



**APOLLO™ HI-RISER™ MONITOR  
STYLE 3433/3431**

**INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS**

The following is intended to provide the basic instructions for installation, operation and maintenance of the Apollo Hi-Riser DI monitor and the Apollo Hi Riser SI monitor, and to assist in attaining the best possible performance from the unit. Read and understand these operating instructions before use.

**PRODUCT RATINGS:**

Maximum flow : 1250 gpm in the deck mode  
: 800 gpm while operating in the ground base - Dual Inlet  
: 1000 gpm while operating in the ground base - Single Inlet  
Maximum Pressure : 200 psi

**PRODUCT WARNINGS:**

- ⚠ WARNING: For fire fighting use only by trained fire fighters.
- ⚠ WARNING: Charge the unit slowly. Rapid charging may cause a pressure surge which has the potential to cause an injury, or damage the monitor.
- ⚠ WARNING: Aim the unit in a safe direction before pumping water through it (i.e. away from power lines).
- ⚠ WARNING: Replace the identification tags if they should become worn or damaged.
- ⚠ WARNING: While operating in the direct mount flange base or portable base, THE TWO CONNECTING PINS MUST BE FULLY ENGAGED AT ALL TIMES.
- ⚠ WARNING: Read and follow the Warning Tag Instructions on the lock pin lanyard.
- ⚠ WARNING: NEVER OPERATE THE UNIT IN THE RAISED POSITION WHILE IN THE GROUND BASE.
- ⚠ WARNING: DO NOT exceed the maximum pressure or flow ratings of the monitor. Exceeding these ratings may lead to an injury or may cause damage to the monitor.
- ⚠ WARNING: DO NOT install shutoffs on the outlet of the Apollo Hi-Riser monitor. Shutoffs increase the potential for pressure surges due to water hammer, which have the potential to cause an injury or damage the monitor.
- ⚠ WARNING: If not equipped with the automatic drain valve, drain the Apollo Hi-Riser monitor after use to prevent "freeze damage."
- ⚠ WARNING: Ensure the thread on the nozzle swivel matches the thread on the monitor outlet. Do not over tighten the nozzle onto the unit.

**MONITOR ATTACHMENT:**

- ⚠ WARNING: INSUFFICIENT STRUCTURAL SUPPORT CAN LEAD TO FAILURE, WHICH HAS POTENTIAL TO CAUSE INJURY. THEREFORE, ADDITIONAL STRUCTURAL SUPPORT AT THE INLET FLANGE ON THE VEHICLE DECK MAY BE REQUIRED. (Contact Akron Brass Customer Service for assistance.)

**⚠ WARNING:** Do not install the Hi-Riser onto any elevating deck gun device including but not limited to:  
1. The Akron Brass Upper Deck; 2. The TFT® Extend-A-Gun™; 3. The Elkhart Pipe™.

To install the monitor onto either the direct mount flange base or the portable base, place the monitor onto the appropriate base so that the holes in the ears are aligned. Then insert one lock pin at a time through the holes in the ears. **MAKE SURE BOTH PINS ARE FULLY ENGAGED BEFORE OPERATING.**

To remove the monitor from either the direct mount flange base or the ground base, hold the monitor securely by the carry handle and pull each lock pin straight out

## OPERATING INSTRUCTIONS:

The hand wheel and the brake knob are used to control the monitor. To change the horizontal monitor position toward the “RIGHT” or “LEFT”, turn the brake knob counterclockwise until the unit can be easily rotated. Turn the same knob to the right to lock the unit in the desired horizontal position. To change the vertical monitor position upward or downward, turn the hand wheel clockwise or counterclockwise until it is aimed in the desired direction.

