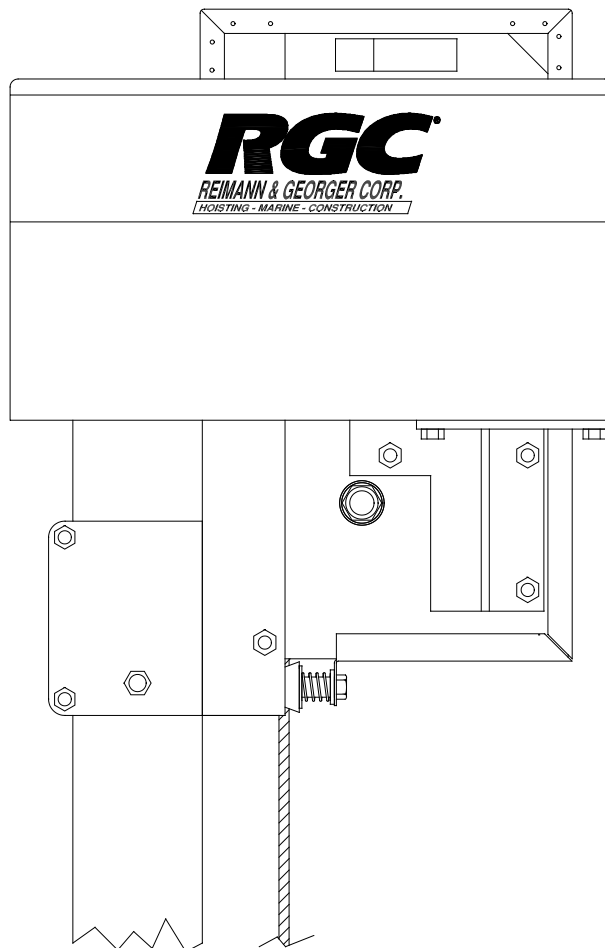




VL DIRECT DRIVE (2009) INSTRUCTIONS

(Applies to P/Ns 3709451, 3709452, 3709453, 3709454,
3709455, 3709456, 3763055, 3763057)



REIMANN & GEORGER CORPORATION
MARINE PRODUCTS
P/N 6112188

BUFFALO, NY
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1 SAFETY

1.1 INTRODUCTION

Your Reimann & Georger Corporation Marine Products heavy duty 110V AC direct power drive mounts in place of the standard handwheel to lift your boat out of the water. The exclusive right angle design minimizes the intrusion of dock space. A Remote Control option is available which is covered in a separate manual for this unit.

Your power drive is well-designed and well-built. However, like any other equipment, it can malfunction or become hazardous in the hands of an inexperienced and/or untrained user. Therefore, read this manual and your related vertical lift manual thoroughly before operating the power drive to provide maximum safety for all operating personnel, and to get the maximum benefit from your equipment.



WARNING:

AN INSTALLED POWER DRIVE BECOMES AN INTEGRAL PART OF THE ASSOCIATED VERTICAL LIFT. THEREFORE, DO NOT USE THE POWER DRIVE TO OPERATE THE LIFT WITHOUT STUDYING BOTH THIS MANUAL AND THE VERTICAL LIFT MANUAL. FAILURE TO DO THIS CAN LEAD TO MISUSE OF THE DRIVE AND/OR LIFT WITH RESULTING DAMAGE AND/OR PERSONAL INJURY. CONTACT YOUR RGC® MARINE DEALER IF YOU HAVE ANY QUESTIONS.

1.2 SAFETY DEFINITIONS

A safety message alerts you to potential hazards that could hurt you or others or cause property damage. The safety messages or signal words for product safety signs are **DANGER**, **WARNING**, and **CAUTION**. Each safety message is preceded by a safety alert symbol and is defined as follows:

DANGER: Indicates an imminently hazardous situation which, if not avoided, **will** cause death or serious injury. This safety message is limited to the most extreme situations.

WARNING: Indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices and property-damage-only accidents.

1.3 EQUIPMENT SAFETY LABELS

These labels warn you of potential hazards that could cause injury. Read them carefully. If a label comes off or becomes illegible, contact a Reimann & Georger Corporation dealer for a replacement.

1.4 INSTALLATION SAFETY

1. Do not install or use the drive if it shows any signs of damage.



WARNING:

THE POWER DRIVE AND SUPPLY LINE MUST BE INSTALLED AND INSPECTED BY A CERTIFIED ELECTRICIAN IN ACCORDANCE WITH LOCAL ELECTRICAL CODES. BECAUSE WATER AND ELECTRICITY ARE POTENTIAL SAFETY HAZARDS, THIS INSTALLATION MUST INCLUDE A PROPERLY WORKING GROUND FAULT CIRCUIT INTERRUPTER. (G.F.C.I.)

2. Ensure that all bolts and nuts are fastened securely prior to operation.
3. Do not weld or otherwise modify any part of the drive assembly. Such alterations may damage the drive and/or the winch and void the associated warranties.

1.5 OPERATING SAFETY

1.5.1 General

1. Before allowing anyone to operate the drive, be sure they fully understand the proper operating procedure and the use of all controls and connections for both the drive and the lift.
2. Completely remove any user or dealer installed locking devices before operating the lift.
3. Do not operate the drive and the lift under the influence of drugs, alcohol, or medication.
4. Do not exceed the rated maximum capacity of the lift. This can damage the drive, lift and/or boat with resulting serious personal injury.
5. Never allow anyone into the boat when suspended in the lift.
6. Never operate the drive without the cover installed over the drive assembly. Keep fingers and clothing clear of all moving parts of the lift and direct drive.
7. Do not attempt to make any adjustments on the lift or drive during operation.
8. Disconnect and lock out the power source when not using the drive to prevent unauthorized use.
9. Never use the drive installation or any part of the lift to hang or store any auxiliary equipment such as boating hardware.

1.5.2 Safety When Raising the Boat

1. The power drive shaft must turn clockwise to raise the platform. The brake pawl on the winch must click, indicating that the brake is operative.
2. Do not try to raise the boat beyond the maximum lifting height of the platform. This can cause lift and drive damage.



