

TITAN



INSTRUCTION MANUAL
MANUALE DI ISTRUZIONI
MANUEL D'INSTRUCTIONS
GEBRAUCHSANWEISUNG
MANUAL DE INSTRUCCIONES

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INHALT

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TITAN PRESENTATION

Thank you for choosing Lofrans. The Titan is the Lofrans windlass designed for boat from 18 (59') up to 24 mts (79') length . Listed below are the technical features :

- White or anodised finishing
- Available in 3 versions : A , B or C
- Nominal power with S2 parameter – 60 min : 2000W 24V DC
- Available in AC motor : Three phases – Single phase (ask for details)
- Nickered chain gipsy
- Main shaft in stainless steel AISI 431
- Independent drum from gipsy
- Manual override equipped
- Haulage speed depending on the load from 10 up to 16 mt/min
- Ampere load : from 80 - 110 A DC
- Max pull measured with dynamometer : Kgs 2000 approx
- Weight : Kgs 75 (A version) – Kgs 96 (B version) – Kgs 85 (C version)

SAFETY INFORMATION

- This product is not designed as a strong point to fasten your anchor rode. Fast the anchor rode to a strong point such as mooring cleat or similar.
- The vessel's engine should always be running and used to assist in the recovery of the ground tackle.
- Always install the properly rated circuit breaker to protect the electric circuit and the motor from overheating and damage.
- Always turn off the main switch when the windlass is not in use to prevent accidental engagement.
- Always keep hands and feet clear of an operating windlass. If a jam occurs turn the windlass off at the main switch before clearing the anchor rode.
- Do not use the windlass for different purposes it was designed for.

WINDLASS WIRING MINIMUM REQUIREMENTS

Below there are the requirements for all the components of the windlass electric plant depending from the motor nominal power .

| | 2000 W 24V |
|---|------------------------------|
| A-Battery capacity | 150 Ah |
| B-Power cables size | 50 mm ² - 1 AWG |
| C-Lofrans Circuit breaker (slow time/current curve) | 100 A |
| Fuse | 5 A |
| Control wires size | 1,5 mm ² - 14 AWG |

NOTES

- A. Battery of lower capacity decrease the windlass performances and are rapidly subjected to wear and tear.
- B. This size must be increased when the length of the positive plus the negative cables are more than 25 mts. Use marine grade tinned copper wire.
- C. The Lofrans circuit breaker protects the power line from short circuit and the windlass motor in case of overheating. It must be kept dry and installed in accessible place to be promptly reactivated when it trips. It can be also used to isolate the windlass from the remote controls as we strongly suggest to avoid accidental engagement. All the switches must be wired in parallel. We strongly recommend to have a minimum of two switches to operate the windlass in case one of them gets damage. All Lofrans equipment is CE approved.

INSTALLATION GENERAL REQUIREMENTS

Proper installation of the windlass is critical and these essential conditions listed below need be fully satisfied :

- Fig.1** The gipsy of the windlass must be in line with the bow roller.
- Fig.2** The deck must be flat. The structure of the boat must be adequate to the load that the windlass is able to pull. If necessary reinforce the deck with a backing pad to spread the stress. Put an isolator between windlass and deck in case of metal boat.
- Fig.3** When determining the position of the windlass , it is critical to locate it directly above the deepest area of the chain locker. As the chain falls into the chain locker , it must be maximized because when the chain is stored. The chain tends to gather in the shape of a pyramid , which reduce the available space. If the chain pyramid falls , then overlaps may occur, resulting in jams. The deeper the locker , the less likely this will occur. You must have a minimum of **A=12"** between the underside of the deck and the top of the heaped chain. The chain locker shape is really important to limit the pyramid problem. The chain coming from the bow roller can be inclined up to 5 degrees.
- Fig.4** Always the angle of the chain around the gipsy must be 90 degrees minimum. If this angle is less than 90 degrees put a roller between the gipsy and the bow roller to keep the chain down.

INSTALLATION PROCEDURE

- Fig.5** Carefully position the template provided to the deck . Mark and drill the holes. Sand smooth all edges and seal. Place the windlass.
- Fig.6** Place the chain pipe (469). The stripper (467) must be placed into the middle of the gipsy without touch it. By a free rotation of the gipsy , check that all work properly. Mark and drill the holes.
- Fig.7** Seal the windlass body base with high quality sealant. Then secure the windlass on the deck using stainless steel M12 or equivalent bolts and nuts. Secure the chain pipe.
- Fig.8** The cables from the Control Box must be passed through the windlass body proper holes. Connect these cables to the electric motor.

