



CD3500 BOAT LIFT WINCH



WARNING READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THIS WINCH. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN SERIOUS OR FATAL INJURY. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

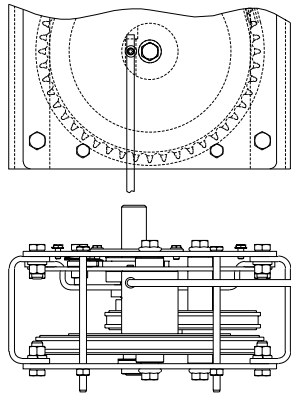


IMPORTANT SAFETY INFORMATION

- This brake winch is built for raising and lowering boat lifts and other similar applications. It is not to be used as a hoist for lifting, supporting or transporting people, or for loads over areas where people could be present.
- Respect this winch. High forces are created when using a winch, creating potential safety hazards. It should be operated and maintained in accordance with instructions. Never allow children or anyone who is not familiar with the operation of the winch to use it. A winch accident could result in personal injury.
- Check winch for proper operation on each use. Do not use if damaged. Seek immediate repairs.
- Never exceed rated capacity. Excess load may cause premature failure and could result in serious personal injury. This winch is rated to pull 1750 lbs. single line and 3500 lbs. double line on the second layer of cable on reel. Using more layers of cable increases the load on the winch.
- Never apply load on winch with cable fully extended. Keep at least two full turns of cable on the reel. Check cable on every use. Replace at first sign of kinks, broken wires, deformation or any other damage.
- Secure load properly. When winching operation is complete, do not depend on winch alone to support load.

ASSEMBLY – The crank wheel and hub for this winch are not made by Dutton-Lainson Company, so check the following to ensure trouble free operation. The side of the hub that contacts the brake lining plate must have a counterbore that is at least 1/8" deep before the threads begin. Thread the crank wheel onto the drive shaft and make sure the wheel threads on freely without any binding. Thread the wheel all the way onto the shaft and ensure the shaft sticks out past the hub by at least 1/16". Install the washer and bolt onto the end of the shaft. The winch should make a clicking noise when the crank wheel is turned clockwise. See parts drawing for details.

WINCH MOUNTING AND CABLE ATTACHMENT – Mount the winch using two 3/8" Grade 8 bolts, washers, lock washers, and nuts. Winch may be mounted on either side depending on the application. To attach cable, turn wheel clockwise until hole in reel is vertical and set screw is accessible through hole in front of winch base. Loosen the set screw and insert cable into hole in reel hub. Make sure end of cable is flush with O.D. of reel hub and tighten set screw with 1/8" hex key. Keep three wraps of cable on drum before applying load.



WINCH MAINTENANCE – Keep winch in good working order. Damaged or severely worn parts create unnecessary dangers and could result in personal injury or property damage. The winch requires periodic maintenance. The following check should be made at least once annually and more frequently when the winch is exposed to an environment which is particularly dirty or wet.

1. Remove all load from the winch so there is slack in the cable. Remove the top cover from the winch and examine the winch gear train and brake mechanism for any rust, corrosion, or buildup of debris which might be present.
2. Inspect links on all roller chains and replace if there are any cracked or missing rollers. Apply oil to roller chains with a brush or oil can. Oil each link between the pin and bushing and the link side plates. Apply a drop of oil at ends of bushings on intermediate sprocket assemblies and to bushings on primary drive shaft.
3. **CAUTION!** Do not grease or oil any of the brake mechanism parts. If needed, remove brake components. Remove the bolt and washer from the end of the drive shaft and unthread the crank wheel off the shaft by turning it counterclockwise. Remove the brake cover by removing the three screws holding the cover to the front base plate. Pull the ratchet pawl out of engagement with the ratchet wheel and slide the brake lining plates and ratchet wheel off the drive shaft.

OPERATING INSTRUCTIONS – Wind cable onto winch reel by turning crank wheel in clockwise direction. This should produce a loud, sharp, clicking noise. The load will remain in position when the wheel is released. Wind cable off the winch reel by turning the wheel counterclockwise (no noise will be produced). The load will remain in position when the wheel is released, but for extra security it is recommended that the wheel be turned clockwise until at least two clicks are heard. This will add extra tightness to the brake mechanism. Always satisfy yourself that the winch is holding the load before releasing the crank wheel.

CAUTION! Once the load has been lowered to the desired position, continuing to wind cable off the drum may result in the cable becoming tangled or may allow the cable to wind on the drum in the wrong direction. Lifting a load by turning the crank wheel in the counterclockwise direction could result in dropping the load. The brake only works when the load is raised by turning the crank wheel in the clockwise direction.

