

## 7F - Series 7 Swivel Davit - Bitt Mount Setup CLASS

### Product & Major Parts List

1. 10" winch handle
2. Winch – 20 or 35 ST
3. Lift line brake assembly
4. Winch plate
5. Brake safety plates
6. Brake Roller
7. Brake safety pin
8. Tension line – 6mm
9. Davit boom arm gate
10. Tension line adjustment buttons
11. Tension line boom pin & cotter pin
12. Lift line w stopper ball – 11mm
13. Snap hook – 1,798lbs. / 8kN rated
14. Boom
  - a. Bitt Mount – 6'-8" standard
  - b. Flat Mount – 4'-3" standard
15. Boom sheave
16. Boom connection to rescue davit
17. Safety pin for davit boom arm gate
18. Base channel (red)
19. Vertical spindle tube with top and bottom blocks
20. Worm gear side handle
21. Spindle gear



### Bitt Mount Installation

22. Upper & lower straps
23. Optional holes for rear angle feet on narrower bitts
24. Rear angle feet (4 units in red / 2 units in clear anodized)
25. Side stabilizers
26. Strap latch clamps



### Bitt Mount – Setup One Time for the Vessel

**Supplied:** Winch handle, lift line with stopper ball and snap hook, boom, tension line & connecting hardware.

**Other Tools Needed:** Allen Wrenches: 5/32", & 5/16", Pliers, Tape Measure, NEVER•SEEZ<sup>®</sup> (Regular Grade or Mariner's Choice), duct tape, LOCTITE<sup>®</sup> and a small diameter line for tethering to prevent davit from going overboard.

**Note:** The C-Hero<sup>®</sup> Bitt Mount Rescue Davit will fit on most bitts with no adjustments. If the height is between 23" and 30" and the diameter is between 8½" and 13½", you will be able to use the davit as shipped. Sections 2 and 3 are only needed if your bitt is not within the above measurements.

1. Select Bitt - Measure - Inspect: Select a bitt to be used for rescues.
2. Typically, the bitt on the quarter is used because it is closer to the water. The bow bitt might be the only choice if there are no bitts aft or the bitts aft are too tall. The forward bitt for the davit works fine, as the crews will use the Rescue Pole aft so it is closer to the water.
3. Any welds that are in the way, or a top flange that needs to be cut down, in just the area the unit will go, should be done now. Use a small grinder and metal cutting wheel if needed.
4. Note: *Ensure that the grinding of weld(s) or other modifications do not diminish the integrity of the bitt itself.* Height of Bitt: Most bitts are 23" - 28" tall, and the upper strap is set in the top position at the factory for this height.
5. If your bitt is under 23" the upper strap will need to be moved down to the middle set of holes. The rear angle feet, being continuous, will accommodate any height bitt. Measure the outboard side of the bitt, as shown in **Image J2**.



**Image J1** Measure bitt diameter



**Image J2** Measure bitt height

## 7F - Series 7 Swivel Davit - Bitt Mount Setup CLASS - Continued

### Bitt Mount – Setup \*continued\* One Time for the Vessel



**Image J3** Depicts how the Rescue Davit should fit, not bottoming out and touching the bitt between the rear angle feet



**Image J4** A properly installed Bitt Mount Rescue Davit



**Image J5** Depicts a big top flange & how it was cut off to make the Rescue Davit work



**Image J6** The bitt dome top was welded on. Weld will be cleaned up where the davit will sit



### Bitt Mount – Setup \*continued\*

#### One Time for the Vessel

**NOTE:** *You may skip Step 2. below if your bitt height is taller than 23"*

#### 6. Upper Strap – Move:

To move the upper strap, use a 5/32" Allen wrench to move the clamp, and a 5/16" Allen wrench on the end of the strap connected to unit, with a 3/4" box wrench. When putting the strap in its lower position, use a piece of tape over the box wrench to hold the nut in, (your hand won't fit in the tubing). Make sure the strap is straight, like the bottom strap.

