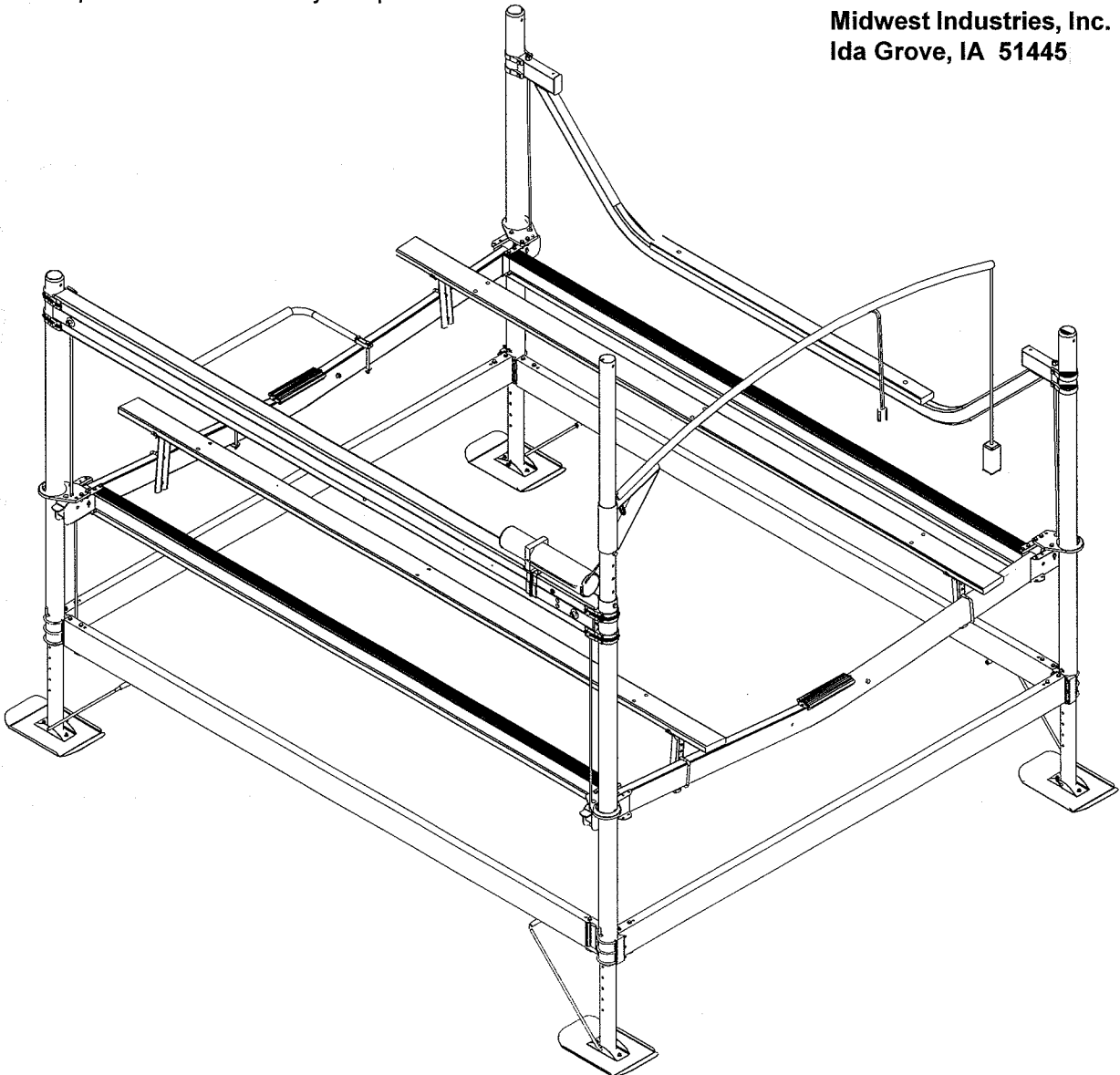


### SSV60120 HYD ShoreStation Aluminum V-Frame Hydraulic Hoist Parts Manual

Your **ShoreStation** Hydraulic Boat Hoist is designed to give years of dependable service. Following the instructions in the operator's manual will insure its dependability and more important, **YOUR** safety. Read through this entire operator's manual before attempting to operate your hoist. Our goal is your safety - help us help you by knowing and observing the operating precautions and limitations you will find listed herein. If you do not understand any of these instructions, please ask your dealer for his personal attention to your questions.

Midwest Industries, Inc.  
Ida Grove, IA 51445



## SSV60120 HYD Bundles

66556	Drop Side Bundle HYD V60120
66604	Bunk Bundle HYD 60120
66606	Platform Bundle HYD 60120
66607	Winch Tube Bundle HYD 60120
66608	Hydraulic Pump Assy HYD Hoist
SS1204	Control Arm Assy
66676	Leg Bundle SSV60120 HYD
66678	Hdwe Box V60120 HYD
66689	Lower Frame Bundle V60120 HYD

## Tools Required for Assembly

9/16" Socket / Wrench  
3/4" Socket / Wrench  
5/16" Socket / Wrench  
7/16" Socket / Wrench  
Wire Threader

## SAFETY PRECAUTIONS

### DO NOT OPERATE THIS HOIST WITHOUT FIRST STUDYING THIS OWNER'S MANUAL

1. See to it that you, your family, and anyone else who uses the hoist looks upon the unit not as a toy, but a piece of heavy equipment that deserves your respect and good judgment.
2. Before allowing anyone to operate the unit, be sure they fully understand the proper operating procedure.
3. Do not exceed maximum capacity of unit, overloading may cause mechanical failure and serious personal injury.
4. All persons should stand clear and should not be allowed to board your watercraft when it is being raised or lowered.
5. If you choose to remove the pump cover and inspect or work on the pump, be sure the platform is completely lowered.
6. It is a good safety policy to restrict children, as well as adults, from playing on or near the hoist.
7. Service pump annually. **IMPORTANT:** Pump maintenance schedule must be followed to avoid possible failure and injury.
8. Check cable for wear or fraying and also stress on cable attaching ends. If this occurs, replace cable immediately.
9. Be sure the hoist is installed level, severe out of level installation may cause hoist hang up and serious personal injury.
10. Do not work on your watercraft or hoist with watercraft on the hoist.
11. Check all sheaves, make sure they are turning and operating properly.
12. Check fasteners on cable ends to be positive they are threaded properly (see setting up instructions).
13. If the platform begins to fall down for any reason, at no time should you attempt to prevent it from doing so. Such action could result in injury to arms and hands. Instead, simply let the platform fall down into the water. Doing so will neither damage your watercraft or hoist.
14. Never pick up on platform of hoist while trying to move, position, or transport hoist. Doing so may cause serious personal injury.
15. Never stand or walk on hoist platform while in any raised position. Doing so may cause serious personal injury.

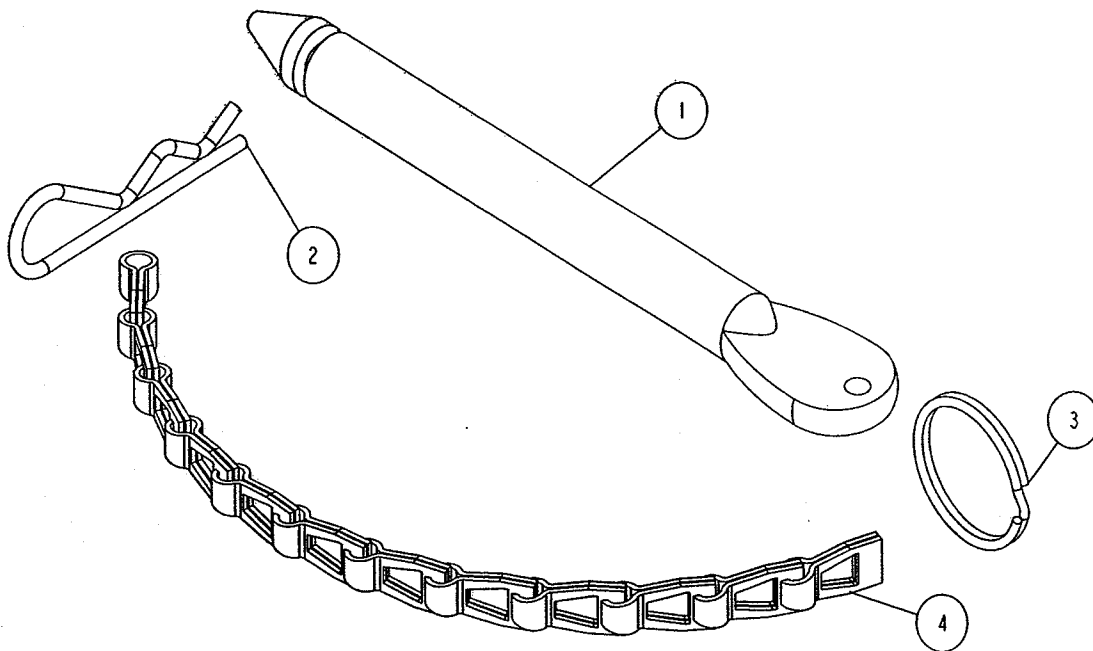
## SAFETY MAINTENANCE

It is recommended that your ShoreStation hoist be thoroughly inspected at least once each season:

1. Tighten all bolts.
2. Check pulleys and make sure they are all turning freely.
3. Inspect all cables for fraying, wearing or deteriorating. If any signs appear, replace cables.
4. Check frame thoroughly.
5. Check pump as per manufacturer's specifications.

### 68139 Leg Pin Assembly

BILL OF MATERIALS			
ITEM	PART #	DESCRIPTION	QTY
1	68138	PIN - SHORESTATION ADJ LEG	1
2	1550300	HITCH PIN CLIP #7 STAINLESS STEEL	1
3	1710016	RING - 1" SPLIT	1
4	2210295	CHAIN #35 SASH STAINLESS STEEL	1



#### Instructions:

Remove the existing leg pin and hitch pin clip from the leg. Replace with the new 68139 leg pin assembly.



