



**STORM**

**VR / VRC 2500/3500/4000  
VERTICAL WINDLASS**

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# THE WORLD POWER IN ANCHORING SYSTEMS

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## INTRODUCTION

Thank you for purchasing a Muir Windlass. Muir go to great lengths to develop anchoring systems that not only meet all your performance and safety requirements, but at the same time designed with a style and finish that enhances the aesthetics of your vessel. With Muir's commitment to quality and use of superior materials and processes we know you will be pleased with your investment, and rest assured that through the correct installation, operation and maintenance your new Muir Windlass will give you years of reliable performance.

## IMPORTANT INFORMATION

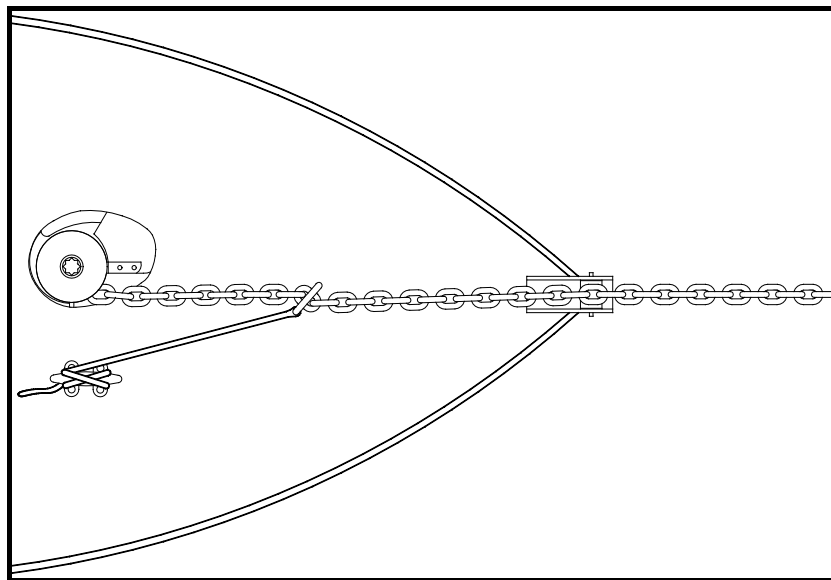
To avoid damage to the geardrive, windlass or vessel when bringing the anchor up hard, it is a preferred practice to mark the chain at approximately 5-meter intervals from the anchor, to alert the operator to the anchor position. Alternatively an Auto Anchor can be used.

Under no circumstances should the windlass be operated if it is stalled or overloaded.

If anchor retrieval is impaired by high wind, heavy seas or the anchor is snagged, ease the load by either motoring or sailing slowly forward into the wind.

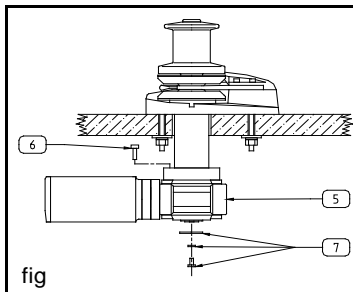
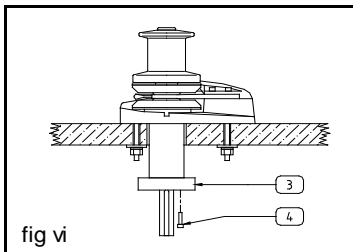
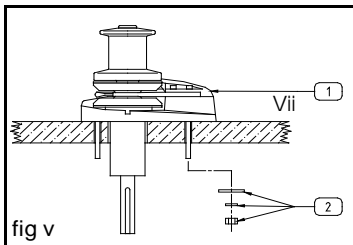
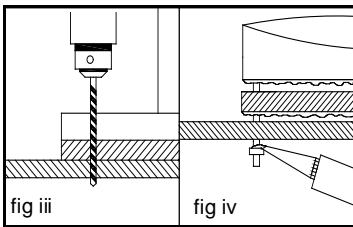
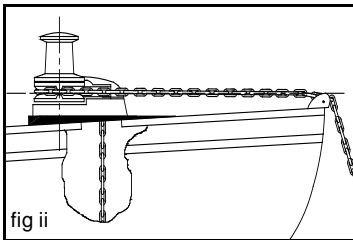
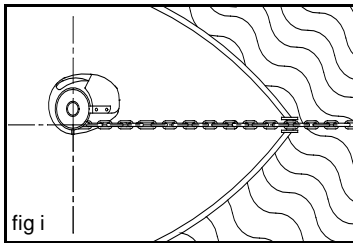
## SAFE OPERATION

- Ensure that hands, feet, hair and clothing are kept clear of the windlass and other loose gear when in operation.
- Ensure no one is swimming nearby as anchor is being lowered or retrieved.
- Keep hands well clear of capstan, gypsy, chain and rope.
- The windlass should never be used for lifting people aloft.
- Do not use a windlass as a bollard for mooring, towing or being towed.
- When the windlass is in use or the anchor stowed, always ensure the clutch is tightened with the clutch handle, and a Chain lock, Devils claw or Snubber Line is fitted to retain the anchor. The use of these accessories will prevent excessive loads on the geardrive and accidental release of the anchor.



## INSTALLATION

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**Figure(i)** Locate the windlass centrally fore and aft. Check that the chain leads unhindered to the anchor roller. The chain leads onto the starboard side of the gypsy, wraps around 180° and falls below deck through the chain pipe (hawser). Ensure there is sufficient room around the windlass to allow full rotation of the windlass manual/clutch handle (if supplied).

**Figure (ii)** The centre height of the gypsy must be in the same plane as the chain lead from the bow roller. If the deck is angled (fore & aft) or curved (port to starboard) a suitably shaped mounting block will be required to spread the load evenly over the deck surface and mount the windlass base on a level and even footing.

**Figure (iii)** Place the shaped mounting block (if required) onto the deck. Using the layout template supplied, mark the mounting centres and drill the holes, (Refer template).

**Figure (iv)** Apply an appropriate sealant to the base plate, gasket and mounting block (if required) and carefully tighten the nuts & washers onto the threaded studs under the deck. Remove excess sealer.

For Aluminium or Steel hull vessels, it is important to insulate the windlass with a non-conductive gasket to avoid corrosion. This also applies below deck with the mounting bolts, nuts and washers.

Where the deck construction is light or of foam sandwich construction, a plywood stiffener of at least 16mm (5/8") should be fitted to the underside of the deck to spread the load and to prevent the bolts from pulling through the deck. Large diameter washers on the underside of the stiffener assists to spread the load.

**Figure (v)**

1. Mount the windlass from above as shown.
2. From below, place washers and nut on each stud and tighten.

**Figure (vi)**

3. Locate adaptor and align holes.
4. Fasten using cap screws provided.

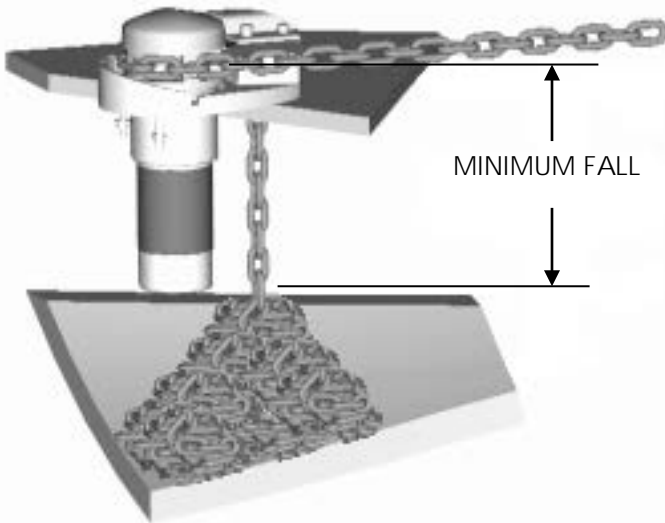
**Figure (vii)**

5. Grease shaft and key, slide geardrive onto shaft ensuring key is aligned. Rotate gearbox to preferred mounting position and secure with bolts provided.
6. Locate gearbox and bolt through adaptor.
7. Place washers and bolt in the end of the shaft and tighten / Fit circlip.

NOTE: On assembly, grease all moving parts and deck plate grease nipple with a Lithium/teflon based grease. The Motor/geardrive assembly should be protected with anti-corrosion film or grease tape.

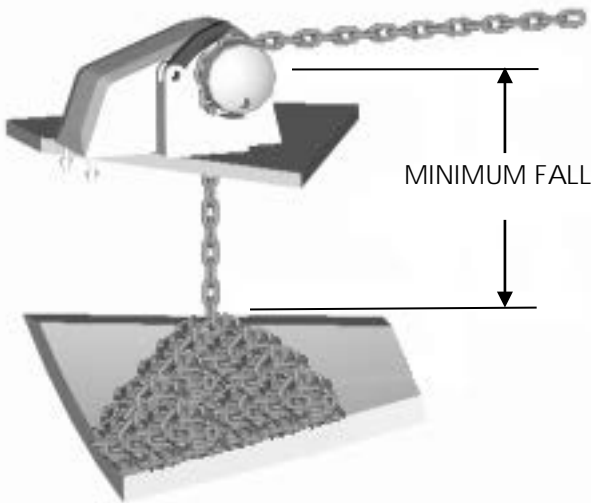
**DEPTH OF THE CHAIN LOCKER**

Measuring the vertical distance (minimum fall) underside of the deck and the top of the completely stored and heaped anchor rode in the locker will assist in determining the installation to suit your vessel. Refer to the fall depth diagrams to the left, and the options detailed below. It is also recommended that the chain be directed to the center of the chain locker.



**Vertical Windlass:**

The running gear, gypsy and capstan are positioned above the deck with the motor and gear drive below. Vertical windlasses operate at best with greater anchor rode fall than the horizontal windlass and a minimum fall of 300mm from top of stacked anchor rode is recommended. This is particularly important if using nylon line, which does not fold and stack as well as chain. Vertical windlasses minimise deck intrusion and the modern curved lines of the Muir windlass enhance the look of any vessel. A vertical windlass provides the advantages of a 180-degree wrap of the anchor rode around the gypsy.



**Horizontal Windlass:**

Fully enclosed, above deck, this style is usually preferred where locker space is limited or additional fall is required. The motor and gear drive is fully enclosed in the housing with nothing protruding below deck. The horizontal windlass operates with optimum anchor rode fall of at least 300mm from the top of the stacked anchor rode, and due to the horizontal orientation of the gypsy higher above the deck there is additional fall provided. These units are ideally suited for vessels with less locker space.

Vertical Windlass Model	Horizontal Windlass Model	Minimum Fall (Dist. Top of Pile)
VR/C 600	HR 600 / 700 / 806 / 808	300 mm
VR/C 850 / 1250 / 2200	HR 1200	450 mm
VR/C 2500 / 3500	HR 2500 / 3500	650 mm
VR/C 4000	HR 4000/- 4200	800 mm

**HANDY HINTS**

It is a common mistake to locate the windlass too far forward, or too close to the bulk head, where there is insufficient room for chain and anchor stowing. The chain fall position should be in the centre of the chain locker. If the chain falls alongside a bulkhead or onto the stem it will pyramid and jam.

If the chain falls into an undesirable position, a metal tube can be fitted under the hawser to redirect the chain to a preferred position. This pipe should be at least 1 ½ times the diameter of the chain. It should also have as much vertical angle as possible. Position the windlass in the best location with the chain hawser facing forward. Ensure sufficient room to run electric cables to the windlass. Follow the instructions on page 4 including underdeck stiffening, deck camber, alignment, mounting blocks and sealing procedures. The gearbox and motor can be located in one of 22 positions.

**ELECTRICAL**

See Wiring Diagrams for wiring instructions.

**A circuit breaker must be fitted to ensure warranty.** If the windlass is overloaded or stalled the circuit breaker automatically cuts off power to the windlass and protects the wiring and motor. The circuit breaker should not be used as an isolating switch.

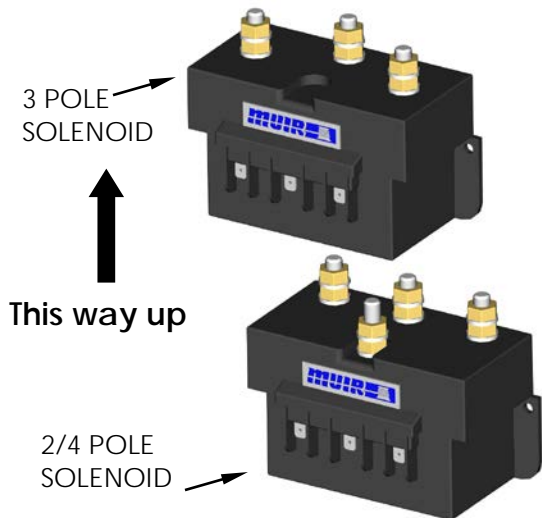
**Deck Switches** are best located out to either port or starboard or directly behind the windlass in a position where it can be easily reached with your foot or knee, preferably where you can view the anchor and chain coming aboard.

**Isolating Switch** should be fitted in an accessible position for safety, ideally close to the battery or switches. The isolating switch is not a circuit breaker.

**Batteries** are best located as close to the windlass as possible. Larger cables will reduce the voltage drop to the motor and the heat generated when running the windlass. Small diameter cables drop voltage considerably. Use the following table as a guide to your required wire size:

Distance from battery to motor (m)	Cable Size		Cable Diameter (mm)
	(mm <sup>2</sup> )	AWG	
7 (23')	50	1	8 (5/16")
9 – 17 (30' – 55')	85	3/0	10 (3/8")

**Rotation:** Windlasses may be wired for single or dual direction, using single or dual deck switches for raising or lowering. Alternatively a remote control solenoid packages with Toggle Switch, Hand Pendant or Auto Anchors are available.



**Solenoid Installation**

We recommend that the solenoid is installed in an upright position, and in close proximity to the electric motor of the capstan. The solenoid **must not** be installed in chain locker. It should be located in **dry** area only.

For wiring information, please refer to the appropriate wiring diagram.

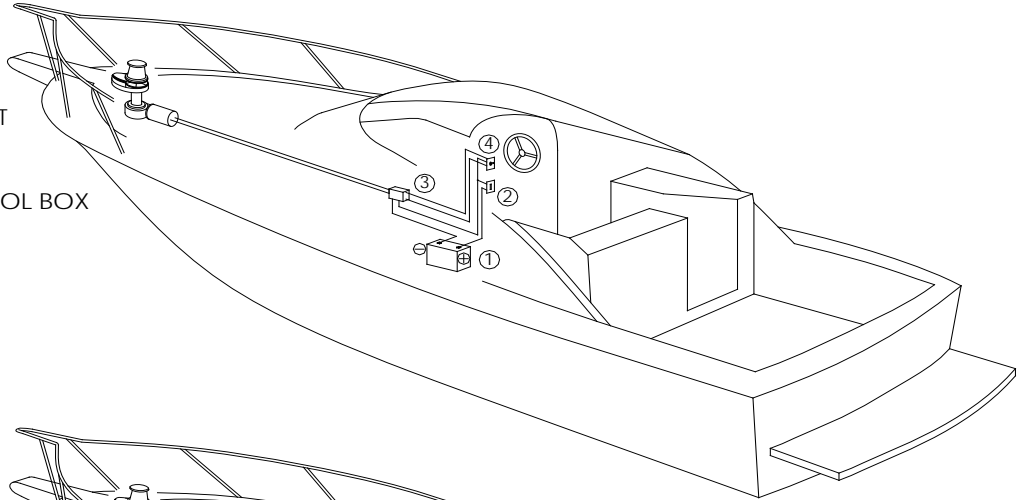
WINCH MODEL	MOTOR SIZE	MOTOR TYPE
VR/C 2500	1200 W	3 POLE
VR/C 3500	1500 W	3 POLE
VR/C 4000	2000 W	4 POLE

**WARNING: Keep solenoid away from salt and fresh water**

WIRING LAYOUT

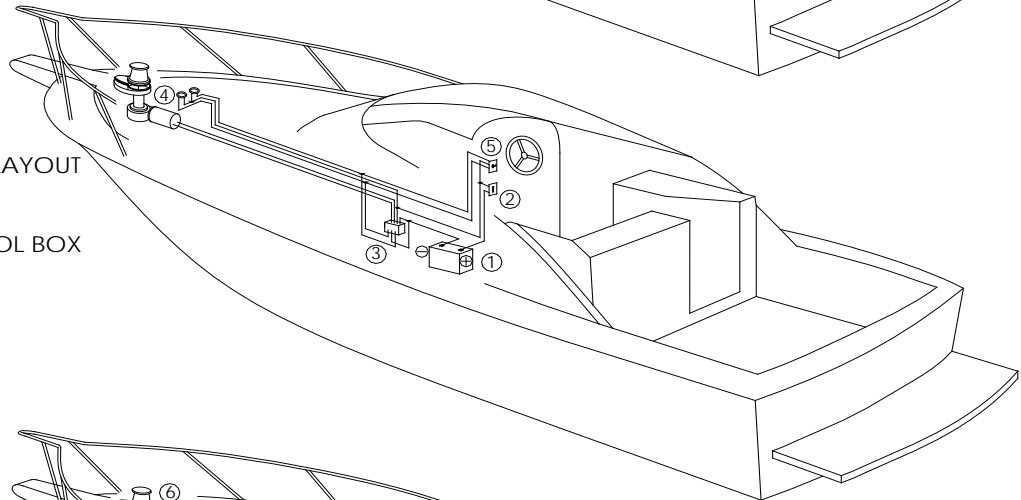
REMOTE SWITCH LAYOUT

- 1. BATTERY
- 2. CIRCUIT BREAKER
- 3. SOLENOID/CONTROL BOX
- 4. REMOTE SWITCH



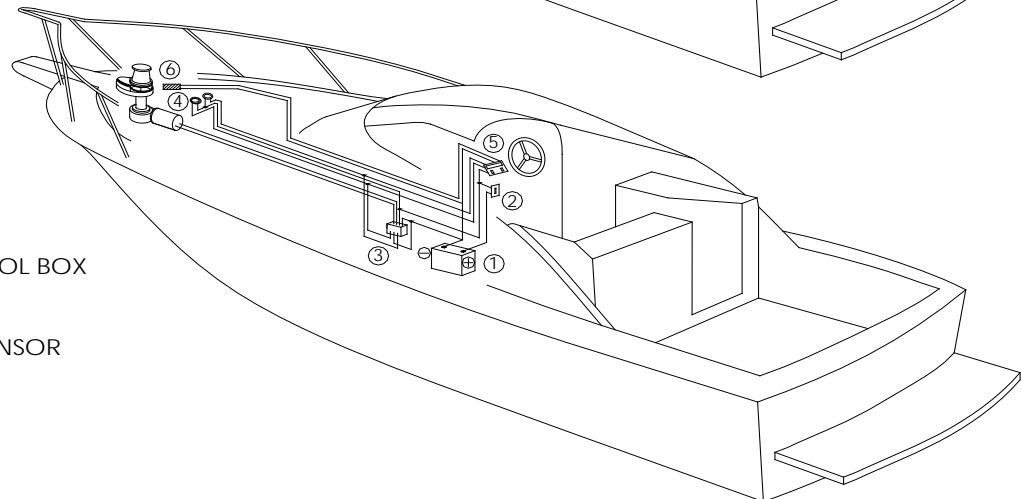
REMOTE / DECK SWITCH LAYOUT

- 1. BATTERY
- 2. CIRCUIT BREAKER
- 3. SOLENOID/CONTROL BOX
- 4. DECK SWITCHES
- 5. REMOTE SWITCH



AUTO ANCHOR LAYOUT

- 1. BATTERY
- 2. CIRCUIT BREAKER
- 3. SOLENOID/CONTROL BOX
- 4. DECK SWITCHES
- 5. AUTO ANCHOR
- 6. AUTO ANCHOR SENSOR



NOT TO BE USED AS WIRING DIAGRAMS

# THE WORLD POWER IN ANCHORING SYSTEMS

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## OPERATION

**Manually:** When releasing anchor rode, place the handle into the clutch drive Bi-square (located at the top of the windlass) and release the clutch brake anti-clockwise. Let the anchor fall and control the chain run by rotating the handle clockwise using the clutch mechanism as a brake.

