

J.K. FABRICATION, Inc.

HYDRAULIC MARINE EQUIPMENT

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GENERAL ANCHOR WINCH INSTRUCTIONS

A. General Description

The **J.K. Fabrication** Direct Drive Aluminum and Stainless Steel Anchor Winch is constructed to provide many years of reliable service, being built with the finest Marine Grade Materials and utilizing the proven RE Series of hydraulic motors from White Hydraulics. The Winch is designed to haul (or pay-out) rope (or cable) by the rotation of the hydraulic powered drum. It is important that the Anchor Winch be mounted “in-line” with the vessel Bow Roller, so that the incoming rope (or cable) spools onto the winch drum as evenly as possible.

Contact **J.K. Fabrication** for recommendations and circuit diagrams before adding an Anchor Winch to your hydraulic system.

CAUTION

**AS WITH ANY WINCH OR HOIST, EXTREME CARE
MUST BE FOLLOWED TO PREVENT INJURY WHILE IN
USE. DO NOT OPERATE THE J.K. FABRICATION
ANCHOR WINCH IN AN UNSAFE MANNER AT ANY
TIME.**

B. Anchor Winch Installation

The **J.K. Fabrication** Anchor Winch must be securely mounted to a rigid surface, which will not flex when the winch is in use. The winch should be mounted with the centerline of the drum in a horizontal position. Also consider the strength of the deck the winch will be installed onto, along with any needed winch foundation, which may be necessary to strengthen (and/or to secure) the winch to the deck, along with the location of the hydraulic hose connections.

In determining the Anchor Winch hauling location, you should consider that the **J.K. Fabrication** Anchor Winch will spool the rope (or cable) onto the drum more evenly if the winch is mounted farther from the bow roller. The closer the winch is to the roller, the more un-even the rope (or cable) will spool onto the drum, as the fleet angle is greater.

Secure the winch to your deck using best practice. Remember, you may not have to anchor very often, but when you do, you'll want the anchor winch to hold, and not fail. If you have any doubt, consult your naval architect.
Note: Large holes are provided in the winch housing to aid in mounting.
Use Bolts of adequate Size and Strength to mount the Anchor Winch keeping in mind the intended load on the winch.

The **J.K. Fabrication** Anchor Winch is Pre-plumbed with a Directional Control Valve for easy installation (see Fig. 1 below for Typical Connection of Hydraulic Lines to Winch Control Valve).

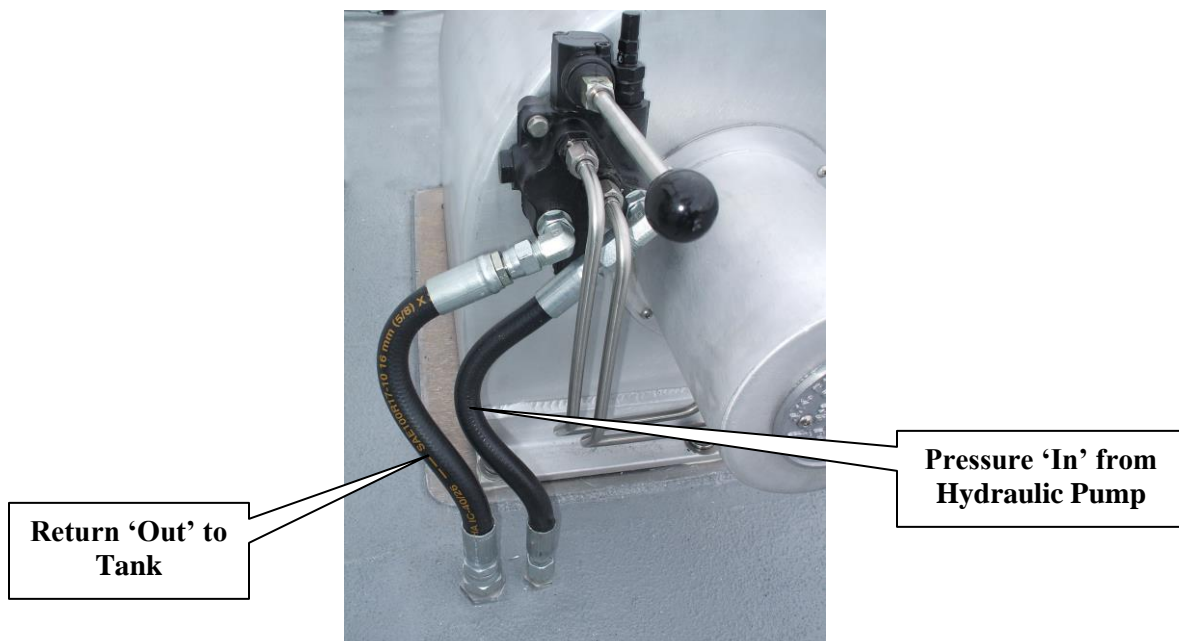


Figure 1- Typical Hose Connections

C. Anchor Winch Operation and Wire Cable Installation

As the **J.K. Fabrication** Anchor Winch is equipped with a Push-Pull operated Valve Spool having four positions, moving the valve control handle will cause the winch to:

- 1) Haul-in
- 2) Center or neutral (Hold Position)
- 3) Pay-out
- 4) Float-position or free-wheel

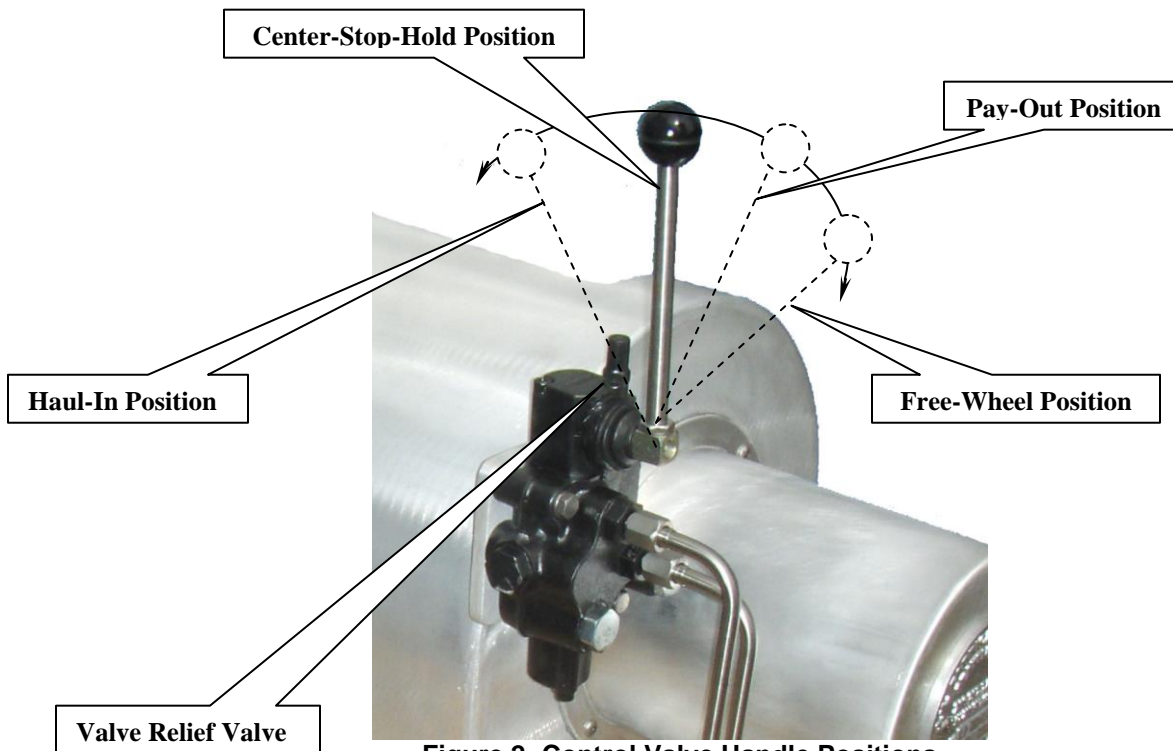


Figure 2- Control Valve Handle Positions

- **NOTE:** The **J.K. Fabrication** Anchor Winch Directional Control Valve is equipped with a Relief Valve 'Factory-Set to 1500 PSI.' Adjustment of this valve is possible should customer desire to change. Please consult **J.K. Fabrication** for instructions prior to adjusting.
- **NOTE:** Even though the Directional Control Handle is designed to be re-positional, **NEVER** re-position the handle while the Hydraulic Power is on, as loss of winch control could be the result!
- **NOTE:** Spool Cable onto the Drum in **Overwound** direction, and always have **AT LEAST TWO LAYERS** of Cable on the Drum **UNUSED** during payout.

The **J.K. Fabrication** Anchor Winch is equipped with a locking Dog to firmly lock the drum while anchored. **NOTE: Wire Cable must be spooled ‘Overwound’ onto the Drum for the Dog to work properly.**

Drum Dog Operation: Upon completion of Pay-out of Anchor and Cable, Loosen Dog Wing Nut, Rotate Dog Clip towards the Anchor allowing the dog arm (pawl) to engage the drum ratchet. (See Fig. 3 and Fig.4)

————> **NOTE: Always have the Drum Dog ‘ENGAGED’ while anchored, AND while hauling in your Cable and Anchor!**