#### Rear Angle Feet Found On Rear Davit:

These clear anodized angle pieces seat against the bitt to provide a sound connection to the Rescue Davit. They are long enough to accommodate both shorter and taller davits. Therefore, no adjustment to these pieces are necessary.

**NOTE:** *You may skip Step 3. below if your bitt diameter is wider than 8 1/2"*

#### 7. Rear Angle Adjustment Feet – Move In:

The inside holes on the back of unit, should be used for smaller diameter bitts, (less than 8 1/2" [21.59 cm] diameter). Use a 5/32" Allen wrench to relocate. The back of the unit should not bottom out against the bitt.



**Image J7** Back feet, 4 feet version. For shorter bitts, the top red feet and band attachments have been moved down to the lower sets of holes. All 4 feet would also be moved down for a bit diameter less than 8 1/2"



**Image J8** Back feet, 2 feet version shown

**Bitt Mount – Setup** \*continued\*

**One Time for the Vessel Strap Buckle Assemblies**

**8. Top Strap**

- a. Open the top clamp, and thread the strap through it, making sure there are no twists.
- b. To **Tighten** the strap, pull it tight against the bitt, and close the clamp



**Image J9** Top buckle thread



**Image J10** Top buckle finished

**9. Bottom Strap**

- a. Check the bottom strap to make sure the strap is not twisted, and the hook will be facing away from the bitt as shown in **Image J13**.
- b. To **Tighten** the strap, once the hook is in, pull the tail of the strap tight and close the clamp.
- c. To **Loosen** the strap, open the clamp and move the adjuster, and take the hook out of the clamp.
- d. Stow the bottom strap in the base.



**Image J11** Bottom buckle thread



**Image J12** Bottom buckle finished



**Image J13** Bottom hook in place



**Image J14** Tether Line\*not included\*

**Note:** C-Hero® strongly recommends connecting a tether (not included) to the hole under the winch plate or around the winch plate. See **Image J14**.

### Bitt Mount – Setup \*continued\*

#### Davit Boom Assembly

#### 10. Boom Installation

- Stand the base unit up against the bulkhead.
- The side handle is used to move the boom left and right. Use this handle (**Image J15**) to bring the davit boom to the center of the unit. The bottom connection point will be pointing straight away from the davit body.
- Take the nut and bolt off of the davit connection point.
- Lay the davit boom on the deck with the slot for the tension line facing up (towards the unit). Tighten with a 5/16" Allen wrench and 3/4" wrench, using Never-Seez<sup>®</sup> (Regular Grade or Mariner's Choice).



**Image J15** Side handle



**Image J16** Boom connected to davit base

#### 11. Boom Red Tension Line Installation

- Take the pin out of the end of the davit boom.
- Prop up the davit boom then grab the red tension line from under the winch plate.
- Place the eye of the red tension line in the slot and then pin it. Bend the cotter pint to secure it shown in **Image J17**.



**Image J17** Tension line around the pin inside of the boom. Cotter pin has been inserted and bent to secure in place.



### Bitt Mount – Setup \*continued\*

#### Lift Line

##### 12. Lift Line Installation

- a. Thread the lift line with stopper ball and into the sheave at the end of the davit boom.  
As shown in Image J17 on the previous page.
- b. Check the lift line to make sure that it is not crossed with the tension line.
- a. Lead the lift line into front of the rope brake, under the bronze roller.
- b. Pull the safety pin, open the brake arm, and the rubber will move out of the way.
- c. Use a rolling motion to get the line through the brake.
- d. The winch gets loaded clockwise, 4 wraps, over the chrome tailing arm and into the tailing jaws.
- e. There should be about 1' of line from the winch. Roll the rubber to line up with the holes, then pin it.
- f. Tie an overhand knot on the end of the lift line, to prevent it from running out.
- g. Winch handle (**Image J20**) goes into the top of the winch, use thumb lock.
- h. Snap the line brake closed. Best practice is to store the winch handle in the winch.
- i. **To Stow the Davit Boom:** Fold davit boom up against the winch plate and pin.  
See **Image J21** below.