**Anchoring:** When laying at anchor use a chain stopper, nylon/chain bridle or snubber line to prevent snatching and direct load on the windlass main shaft. Never use the windlass as a mooring bollard!!

**Retrieving Chain:** Place the handle in the Bi-square and rotate clockwise to tighten the clutch then remove handle. If the anchor is buried hard, motor forward to pull it free after hardening up on the windlass, to ease the load on the windlass.

**Rope hauling on Capstan:** The capstan can be operated independently of the gypsy. Secure the anchor rode (via Chainlock, Gypsy lock or Snubber) then release the clutch. The capstan can then be operated in one of the following ways:

1. By place the handle into the off-centre Bi-square and manually winding
2. By the use of the electrical switch gear.

**Electric / Hydraulic operation:** Releasing and retrieving Anchor rode is identical when operating the windlass. Always keep well clear of the windlass when releasing or retrieving chain and anchor. Keep fingers, hair and clothing well clear when the windlass is in operation.

**Auto Anchor Launching:** Two direction windlasses are now standard. If the anchor and anchor roller can be positioned so that it falls as soon as the windlass is reversed, the whole operation can then be carried out remotely from aft or fly bridge. Remote switch controls are self centering and stops the windlass when the switch is released. Mark the anchor end of the chain at 2 and 5 metre (6.5' & 16.5') which will enable the operator to judge when the anchor is almost up. Go gently with the last two metres of retrieving by letting go of the switch, rather than waiting for the anchor to fly up over the roller, and banging tight, putting excessive load onto the bow roller, windlass and fore deck.

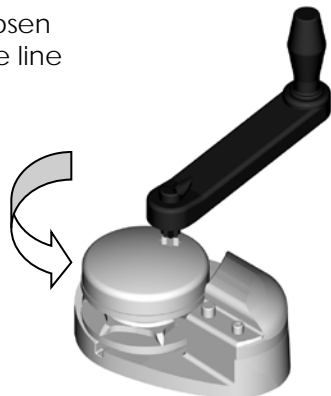
## SERVICING

VRC2500/3500/4000 models have a grease nipple on the aft side of the base plate which lubricates the main drive shaft.

The geardrive is filled and sealed at factory with long life synthetic oil and does not require replacement. A rinse of fresh water on all your deck gear after every excursion ensures all salt deposits and corrosion are kept to a minimum.

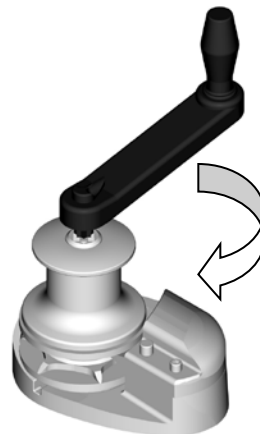
We recommend the windlasses of Pleasure Vessels are stripped yearly and all moving parts cleaned and greased with a Marine Grease, Teflon or Lithium based grease (e.g. Duckhams'Keenol'; 'Castrol LMX'.). In the case of Work and Charter Vesels we suggest it is carried out more frequently. **Do not use soap based grease.**

Gradually loosen  
to release the line  
manually



Tighten to brake the  
outgoing line

Fully tighten retrieve the  
anchor under power





MAINTENANCE AND ASSEMBLY INSTRUCTIONS

DIAGRAM 1

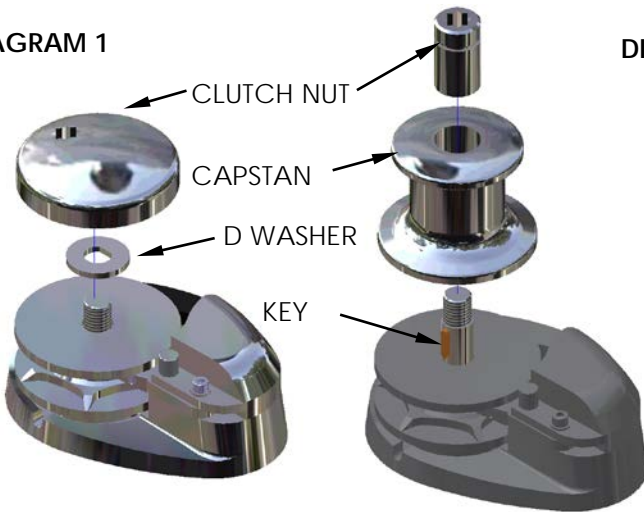


DIAGRAM 2

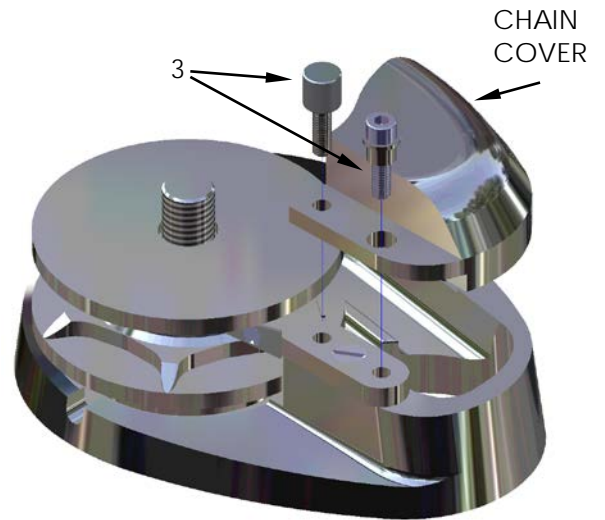


DIAGRAM 3

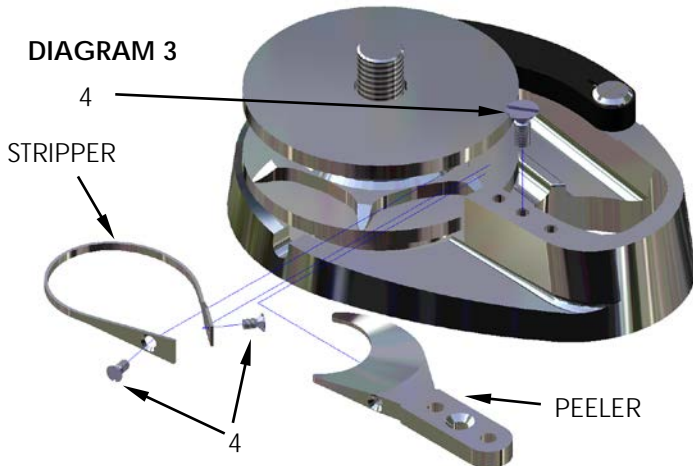
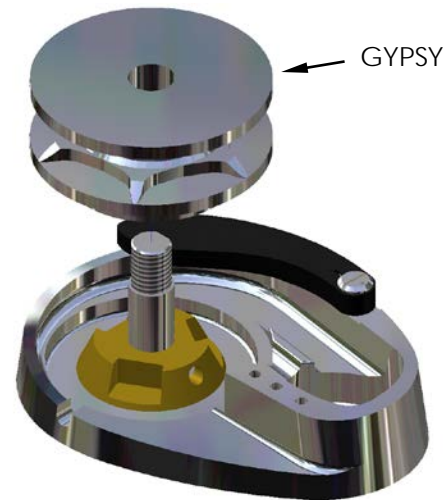


DIAGRAM 4



**PROCEDURE:**

Tools Required: Clutch handle, Allen keys, a small and large flat screwdriver & Marine, Teflon or Lithium based grease.

**VR MODELS ONLY (DIAGRAM 1 LHS)**

1. Secure the gypsy, and then remove the clutch nut with handle supplied
2. Slide the d washer off the shaft.

**VRC MODELS ONLY (DIAGRAM 1 RHS)**

1. Secure the gypsy, and then remove the clutch nut with handle supplied
2. Slide the capstan off the shaft taking care not to lose the shaft key

**VR AND VRC MODELS**

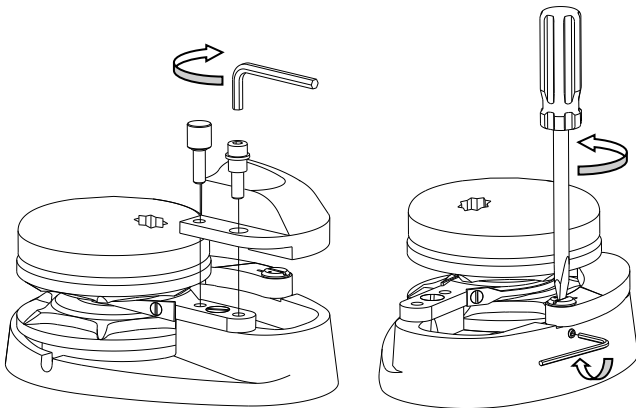
3. Undo the Thumb Screw and Socket Head Screw with an Allen key to remove the chain cover.
4. Undo the stripper screws into the peeler with a small flat head screwdriver and remove the stripper. The securing screw for the peeler should now be removed with a large flat head screwdriver and then the peeler.
5. The gypsy can now be removed from the main shaft.

**NOTE: We recommend the use of Lithium/Teflon based grease.**

- Before re-assembly, grease the exposed Main Shaft/cone & Gypsy bore.
- The Windlass Base Plate can be greased via grease nipple located at the rear of the base.
- The Motor / geardrive assembly should be protected with anti-corrosion film or grease tape.

## ROPE CHAIN MANAGEMENT SYSTEM (RCMS) ADJUSTMENT

Firm tension of the finger is required to reduce rope (nylon line) slipping through gypsy. To adjust this tension (if your line is slipping) refer to the two diagrams and procedure below.

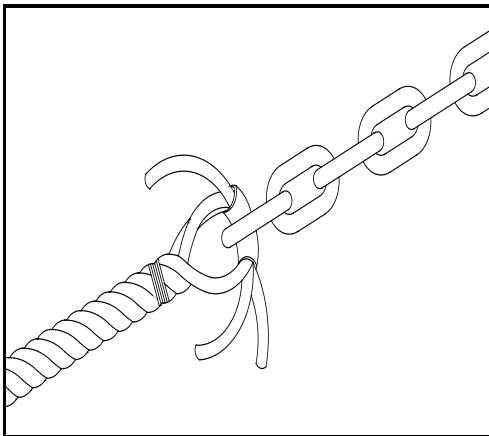


### PROCEDURE:

Tools Required: Allen keys and a large flat screwdriver.

1. Undo the Thumb Screw and Socket Head Screw with an Allen key to remove the chain cover.
2. Loosen the grub screw on the side of base with an Allen key for finger adjustment.
3. Turn screwdriver **clockwise** to tension the spring, while holding the tension re-tighten grub screw.
4. Re attach the chain cover to finish the adjustment.

### Rope/Chain Splice.

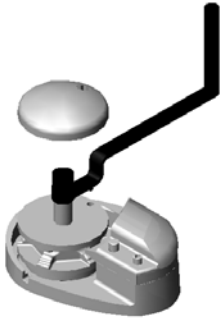


1. To stop rope unravelling, seize rope 400mm(16") from end with whipping twine. Unlay strands.
2. After placing 20mm (3/4") of heat shrink sleeve tubing through the last link of chain, pass one strand of rope through sleeve and chain from one side and the other two strands of rope from the opposite side. (See illustration).
3. While pulling all three strands tight, shrink the sleeve tightly onto the rope using a hairdryer / fan heater or by immersing in boiling water.
4. Remove seizing and complete back splice in normal manner for two full tucks. With a hot knife pare down the three strands by 1/3 and insert two further tucks. Pare down by another 1/3 and finish with two tucks. Cut any remaining tails.

### Line Care

Using the wrong type of line may cause the line to jam causing excessive line wear. Muir Windlasses are designed to run on 3-strand nylon line (supplied by Muir) which has been specially treated with fabric softener to prevent it from hardening. It is recommended to soak your rope in fresh water containing fabric softener every 3 months.

In case of a rope jam, slacken off the windlass clutch to free the jammed line. When retrieving the anchor rode do not continue to run the windlass if the anchor or chain is jammed, as line slippage in the gypsy will cause damage to the line.



**Manual Operating System (MOS):** allows for manual operation featuring a special handle that fits to the top of the gypsy after the capstan or clutch top has been removed. *(This is optional on the VR/VRC 850-1250 / 1000-1200 / 2200 / 2500-4000.)*



**Manual Override System (MORS):**

This allows the operator to manually recover the anchor and anchor rode without the use of the electrics. For manual operation the ratchet drive pawl should be engaged which stops the gypsy from running back wards. Tighten the clutch nut to engage the gypsy by rotating it clockwise (anti clockwise if left hand winch), then place the handle into the offset clutch drive Bi-square. When turning in an anti-clockwise (clockwise if left hand winch) direction the MOR pawls will engage and drive the gypsy retrieving the chain, as the handle is moved clockwise (anti clockwise if left hand winch) the weight will be taken by the gearbox and ratchet drive pawls.

**Assembly**

**To engage the pawls (refer to diagram):**

1. Remove the clutch nut (and the D washer for VR models) with handle supplied
2. Remove the capstan assembly (if fitted) and key on the shaft before remove the whole gypsy
3. Loosen off the nylon peeler arm (see RCMS adjustment)
4. Remove the chain cover
5. Remove the gypsy together with peeler stripper assembly
6. Remove the shoulder bolt
7. Remove the ratchet cone and washer
8. Remove the pawls and replace them into the adjacent slots taking care not to loose the pawl springs
9. To reassemble the winch, repeat steps 1 – 9 in reverse order

**Note:** The ratchet pawl assembly is disengaged when assembled at Muir engineering Pty Ltd.

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## Trouble Shooting

### ELECTRICAL

1. Check the battery circuit breaker and ensure the isolating switch is on.
2. Check battery is charged up to 12 or 24 volts.
3. Check that the foot switch plunger is contacting
4. Check remote control solenoid is contacting, if this is clicking the problem may be low voltage, a faulty solenoid or a wire not properly connected.
5. Check wiring between controls, solenoid and motor are in-tact.
6. If the motor will not turn after checking the above points, check that the motor bushes are not worn or sticking.

### MECHANICAL

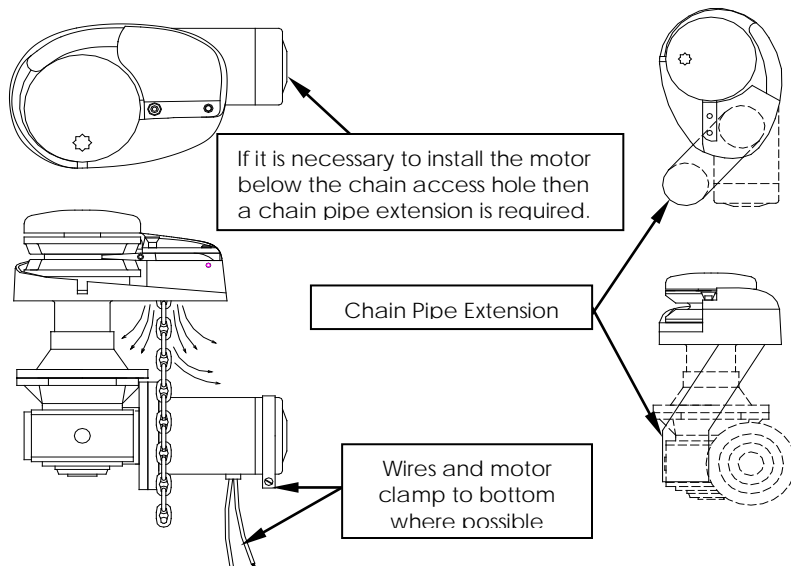
If the windlass running gear will not turn or operate check the following

1. Check that the clutch above the chain gypsy is tightened to the chain gypsy drive using the manual handle supplied (see operating instructions).
2. If the line slips check the tension on the finger and increase spring tension (see RCMS adjustment on previous page).
3. Check the drive key on main shaft to gearbox output.
4. Check the drive key between the gearbox and motor input.

### HYDRAULIC MOTOR

Refer any problems with your hydraulic motor to a Muir service agent or Muir Hobart.

### WATER PROTECTION DIAGRAM



#### NOTE:

It is important to thoroughly lubricate all mating surfaces with a grease suitable for marine applications.

Corrosion protection should be applied to the external surfaces of the motor, gearbox and adaptor and also in any areas that water may lie.

Recommended products for anti corrosion protection are Techtyl under body anti corrosion film and Denso grease tape.

**MAINTENANCE SCHEDULE**

INSTALLATION	DATE	PROCEDURE
At Installation		See page 4/5
6 Months after installation		<ul style="list-style-type: none"> <li>• Check all bolts are tight</li> <li>• Check Grease tape/anti-corrosion film on Motor /geardrive</li> </ul>
12 Months after installation		Remove chain wheel, clean cones then fully grease and lubrication. - see page 9
2 years after installation		Remove chain wheel, clean cones then fully grease and lubrication. - see page 9
3 years after installation		Remove chain wheel, clean cones then fully grease and lubrication. - see page 9
4 years after installation		Full winch Service

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## Warranty Limited for period of Three years (First Owner)

We warrant each new product manufactured by us to be free from defects in material and workmanship for a period of 3 years (first Owner).

This warranty shall become effective only upon receipt of a completed warranty registration, which shall identify the product so registered by serial number. This warranty shall remain in effect for a period of three (3) years from the date of purchase. For vessels in charter or hire the warranty is one (1) year due to various operators and overloading which may occur.

### Conditions

While this warranty applies to defects in material and workmanship, it does not apply to:

- Normal worn parts or to damage caused by neglect, lack of maintenance, accident or improper service/installation or service by persons other than an authorised Muir representative.
- Muir shall not be responsible for failures due to products being used in applications that they are not intended for, or exceed the products performance specifications.
- For warranty claim, defective product must be returned to Muir for inspection.
- Muir will not be responsible for freight charges, removal or installation labour on warranty claims.
- Damage due to unsatisfactory storage or use of equipment prior to installation in the approved/intended manner.

### Exclusions

Warranty is limited to twelve months for:

- Electric motors / controls / equipment
- Hydraulic pumps / controls / valves
- Weather seals
- Use on charter/hire/commercial boats

All incidental and/or consequential damages are excluded from this warranty. Warranties of merchantability and fitness are excluded from this warranty. Implied warranties are limited to the life of this warranty. Some countries do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

We reserve the right to improve the design or materials used on any product without assuming any obligation to modify any product previously manufactured or used.

### Liability

Muir Engineering liability under this warranty shall be to the exclusion of all other warranties or liabilities (to the extent permitted bylaw). In particular (but without limitation):

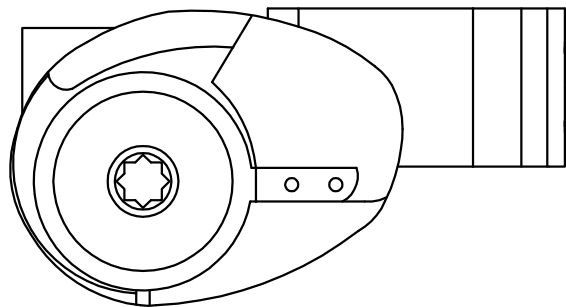
Muir Engineering shall not be liable for:

Any indirect or consequential loss including (without limitation) any loss of anticipated profits, damage to reputation or goodwill, loss of expected future business, damages, costs or expenses payable to any third party or any other indirect losses. Any damage to yachts or equipment. Death or personal Injury (unless caused by Muir Engineering negligence).

