



Plumbizer (35E & 45V)

Installation Instructions

Supplied Hardware

- (1) 11E (Straight) or 11V (Angle) Casting
 - (1) 11R Ball Casting
 - (2) 25PN 1-1/2" Pipe Thread Lock Nut
 - (2) 25MB 2" ID 10-Ga. Flat Washer
 - (2) 1/4" x 3/8" Set Screw
 - (4) 3/8" x 2-1/2" Bolt
 - (4) 3/8" Nut
 - (4) Spring Lock Washer
 - (8) 3/8" Flat Washer
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Installation

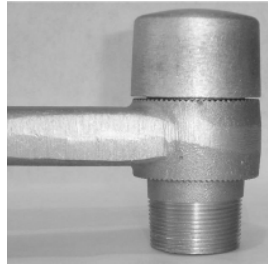
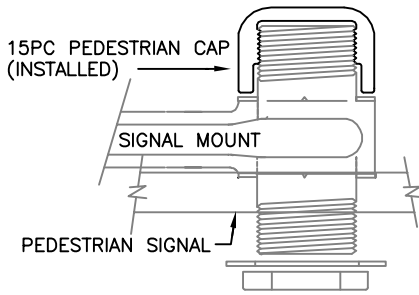
- **Wear approved and specified protective gear during the installation process.**
- **Apply anti-seize lubricant on all threaded surfaces during the installation process.**
- **Plumbizer shall be mounted on a specified hub flange.**
- **USE TORQUE WRENCH FOR INSTALLATION PROCESS.**

- **Attach the Plumbizer to the Hub**
 - Place the 11R Ball Casting on the hub with the flat side against the hub surface.
 - Place the plumbizer casting on the ball casting and line up the holes with the hub slots. Keep the threaded nipples on the casting in the specified orientation of the signal stack.
 - Temporarily install a "C" Clamp to hold the plumbizer to the hub flange for hardware install.
 - Use the 3/8" bolts, nuts, spring lock washers, and flat washers to attach the plumbizer over the ball casting and to the hub. Keep loose; do NOT tighten yet.
 - Remove the clamp.

- **Install Signal Heads on the Plumbizer**
 - Place the lower signal heads over the threaded nipple facing the ground.
 - Inside the signal head housing, place the 2" Flat Washer over the nipple.
 - Thread the 1-1/2" Pipe Thread Lock Nut onto the plumbizer to fasten the signal head.
 - Thread one 1/4" set screw into Pipe Thread Lock Nut wall to secure nut to plumbizer nipple.
 - Repeat process for upper signal heads.
 - **NOTES:**
 - *11F Spacers are required for more than three section signals mounted vertically per MnDOT specifications. Install the spacers on both sides of the plumbizer point of mounting with the hardware provided with the 11F Spacers.*
 - *15PC cast aluminum cap is required for single pedestrian signal heads. Thread the cap over the top nipple of the plumbizer per MnDOT specification.*

- **Field Adjust**
 - Using the range of motion provided by the Ball & Socket, aim the signal in the direction of traffic being sure to loosen opposing nuts to provide maximum adjustment range.
 - Plumb the signal heads.

- **Tighten to the Flange**
 - While alternating tightening between bolts for an even fastening, apply twenty-one foot-pounds (21 ft-lbs) of torque to each bolt.



15PC PEDESTRIAN CAP (OPTIONAL)

OPTIONAL EQUIPMENT

(2) 11F SPACERS REQUIRED FOR 4-5 SECTION PLASTIC SIGNALS, OR HORIZONTAL MOUNTING, MAY BE REQUIRED ON ALL VEHICLE SIGNALS PER JOB SPECIFICATIONS. SEE FMC DWG. 5A.

(1) 15PC PEDESTRIAN CAP FOR PEDESTRIAN SIGNAL MOUNTING (SEE DWG. 9.1.0.)

