

TIGRES

MOUNTING, OPERATION AND MAINTENANCE INSTRUCTIONS

WE ADVISE YOU TO CAREFULLY READ THESE INSTRUCTIONS BEFORE INSTALLING YOUR WINDLASS. YOU WILL FIND IN THE TEXT INSIDE THE BRACKETS () THE ITEM NUMBER OF THE PARTS LIST. KEEP THESE INSTRUCTIONS IN A SAFE PLACE ON YOUR BOAT, SO THAT YOU MAY EASILY CONSULT IT WHEN NECESSARY.

MODEL CLASSIFICATION

Fill in this form and specify the type of chain to obtain a complete and exact classification of the installed model.

Mod. TIGRES

Standard version

Free Fall version



FINISH

Series (aluminium anodised)

White (protect by a polyester coating)

MOTOR

1000 Watt 12 Volt

1200 Watt 12 Volt

1000 Watt 24 Volt

1200 Watt 24 Volt

CHAIN GIPSY

Ø 1/4"

Ø 6 mm

Ø 5/16"

Ø 7 mm

Ø 3/8"

Ø 8 mm

Ø 10 mm

PURCHASE DATE & PLACE

NOTES

SERIAL NUMBER

WARRANTY

LOFRANS' S.r.l. WARRANTS ITS PRODUCTS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF PURCHASE AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP, UNDER NORMAL USE AND SERVICE. ANY PART WHICH PROVES TO BE DEFECTIVE IN NORMAL USAGE DURING THAT ONE YEAR PERIOD WILL BE REPAIRED OR REPLACED BY LOFRANS'. THIS WARRANTY IS SUBJECT TO THE CONDITIONS LISTED BELOW.

- LOFRANS' LIABILITY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PART DEFECTIVE IN MATERIALS OR WORKMANSHIP.
- LOFRANS SHALL NOT BE LIABLE IN ANY WAY FOR FAILURES DUE TO:
 - USE OF PRODUCTS IN APPLICATIONS FOR WHICH THEY ARE NOT INTENDED.
 - IMPROPER INSTALLATION, MISUSE, INCORRECT MAINTENANCE.
 - UNAUTHORISED ALTERATION OF THE PRODUCT.
 - CORROSION, NORMAL WEAR AND TEAR, DISCOLORATION.
 - CONDITIONS THAT EXCEED THE PRODUCT'S PERFORMANCE SPECIFICATIONS.

THE CLAIM OF WARRANTY MUST BE PROMPTLY NOTIFIED, IN WRITING, TO LOFRANS OR LOFRANS' AUTHORISED DISTRIBUTOR, PROVIDING PROOF OF PURCHASE.

REPAIR WILL BE UNDER TAKEN UPON RETURN OF THE DEFECTIVE PART, FREIGHT PREPAID TO LOFRANS OR LOFRANS AUTHORISED DISTRIBUTOR. LOFRANS OR ITS AUTHORISED DISTRIBUTOR WILL NOT BE RESPONSIBLE FOR ANY SHIPPING CHARGES OR LABOUR COST ASSOCIATED WITH ANY WARRANTY CLAIMS.

LOFRANS SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES TO YACHTS, EQUIPMENT OR OTHER PROPERTY OR PERSONS DUE TO USE OR INSTALLATION OF LOFRANS EQUIPMENT.

IMPLIED WARRANTIES ARE LIMITED TO THE LIFE OF THIS WARRANTY. ALL INCIDENTAL AND/OR CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM THIS WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSIONS MAY NOT APPLY TO YOU. **LOFRANS' RESERVE THE RIGHT TO DISCLAIM THE WARRANTY IN CASE THE WINDLASS IS CONTROLLED BY NOT SUITABLE ELECTRIC ACCESSORIES AND/OR IN CASE OF NON INSTALLATION OF A PROPER CIRCUIT BREAKER ON THE WINDLASS ELECTRIC LINE.**