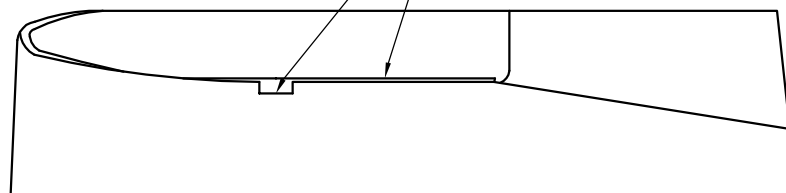
## Warranty Registration

Please visit “ <https://www.muir.com.au/warrantyregistration> “ to complete your online Warranty Registration.

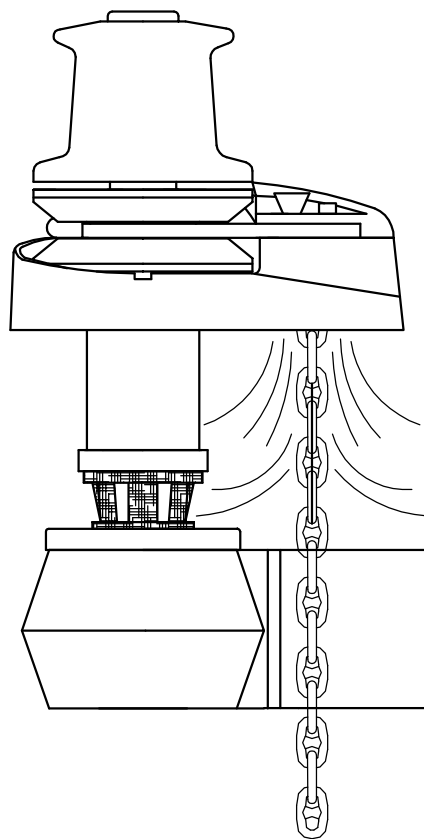
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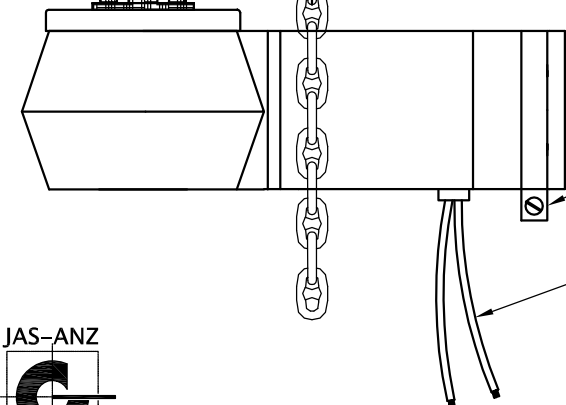
IF IT IS NECESSARY TO INSTALL THE MOTOR BENEATH THE CHAIN ACCESS HOLE. THEN A GUIDE PIPE IS REQUIRED TO PREVENT CHAIN FROM PILING ON THE MOTOR



RAISED BASE AND DRAINAGE HOLE PREVENTS EXCESS WATER FROM LYING AROUND THE SHAFT.

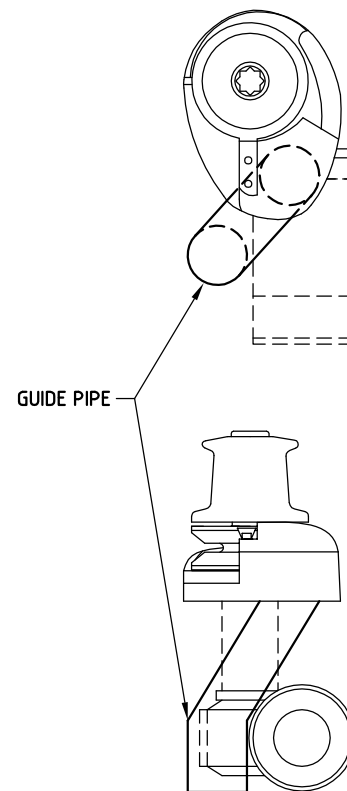


WATER GETS INTO THE GEARBOX THROUGH THE ADAPTOR, THIS OCCURS WHEN WATER FOLLOWS IN WITH THE CHAIN, AND THE CHAIN IN TURN MOVES AROUND WITH VESSEL MOTION.



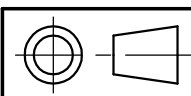
MOTOR END CAP CLAMP TO BOTTOM

WIRES TO THE BOTTOM WHERE POSSIBLE



GUIDE PIPE

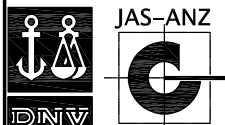
**IMPORTANT**  
IT IS IMPORTANT TO THOROUGHLY LUBRICATE ALL MATING SURFACES WITH A GREASE SUITABLE FOR MARINE APPLICATIONS. AS THE WINDLASS WILL BE OPERATING IN AN EXTREMELY CORROSIVE ENVIRONMENT IT IS ALSO HIGHLY RECOMMENDED THAT CORROSION PROTECTION BE USED ON THE EXTERNAL SURFACES OF THE MOTOR, GEARBOX AND ADAPTOR, AND ALSO IN ANY AREAS WHERE WATER MAY LIE (E.G. TOP OF GEARBOX OUTPUT SHAFT) TO PROTECT AGAINST MOISTURE IN THE CHAIN LOCKER. PRODUCTS SUCH AS TECHTYL UNDER BODY ANTI-CORROSION FILM AND DENSO GREASE TAPE ARE IDEAL FOR THIS APPLICATION.



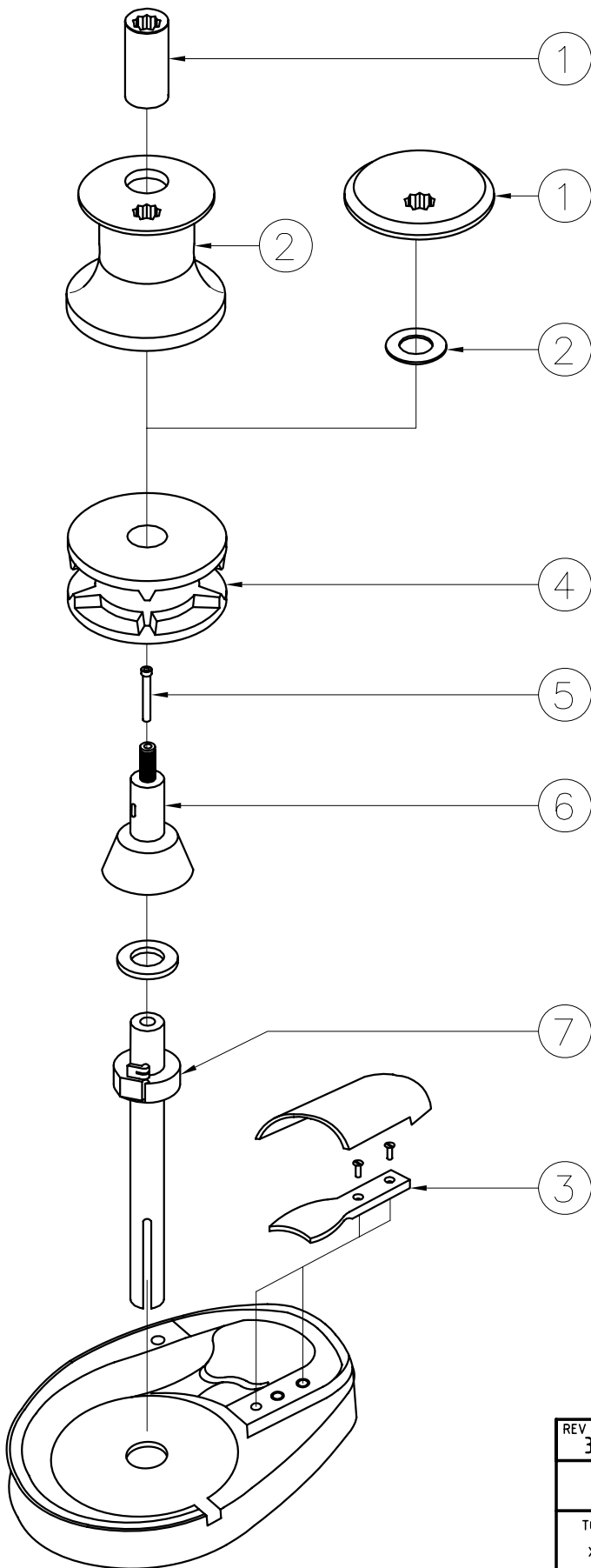
TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	

MATERIAL	
FINISH	

<b>MUIR</b> WINDLASSES AUSTRALIA			
TITLE VERTICAL WINDLASS INSTALLATION WATER PROTECTION			
PART No.			
DRN AJN	DATE 8/12/97	DRG No. NCR253	
SCALE NTS	APP1	APP2	SIZE A4
© COPYRIGHT MUIR ENGINEERING PTY. LTD.			



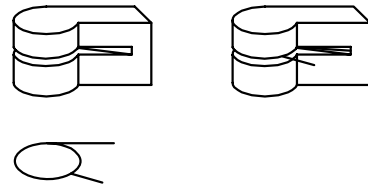
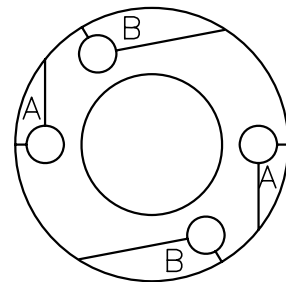
DNV Certification Pty Ltd  
Quality Assured ISO9001:2000



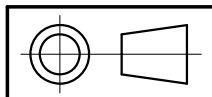
- ① REMOVE CLUTCH NUT (VRC)  
REMOVE CLUTCH CAP (VR)
- ② REMOVE CAPSTAN ASSEMBLY (VRC)  
REMOVE SPACER WASHER (VR)
- ③ REMOVE CHAIN PEELER
- ④ REMOVE GYPSY
- ⑤ REMOVE SHOULDER BOLT  
(USE 1/8" ALLEN KEY)
- ⑥ LIFT OFF DRIVE SHAFT
- ⑦ EXCHANGE PAWLS AS SHOWN BELOW

FOR FIXED DRIVE  
PLACE PAWLS IN SLOTS "A."

FOR RATCHET DRIVE  
PLACE PAWLS IN SLOTS "B"  
WITH SPRINGS.

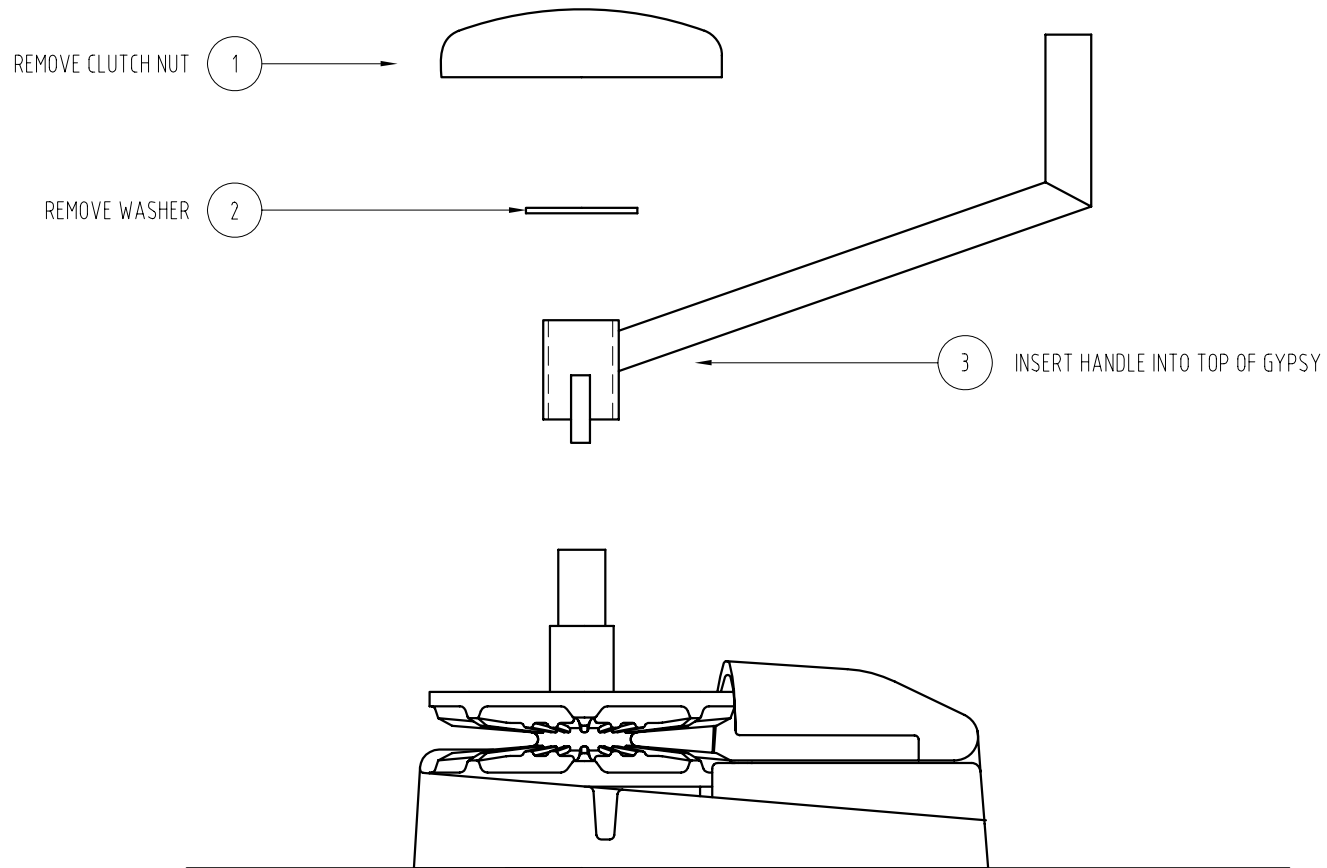


PLACE STRAIGHT LEG OF SPRING  
AGAINST SLIT OF PAWL.

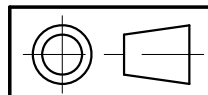
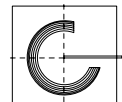



REV No. 3	DESC. UPDATED NEW BASE	BY. WHE	DATE. 2-4-08
TOLERANCES (mm)		TITLE	
X.	±	<b>MUIR</b> WINDLASSES AUSTRALIA ATLANTIC RATCHET PAWL MODELS FIXED TO RATCHET CHANGEOVER DIAGRAM	
X.X	±		
X.XX	±		
UNLESS OTHERWISE SPECIFIED		PART No.	
MATERIAL		DRN SA	DATE 01/05/95
FINISH		DRG No. DIAG0004	SCALE NTS
		APP1	APP2
			SIZE A4
© COPYRIGHT MUIR ENGINEERING PTY. LTD.			





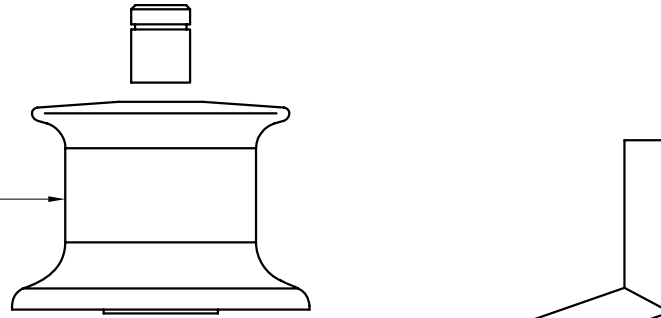
JAS ANZ



TOLERANCES (mm) X. ± X.X ± X.XX ± UNLESS OTHERWISE SPECIFIED		 <b>ENGINEERING HOBART</b>	
MATERIAL		TITLE <b>ATLANTIC VR2500/3500/4000 MANUAL OPERATION SYSTEM</b>	
FINISH		DRN <b>AJN</b>	DATE <b>15-4-98</b>
		DRG No. <b>HANDL35E</b>	
		SCALE <b>NTS</b>	APP 
		SIZE <b>A4</b>	
©COPYRIGHT MUIR ENGINEERING PTY. LTD.			

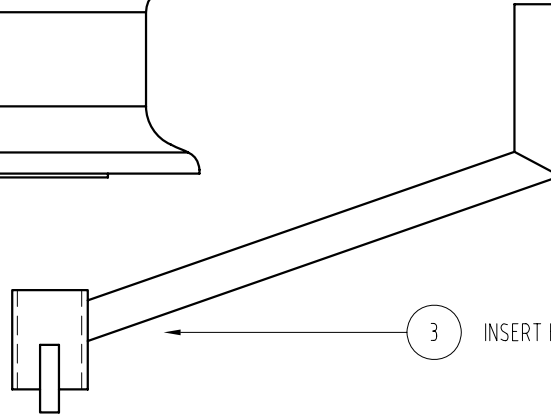
REMOVE CLUTCH NUT & CAPSTAN

1



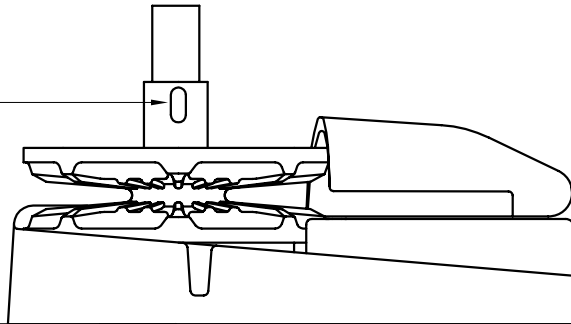
INSERT HANDLE INTO TOP OF GYPSY

3

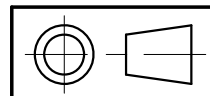
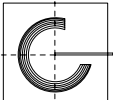



REMOVE KEY FROM SHAFT

2



JAS ANZ



TOLERANCES (mm) X. ± X.X ± X.XX ± UNLESS OTHERWISE SPECIFIED		 ENGINEERING HOBART	
MATERIAL		TITLE ATLANTIC VRC2500/3500/4000 MANUAL OPERATION SYSTEM	
FINISH		DRN AED	DATE 15-10-08
		SCALE NTS	DRG No. HANDL35E
		SIZE A4	
©COPYRIGHT MUIR ENGINEERING PTY. LTD.			

## Trouble Shooting

### ELECTRICAL

1. Check the battery circuit breaker and ensure the isolating switch is on.
2. Check battery is charged up to 12 or 24 volts.
3. Check that the foot switch plunger is contacting
4. Check remote control solenoid is contacting, if this is clicking the problem may be low voltage, a faulty solenoid or a wire not properly connected.
5. Check wiring between controls, solenoid and motor are in-tact.
6. If the motor will not turn after checking the above points, check that the motor bushes are not worn or sticking.