# ShoreStation®

## Aluminum Hoist

# Owner's Warranty Information

### Your ShoreStation® Hoist Limited Warranties

During the terms of the Limited Warranties on your aluminum ShoreStation hoist, Midwest Industries, Inc. (hereafter referred to as "Midwest") covers the cost of all parts and labor needed to repair or replace any Midwest supplied item that proves defective in material, workmanship or factory preparation. These repairs or replacements (parts and labor) will be made by your dealer at no charge using new or remanufactured parts.

### Your Legal Rights Under Midwest's Limited Warranties

All of the Midwest Limited Warranties stated in this document are the only express written warranties made by Midwest applicable to the aluminum ShoreStation hoist. These Limited Warranties give you specific legal rights and you may also have other rights which vary from state to state. You may have some implied warranties, depending on the state in which your aluminum hoist is registered.

#### For example, you may have:

1. An "implied warranty of merchant ability" (that your hoist is reasonably fit for the general purpose for which it was sold);
2. An "implied warranty of fitness for a particular purpose," (that your hoist is suitable for your special purposes; if your special purposes were specifically disclosed to Midwest itself – not merely to the distributor or dealer – prior to purchase.)

These implied warranties are limited, to the extent allowed by law, to the time period covered by the written warranties set forth in this publication.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

#### Subsequent Buyer/Owner

This Warranty is extended only to the first buyer/owner of the hoist. This is defined as the first legal owner of a Midwest aluminum ShoreStation other than an authorized Distributor or Dealer who has bought the hoist from Midwest for resale to the public.

#### Hoist Alteration

This warranty does not cover alteration of the aluminum ShoreStation hoist, or failure of hoist components caused by such alteration.

#### Production Changes

Midwest and its distributors/dealers reserve the right to make changes in aluminum ShoreStation hoists built and/or sold by them at any time without incurring any obligation to make the same or similar changes on hoists previously built and/or sold by them.

### Your 2-Year Basic Limited Warranty

#### What is covered:

The 2-Year "Basic Warranty" covers every Midwest supplied part on your aluminum ShoreStation hoist and aluminum canopy support frame.

The "Basic Warranty" begins on your hoist's Warranty Start Date. The Warranty Start Date is the earlier of (1) the date you take delivery of your new aluminum ShoreStation hoist, OR (2) the date the hoist was first put into service (for example, as a dealer "demo" or as a Midwest company hoist). The "Basic Warranty" lasts for 2 years (24 months) from this date.

The "Basic Warranty" covers the cost of all parts and labor needed to repair any item on your aluminum ShoreStation hoist that is defective in material, workmanship or factory preparation. You pay nothing for these repairs.

#### Exceptions:

The following items are not covered:

- paint and/or finish
- vinyl canopy cover

### Your 10-Year Fabricated Frame & Extrusion Warranty

#### What is Covered:

The "Frame and Extrusion Warranty" covers these parts and components of your aluminum ShoreStation hoist frame for 10 years beginning at your hoist's Warranty Start Date:

**Extruded Aluminum:** guide post tube, corner post tube, guide post mounting extrusion, winch mounting plate, winch post tube, winch post plate, winch post mounting extrusion, adjustable leg tube, lower side frame tube, lower frame corner bracket, lower frame tube, lower cross-member tube, side frame tube, platform crossmember tube, platform rail, platform



# SSV60120 HYD Lower Frame

REF#	PART#	DESCRIPTION	QTY
1	A103	ALUM BASE PAD .....	4
2	A104	ALUM BASE PAD CHANNEL CLAMP .....	4
3	A389	BLACK PLASTIC CAP .....	3
4	A126	BOTTOM CORNER CABLE BRKT .....	2
5	A315	ADJUSTMENT LEG .....	4
6	0210100	CARR 3/8-16 X 3/4 GR5 .....	8
7	1440101	FLANGE LOCKNUT SMALL 3/8-16 .....	48
8	3510014	GRIP-BLACK PLASTIC - 1/2" ID X 4 1/2 .....	4
9	A354	GUIDE POST 3 1/2"OD X 84" .....	4
10	1440269	HEX NUT FINISH 5/8-11 GRB .....	4
11	0110069	HH 3/8-16 X 6 1/2 CS GR5 .....	12
12	0110070	HH 3/8-16 X7 CS GR5 .....	4
13	1540300	HITCH PIN CLIP #7 .....	8
14	A135	LEG ADJUSTMENT PIN .....	4
15	A141	LEG LIFT ROD(BOAT LIFT) .....	4
16	A302	LOWER CORNER BLOCK 5 11/16 .....	4
17	62689	LOWER FRAME TUBE 6 X 2 X 119IN .....	2
18	66688	LOWER FRAME TUBE 6 X 2 X 143IN .....	2
19	0310097	RUB 3/8" X 3 7/8 X 4 5/8 .....	12
20	1340095	WASHER USS FLAT 3/8 .....	16
21	1340105	WASHER USS FLAT 5/8 .....	2

Assemble the base pad clamps (Ref.#2) to the base pads (Ref.#1) with 3/8" X 3/4" carriage bolts (Ref.#6) and 3/8" flange lock nuts (Ref.#7) on all four (4) pads. Tighten.

Place the black grips (Ref.#8) on the four (4) leg lift rods (Ref.#15).

Mount the base pads to the adjustable legs (Ref.#5) with the leg lift rods (Ref.#15) in the bottom hole and secure with the hitch pin clips (Ref.#13). **NOTE:** The leg lift rods must clear the lower corner blocks (Ref.#16).

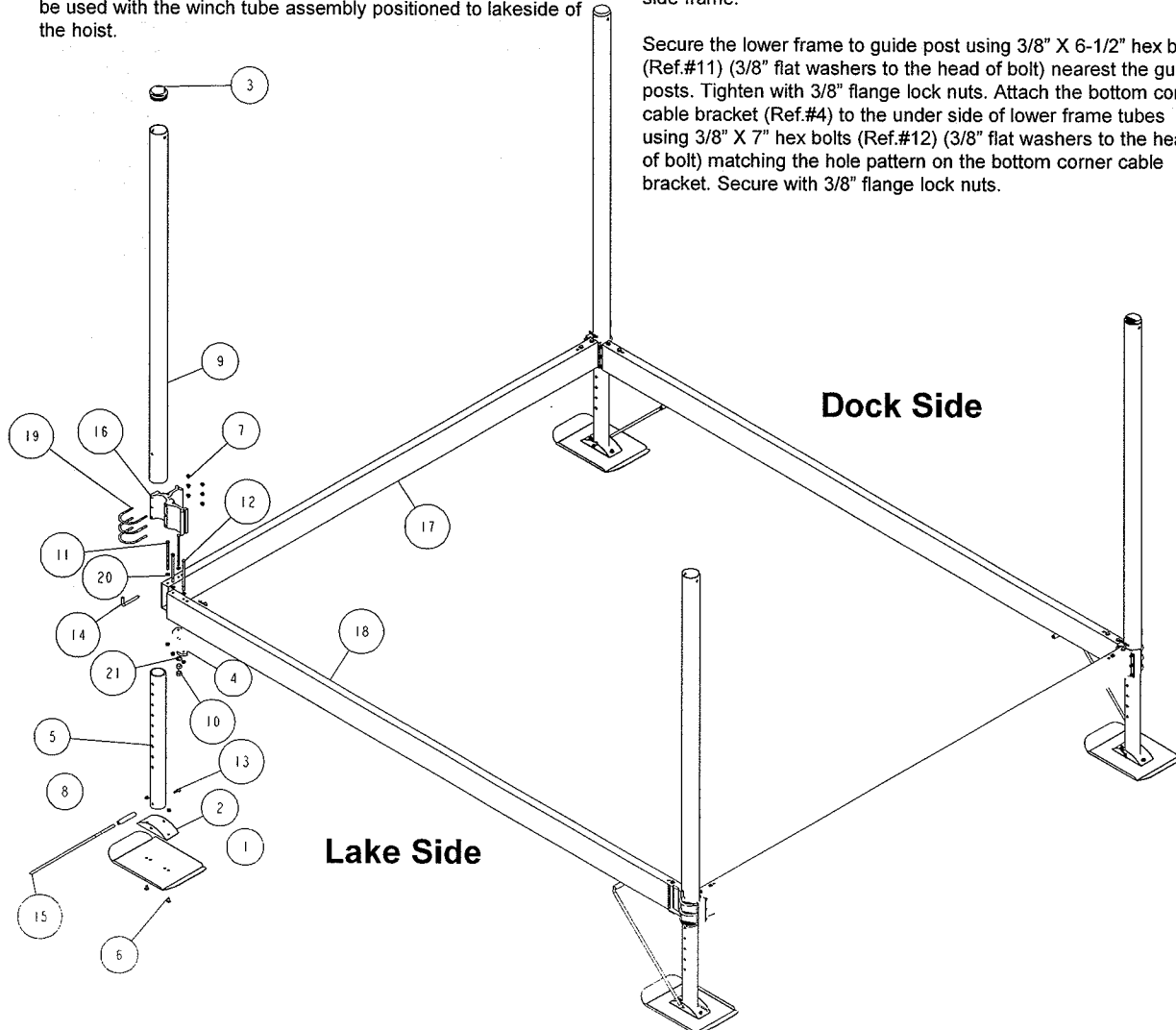
Note that the guide posts (Ref.#9) are factory-assembled with corner blocks (Ref.#16), 3/8" X 3-7/8" X 4-5/8" round u-bolts (Ref.#19) and 3/8" flange lock nuts.

The guide posts and adjustable leg can be adjusted to the water height - use the leg adjustment pins (Ref.#14) to level the hoist. Secure with hitch pin clips.

Slide the lower frame tubes (Ref.#17 & 18) onto the corner blocks. **NOTE: The drop side weldment is always facing the dock side of hoist. The pump will be lake side. This will determine the right and left side of the hoist. Refer to drawing for placement.** The 119" lower frame tubes (Ref.#17) are the frame spacers for width. The 143" lower frame tubes (Ref.#18) are the side frame.

**NOTICE:** The guide post tubes with red vinyl dots attached are to be used with the winch tube assembly positioned to lakeside of the hoist.

