TCB/SS20

Tiger Chain Block and Tiger Corrosion Resistant Chain Block

ORIGINAL INSTRUCTION GUIDE

- PLEASE PASS ONTO OPERATOR

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CE

www.tigerlifting.com

Instruction Guide Tiger TCB-SS20 En 202007 v1.4

LEEA Full Member

Operator Instruction Guide

MUST READ BEFORE USE

1. It is important that this manual is read and fully understood and that all instructions are followed before using this Tiger product.
2. Inspect the machine 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 product, do not operate until the sign has been removed by designated personnel.
4. The product must be operated, inspected, maintained 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 use the product in explosive environments unless an ATEX version has been supplied.
10. It is the responsibility of the operator to exercise caution, use good practice, common sense and be familiar with proper rigging techniques.
11. Improper use could result in death or serious injury.
12. 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 than those issued on behalf of the manufacturer/supplier.
13. If an SS20 unit is to be used in multi-immersion applications then the separate instructions for multi-immersion use must also be followed.

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

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

1. Safety Information

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.

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.

Health and Safety at Work

All lifting equipment must be maintained and tested to meet relevant statutory 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.

Equipment Labelling

The identification label/name plate details the product type, model, manufacturer, working load limit (WLL), 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. ATEX models will be marked with the Ex logo.

An example of the TCB14 label.
Labels on earlier models may be different.

Safety Instructions

! WARNING

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

Always use the hoist within 2% of its rated load capacity (WLL) and its maximum rated load capacity (WLL)
Always allow only competently trained people to operate the hoist.
Always make sure the chain block suspension hook is securely attached to a suitable support.
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.
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 warn personnel of your intention to move a load in their area.
Always be sure that the hoist's rated capacity, 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.

Always check for loose or missing parts before use.
Always lubricate the hoist regularly (Refer to Chapter 7).
Always pay attention to the load at all times when operating the hoist.
Always secure a hoist and loads properly after use.
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.

! 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 attempt to lift below 2% of 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 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 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 leave a suspended load unattended.
Never weld or cut a load suspended by a hoist.
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
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 6).
Never use a hoist near fire or where hot objects may touch it.
Never use the hoist in temperatures below -40ºC (-40ºF) or above +80 ºC (+176 ºF).
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 reach into moving parts.
Never allow the unit to fall from height.
Never shock load chain block, chain or hook.
Never drag the chain, chain block or hook along the floor or across other objects.

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.

