



SINGLE BARREL TAGLINE

MAINTENANCE AND OPERATION MANUAL



A LEADER IN RESEARCH, TECHNOLOGY & INNOVATION DRIVING YOUR BUSINESS FORWARD

This product is manufactured, sold, and serviced by IPS CRANES. We work with our customers to create the best products for the job that are smarter, safer, and more efficient with a lower environmental impact.

IPS CRANES offers the parts for your equipment needs to maximize your uptime, including aftermarket parts for existing taglines. Our professional engineers and seasoned sales team can help you troubleshoot and find solutions while saving you money. IPS also offers 24/7 on- and off-site service and support, and free technical support over the phone. For all parts needs, service, or operation questions, please contact IPS CRANES.



OUR PROMISE TO YOU

- INDUSTRY LEADING INNOVATION
- EASE OF OPERATION & MAINTENANCE
- BEST IN CUSTOMER SERVICE
- IMPROVED SAFETY

OUR FAMILY OF BRANDS INCLUDES



IPS CRANES is a certified women-owned business

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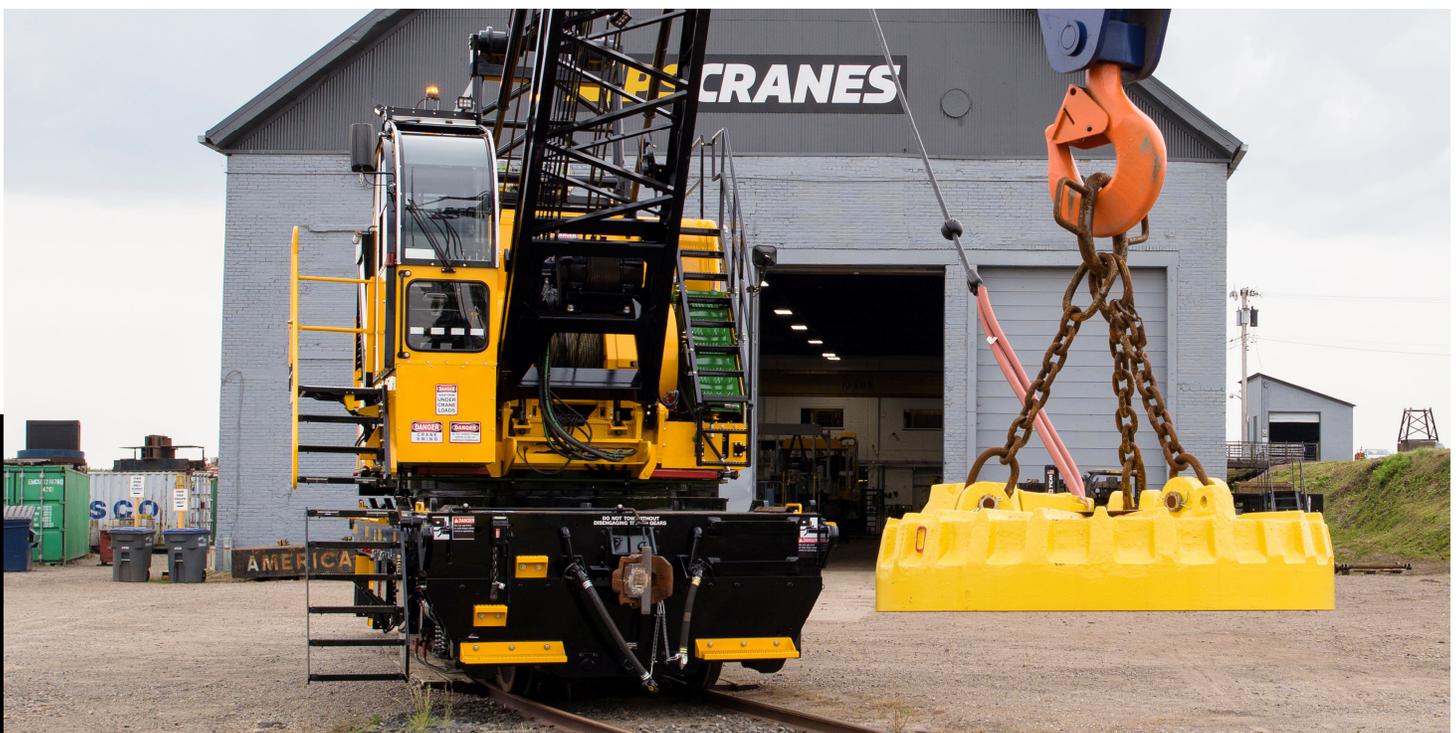
SINGLE BARREL TAGLINE

ADVANTAGES

Taglines provide constant, positive tension on the clamshell bucket to hold it steady while it is suspended in the air, regardless of boom angle. The IPS Single Barrel Tagline is fully automatic after installation, and the fairlead does not require sheaves, pins, or lubrication.