WARNING:

IF THE POWER DRIVE SHAFT MUST TURN COUNTERCLOCKWISE TO RAISE THE PLATFORM, YOU HAVE REEVED THE WINCH INCORRECTLY. THE DRIVE WILL IMMEDIATELY ENCOUNTER STRONG RESISTANCE WHICH CAN DAMAGE THE DRIVE AND/OR WINCH AND BREAK THE CABLE.

1.5.3 Safety When Lowering the Boat

1. The power drive shaft must turn counter-clockwise when lowering the platform.



WARNING:

IF THE DRIVE SHAFT MUST TURN CLOCKWISE TO LOWER THE PLATFORM, YOU HAVE REEVED THE WINCH INCORRECTLY. THE BRAKE PAWL WILL NOT BE EFFECTIVE WHICH CAN CAUSE AN UNCONTROLLED SPIN-DOWN OR “FREEWHEEL” OF THE WINCH SHAFT. IF FREEWHEELING OCCURS, NEVER TRY TO STOP IT.

2. Counter-clockwise rotation of the power drive shaft allows the self-activating brake mechanism to provide a controlled lowering of the platform.



WARNING:

NEVER RELEASE THE BRAKE PAWL OF THE WINCH. THIS CAN TRIGGER AN UNCONTROLLED SPIN-DOWN OR “FREEWHEEL” OF THE WINCH SHAFT.

3. Do not continue lowering the platform after the boat floats freely. Excessive slack in winch cable may cause binding.

2 INSTALLATION AND SETUP

The following instructions apply to the direct drive only. Instructions for the optional remote control panel are in the manual specifically for this item.

2.1 PRE-INSTALLATION CHECKS

1. Ensure that the vertical lift has been properly installed as described in your lift manual.
2. Check that the winch is reeved properly. Do not install the direct drive until the winch is reeved as described in your lift manual.
3. Do not install or use the drive if it shows any signs of damage.
4. Ensure that you are using the proper VL Direct Drive Assembly for your lift as listed in the following table.

VL DIR. DR. ASSY #	VL MODEL
3763055	VL3500 THRU 4000
3709451	VL4500, 50124 (SR09)
3709452	VL50124 (SR09)
3763057	VL60124 & Tall
3709455	VL60124 & Tall
3709453	VL80124T
3709454	VL80124T

5. Do not weld or otherwise modify any part of the drive assembly. Such alterations may damage the drive and/or the winch and void the associated warranties.
6. Two people will be needed to mount this drive onto the winch. The following precautions must be observed when lifting any part of this equipment:
 - a. Be sure of your footing.
 - b. Bend your knees and lift with your legs.
 - c. Hold the equipment section close to your body when lifting.



WARNING:

THE DRIVE IS TOO HEAVY TO SAFELY MOUNT IT SINGLE-HANDEDLY. ATTEMPTING THIS CAN CAUSE EQUIPMENT DAMAGE AND/OR PERSONAL INJURY.

7. For installing this drive, you will need two 9/16" wrenches, one 1/2" wrench, one 9/32" wrench, one 3/4" deep wall socket with ratchet and a #2 Phillips screwdriver.

2.2 UPGRADE INSTALLATION – HANDWHEEL / HUB REMOVAL

1. Remove all weight from the lifting platform. Lower the platform to relieve cable tension, but do not lower it enough to create excessive slack in the winch cable.



WARNING:

FAILURE TO REMOVE ALL WEIGHT FROM THE PLATFORM BEFORE INSTALLING THE DRIVE CAN CAUSE EQUIPMENT DAMAGE AND/OR PERSONAL INJURY.

2. Remove the winch cover and hold the input shaft with a suitable clamping device to prevent it from rotating.
3. Remove the handwheel by removing the 1/2" locknut (3/4 socket) and washer that is fastened to the winch input shaft, located in the center of the handwheel. Refer to Figure 2-1.

4. Proceed to section 2.3.

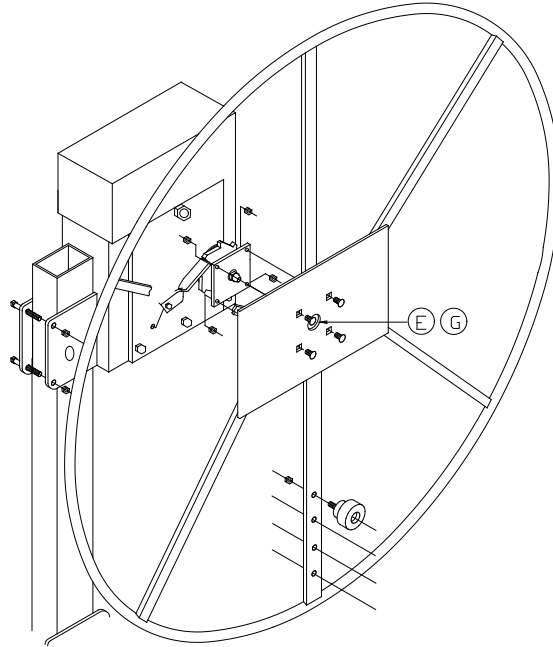


Figure 2-1
Handwheel / Winch Hub Removal



WARNING:

DO NOT REMOVE THE BRASS WASHER FROM THE WINCH INPUT SHAFT. THE SPRING LOADED WINCH BRAKE PAWL MUST REMAIN ENGAGED DURING THE POWER DRIVE INSTALLATION.

2.3 WINCH INPUT COUPLER INSTALLATION

1. Refer to Figure 2-2, screw the acme coupler clockwise onto the winch input shaft. The coupler must pinch the brass washer and brake sprocket tightly against the friction disk.
2. Verify that the brake pawl is engaged on the brake sprocket.
3. Install 1/2" washer onto the end of the input shaft.
4. Install and securely fasten the 1/2"-20 locknut onto input shaft. Tighten using a 3/4" socket/ratchet.