IMPORTANT ADDITIONAL INFORMATION CONCERNING SAFETY ASPECTS OF YOUR ANCHOR WINDLASS

- **WARNING !!** YOUR WINDLASS IS NOT DESIGNED AS A STRONG POINT TO FASTEN YOUR ANCHOR RODE (CHAIN OR ROPE) TO WHEN THE BOAT IS LAYING ON ITS ANCHOR AND SURGING. THE ANCHOR RODE MUST BE FASTENED TO A STRONG POINT SUCH AS MOORING CLEAT, BOLLARD OR CHAIN STORAGE.
- **WARNING !!** DO NOT EXCEED A PULLING LOAD MORE THAN THE RATING OF YOUR WINDLASS. WE SUGGEST THAT THE VESSEL'S ENGINE BE RUNNING AND USED TO ASSIST IN THE ANCHOR RECOVERY.
- **WARNING !!** ALWAYS INSTALL THE PROPERLY RATED CIRCUIT BREAKER TO PROTECT THE ELECTRICAL CABLE AND ELECTRIC MOTOR FROM OVERHEATING AND DAMAGE.
- **WARNING !!** WHEN NOT IN USE BE SURE TO KEEP THE **ON/OFF** ANCHOR WINDLASS CIRCUIT SWITCH IN THE **OFF** POSITION TO PREVENT ACCIDENTAL ENGAGEMENT OF THE WINDLASS.
- **WARNING !!** ALWAYS KEEP YOUR HANDS, FEET AND FINGERS CLEAR OF AN OPERATING WINDLASS. IF A JAM OCCURS USE EXTREME CAUTION AND TURN OFF THE WINDLASS CIRCUIT BEFORE ATTENDING TO CLEARING THE ANCHOR RODE.
- **WARNING !!** DO NOT USE THE WINDLASS FOR DIFFERENT PURPOSES IT WAS DESIGNED FOR.

ELECTRICAL CONNECTIONS

Check that the motor tension corresponds to the plant on board. The following schedule shows the suggested minimum capacity for the battery feeding the windlass:

MOTOR	CAPACITY
1000 Watt 12 V	150 Ah
1000 Watt 24 V	90 Ah

MOTOR	CAPACITY
1200 Watt 12 V	180 Ah
1200 Watt 24 V	100 Ah

If the windlass is supplied with a battery of inferior capacity to what indicated in this schedule, the performances, will be worse and the battery will be subject rapidly to wear and tear. We recommend the use of excellent quality cables, insulated and heat resistant. The minimum suggested section is:

MOTOR	CABLES SECTION	
1000 Watt 12 V	35 mm ²	2 AWG
1000 Watt 24 V	25 mm ²	3 AWG

MOTOR	CABLES SECTION	
1200 Watt 12 V	50 mm ²	1 AWG
1200 Watt 24 V	25 mm ²	3 AWG

These values should be increased by approx. 30% - 50%, if the length of the extended cable, positive and negative, is greater than 10 mts. or 29' length. The cables connected to electric controls, shown on the wiring diagram as a thin line, should have a section of 1.5 mm² or 16 AWG approx. It is necessary to install on the power line a proper circuit breaker with following capacities:

MOTOR	CIRCUIT BREAKER
1000 Watt 12 V	100 Amps
1000 Watt 24 V	70 Amps

MOTOR	CIRCUIT BREAKER
1200 Watt 12 V	100 Amps
1200 Watt 24 V	70 Amps

WARNING !! These capacities concern only LOFRANS' circuit breaker so that they could be incorrect for other circuit breakers.

The circuit breaker has three functions:

- protects from very dangerous short circuits
- protects windlass motor, avoiding damages due to anomalous absorption
- interrupts tension to windlass, when desired

The circuit breaker must be installed in a dry, accessible and visible position. For safety reasons we recommend that the windlass and remote are isolated during navigation and reactivated during anchorage manoeuvring.

Install the Control Box, which is an electric unit made up of two solenoids enclosed inside a special container, preferable in a dry place on board.

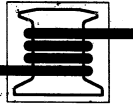
The entire unit has been designed with a view to simplifying and speeding up the electrical connections.

We recommend to install at least two remote control to drive the windlass in case one of them gets damaged.

For protection of electric remote controls, it will be necessary to install a circuit breaker of 5 Ampere.

As for the electric remote controls, we recommend You to use original LOFRANS' components only, which are designed for sea water purpose.

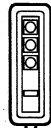
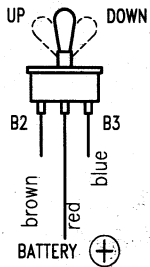
See the following page for wiring connections.