ASSEMBLY

IPS makes it easy! The IPS CRANES Single Barrel Tagline is shipped fully assembled and consists of a drum, cable, spring-loaded cylinders, and fairlead. Once received, the unit is ready to use on all lattice boom cranes.



Mount the tagline with the cable reel on either side of the boom or within the structure itself. Instructions for each installation method can be found below.

IMPORTANT: ALWAYS INSTALL THE TAGLINE ON THE OPPOSITE SIDE OF THE OPERATOR'S CAB.

Mount the tagline approximately 1/3 of the way up from the base of the boom (Figure A) and set in position between the upper and lower lacings (Figure B). The tagline will mount with the cable reel on either side of the boom. Mounting instructions for installing the tagline on the left and right sides of the boom are described beginning on page 4.

FIGURE A.

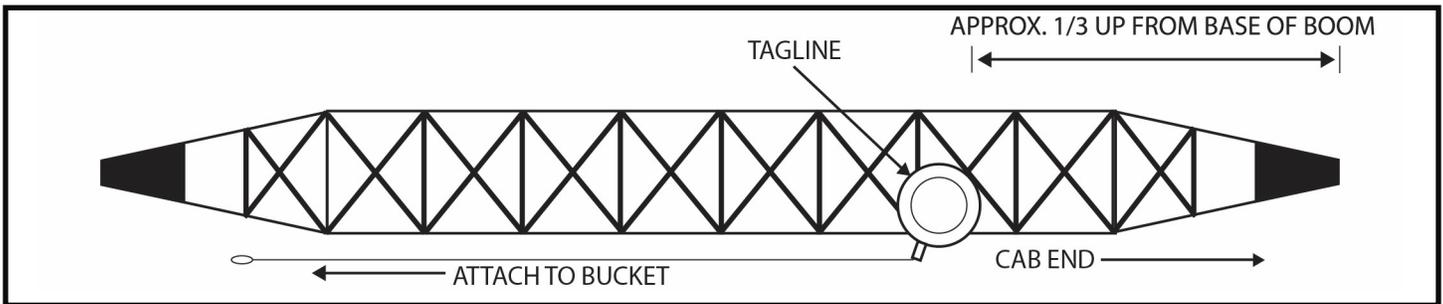
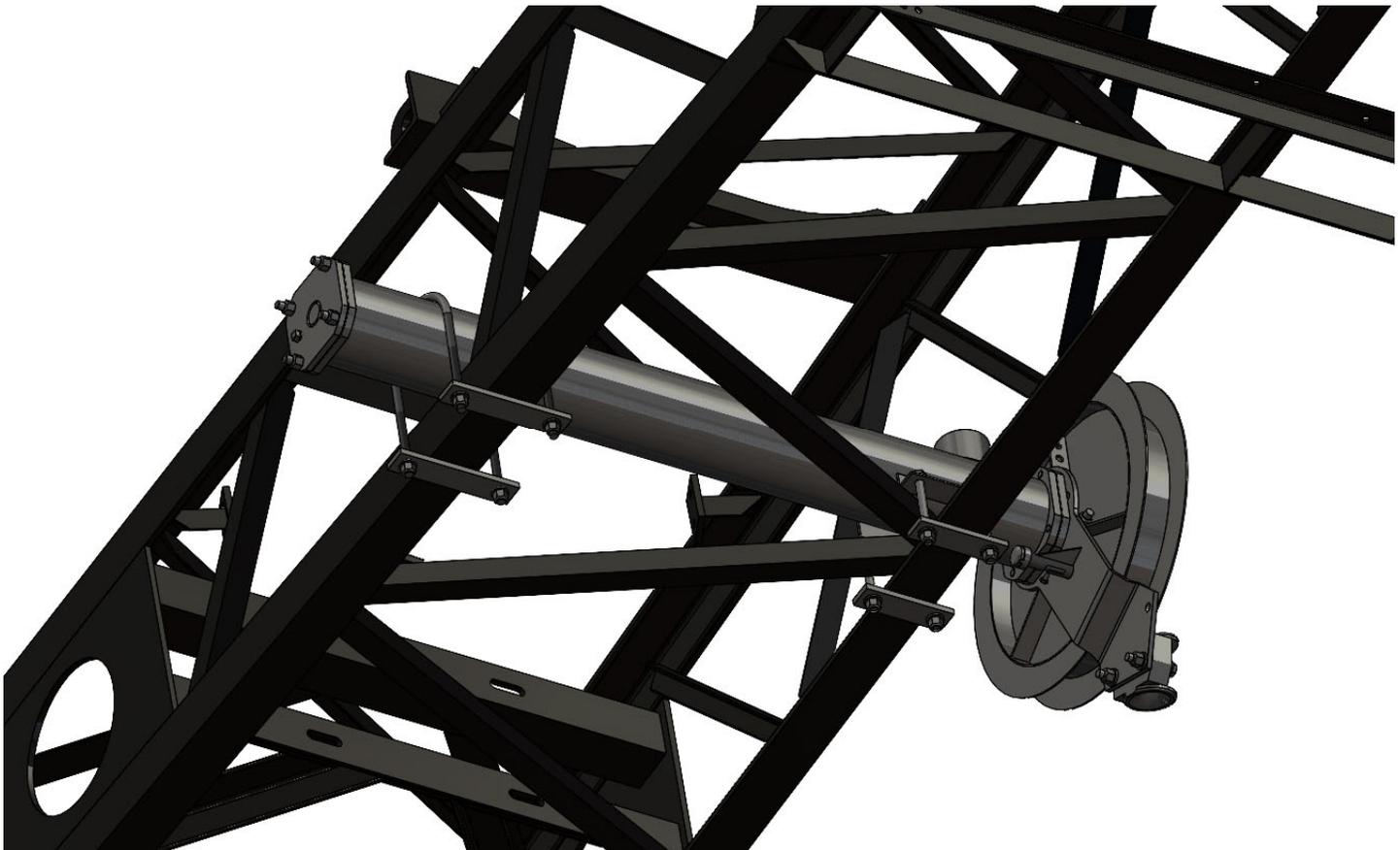