2.4 MOUNTING THE DIRECT DRIVE

1. Unpack the drive by removing the 5/16 X 3/4 bolt from the mounting plate to which the motor is attached. Do not remove the 1/4 X 1" bolt from the wood frame.
2. Refer to Figure 2-2, from the direct drive mounting bracket, remove the 3/8 X 1" bolt, nut and washer.
3. Remove from the winch the 3/8 nut and washer off the 3/8 X 1" carriage bolt that is pressed into the winch wall and 3/8 X 6-1/2" bolt that holds the winch wall spacer. **DO NOT** remove the 3/8 X 1 carriage bolt.
4. Insert rubber spider onto direct drive coupler.
5. Make sure the fingers on the direct drive and winch shaft couplers are properly aligned. You may need to turn the winch shaft coupler to do this.
6. Lightly moisten rubber spider with water to assist in mating the couplers.

7. Mount the direct drive assembly to the winch as shown. Install and hand tighten washer and nuts onto the winch supplied bolts. Install the 3/8 x 1" bolt supplied with mounting bracket, from the inside of winch wall to outside of mounting bracket. Lightly fasten.
8. Position mounting bracket for best alignment, then securely fasten all 3/8 nuts.
9. Using a 9/32" wrench, remove from reducer the installed 1/8" red pipe plug. Install the vent plug supplied with unit.



CAUTION:
FAILURE TO DO THIS COULD, IN PROLONGED USE, BLOW THE REDUCER SEALS AND VOID YOUR WARRANTY.