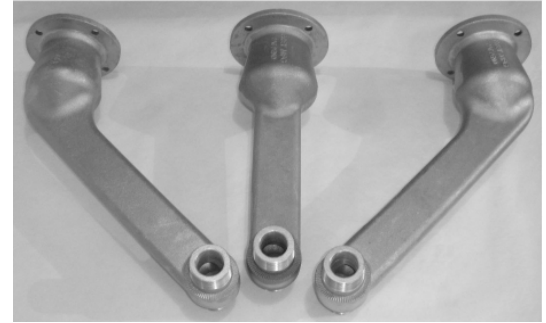
35E or 45V SUPPLIED HARDWARE ASSEMBLY

HARDWARE MEETS OR EXCEEDS STATE SPECIFICATIONS

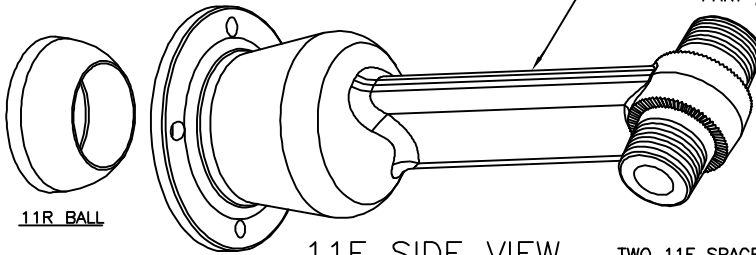
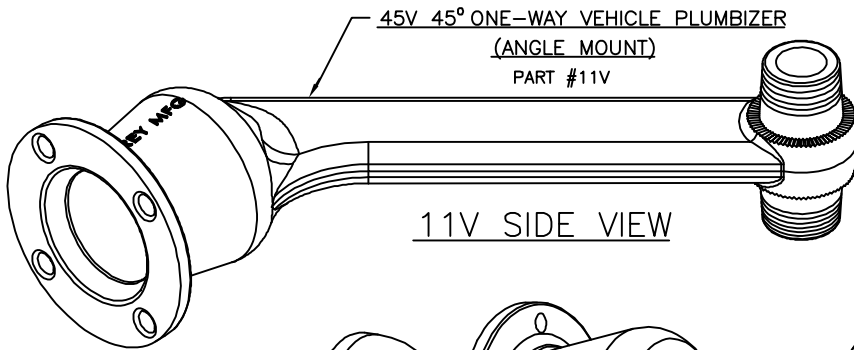
- (1) 11E OR 11V PLUMBIZER CASTING
- (1) 11R BALL CASTING
- (4) 3/8" X 2 1/2" BOLT
- (8) 3/8" FLAT WASHER
- (4) 3/8" SPRING LOCK WASHER
- (4) 3/8" NUT
- (2) 25PN 1 1/2" PIPE THREAD LOCK NUT
- (2) 25MB 2" ID 10 Ga. MACHINE BUSHING (FLAT WASHER)

NOTE:

APPLY ANTI-SEIZE LUBRICANT TO ALL THREADED SURFACES.

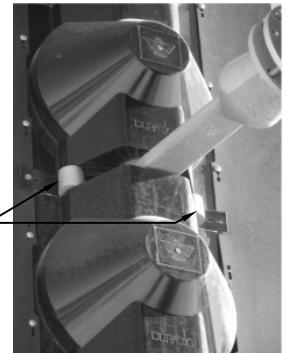


CASTINGS ARE REVERSABLE FOR PED MOUNTS

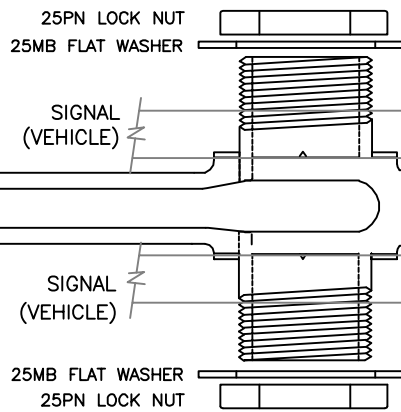
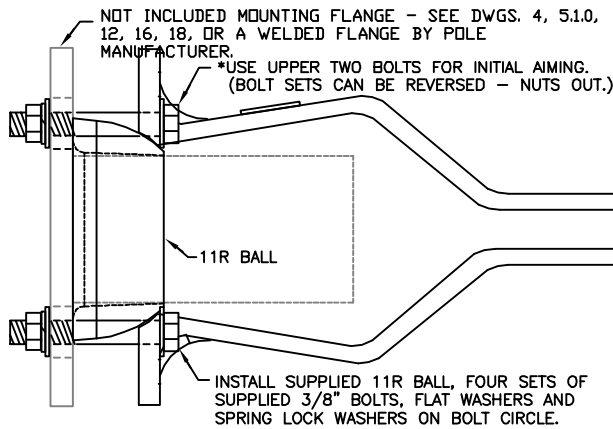


11R BALL

35E ELEVATOR PLUMBIZER (STRAIGHT MOUNT) PART #11E



TWO 11F SPACERS



11F SPACER (TWO IF REQUIRED) SEE DWG. 5A

*NOTE: MAKE SURE OPPOSITE BOLT(S) IS LOOSE PRIOR TO TIGHTENING NUT WHEN MAKING ADJUSTMENTS. CASTING WILL NOT BEND.

35E OR 45V PLUMBIZER ASSEMBLY

NOT TO SCALE

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35E AND 45V PLUMBIZER INSTALLATION

DATE	DWG. NO.	REV.
02-09-09	9.1	1