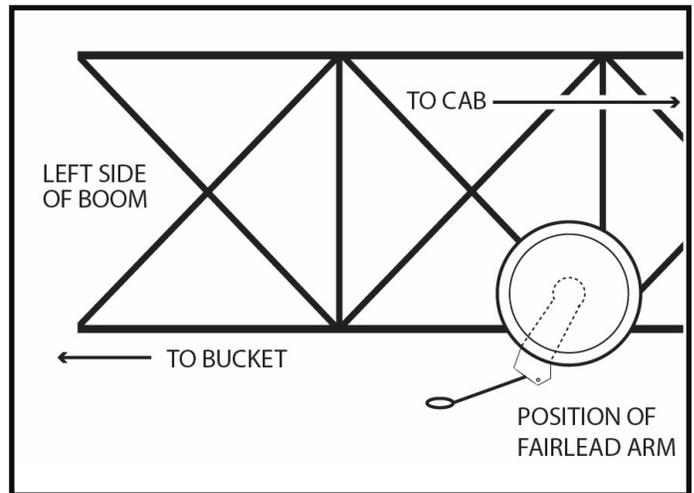
FIGURE B.



MOUNTING THE CABLE REEL ON THE LEFT SIDE OF THE BOOM

To mount the cable reel on the left side of the boom, secure the tagline with the fairlead arm pointing in the direction of the bucket, and in a position that allows the cable to travel back and forth smoothly. The three bolt holes at the end of the fairlead arm provide a choice of two positions to attach the cable guide. Use the position that offers the best alignment to the bucket (Figure C).