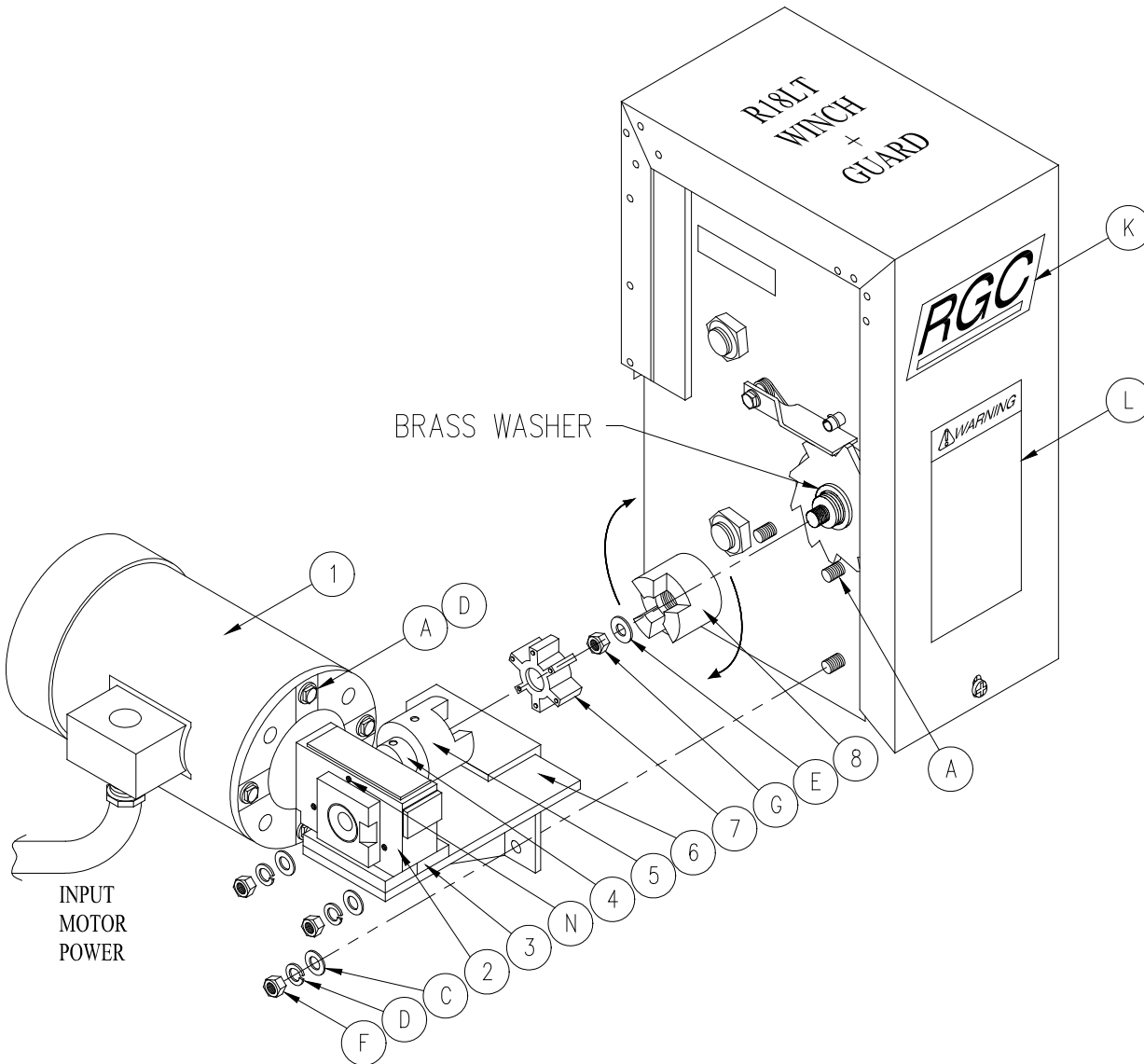


Figure 2-2
Direct Drive Mounting

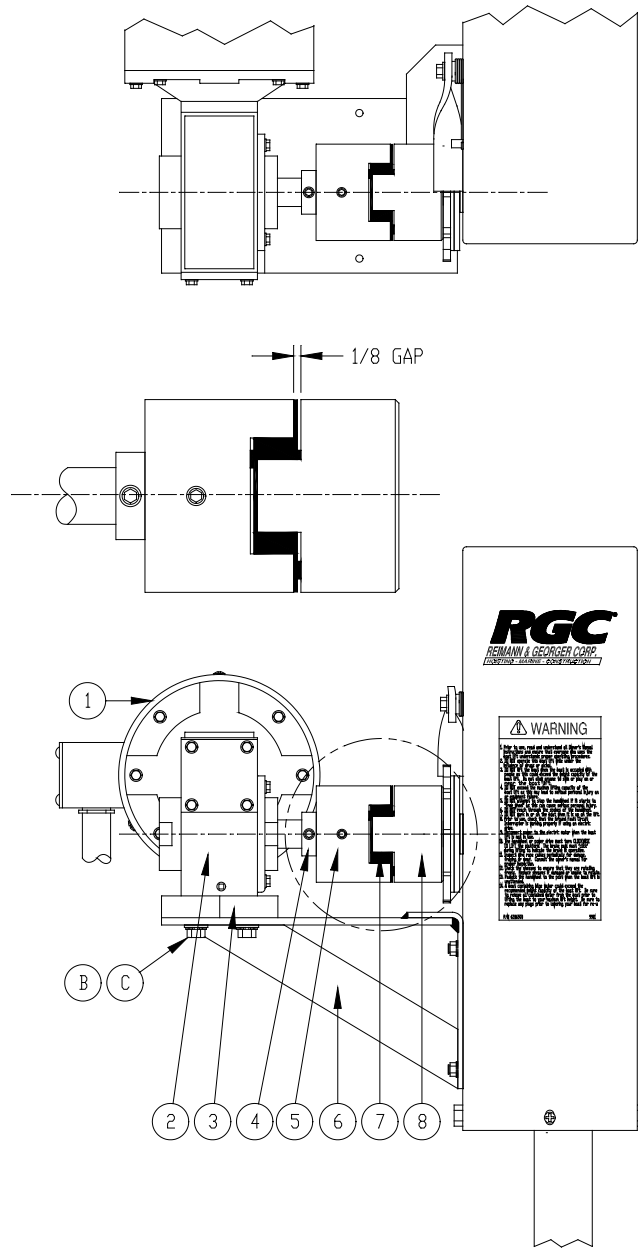


Figure 2-3
Coupler Alignment and Gap Adjustment

2.5 COUPLER ALIGNMENT AND GAP ADJUSTMENT

1. Refer to Figure 2-3, the center line of the direct drive coupler must align with the center line of the winch input shaft coupler. Align if necessary, by loosening the gearbox mounting bolts and positioning the gearbox as required. Re-tighten bolts.



CAUTION:
FAILURE TO PROPERLY ALIGN THESE CENTER LINES CAN CAUSE EQUIPMENT DAMAGE.

2. With the winch shaft coupler threaded tightly against the brake sprocket, measure the gap between the couplers. A 1/8" gap is required to ensure proper brake operation.



CAUTION:
FAILURE TO MAKE THE PROPER GAP ADJUSTMENT CAN CAUSE EQUIPMENT DAMAGE.

3. If adjustments are required to achieve this 1/8" gap, use the supplied Allen wrenches to loosen the coupler and shaft collar set screws on the gearbox output shaft. Make the proper adjustments to this coupler position.
4. Tighten all hardware after making the adjustments.
5. There will be a 1/8" gap between the two couplers when the platform is raised. This gap closes when the brake is released and the platform is lowered.

2.6 VL DIRECT DRIVE GUARD / SWITCH INSTALLATION

1. Refer to Figure 2.4, Using a #2 Phillips screwdriver, fasten the long winch mounting bracket to the backside of guard with 1/4 -20 x 1" machine screws.
2. Fasten short mounting bracket to the gearbox mounting plate with 1/4 -20 x 1" machine screws.
3. Remove screws from backside of winch guard and install VL Direct Drive Guard over drive assembly. Fasten guard to bracket on gearbox mounting plate with 1/4 -20 x 1" machine screws. Fasten guard to winch using previously removed screws.