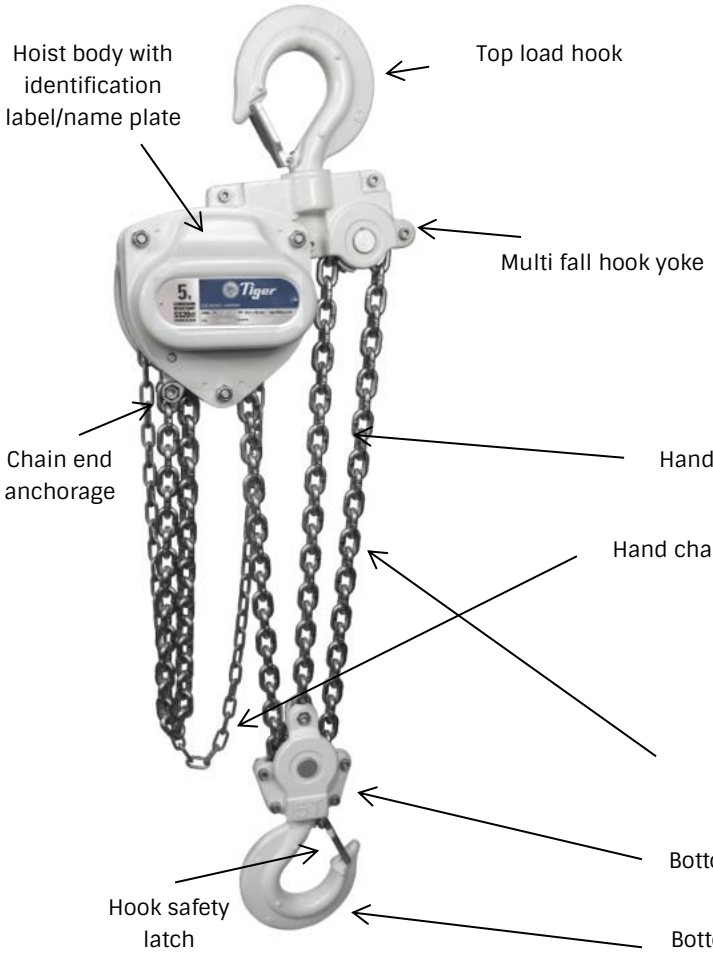
2. General Information

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.

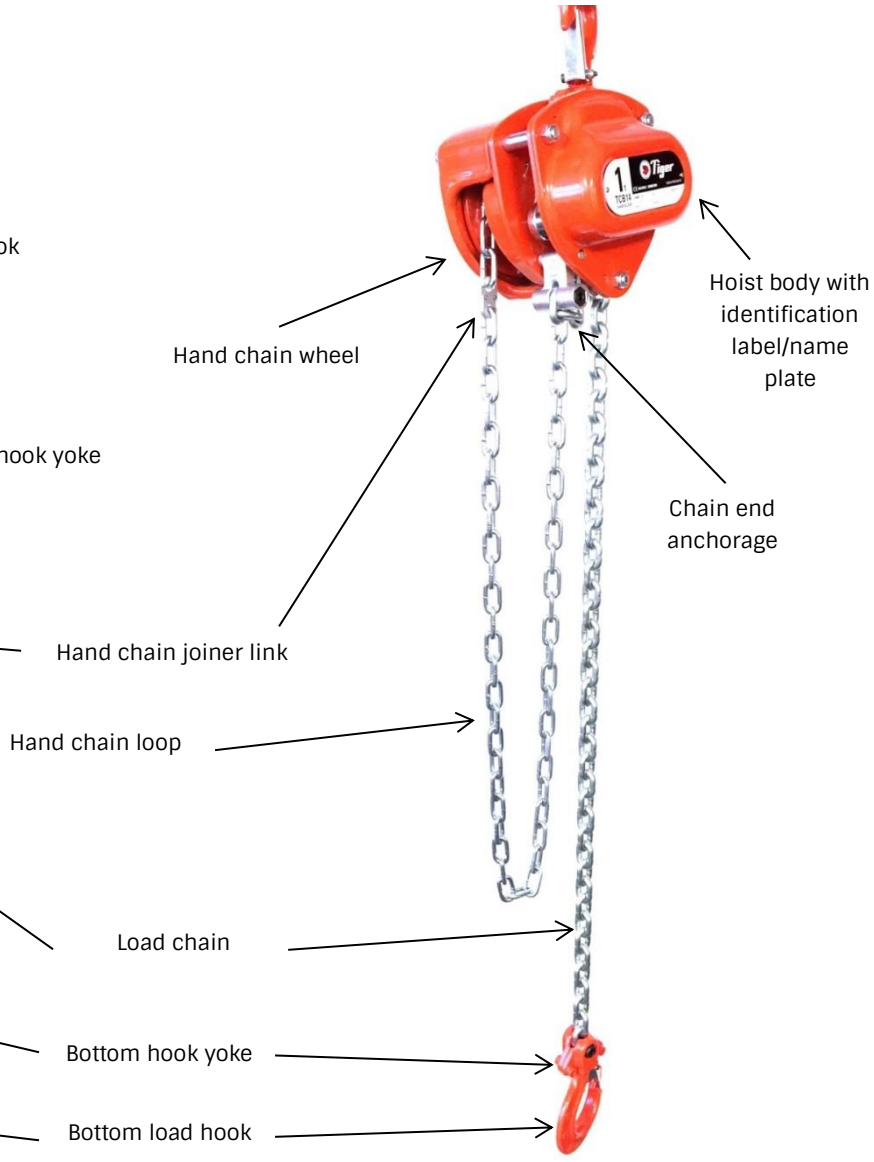
Choose the Right Chain Block for the Job

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.