TEST PROCEDURE

- Fig.9** Introduce the chain into the gipsy . Please take care to keep hands and feet away of the incoming chain. Turn on the remote control. Operate the UP switch. The chain will be recovered. Release the UP switch. Operate the DOWN switch. The chain will be released. If the windlass runs in wrong direction change over the UP and DOWN wires at the control box. After using the windlass , we strongly recommend that the nuts are checked again to ensure they are well tightened.

USE OF THE WINDLASS

The basic operations you need to know are lowering and raising the anchor by electric motor. This product is cone clutch-equipped which allows to you to lower the anchor without using the electric motor. Lofrans strongly recommend to use the chain stopper in conjunction with this windlass. The chain stopper is a device which is normally installed on the boat and will keep your chain in place on deck. It must be used to secure the anchor after anchoring.

| OPERATION | FIRST ... | THEN ... |
|--|---|--|
| 1. USE OF THE CLUTCH | - | To disengage the clutch insert the handle (466) into the wingnut (435) and loosen it. To engage the clutch again tight the wingnut can until you cannot move the handle any more. Anchor and /or chain provide resistance during the tightening. |
| 2. USE OF THE BAND BRAKE | - | To disengage the brake loosen the hand-wheel (440). To engage the brake tight the hand-wheel. Always the band brake must be disengaged when you raise or lower the anchor and engaged at the end of these operation. |
| 3. LOWERING THE ANCHOR BY THE ELECTRIC MOTOR | <ul style="list-style-type: none"> Disengage the chain stopper Check if the clutch is engaged Disengage the brake Turn on the circuit breaker | Simple push the button DOWN. You will have always a perfect control of the operation , which can be interrupted any moment by releasing the button DOWN . |
| 4. AFTER ANCHORING | <ul style="list-style-type: none"> Engage the chain stopper Engage the clutch Turn off the circuit breaker | If you have all chain , reduce the windlass load by engaging the chain stopper or secure the chain to a strong point such as a cleat with a rope. Engage the brake. |
| 5. RAISING THE ANCHOR | <ul style="list-style-type: none"> Disengage the chain stopper Check if the clutch is engaged Disengage the brake Turn on the circuit breaker | Start the engine of the boat. Push the button UP while with the boat at minimum speed going towards the anchoring point. Do not use the windlass to pull the boat to the anchor. Release the button UP to stop the operation. Pay attention to the speed of the anchor , which may damage the bow of your boat. In the event that the anchor becomes stranded and the Lofrans circuit breaker trips , wait several minutes before re-setting and try once more. Should the circuit breaker trip again , we suggest to fix the rope or chain to a cleats and then use the boat engine to break the anchor loose. |
| 6. DURING THE NAVIGATION | <ul style="list-style-type: none"> Engage the chain stopper Engage the clutch Turn off the circuit breaker | Windlass must not be used as the sole means of securing the anchor to the bow fitting. Anchors should be independently secured to prevent accidental release. Engage the brake or use a chain stopper or a lanyard to do that. |
| 7. LOWERING THE ANCHOR BY THE CLUTCH | <ul style="list-style-type: none"> Disengage the chain stopper Disengage the brake Turn off the circuit breaker | Disengage the clutch. As the chain falls , it can be controlled by the clutch handle . At the end of the operation engage the clutch. |
| 8. USE THE DRUM | <ul style="list-style-type: none"> Engage the brake Turn on the circuit breaker | Disengage the clutch. Turn clockwise around the drum with 2-3 laps of rope. Keep the end of rope. Push the button UP , recovering the rope at the same time. |
| 9. USE OF THE MANUAL EMERGENCY | <ul style="list-style-type: none"> Disengage the chain stopper Engage the clutch Disengage the brake Turn off the circuit breaker | Insert the handle into emergency wheel (457) and draw it back and forth. The stress will be hard in case of deep anchoring. |

MAINTENANCE PROGRAM

Below are indicated the operations and the period we consider essential to get the best efficiency and performance of your anchor windlass.

- A. Clean all the outer surfaces and the hidden points with fresh water and remove the salt layer.
- B. Grease the outer rotation parts . Particularly the main shaft thread and the clutch cones. Check for evidences of corrosion and stress.
- C. Check the terminals of the electric motor. Test the drop of voltage at the terminals.
- D. Replace of the all outer seals. The gearbox is proper filled with SAE 90 long life oil.
- E. Remove the windlass from the deck to clean the salt under the base plate.

| | YEARLY FREQUENCY OF USE OF THE BOAT | | | |
|-----------------|-------------------------------------|--------------------|---------------|---------|
| | LESS THAN 2 MONTHS | FROM 2 TO 6 MONTHS | OVER 6 MONTHS | CHARTER |
| EVERY 3 MONTHS | | | A,B | A,B |
| EVERY 6 MONTHS | | A,B | | |
| EVERY 12 MONTHS | A,B,C | C | C | C,D |
| AFTER 24 MONTHS | | D | D | E |
| AFTER 36 MONTHS | D,E | E | E | |