Secure the lower frame to guide post using 3/8" X 6-1/2" hex bolts (Ref.#11) (3/8" flat washers to the head of bolt) nearest the guide posts. Tighten with 3/8" flange lock nuts. Attach the bottom corner cable bracket (Ref.#4) to the under side of lower frame tubes using 3/8" X 7" hex bolts (Ref.#12) (3/8" flat washers to the head of bolt) matching the hole pattern on the bottom corner cable bracket. Secure with 3/8" flange lock nuts.



# SSV60120 HYD Platform

REF#	PART#	DESCRIPTION	QTY
1	S-3179G	2X6 BUNK BRKT SPUN GALV.	4
2	65064	ADJ BUNK BRKT. (BOAT LIFT)	2
3	3510132	AXLE PAD 12IN BLK	4
4	66549	BUNK ASSY W/BRKTS & STIFFENER	2
5	61047	BUNK SUPPORT FOR V55132 HOIST	2
6	3910025	BUNKWOOD 2 X 6 X 14FT FIR	2
7	3510099	BUSHING - NYLATRON V-HOIST	2
8	60989	BUSHING SS STEEL (BOAT LIFT)	2
9	64052	CABLE RETAINER CHANNEL-V FRAME	4
10	3110361	CABLE STAINLESS STEEL LEVEL	1
11	3110361	CABLE STAINLESS STEEL LEVEL	1
12	A119	CORNER GUIDE W/POLY RING	2
13	A120	CORNER GUIDE W/POLY RING	2
14	1510078	COTTER KEY 3/16 X 1	8
15	63062	CRADLE TUBE WMENT 120	2
16	0210060	ELEVATOR BOLT 1/4-20 X 2 1/4, GR2	12
17	1440102	FLANGE LOCKNUT SMALL 1/2-13	2
18	1440101	FLANGE LOCKNUT SMALL 3/8-16	20
19	1410079	HEX LOCKNUT 5/16-18 GRA	16
20	1440159	HEX NUT FINISH 1/2-13	8
21	1410049	HEX NUT FINISH 1/4-20	12
22	1440269	HEX NUT FINISH 5/8-11 GRB	4
23	0110098	HH 1/2-13 X 2 1/2 CS GR5	2
24	0140045	HH 3/8-16 X 1 1/2 CS GR5	12
25	0140040	HH 3/8-16 X 1 CS GR5	4
26	0110070	HH 3/8-16 X7 CS GR5	4
27	0140022	HH 5/16-18 X 3/4 CS GR5	16
28	60991	KEEL PROTECTOR PLATE(BOAT LIFT)	2
29	1310040	LOCKWASHER 1/2 S/T MED	8
30	1310020	LOCKWASHER 1/4 S/T MED	12
31	3510033	MOTOR STOP PLASTIC TUBE	1

Place the cradle tube weldments (Ref.#15) onto the lower frame.  
**NOTE:** The cables (Ref.#11) that lay over the top of the pulley and then come out the bottom of the cradle tube weldment must be positioned on the pump side of hoist.

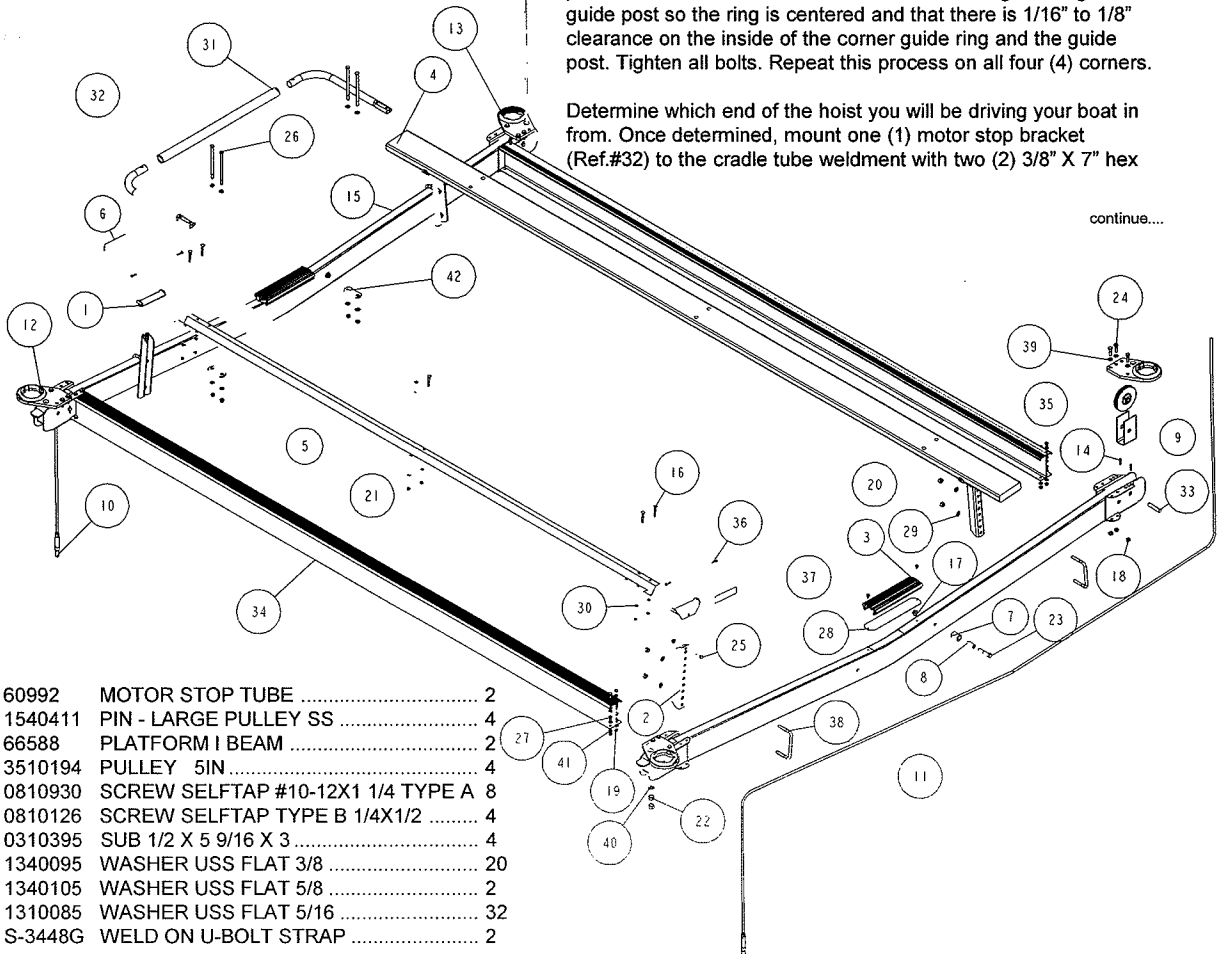
Place the cable end down through the hole in the cable mounting bracket on the determined winch tube side of hoist. Secure with a 5/8" flat washer (Ref.#40) and two (2) 5/8" hex nuts (Ref.#22). Turn on the first nut then turn on the second nut with a wrench, turn first nut counterclockwise with another wrench until the two (2) nuts are locked together securely. Repeat cable tightening procedure on the other cradle tube weldment at the opposite end of the hoist.

Install the platform I-beam (Ref.#34) to the cradle tube weldments using 5/16" X 3/4" hex bolts (Ref.#27). **NOTE:** The 5/16" flat washer should be positioned next to the aluminum to protect aluminum from gouging and at the head of the 5/16" X 3/4" hex bolt. Secure with 5/16" flat washers (Ref.#41) and 5/16" hex lock nuts (Ref.#19). Place two (2) 5/16" bolts in each of the top and bottom flange on the platform I-beam. Repeat on all four (4) corners and tighten.

Slide the corner guide rings (Ref.#12 & 13) over the guide posts with the round edge of the nylon insert up. **IMPORTANT: The round edge must be up on all four (4) corner guide rings.**

Match the bolt patterns on the corner guide ring and the cradle tube weldment flange. Insert 3/8" X 1-1/2" hex bolt (Ref.#27) with 3/8" flat washers (Ref.#41) at the bolts head and secure with 3/8" flange lock nuts. Repeat on all four (4) corners. Center the total platform on the lower frame. Position the corner guide ring on the guide post so the ring is centered and that there is 1/16" to 1/8" clearance on the inside of the corner guide ring and the guide post. Tighten all bolts. Repeat this process on all four (4) corners.

Determine which end of the hoist you will be driving your boat in from. Once determined, mount one (1) motor stop bracket (Ref.#32) to the cradle tube weldment with two (2) 3/8" X 7" hex



32	60992	MOTOR STOP TUBE	2
33	1540411	PIN - LARGE PULLEY SS	4
34	66588	PLATFORM I BEAM	2
35	3510194	PULLEY 5IN	4
36	0810930	SCREW SELFTAP #10-12X1 1/4 TYPE A	8
37	0810126	SCREW SELFTAP TYPE B 1/4X1/2	4
38	0310395	SUB 1/2 X 5 9/16 X 3	4
39	1340095	WASHER USS FLAT 3/8	20
40	1340105	WASHER USS FLAT 5/8	2
41	1310085	WASHER USS FLAT 5/16	32
42	S-3448G	WELD ON U-BOLT STRAP	2

continued from....

bolts (Ref.#26), 3/8" flat washers, mounting strap (Ref.#42), 3/8" flat washer and 3/8" lock nuts. Tighten only finger tight. Slip the 30" plastic tube (Ref.#31) over the end of the motor stop bracket into the other end of the 30" plastic tube. Secure to the cradle tube weldment with 3/8" X 7" hex bolts, 3/8" flat washer on top and bottom and 3/8" hex lock nuts. Locate the motor stop brackets so that it is in the center of the cradle tube weldment and tighten.