Key parts of a hand chain block



Multi fall SS20 chain block



Single fall TCB chain block

3. Function/Operation

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 between -40ºC (-40ºF) and +80 ºC (+176 ºF). Consult the manufacturer in the case of extreme working conditions.

Note: Before use at ambient temperatures of less than 0ºC, 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.

Operation

Face the hand chain wheel side of the hoist.

Pulling the hand chain in clockwise direction will raise the load.
Pulling the hand chain in anticlockwise direction will lower the load.

On TCB hoists with two chain block heads, use two operators, one on each of the two hand chains. To keep the load chain centred in the block assemblies, operate the units simultaneously and at the same speed. An equal amount of unloaded chain must be maintained under each hoist body.

! 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.

When the unit is not in use, position the suspension (e.g. bottom block, load hook) above normal head height, if possible.

Do not allow load chain on hoists with two chain block heads to accumulate on one side (under one hoist body). Excessive loading to load chain anchor may occur resulting in a falling load which can cause death, injury or property damage.

Operating Principle of Overload Protected Chain Block

If the chain block is fitted with a slipping clutch overload mechanism then it is protected from overload.

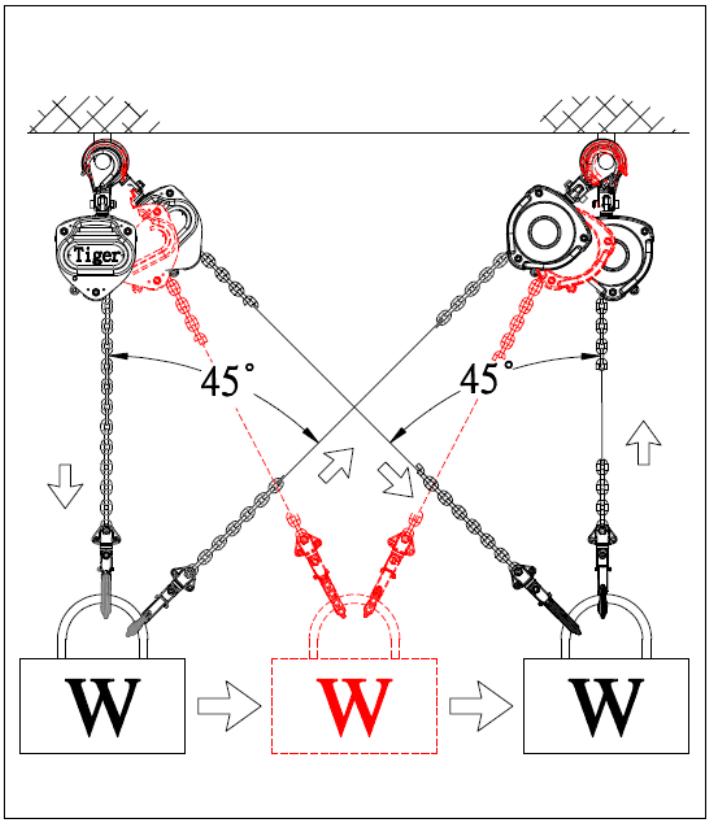
When the load limit is exceeded, the clutch in the chain wheel will slip, allowing the hand wheel to be rotated whilst not engaging the gear box. This prevents further lifting of the load, though lowering is still possible. Continual overloading of the unit must be avoided as the efficiency of the clutch may be impaired. The overload clutch is factory set and should only be adjusted or repaired by a Tiger authorised repairer.