LOFRANS LIMITED INTERNATIONAL WARRANTY

Lofrans warrants this product for a period of 2 years subjected to the conditions listed below :

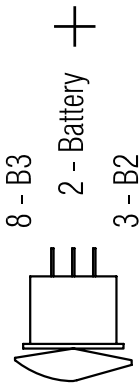
1. The product must be registered. The registration must be done within 30 days from the date of purchase by one of these options : online going to the web site www.lofrans.com under the page "Product Registration" and following the instructions or by faxing to +039 2004299 the completed registration card attached to the instruction manual.
2. This warranty starts from the date of purchase of the product from the original purchaser. If the product is first equipment of a new boat the warranty starts from the date of purchase of the boat.
3. This warranty covers original defects in material and workmanship.
4. This warranty is limited to the repairment and/or the replacement of the original defective part.
5. The claim of warranty must be promptly notified in writing and sent by fax or e-mail to Lofrans or Lofrans authorised distributor providing the serial number of the product and the registration warranty number. Lofrans reserves the right to require the proof of purchase of the product to accept the claim of warranty.
6. The defective part/product must be returned to Lofrans or Lofrans authorized distributor. List of authorised distributors is available on the web site www.lofrans.com.
7. This warranty does not cover failures due to : use of the product in applications for which they are not intended , corrosion , normal wear and tear , discoloration , unauthorised alteration of the product , improper installation , incorrect use or maintenance of the product , conditions that exceed the product's performance specifications
8. This warranty does not cover any loss or damages to the original purchaser due to a proven non conformity of the product with the exception of the cases ruled by the Italian law.
9. Lofrans reserves the right to disclaim the warranty in case the product be controlled by improper electric devices and/or in case of non installation of a proper circuit breaker on the electric power line.

The consumer statutory rights are not affected by this warranty according to the national legislation, disciplining the sale of goods.

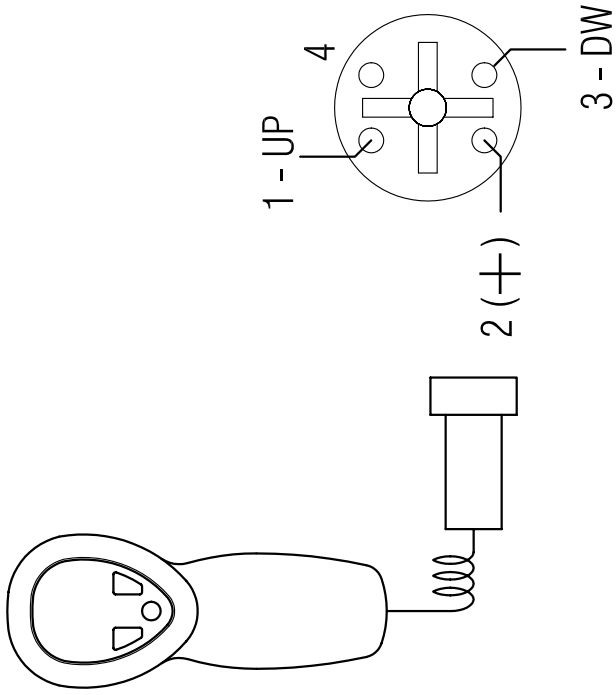
This warranty is ruled by the Italian law

For every controversy the Court of Milan is competent exclusively.