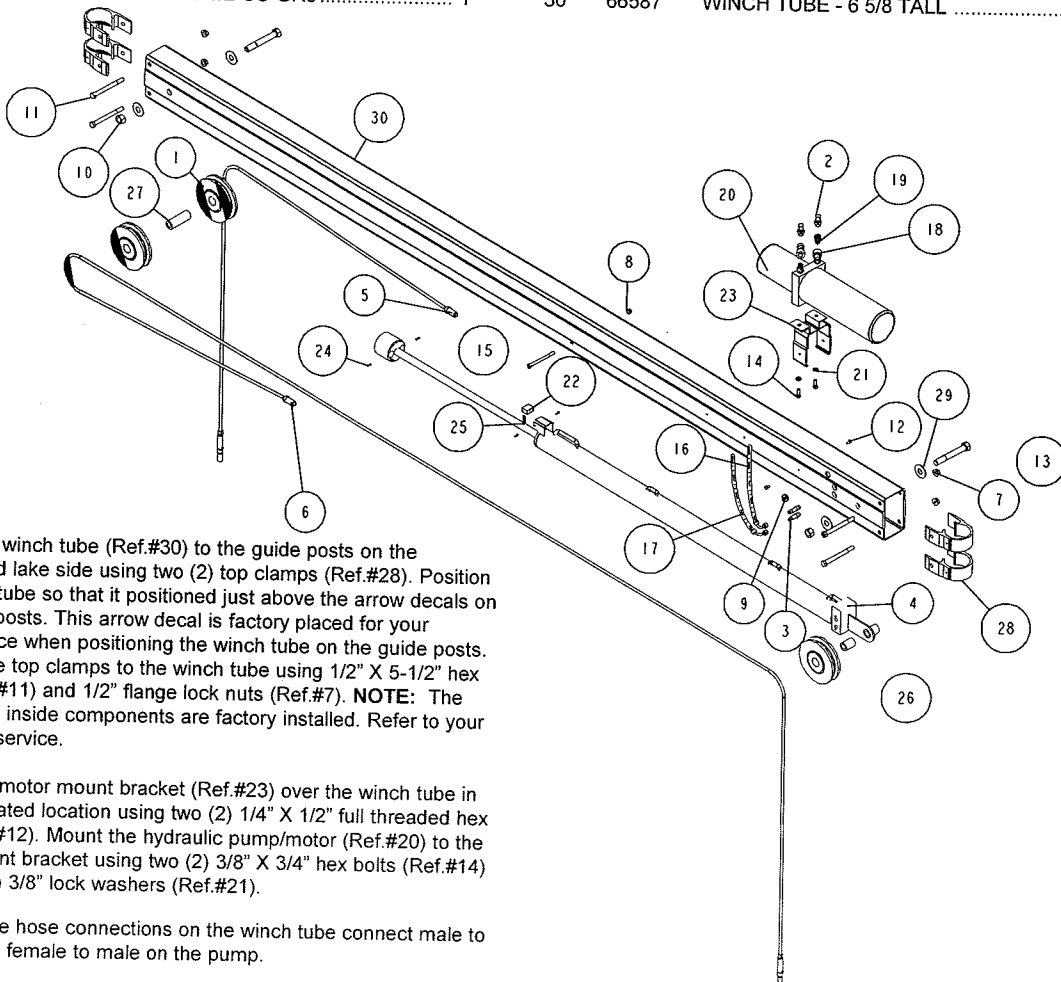
Place a 1/2" X 5-9/16" X 3" u-bolt over the cradle tube weldment so that the legs of the u-bolt are pointing to the center of the hoist.

Place an adjustable bunk bracket over the u-bolt legs in an adjustment location that would best fit your water craft. Secure with two (2) 1/2" lock washers and 1/2" hex nuts. Repeat on the other side of the cradle tube weldment making sure that the u-bolts are all pointing to the center of the hoist to allow clearance for the lower frame.

Mount the bunk assemblies to the adjustable bunk brackets using 3/8" X 1" hex bolt and 3/8" flange lock nuts. Do not over tighten. The bunk assembly must pivot so that the bunks conform to the hull of your watercraft.

## SSV60120 HYD Winch Tube

REF#	PART#	DESCRIPTION	QTY	REF#	PART#	DESCRIPTION	QTY
1	3510228	6 1/2 DIA. SHEAVE .....	3	16	3210102	HOSE 20" 1/4-18 MP-4JIC FE SW 90 .....	1
2	3210103	ADAPTOR 90 DEG MALE 1/4NPT-6ORIN .....	2	17	3210102	HOSE 20" 1/4-18 MP-4JIC FE SW 90 .....	1
3	3210100	ADAPTOR STR THD 4 JIC-4 ORING .....	2	18	3210073	HYDRAULIC 1/4 IN FEMALE COUPLER .....	2
4	3210097	BOBALEE 2.5: HYDRAULIC ASSEMBLY .....	1	19	3210071	HYDRAULIC 1/4 IN MALE COUPLER .....	2
5	3110362	CABLE LIFT SSV60120 HYD .....	1	20	3210096	HYDRAULIC PUMP/MOTOR .....	1
6	3110363	CABLE WINCH SSV60120 HYD .....	1	21	1340030	LOCKWASHER 3/8 S/T MED .....	2
7	1440102	FLANGE LOCKNUT SMALL 1/2-13 .....	4	22	3820075	MERCURY SWITCH HOUSING .....	1
8	1440101	FLANGE LOCKNUT SMALL 3/8-16 .....	1	23	66589	MOTOR MOUNT BRKT .....	1
9	3510030	GROMMET 7/8IN MOLDED .....	1	24	1540407	ROLL PIN - 1/8 X 1/2" .....	4
10	1420309	HEX NUT 3/4-16 UNF .....	2	25	1540418	ROLL PIN - 3/16 X 1 1/4" .....	1
11	0110125	HH 1/2-13 X 5 1/2 CS GR5 .....	4	26	3610161	STAINLESS STEEL BUSHING-1.6875 .....	1
12	0110316	HH 1/4-20 X 1/2 CS FULL THREADED .....	2	27	3610158	STAINLESS STEEL BUSHING-3 19/32 .....	1
13	0110285	HH 3/4-10 X 5 1/2 CS GR5 .....	2	28	66603	TOP CLAMP - WINCH TUBE .....	4
14	0110038	HH 3/8-16 X 3/4 CS GR5 .....	2	29	1310120	WASHER USS FLAT 3/4 ULTRASEALED .....	4
15	0110062	HH 3/8-16 X 4 1/2 CS GR5 .....	1	30	66587	WINCH TUBE - 6 5/8 TALL .....	1

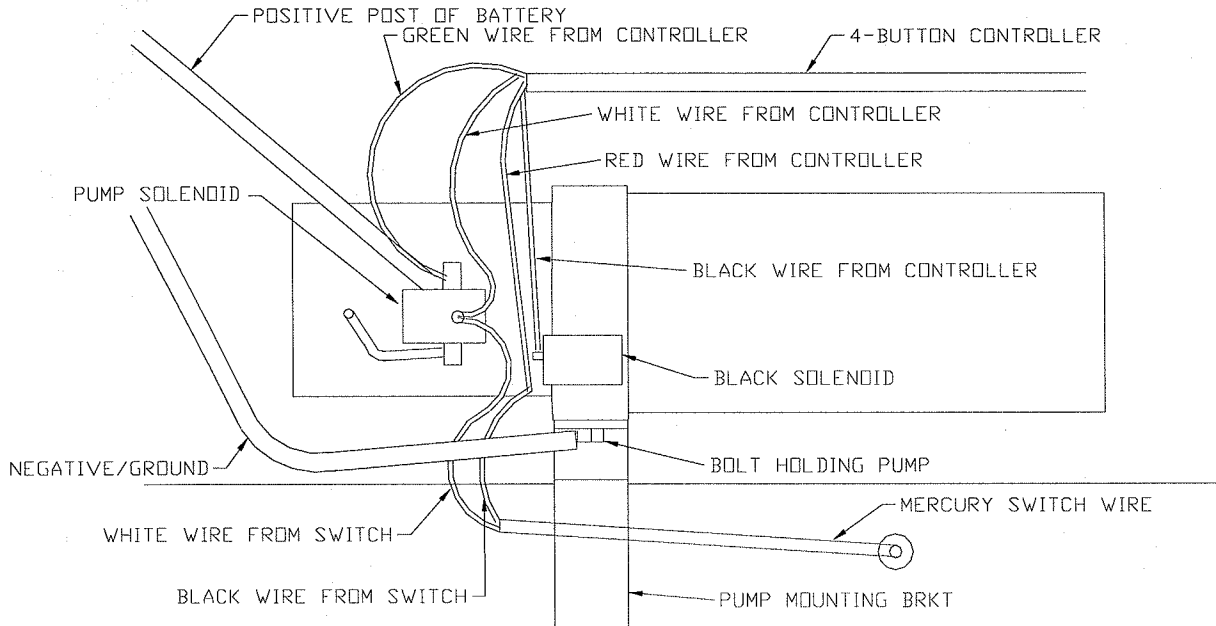


Mount the winch tube (Ref.#30) to the guide posts on the determined lake side using two (2) top clamps (Ref.#28). Position the winch tube so that it is positioned just above the arrow decals on the guide posts. This arrow decal is factory placed for your convenience when positioning the winch tube on the guide posts. Tighten the top clamps to the winch tube using 1/2" X 5-1/2" hex bolts (Ref.#11) and 1/2" flange lock nuts (Ref.#7). **NOTE:** The winch tube inside components are factory installed. Refer to your dealer for service.

Mount the motor mount bracket (Ref.#23) over the winch tube in the designated location using two (2) 1/4" X 1/2" full threaded hex bolts (Ref.#12). Mount the hydraulic pump/motor (Ref.#20) to the motor mount bracket using two (2) 3/8" X 3/4" hex bolts (Ref.#14) and two (2) 3/8" lock washers (Ref.#21).