! WARNING

Never disassemble or attempt to adjust the overload limiter assembly. Any attempt to do so will void the warranty.

4. Cross Hauling/Fleeting Operations

The TCB and SS20 ranges of chain blocks fitted with the patented protected twin pawl quad cam brake system can be safely used for “fleeting” and “cross-hauling” applications up to 45º. All such operations should be carried out in accordance with manufacturer’s instructions and fully risk assessed by a competent person.



As well as following any industry or country specific guidance on chain blocks used at an angle to the vertical, we recommend that before commencing an operation using multiple hoists or involving the transfer of a load from one hoist to another, the following is adhered to:

- All the units that are to be used in such an operation must be of the same make and model and have the same rated capacity.
- Attachment points are critical and the suspension point must have a rated capacity equal to or greater than that of the load to be lifted at the angle that the load will be a carried through.
- The attachment points must be designed and certified to work at angles away from the vertical.
- The attachment points must be the correct size to allow the hooks to attach correctly in the bowl of the hook and have enough clearance to allow the hook room to articulate.
- All fleeting operations should be risk assessed by a competent person.
- Load calculations and method statements should be produced.
- Proximity hazards should be accounted for.
- The load chain should be kept free of any twists and must enter the hoist body in a straight line over the load sheave.
- When taking up the load or beginning the transfer between hoists particular care should be taken to align the block body so the hand chain is hanging vertically from the block and that the hoist body, load chain and top and bottom hooks are all in line.
- The top and bottom hooks should be free to rotate within the hook yoke and cannot become trapped or jammed causing stress areas in both the hook and the body.

5. Inspection

According to national and international accident prevention and safety regulations (for example LOLER for the UK), hoisting equipment must be inspected:

- in accordance with the risk assessment of the operating company
- prior to initial operation
- before the unit is put into service for any subsequent use
- after substantial changes
- however, at least once per year, by a competent person.

The intervals of inspection must be determined by the individual application and are based upon the type of service to which the chain block will be subjected.

Prior to initial operation, before it is put into operation again and after substantial changes

Before the unit is put into operation, for the first time, for a subsequent use or after substantial repair or modification, it should be thoroughly examined by a competent person in compliance with applicable statutory regulations.

Typical pre-use inspection will consist of a visual inspection and a function check. These inspections are intended to establish that the hoist is in a safe condition, has been set up appropriately and is ready for operation, and that any defects or damage are detected and eliminated.

Inspect the chain block for operation warning notices and legibility. Deficiencies should be noted and brought to the attention of supervisors. Be sure defective chain blocks are tagged and taken out of service until repairs are made.

The following checks should be carried out before starting work:

Check the unit

- Inspect the unit for visual defects, e.g. deformations, damage, cracks, wear and corrosion marks.
- Check that the name plate/label showing the hoist capacity is attached and clearly legible.
- Check lubrication and lubricate if necessary.
- Check the functioning of the chain drive in unloaded condition. When facing the hand chain side of the hoist with no load, the brake is operating normally if the pawl "clicks" when the hand chain is wound in a clockwise direction and does not "click" when operated in the anti-clockwise direction.
- Check for loose or missing nuts and for missing split pins.

Check the brake function

Before starting work, always check operation of the brake. To do this, lift, pull or tension, then lower or release a load over a short distance with the unit. When the hand chain is released, the load must be held in any position. Repeat this at least twice before starting further work.

Inspect the supporting structure and attachment point

The attachment point for the hoist must be selected so that the supporting structure to which it is to be fitted has sufficient stability and to ensure that the expected forces can be safely absorbed. The unit must align freely also under load in order to avoid impermissible additional loading. Check that the hoist and the load are correctly attached.

Inspect the hand chain

If the unit's hand chain has been supplied with a Tiger Hand Chain Joiner link, make sure that it has been fitted correctly and is in good working order. See Chapter 6 Chain and Hooks for more information.