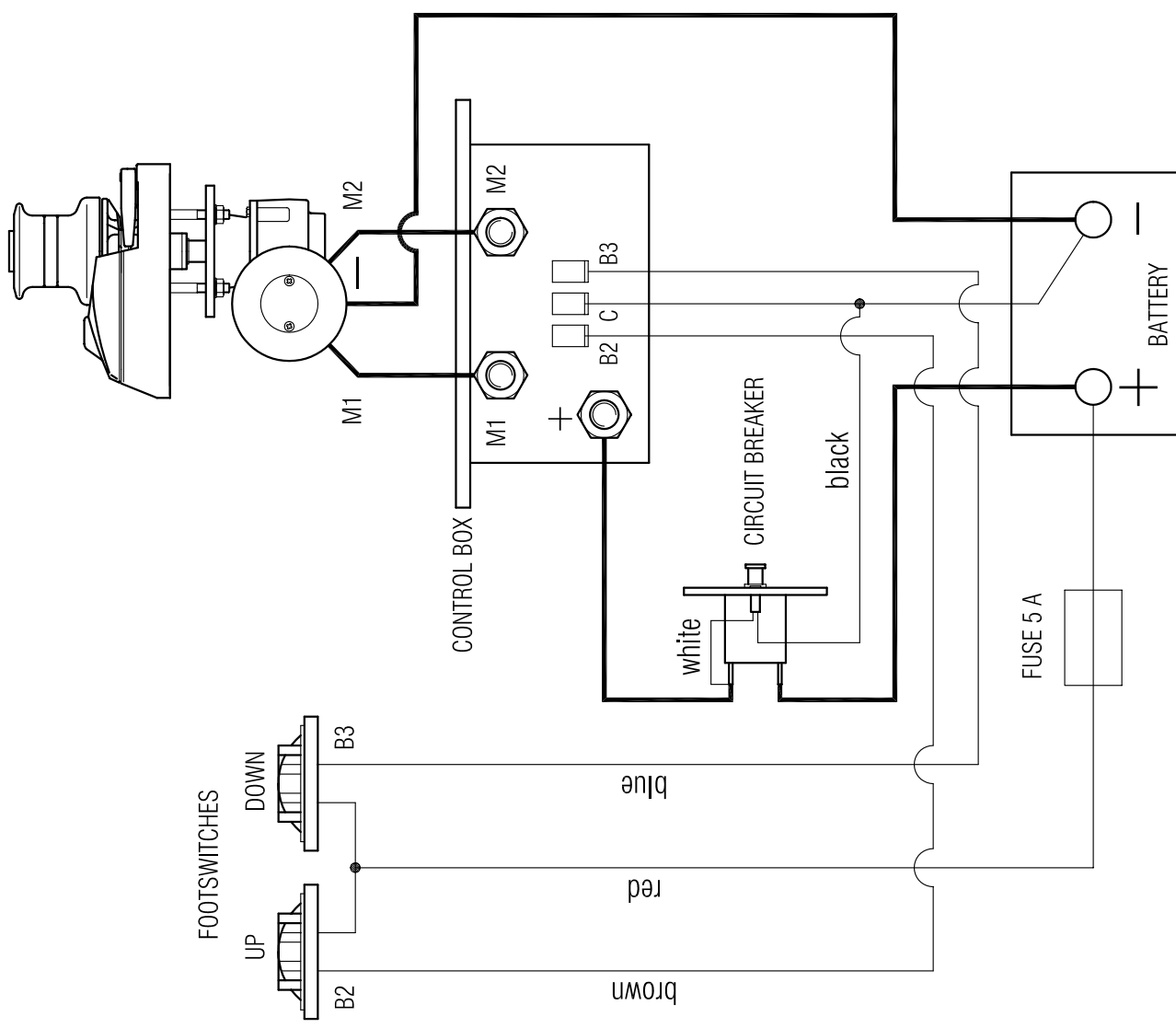
ROCKER SWITCH TYPE C



REMOTE CONTROL MIRA

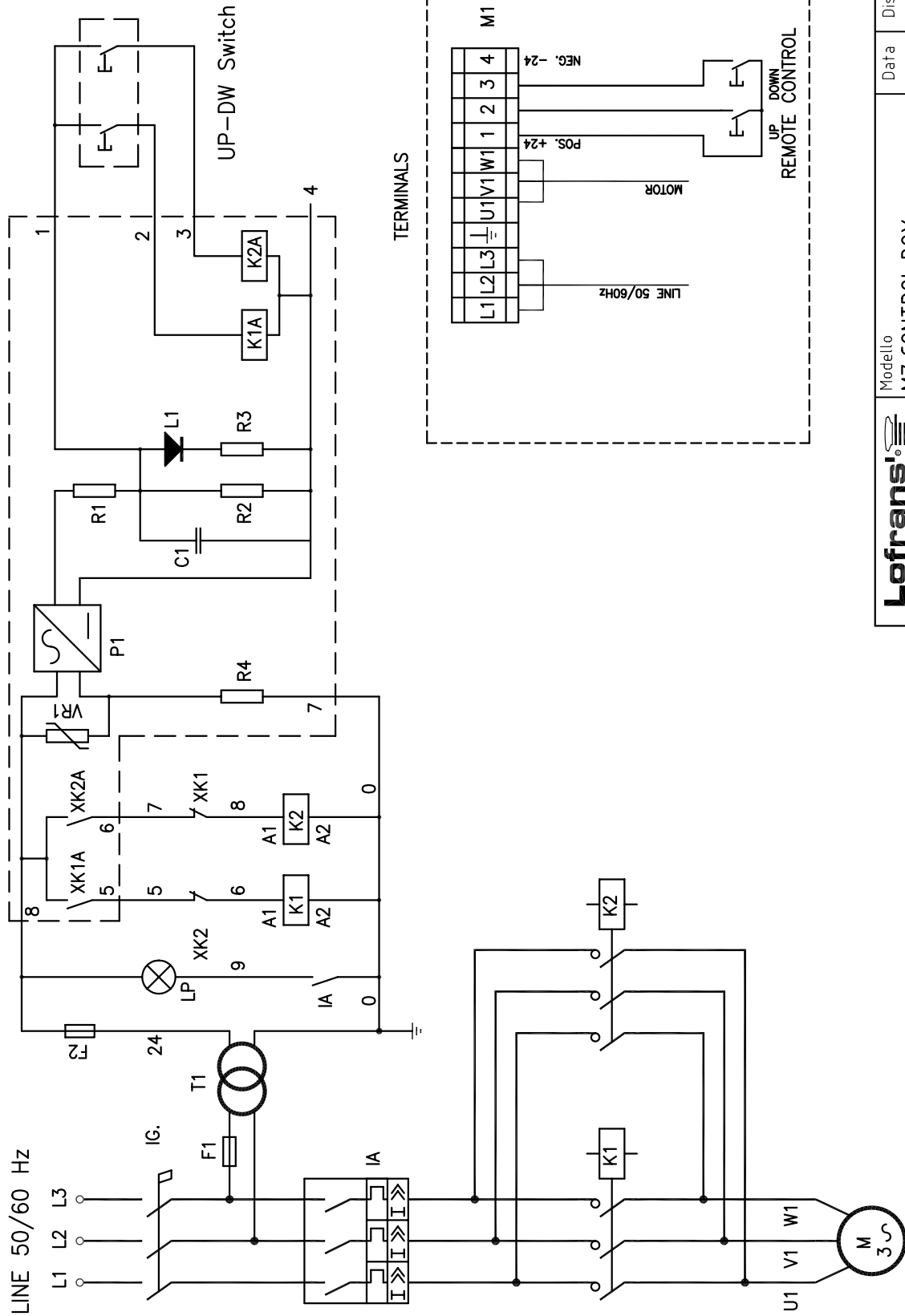



WIRING DIAGRAM - 3 TERMINALS ELECTRIC MOTOR