**NOTE:** The hose connections on the winch tube connect male to female and female to male on the pump.

# SSV60120 HYD Hoist Pump Wiring Diagram



## Trouble Shooting

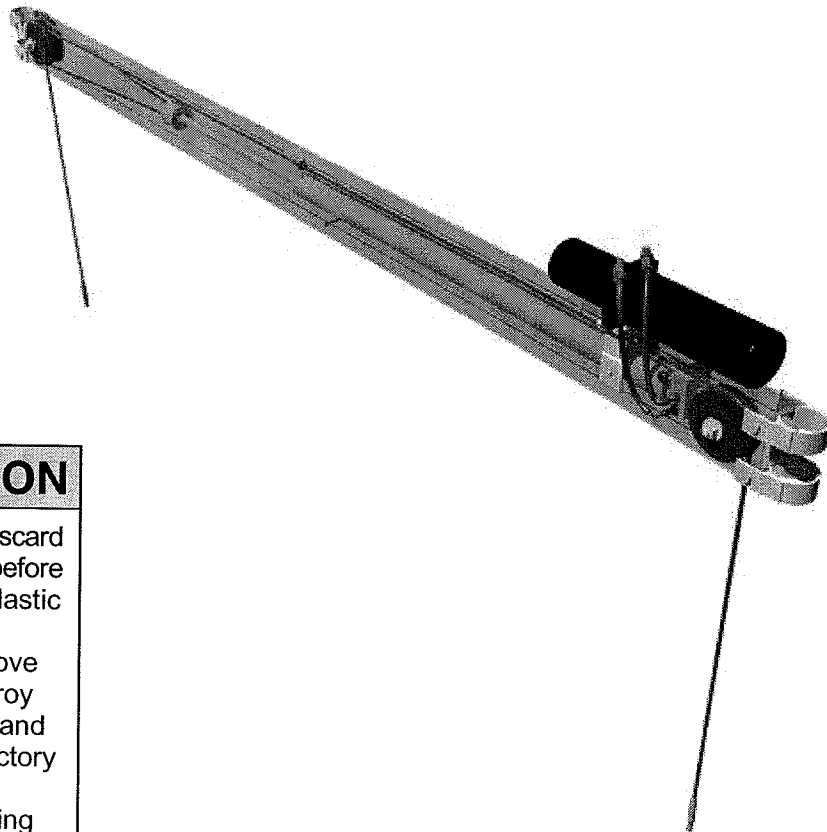
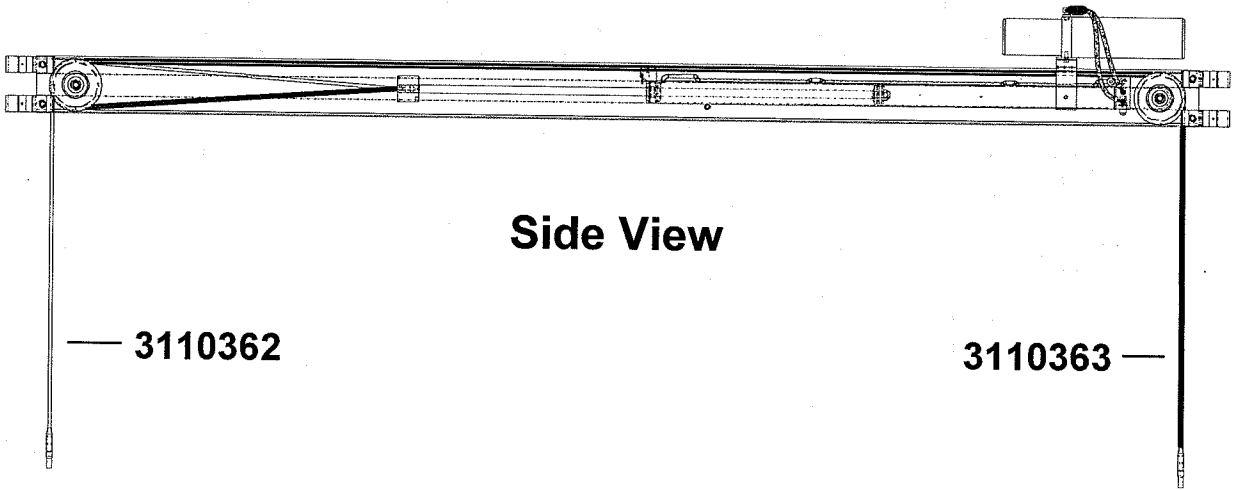
### General:

1. Check to see that the motor is wired correctly with tight connections, and for the proper voltage.
2. Check reservoir oil level.
3. Check for external leakage at cylinders, hoses and power unit.

## Typical Examples

Symptom	Possible Cause	Fixes & Hints
Unit will not start (See causes 1,2,3 & 10)	1. Improper voltage to motor. (A, F & G)	A. Check wiring and insure connections are tight, as well as proper voltage.
Unit drifts with power unit off. (See causes 5,6,7 & 8)	2. Improper ground. (A, H & I)	B. Keep oil reservoir full & clean.
Slow cylinder travel. (See causes 1,2,3,7,8,9,10 & 11)	3. Relief valve set too low. (C & E)	C. Do not adjust valves without the proper equipment (pressure-gauge).
Unit will not lower. (See causes 2,4,5 & 11)	4. Relief valve set too high. (C & E)	D. Flush & clean hydraulic system.
	5. Improper voltage to valve solenoid. (A & H)	E. Adjust relief valve to proper setting.
	6. Leakage through pump check valve. (D & F)	F. Replace component.
	7. Leakage through solenoid lowering valve. (D & F)	G. Return for necessary repair.
	8. Internal leakage at cylinder. (F & G)	H. Check for clean tight metal to metal chassis ground.
	9. Insufficient oil to pump. (B, D & G)	I. Make sure nut is tight on solenoid valve 15 in LB max.
	10. Pump seized - frozen up. (F& G)	
	11. Cylinder overloaded. (C & E)	

# SSV60120 HYD Winch Tube Cable Diagram



**▲ CAUTION**

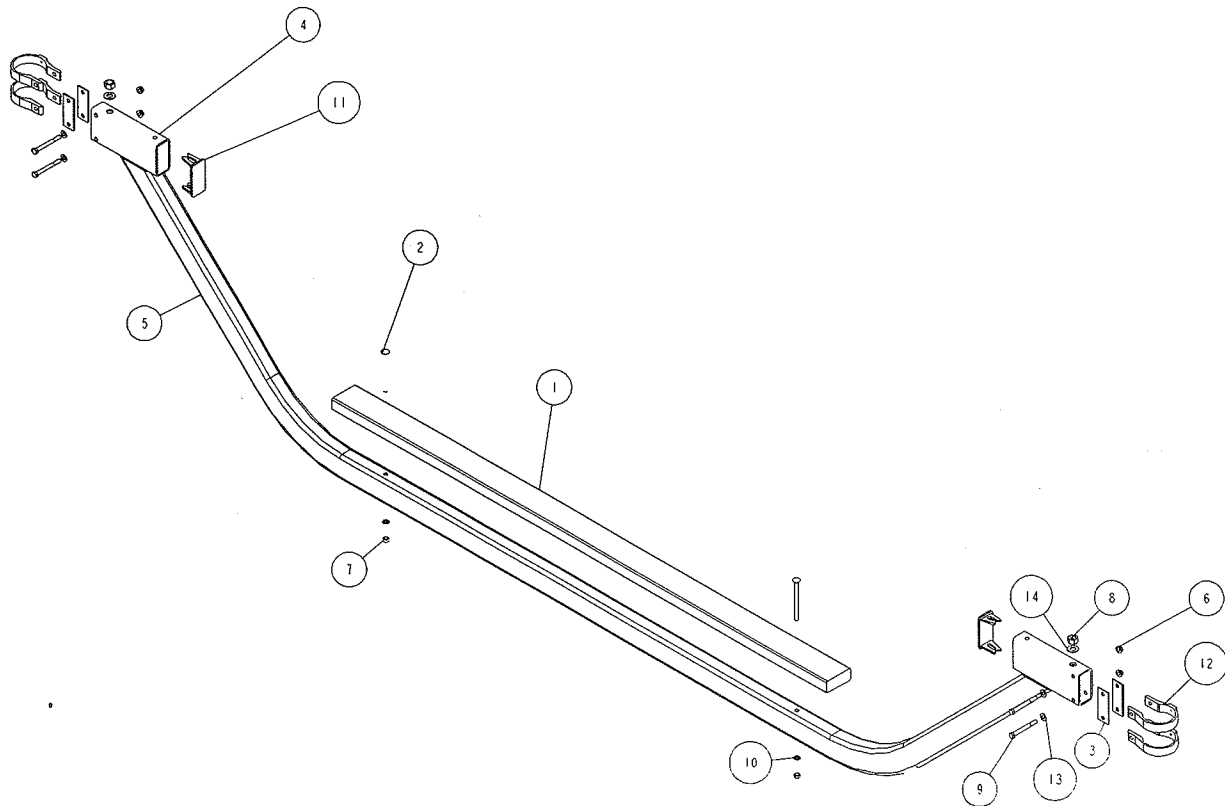
Remove and discard 3/8" pipe plug before using. Insert plastic breather cap. Failure to remove plug may destroy gasket. Pump and cylinder are factory filled with oil. Normal operating level with hoist in raised position is 2" from top.

4850385

# SSV60120 HYD Drop Side

REF#	PART#	DESCRIPTION	QTY
1	66555	BUNK W/CARPET FOR HYD V60120 .....	1
2	0210137	CARR 3/8-16 X 5 FULL THREAD GR5 .....	2
3	66592	CLAMP/SHIM HYD V60120 .....	4
4	66556	DROP SIDE BUNDLE FOR HYD 60120 ...	1
5	66554	DROP SIDE WMENT HYD V60120 .....	1
6	1440101	FLANGE LOCKNUT SMALL 3/8-16 .....	4
7	1410109	HEX NUT FINISH 3/8-16 .....	2
8	1440269	HEX NUT FINISH 5/8-11 GRB .....	2
9	0110058	HH 3/8-16 X 3 1/2 CS GR5 .....	4
10	1340030	LOCKWASHER 3/8 S/T MED .....	2
11	S-547	SL END CAP .....	2
12	65937	TOP CLAMP 1IN WITH 2 3/8 OPENING ..	4
13	1340095	WASHER USS FLAT 3/8 .....	4
14	1340105	WASHER USS FLAT 5/8 .....	2

Mount the drop side weldment (Ref.#5) to the guide posts on the determined dock side using four (4) top clamps (Ref.#12). Position the drop side weldment so that it positioned just above the arrow decals on the guide posts. This arrow decal is factory placed for your convenience when positioning the drop side weldment on the guide posts. Tighten the top clamps with clamp/shims (Ref.#3) to the drop side weldment and guide posts using 3/8" X 3-1/2" hex bolts (Ref.#9), 3/8" flat washer (Ref.#13) and 3/8" flange lock nuts (Ref.#6).