MOTOR	CABLE SIZE		Circuit Breaker
	mm ²	AWG	
700W 12V	25	3	70 Ampere
700W 24V	16	4	35 Ampere
1000W 12V	35	2	100 Ampere
1000W 24V	25	3	70 Ampere
1200W 12V	50	1	100 Ampere
1200W 24V	25	3	70 Ampere
1500W 12V	50	0	125 Ampere
1500W 24V	35	2	70 Ampere
2000W 24V	50	0	100 Ampere

REMOTE CONTROL VEGA

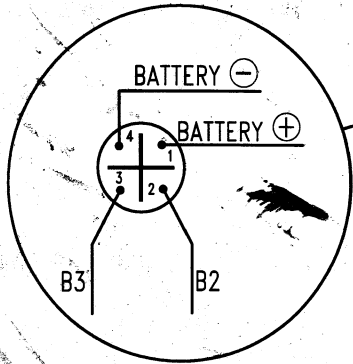
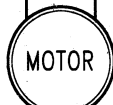
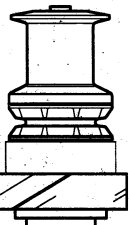
TOGGLE SWITCH type L



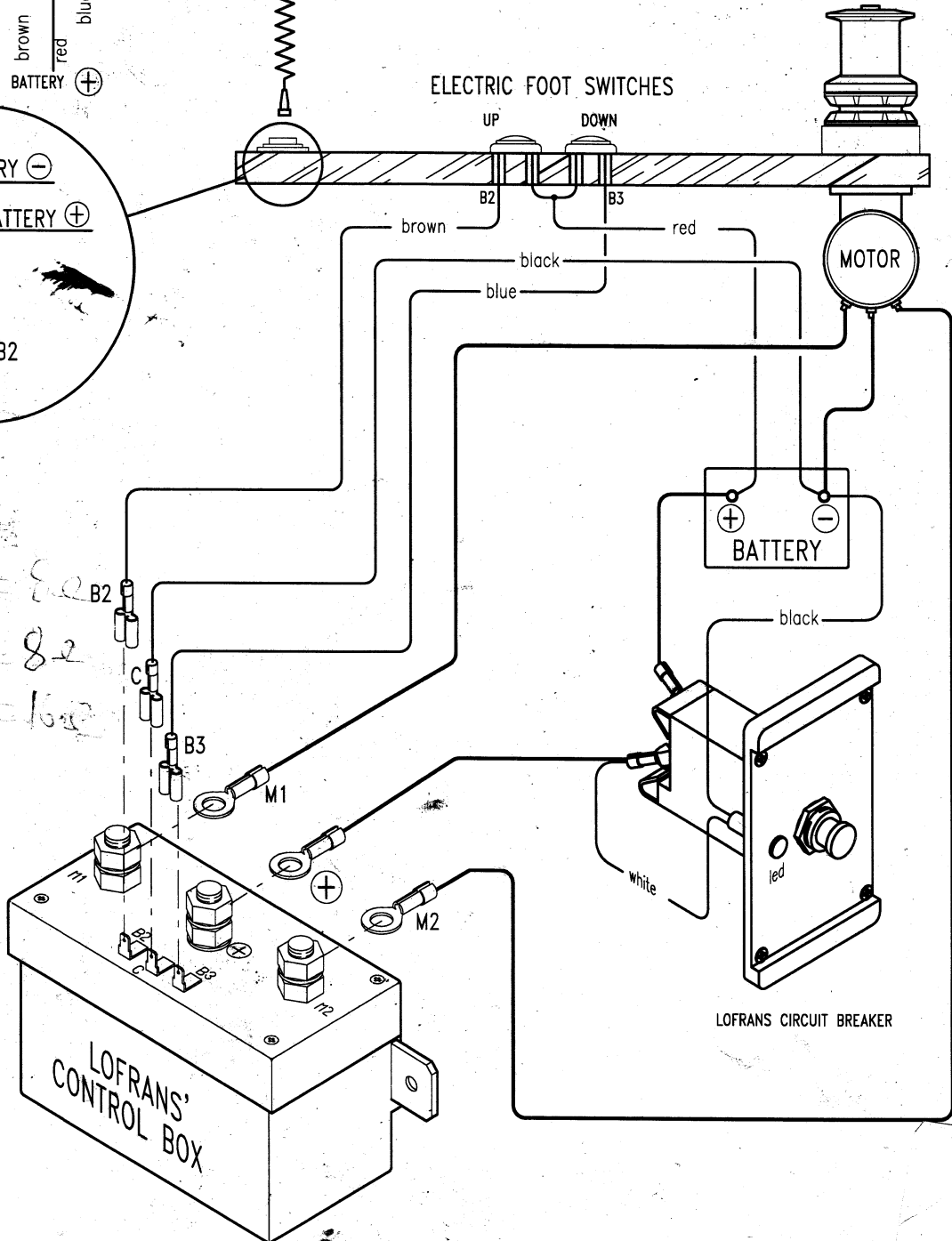
ELECTRIC FOOT SWITCHES

UP DOWN

B2 B3



C-B2 = 82
C-B3 = 82
B2-B3 = 162



LOFRANS CIRCUIT BREAKER

INSTALLATION INSTRUCTIONS

Check if the windlass is complete in every parts. If any parts is missing or damaged, please contact your dealer.