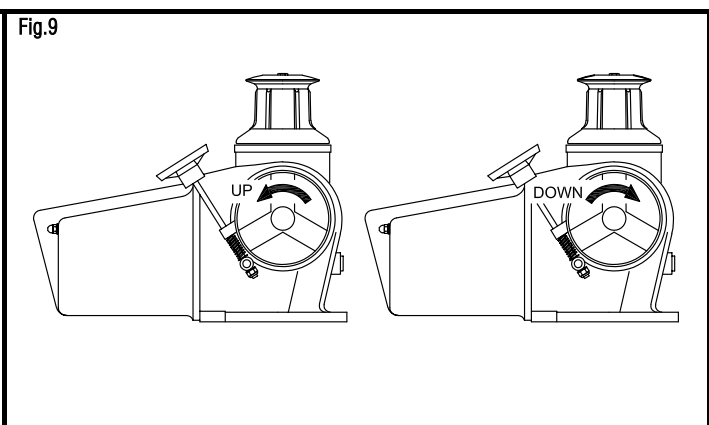
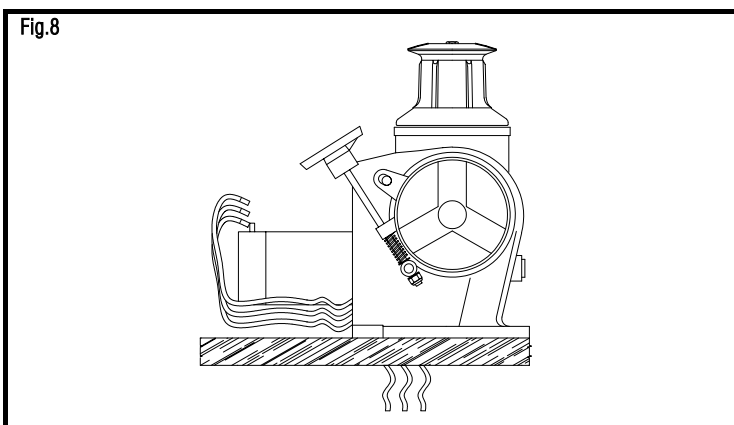
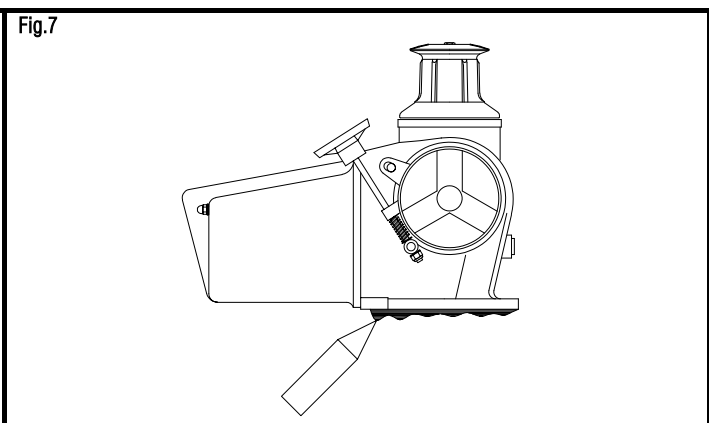
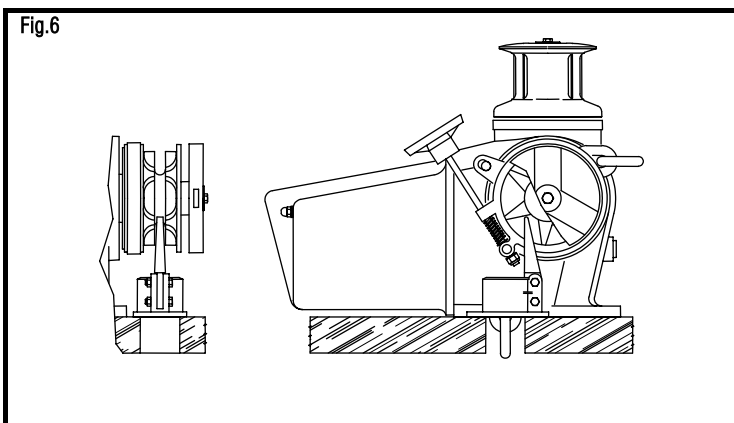