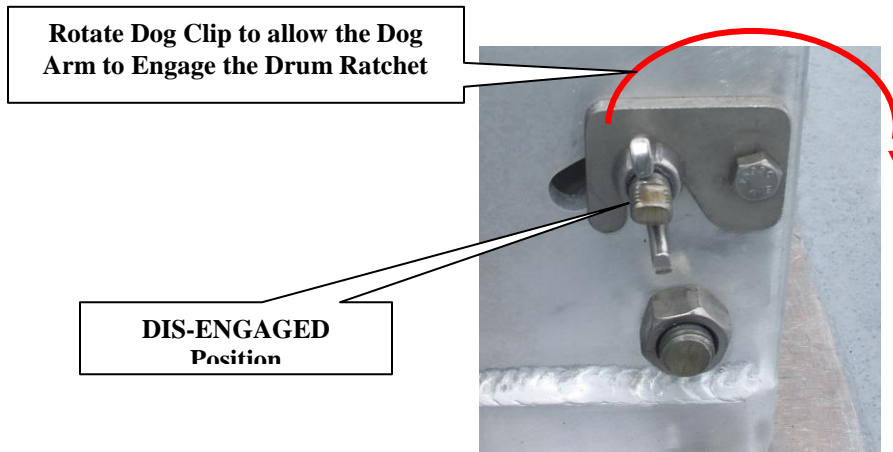


Figure 3- Locking Dog Position “A” Allows Drum to Rotate Freely

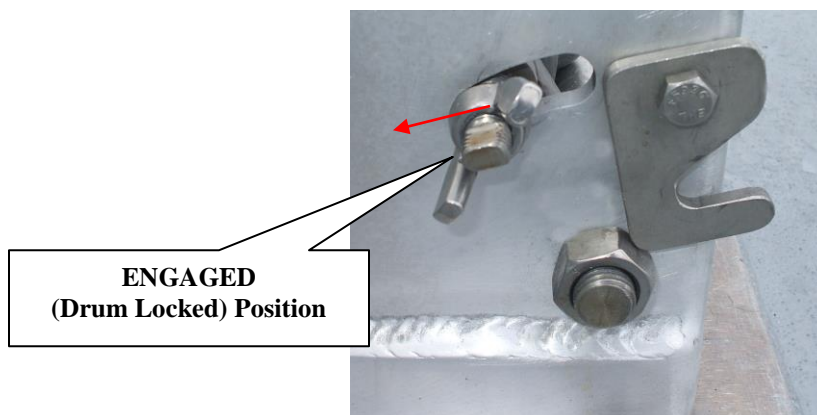


Figure 4- Locking Dog Position “B” Engages Drum-Dog to Drum, Locking Drum While Anchored

NOTE!

————> **DO NOT Engage ‘Locking Dog’ while Anchor Winch Drum is Turning!**

Wire Cable Installation

All **J.K. Fabrication** Direct Drive Anchor Winches are designed to ‘Over-Spool’: that is, the cable or line must be led onto the drum above the Core Barrel. This orientation allows the Drum Dog Pawl to work properly.

Located on the Drum Core Barrel is the Cable Hold Tube. This Tube is welded securely to the Core Barrel internal structures, and is fitted with set screws. When spooling onto the drum, the cable is held fast by this tube and the tightened set screws. The Sole purpose of this arrangement is to allow the initial spooling of the cable onto the drum.

- **NOTE: THE CABLE HOLD TUBE AND SET SCREWS ARE NOT DESIGNED TO WITHSTAND ANY LOADS GENERATED DURING THE USE OF THE WINCH.**
- **J.K. Fabrication strongly recommends a minimum wire capacity of Two Layer’s deep on all J.K. Fabrication Winches during operation. This means that the 1st and 2nd layers of wire in direct contact with the Core Barrel must never be wound or unwound when the winch is under loaded conditions. This condition insures secure handling of the intended loads, along with safe operation of the winch.**
- **ALL WINCH OPERATORS MUST BE NOTIFIED AND AWARE OF THE ABOVE RECOMMENDATION!**

D. Hydraulics

The **J.K. Fabrication** Direct Drive Anchor Winch requires a vessel hydraulic system delivering 3 to 5 Gallons Per Minute (GPM), along with a corresponding hydraulic system operating pressure of 1500 Pounds Per Square Inch (PSI) (1800 PSI Maximum), for normal winch operation.

(See the Typical Hydraulic Circuit Drawing following the General Instructions for Hydraulic Circuit Recommendations)

- **NOTE: The J.K. Fabrication Direct Drive Anchor Winch is designed to develop very high (and potentially dangerous) line pull torque. Consult with J.K. Fabrication or a licensed Hydraulic Company to ensure proper Hydraulic Connections, Hydraulic Line Sizes, Hydraulic Flows and Hydraulic Pressures.**

E. Maintenance

There is one provided grease fitting (which lubricates the outermost drum bearing) on the **J.K. Fabrication** Anchor Winch. It is recommended that during heavy anchor winch operations this Zerk Fitting be greased on a weekly basis with Multi-purpose grease.