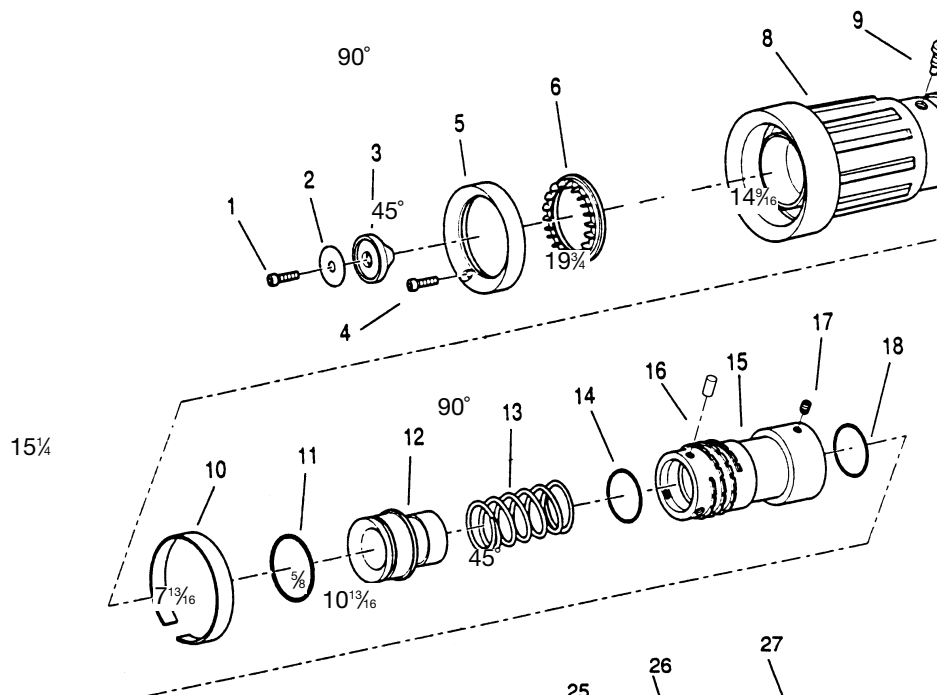
To raise the unit for operation over obstructions first make sure that the unit is properly installed on the direct mount deck flange and that **NO** water is flowing through the unit. With one hand, pull the ring for the release pin on the top of the elevating arm with the other hand grab hold and pull up on the outlet end of the elevating arm until the release pin clicks in place. **NOTE:** If the unit is difficult to elevate, turn the handwheel to relieve pressure on the elevation stop.

To lower the unit for storage or ground base operation first make sure no water is flowing through the unit. With one hand pull the ring for the release pin on the bottom of the elevating arm and with the other hand grab hold and push down on the outlet end of the elevating arm until the release pin clicks in place.

When changing from direct mount flange base to the ground base, be sure that the elevating arm is in the lowered position, the outlet elbow is above the 35° vertical safety stop, and that all folding legs are fully deployed on the ground base before use. This is essential for proper stability in the portable mode.

**⚠ WARNING: DO NOT OPERATE THE UNIT IN THE RAISED POSITION WHILE IN THE GROUND BASE.**

An adjustable safety chain with hook is provided in the front of the ground base as an additional safety precaution. Connect the hook to rigid stationary object such as a parking meter, manhole, car wheel, etc., in front of the unit, and pull the chain tight. **DO NOT OPERATE THE UNIT IN THE PORTABLE BASE WITHOUT THE SAFETY CHAIN SECURED.** To release the hook and/or lengthen the chain, hold the spring loaded latch open and pull the chain through the eye of the hook.



## STYLE 3433 DUAL INLET GROUND BASE:

### IMPORTANT INSTRUCTIONS FOR USING THE STYLE 3433 APOLLO HI-RISER MONITOR ON CONCRETE AND OTHER HARD SURFACES:

When the Apollo Hi-Riser monitor is used with the dual inlet ground base on concrete, each spike must be “set” with the head of the safety hook, a 16 oz. Hammer or equivalent. After the Apollo is hooked up and ready to flow, set the spikes in rotation by striking the hex head bolt over each ground spike with a sharp blow from a hammer or another tool sufficient to drive the spike at least 1/8” (3mm) into the concrete. This process must be repeated each time the unit is repositioned on a concrete surface. As with any portable monitor, the Apollo Hi-Riser should always be secured with the safety chain or ropes before using on any surface.