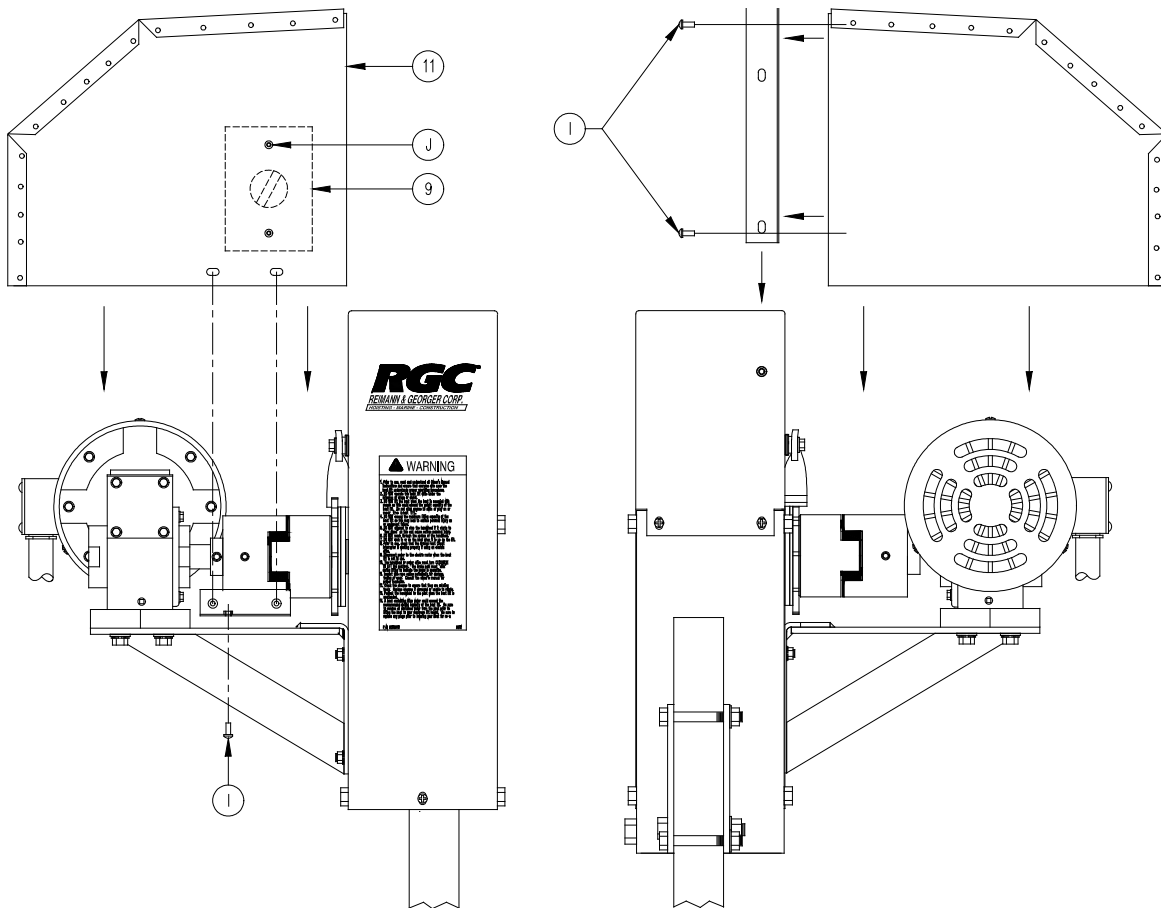


Figure 2-4
VL Direct Drive Guard / Switch Assembly

4. Mount the reversing switch assembly to the guard by removing the cover from switch box and fastening box to guard with 8-32 x 1/2" machine screws. Reinstall cover onto switch box.



WARNING:

NEVER OPERATE THE DIRECT DRIVE WITHOUT THE MOTOR GUARD IN PLACE. THIS CAN CAUSE SERIOUS PERSONAL INJURY.

2.7 VL RC GEM CONTROL BOX MOUNTING

1. Refer to Figure 2-5. Mount the RC control box on the vertical leg A, using 2-hole plate (detail 3) and hardware.
2. Refer to Figure 2-6. Mount the RC control box onto the winch bracket using universal mounting bracket (detail 2).
3. Refer to Figure 2-7. Attach limit switch bracket assembly onto vertical leg A, approximately 10 inches below “Maximum Lift Height” decal. Fasten securely.
4. Reposition limit switch bracket assembly after maximum lift height has been established for your boat and lift installation. Your maximum lift height must include rough water conditions and rising water tables.