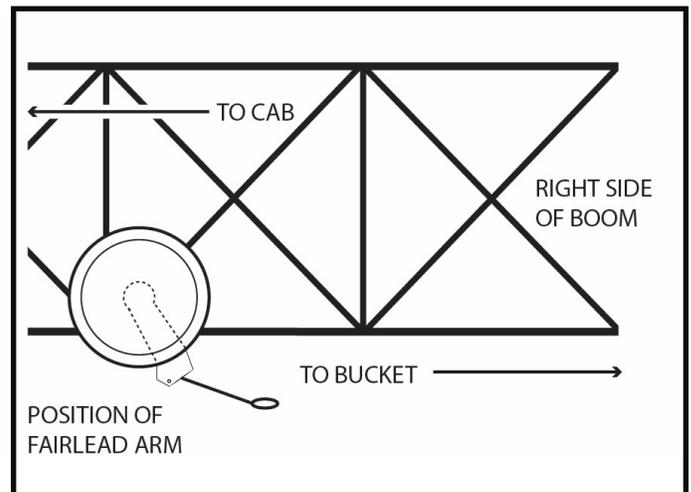
FIGURE C.



MOUNTING THE CABLE REEL ON THE RIGHT SIDE OF THE BOOM

To mount the cable reel on the right side of the boom, direct the cable around the reel and back out the underside toward the bucket (Figure D). A series of eight bolt holes around the upper fairlead arm permit a wide choice of positions for attaching the arm to the tagline's barrel. Adjust the position of the fairlead arm and cable guide so that the cable can travel smoothly through the guide to the bucket. The three bolt holes at the end of the fairlead arm provide a choice of two positions to attach the cable guide. Use the position that offers the best alignment of the cable to the bucket.

FIGURE D.