**△ CAUTION:**     **Wear safety glasses or face shield when setting the spikes. The chain and/or ropes will stretch when charging the unit. Ensure that you stand clear when charging. If the unit moves, reset the spikes.**

The portable base is designed to grip by imbedding the ground spikes into the surface on which it is operating. These spikes will not grip on metal, marble, or similar hard surfaces. Do not operate on these surfaces without securing the unit with rope or some other stable means, in addition to the safety chain.

The ground spikes in the portable base are made of a special hardened tool steel to remain sharp through extended use. If, after use, the flats on the ends of the spikes exceed 1/16” (1.5mm) diameter, the spikes must be sharpened or replaced. (See Maintenance Instructions).

Each spike must be in uniform contact with ground surface at all times during use. Make sure that no large rocks or other debris are under the portable base during use, for this may cause the spikes to come out of contact with the ground surface. The maximum safe operating pressure for this unit is 200 PSI. (1400kPa).

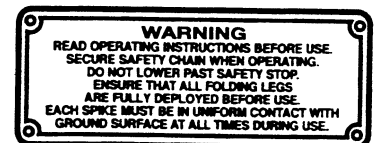
The Apollo Hi-Riser monitor is designed with a safety stop at 35° above horizontal to maintain stability when used in the portable base. Do not release the elevation stop and operate below that point unless the unit is secured in the direct mount base.

**△ WARNING:**     **Read and follow the safety chain warning tag located on the ground mount tag.**

**△ WARNING:**     **Read and follow the plunger pin caution tag.**

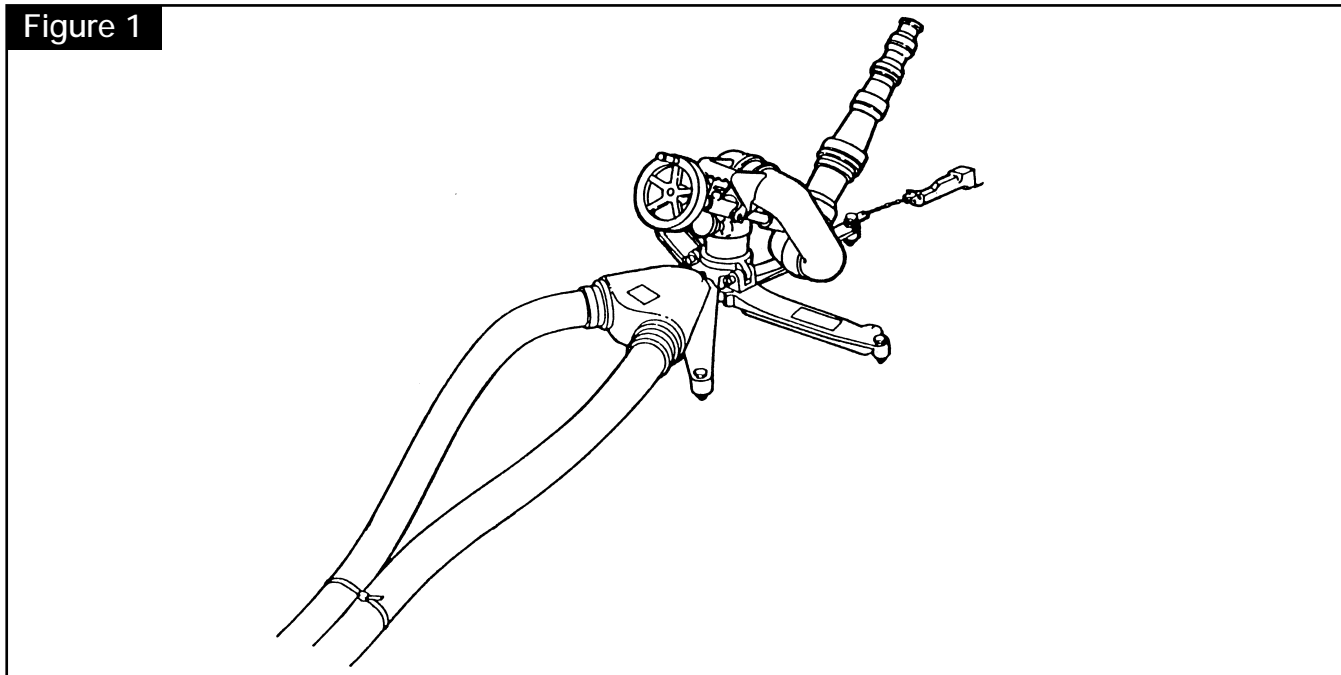
### GROUND BASE SETUP INSTRUCTIONS:

- Rotate legs to the full open position.
- Aim center leg toward target.
- Ensure the unit is in the lowered position.
- Set spikes with hammer.
- Ensure Lock pins are fully engaged.
- Aim discharge upward.
- Secure safety chain.
- Charge hose slowly.
- If unit moves while charging, reset spikes.



When used in the DI portable base, the unit should not be operated at more than 500 gpm (1900 lpm) with one hose and 800 gpm (3030 lpm) with two hoses. Therefore, do not exceed the following discharge pressures with straight tips unless the unit is secured in the direct mount flange base:

**Figure 1**



<u><b>TIP SIZE</b></u>	<u><b>TWO HOSES</b></u>		<u><b>ONE HOSE</b></u>	
	<u><b>PSI</b></u>	<u><b>kPa</b></u>	<u><b>PSI</b></u>	<u><b>kPa</b></u>
1-3/8"	100	690	75	515
1-1/2"	100	690	55	380
1-3/4"	70	480	NR	NR
2"	50	345	NR	NR

**(NR - not recommended)**

Do not exceed 500 gpm (1900 lpm) with one hose and 800 gpm (3030 lpm) with two hoses, when using a fog nozzle, unless the unit is secured in the direct mount flange base.

**⚠ WARNING: Read and follow the tip pressure tag located on the ground mount tag.**

The following hose arrangement is recommended for this appliance (See Figure 1): Use two hoses and bring both hoses straight back from the siamese parallel to each other. Loosely tie the hoses together 10 ft. (3m) from the monitor with a hose and ladder strap, rope, etc.

**⚠ WARNING: Incorrect hose layout may cause instability.**

**⚠ CAUTION: Do not use larger than 3" diameter hose.**

When the unit is operating in the portable base, do not attempt to move or pick up any part of the base itself or the 10 feet (3m) of supply hose closest to the unit.

When the unit is stored in the direct mount base or truck mount, it is recommended that the elevating arm be placed in the lowered position and the nozzle or tips be lowered against a rigid support or removed during transportation.

## STYLE 3431 SINGLE INLET GROUND BASE:

### IMPORTANT INSTRUCTIONS FOR USING THE STYLE 3431 APOLLO HI-RISER S.I. ON CONCRETE AND OTHER HARD SURFACES:

When the Apollo HI Riser S.I. monitor is used with the portable base on concrete, each spike must be “set” with the head of the safety hook, a 16 oz. hammer or equivalent. After the Apollo is hooked up and ready to flow, set the spike in rotation by striking the hex head bolt, over each ground spike, with a sharp blow from a hammer or another tool sufficient to drive the spike at least 1/8” (3mm) into the concrete. this process must be repeated each time the unit is repositioned on a concrete surface. As with any portable monitor, the Apollo should always be secured with the safety chain or ropes before using on any surface.

#### **△ CAUTION: Wear safety glasses or face shield when setting the spikes.**

The portable base is designed to grip by imbedding the ground spike into the surface on which it is operating. These spikes will not grip on metal, marble, or similar hard surfaces. Do not operate on these surfaces without securing the unit with rope or some other stable means, in addition to the safety chain.

The ground spikes in the portable base are made of a special hardened tool steel to remain sharp through extended use. If, after use, the flats on the ends of the spike exceed 1/16” (1.5mm) diameter, the spikes must be sharpened or replaced. (See Maintenance Instructions.)