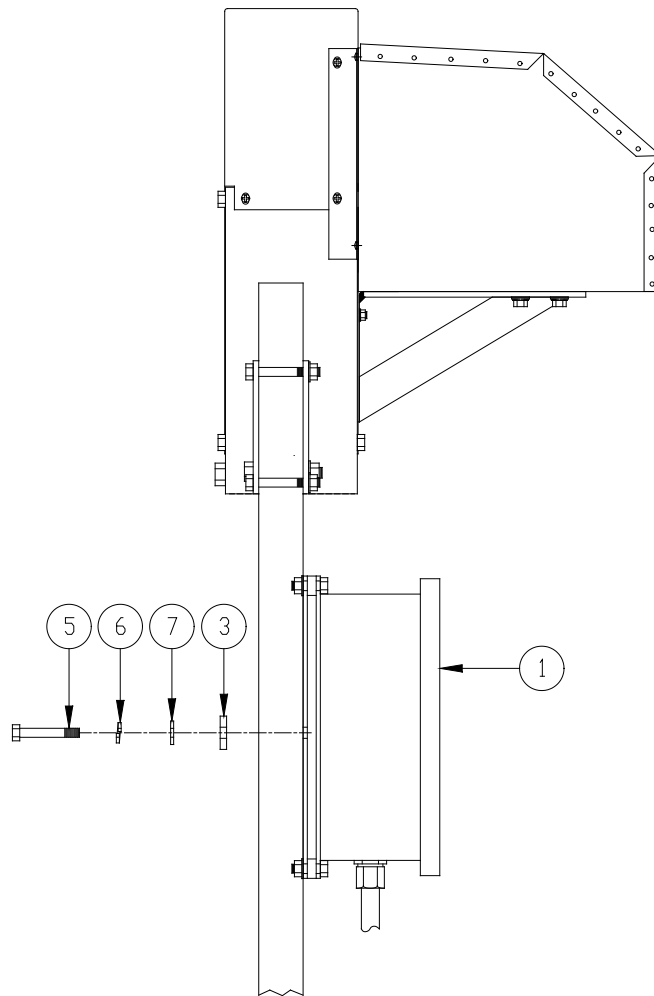


Figure 2-5
RC Control Mounting to Vertical Leg A

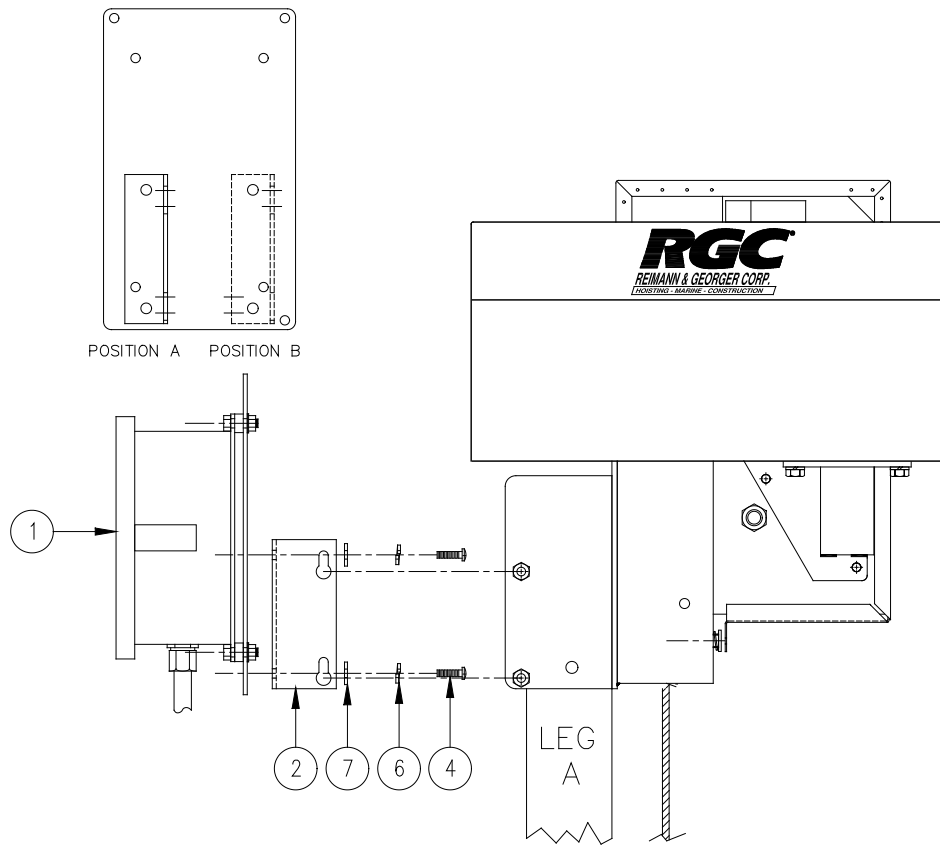


Figure 2-6
RC Control Mounting to winch bracket

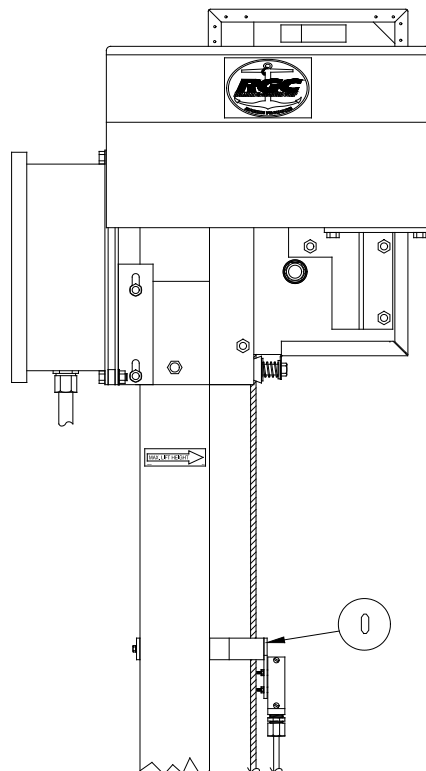


Figure 2-7
Limit Switch Bracket Mounting

2.8 POWER SUPPLY CONNECTIONS

1. Ensure power supply is compatible with motor nameplate ratings. The motor must be connected to a properly rated branch circuit to help minimize voltage drops during operation.

6511862 Leeson 1/2 hp Motor Nameplate Data:

Rated Output: 1/2 HP
 Speed: 1725rpm
 Hertz: 60HZ
 Volts: 115/230V
 Phase: 1 PH
 Full Load Amps: 7.4/3.7 amps
 Service Factor: 1.25

6511058 Leeson 1hp Motor Nameplate Data:

Rated Output: 1 HP
 Speed: 1725rpm
 Hertz: 60HZ
 Volts: 115/230V
 Phase: 1 PH
 Full Load Amps: 12.8/6.4 amps
 Service Factor: 1.15

6500647 Leeson 3/4 Motor Nameplate Data:

Rated Output: 3/4 HP
 Speed: 1725rpm
 Hertz: 60HZ
 Volts: 115/208-230V
 Phase: 1 PH
 Full Load Amps: 10.8/5.4 amps
 Service Factor: 1.15



WARNING:

THE POWER DRIVE AND SUPPLY LINE MUST BE INSTALLED AND INSPECTED BY A CERTIFIED ELECTRICIAN IN ACCORDANCE WITH LOCAL ELECTRICAL CODES. BECAUSE WATER AND ELECTRICITY ARE POTENTIAL SAFETY HAZARDS, THIS INSTALLATION MUST INCLUDE A PROPERLY WORKING GROUND FAULT CIRCUIT INTERRUPTER. (G.F.C.I.)

2. Use the following guide in wiring the power drive.

WIRE SIZING GUIDE FOR REFERENCE ONLY

Distance → Motor amps ↓	50 feet	100 feet	150 feet	200 feet	250 feet	300 feet	350 feet	400 feet
5 amp	#12 awg	#12 awg	#10 awg	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg
7.5 amp	#12 awg	#12 awg	#10 awg	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg
10 amp	#12 awg	#10 awg	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg	#4 awg
12.5 amp	#12 awg	#10 awg	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg	#4 awg
15 amp	#10 awg	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg	#4 awg	#4 awg
17.5 amp	#10 awg	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg	#4 awg	#4 awg
20 amp	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg	#4 awg	#4 awg	#2 awg
22.5 amp	#10 awg	#8 awg	#8 awg	#6 awg	#6 awg	#4 awg	#4 awg	#2 awg
25 amp	#8 awg	#8 awg	#6 awg	#6 awg	#4 awg	#4 awg	#2 awg	#2 awg

awg = American Wire Gauge

amp = Motor Full Load Current

feet = Distance From MAIN Breaker Box to Control Panel



CAUTION:

THE ABOVE CHART IS ONLY A REFERENCE FOR WIRE SIZING. DO NOT USE THIS INFORMATION TO ACTUALLY SIZE THE WIRE TO YOUR POWER DRIVE. YOU MUST CONSULT A LICENSED ELECTRICAL CONTRACTOR WHO WILL DETERMINE THE ACTUAL WIRE SIZE REQUIRED TO SUIT YOUR PARTICULAR APPLICATION.

3. Use plastic zip ties and any other supplies needed to tie off the electrical cords. This protects the cords from abrasion, sharp objects, water contact and other harm.

3 OPERATION

3.1 PRE-OPERATIVE CHECKS

1. Review the following Pre-Lifting Checklist. Only those who have read and understood this manual, the vertical lift manual, and related equipment manuals are qualified to do this inspection.