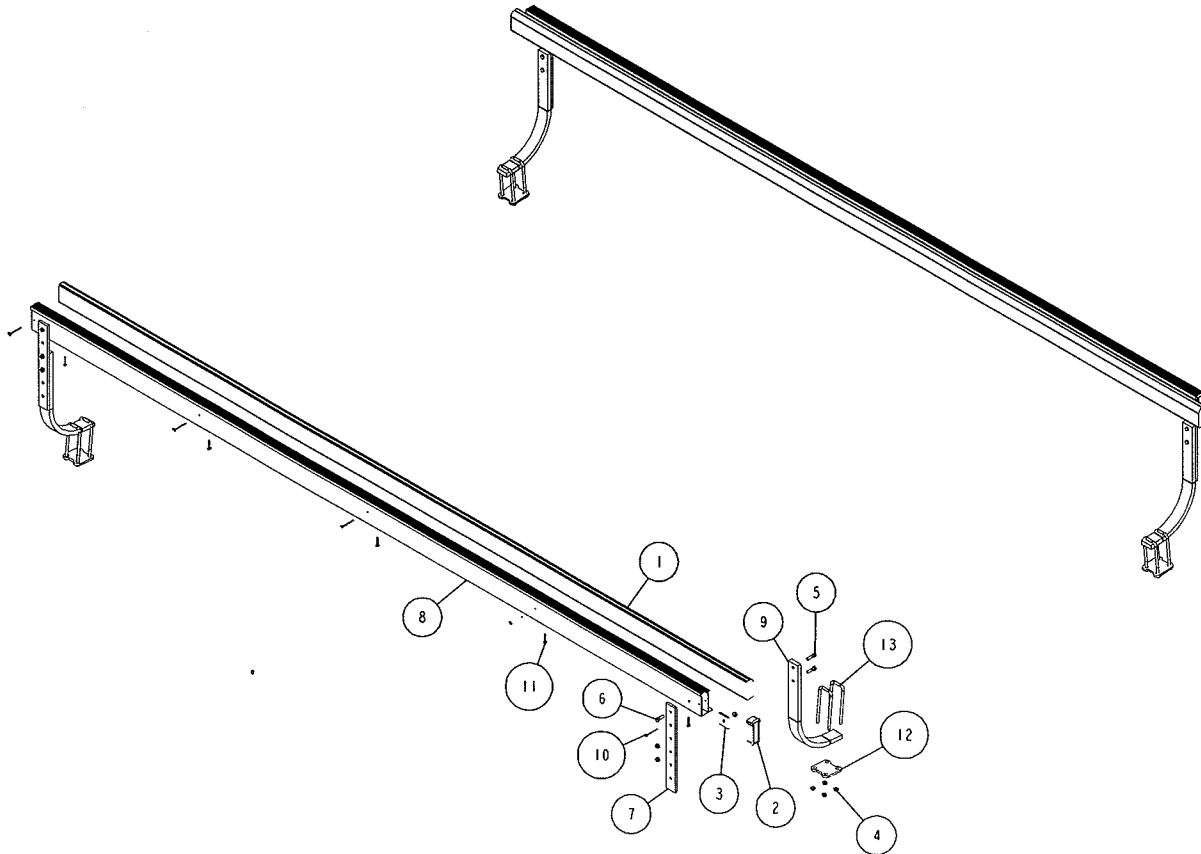




# SSV60120 HYD Loadguide - Optional

## SS1196 Loadguides - SSV60120 HYD

REF#	PART#	DESCRIPTION	QTY	
1	66627	BUNK LOADGUIDE HYD V60120 .....	2	Move the loadguide adjustment arm (Ref.#7) on the bunk loadguide assembly (Ref.#1 & 8) in a downward position.
2	3510227	END CAP LOAF LOADGUIDE .....	4	
3	62406	FENDER SUPPORT BRKT .....	4	Assemble the bunk loadguide assembly to the loadguide mounting brackets (Ref.#9) in the desired height location using two (2) 3/8" X 1-1/2" hex bolts (Ref.#5) and two (2) 3/8" flange lock nuts.
	1440101	FLANGE LOCKNUT SMALL 3/8-16 .....	28	
5	0140045	HH 3/8-16 X 1 1/2 CS GR5 .....	8	Determine the distance between guide post to where you want to position the loadguide assembly and mark. Attach the loadguide assembly to the platform using 3/8" X 2-7/16" X 6-1/2" square u-bolts over the loadguide mounting bracket and through the spring u-bolt plate. Secure with 3/8" flange lock nuts.
6	0110037	HH 3/8-16 X 1 1/4 CS GR5 .....	4	
7	66629	LOADGUIDE ADJ ARM HYD V60120 .....	4	Tighten all flange lock nuts.
8	66626	LOADGUIDE EXTRUSION HYD V60120 ..	2	
9	66628	LOADGUIDE MTG BRKT HYD V60120 ....	4	
10	0810919	SCREW SELFTAP TYPE A #10X2 1/2 P..	10	
11	0810920	SCREW SELFTAP TYPE A #10X1 1 .....	10	
12	S-3449G	SPRING AND AXLE U-BOLT PLATE .....	4	
13	0310109	SUB 3/8 X 2 7/16 X 6 1/2 .....	8	



# Adjustable Step - Optional

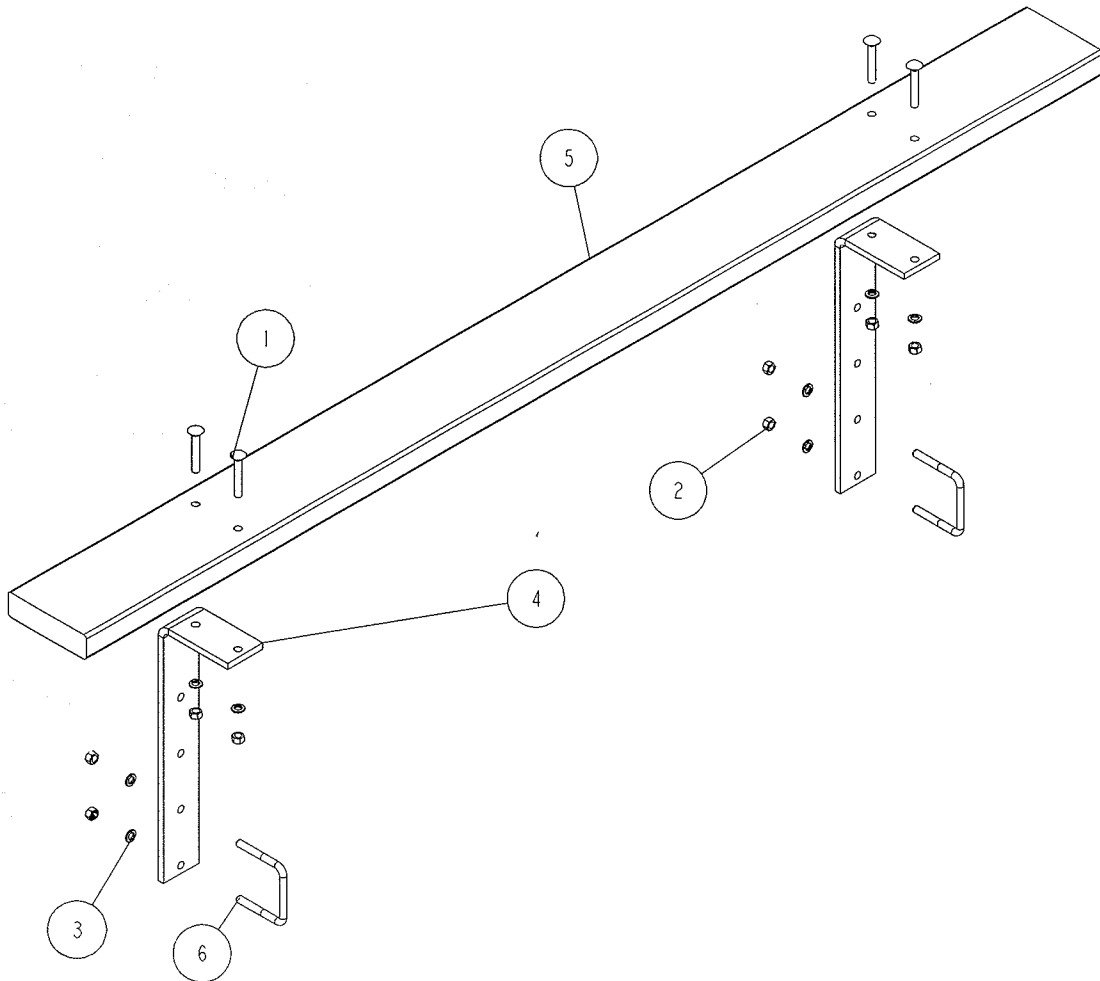
## SS1202 Adjustable Step - Hydraulic Hoist

REF#	PART#	DESCRIPTION	QTY
1	0210125	CARR 3/8-16 X 2 1/2 GR5 .....	4
2	1410109	HEX NUT FINISH 3/8-16 .....	8
3	1340030	LOCKWASHER 3/8 S/T MED .....	8
4	66845	STEP BRKT FOR HYD HOIST .....	2
5	66844	STEP BUNK FOR HYD HOIST .....	1
6	0310108	SUB 3/8-16 X 3 7/16 X 3 .....	2

Remove the existing bunk assembly on the drop side weldment.

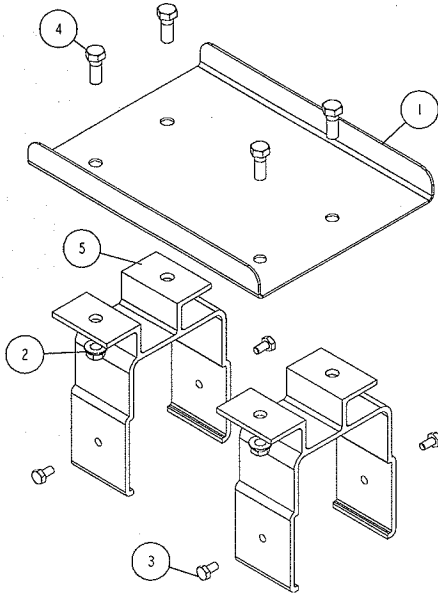
Mount the step brackets (Ref.#4) to the step bunk (Ref.#5) using four (4) 3/8" X 2-1/2" carriage bolts (Ref.#1) down through the step bunk and step brackets. Secure with 3/8" lock washers (Ref.#3) and 3/8" hex nuts (Ref.#2).

