

TR7 Tiger Chain Block

ORIGINAL INSTRUCTION GUIDE

- PLEASE PASS ONTO OPERATOR

Sticker here

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Operator Instruction Guide



- 1. It is important that this manual is read and fully understood and that all instructions are followed before using the chain bloc k.
- 2. Inspect the machine , chain and accessories for any damage or wear before use. Do not use the machine if it is not in good working order.
- 3. When a "DO NOT OPERATE" sign is placed on the hoist, do not operate the hoist until the sign has been removed by designated personnel.
- 4. The chain block must be o perated, inspected, maintain ed and repaired by a competently trained person in accordance with applicable safety codes and regulations.
- 5. Do not use the machine to lift, support or transport people in any way.
- 6. Do not hoist loads over or near people.
- 7. Never work under or near hoisted loads.
- 8. The machine is for manual operation only. Do not attempt to use a motorized mechanical device to operate the machine.
- 9. Do not attempt to overload the machine as this could cause damage to person or machine.
- 10. Do not use the chain block in explosive environments unless an A TEX version has been supplied.
- 11. It is the responsibility of the operator to exercise caution, use good practice, common sense and be familiar with proper rigging techniques.
- 12. Improper chain block use could result in death or serious injury.
- 13. The supplier takes no responsibility for any form of consequential loss or damage as the result of unauthorised repair or use of spare part other th an those issued on behalf of the manufacturer/supplier.

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For details of the full Tiger product range visit our website: www.tigerlifting.com

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Due to our policy of continual product development, dimensions, weights and specifications may change without prior notice.







1. Safety Information

Tiger Lifting products have been built in accordance with state of the art and generally accepted engineering standards. Nonetheless, incorrect handling when using the products may cause dangers to life and limb of the user or third parties and/or damage to the hoist or other property. The operating company is responsible for the proper and professional instruction of the operating personnel . The personnel responsible for operation, maintenance or repair of the product must read, understand and follow these operating instructions. These instructions are intended to make the user familiar with the product and enable them to use it to the full extent of its intended capabilities. This manual contains important Information to help you properly install, operate and maintain your chain block for maximum performance, economy and safety. Acting in accordance with these instructions helps to avoid danger, reduce s repair costs and downtime and increase s the reliability and lifetime of the product.

The operating instructions must always be available at the place where the product is operated. Apart from the operating instructions and the accident prevention act valid for the respective country and area where the product is used, statutory regulations and procedures along with the commonly accepted regulations for safe and professional work must also be adhered to. The indicated protective measures will only provide the necessary safety if the product is operated correctly and installed and/or maintained according to the instructions. The operating company must be committed to ensure safe and trouble-free operation of the product.

If the product's ability to do a job, or to do so safely is in question - DON'T TRY IT.

Definitions

! WARNING

Indicates a potentially hazardous situation that, if not avoided, could re sult in death or serious injury. It may also be used to alert against unsafe practices.

Competent Person

The competent person should have appropriate, practical and theoretical knowledge and experience of the Tiger product which will enable them to detect defects or weaknesses and to assess their importance in relation to the safety and continued use of the unit. Competent persons may be, for example, the maintenance engineers of the manufacturer or the supplier. However, the company may also assign performance of the inspection to its own appropriately trained specialist personnel.

Health and Safety at Work

All lifting equipment must be maintained and tested to meet relevant statutory regulations (e.g. PUWER/LOLER) when put to use. It is the responsibility of every company to ensure that their employees have been fully and properly trained in the safe operation of their equipment.

It is the owner's and user's responsibility to determine the suitability of a product for any particular use. It is recommended that all applicable industry, trade association, federal, state and local regulations are checked. Read all operating instructions and warnings before operation.

Equipment Labelling

The identification label/name plate details the product type, model, manufacturer, working load limit (WLI), serial number and the grade and size of the load chain. The CE marking indicates compliance with the essential health and safety requirements of the Machinery Directive 2006/42/EC. Other international standards that the unit conforms to may be shown.