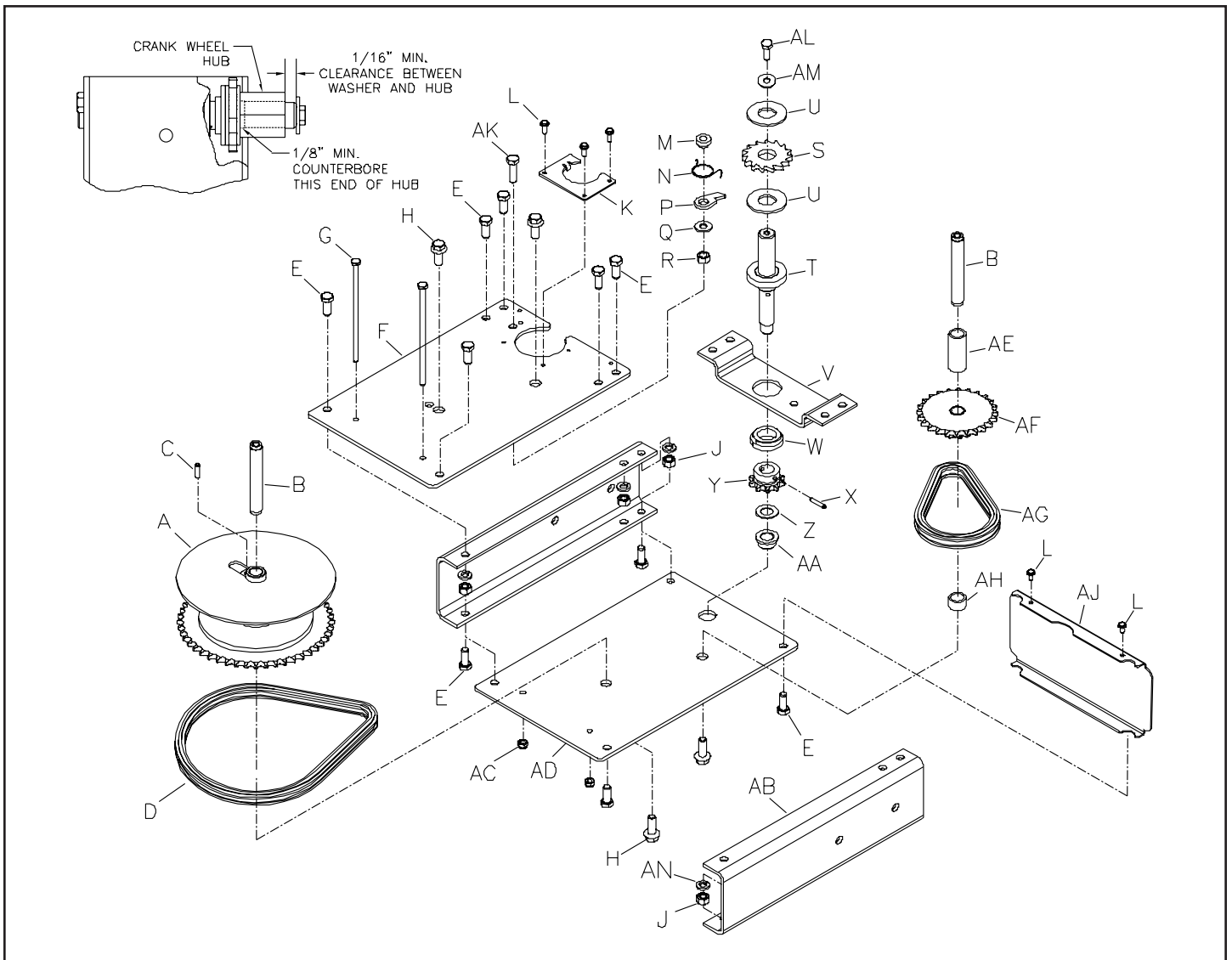
NOT FOR MOVEMENT OF HUMAN BEINGS

MOTOR DRIVES – Operating the winch with a motor drive may result in accelerated wear and reduced winch life. Dutton-Lainson Company is not responsible for issues that are the result of operating the winch with a motor drive.

WARNING! A motor drive may overpower the winch and/or cable and could result in damage or personal injury.

4. Check the ratchet wheel, brake lining plates, crank wheel hub and the washer on drive shaft assembly for any build up or glaze (shiny spots) which may be present. This can be removed by rubbing these parts lightly with sand paper.
5. Holding tension in the ratchet pawl, reinstall the first brake lining plate, ratchet wheel, and second brake lining plate onto the drive shaft. Assemble the brake cover onto the winch with the three screws. Apply a light coating of wheel bearing grease to the drive shaft threads and thread the crank wheel onto the shaft by turning it clockwise. Install the washer and bolt onto the end of the shaft. Make sure the winch is making a clicking sound when turning the crank wheel clockwise.
6. Check the mounting of the winch to be sure that it is secure and check the cable for any abnormal stiffness, kinking or broken strands. Replace the winch cable at the first sign of damage. NOTE: Winch cable will last longer and remain more flexible with occasional application of light oil. The winch finish can be protected and will provide longer service if it is washed with water and then wiped with light oil or wax.

If you have any questions whatsoever concerning the above procedure, please contact the manufacturer.



Ref.	Description	Part No.	Ref.	Description	Part No.
A	Reel Assy	306292	V	Bearing Support Plate	406167
B	Spacer Shaft	406215	W	Bushing	206372
C	Set Screw, 1/4"	206745	X	Roll Pin, 3/16 x 1-3/8	203963
D	Roller Chain, 54 Link	206690	Y	Sprocket 10T	406164
E	Cap Screw, 3/8 x 1	206782	Z	Washer, 5/8	205139
F	Front Base Plate	206746	AA	Bronze Flange Bushing	206686
G	Cap Screw, 1/4 x 5	206788	AB	Side Base Plate	406219
H	Flange Screw, 3/8 x 3/4	206779	AC	Lock Nut, 1/4	206780
J	Hex Nut, 3/8, Brass	206784	AD	Back Base Plate	206747
K	Brake Cover	406184	AE	Spacer, Long	406178
L	Thread Forming Screw	206781	AF	Sprocket Assy, 10T, 24T	306245
M	Ratchet Spacer	406171	AG	Roller Chain, 32 Link	206689
N	Ratchet Spring	204363	AH	Spacer, Short	406216
P	Ratchet Pawl	404409	AJ	Top Cover	406221
Q	Washer	205055	AK	Ratchet Bolt, 3/8	206786
R	Lock Nut, 3/8	204803	AL	Cap Screw, 5/16 x 1/2	205118
S	Ratchet Wheel	404408	AM	Washer, 5/16	205119
T	Primary Shaft	306291	AN	Lock Washer, 3/8	206783
U	Pressure Plate	205123			



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