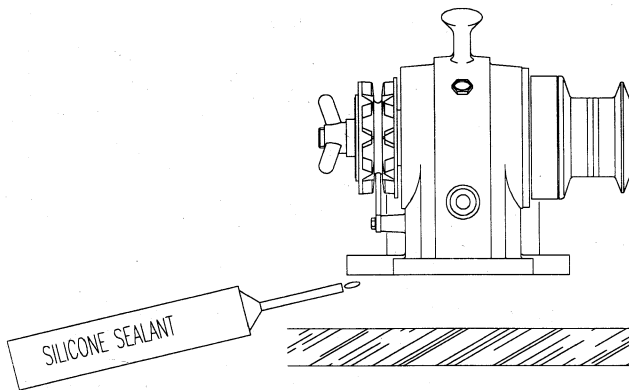
To operate a windlass You need: one LOFRANS' Control Box and at least two controls to drive the windlass in case one of them gets damaged.

TOOLS AND MATERIALS REQUIREMENTS	Drill Ø 11 mm (7/16")
	Spanner 10 mm A/F - 13 mm A/F
	Jig Saw
	Power Drill
	Silicone Sealant

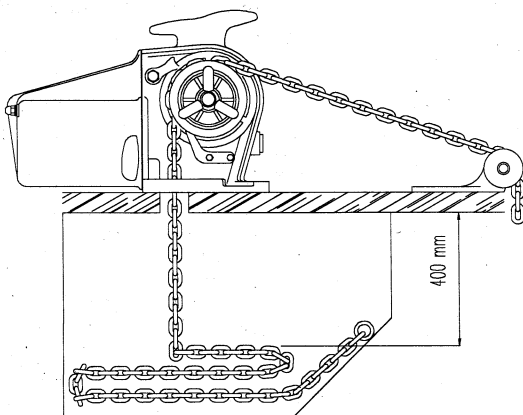
WARNING !! = Avoid to make holes in the windlass body (item 11) and motor cover (item 31) in order not to damage the protective coating irreparably.

To ensure efficient operations it is essential that the windlass is correctly mounted. Follow these instructions carefully step by step.

- Ensure there are no deck obstructions. Be sure that there is ample room to enable You to use the emergency handle (item 47).
- In case the deck is too thin, it will be necessary to use a backing pad (plywood, timber) of sufficient dimensions to spread the stress imposed during recovery of chain.
To avoid electrolysis problems do not use stainless steel pad as backing pad. For boats of steel or aluminium construction, it is very important that body (item 11) and fixing studs are insulated from the deck with a non conductive gasket and insulators.
- When the position of the windlass has been set, drill the necessary holes, using the template we supply. Introduce the plastic inserts supplied into the four holes at the base of the body.

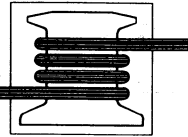


- Separate the body from the motor cover (item 31) removing the blind nuts (item 34) from the mounting stud (item 30). Seal, with a good quality silicone sealant, the bottom of the body (item 11).