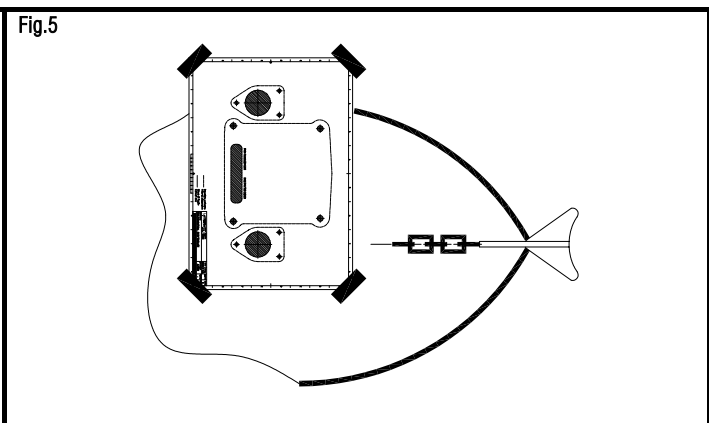
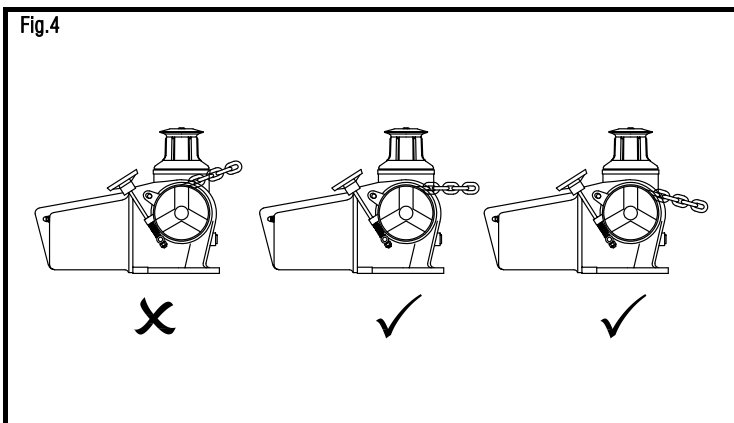
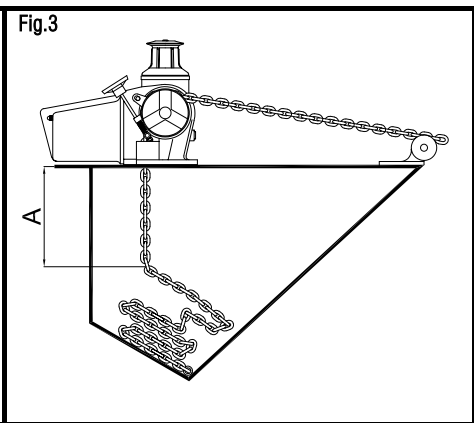
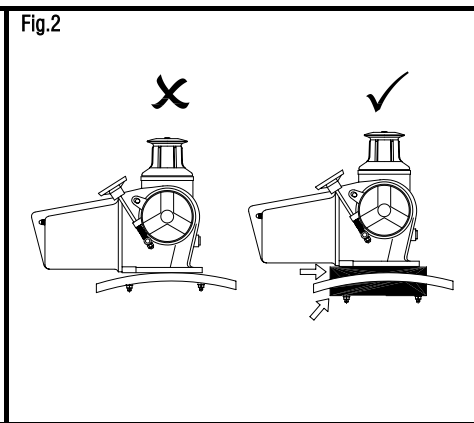
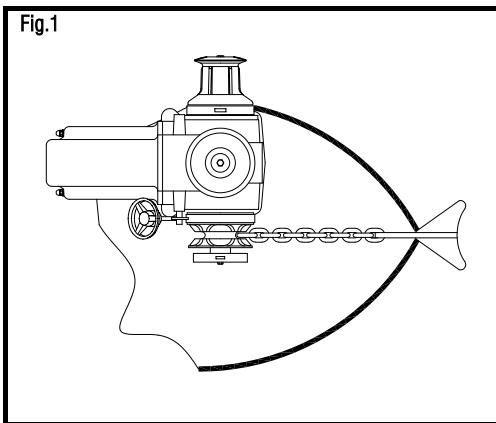