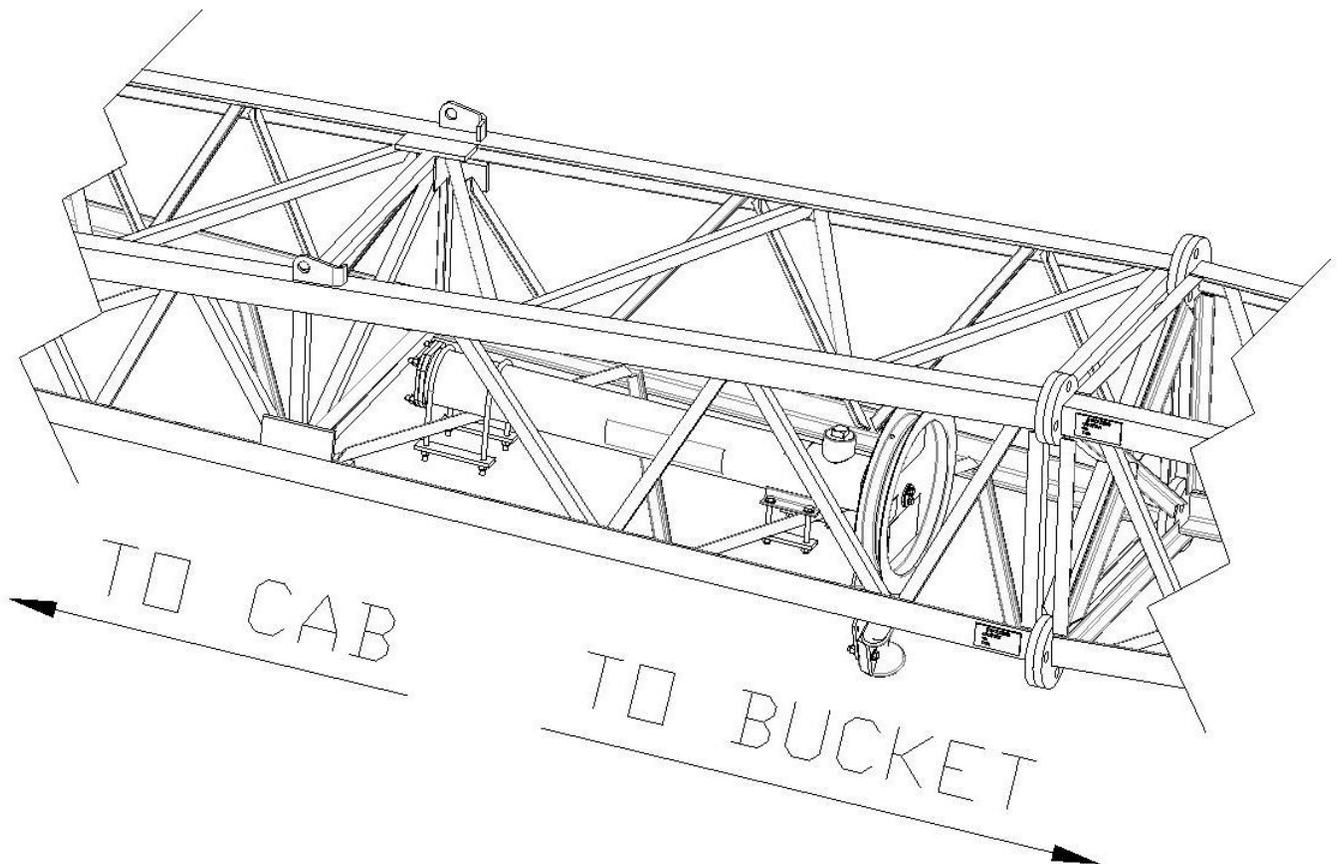


MOUNTING THE TAGLINE INSIDE THE BOOM

Installing the entire single barrel tagline within the boom structure itself is limited to booms with large interior diameters. If you are unsure whether your tagline will fit inside your crane's boom, please contact IPS CRANES before proceeding with the installation.

There is no preferred method to secure the tagline to the boom. Several workable methods may be improvised depending on the type of boom in operation. In the majority of installations, supports are installed across the boom with the tagline housing bolted or welded to these supports. Another technique is to separate the guide from the fairlead arm and attach it to a small plate on the side of the boom. Use whichever mounting technique ensures the best cable alignment from the reel through the guide to the bucket.

Install the tagline within the lower third of the boom so the small end plate points toward the cab and the tagline barrel is parallel to the angle of the boom's height. The exterior, flat side of the cable reel should face the upper end of the boom.



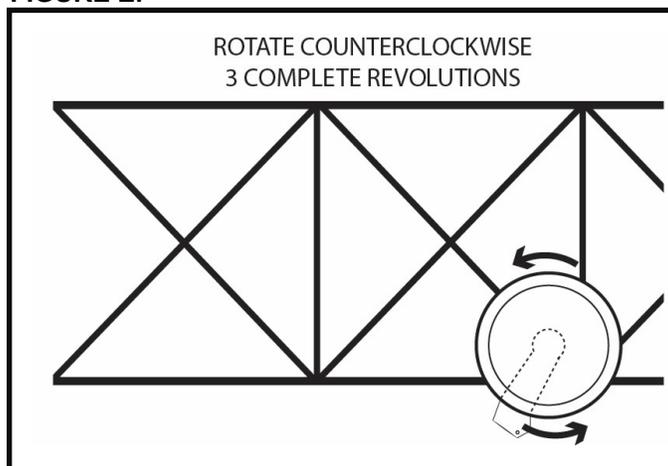
SECURING THE CABLE TO THE BUCKET

When the tagline is mounted on the boom (using any installation method), the cable will remain hooked in the original position on the reel. Instructions for securing the cable to the bucket are included below. Use two people to do this.

To secure the cable to the bucket:

1. Rotate the reel counterclockwise three complete revolutions from the neutral position (Figure E). Be sure there is no tension.
2. Unhook the cable reel and pass it through the cable guide. The first person holds the reel in a stationary position while the second person secures the rope end to the bucket.
3. The tagline is now functional and ready for pre-operation testing.

FIGURE E.



Performing the pre-operation test before using the tagline at a job site ensures that it will function properly. Reference the instructions below to perform the test.

PRE-OPERATION TEST INSTRUCTIONS

During the pre-operation test, observe the tagline to confirm that the crane hoisting and closing lines do not twist enough to cross over and foul operations. To perform the test, reference the steps below.

1. Position the crane boom over the ground at approximately 35 degrees.
2. Raise the clamshell bucket to maximum height.
3. Drop the bucket to the ground in a fully open position.
4. Load and close the bucket.
5. Raise the bucket at least 15 feet while swinging it through a 45-degree arc.
6. Drop the load and return the bucket to its original position.
7. If the tagline operates smoothly and without hindrance, the unit is ready for work. If the hoisting and closing lines twist, additional tension is required. Reference the instructions below to add tension.

ADDING TENSION

If the tagline fails the pre-operation test, additional tension is required. Reference the instructions below to add tension.

CAUTION: THE REEL MUST BE HELD IN A STATIONARY POSITION WHILE THE CABLE IS WOUND AROUND IT. THIS CAN BE DONE BY HAND OR BY ENGAGING THE DOG RATCHET.

1. Lower the boom to ground level.
2. Using two people, turn the cable reel counterclockwise, releasing enough slack to allow one additional turn of cable around the reel.
3. Turn once and release the cable reel.
4. Repeat the pre-operation test.