An example of the TR7 label.

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Safety Instructions

! WARNING

Improper use of chain blocks could result in death or serious injury, to avoid these hazards: Always be familiar with chain block operating controls, procedures and warnings. Always allow only competently trained people to operate the hoist. Always operate a hoist only if you are physically fit. Always inspect the hoist before use. Always let the authorized personnel inspect the hoist periodically. Always make sure the chain block suspension hook is se curely attached to a suitable support. The selection and calculation of the appropriate supporting structure are the responsibility of the operating company. Always maintain a firm footing or be otherwise secured when operating the chain block . Always make sure that load slings or other approved sling attachments are properly sized and seated in the hook saddle. Only approved and certified lifting tackle must be used. Always make sure that the hook latch, is closed and not supporting any part of the load. Always make sure that the load is free to move and will clear all obstructions. Always take up slack chain carefully, check load balance, then lift a few centimetres and check to be sure the brake will hold the load and that attachments to the load are firmly seated. Always avoid any swinging of the load or load hook. Always protect load chain from weld spatter or other damaging contaminants. Always report any malfunction, unusual performance or damage of lifting equipment to the appropriate person promptly . Always inspect the chain block regularly, replace damaged or worn parts and keep appropriate records of maintenance. Always use genuine Tiger parts when repairing the chain block . Always apply lubricant to the load chain as recommended in this manual. Always make sure that you and others are clear of the load before lifting begins and stay clear of the suspended load. Always warn personnel of your intention to move a load in their area. The operator may start moving the load only after it has been attached correctly and all persons are clear of the danger zone. Always make sure that the chain length is long enough for the intended job. Always check that the hook latches are in proper working order before use (Refer to Chapter 4). Replace missing, damaged or broken hook latches. Always be sure that the hoist's rated capacity, which is found on the hoist's name plate /label and forged into the hooks, is in excess of the weight of the load. Always keep the load from hitting the chain. Always use two hoists which have rated capacities equal to or more than the load to be lifted whenever you must use two hoists to lift a load. This will provide adequate protection in the event that a sudden load shift or failure of one hoist occurs Always check the brake before use. Always check for loose or missing parts before use. Always lubricate the hoist regularly. Always pay attention to the load at all times when operating the hoist. Always secure a hoist and loads properly after use. Always consult the manufacturer or your dealer if you plan to use a hoist in a dusty, moist or greasy environment. Always consult the manufacturer or your dealer if you plan to use a hoist in an excessively corrosive environment. Always operate the hoist with manual power. Always stop using the hoist immediately in case of functional defects or abnormal operating noise. Always observe that the chain hangs straight (without twists) from chain block to lower hook. Always lift in a straight line from hook to hook. Always make sure the chain block is free to swivel on the upper hook. Always fit load chains which have been approved by the manufacturer.



! WARNING

Improper use of chain blocks could result in death or serious injury, to avoid these hazards:

- Never attempt to lift more than the rated load capacity (WLL) of the suspension and the supporting structure.
- Never allow your attention to be diverted from operating the chain block .
- Never attempt to operate this equipment under the influence of alcohol or drugs.
- Never wrap the load chain around the load and hook onto itself as a sling/choker chain.
- **Never** insert the point of the hook into a chain link.
- Never lift a load if binding prevents equal loading on the load chain.
- Never let the load swing or come into contact with other objects.
- Never use the chain block to lift, lower, support or transport people.
- Never lift a load over people.
- Never work near or under hoisted loads.
- Never use a damaged chain block or a chain block that is not working correctly.
- Never use a chain block which has been taken out of service until it has been properly repaired or replaced.
- Never use a hoist if the hook latch is missing or broken (if one is intended to be fitted).
- Never splice load or hand chain by using pins, bolts, screw drivers or similar between links.
- Never attempt to lengthen the load chain or repair damaged load chain.
- Never force a hook or chain into place by hammering.
- Never use the chain block with twisted, kinked, damaged, stretched or worn chain.
- Never swing a suspended load.
- Never support a load on the tip of the hook.
- Never suspend a load for an extended period of time.
- Never leave a suspended load unattended.
- Never run the load chain over a sharp edge ; use a sheave .
- Never weld or cut a load suspended by a hoist.
- Never use the hoist chain as a welding electrode or allow the chain or hook to be touched by a live welding electrode.
- Never allow the chain or hook to be used as an earth for welding.
- Never use the hoist with rusty chain.
- Never run the lower hook block into the chain block frame or bring the load in contact with the chain block. Case and/or chain guide damage may result.
- Never operate the chain block beyond limits of load chain travel or run the hook assembly into the frame of the block.
- Never use the chain stop as an operational limit device.
- Never operate a hoist if chain is jumping, if there is excessive noise, or if jamming, overloading or binding occurs.
- Never use a hoist without both load chain anchoring points correctly fitted.
- Never use a hoist without a name plate /label or with illegible name plate /label.
- Never use modified or deformed hooks (refer to Chapter 4).
- Never use a motor to operate a manual chain block.
- Never use a hoist near fire or where hot objects may touch it.
- Never use the hoist in temperatures below -40°C (-40°F) or above +50 °C (+122 °F).
- Never adjust or repair a chain block unless qualified to perform chain block maintenance.
- Never perform maintenance on the hoist while it is supporting a load
- Never use the unit for pulling free a jammed load
- Never allow loads to drop when the chain is in a slack condition (danger of chain breakage and shock loading).
- Never move the load into areas which are not visible to the operator.
- Never suspend more than one load lifting attachment in the hook of the hoist.
- Never reach into moving parts.
- Never throw a hoist or allow the unit to fall from height. Always place it properly on the ground.
- Never heat treat nor weld any part of the chain block, especially the load chain.





 Never
 shock load chain block , chain or hook.

 Never
 operate the chain block unless it is rigged to pull in a straight line from hook to hook.

 Never
 lift a load unless the chain is properly seated in the chain wheel(s).

 Never
 allow more than one operator to pull on a single hand chain at one time.

 Never
 allow sharp contact between two chain blocks or between the chain block and any obstructions.

 Never
 use the hoist for any unauthorised purpose that is beyond the operation instructions contained in this manual.

 Never
 use the chain hoist in acidic conditions.

2. General Information

The information in this manual is directed to the proper use, care and maintenance of the product and does not comprise a handbook on the broad subject of rigging. Rigging can be defined as the process of lifting and moving heavy loads using hoists and other mechanical equipment. Skill acquired through specialised experience and study is essential to safe rigging operations. Remember, proper rigging and lifting techniques are the responsibility of the operator.

Each Tiger chain block is built in accordance with the specifications contained herein and at the time of manufacture complies with our interpretation of applicable sections of the European s tandard BS EN 13157:2004-A1:2009, the Australian standard AS1418.2, the American standard ANSI/ASME B30. 16, and the South African standard SANS 1594. All items come with a test certificate or an EC Declaration of Conformity stating compliance with the essential health and safety requirements of the Machinery Directive 2006/42/EC. Tiger chain blocks are third party verified by SGS Certificate Number MDC 1302.

Unpacking

After opening the carton, the product should be carefully inspected for damage which may have occurred during shipment or handling. Check the chain block frame for dents or cracks and inspect the load chain for nicks and gouges. If shipping damage has occurred, contact your supplier.

! WARNING

Operating a unit with obvious external damage may cause the load to drop and that may result in personal injury and/or property damage. To avoid injury carefully check unit for external damage prior to installation.

Choose the Right Chain Block for the Job

The load capacity indicated on the unit is the maximum working load limit (WLL) that may be attached. Choose a chain block with the capacity for the job. Know the capacities of your loads, then match them. The application, environment it is to be used in, the size and type of load, the attachments to be used and the period of use must also be taken into consideration in selecting the right chain block for the job. Remember the chain block was designed to ease our burden, and carelessness not only endangers the operator, but in many cases, a valuable load.