Inspect the load chain

Inspect the load chain for sufficient lubrication, mechanical damage and check for external defects, deformations, superficial cracks, wear, excessive rust and corrosion marks. Check for gouged, twisted and distorted links, and for deposits of foreign material which may be carried into the chain block mechanism. Do not operate chain blocks with twisted, kinked or damaged chain links. See Chapter 6 Chain and Hooks.

Inspection of the Load Chain Anchoring

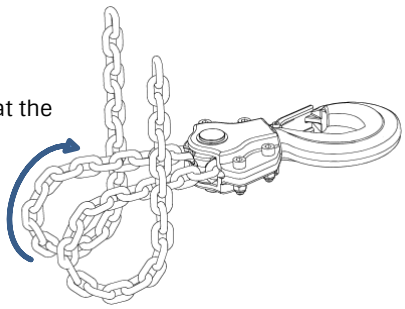
The load chain anchoring must always be fitted securely at both ends. There must be no wear or incorrect alignment.

Inspection of the top hook and bottom load hook

The top and load hooks must be checked for cracks, deformations, damage, wear and corrosion marks. The safety latch must be attached, move freely and be fully functioning. Hooks that are bent, worn or have openings which are enlarged beyond normal throat opening (Chapter 12 Technical Data/Hooks) should not be used. If the latch does not engage in the throat opening of the hook, the chain block should be taken out of service. Hooks that do not fulfil all requirements must be replaced immediately. See Chapter 6 Chain and Hooks and Chapter 12 Technical Data/Hooks for more information. Welding on hooks, e.g. to compensate for wear or damage is not permissible.

Inspection of chain reeving in the bottom block

All units with two or more chain falls must be inspected before initial operation to ensure that the load chain is not twisted or kinked. The chains of hoists with two or more falls may become twisted if the bottom block is rolled over “capsized” (i.e. bottom hook has looped through the multi fall chain). A twist in the load chain can damage the chain block and cause injury.



And finally, listen (while hoist operates) for unusual sounds which may indicate trouble.

Thorough Examination

The chain block must be subject to periodic thorough examination in compliance with national statutory regulations including on initial use or following installation.

Reports of thorough examination can be based on statutory maximum intervals or via a written examination scheme based on risks and hazards associated with use.

Initial inspection and recurring inspections must be documented. Chapter 13 contains the inspection log which must be maintained for each block. Any deficiencies noted are to be corrected before the chain block is returned to service.

Any parts that are deemed unserviceable are to be replaced with new parts before the unit is returned to service. It is very important that the unserviceable parts are destroyed to prevent possible future use as a repair item and are properly disposed of.

6. Chain and Hooks

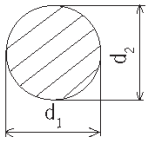
The hooks and load chains are made of special alloy-steels and are precisely heat-treated. Never weld or heat-treat them again.

Load Chain

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 link 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.

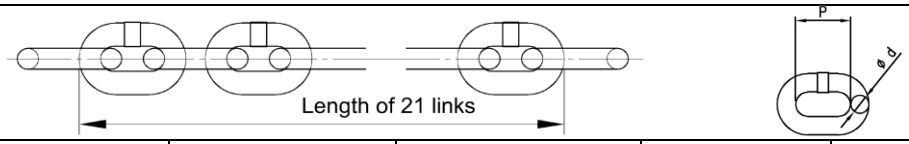
Measuring the diameter of the chain



$$d_m = \frac{d_1 + d_2}{2}$$

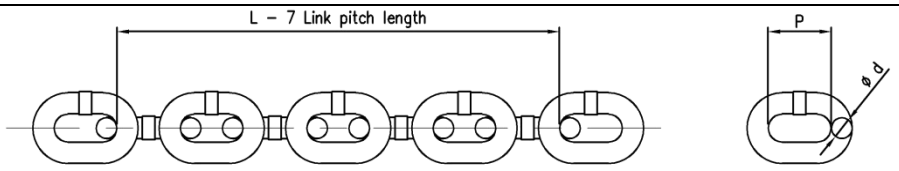
Replace the chain if $d_m \leq 0.9 \times d$, where d is the normal diameter of the chain wire.