This section provides safety and maintenance information under normal operational conditions. Be sure to reference it to ensure safe operation and function of the tagline.

DISENGAGING THE CABLE FROM THE BUCKET AND OTHER LOADS

Reference the steps below when disengaging the cable from the bucket and other loads.

1. With a second person, lower the bucket to ground level.
2. Engage the dog ratchet.
3. While wearing gloves, the first person unhooks the cable end and grasps the cable firmly with both hands.
4. The second person disengages the dog ratchet and stands by the reel in case the first person loses grip and the dog ratchet needs to be re-engaged.
5. The first person slowly walks in the cable as it winds around the reel.

IMPORTANT: IF THE REMAINING TENSION ON THE COIL SPRING IS MORE THAN SIX REVOLUTIONS, OR IF THE REMAINING TENSION IS UNKNOWN, USE THREE PEOPLE TO DISENGAGE THE CABLE. THE FIRST PERSON WILL DISENGAGE THE DOG RATCHET AND THE OTHER TWO PEOPLE (WEARING GLOVES) WILL WALK IN THE CABLE.

INSPECTION FOR WEAR OR DAMAGE

Inspect the cable guide and the cable itself for routine wear to ensure the safe operation of the unit. If the cable has visibly frayed ends or shows any other signs of wear, replace it. Replace the guide if a pronounced groove is apparent. Call IPS CRANES with any parts needs, and be sure to have the model and serial number of your tagline handy to ensure timely service.

STORING THE TAGLINE

It is not necessary to drain the oil from the tagline housing for brief periods of inactivity. However, if the tagline is going to be inactive for a long period of time, lubrication oil should be drained from the housing.

To drain:

1. Remove the drain plug on the end plate.
2. Tilt the unit to drain any oil still left in the barrel.
3. When draining is complete, replace the drain plug.

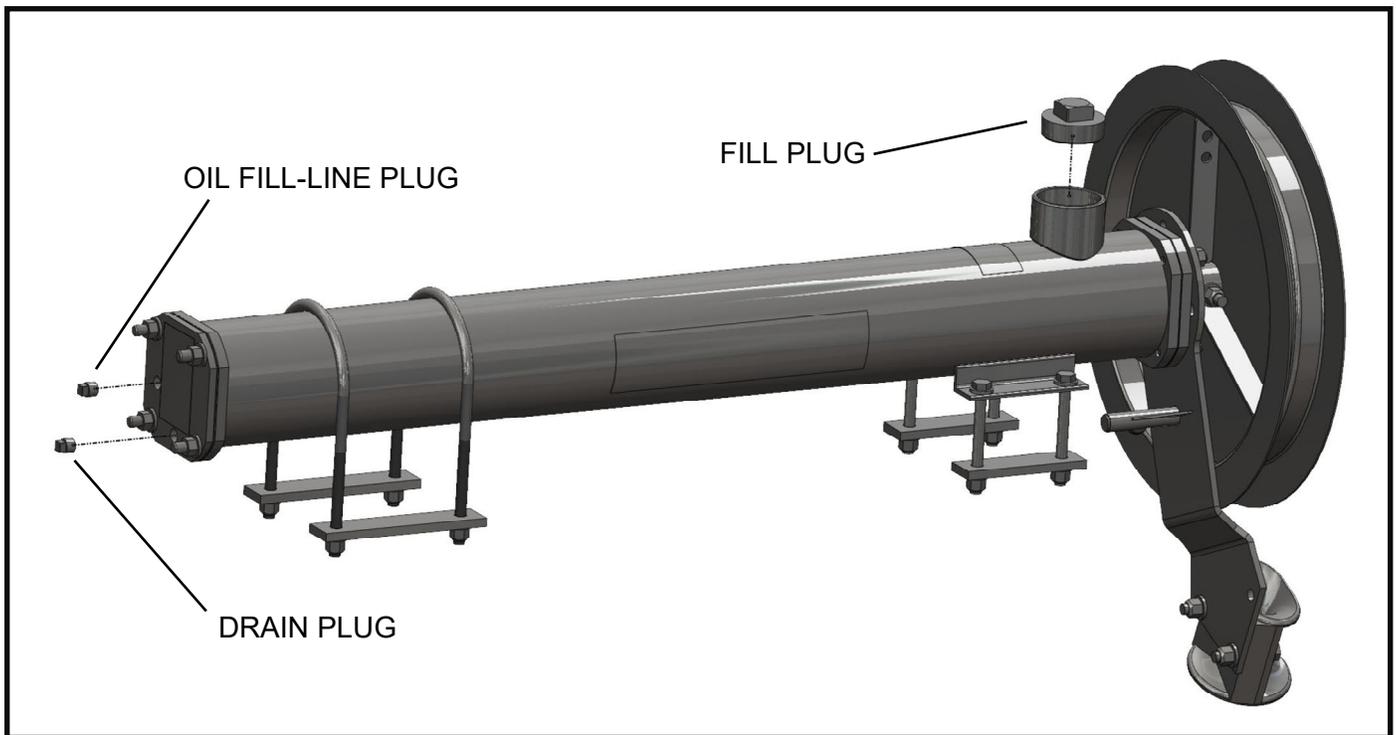
CAUTION: ALWAYS STORE THE TAGLINE IN A HORIZONTAL POSITION TO PREVENT OIL FROM LEAKING THROUGH THE OIL SEAL.