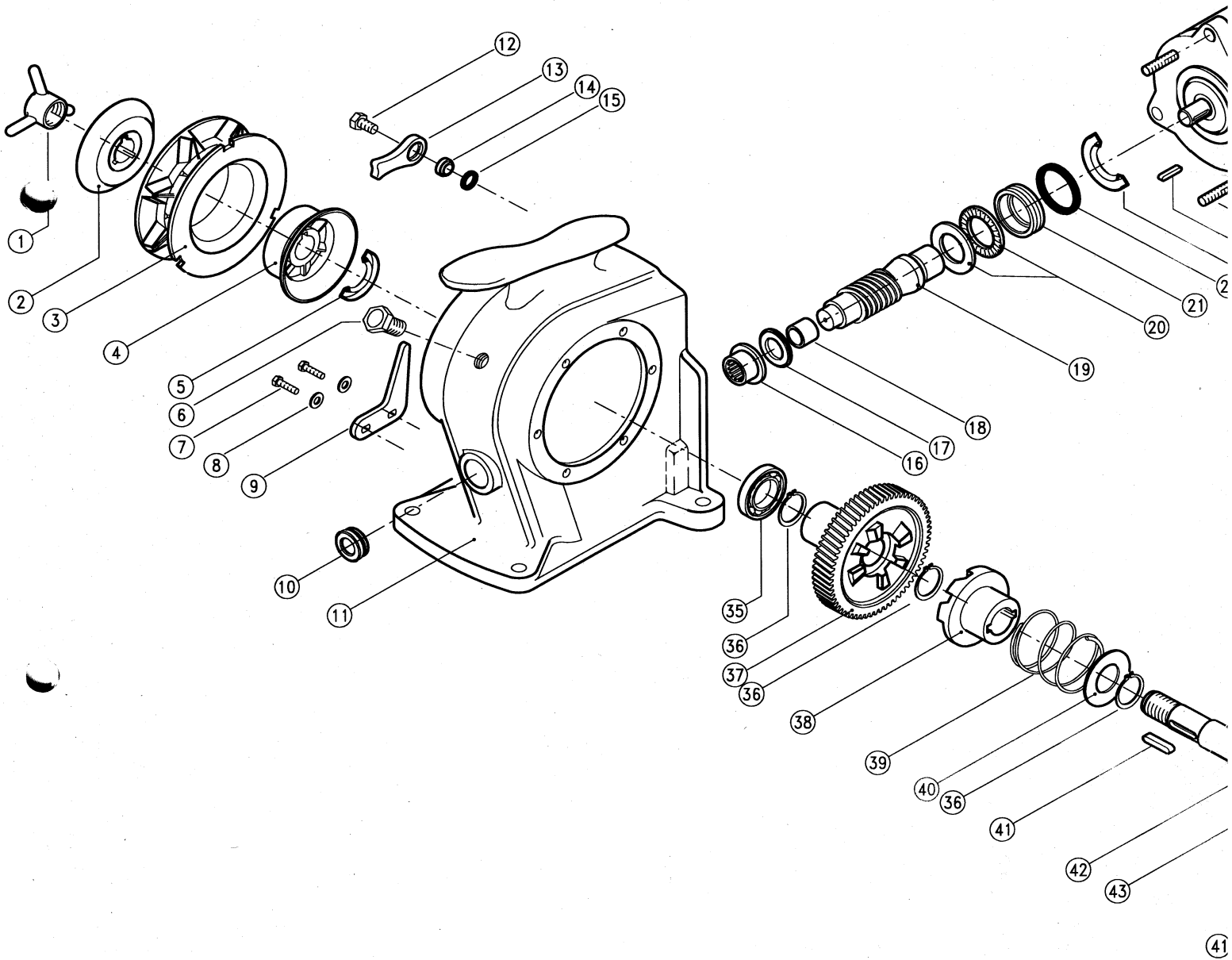


- Place the windlass on the deck. The windlass must be located with the gipsy in line with bow roller. The chain must turn round the gipsy with a rotation of 90° approx. Fix the windlass on the deck using bolts and nuts type M10 or equivalent in stainless steel. Ensure the chain locker is of sufficient capacity to store all the chain and leave a minimum of 400 mm (16") between underside of the deck and the top of the heaped chain.