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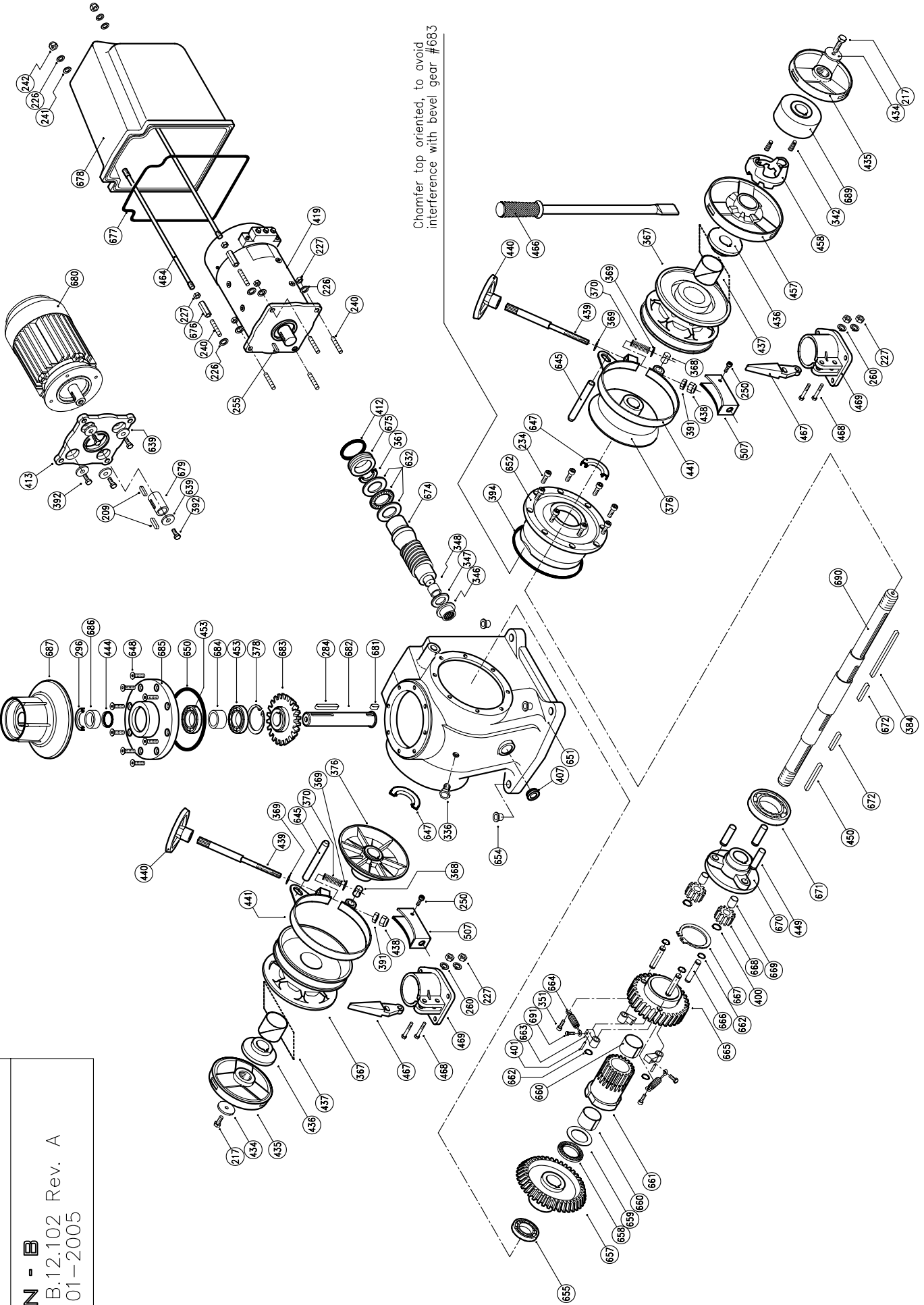
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 ARE NOT PERMITTED