TAGLINE LUBRICATION

The tagline should be lubricated quarterly and before starting a new job using SAE 90 heavy oil. Lubrication instructions can be found below and on the decal posted on the tagline barrel.

1. Remove the 3–inch oil fill plug on the barrel near the cable reel and the 1/2–inch oil fill-line plug on the end plate.
2. Add oil until the level lines up with the oil fill-line-plug-hole on the end plate. Do not fill past this point.
3. Replace the plugs when finished.

FIGURE F.



After some time, parts of the tagline may become worn and will require replacement. This section describes the necessary steps to release spring tension so that the tagline can be safely disassembled. Use whichever method best suits the type of mount and the condition of the unit.

CAUTION: ALL TENSION MUST BE RELEASED FROM THE COIL SPRING INSIDE THE BARREL BEFORE THE TAGLINE CAN BE DISASSEMBLED. SEE INSTRUCTIONS BELOW ON HOW TO PROPERLY RELEASE SPRING TENSION.

METHOD ONE: RELEASE SPRING TENSION WITH CABLE REMAINING ON REEL

Reference the instructions below to release spring tension with the cable remaining on the reel. Use two people to do this.

CAUTION: THIS METHOD IS NOT RECOMMENDED WHEN THE TAGLINE IS MOUNTED INSIDE OF THE BOOM.

1. Lower the boom to ground level.
2. While the tagline is still hooked to the bucket, the one person will hold the reel in place while the other person removes one loop of cable from the reel.
3. The first person turns the reel clockwise one revolution to take up the rope slack and reduce tension on the spring.
4. Repeat until all tension on the spring is released.
5. The tagline is ready for disassembly.

METHOD TWO: RELEASE SPRING TENSION WITH CABLE REMOVED FROM REEL

Reference the instructions below to release spring tension with the cable removed from the reel. Use two people to do this.

CAUTION: BEFORE ATTEMPTING TO REMOVE THE CABLE, THE REEL MUST BE SECURED IN A STATIONARY POSITION. THE CABLE REEL MUST BE IN WORKING CONDITION FOR THIS METHOD.

1. Lower the boom to ground level.
2. Place the dog ratchet against the gusset on the interior side of the cable reel.
3. Unwind all of the cable, and detach the end from the reel. Remove the cable from the area completely.
4. Disengage the dog ratchet, and allow the reel to spin freely until it comes to a stop and all spring tension is released.
5. The tagline is ready for disassembly.

After all tension has been released from the coil spring, the tagline is ready for disassembly. The tagline can remain secured to the boom or it can be removed entirely. Removing the tagline may require burning off the U-bolts. When the tagline is remounted, the U-bolts will need to be replaced.