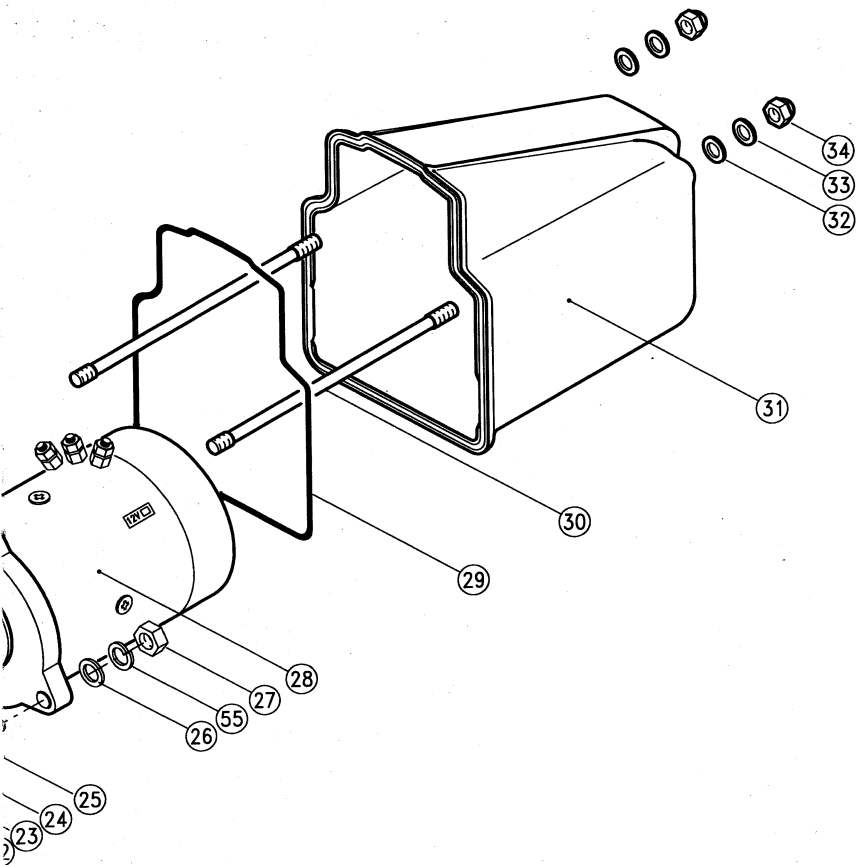
- Pass the electric cables through the deck and the two holes on the body under the electric motor. Join the cables to the electric motor following the wiring diagram. Join the motor cover to the body. Introduce the chain into the gipsy, operate the "UP" switch of the foot switch or remote control and the chain will automatically be fed into your locker. Take care to keep hands and feet well clear of incoming chain. If the windlass runs in wrong direction, change over M1 and M2 cables at the control box. After using the windlass, we strongly recommend that the nuts are checked again to ensure they are well tightened.