Each spike must be in uniform contact with ground surface at all times during use. Make sure that no large rocks or other debris are under the portable base during use, for this may cause the spikes to come out of contact with the ground surface. The maximum safe operating pressure for this unit is 200 PSI. (1400 kPa), in the direct mount base.

The Apollo S.I. Monitor is designed with a safety stop at 35° above horizontal to maintain stability when used in the portable base. Do not release the elevation stop and operate below that point unless the unit is secured in the direct mount base.

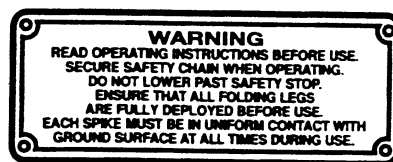
#### **△ WARNING - Read and Follow The Safety Chain Warning Tag Located On The Ground Mount Tag.**

#### **△ WARNING - Read And Follow The Plunger Pin Caution Tag.**

For use with 4”, 4-1/2” or 5” hose only.

When used in the portable base, the unit should not be operated at more than 1000 GPM (3800 LPM). Therefore, do not exceed the following discharge pressures with straight tips unless the unit is secured in the direct mount flange base:

TIP SIZE	PSI	kPa
1-3/8”	100	690
1-1/2”	100	690
1-3/4”	100	690
2”	75	515



Also, do not exceed 1000 GPM (3800 LPM) when using a fog nozzle, unless the unit is secured in the direct mount flange base.

Be sure the storz or swivel is attached securely.

#### **△ WARNING - Read And Follow The Tip Pressure Tag Located On The Ground Mount Tag.**

THE FOLLOWING HOSE SET-UP MUST BE USED TO PROVIDE NECESSARY STABILITY WHEN OPERATING THE STYLE 3411/3413.

#### **△ WARNING - Read And Follow The Set-Up Instructions Tag Located On Inlet Body**

#### **△ WARNING - Incorrect Hose Layout May Cause Instability.**

## SETUP INSTRUCTIONS:

Aim center leg toward target.

Slide buckles to end of tie-down straps.

Connect straps loosely around hose.

DO NOT tighten.

Set spikes with hammer.

Ensure lock pins are fully engaged. Aim discharge upward.

Secure safety chain.

Charge hose slowly.

Tighten straps around hose until it contacts hose stop.

If unit moves while charging, reset spikes.

When the unit is operating in the portable base do not attempt to move or pick up any of the base itself, the hose loop, or the 10 feet (3m) of straight hose ahead of the hose loop.

When the unit is stored in direct mount base or truck mount, it is recommended that the nozzle or tips be lowered against a rigid support or removed during transportation.