### MECHANICAL

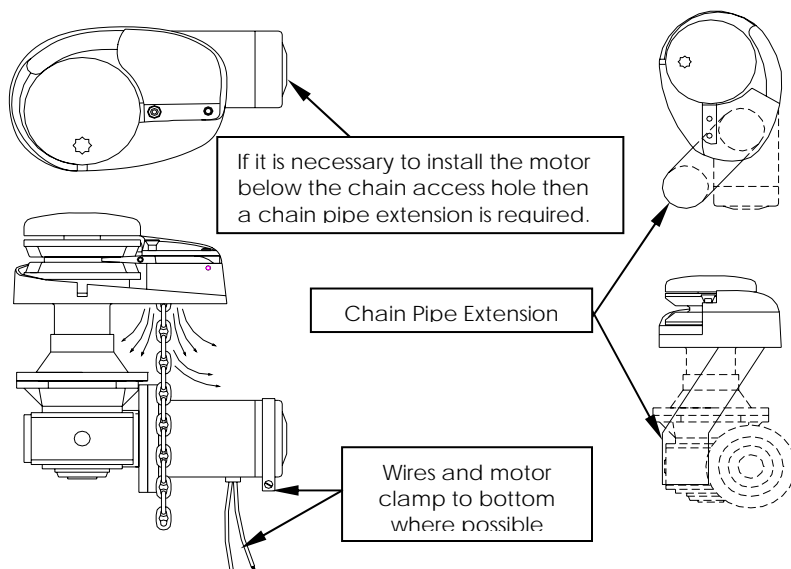
If the windlass running gear will not turn or operate check the following

1. Check that the clutch above the chain gypsy is tightened to the chain gypsy drive using the manual handle supplied (see operating instructions).
2. If the line slips check the tension on the finger and increase spring tension (see RCMS adjustment on previous page).
3. Check the drive key on main shaft to gearbox output.
4. Check the drive key between the gearbox and motor input.

### HYDRAULIC MOTOR

Refer any problems with your hydraulic motor to a Muir service agent or Muir Hobart.

### WATER PROTECTION DIAGRAM



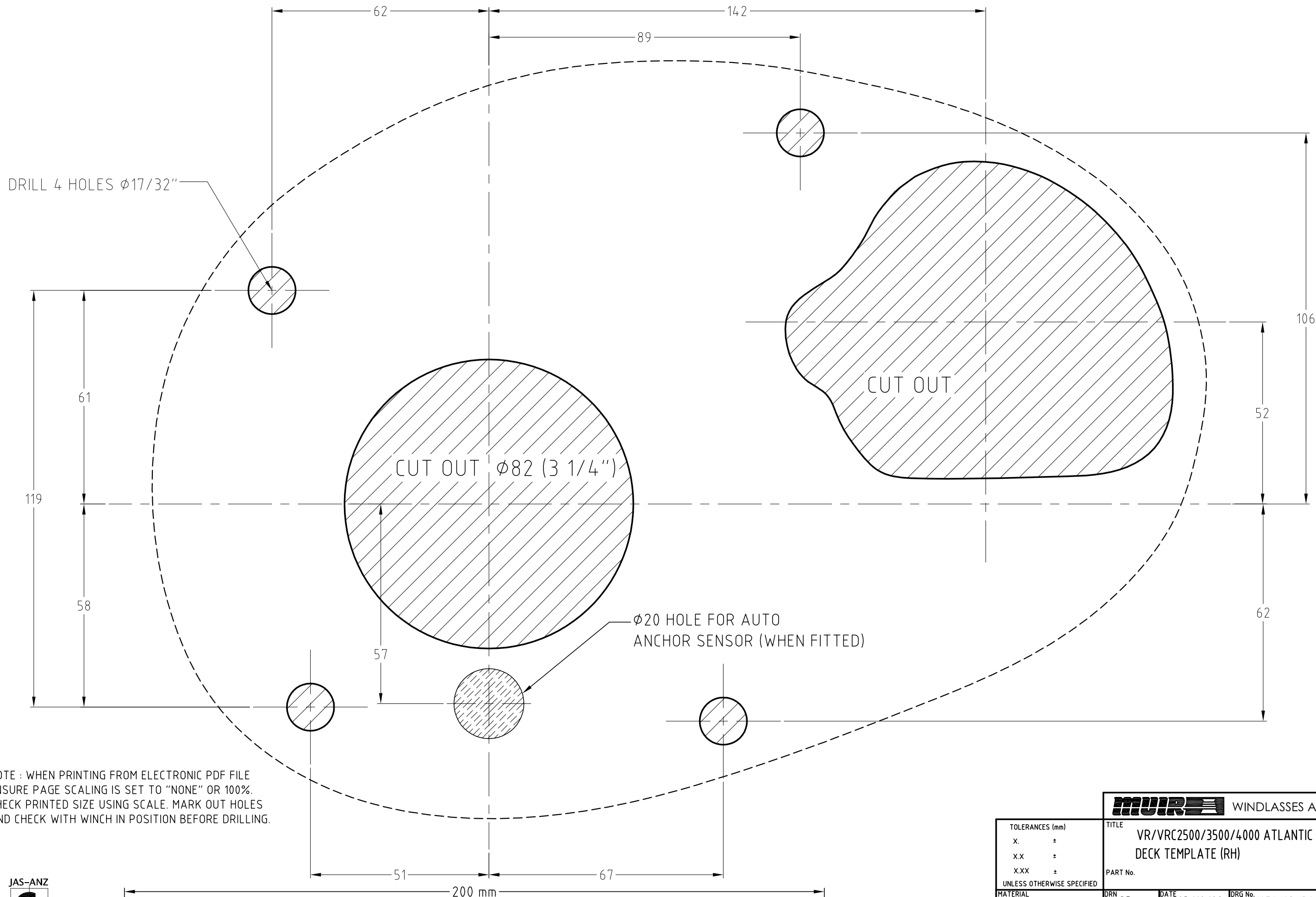
#### NOTE:

It is important to thoroughly lubricate all mating surfaces with a grease suitable for marine applications.

Corrosion protection should be applied to the external surfaces of the motor, gearbox and adaptor and also in any areas that water may lie.

Recommended products for anti corrosion protection are Techtyl under body anti corrosion film and Denso grease tape.

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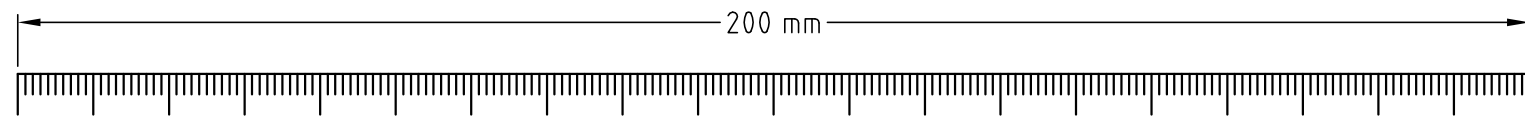
DRILL 4 HOLES  $\phi 17/32''$

CUT OUT  $\phi 82 (3 \frac{1}{4}'' )$

CUT OUT

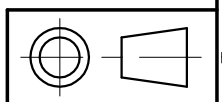
$\phi 20$  HOLE FOR AUTO ANCHOR SENSOR (WHEN FITTED)

NOTE : WHEN PRINTING FROM ELECTRONIC PDF FILE ENSURE PAGE SCALING IS SET TO "NONE" OR 100%. CHECK PRINTED SIZE USING SCALE. MARK OUT HOLES AND CHECK WITH WINCH IN POSITION BEFORE DRILLING.

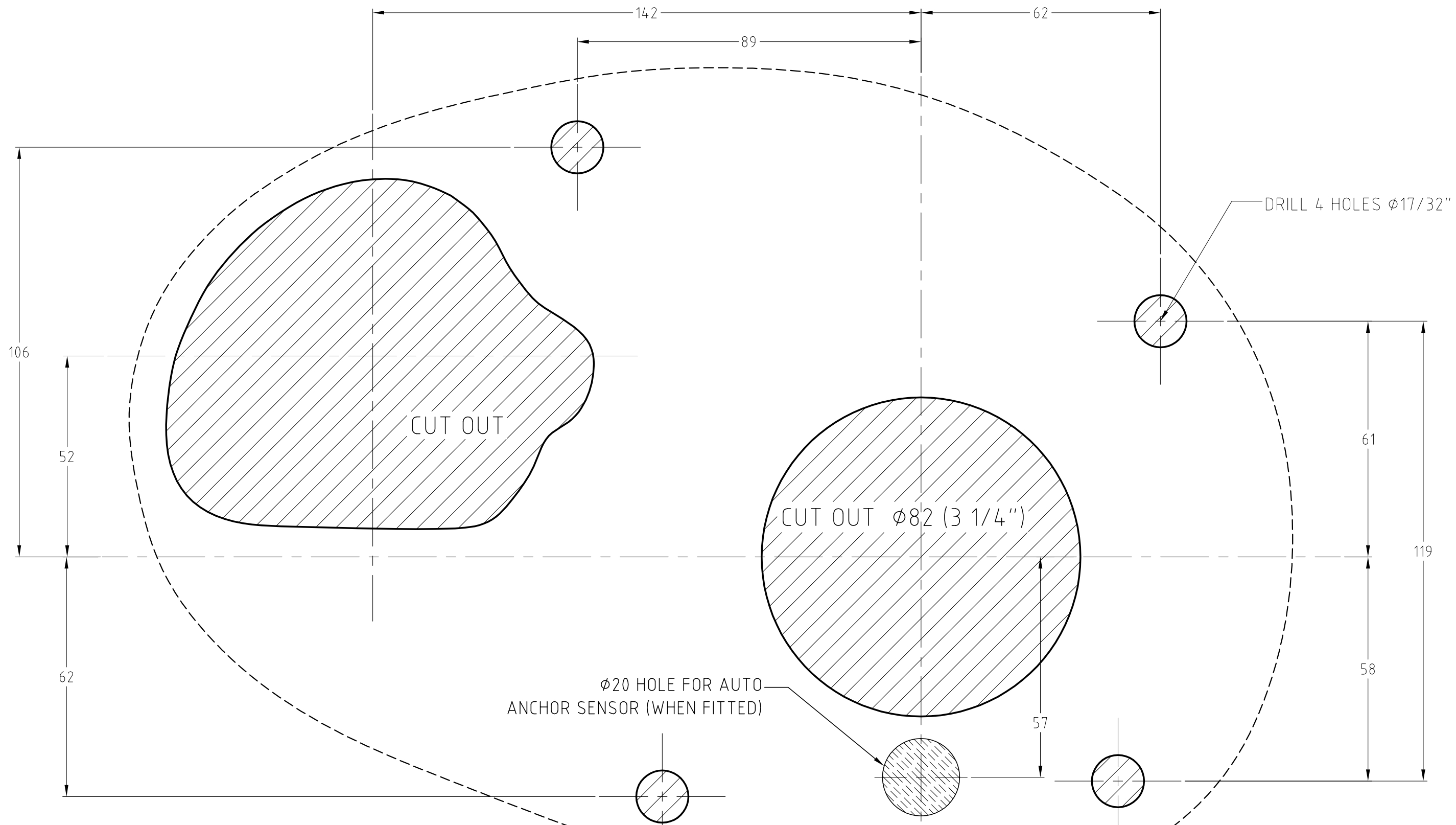


TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	

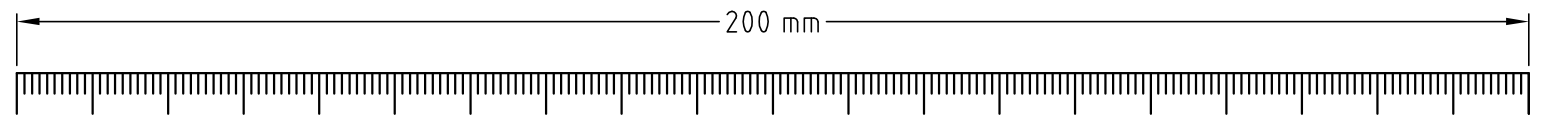
<b>MUIR</b> WINDLASSES AUSTRALIA			
TITLE VR/VRC2500/3500/4000 ATLANTIC DECK TEMPLATE (RH)			
PART No.			
DRN SB	DATE 03/10/02	DRG No. 1250/2D/D2	
SCALE 1:1	APP1	APP2	SIZE A3
© COPYRIGHT MUIR ENGINEERING PTY. LTD.			



G:\Instruction Manuals\Pressure manuals\Deck Templates\12502D02.dwg, 12/11/2010 2:31:44 PM, jefit

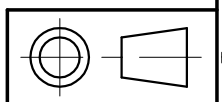


NOTE : WHEN PRINTING FROM ELECTRONIC PDF FILE ENSURE PAGE SCALING IS SET TO "NONE" OR 100%. CHECK PRINTED SIZE USING SCALE. MARK OUT HOLES AND CHECK WITH WINCH IN POSITION BEFORE DRILLING.



TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	

<b>MUIR</b> WINDLASSES AUSTRALIA			
TITLE VR/VRC2500/3500/4000ATLANTIC DECK TEMPLATE (LH)			
PART No.			
DRN SB	DATE 03/10/02	DRG No. 1250/2D/D2L	
SCALE 1:1	APP1	APP2	SIZE A3
© COPYRIGHT MUIR ENGINEERING PTY. LTD.			



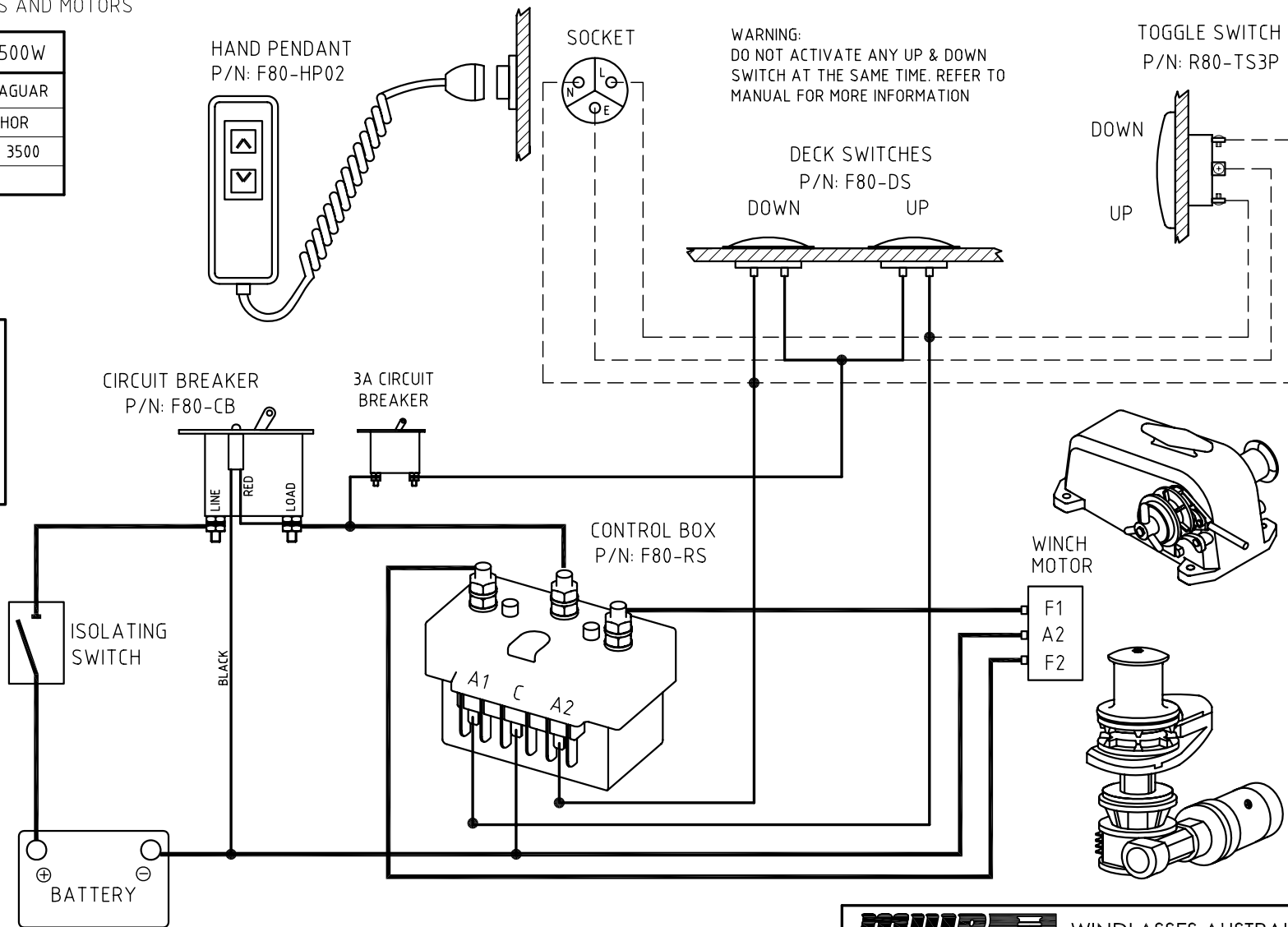
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NORMALLY APPLIES TO THESE WINCHES AND MOTORS

MOTOR 12/24V	1000W	1200W	1500W
WINCH MODEL	COUGAR	CHEETAH	JAGUAR
	V 1000	V 1200	THOR
	V 1050	V 2200	V 3500
	V 1250	V 2500	

CHAIN METER

NOTE:  
REFER TO MUIR AUTO ANCHOR  
OPERATION MANUAL FOR CHAIN  
METER INSTALLATION WIRING  
DIAGRAMS. THESE ARE  
SUPPLIED WITH MUIR AUTO  
ANCHOR KIT.



WARNING:  
DO NOT ACTIVATE ANY UP & DOWN  
SWITCH AT THE SAME TIME. REFER TO  
MANUAL FOR MORE INFORMATION

TOGGLE SWITCH  
P/N: R80-TS3P

DECK SWITCHES  
P/N: F80-DS

DOWN  
UP

CIRCUIT BREAKER  
P/N: F80-CB

3A CIRCUIT  
BREAKER

CONTROL BOX  
P/N: F80-RS

WINCH  
MOTOR

ISOLATING  
SWITCH

BATTERY

BLACK

LINE

RED

LOAD

A1 C A2

F1  
A2  
F2

**MUIR** WINDLASSES AUSTRALIA

TITLE  
**THREE TERMINAL MOTOR (REVERSING)  
WIRING DIAGRAM (POSITIVE ACTING SOLENOID)**

PART No.

TOLERANCES (mm)  
X. ±  
X.X ±  
X.XX ±  
UNLESS OTHERWISE SPECIFIED

MATERIAL

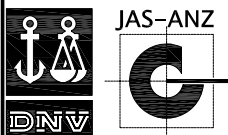
FINISH

DRN JK DATE 25/11/02 DRG No. WIRE1075

SCALE NTS APP1 APP2 SIZE A4

© COPYRIGHT MUIR ENGINEERING PTY. LTD.

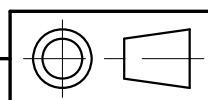
- REFER TO MANUAL FOR WIRING INDICATED BY HEAVY LINES
- LIGHTER LINES INDICATE LIGHT WIRING.
- -** DASHED LINES INDICATE OPTIONAL WIRING.



DNV Certification Pty Ltd  
Quality Assured ISO9001:2000

REV No. 1 DESC. REMOVED CHAIN METER, ADDED NOTE

BY. WHE DATE 5/5/08



C:\Acad\Wiring\WIRE1075.DWG, 4/08/2008 11:05:56 AM Alex, .dws, Adobe PDF



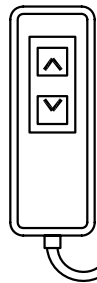
NORMALLY APPLIES TO THESE WINCHES AND MOTORS

MOTOR 24V	2000W
WINCH MODEL	VR/C 4000 HR4200 THOR

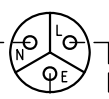
CHAIN METER  
P/N : F80-CMAA560

NOTE:  
REFER TO MUIR AUTO ANCHOR  
OPERATION MANUAL FOR CHAIN  
METER INSTALLATION WIRING  
DIAGRAMS. THESE ARE  
SUPPLIED WITH MUIR AUTO  
ANCHOR KIT.