Determine the location on the drop side weldment that you would mount this assembly and mark. Attach the step assembly to the drop side weldment using two (2) 3/8" X 3-7/16" X 3" square u-bolts (Ref.#6) and secure with 3/8" lock washers and 3/8" hex nuts.



# Battery Mounting Hardware - Optional

## SS1203 Battery Mounting Hardware - Hydraulic Hoist



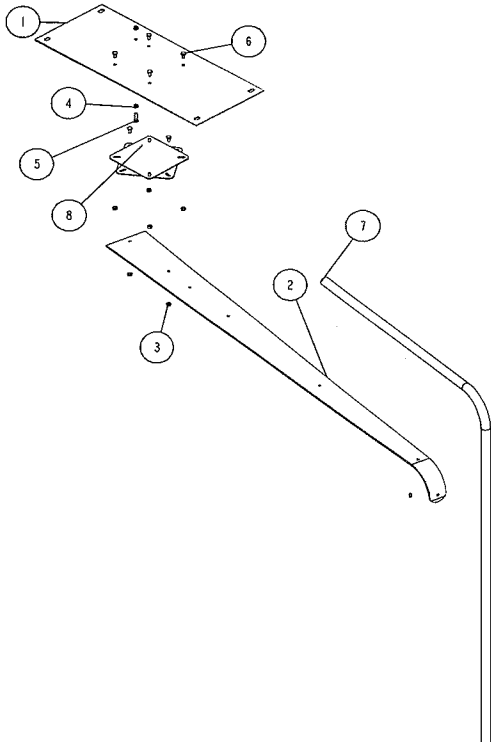
REF#	PART#	DESCRIPTION	QTY
1	66590	BATTERY HOLDER BRKT .....	1
2	1440101	FLANGE LOCKNUT SMALL 3/8-16 .....	4
3	0110316	HH 1/4-20 X 1/2 CS FULL THREADED ....	4
4	0110038	HH 3/8-16 X 3/4 CS GR5 .....	4
5	66589	MOTOR MOUNT BRKT .....	2

Mount the motor mounting bracket (Ref#5) to the winch tube in the designated holes using four (4) 1/4" X 1/2" full threaded hex bolts (Ref.#3).

Mount the battery holder bracket (Ref.#1) to the motor mounting brackets using four (4) 3/8" X 3/4" hex bolts (Ref.#4). Secure with 3/8" flange lock nuts (Ref.#2).

# Canopy Pendant Holder - Optional

## SS1205 Canopy Pendant Holder - Hydraulic Hoist

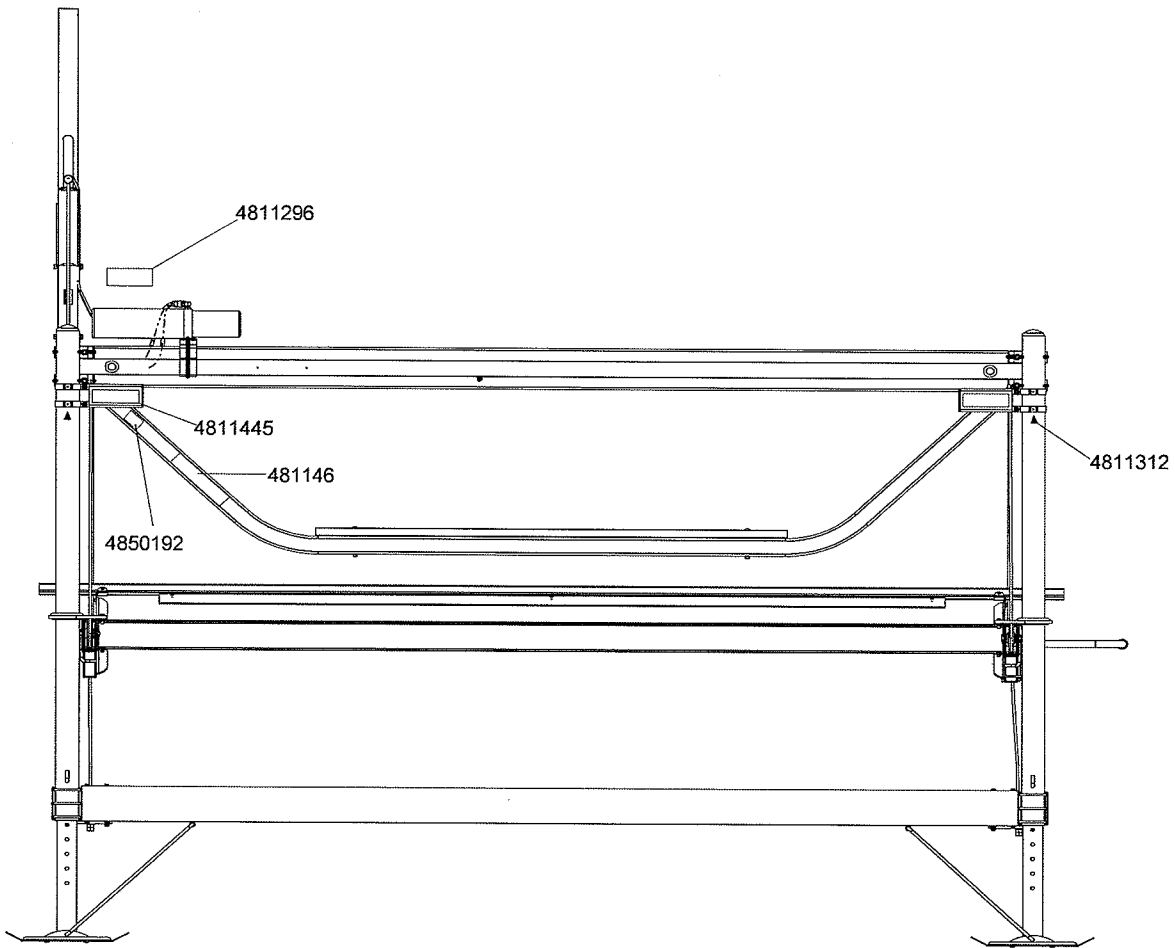


REF#	PART#	DESCRIPTION	QTY
1	66841	CANOPY PENDANT BRACKET .....	1
2	66842	CONTROLLER SWING ARM .....	1
3	1410059	HEX LOCKNUT 1/4-20 GRA .....	6
4	1410049	HEX NUT FINISH 1/4-20 .....	2
5	0110021	HH 1/4-20 X 1 1/2 CS GR5 .....	1
6	0110316	HH 1/4-20 X 1/2 CS FULL THREADED ....	6
7	3210104	HOSE 5/8 ID HEATER 6 FT .....	1
8	2400008	SWIVEL - ZINC PLATED .....	1
-	1110036	WIRE TIE 4 IN BLACK .....	4

Place the canopy pendant bracket assembly under the bows of the canopy frame in the center nearest to the hydraulic pump/motor. Secure the pendant bracket to the bows of the canopy frame using four (4) 1-3/4" hose clamps.

Run the controller cable along the side of the controller swing arm. Secure the controller cable to the controller swing arm using five (5) black wire ties.

# SSV60120 HYD Decal Placement



PART#	DESCRIPTION	QTY
4811445	DECAL SHORESTATION ORIGINAL/1959 .....	2
4811446	DECAL CAUTION WARNING .....	1
4850192	DECAL CAUTION MAX LOAD 6000 LBS. ....	2
4811296	DECAL PIPE PLUG WARNING .....	1
4811312	DECAL CLAMP ARROW ALUMINUM HOIST ..	4



### Troubleshooting Guide ShoreStation Hydraulic Hoists with Environmentally Friendly Bio-degradeable Hydraulic Oil

For pumps equipped with *Environmentally Friendly Bio-degradeable Hydraulic Oil*. (For ShoreStation hydraulic hoists manufactured with serial number after ...)

Model	Hydraulic Lift Tube Serial Number
SSV40120 HYD	1011
SSV60120 HYD	1408
SSV90132 HYD	1065
SSV150144 HYD	1011

**NOTE:** Some of this information is specific to the type of power (AC or DC) used to operate the hoist. Be sure to refer to the proper section for your hoist.

#### General Troubleshooting – Nonelectrical Issues Hydraulic Pump and Connections

1. Pumps are shipped with a solid reservoir plug that must be replaced with the provided breather cap before use. Failure to do so will ruin the seal between the motor and the pump.
2. Before operating the pump check that all hydraulic hose connections have been securely tightened to prevent oil spills.
3. With the hoist in the fully raised position, check that the oil reservoir is filled to the proper level, 1" minimum to 2" maximum from the top of the reservoir. Overfilling may cause oil to be forced out of the breather cap. **IMPORTANT:** to eliminate possible overfilling, the oil level must always be checked and filled when the hoist platform is fully raised.
4. Check that the hydraulic quick-connect couplers are properly mated and secured to ensure unobstructed oil flow.

#### Hoist Structure

1. Recheck the hoist component parts to make sure they have been properly assembled before operating the hoist.
2. Check to make sure all bolts and fasteners have been properly tightened.
3. Check the platform clearance to make sure the hoist platform will move up and down freely, without binding. (NOTE: to properly check platform clearance the hoist must be on concrete or level ground.)

#### Hydraulic System - Important Information Submerged Pump

In the event that the hydraulic pump has been submerged in water, **DO NOT** operate unit until all water and contamination have been removed.

Remove oil from the tank with either a suction gun or transfer pump and refill with *Royal Purple Bio-degradeable Marine Hydraulic Oil AW46*.

**NOTE:** Always dispose of contaminated oil properly at a reclaim station.

#### Oil Grade

This hydraulic pump has been shipped with *Environmentally Friendly Bio-degradeable Hydraulic Oil*. Always use when adding or replacing oil. See your *ShoreStation* dealer for availability.