Hoists are designed to provide a 4 to 1 safety factor. Supporting structures and load -attaching devices used in conjunction with this hoist must provide an adequate safety factor to handle the rated load, plus the weight of the hoist and attached equipment. This is the customer's resp onsibility. If in doubt, consult a registered structural engineer.





3. Function/Operation

! WARNING

If parts of the hoist are dropped, they can cause injury, death or property damage. Adequately support the hoist during installation.

Hand operated manual chain blocks are actuated by pulling on the hand chain that is fitted to a pocketed wheel that when rotated acts on the brake and either raises or lowers a load.

The hoist may be used at ambient temperatures betwe en -40°C (-40°F) and +50 °C (+122 °F). Consult the manufacturer in the case of extreme working conditions .

Note Before use at ambient temperatures of less than 0 °C, check the brake for freezing by lifting and lowering a small load 2 - 3 times. Before operating the hoist in special atmospheres (high humidity, salty, caustic, alkaline) or handling hazardous goods (e.g. molten compounds, radioactive materials), consult the manufacturer for advice.

Loads can be moved horizontally with the use of a trolley. Always transport the load in the horizontal direction slowly, carefully and close to the ground.

Operation

Face the hand chain wheel side of the hoist.

Lifting the load

Pulling the hand chain in clockwise direction will raise the load. **Note** Depending on the type of load picked up, the lifting height may be reduced for units fitted with a chain container.

Lowering the load

Pulling the hand chain in anticlockwise direction will lower the load. Note:The clicking sound of the pawl when a load is being raised indicates normal operation.

! WARNING

Stop operating in the lifting direction when the hook block contacts the hoist body, as noted by the sudden increase in the hand chain pull or the tipping of the hook block.

The operator must ensure that the hoist is suspended in a manner that makes it possible to operate the unit without exposing himself or other personnel to danger by the unit itself, the suspension or the load.

Stand clear of all loads and avoid moving load over the heads of other personnel. Warn personnel of your intention to move a load in their area. When the unit is not in use, position the suspension (e.g. bottom block, load hook) above normal head height, if possible.

4. Chain and Hooks

The hooks and load chains are made of special alloy-steels and are precisely heat -treated. Never weld or heat-treat them again.

Load Chain

The load chains are exceptionally long -wearing, but wear is unavoidable and certain conditions will cause wear and corrosion that will lessen the strength . Inspect the load chain for sufficient lubrication , mechanical damage and check for external defects, deformations, superficial cracks, wear and corrosion marks.

Round steel section chains must be replaced when the original nominal thickness 'd' on the chain I ink with the worst wear has been reduced by more than 10% or when the chain has elongated to a value greater than the discard levels shown in the tables below. There are two alternative tables for either measuring the chain over 21 links or measuring the chain over 7 pitches. Chain should be clean, free of twists and pulled taut before measuring.

Measuring the diameter of the chain

 $\begin{array}{l} d_m \ = \ \frac{d_1 + \, d_2}{2} \\ \mbox{Replace the chain if } d_m \quad \fbox{ 0.9 \times d, where d is the normal diameter of the chain wire . } \end{array}$

Measuring over 21 links

| | | Length of 21 links | | P P |
|-------------------|-----------------------------------|--|-------------------------------------|-------------------------------|
| Capacity (tonnes) | Diameter of Chain Wire dØ (mm) | Discard if Diameter of Chain Wire dØ (mm) ≤ | Dimensions of Chain (mm) (dØx P) | Discard if 21 links (mm) ≥ |
| 0.5/1.0 | 6.3 | 5.7 | 6.3 × 19 | 421.6 |
| 1.5/3.0t twin | 7.1 | 6.4 | 7.1 × 21 | 467.4 |
| 2.0/5.0 | 8.0 | 7.2 | 8 × 24 | 533.4 |