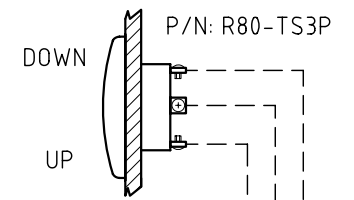
HAND PENDANT  
P/N: F80-HP02



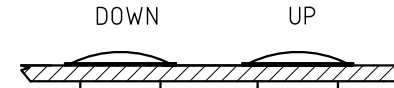
SOCKET



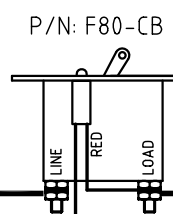
TOGGLE SWITCH  
P/N: R80-TS3P



DECK SWITCHES  
P/N: F80-DS



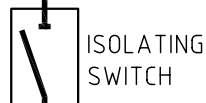
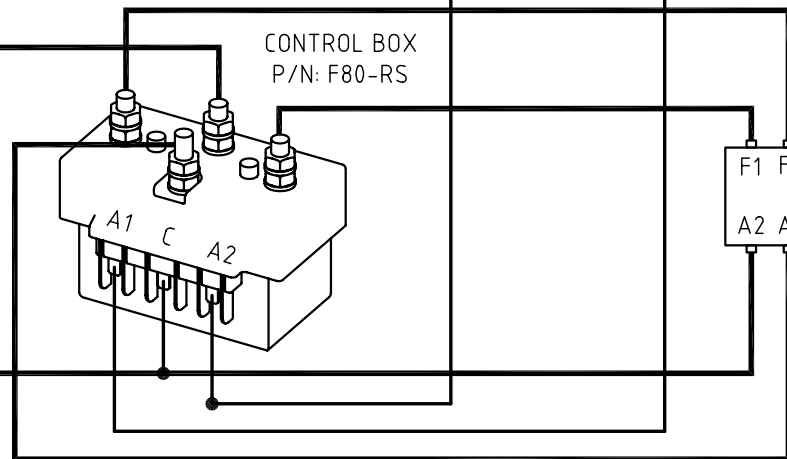
CIRCUIT BREAKER  
P/N: F80-CB



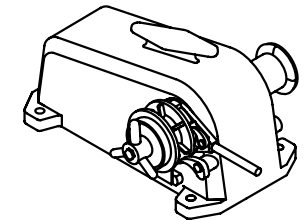
3A CIRCUIT  
BREAKER



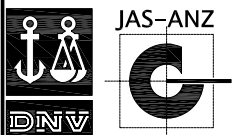
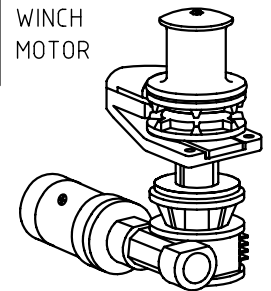
CONTROL BOX  
P/N: F80-RS



BATTERY

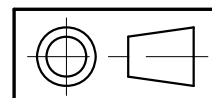


WINCH  
MOTOR



DNV Certification Pty Ltd  
Quality Assured ISO9001:2000

- REFER TO MANUAL FOR WIRING INDICATED BY HEAVY LINES
- LIGHTER LINES INDICATE LIGHT WIRING.
- -** DASHED LINES INDICATE OPTIONAL WIRING.

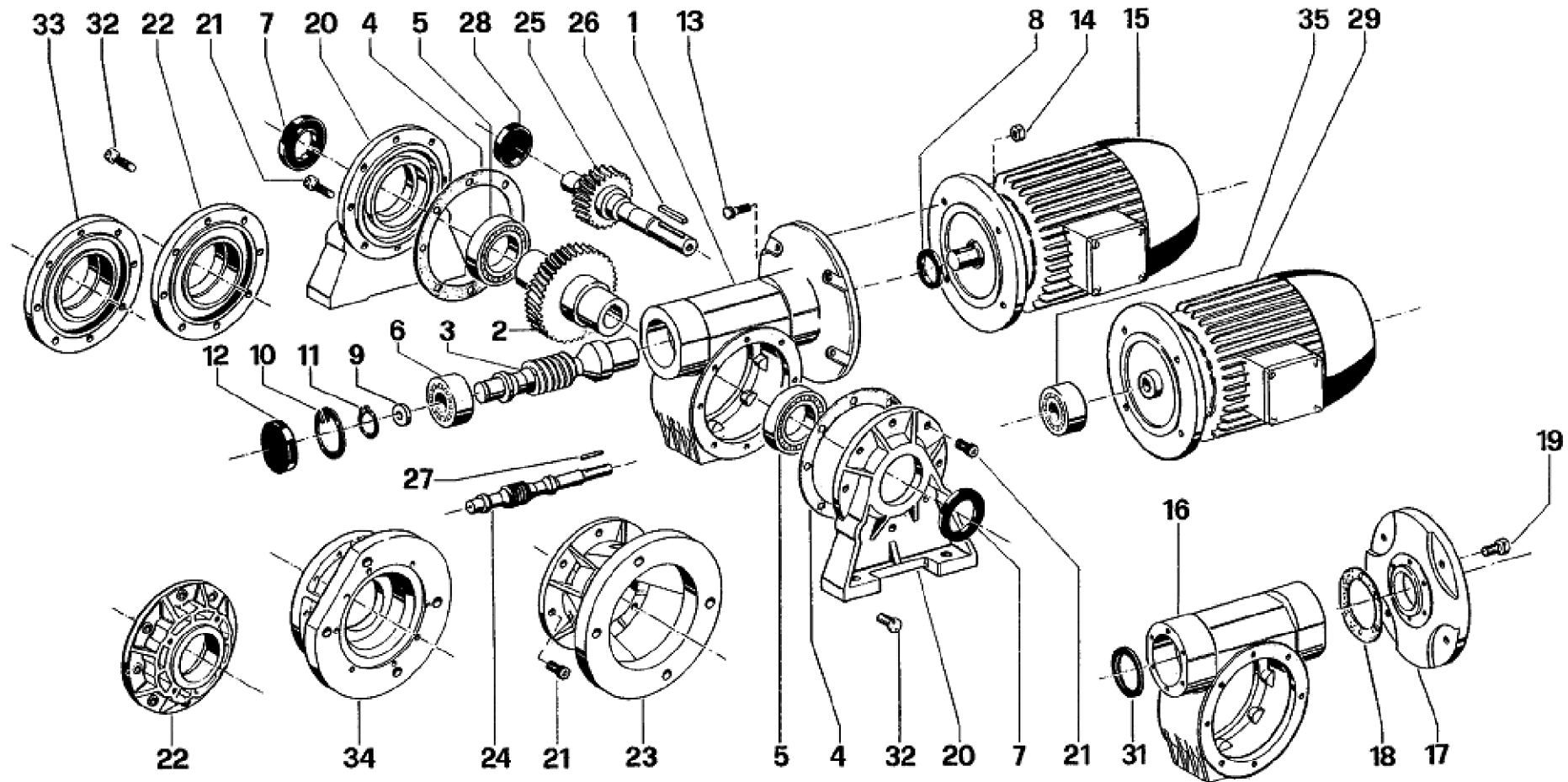


TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	

**MUIR** WINDLASSES AUSTRALIA

TITLE <b>FOUR TERMINAL MOTOR (REVERSING) WIRING DIAGRAM (POSITIVE ACTING SOLENOID)</b>			
PART No.			
DRN JK	DATE 11/10/00	DRG No. WIRE1077	
SCALE NTS	APP1	APP2	SIZE A4
© COPYRIGHT MUIR ENGINEERING PTY. LTD.			

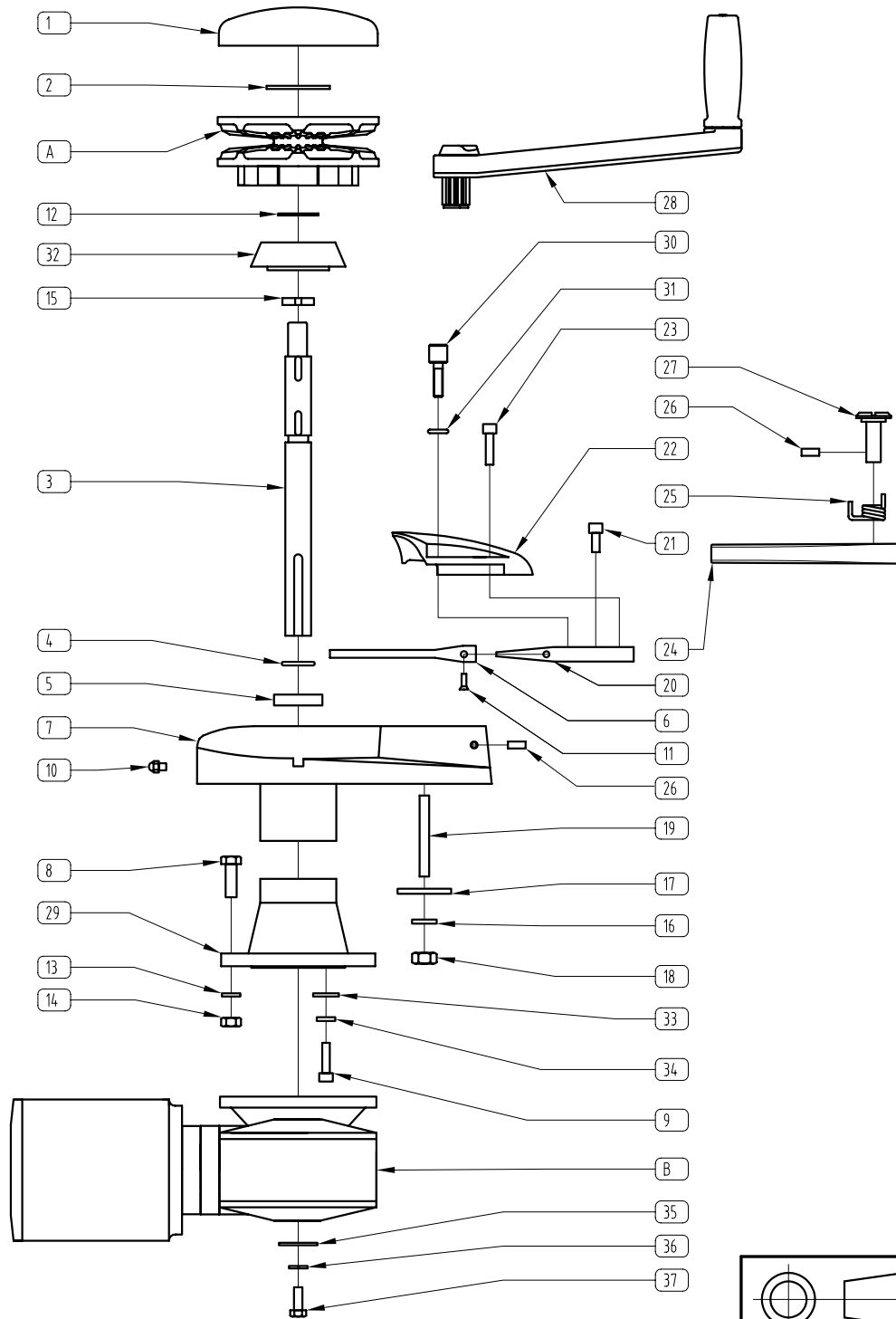
## GEARBOX PARTS REFERENCE



Item	Description	Gearbox	Winch
1	Housing—integrated Flange	44-49	VR/C500-850-1000-1200-1250
2	Wormwheel	44-49-63	VR/C500-850-1000-1200-1250
3	Wormshaft	44-49-63	VR/C500-850-1000-1200-1250
4	Gasket	44-49-63	VR/C500-850-1000-1200-1250
5	Bearing	44-49-63	VR/C500-850-1000-1200-1250
6	Bearing	44-49-63	VR/C500-850-1000-1200-1250
7	Oil Seal	44-49-63	VR/C500-850-1000-1200-1250
8	Oil Seal	44-49-63	VR/C500-850-1000-1200-1250
9	Spacer Ring	44-49-63	VR/C500-850-1000-1200-1250
10	Circlip	44-49-63	VR/C500-850-1000-1200-1250
11	Circlip	44-49-63	VR/C500-850-1000-1200-1250
12	Rubber Cap	44-49-63	VR/C500-850-1000-1200-1250
13	Hex Head Screw	44-49-63	VR/C500-850-1000-1200-1250
14	Nut	44-49-63	VR/C500-850-1000-1200-1250
15	Electric Motor	44-49-63	VR/C500-850-1000-1200-1250

Item	Description	Gearbox	Winch
16	Housing	63	VR/C2500-3500
17	Motor flange	63	VR/C2500-3500
18	Gasket	63	VR/C2500-3500
19	Hex Head Screw	63	VR/C2500-3500
21	Socket Head Screw	63	VR/C2500-3500
31	Spacer Ring	63	VR/C2500-3500
32	Hex Head Screw	63	VR/C2500-3500
33	Plain cover	63	VR/C2500-3500
34	FC Cover	63	VR/C2500-3500

Note: Gaskets, Seals, and Bearings are supplied in kit form.



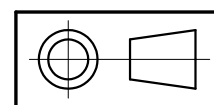
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVR02500A	CLUTCH NUT BRONZE VR2500A	1
2	P23-316063.5025.406	D' WASHER SS316 2 1/2" x 1" x 6MM	1
3	K06-SFTVR02500A	SHAFT ASSEMBLY VR2500A	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500A	BASE BRONZE VR/C2500A	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S94-CIR30434.93	CIRCLIP 304SS	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P16-RNG303VRC2500A	SPLIT RING 303 VRC2500A	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500A	PEELER BRONZE VR/C2500A	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500A	CHAIN COVER BRONZE VR/C2500A	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZ2500A	CONE BRONZE VR/C2500A	1
33	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
34	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
35	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
36	S76-30410.00	WASHER SPRING SS304 10MM	1
37	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

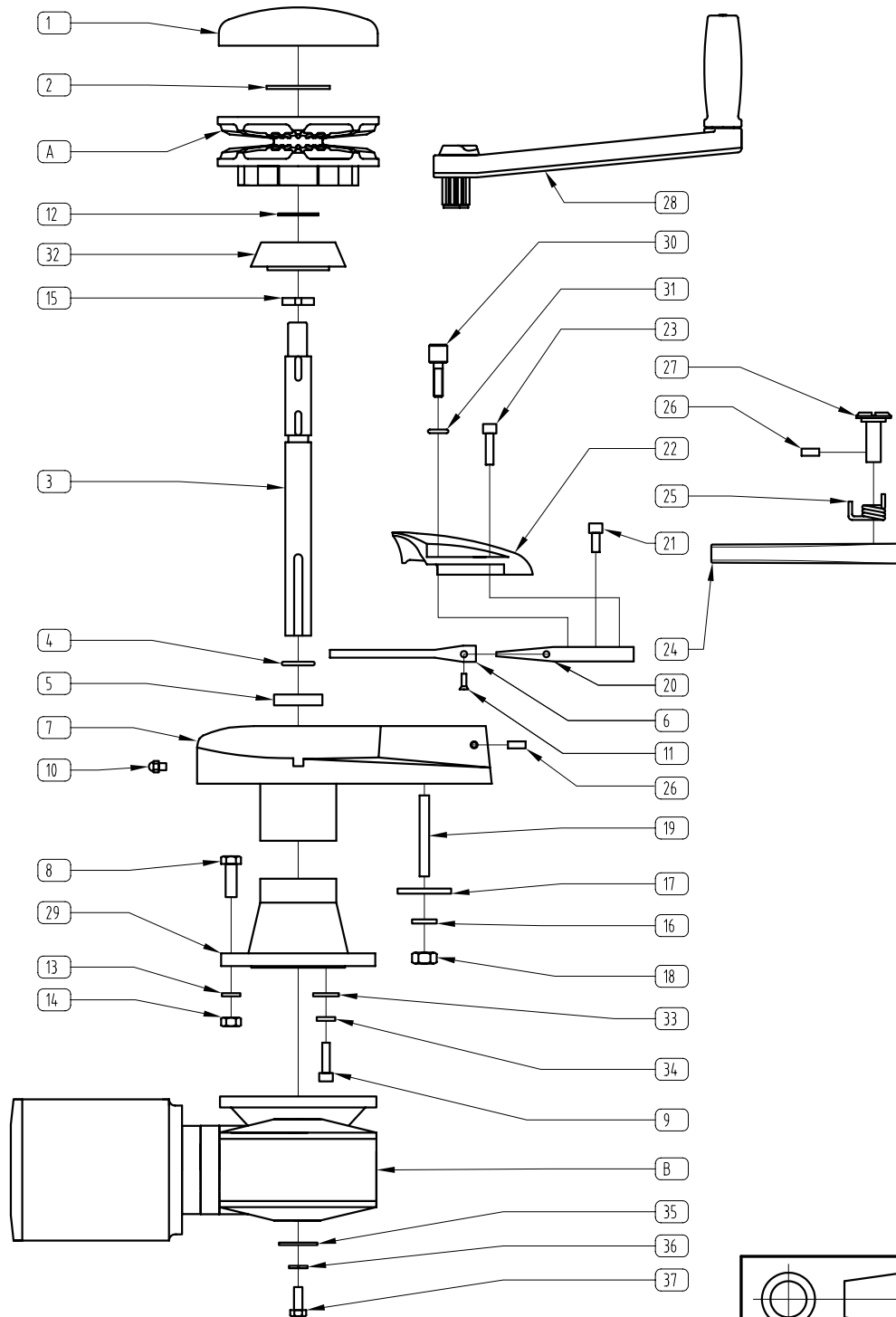
A GYPSY  
B MOTOR / GEARBOX ASSEMBLY



TITLE <b>ATLANTIC VR2500/3500 EXPLODED VIEW</b>			
PART No. <b>K08-ATLVR2500</b>			
DRN <b>AJN</b>	DATE <b>04/04/00</b>	DRG No. <b>K08-ATLVR2500</b>	
SCALE <b>NTS</b>	APP1	APP2	SIZE <b>A4</b>
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TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	FINISH





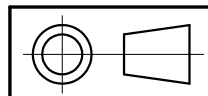
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVR02500A	CLUTCH NUT BRONZE VR2500A	1
2	P23-316063.5025.406	D' WASHER SS316 2 1/2" x 1" x 6MM	1
3	K06-SFTVR02500A	SHAFT ASSEMBLY VR2500A	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500AM	BASE BRONZE VR/C2500A MIRROR	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S94-CIR30434.93	CIRCLIP 304SS	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P16-RNG303VRC2500A	SPLIT RING 303 VRC2500A	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500AM	PEELER BRONZE VR/C2500A MIRROR	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500AM	CHAIN COVER BRONZE VR/C2500A MIRROR	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZ2500A	CONE BRONZE VR/C2500A	1
33	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
34	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
35	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
36	S76-30410.00	WASHER SPRING SS304 10MM	1
37	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