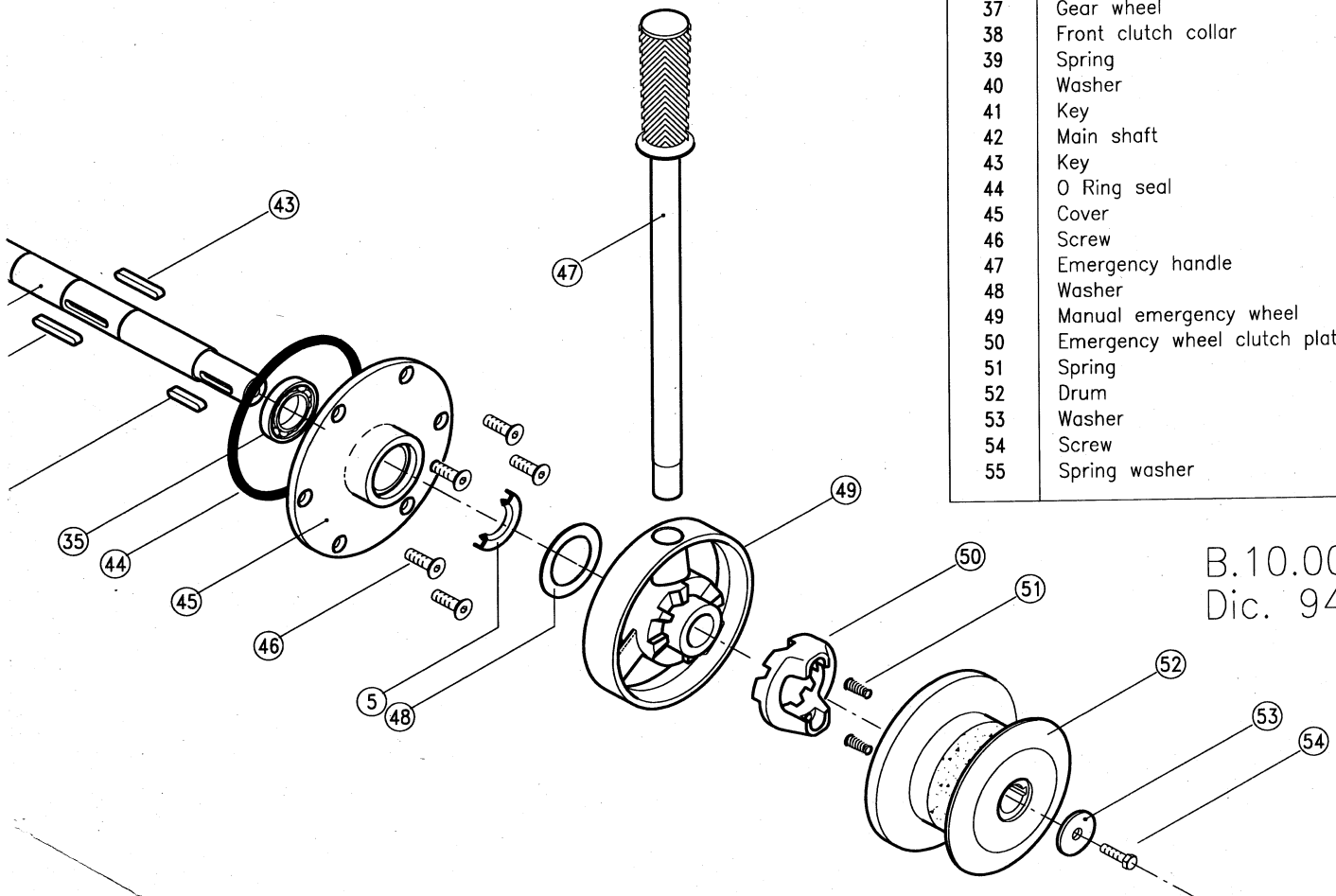
Mod. TIGRES



PARTS LIST



Item nr.	Description	Q.ty
1	Wingnut	1
2	Shove gipsy	1
3	Gipsy/chain wheel	1
4	Gipsy holder	1
5	Seal	2
6	Oil filler	1
7	Screw	2
8	Washer	2
9	Stripper	1
10	Oil level tap	1
11	Body	1
12	Screw	1
13	Gipsy stopper	1
14	Spacer	1
15	O Ring seal	1
16	Combined bearing	1
17	Bearing washer	1
18	Ring	1
19	Worm screw	1
20	Thrust bearing	1
21	Spacer	1
22	O Ring seal	1
23	Seal	1
24	Key	1
25	Mounting stud	3
26	Washer	3
27	Nut	3
28	Electric motor	1
29	Seal	1
30	Mounting stud	2
31	Motor cover	1
32	Nylon washer	2
33	Washer	2
34	Blind nut	2
35	Bearing	2
36	External circlip	3
37	Gear wheel	1
38	Front clutch collar	1
39	Spring	1
40	Washer	1
41	Key	2
42	Main shaft	1
43	Key	2
44	O Ring seal	1
45	Cover	1
46	Screw	6
47	Emergency handle	1
48	Washer	1
49	Manual emergency wheel	1
50	Emergency wheel clutch plate	1
51	Spring	2
52	Drum	1
53	Washer	1
54	Screw	1
55	Spring washer	3



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OPERATIONS

WARNING !! = Do not approach with hands or feet near gipsy and chain, when operating.

WARNING !! = When the windlass is not in use or when using emergency handle, switch off electrical power turning "OFF" the circuit breaker.

WARNING !! = Engage the chain stopper after completing the anchoring manoeuvre. Windlass must not be used as sole means securing anchor in bow fitting. Anchors should be independently secured to prevent accidental release.

WARNING !! = Before raise or lower the anchor be sure the gipsy stopper (item 13) is not introduced into a gipsy border socket.

WARNING !! = Never use the windlass under power with the emergency handle inserted either into the wingnut (item 1) or manual emergency wheel (item 49).

Gipsy Clutch Operation

Gipsy is connected to the main shaft (item 42) by a clutch, items (2) and (4).

To engage the clutch insert the emergency handle (item 47) supplied into the wingnut (item 1) and tighten it.

To disengage the clutch loose the wingnut.

Raising The Anchor

Start the engine of the boat. Be sure that the clutch is well engaged. Draw out the emergency handle from the wingnut.

Push the button "UP" of the foot switch or remote control. **Do not use the windlass to pull the boat to the anchor.** The chain haulage speed will adjust to the uplifted weight. Release the button "UP" to stop the manoeuvre. When You haul the last metres of the chain, reduce the windlass speed and pay attention to the anchor. If too quickly hauled, it may damage the bow of Your boat. Do not push the button "UP" for more a twenty seconds, if the windlass motor slows down under load and the thermal cut-out switch does not intervene. If, on the contrary, the thermal cut-out switch gets released, wait some minutes before putting back into service and try the manoeuvre once more. Should the motor stop again, we suggest You fix the chain on the stopper or bollard, then use the boat engine to break the anchor loose.

For safety reasons we strongly recommend to turn OFF the circuit breaker and engage the chain stopper during navigation. Reactivate the circuit breaker and disengage the chain stopper during anchorage manoeuvring.

Lowering The Anchor

When You wish to lower the anchor very quickly, it is necessary disengage the clutch. In this way, the gipsy may freely run on its shaft and release the chain into the water. The chain fall can be controlled by tightening the wingnut with the emergency handle. At the end of the operation engage the clutch.