- Ensure the lift installation will clear all power lines and obstructions.
- Ensure all structural members of the lift are free of defects and damage that may affect the integrity.
- Ensure that the power drive has been inspected and installed by a certified electrician in accordance with local electrical codes. A Ground Fault Circuit Interrupter (G.F.C.I.) must be installed by your electrician and work properly.
- Ensure that any user or dealer installed locking devices have been removed before operating the lift.
- Operate the lift first without, and then with, your boat on the platform to test the operation of both the lift and the winch.
- Ensure the boat is properly positioned on the lift before doing any raising or lowering.
- Ensure the lift is not being used beyond its rated capacity.
- Ensure any drain plug is in place on the boat before launching.
- Conduct the wire rope inspection procedure described in your vertical lift manual at least monthly.
- Ensure the leg pins connect the vertical legs to the adjustable legs. Ensure the leg height has been properly adjusted according to the water depth.
- Ensure the frame and platform fastenings are tight.
- Ensure the lower diagonal braces are installed in each corner.
- Ensure the frame is level and square according to the dimensions shown in the installation chapter of the vertical lift manual.
- Ensure the cable end loops of the load and spreader tubes are fastened to the bracket at the bottom of each vertical leg.
- Ensure the cable studs opposite the cable end loops in the platform assembly are tight. If tightening is needed, follow the sequence described in the installation chapter of the vertical lift manual. Then tighten the jam nuts to the cable nuts to lock the position.
- Ensure the winch is securely fastened to vertical leg "A".
- Ensure the center lines of the couplers on the winch input shaft and gearbox output shaft are properly aligned.
- Ensure that the coupler on the winch input shaft is pinching the brass washer and brake sprocket tightly against the friction disk.
- Ensure that there is a 1/8" gap between the winch input shaft and gearbox output shaft couplers with the platform in the raised position.
- Ensure set screw securing wire rope end to the drum is tight and in good condition.
- Ensure the guards are in place before operating the winch.

- Ensure the cover is installed over the direct drive assembly.
- Ensure the vent plug is installed on the gearbox.
- Ensure the plastic caps are installed onto the tops of the vertical legs and the ends of the upper short horizontal tubes.
- Read the lift manual and ensure that everyone understands the proper operating procedure.
- Understand the use of all controls and connections provided with the direct drive.
- Do not use the lift or direct drive if either shows any signs of damage.
- Ensure that all bolts and nuts are fastened securely prior to operation.
- Check that the winch is reeved properly. See the reeving instructions in your vertical lift manual.
- Never try lifting anything other than a boat with this lift.
- Do not operate the lift under the influence of drugs, alcohol, or medication.
- Never try to lift or launch your boat in rough water conditions. This can damage your boat and/or the lift.

3.2 TESTING WINCH OPERATION

After the lift installation is complete, it is important that the winch functions properly. Test the winch operation as follows:

1. Turn and hold the switch in the UP position to raise the empty platform about one-fourth the way up. Then release the switch. If the winch is functioning properly, the brake mechanism will hold the platform at any position. The direct drive must turn clockwise when raising the platform. The brake pawl must click, indicating that the brake is operative.



WARNING:

IF THE DIRECT DRIVE SHAFT MUST TURN COUNTERCLOCKWISE TO RAISE THE PLATFORM, YOU HAVE REEVED THE WINCH INCORRECTLY. THE DRIVE WILL IMMEDIATELY ENCOUNTER STRONG RESISTANCE WHICH CAN DAMAGE THE DRIVE AND/OR WINCH AND BREAK THE CABLE.

2. Repeat Step 1 in the half, three-quarters, and full lift positions.
3. Lower the empty platform to repeat steps 1 and 2 with your boat on the lift. The direct drive shaft must turn counter-clockwise when lowering the platform. This counter-clockwise rotation allows the self-activating brake mechanism to stop the platform lowering as soon as the operator releases the switch from the DOWN position. Make sure this brake mechanism is operative.



WARNING:

IF THE DRIVE SHAFT MUST TURN CLOCKWISE TO LOWER THE PLATFORM, YOU HAVE REEVED THE WINCH INCORRECTLY. THE BRAKE PAWL WILL NOT BE EFFECTIVE WHICH CAN CAUSE AN UNCONTROLLED SPIN-DOWN OR “FREEWHEEL” OF THE WINCH SHAFT. IF FREEWHEELING OCCURS, NEVER TRY TO STOP IT. DO NOT USE THE LIFT IN THIS CONDITION.

4. Contact your authorized dealer if the winch mechanism fails to perform as described in this section. Do NOT tamper with the winch mechanism.

3.3 RAISING AND LOWERING THE PLATFORM

1. Raise the platform by turning and holding the switch in the UP position until the platform is at the desired level. The switch can be released any time to stop the platform movement and the self-activating brake mechanism will hold the platform at that height. Do not try to raise the boat beyond the maximum lifting height of the platform. This can cause lift and direct drive damage.
2. Platform should be raised a minimum of 1 foot between bottom of boat and highest potential water table height for your geographic area.



WARNING:

DO NOT STAND OR WALK ON THE LIFT PLATFORM OR SIT IN THE BOAT WHILE THE PLATFORM IS IN ANY RAISED POSITION. THIS CAN CAUSE SERIOUS PERSONAL INJURY.

3. Lower the platform by turning and holding the switch in the DOWN position. The switch can be released any time to stop the platform movement. Do not continue lowering the platform after the boat floats freely from it. Excessive winch cable slack may cause cable, lift, and winch damage.



WARNING:

NEVER RELEASE THE BRAKE PAWL OF THE WINCH. THIS CAN TRIGGER AN UNCONTROLLED SPIN-DOWN OR “FREEWHEEL” OF THE WINCH SHAFT.

4. Check the lift periodically for frayed cables and/or binding pulleys.
5. Never operate the direct drive from inside the boat or lift.
6. Keep fingers and clothing clear of all moving parts of the lift and power drive. Keep people clear during operation of the lift.

3.4 SECURING LIFT WHEN NOT IN USE

At the end of operation, secure the lift to prevent unauthorized use. Proceed as follows:

1. Raise the platform to the desired height.
2. Disconnect and lock out the power source to prevent unauthorized use of the lift when it is unattended.

3.5 PROGRAMMING THE GEM REMOTES.

Programming Transmitters on NEWER UNITS

(Yellow transmitters with 3 blue buttons.)

1. Press the LEARN button once and release.
2. Press the STOP button within 5 seconds of pressing the LEARN button to program the transmitter.

4 TROUBLESHOOTING

The following chart is intended to assist with troubleshooting the power drive. While not all inclusive, the chart outlines the most common causes of a problem and the recommended course of action.

The troubleshooting guide for the associated vertical lift is in the vertical lift instruction manual.