#### APPROXIMATE OIL CAPACITIES PER HOIST:

MODEL 40120HYD	6.5 QTS.
MODEL 60120HYD	7.5 QTS.
MODEL 90132HYD	11.5 QTS.
MODEL 150144HYD	22.0 QTS.

#### Oil Change Schedule

This hydraulic system is filled with superior quality *Environmentally Friendly Bio-degradeable Hydraulic Oil*. Normal change time for this oil is five (5) years. This will vary however depending on whether it has been contaminated with water or some other foreign material. The *Environmentally Friendly Bio-degradeable Hydraulic Oil* is normally clear in appearance. Should the oil have a yellowish or dark coloring, change oil. If the oil has a white, milky color it has been contaminated with water. If contaminated it must be changed. Remove oil from the tank using the procedure of changing oil below and refill with *Royal Purple Bio-degradeable Marine Hydraulic Oil AW46*. See your *ShoreStation* dealer for availability. **NOTE:** Always dispose of contaminated oil properly at a reclaim station.

#### Procedure for Changing Oil

To change the oil in your hydraulic system, follow these procedures:

1. With no boat or load on the hoist, raise the platform to the maximum height or fully-raised position.

2. Remove all of the oil from the pump reservoir with either a suction gun, or a transfer pump. Make sure all of the current oil in the pump is removed.
3. Refill the pump reservoir with new bio-degradable oil. **DO NOT RUN PUMP.**
4. Unhook the hose with the female coupler from the pump.
5. Remove the female coupler end from the hose and place that end of the hose into a bucket to catch the old oil.
6. Using precautions to not spill any oil, engage the pump to lower the hoist platform. As it is being lowered, the oil on the backside of the cylinder will be expelled into the bucket while the new oil is being pumped into the cylinder. Additional oil may need to be added to the reservoir as the platform is being lowered to totally lower the platform.
7. Once the cylinder is fully extended or the platform is fully lowered, re-install the female coupler that was removed from the hose and tighten it.
8. Reconnect the hose to the pump and engage the pump in the **UP** mode. This will raise the platform as the oil that was just removed in step 6 is being replaced with the new bio-degradable oil in the reservoir.
9. Raise and lower the platform several times until any air that may have been trapped in the system is removed.
10. With the platform in the fully-raised position refill the reservoir to the proper oil level, 1" minimum to 2" maximum from the top of reservoir. Re-install the breather cap.

#### **Storage**

Before storing hoist, always check that the system is full of oil to prevent condensation.

#### **12 Volt Pump**

If our hoist has a 12 volt pump, prepare the motor for storage as follows:

1. Remove the vinyl pump cover.
2. Identify one of the black drain plugs located approximately 1" from the back end of the motor. Remove it by prying it out the hole with a screwdriver.
3. Place the nozzle tube of the WD-40 lubricant into the hole. Squirt WD-40 into the hole approximately 3-4 seconds. This will fog all the internal parts and protect them over the winter season. It is not necessary to clean or remove the WD-40 in the spring. The motor will function properly without cleaning.
4. Replace the black drain plug if it is on the side of the motor. If it is located near the bottom of the motor, discard the plug. This will serve as a weep hole for any moisture that may enter the motor from condensation build up in the future.
5. Replace the vinyl cover to protect the pump unit from the weather.
6. Disconnect the battery and store in a warm place. Do not store directly on the ground or concrete. Always insulate the battery from the ground or concrete by placing it on a wood board, rubber or plastic mat.

#### **Biodegradable Oils**

There are several brands of environmentally friendly hydraulic oil available in the market place today. We recommend that you use only **Royal Purple Bio-degradeable Marine Hydraulic Oil AW46** in your system to ensure that the oil doesn't break down during use.

## Hydraulic System Troubleshooting

<b><u>PROBLEM</u></b>	<b><u>POSSIBLE CAUSE</u></b>	<b><u>SOLUTION</u></b>
Pump runs but not at full speed.	Low voltage to pump	Check voltage. Increase power supply Wire size. See chart A
Pump runs but the platform won't go up or down	Couplers not mated properly	Recheck couplings making sure they are properly mated and locked together.
Unit raises slowly	Low voltage to pump	Have wiring checked for proper size from power source.
	Unit is overloaded	Remove load. Check travel speed without load. Weigh load to see if load is within limits of the hoist capacity.
	Load on hoist is within hoist rated load	Pressure relief valve may be set to low. Contact local dealer to have the pressure checked and the valve reset.
Platform will not lower	Hose coupling are not fully connected	Recheck couplings making sure they are completely snapped together. Replace if needed.
	Push-button controller is not making proper connection	Check the connection between the controller and the pump unit. If problem is in the controller, contact your dealer.
	Solenoid is not pulling the spool valve open	Check solenoid, place screwdriver on nut of solenoid. Operate pump. Magnetism in solenoid will draw screwdriver if operating properly.
		Spool valve maybe stuck. Tap lightly on hex nut and spool valve located on face of solenoid. Retry, if it fails. Remove nut, solenoid and spool valve. Insert small phillips screwdriver into end of valve. Compress moving internal portion of valve 1/4". Repeat several times. Reinstall. Contact your dealer.
Platform drifts down	Low voltage	AC units must have 110 volts while motor is running. DC units must have 12 volts in battery.
	Oil is seeping past the lift cylinder in the lift tube or a control valve.	Contact your dealer.
	Contamination in the oil	Flush the hydraulic system removing contamination. Refill with proper weight & grade of oil. See oil specifications.
	Air in system	Cycle system until air is removed. Re-check oil level in reservoir.
When controller is in ON position, platform doesn't raise to the full UP position	Micro switch malfunction on hydraulic cylinder	Contact your dealer.
When controller is ON Pump continues to run when platform is completely raised.	Micro switch malfunction on hydraulic cylinder	Contact your dealer.
Pump makes squealing noise while running	Air in system	Raise & lower platform several times without load to remove trapped air. If squeal continues, contact your dealer.

## AC Powered Hoists General Electrical Troubleshooting

Check the following:

- A. The circuit breaker in the electrical control panel is snapped into position.
- B. The cord is plugged in.
- C. All wire connections are tight.
- D. The GFCI is reset for use. It must be reset AFTER the power supply is turned on. (NOTE: When GFCIs are connected in series and the GFCI closest to the power source disconnects or loses power, connected GFCIs down the line will automatically trip out. When resetting a series of GFCIs, the one closest to the power source must be engaged first.)
- E. The voltage and wire size are adequate to properly power the unit. See Chart A (below) for proper wire size recommendations. Wire size requirements will vary depending on the distance from the power source to the hoist. **LOW VOLTAGE WILL CAUSE PUMP MALFUNCTION AND MOTOR FAILURE.**
- F. The push-button controller is properly connected. See wiring diagram and instructions.

### Proper Wire Gauge

To minimize voltage drop in the power supply line, it is very important to use the proper size wire when connecting the hydraulic pump to the electrical supply. While the pump is running, the voltage must never be lower than 110 volts. Voltage less than 110 volts can cause the pump to not function properly and may cause premature pump failure.

NOTE: the chart below is only a guideline and exact requirements may vary depending on the power source and electrical panel for each installation.

The wire size recommendations below are based on these assumptions:

1. The line to run the hydraulic pump is being connected directly into your home's electrical power control panel.
2. The power supply at the electrical power control panel has a minimum rating of 115 volts with 20 amps.
3. The hydraulic pump is being connected to its own 20 amp circuit breaker in the control panel.
4. The power source has GFCI protection.
5. The length of the power cord, from the control panel to the hydraulic pump is not longer than the length specified in the chart below.

**CHART A – Wire Gauge**

<u>LENGTH (FEET)</u>	<u>WIRE GAUGE</u>
50'	14 ga
75'	12 ga
100'	10 ga
150'	8 ga
200'	8 ga
250'	6 ga
300'	6 ga

*Contact a certified electrician to ensure that the above requirements have been met properly and that all wiring is installed according to the electrical code in your area.*

## AC Powered Hoists - Electrical Powered Pump Troubleshooting

<u>PROBLEM</u>	<u>POSSIBLE CAUSE</u>	<u>SOLUTION</u>
Pump will not run	Circuit breaker in electrical panel not engaged	Engage circuit breaker
	Cord not plugged in	Plug in cord
	Loose wire connection	Check that all connections are tight.
	GFCI not reset	Reset GFCI by pushing the reset button on the GFCI. If GFCI won't stay engaged, replace. See item D under General AC Electrical Items.
	Low voltage to unit	Check voltage. Proper voltage is critical to pump operation. Voltage should read 110 volts when the motor is running. If low, the unit will require heavier wire from the power source to the unit.
	Push-button control pendent not properly connected.	Check connection to the pump unit. Make sure the plugs are properly mated and locked together by turning the locking ring clockwise.

## DC Powered Hoists General Electrical Troubleshooting

Check the following:

- A. The battery used to power the hydraulic pump meets the following specifications to insure proper power supply to the unit:
- MARINE DEEP CYCLE BATTERY  
MARINE CRANKING AMPS (MCA) 625 AMPS  
RESERVE CAPACITY OF OR EQUAL TO  
180 MINUTES @ 25 AMP DRAW
- B. The battery supplying power to the unit is fully-charged.
- C. All connections are tight.
- D. The battery terminals are not corroded.
- E. The ground cable has a good connection.
- F. The push-button controller is properly connected. See wiring diagram and instructions.

## DC Powered Hoists - Electrical Powered Pump Troubleshooting

<u>PROBLEM</u>	<u>POSSIBLE CAUSE</u>	<u>SOLUTION</u>
Pump won't run.	Battery dead.	Check charge in battery. Recharge if necessary.
	Improperly sized battery	See General DC Electrical Items for Battery specifications.
	In-line fuse may be blown. (Located in the line when using boat battery)	Check and replace if bad.
	Bad connections. Either loose or corroded.	Tighten all connections. Clean if corroded.
	Bad ground connection	Make sure the ground connections on both the motor and battery are tight and not corroded.
	Push-button controller not properly connected.	Check connection to the pump unit. Make sure the plugs are properly mated and locked together by turning the lock ring clockwise.