Measuring over 7 pitches

| L - 7 Link silch length | | | | | |
|-------------------------|-----------------------------------|---|--------------------------------------|---------------------|--|
| Capacity (tonnes) | Diameter of Chain Wire dØ (mm) | Discard if Diameter of Chain Wire dØ (mm)≦ | Dimensions of Chain (mm) (dØ x P) | Discard if L (mm) ≥ | |
| 0.5/1.0 | 6.3 | 5.7 | 6.3 × 19 | 137.0 | |
| 1.5/3.0t twin | 7.1 | 6.4 | 7.1 × 21 | 151.5 | |
| 2.0/5.0 | 8.0 | 7.2 | 8 × 24 | 173.5 | |

Do not knot the load chain or splice/connect it by using pins, bolts, screw drivers or similar. Do not repair load chains installed in the hoist. Protect load chain from weld spatter or other damaging contaminants.

Only fit load chains which have been approved by the manufacturer. Non -compliance with this specification will render the legal warranty or guarantee void with immediate effect. See the Chapter 7 Maintenance for more information on maintenance of the load chain.

Hand chain

Tiger hand chain is 5mm × 24mm and either galvanised hand chain.

Only fit hand chains which have been approved by the manufacturer. Non -compliance with this specification will render the legal warranty or guarantee void with immediate effect.

If the unit's hand chain has been supplied or subsequently fitted with a Tiger hand chain joiner link (HC-050-JL) make sure that it has been fitted correctly and is in good working order.

Make sure that the HC-050-JL has been fitted in the correct orientation as shown in figure 1 below. To achieve this, the HC-050-JL stainless steel rivet heads must be facing the front of the chain block and the joiner link must sit vertically within the hand wheel pocket as seen in figure 2 below:

Figure 1

Figure 2

Regularly inspect the HC -050-JL. In the event of any defects remove from service and refer the hoist to a competent person for thorough examination:

- Wear: make sure that the two stainless steel rivet heads are complete and have not been worn away or corroded, ensure the rivets are secure and tight a have solid hold of both plates.
- Damage: ensure the link has not been damaged and that both sides of the link join together to form a flat surface without any signs of distortion by being: bent, twisted, cracked, corroded or stretched.

If the rivets are to be replaced during inspection or maintenance, the dimensions are 2.4mm × 6.0mm and must conform to EN ISO 15983 and the material is stainless steel. These and the joiner links are available as a spare part from Tiger.

Hooks

Do not remove the safety latches from top and/ or bottom load hooks unless you are replacing them with new latches .

Never mark or hard stamp hooks or any other load bearing parts.

The hook opening will elongate with overloads and incorrect hooking. When the hook measurements have changed beyond the permissible discard limits shown in the t able in Chapter 7 Technical Data /Hooks, it is dangerously deformed and must be replaced immediately.

Dye penetrant, magnetic particle inspections (MPI) or other suitable crack detecting inspections should be performed on hooks at least once a year, if external conditions indicate there has been unusual usage.

TR7 products are fitted with the patent pending Tiger "EZ check" 3 point marking system. With this system a quick check that the A and B measurements are the same (as shown in the diagram below) will indicate if the hooks have stretched If $A \leq B$ the hook is fine; If A > B the hook needs to be replaced:

5. Maintenance

! WARNING

Never perform maintenance on the hoist while it is supporting a load.

Before performing maintenance attach a notice/tag to the block to indicate that it must not be used while maintenance is in progress.

Servicing and repairs should only be carried out by qualified, competent, and responsible people.

After performing any maintenance to the hoist, always perform a functional test before returning to service. After the replacement of components, a subsequent inspection by a competent person is obligatory!

Repair work may only be carried out by a specialist workshop that uses original Tiger spare parts.

Beforehandling lubricants, read the associated product health and safety datanformation sheet obtained from the lubricant supplier.