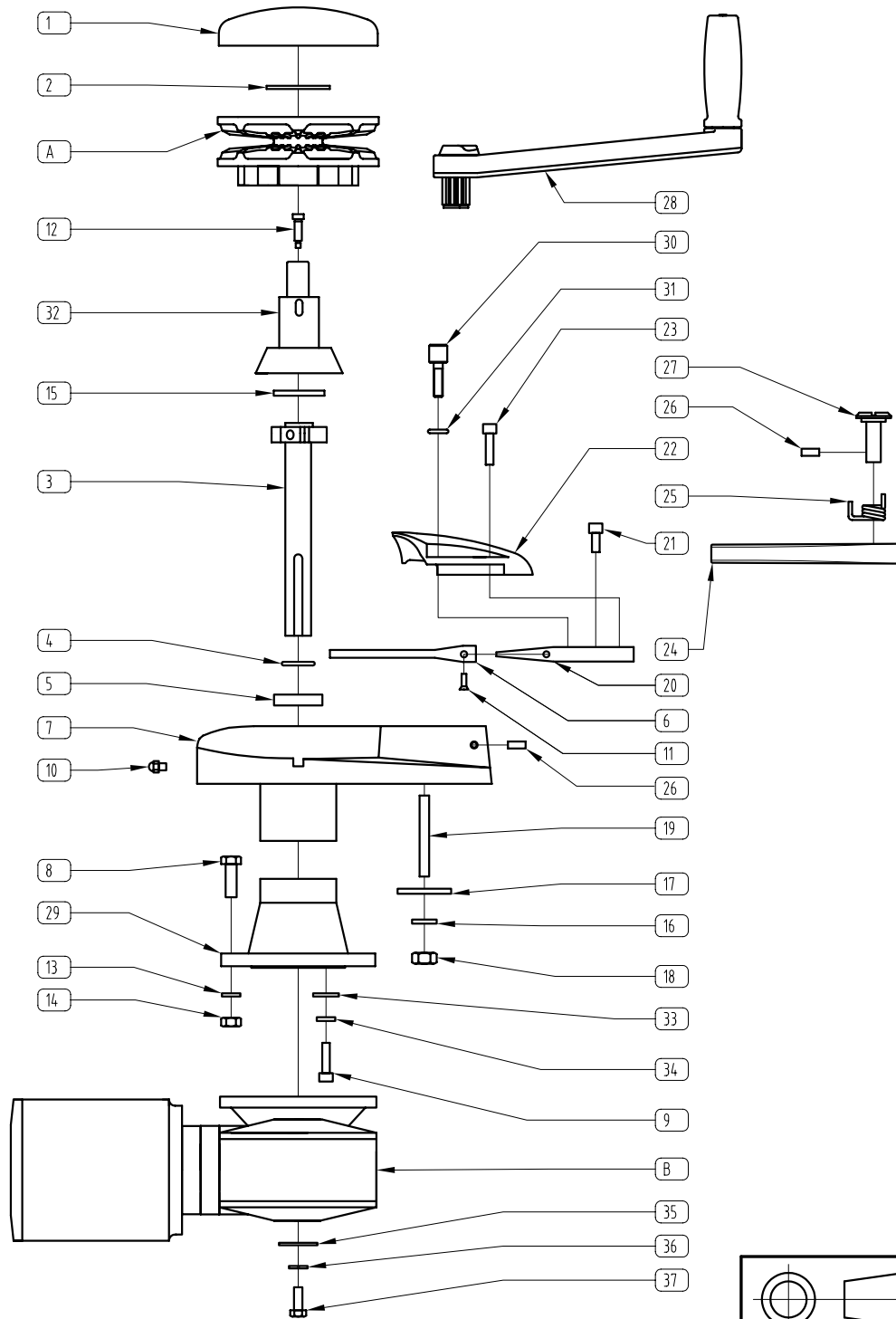
NOTE: WHEN REFERENCING MOTOR/GEARBOX ASSEMBLY PLEASE SPECIFY "LEFT HAND UNIT"

A GYPSY  
B MOTOR / GEARBOX ASSEMBLY

**MUIR** WINDLASSES AUSTRALIA

TOLERANCES (mm)			
X.	±		
X.X	±		
X.XX	±		
UNLESS OTHERWISE SPECIFIED			
MATERIAL		DRN	DATE
		AC	21/09/04
		DRG No.	K08-ATLVR2500M
FINISH		SCALE	SIZE
		NTS	A4
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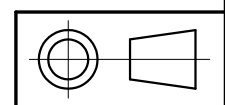


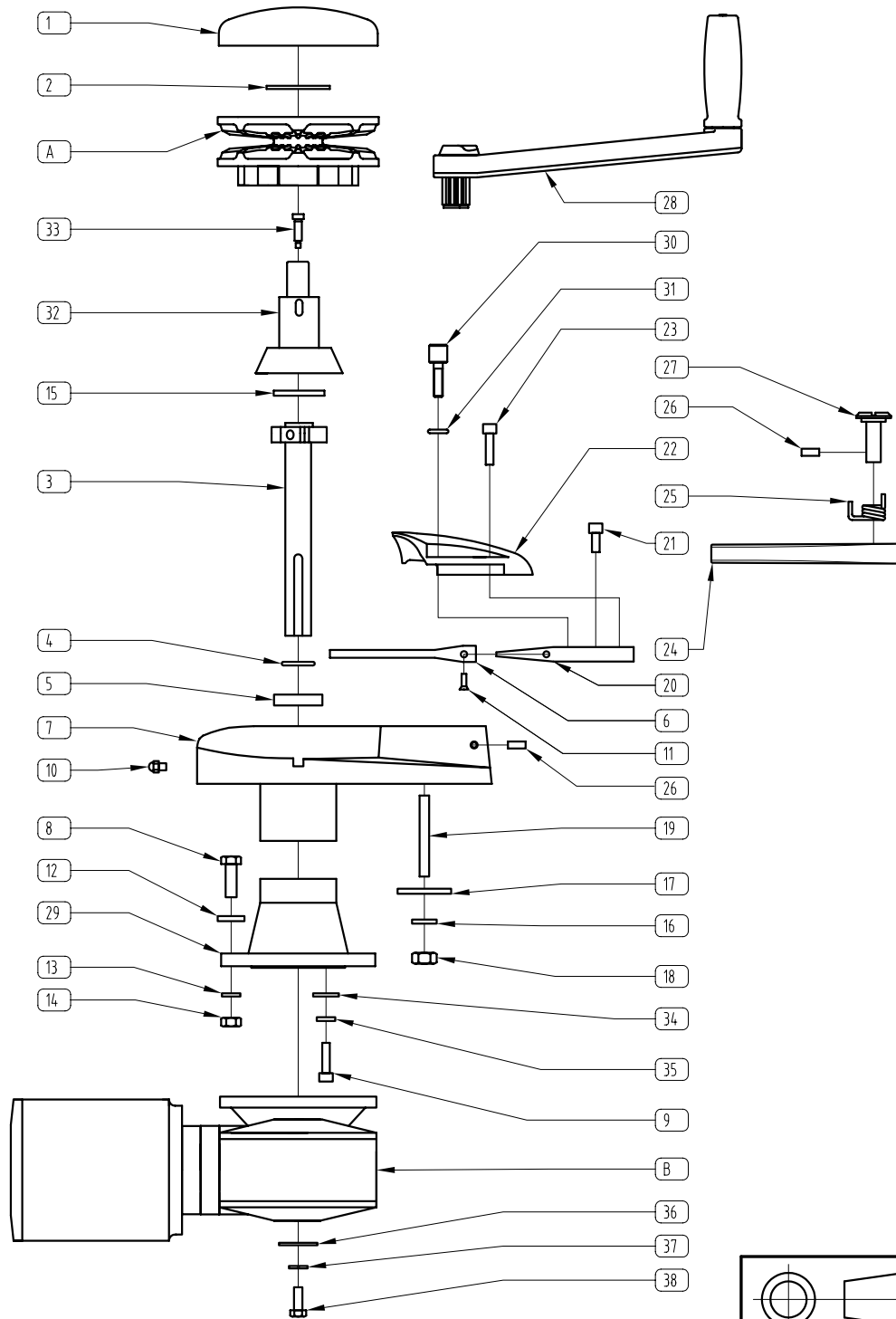
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVR02500A	CLUTCH NUT BRONZE VR2500A	1
2	P23-316063.5025.406	'D' WASHER SS316 2 1/2" x 1" x 6MM	1
3	K06-SFTVR02500MOR	SHAFT ASSEMBLY VR2500A MORS	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500A	BASE BRONZE VR/C2500A	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S47-30406.4057.2005	SCREW SHOULDER SS304 1/4 X 1 1/4 X 3/16"	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500A	PEELER BRONZE VR/C2500A	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500A	CHAIN COVER BRONZE VR/C2500A	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZVR2500	CONE RATCHET BRONZE VR2500	1
33	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
34	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
35	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
36	S76-30410.00	WASHER SPRING SS304 10MM	1
37	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

A GYPSY  
B MOTOR / GEARBOX ASSEMBLY



TOLERANCES (mm)			
X.	±		
X.X	±		
X.XX	±		
UNLESS OTHERWISE SPECIFIED			
MATERIAL		DRN	DATE
		AJN	01/03/02
FINISH		DRG No.	DRG No.
			K08-ATLVR2500MORS
SCALE		APP1	APP2
NTS			
SIZE			
A4			
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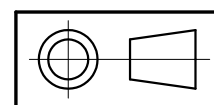
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVR02500A	CLUTCH NUT BRONZE VR2500A	1
2	P23-316063.5025.406	'D' WASHER SS316 2 1/2" x 1" x 6MM	1
3	K06-SFTVR04000A	SHAFT ASSEMBLY VR4000A	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500A	BASE BRONZE VR/C2500A	1
8	S13-31612.00050	BOLT HEX HD SS316 12MM X 50MM	4
9	S45-30407.94038	SCREW SHCS SS304 5/16 X 1-1/2 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S75-31612.00	WASHER FLAT SS316 12MM	4
13	S76-31612.00	WASHER SPRING SS316 12MM	4
14	S20-31612.00	NUT HEX SS316 12MM	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500A	PEELER BRONZE VR/C2500A	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500A	CHAIN COVER BRONZE VR/C2500A	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP086FC02500A	ADAPTOR ALLOY VF86FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZVR2500	CONE RATCHET BRONZE VR2500	1
33	S47-30406.4057.2005	SCREW SHOULDER SS304 1/4 X 1 1/4 X 3/16"	1
34	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
35	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
36	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
37	S76-30410.00	WASHER SPRING SS304 10MM	1
38	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

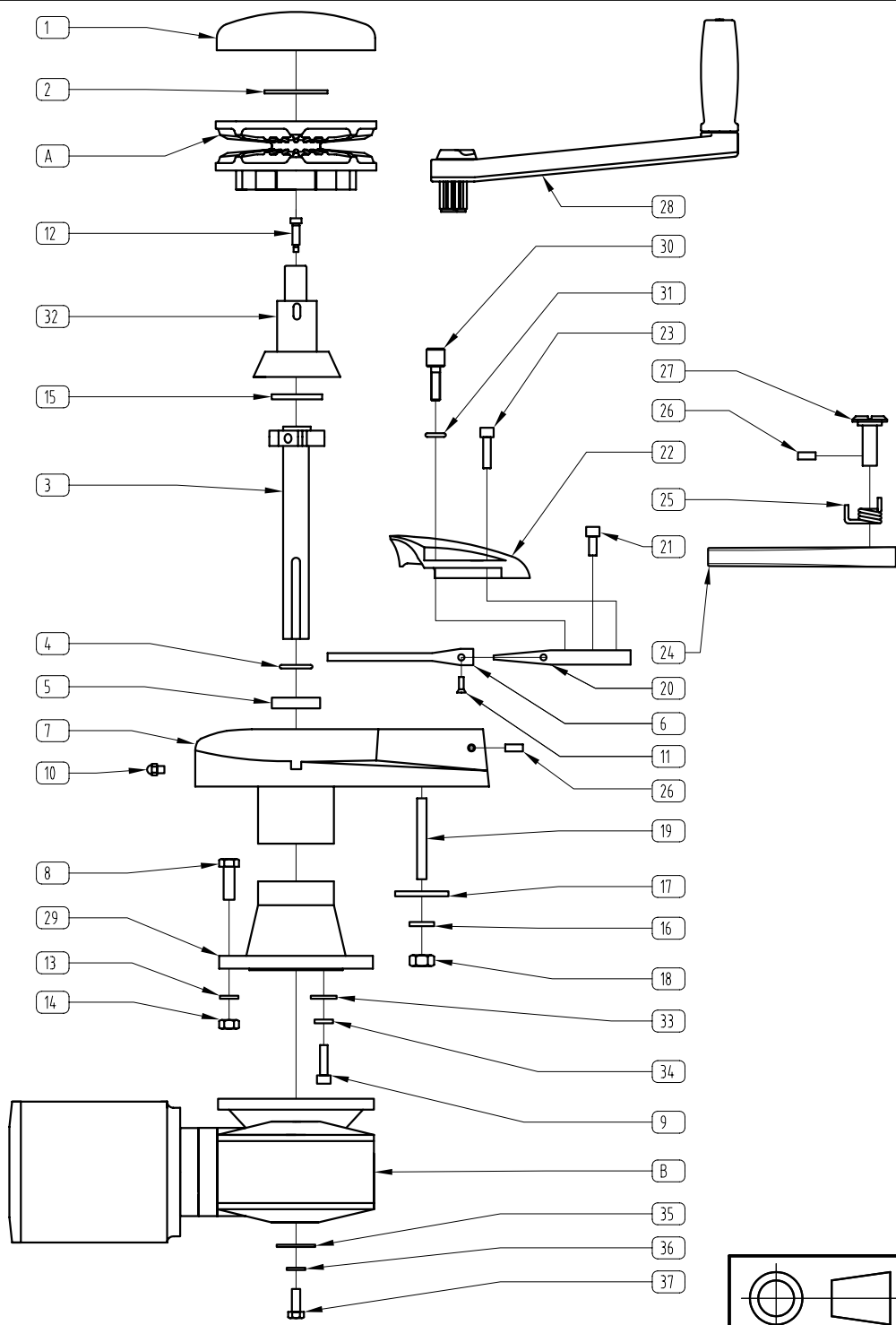
A GYPSY  
B MOTOR / GEARBOX ASSEMBLY



TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	

TITLE			
ATLANTIC VR4000 MORS			
EXPLODED VIEW			
PART No. K08-ATLVR4000			
DRN	DATE	DRG No.	
AJN	01/03/02	K08-ATLVR4000	
SCALE	APP1	APP2	SIZE
NTS			A4
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ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVR02500A	CLUTCH NUT BRONZE VR2500A	1
2	P23-316063.5025.406	'D' WASHER SS316 2 1/2" x 1" x 6MM	1
3	K06-SFTVR02500MORL	SHAFT ASSEMBLY VR2500A MORS LEFT HAND	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500AM	BASE BRONZE VR/C2500A MIRROR	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S47-30406.4057.2005	SCREW SHOULDER SS304 1/4 X 1 1/4 X 3/16"	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500AM	PEELER BRONZE VR/C2500A MIRROR	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500AM	CHAIN COVER BRONZE VR/C2500A MIRROR	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZVR2500L	CONE RATCHET BRONZE VR2500 LEFT HAND	1
33	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
34	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
35	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
36	S76-30410.00	WASHER SPRING SS304 10MM	1
37	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

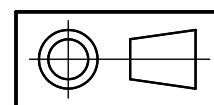
NOTE: WHEN REFERENCING MOTOR/GEARBOX ASSEMBLY PLEASE SPECIFY "LEFT HAND UNIT"

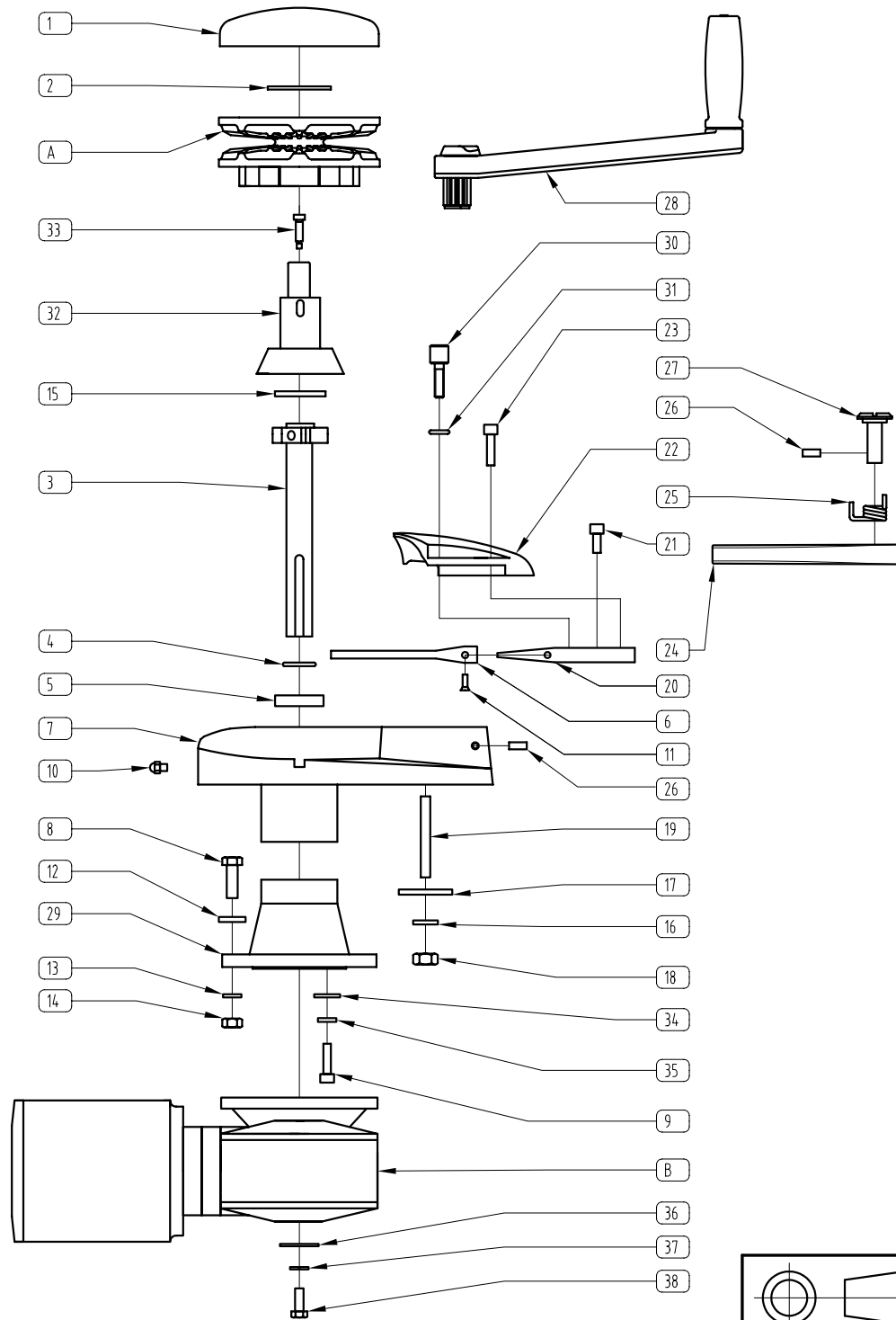
A GYPSY  
B MOTOR / GEARBOX ASSEMBLY (LEFT HAND UNIT)



<b>MUIR</b> WINDLASSES AUSTRALIA	
TITLE <b>ATLANTIC VR2500/3500 MORS LEFT HAND EXPLODED VIEW</b>	
PART No. <b>K08-ATLVR2500MORSL</b>	
DRN <b>AJN</b>	DATE <b>01/03/02</b>
DRG No. <b>K08-ATLVR2500MORSL</b>	
SCALE <b>NTS</b>	APP2 <b>APP2</b>
SIZE <b>A4</b>	
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TOLERANCES (mm)
X. ±
X.X ±
X.XX ±
UNLESS OTHERWISE SPECIFIED
MATERIAL
FINISH