Measuring over 21 links



Capacity (tonnes)	Diameter of Chain Wire Ød (mm)	Discard if Diameter of Chain Wire Ød (mm) ≤	Dimensions of Chain (Ød x P) (mm)	21 links length (mm)	Discard if 21 links (mm) ≥
0.25	4.0	3.6	4 × 12	260.0	267.5
0.5/1.0	6.3	5.7	6.3 × 19	411.6	421.6
1.5/2.0t lite/3.0t twin	7.1	6.4	7.1 × 21	455.2	467.4
2.0/5.0/8.0 four fall	8.0	7.2	8 × 24	520.0	533.4
3.0 Single/6.0/8.0 three fall/ 10.0/15.0/20.0/30.0	10.0	9.0	10 × 30	350.0	668.0

Measuring over 7 pitches



Capacity (tonnes)	Diameter of Chain Wire Ød (mm)	Discard if Diameter of Chain Wire Ød (mm) ≤	Dimensions of Chain (mm) (Ød x P)	Pitch length L (mm)	Discard if L (mm) ≥
0.25	4.0	3.6	4 × 12	84.0	86.5
0.5/1.0	6.3	5.7	6.3 × 19	133.0	137.0
1.5/2.0t lite/3.0t twin	7.1	6.4	7.1 × 21	147.0	151.5
2.0/5.0/8.0 four fall	8.0	7.2	8 × 24	168.0	173.5
3.0 Single/6.0/8.0 three fall/ 10.0/15.0/20.0/30.0	10.0	9.0	10 × 30	210.0	216.5

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.

Hand chain

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

Only fit hand chains which have been approved by the manufacturer.
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 figures below.

Figure 1

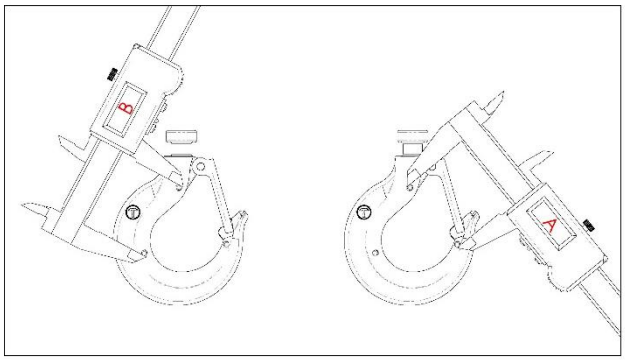
Figure 2

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:

Hooks

Do not remove the safety latches from top and/or bottom load hooks. Never mark or hard stamp hooks or any other load bearing parts.

When the hook measurements have changed beyond the permissible discard limits shown in the table in Chapter 12 Technical Data/Hooks, it is dangerously deformed and must be replaced immediately.
Newer models of the TCB 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≦B the hook is fine; If A>B the hook needs to be replaced.



7. Maintenance

! WARNING

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

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.

Before handling lubricants, read the associated product health and safety data information sheet obtained from the lubricant supplier.

Load Chain

To determine if load chain should be continued in service, check gauge lengths and condition. Chain worn beyond the maximum allowable gauge length (as shown in Chapter 6), nicked, gouged or twisted chain should be replaced before returning the chain block to service.

It is recommended that you lubricate load chain at least weekly, or more frequently than normal depending on severity of service. Apply new lubricant over existing layer. Lubricate chain more frequently in a corrosive environment.
A dry film lubricant, e.g. PTFE spray, should be used in environments where abrasives like sand, etc., occur. The service life of the load chain can be increased by careful lubrication to 20 - 30 times, compared with a chain that is not serviced.