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- Store the unit in a clean and dry place.
- Protect the unit including all accessories against contamination, humidity and damage by means of a suitable cover.
- Protect against corrosion.
- Wipe off all dirt and water.
- A light oil film should be applied to the chains , hook pins and hook latch pins.
- Since the brake disks may freeze at temperature below 0°C, the unit should be stored with closed brake. Turn the hand chain wheel clockwise to this effect and hold the load fall at the same time.
- If the unit is to be used again after it has been taken out of service, it must first be inspected again by a competent person.

Disposal

When the product comes to the end of its lifecycle, after taking the unit out of service, recycle or dispose of the parts of the unit respecting local and national environmental regulations.

6. Manufacturer Testing and Verification

This product was manufactured under our single -unit control of quality and was passed with strict inspection in accordance with our inspection standards.

| Capacity (tonne) | WLL(kg) | Test Load (kg) |
|------------------|---------|----------------|
| 0.5 | 500 | 750 |
| 1 | 1000 | 1500 |
| 1.5 | 1500 | 2250 |
| 2 | 2000 | 3000 |
| 3 | 3000 | 4500 |
| 5 | 5000 | 7500 |

Declaration of Conformity

Products are tested in line with the requirements within applicable sections of the European standard BS EN 13157: 2004+A1:2009, the Australian standard AS1418.2, the American standard ANSI/ASME B30.16, and the South African standard SANS 1594. All items comply with the essential health and safety requirements of the Machinery Directive 2006/42/EC. Tiger chain blocks are third party verified by SGS Certificate Number MDC 1302.

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7. Technical Data

Chain blocks

| Product | Capacity | Effort | | | Dim | ensions (I | mm) | | | Load Ch | nain | Standard | Mass @ | Extra mass |
|---------|----------|--------|-----|----|-----|------------|-----|----|-----|----------|--------|----------|----------|------------|
| Code | (tonne) | (kg) | Α | В | D | E | F1 | F2 | G | Diameter | No. of | HOL (m) | standard | per metre |
| | | | | | | | | | | (mm) | falls | | HOL (kg) | HOL (kg) |
| CB-0050 | 0.5 | 21 | 93 | 66 | 52 | 78 | 24 | 38 | 305 | Ø 6.3 | 1 | 3 | 10.8 | 1.86 |
| CB-0100 | 1.0 | 25 | 93 | 66 | 63 | 87 | 28 | 45 | 340 | Ø 6.3 | 1 | 3 | 11.8 | 1.86 |
| CB-0150 | 1.5 | 32 | 98 | 73 | 78 | 102 | 34 | 51 | 385 | Ø 7.1 | 1 | 3 | 16.2 | 2.10 |
| CB-0200 | 2.0 | 34 | 101 | 79 | 87 | 113 | 35 | 53 | 420 | 8.0 | 1 | 3 | 20.0 | 2.39 |
| CB-0300 | 3.0 | 34 | 98 | 73 | 60 | 148 | 36 | 56 | 465 | 7.1 | 2 | 3 | 23.3 | 3.20 |
| CB-0500 | 5.0 | 37 | 101 | 79 | 122 | 209 | 49 | 70 | 575 | 8.0 | 3 | 3 | 37.8 | 5.17 |

0.5t – 2.0t

3.0t twin fall

ìger

Hooks

The following table shows the normal measurements for the Tiger hooks and the discard limits.