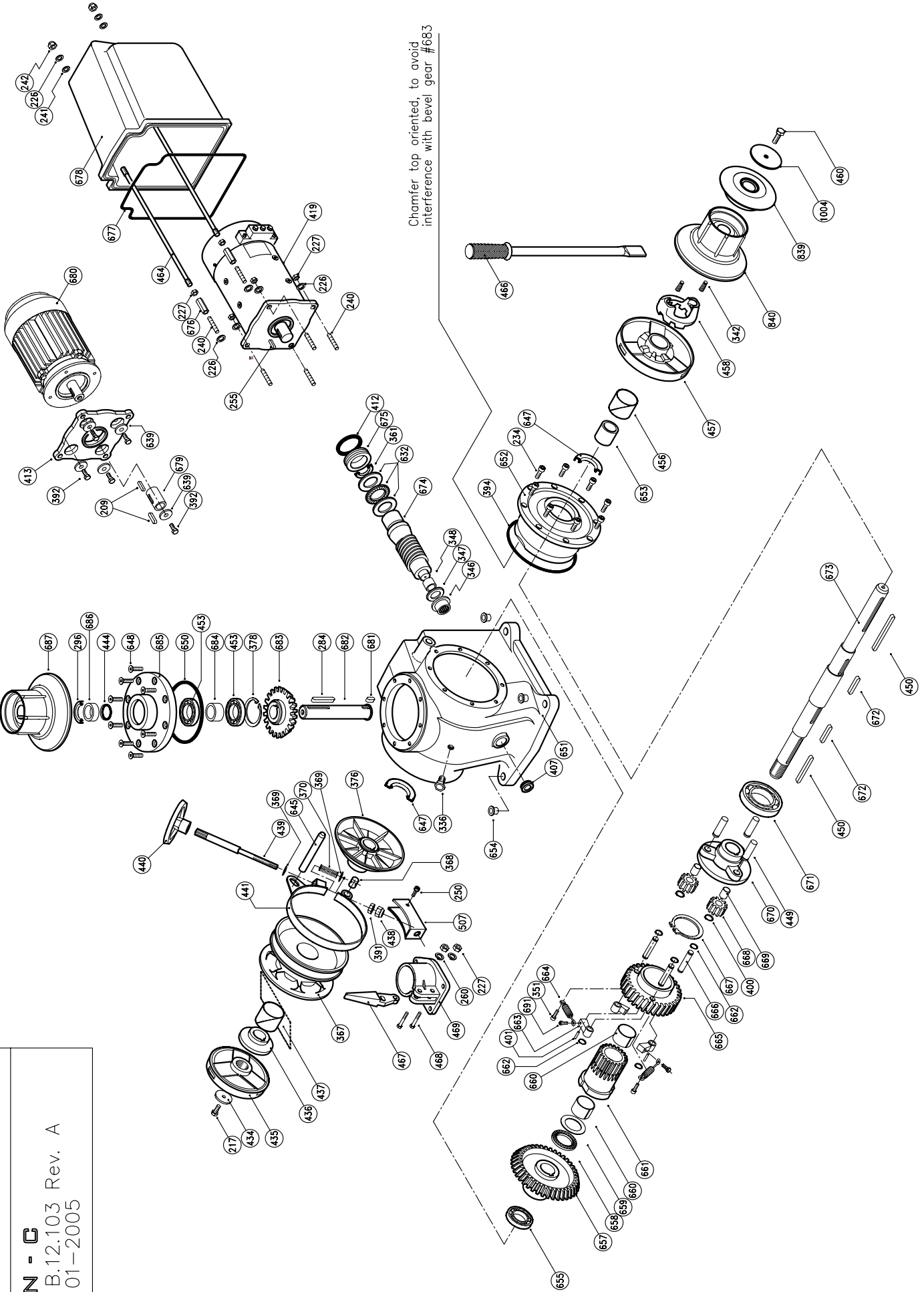
| | | | | | |
|---|----------------|------------|-----------|---------|-------|
|  Lofransi WINDLASSES | Modello | Data | Diseg. | Approv. | Scala |
| | MZ CONTROL BOX | 05.07.2005 | L.Rivolta | | 1:1 |
| DESCRIZIONE | Nr. disegno | Revisione | Formato | | |
| WIRING DIAGRAM FOR THREE PHASE A.C. MOTOR | E0012 | - | A3 | | |

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Chamfer top oriented, to avoid interference with bevel gear #683



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