**NOTE:** The winch and rope brake should always be set before each use, check to ensure the tethered pin is in place with the rubber. The rope brake, when closed, allows the line to be pulled, but not let out.



**Image J18** Line brake open



**Image J19** Line brake closed, line wrapped, in the winch jaws. Tailed off the chrome tailing arm and ready to lift.



**Image J20** Winch handle with thumb lock



**Image J21** Davit boom stowed and pinned

### Bitt Mount – Setup \*continued\*

#### Installation of Davit & Fit Check on Bitt

##### 13. Davit Ready Fit Check

- a. The bitt should be checked first to assure that any welds or any top flange interference was previously addressed.
- b. Open both clamps and place the tether on the bitt to be used. Place the unit on the outboard side of the bitt and put the top strap over the bitt. Check that the feet on the back are touching the bitt, and not the unit. Tighten the clamp when ready.



**Image J22** Top strap with clamp ready to be closed

- c. The bottom strap goes on after the top strap and comes off the bitt before the top strap comes off (when removing). Take the strap out of the base and place the hook into the open clamp facing away from the bitt, pull the strap tight and close the clamp.
- d. To loosen the strap, open the clamp and move the adjuster, take the hook out of the clamp, which is shown in **Image J23**.
- e. Stow the bottom strap in the base.
- f. To release the davit boom: Hold the red tension line, and reach out to the davit gate, and pull the pin. Swing the gate out of the way.



**Image J23** Hook is in the clamp



### Bitt Mount – Setup \*continued\*

#### Installation of Davit & Fit Check on Bitt \*continued\*

#### 14. Davit Boom Height Adjustment While Attached To Bitt

**NOTE:** The red boom tension line is a fixed piece of line that is always connected and depending on the angle of the bitt, may need to be adjusted. This will help ensure the lift line will clear the tires and fenders.

- Deploy the davit boom and lift line, and see where the snap hook hangs, it should clear the outboard rubber. **In most cases a 45-degree angle on the davit boom is optimum.**
- The davit boom can be lifted by the red tension line, and slack taken out of it under the winch on the adjusting buttons, as shown in **Image J24**, and the video below.



**Image J24** Boom height adjustment, with davit securely attached to the bitt. Holding the red tension line, lift the boom to approximately to a 45-degree angle and wrap the red tension line around the tension line adjusting buttons found underneath the winch plate.



- Use a figure "8" or round turns around the buttons as shown in **Images J25 & J26**.
- It may take a couple of times to get the desired angle.
- Once the boom angle is set, check to make sure the wraps are tight and properly seated. Twist the tension line on one of the buttons to help seat the wraps from not coming off.



**Image J25** Beginning wrap to adjust boom height angle



**Image J26** Wraps on tension buttons with a half hitch finish

### Bitt Mount – Setup \*continued\*

#### 15. Final Adjustment on Deck – Tension Line Centering & Securing

- The red tension line will get lead through the eye strap under the winch plate. This keeps the tension line centered and always at the ready. This should be completed on deck to avoid losing the bolt.
- Remove the bolt from the eye strap holding the tension line, found on the end of the underside of the winch plate. Use a 5/32" Allen wrench. See **Image J27** below.
- Loosen the second bolt just enough to be able to swing the eye strap towards the davit boom cradle.
- Slip the red tension line through the eye strap. Secure the eye strap with the removed bolt and add a drop of LOCTITE. Then tighten the remaining bolt. It should look like **Image 28** below.



**Image J27** Eye strap, one end unfastened and opened with tension line running through it



**Image J28** Eye strap refastened with the tension line running through it



**Bitt Mount – Setup \*continued\***



**Image J29** Rescue davit attached & ready to deploy



**Image J30** During a MOB drill

**16. The Bitt Mount Rescue Davit One Time Adjustments Are Now Complete**

- a. The Rescue Davit location and selected rescue bitt information should be visibly posted.
- b. Initial setup is a perfect time to refer to this manual for pictures of different types of bitts.
- c. Moving a Rescue Davit to another boat? Refer to the manual for setup.