| Capacity (Tonnes) | Collar measurements (mm) | | | Hook thickness at point shown in diagram (mm) | | | Hook Openir | throat ig (mm) | "EZ Check" measurement (mm) | | | |
|----------------------|--------------------------|--------------|--------|--|--------|--------------|----------------|-------------------|-----------------------------------|--------------|--------|--------------|
| | | а | b | | c d | | e | | f | | | |
| | Normal | Discard ≥ | Normal | Discard ≤ | Normal | Discard ≤ | Normal | Discard ≤ | Normal | Discard ≥ | Normal | Discard ≥ |
| 0.5 | 8 | 8.5 | 13.5 | 12.8 | 19 | 18 | 15 | 14 | 29 | 32 | 47 | 50 |
| 1.0 | 8 | 8.5 | 13.5 | 12.8 | 23 | 21.5 | 17 | 16 | 34 | 37 | 52 | 55 |
| 1.5 | 10 | 10.5 | 15.5 | 14.7 | 26 | 24.2 | 21 | 19.5 | 39 | 43 | 59 | 63 |
| 2.0 | 10 | 10.5 | 17.5 | 16.6 | 30 | 28.2 | 22 | 20.5 | 42 | 47 | 64 | 69 |
| 3.0 | 12.5 | 13.5 | 20 | 19 | 37 | 35 | 32 | 30 | 42 | 47 | 76 | 81 |
| 5.0 | 19 | 20.5 | 30 | 28.5 | 43 | 40.5 | 36 | 34 | 58 | 63.5 | 86 | 91.5 |

Traditional Tiger Hooks

Tiger Hooks with new "EZ Check" 3 point marking system

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TR7 products are fitted with the patent pending Tiger "EZ check" 3 point marking system. With this system a quick check that the A and B measurements are the same (as shown in the diagram below) will indicate if the hooks have stretched If $A \leq B$ the hook is fine; If A > B the hook needs to be replaced:

In addition to the above checks, more than a 10° twist from the plane of hook is enough to warrant replacement of the hook.

8. Exploded diagrams

For 500kg, 1.0t, 1.5t, 2.0t, 3.0t twin fall, 5t capacity units:

| Part No. | Q'TY | Part Name | Part No. | Q'TY | Part Name | Part No. | Q'TY | Part Name |
|----------|------|----------------------------|----------|------|---------------------------|----------|------|---|
| C-1 | 1 | Label | C-13 | 1 | Load Chain Guide | C-25 | 2 | Pawl |
| C-2 | 6 | Nut | C-14 | 1 | Load Sheave | C-26 | 2 | Snap Ring for Pawl Pin |
| C-4 | 1 | Gear Cover | C-15 | 1 | Top Hook Assembly | C-27 | 1 | Ratchet Gear Cover |
| C-5 | 2 | Pinion(with Pinion Gear) | C-16 | 1 | Cutter Pin | C-28 | 1 | Handwheel |
| C-6 | 1 | Load Gear | C-17 | 1 | Chain-End-Fixing Pin | C-29 | 1 | Hand Chain |
| C-7 | 1 | Pinion Shaft | C-18 | 1 | Load Chain | C-30 | 1 | Washer for Pinion Shaft Nut |
| C-8 | 1 | Pinion Shaft Washer | C-19 | 1 | Load Chain Guide Pin | C-31 | 1 | Check Nut |
| C-9 | 1 | Gear - Side Plate Assembly | C-20 | 1 | Wheel-Side Plate Assembly | C-32 | 1 | Cutter Pin for Check Nut |
| C-10 | 1 | Chain Stripper | C-21 | 1 | Disc Hub | C-33 | 1 | Handwheel Cover |
| C-11 | 1 | Load Chain Anchoring | C-22 | 2 | Brake Disc | C-53 | 1 | Chain-End-Fixing Screw for 3t Hook Yoke |
| C-12 | 1 | Bottom Hook Assembly | C-23 | 1 | Ratchet Gear | C-55 | 1 | Chain-End-Fixing Screw for 5t Hook Yoke |
| C-12-1 | 1 | Bottom Hook Pin | C-24 | 2 | Pawl Spring | | | |

9. **Inspection Log**

| Test Certificate/DOCNumber | Model Number | Product Description |
|----------------------------|--------------|---------------------|
| | | |
| | | |

| Serial Number | |
|---------------|---------------|
| | Serial Number |

| Date | Comments | Signature |
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| Owner's | Notes |
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Owner's Notes

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