When lubricating the chain, make sure the chain is in no-load condition so that the oil can reach the contact points (crown/saddle) of the chain links which are subject to wear.

Make sure that the load chain is lubricated over its entire length, also including the part of the chain in the housing of the hoist around the load sheave/wheel. Remove excess lubricant from the chain by wiping with a cloth.

Clean dirty chains with acid free or water based solvent or a similar cleaning agent, to remove rust or abrasive dust build up. Never heat the chain.

! WARNING

Make sure that no lubricant can penetrate the brake enclosure. This may result in failure of the brake.

Hand Chain

Hand Chain should be cleaned, inspected and checked for damage.

Hooks

Lubricate the hook shank, the head within the hook yoke and the hook latch pivot points with the same lubricant used on load chain.

Exterior Finish

Normally, the exterior surfaces can be cleaned by wiping with a cloth. Paint damage should be touched up in order to avoid corrosion. All joints and sliding surfaces should be slightly greased. In the case of heavy contamination, the unit must be cleaned using acid free or water based solvent or a similar cleaning agent.

Preventative Maintenance

In addition to the periodic inspection procedure, a preventative maintenance program should be established to prolong the useful life of the chain block and maintain its dependability and continued safe use. The program should include the periodic inspections with particular attention being paid to the lubrication of various components using the recommended lubricants.

! WARNING

Use only Tiger supplied replacement parts. Parts may look alike however Tiger parts are made of specific materials, processed to achieve specific properties or precisely machined to fit only Tiger hoists.

Any repairs to this lever hoist must be undertaken by a suitably qualified and competent person. Following any repairs, this lever hoist must be tested in line with relevant standards prior to its reintroduction to service.

8. Transport, Storage, Decommissioning and Disposal

Transporting the unit:

- Do not drop or throw the unit, always deposit it carefully.
- Hand chains and load chains must be transported in a way to avoid knotting and formation of loops.
- Use suitable transport means. These depend on the local conditions.

Storing or temporarily taking the unit out of service:

To ensure the continuing integrity of the unit you should store the unit in conditions that do not lead to damage or deterioration. Therefore:

- Always store the hoist unloaded.
- The hoist should be secured against unauthorised and unwarranted use.
- 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 0ºC, 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.

9. 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)
0.25	250	375
0.5	500	750
1	1000	1500
1.5	1500	2250
2	2000	3000
3	3000	4500
5	5000	7500
6	6000	9000
8	8000	12000
10	10000	15000
15	15000	22500
20	20000	25000
30	30000	37500
35	35000	43750

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. Chain blocks supplied with slipping clutch overload protection are compliant with the Norwegian Standard NORSOK R-002. 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.

10. Troubleshooting

Problem	Cause	Solution
Chain is jammed	Load is not being pulled in a vertical direction Pull is at an angle greater than 60º Load swivel has ceased operating Block is dirty, or hampered with foreign matter Fall of chain is tangled Block is overloaded Brake mechanism has jammed	Line load to be positioned vertically Reduce angle of pull a) Unload load and de-swivel b) Replace hook assembly Refer to maintenance and repair section of this manual Unravel and straighten chain Check the load chain for elongation and replace as required. Load block to recommended capacity only Return to supplier or authorised service centre for repair
Block Seized	Wear and tear Poor maintenance and inspection Poor storage and handling Block is overloaded	Replace block Refer to manual for maintenance and inspection details Always store unit in a dry and clean area Load block to rated capacity only
Slippage of load	Brake mechanism worn Block is overloaded	Inspect brake (Chapter 5 Inspection). Replace brake discs or repair brake as described in Chapter 7 Maintenance. Load block to rated capacity only
Block not braking	Brake mechanism worn	Return to supplier for repair and testing
Load chain catches or jams	Damaged load chain, pinion shaft, gears or sheaves. Load chain not installed properly (twisted, kinked or “capsized”).	Disassemble hoist, inspect and repair or replace damaged components. Remove load chain and re-install.
Hand chain catches or jams	Damaged hand chain, hand chain wheel, pinion shaft, gears, load chain, sheaves. Hand chain not installed properly (twisted or kinked).	Disassemble hoist, inspect and repair or replace damaged components. Remove hand chain and re-install.
Hook latch does not work.	Latch broken. Load hook bent or twisted.	Replace hook latch. Inspect load hook as described in Chapter 5 Inspection. Replace if necessary.

