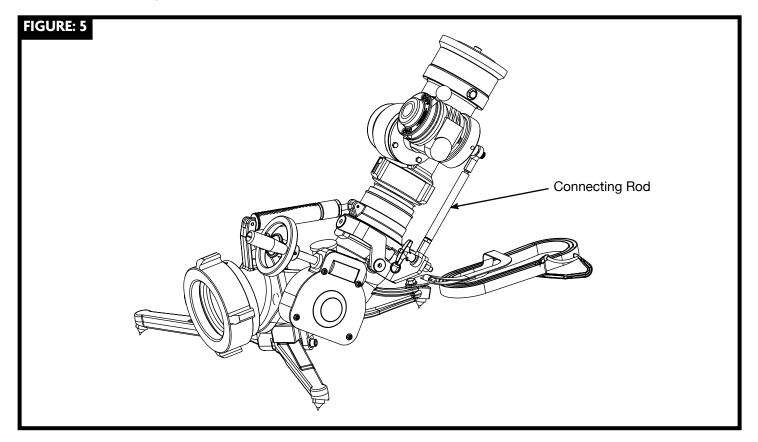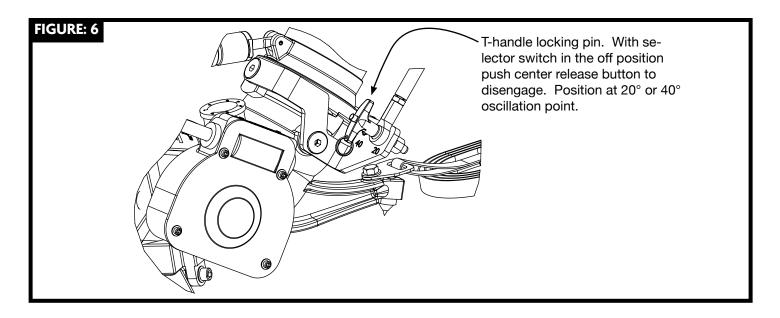
FIGURE: 1

Remove roll pin from this end of the handle

FIGURE: 2

FIGURE: 3

Push down to align
trunnion holes

FIGURE: 4

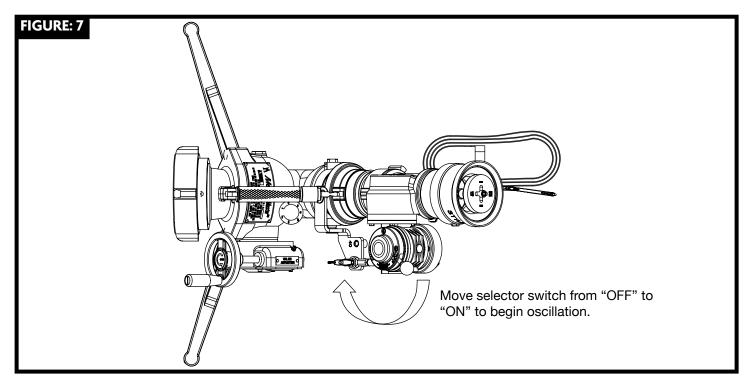Fully assembled monitor
with bracket

Nozzle Installation

⚠ WARNING • Ensure the thread on the nozzle swivel is matched to the thread on the MercuryMaster outlet.

⚠ WARNING • Before operating the oscillating nozzle, make sure the connecting rod is parallel with the water way. Failure to do so may cause the oscillating mechanism to bind during operation.

1. Tighten the nozzle swivel to the outlet of the MercuryMaster. The swivel must be tight to keep the nozzle from loosening during operation.
2. The nozzle must be oriented as shown in Figure 5 to ensure proper alignment of the connecting rod.
3. Following the operating instructions, flow water through the nozzle and monitor assembly to ensure the oscillating mechanism does not bind during oscillation.
4. The nozzle is ready for use.

FIGURE: 5

Connecting Rod

Operating Instructions

⚠ WARNING • Charge all lines slowly to facilitate a controlled water pressure build-up during start-up. Open and close slowly. Rapid opening will produce a sudden thrust. Rapid opening or closing can cause water hammer. Have enough firefighters on the line to safely control the reaction force created by the stream

⚠ WARNING • Make sure the legs are fully deployed and all three spikes are in contact with the ground and safety strap is secure before use.

⚠ WARNING • At pressures below the rated pressure, the oscillating nozzle may not oscillate. Obstructions to flow through the nozzle will also cause the nozzle to not oscillate.

⚠ WARNING • Do not adjust oscillation angle while oscillating.

1. The flow setting for this nozzle is either 800gpm/3030lpm or1000gpm/3800lpm at a pressure of 75psi/5bar at the inlet to the nozzle.
2. With the oscillation selector set to the OFF position, select the desired oscillation angle of 20° or 40° by pushing the center release button on the T-handle, Figure 6.
3. Center the monitor and nozzle on the target. The nozzle will oscillate symmetrically about the center position.
4. With water flowing, move the oscillation selector from OFF to ON to begin oscillation, Figure 7.
5. While flowing rotate the pattern sleeve to obtain the ideal stream quality.

FIGURE: 6

T-handle locking pin. With selector switch in the off position push center release button to disengage. Position at 20° or 40° oscillation point.

FIGURE: 7

Move selector switch from "OFF" to "ON" to begin oscillation.

Maintenance Instructions

• Inspect nozzle prior to and after each use to ensure it is in good operating condition.
• Under normal conditions periodically flushing the nozzle with clean water, cleaning grit and dirt from around exterior moving parts will allow the nozzle to operate as designed.
• Over time the seals may need to be replaced. This can be accomplished by purchasing the appropriate Akron repair kit. Use qualified maintenance mechanics or return the nozzle to Akron Brass Company for repair.
• Regularly check the baffle screw to be sure it is tight.
• Use low temp Lubriplate on metal parts and Parker O-Ring lubricant on O-Rings.

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