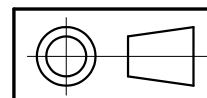
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVR02500A	CLUTCH NUT BRONZE VR2500A	1
2	P23-316063.5025.406	'D' WASHER SS316 2 1/2" x 1" x 6MM	1
3	K06-SFTVR04000AL	SHAFT ASSEMBLY VR4000A MORS LEFT HAND	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500AM	BASE BRONZE VR/C2500A MIRROR	1
8	S13-31612.00050	BOLT HEX HD SS316 12MM X 50MM	4
9	S45-30407.94038	SCREW SHCS SS304 5/16 X 1-1/2 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S75-31612.00	WASHER FLAT SS316 12MM	4
13	S76-31612.00	WASHER SPRING SS316 12MM	4
14	S20-31612.00	NUT HEX SS316 12MM	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500AM	PEELER BRONZE VR/C2500A MIRROR	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500AM	CHAIN COVER BRONZE VR/C2500A MIRROR	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP086FC02500A	ADAPTOR ALLOY VF86FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZVR2500L	CONE RATCHET BRONZE VR2500 LEFT HAND	1
33	S47-30406.4057.2005	SCREW SHOULDER SS304 1/4 X 1 1/4 X 3/16"	1
34	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
35	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
36	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
37	S76-30410.00	WASHER SPRING SS304 10MM	1
38	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

NOTE: WHEN REFERENCING MOTOR/GEARBOX ASSEMBLY PLEASE SPECIFY "LEFT HAND UNIT"

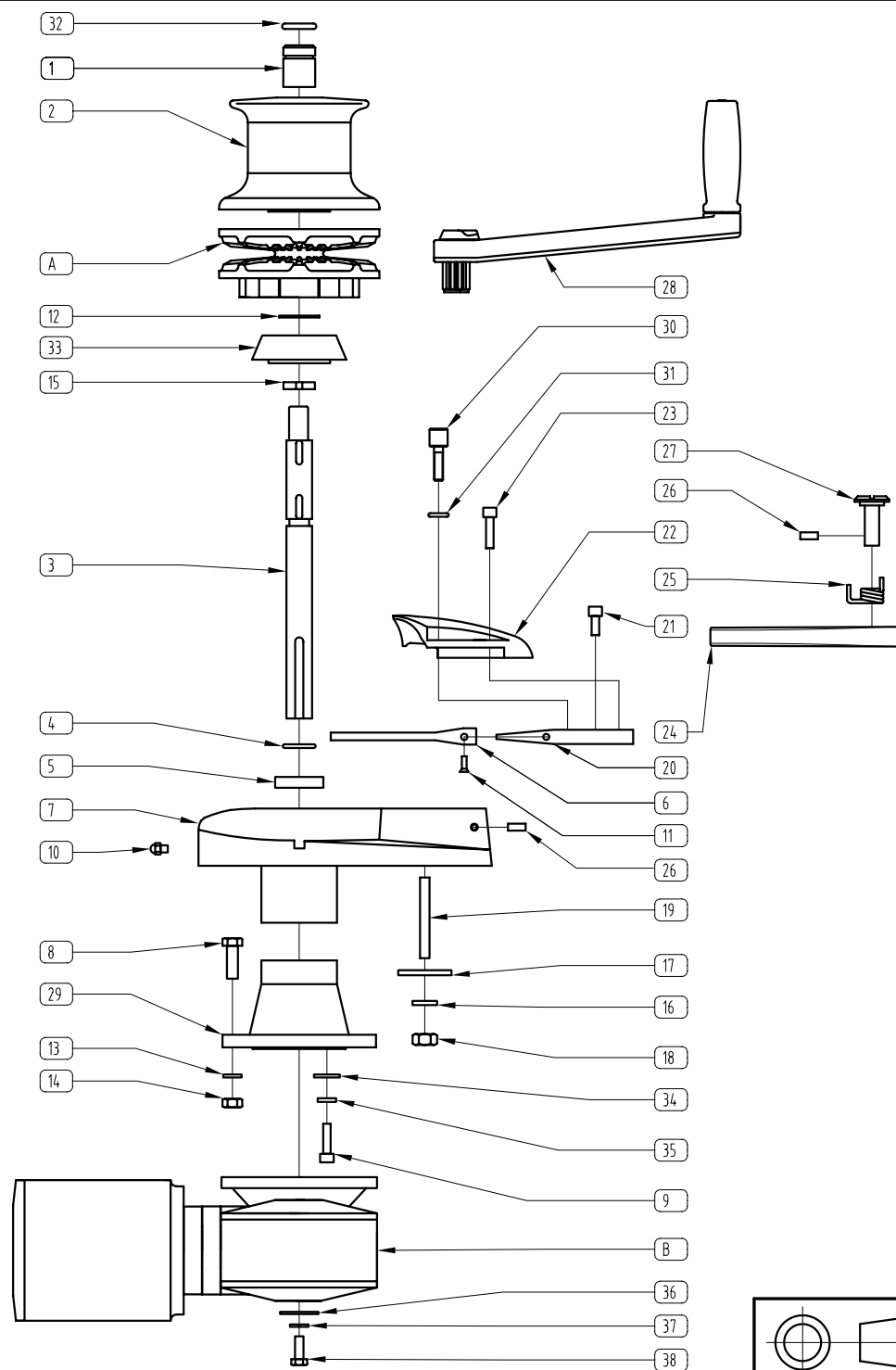
A GYPSY  
B MOTOR / GEARBOX ASSEMBLY (LEFT HAND UNIT)

**MUIR** WINDLASSES AUSTRALIA

TOLERANCES (mm)		TITLE	
X.	±	ATLANTIC VR4000 LEFT HAND	
X.X	±	EXPLODED VIEW	
X.XX	±	PART No. K08-ATLVR4000L	
UNLESS OTHERWISE SPECIFIED		DRN	DATE
MATERIAL		AJN	01/03/02
FINISH		DRG No. K08-ATLVR4000L	
		SCALE	SIZE
		NTS	A4
© COPYRIGHT MUIR ENGINEERING PTY. LTD.			







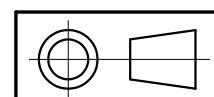
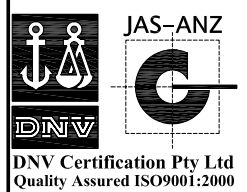
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVRC02500A	CLUTCH NUT BRONZE VRC2500A	1
2	P04-CAPBRZ2500A1	CAPSTAN BRONZE VRC2500A (1 PIECE)	1
3	K06-SFTVRC02500A	SHAFT ASSEMBLY VRC2500A	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500A	BASE BRONZE VR/C2500A	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S94-CIR30434.93	CIRCLIP 1400-35 S/S	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P16-RNG303VRC2500A	SPLIT RING 303 VRC2500A	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500A	PEELER BRONZE VR/C2500A	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500A	CHAIN COVER BRONZE VR/C2500A	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	R41-ORG04503803.5	'O' RING SEAL 45 X 38 X 3.5 (BS222)	1
33	P08-CNEBRZ2500A	CONE BRONZE VR/C2500A	1
34	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
35	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
36	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
37	S76-30410.00	WASHER SPRING SS304 10MM	1
38	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

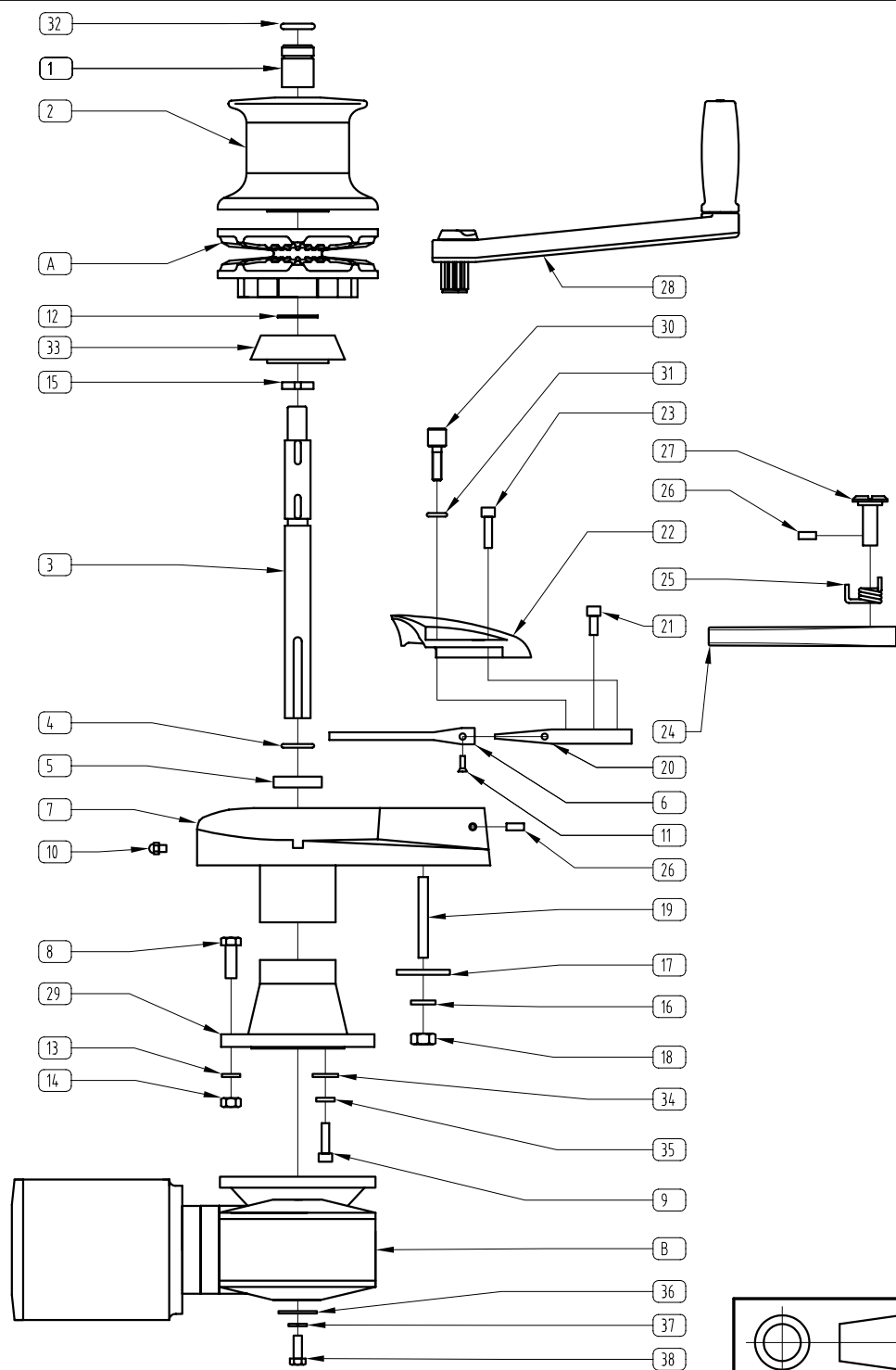
A GYPSY  
B MOTOR / GEARBOX ASSEMBLY



TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	

TITLE			
ATLANTIC VRC2500/3500			
EXPLODED VIEW			
PART No. K08-ATLVRC2500			
DRN	DATE	DRG No.	
AJN	04/04/00	K08-ATLVRC2500	
SCALE	APP1	APP2	SIZE
NTS			A4
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ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVRC02500A	CLUTCH NUT BRONZE VRC2500A	1
2	P04-CAPBRZ2500A1	CAPSTAN BRONZE VRC2500A (1 PIECE)	1
3	K06-SFTVRC02500A	SHAFT ASSEMBLY VRC2500A	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500AM	BASE BRONZE VR/C2500A MIRROR	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S94-CIR30434.93	CIRCLIP 1400-35 S/S	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P16-RNG303VRC2500A	SPLIT RING 303 VRC2500A	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500AM	PEELER BRONZE VR/C2500A MIRROR	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500AM	CHAIN COVER BRONZE VR/C2500A MIRROR	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS303 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	R41-ORG04503803.5	'O' RING SEAL 45 X 38 X 3.5 (BS222)	1
33	P08-CNEBRZ2500A	CONE BRONZE VR/C2500A	1
34	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
35	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
36	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
37	S76-30410.00	WASHER SPRING SS304 10MM	1
38	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

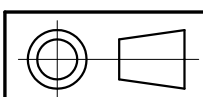
NOTE: WHEN REFERENCING MOTOR/GEARBOX ASSEMBLY PLEASE SPECIFY "LEFT HAND UNIT"



- A GYPSY
- B MOTOR / GEARBOX ASSEMBLY (LEFT HAND UNIT)


**WINDLASSES AUSTRALIA**

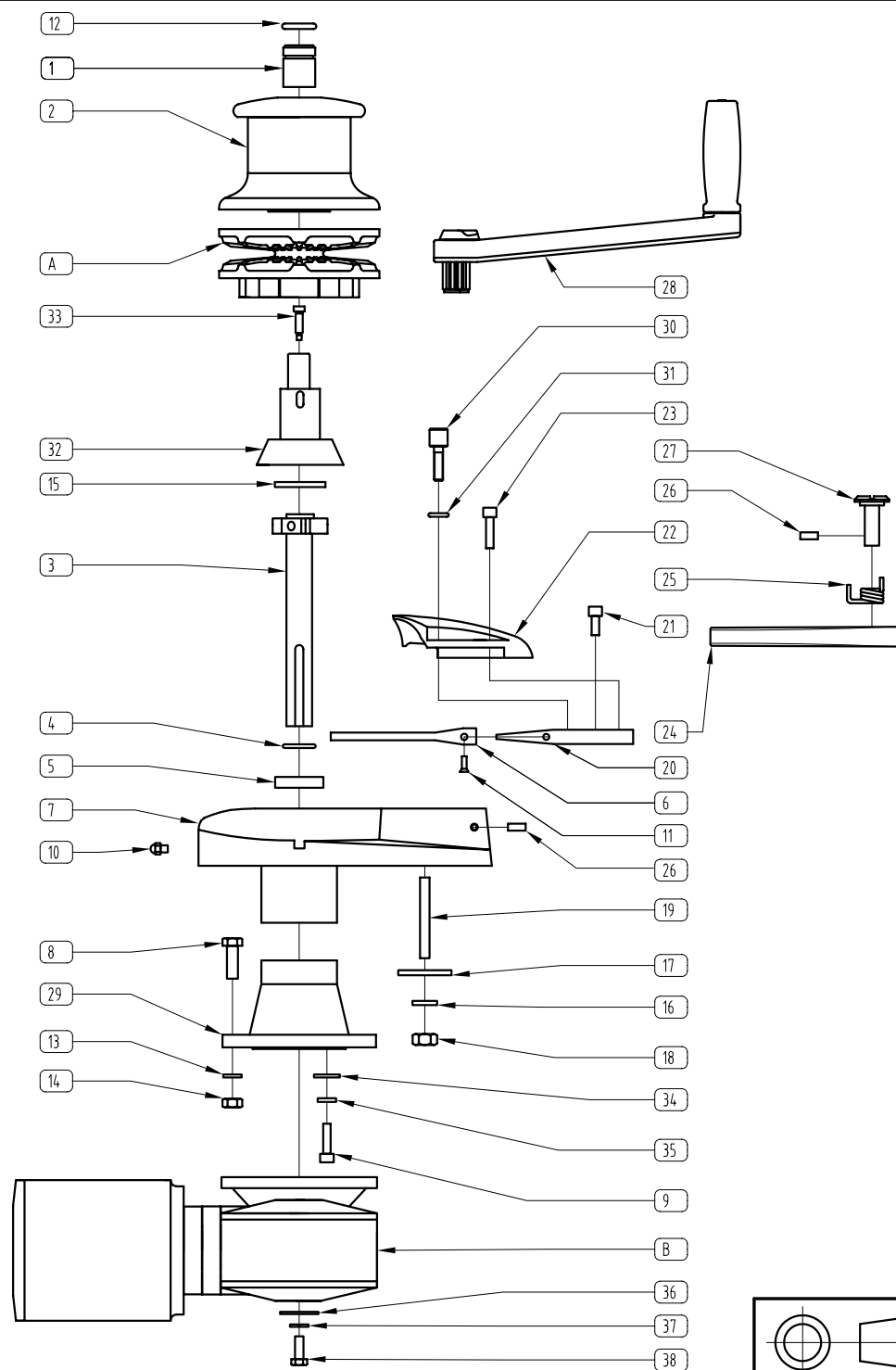
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PART No. <b>K08-ATLVRC2500M</b>			
DRN <b>AC</b>	DATE <b>28/11/02</b>	DRG No. <b>K08-ATLVRC2500M</b>	
SCALE <b>NTS</b>	APP1	APP2	SIZE <b>A4</b>
© COPYRIGHT MUIR ENGINEERING PTY. LTD.			

TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	FINISH



**DNV Certification Pty Ltd**  
Quality Assured ISO9001:2000

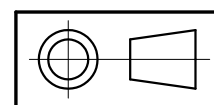
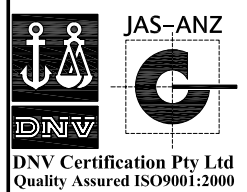


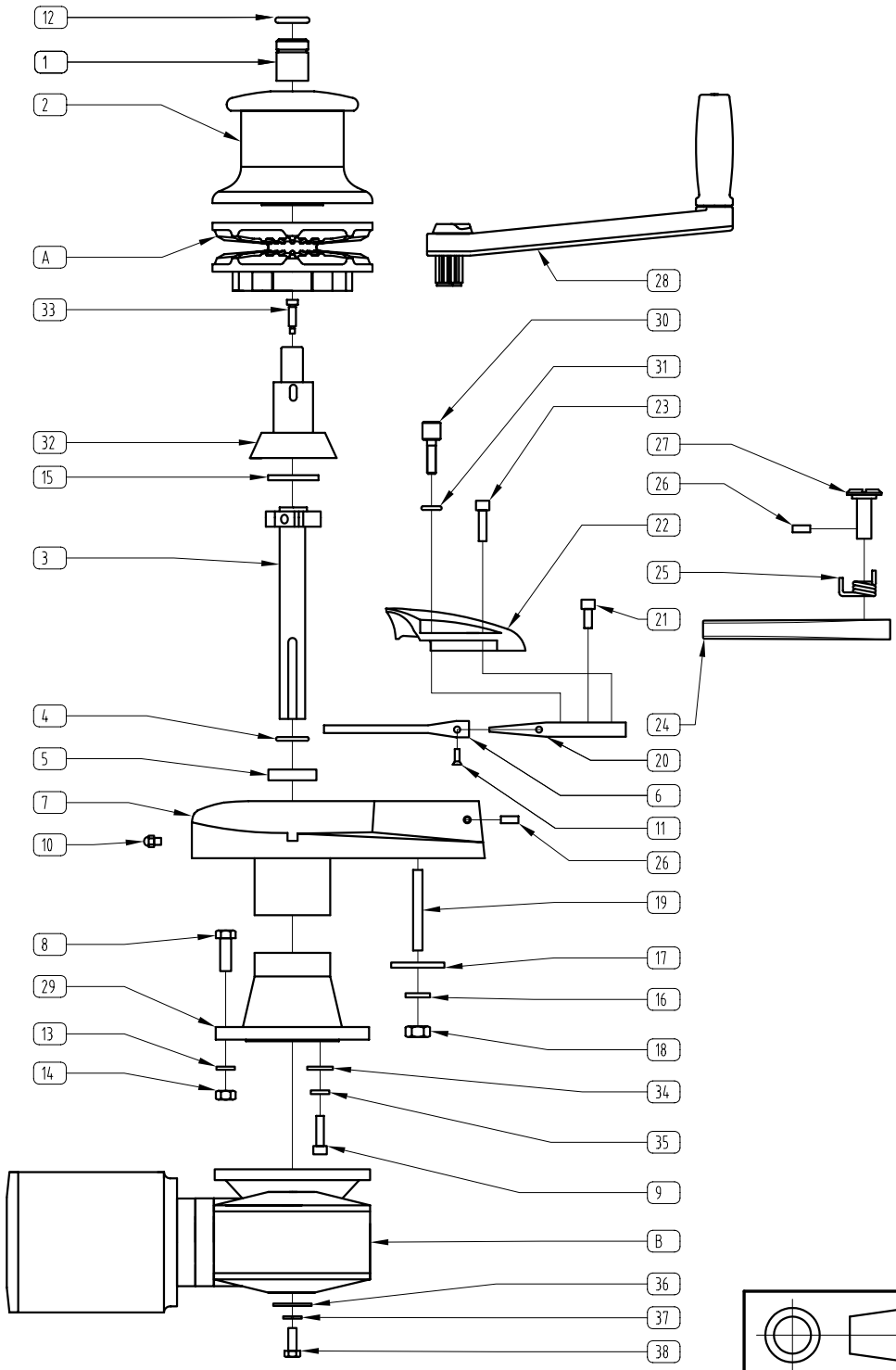
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVRC02500A	CLUTCH NUT BRONZE VRC2500A	1
2	K06-CAPVRC02500A	CAPSTAN ASSEMBLY VRC2500A	1
3	K06-SFTVRC02500MOR	SHAFT ASSEMBLY VRC2500A MORS	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500A	BASE BRONZE VR/C2500A	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	R41-ORG04503803.5	'O' RING SEAL 45 X 38 X 3.5 (BS222)	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500A	PEELER BRONZE VR/C2500A	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500A	CHAIN COVER BRONZE VR/C2500A	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZVRC2500	CONE RATCHET BRONZE VRC2500	1
33	S47-30406.4019.1005	SCREW SHOULDER SS304 1/4 X 3/4 X 3/16"	1
34	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
35	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
36	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
37	S76-30410.00	WASHER SPRING SS304 10MM	1
38	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

A GYPSY  
B MOTOR / GEARBOX ASSEMBLY



TOLERANCES (mm)		TITLE	
X.	±	ATLANTIC VRC2500/3500 (MORS)	
X.X	±	EXPLODED VIEW	
X.XX	±	PART No. K08-ATLVRC2500MORS	
UNLESS OTHERWISE SPECIFIED		DRN	DATE
MATERIAL		AJN	04/04/00
FINISH		DRG No. K08-ATLVRC2500MORS	
		SCALE	SIZE
		NTS	A4
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ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVRC02500A	CLUTCH NUT BRONZE VRC2500A	1
2	K06-CAPVRC02500A	CAPSTAN ASSEMBLY VRC2500A	1
3	K06-SFTVRC02500MORL	SHAFT ASSEMBLY VRC2500A MORS LEFT HAND	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500AM	BASE BRONZE VR/C2500A MIRROR	1
8	S13-30409.52038	BOLT HEX HD SS304 0-3/8 X 1-1/2 INCH	4
9	S45-30407.94044	SCREW SHCS SS304 5/16 X 1-3/4 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4" UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	R41-ORG04503803.5	'O' RING SEAL 45 X 38 X 3.5 (BS222)	1
13	S76-30409.52	WASHER SPRING SS304 3/8 INCH	4
14	S20-30409.52	NUT HEX SS304 0-3/8 INCH	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500AM	PEELER BRONZE VR/C2500A MIRROR	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500AM	CHAIN COVER BRONZE VR/C2500A MIRROR	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP063FC02500A	ADAPTOR ALLOY VF63FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	P08-CNEBRZVRC2500L	CONE RATCHET BRONZE VRC2500 LEFT HAND	1
33	S47-30406.4019.1005	SCREW SHOULDER SS304 1/4 X 3/4 X 3/16"	1
34	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
35	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
36	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
36	S76-30410.00	WASHER SPRING SS304 10MM	1
37	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

NOTE: WHEN REFERENCING MOTOR/GEARBOX ASSEMBLY PLEASE SPECIFY "LEFT HAND UNIT"

- A GYPSY
- B MOTOR / GEARBOX ASSEMBLY (LEFT HAND UNIT)

**MUIR** WINDLASSES AUSTRALIA

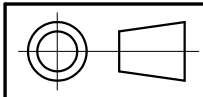
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**ATLANTIC VRC2500/3500 MORS L/HAND  
EXPLODED VIEW**

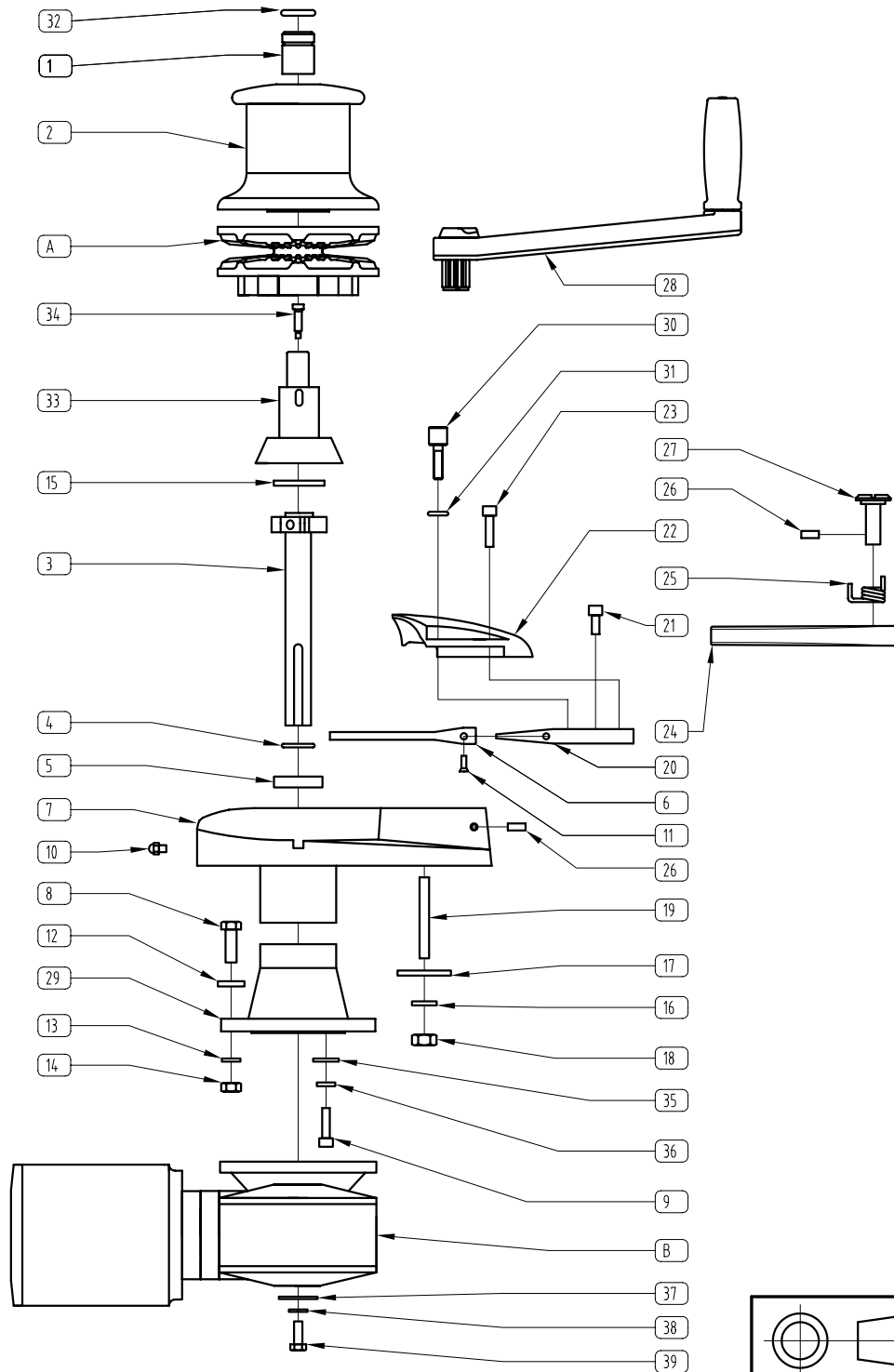
PART No.  
**K08-ATLVRC2500MORSL**

DRN <b>AJN</b>	DATE <b>01/03/02</b>	DRG No. <b>K08-ATLVRC2500MORSL</b>
SCALE <b>NTS</b>	APP1	APP2
		SIZE <b>A4</b>

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TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	



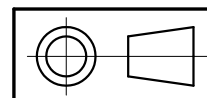


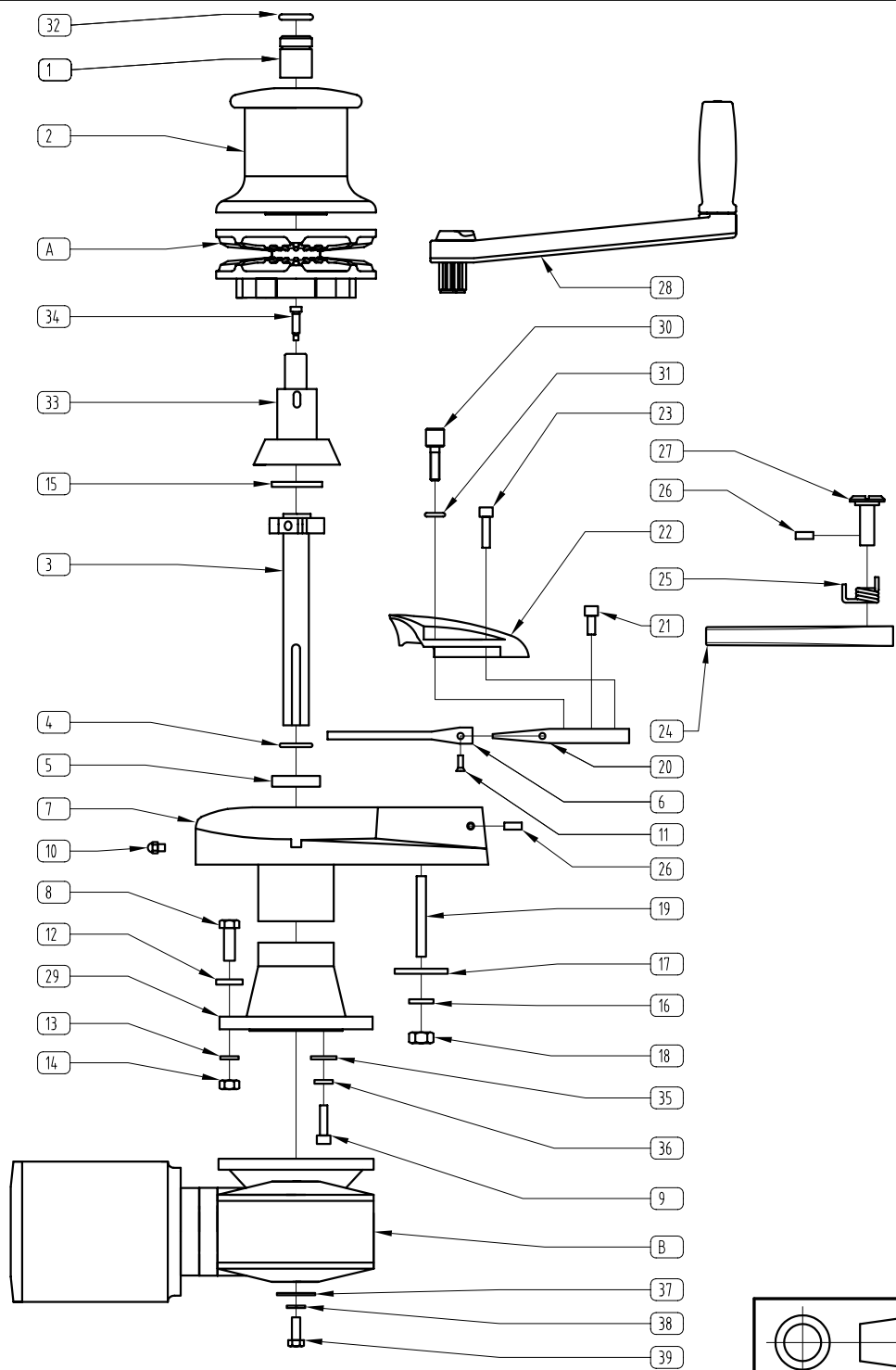
ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVRC04000A	CLUTCH NUT BRONZE VRC4000A	1
2	K06-CAPVRC04000A	CAPSTAN ASSEMBLY VRC4000A	1
3	K06-SFTVRC04000A	SHAFT ASSEMBLY VRC4000A	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500A	BASE BRONZE VR/C2500A	1
8	S13-31612.00050	BOLT HEX HD SS316 12MM X 50MM	4
9	S45-30407.94038	SCREW SHCS SS304 5/16 X 1-1/2 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S75-31612.00	WASHER FLAT SS316 12MM	4
13	S76-31612.00	WASHER SPRING SS316 12MM	4
14	S20-31612.00	NUT HEX SS316 12MM	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500A	PEELER BRONZE VR/C2500A	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500A	CHAIN COVER BRONZE VR/C2500A	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP086FC02500A	ADAPTOR ALLOY VF86FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	R41-ORG04503803.5	'O' RING SEAL 45 X 38 X 3.5 (BS222)	1
33	P08-CNEBRZVRC2500	CONE RATCHET BRONZE VRC2500	1
34	S47-30406.4019.1005	SCREW SHOULDER SS304 1/4 X 3/4 X 3/16"	1
35	S75-30408.0016	WASHER FLAT SS304 5/16 X 5/8"	5
36	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
37	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
38	S76-30410.00	WASHER SPRING SS304 10MM	1
39	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

A GYPSY  
B MOTOR / GEARBOX ASSEMBLY

**MUIR** WINDLASSES AUSTRALIA

TOLERANCES (mm)		TITLE	
X.	±	ATLANTIC VRC4000 (MORS)	
X.X	±	EXPLODED VIEW	
X.XX	±	PART No. K08-ATLVRC4000	
UNLESS OTHERWISE SPECIFIED		DRN	DATE
MATERIAL		AJN	04/04/00
FINISH		DRG No. K08-ATLVRC4000	
		SCALE	SIZE
		NTS	A4
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ITEM	PART NUMBER	DESCRIPTION	QTY
1	P07-CLNBRZVRC04000A	CLUTCH NUT BRONZE VRC4000A	1
2	K06-CAPVRC04000A	CAPSTAN ASSEMBLY VRC4000A	1
3	K06-SFTVRC04000AL	SHAFT ASSEMBLY VRC4000A LEFT HAND	1
4	R41-ORG0380351.8	'O' RING SEAL 38.5X35X1.75	1
5	R42-SEA052035.007.0	SEAL 35 X 52 X 7.0 (TC12522)	1
6	P19-STR3042500A	STRIPPER SS304 VR/C2500A	1
7	P22-BSEBRZ02500AM	BASE BRONZE VR/C2500A MIRROR	1
8	S13-31612.00050	BOLT HEX HD SS316 12MM X 50MM	4
9	S45-30407.94038	SCREW SHCS SS304 5/16 X 1-1/2 INCH	5
10	R43-NIP3036.35UNFST	GREASE NIPPLE SS303 1/4"UNF STRAIGHT	1
11	S33-30406.35013	SCREW CSK SL MT 304 0-1/4 X 1/2 INCH	2
12	S75-31612.00	WASHER FLAT SS316 12MM	4
13	S76-31612.00	WASHER SPRING SS316 12MM	4
14	S20-31612.00	NUT HEX SS316 12MM	4
15	P21-NOV50.8035.203	WASHER NOVASTEEN 2" X 1 3/8" X 3	1
16	S76-30412.70	WASHER SPRING SS304 1/2 INCH	4
17	S75-30412.70025	WASHER FLAT SS304 1/2 INCH X 1 INCH	4
18	S20-30412.70UNC	NUT HEX SS304 0-1/2 INCH UNC	4
19	P24-STD3042500A	STUD SS304 VR/C2500A	4
20	P05-PLRBRZ2500AM	PEELER BRONZE VR/C2500A MIRROR	1
21	S45-30407.94019	SCREW SHCS SS304 5/16 X 0-3/4 INCH	1
22	P05-CCVBRZ2500AM	CHAIN COVER BRONZE VR/C2500A MIRROR	1
23	P15-PIN30412.7X32	PIN - CHAIN COVER ATL 1/2X5/16/1-1/4"	1
24	R40-FGRPVC0850A	FINGER PVC VR/C850A	1
25	S36-SPR304FGRATL	SPRING FINGER ATLANTICS	1
26	S35-30406.35BSW006	SCREW GRUB 304 0-1/4 BSW X 0-1/4 INCH	2
27	P15-PIN30419.05X27	PIN - FINGER ATLANTICS	1
28	F90-HANHDPE200	HANDLE HDPE 8" (200mm)	1
29	P01-DADP086FC02500A	ADAPTOR ALLOY VF86FC - VR/C2500 ATLANTIC	1
30	S46-3047.9425.4	SCREW THUMB SS304 5/16 "X 1"	1
31	R41-ORG01100701.8	'O' RING SEAL 11 X ID7.5 X 1.75 (BS011)	1
32	R41-ORG04503803.5	'O' RING SEAL 45 X 38 X 3.5 (BS222)	1
33	P08-CNEBRZVRC2500L	CONE RATCHET BRONZE VRC2500 LEFT HAND	1
34	S47-30406.4019.1005	SCREW SHOULDER SS304 1/4 X 3/4 X 3/16"	1
35	S75-30408.0016	WASHER FLAT SS304 5/16 x 5/8"	5
36	S76-30407.94	WASHER SPRING SS304 5/16 INCH	5
37	P21-BRS050.0010.503	WASHER BRASS 50 X 10.5 X 3MM	1
38	S76-30410.00	WASHER SPRING SS304 10MM	1
39	S36-30410.00025	SCREW HEX HD SS304 10MM X 25MM	1

NOTE: WHEN REFERENCING MOTOR/GEARBOX ASSEMBLY PLEASE SPECIFY "LEFT HAND UNIT"

- A GYPSY
- B MOTOR / GEARBOX ASSEMBLY (LEFT HAND UNIT)

**MUIR** WINDLASSES AUSTRALIA

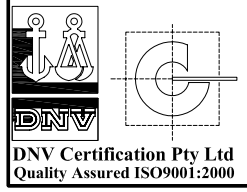
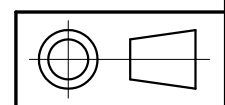
TITLE  
**ATLANTIC VRC4000 LEFT HAND  
EXPLODED VIEW**

PART No.  
**K08-ATLVRC4000L**

DRN <b>AJN</b>	DATE <b>04/04/00</b>	DRG No. <b>K08-ATLVRC4000L</b>
SCALE <b>NTS</b>	APP1	APP2
SIZE <b>A4</b>		

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TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	





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WINDLASS  
SERIAL NUMBER

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*While all due care and attention has been taken in the preparation of this manual no responsibility shall be taken for errors or omissions.*