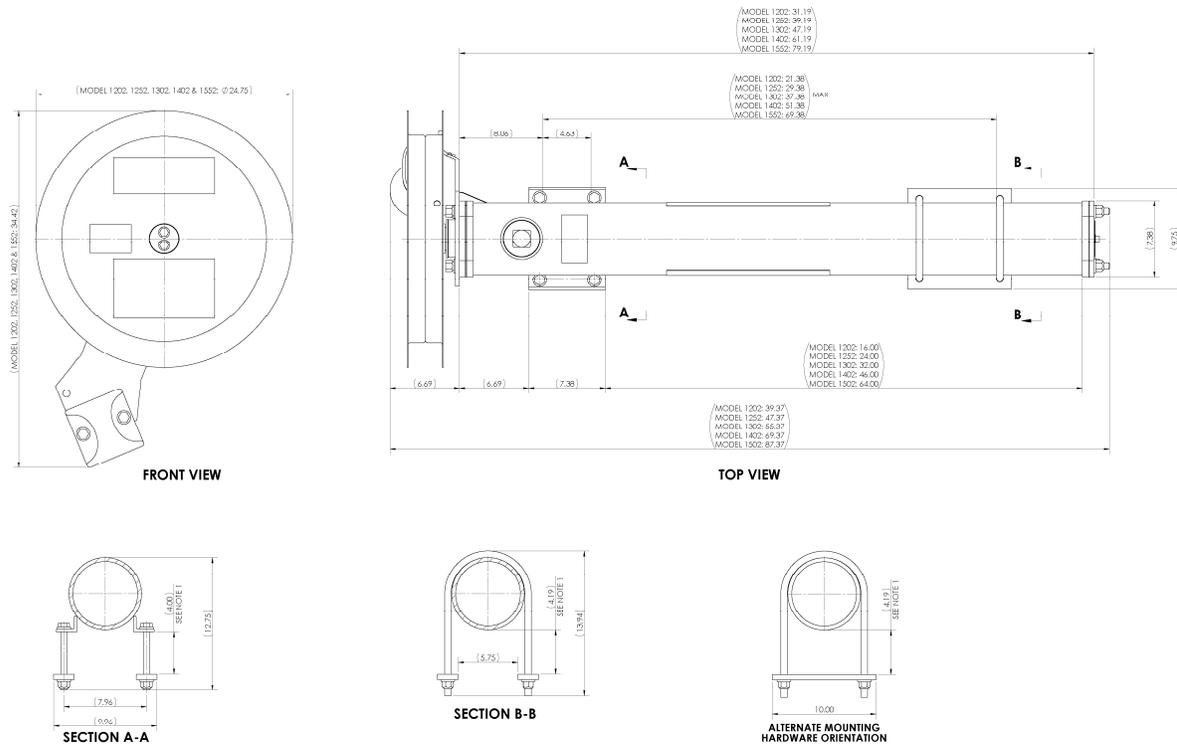
CAUTION: ALL TENSION MUST BE RELEASED FROM THE COIL SPRING INSIDE THE BARREL BEFORE THE TAGLINE CAN BE DISASSEMBLED. SEE INSTRUCTIONS ON PAGE 9 TO PROPERLY RELEASE SPRING TENSION.

TAGLINE DISASSEMBLY

CAUTION: IF YOU ARE DISASSEMBLING THE TAGLINE ON A SURFACE OTHER THAN THE BOOM, THE TAGLINE MUST BE SECURED WITH C-CLAMPS OR AN EQUIVALENT.

To disassemble the tagline, follow the steps below. To reassemble the tagline, reverse these steps.

1. Remove the cap screws from the safety plate.
2. Remove the safety plate.
3. Remove the cable reel.
4. Remove the four nuts connecting the fairlead arm to the tagline barrel.
5. Remove the fairlead arm.
6. Remove the bearing with the shear pin, oil seal, bushing, and gasket. If the bearing sticks, clean the shaft with an emery stick or file.
7. Remove the shaft and coupling.
8. Remove the four nuts connecting the small end plate to the tagline barrel.
9. Remove the end plate, thrust washer, and gasket.
10. Remove the propeller, tubing, and coupling welded through the back.
11. Remove the spring from the tagline barrel.



SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS

IPS CRANES's Single Barrel Taglines are manufactured in five models to accommodate various sized buckets and booms. Each model is engineered to have sufficient cable pullout with the required positive tension to provide full control of the bucket during operation. The tagline model specifications and manufacturer's recommendations for different buckets and booms are given below.

Description	Approx. Weight (Pounds)	Barrel Length (Inches)	Recommended Bucket Size (Yards)	Recommended Boom Length (Feet) Application	Cable Pullout From Neutral (Feet)
IPS CRANES Model 1202 Single	301	30	Small truck cranes	30	45
IPS CRANES Model 1252 Single	326	38	3/8 to 5/8	30	60
IPS CRANES Model 1302 Single	351	46	3/4	40 to 60	70
IPS CRANES Model 1402 Single	392	60	1 to 1 1/2	80	90
IPS CRANES Model 1552 Single	456	78	1 to 1 1/2	Deep digging	135