## CAUTIONS:

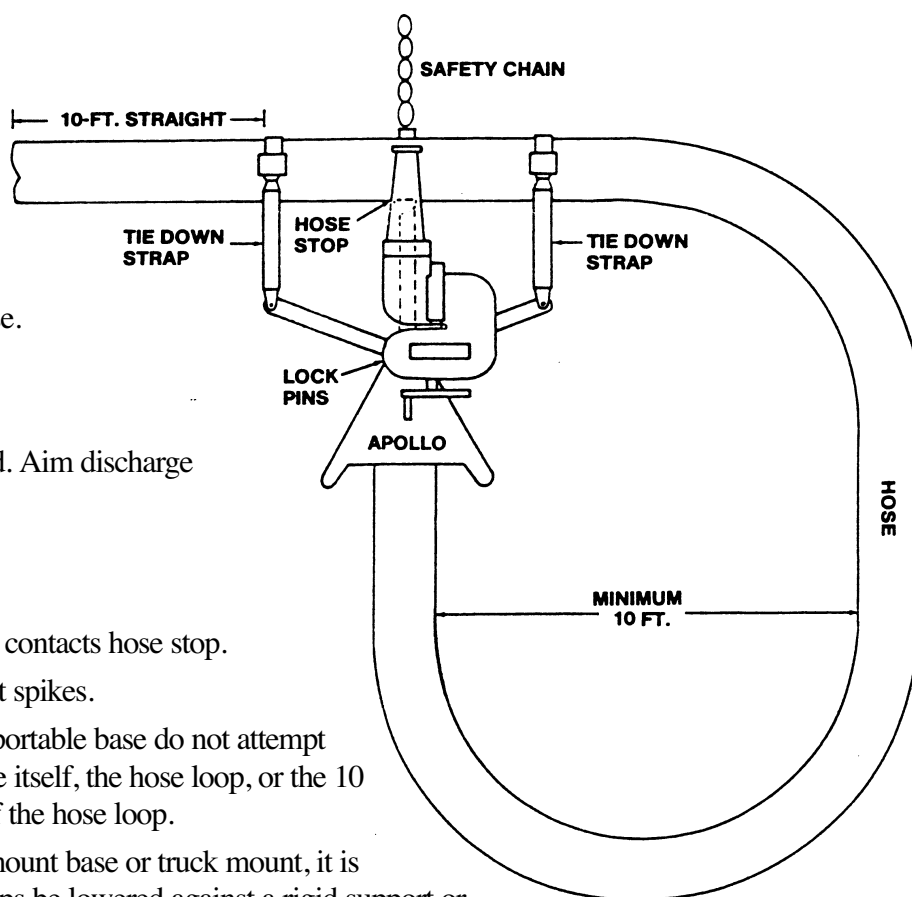
Your Apollo Hi-Riser monitor and nozzle should be inspected prior to and after each use to ensure it is in good operating condition. Periodically, an unanticipated incident occurs where the unit is misused in a manner that is inconsistent with standard operating practices. A partial list of potential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

- Operating above maximum rated pressure or flow.
- Prolonged exposure to temperatures above 140°F, or below -40°F.
- Operating in a corrosive environment.
- 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:

- A hand wheel that is inoperable or difficult to operate.
- Excessive wear.
- Poor discharge performance.
- Water leaks.

If any of the above situations are encountered, the Apollo Hi-Riser monitor should be taken out of service, repaired, and tested by a qualified technician before placing back in service.



## **ROUTINE MAINTENANCE INSTRUCTIONS**

### **Style 3433/3431 Apollo Hi-Riser Portable Monitor**

The following maintenance procedures will prolong the proper operation of this appliance.

**LUBRICATION:** Three grease fittings are provided for periodic lubrication. Use Low-Temp Lubriplate or equivalent.

The horizontal swivel joint and the outlet elbow joint should be lubricated until a small amount of grease appears through the holes in the swivel plugs on either side of the grease fittings.

**⚠ CAUTION - Avoid excessive pressure when using the grease gun. This may damage the O-ring seals in the joints.**

The elevating mechanism must be lubricated in two places - the elevation worm gear should have grease applied periodically and the elevation chain should be periodically oiled on the exposed areas. It may be necessary to adjust the elevation while oil is being applied to the chain to ensure lubrication of the full chain length.

Oil should also be applied periodically to the handwheel shaft, the two plunger pins, and the upper gear bearing. The bearing surface can be oiled through two access holes in the gear.

Examine the points of the ground spikes in the portable base. If the flat of any spike exceeds 1/16" (1.5mm) diameter, it must be sharpened or replaced. To sharpen, use a flat file or grinder and maintain the same taper as the original spikes. If a grinder is used, do not allow the spikes to become hot, or change color, since this will reduce the hardness and spikes will not remain sharp in service.

Check the spring loaded spike holders in the portable base to ensure that they move freely. Use a dry spray lubricant if lubrication is required.

Check that the elevation stop operates properly and must be released to lower the unit below 35° elevation.

Check that both inlet clappers function properly on dual inlet bases. Lubrication is not normally required in this area.

Check that the horizontal brake operates freely and apply a small amount of oil to the brake shaft.

Check that the latch of the safety chain hook engages properly in the chain.

If any parts do not function properly, contact Akron Brass for repair instructions or return the unit to the Akron Brass Company.



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