SYMPTOM	CAUSE AND CORRECTIVE ACTION
Power drive does not start when switch is turned to either the UP or DOWN position.	<p>Poor electrical connection—clean as required and ensure that all connections are tight.</p> <p>Power drive wired improperly—do NOT tamper with either electrical supply or the power line connections at either the drive or the main breaker. Consult a licensed electrical contractor.</p>
Power drive starts, but winch resists platform raising.	<p>Winch has been reeved incorrectly—winch must turn clockwise to raise platform. See Chapter 3 of the vertical lift manual.</p> <p>Shaft bearings corroded - inspect/lubricate/replace.</p> <p>Sheaves binding—inspect/lubricate/replace.</p> <p>Winch cable is rubbing against the winch frame—repeat winch reeving if necessary as described in Chapter 3 of your vertical lift manual.</p>
Power drive is turning winch, but platform raising is either difficult or impossible.	<p>Platform is binding because frame is either not square or not set level in the water—refer to Chapter 3 of the vertical lift manual.</p> <p>One or more cables are broken—replace as required.</p> <p>Sheaves binding—inspect/lubricate/replace.</p> <p>One or more cables are excessively worn—replace as required and follow monthly wire rope inspection procedure described in Chapter 5 of your vertical lift manual.</p> <p>Load exceeds rated capacity—the rated capacity in pounds is the first two digits of your lift number times 100. For example, a VL 35108 has a rated capacity of 35 x 100 or 3500 lbs. Reduce load weight as needed.</p> <p>Broken winch chain - replace</p> <p>User or dealer installed locking devices are in place—remove these.</p> <p>Auxiliary equipment such as boating hardware is being improperly hung on lift—remove this equipment permanently.</p>

5 PARTS LIST

VL DIRECT DRIVE ASSEMBLY / R18 WINCH

REF #	PART #	QTY	PART DESCRIPTION
1	6511058	1	MOTOR - LEESON 1 HP
1	6511862	1	MOTOR - LEESON 1/2HP
1	6500647	1	MOTOR - LEESON 3/4HP
2	6703123	1	GEAR REDUCER 25:1
2	6703280	1	GEAR REDUCER 15:1
2	6703282	1	GEAR REDUCER 10:1
2	6703281	1	GEAR REDUCER 7.5:1
3	3708478	2	VL DIRECT DRIVE SPACER BLOCKS
4	5800114	1	COLLAR 1" I.D. (REDUCER OUTPUT SHAFT)
5	6704741	1	COUPLER LOVEJOY
6	3718047	1	VL DIRECT DRIVE MOUNTING BRKT
7	6704731	1	RUBBER SPIDER
8	3777290	1	COUPLER ACME – VL DIRECT DRIVE
9	5403261	1	SWITCH SALZER
10	5406966	1	GFCI 15A IN-LINE CORDSET
A	5896247	1	3/8-16 X 1" HHCS (MOTOR MTG & WINCH WALL)
B	5896249	4	3/8-16 X 1-1/2" HHCS (REDUCER MTG)
C	5896406	5	3/8 WASHER FLAT SAE (REDUCER MTG & WINCH WALL)
D	5806243	5	3/8 WASHER SPLIT LOCK
E	5806410	1	1/2 WASHER FLAT USS (COUPLER ACME)
F	5896377	1	3/8-16NUT HEX
G	5816153	1	1/2-20 LOCKNUT (COUPLER ACME)
	5806187	1	3/16" ALLEN WRENCH (COUPLERS)
	5806184	1	5/32" ALLEN WRENCH (COLLAR)
	NA	1	1/4 X 1/4 X 1" KEY (REDUCER OUTPUT SHAFT)
	NA	1	3/16 X 3/16 X 1-1/4" KEY (MOTOR SHAFT)
	NA	3	PLASTIC ZIP TIES
N	NA	1	VENT PLUG - REDUCER
K	6206974	1	DECAL “ RGC LOGO OFFICIAL ” (WINCH GUARD)

#3707025 VL DIRECT DRIVE GUARD KIT R18LT

REF #	PART #	QTY	PART DESCRIPTION
11	3707025	1	VL DIRECT DRIVE GUARD KIT R18LT
			Consisting of:
	3707020	1	VL DIRECT DRIVE GUARD
	3707022	1	PLATE MTG ANGLE (REDUCER MTG PLATE)
	3707023	1	WINCH MTG ANGLE R18
H	5806365	2	#8-18 X 1/2" SCREW SHEETMETAL (GUARD MTG)
I	5806241	7	1/4-20 X 1/2" SCREW MACHINE (GUARD MTG)
J	5896240	2	8-32 X 1/2" SCREW MACHINE (SWITCH MTG)
	6206976	1	DECAL “ RGC LOGO REFLECT ” (DRIVE GUARD)
L	6206970	1	DECAL “WARNING VL”

#3709339 VL REMOTE CONTROL GEM BOX ASSY 110VAC

REF #	PART #	QTY	PART DESCRIPTION
1	3709339	1	VL RC GEM BOX ASSY 110VAC
			Consisting of:
	5437122	1	RC GR1 CONTROL BOX
	5437123		TRANSMITTER 3-BUTTON + AUX
	5400173	1	CORD MOTOR 14/3 SJTOW BLACK
O	3751404	1	VL LIMIT SWITCH W / BRKT ASSEMBLY
			Consisting of:
	NA	1	VL LIMIT SWITCH
	3605961	1	VL LIMIT SWITCH BRKT
	9737332	1	RC PANEL UNIVERSAL MTG Bag of Bolts
			Consisting of:
	5033370	1	RC MTG PLATE W / RUBBER PADS
2	5003740	1	RC UNIVERSAL MTG BRKT
3	3606922	1	VL TWO HOLE PLATE 5"
	5896238	2	1/4-20 X 1-1/2" SCREW PH MS PHIL SS
	5896955	2	1/4 WASHER SAE SS
	5893101	2	1/4 NUT HEX NYLOCK SS
4	5896246	2	3/8-16 X 3/4" HHCS SS
5	5896268	2	3/8-16 X 2-3/4" HHCS SS
6	5806243	2	3/8 WASHER SPLIT LOCK SS
7	5896406	4	3/8 WASHER SAE SS
	5896249	2	3/8-16 X 1-1/2 HHCS SS
	5897016	2	3/8-16 NYLOCK HEX NUT SS