Under usual conditions, we suggest to lower the anchor electrically, pushing the button "DOWN" placed on the remote control or foot switch.

Dropping the anchor this way, You will have a perfect control of the manoeuvre, which can be interrupted any moment releasing the button "DOWN".

Once anchored, we suggest, in order to reduce the windlass load, to use a chain stopper and fix the chain with a rope to a strong point as a cleat or a bollard.

Use The Drum Independently From The Gipsy

Before use the drum in this way, it is necessary stop the run of the chain, fixing it to a strong point as a chain stopper or similar.

Disengage the clutch. Turn around the drum with two laps of rope. Engage the drum from above, stretching the loose end of rope.

Push the button "UP", recovering the rope at the same time. Engage the clutch at the end of operation.

Raise The Anchor In Case Of Emergency

In case of damage to the electric on board, it is possible raise the anchor manually, by inserting the emergency handle in the manual emergency wheel (item 49) and drawing it alternatively in forward and backwards. As there is no reduction, please keep in mind that in case of anchoring in deep sounding the stress will be hard.

MAINTENANCE

WARNING !! = Before maintenance operations on windlass switch off electrical power turning "OFF" the circuit breaker and remove with attention the chain from the gipsy and the rope from the drum.

A correct and periodic maintenance operation is essential for the best efficiency of your windlass. At least once every month remove the salt layer, which forms periodically on the outer casting, to avoid electrolysis problems which could prejudice the windlass performances. Wash with a fresh water and clean all surfaces, particularly in the most hidden points, where salts deposits. We recommended, at least once every six months, to disassemble windlass gipsy and drum following these instructions:

Using the emergency handle unscrew (item 1), extract (item 2), unscrew (item 7) and (item 8), remove (item 9). Remove (item 3) and extract (item 4).

Then unscrew (item 54), remove (item 53), extract (item 52) and remove the items (51), (50), (49) and (48).

Clean and check all the parts, spray all with CRC 3097 "LONG LIFE" or WD40. Watch if there are no electrolysis traces and grease the main shaft (item 42) thread.

If, during maintenance, you have difficulty to disengage the clutch, use the gipsy stopper (item 13), introducing it into a gipsy border socket.

If, after a long inactivity period, the electric motor runs slowly we recommend to check and clear the brushes and replace it if necessary.

We strongly recommend to separate, at least once every year, the windlass from the deck to clean and remove the salt layer under the body (item 11).

The body is proper filled with SAE 90 long life oil. If there is a leak of oil from the body, it will be necessary to disassemble and replace the seals. For this purpose, it is available a complete set of seals. At the beginning and at the end of the season, check the motor and Control box, removing eventual residues and covering the clamps with grease.

ORDERING SPARE PARTS

To identify a windlass spare parts see the spare part list. When ordering spare parts, please specify for the TIGRES model the code B.10.001 E, give us a complete model classification, the serial number, the item number and the quantity.

In case of any difficulty please contact your nearest authorised LOFRANS' distributor or directly LOFRANS' S.r.l. fax (039) 2004299.

TECHNICAL FEATURES

Suitable for boats up to approx from 10 to 14 mts.

Electric Motor 1000 Watt 12 or 24 Volt
 1200 Watt 12 or 24 Volt

Chain Size \varnothing 6 - 7 - 8 - 10 mm
 \varnothing 1/4" - 5/16" - 3/8"

Weight Kg.23

Haulage Speed at Kg 0 31 mt/min (1000 W 12 V) - 32 mt/min (1200 W 12 V)
 34 mt/min (1000 W 24 V) - 35 mt/min (1200 W 24 V)

Haulage Speed at Kg 100 17 mt/min (1000 W 12 V) - 18 mt/min (1200 W 12 V)
 19 mt/min (1000 W 24 V) - 20 mt/min (1200 W 24 V)

Ampere Loading at Kg 0 60 Amps (1000 W 12 V) - 65 Amps (1200 W 12 V)
 30 Amps (1000 W 24 V) - 32 Amps (1200 W 24 V)

Ampere Loading at Kg 100. 115 Amps (1000 W 12 V) - 125 Amps (1200 W 12 V)
 60 Amps (1000 W 24 V) - 65 Amps (1200 W 24 V)

TIGRES	A	B	C	D	E	F
	412	286	95	202	155	186
	(1' 4 1/4")	(11 5/16")	(3 3/4")	(8")	(6 1/8")	(7 5/16")