11. Product Warranty and Warnings

Definitions

'Customer' means the individual, firm, company or other party with whom the Company contracts;
'Company' means Tiger Lifting UK Limited or Woo Sing Industrial Co., Ltd;
'Contract' the contract between the Company and the Customer for the sale and purchase of this product;
'Defective Goods' goods, parts or materials, which by reason of fault or incorrect design or workmanship, are found to be defective or fail or are unable to perform in accordance with a Contract;

One Year Limited Warranty

The Company makes every effort to assure that its products meet high quality and durability standards and extends the following warranty to the Customer of new products manufactured by the Company:

1. The Company warrants that this product, when shipped, shall be free from defects in materials and workmanship under normal use and service and the Company shall, at its election, repair or replace free of charge any Defective Goods, provided that all claims for defects under this warranty shall be made in writing immediately upon discovery and, in any event, within one (1) year from the date of purchase of this product by the Customer and provided, further, that Defective Goods shall be kept for examination by the Company or its authorised agents or returned to the Company or an authorised service centre upon request by the Company.
2. The Company does not warrant components of products provided by other manufacturers. However to the extent possible, the Company will assign to the "Purchaser" applicable warranties of such other manufacturers.
3. Except for the repair or replacement mentioned in (1.) above, which is the Company's sole liability and Customer's exclusive remedy under this warranty, the Company shall not be responsible for any other claims arising out of the purchase and use of this product, regardless of whether the Customer's claims are based on breach of contract, tort (including negligence), breach of statutory duty, or otherwise, including claims for any loss of profit, goodwill or business opportunity or any indirect or consequential loss arising under or in connection with the Contract.
4. This one year limited warranty is conditional upon the installation, maintenance and use of this product pursuant to the product manuals prepared in accordance with content instructions by the Company. The warranty on this product does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents. This warranty does not apply if the product has been subjected to improper fittings, alignment or maintenance.
5. The Company shall not be responsible for any loss or damage caused by transportation, prolonged or improper storage or normal wear and tear of this product or for loss of operating time.
6. This warranty shall not apply to this product if it has been fitted with or repaired with parts, components or items not supplied or approved by the Company or which have been modified or altered.
7. The Company limits all implied warranties to the period specified above from the date the product was purchased by the Customer.
8. Except as stated herein, any implied warranties or merchantability and fitness are excluded.

If our inspection discloses a defect, the Company will repair, replace the product or refund the purchase price, if we cannot readily or quickly provide a repair or replacement and if you are willing to accept such refund. The Company will return repaired or replacement products at The Company's expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of Tiger Lifting's warranty, then the Customer must bear the cost of storing and retrieving the product.

! WARNING

The use of this product is beyond the control of Tiger Lifting. The warranty of this product is limited to the replacement cost of this product should it be found to be defective in material and/or workmanship. The warranty is void if the chain block is damaged, worn or used improperly. Normal wear and tear is not considered grounds for replacement.
The Tiger Lifting product warranty does not apply where there has been excessive overloading of the chain block.

Disclaimer

We believe that the information in this document, including technical information and any advice, is reliable although we give no guarantee as to its accuracy or completeness. The user of our products must determine if the product, either used alone or conjunction with other products, is suitable for their purpose and assumes all risk and liability in connection with those decisions. We have made every effort to make sure this document is accurate. The information contained in this document does not form part of any contract.

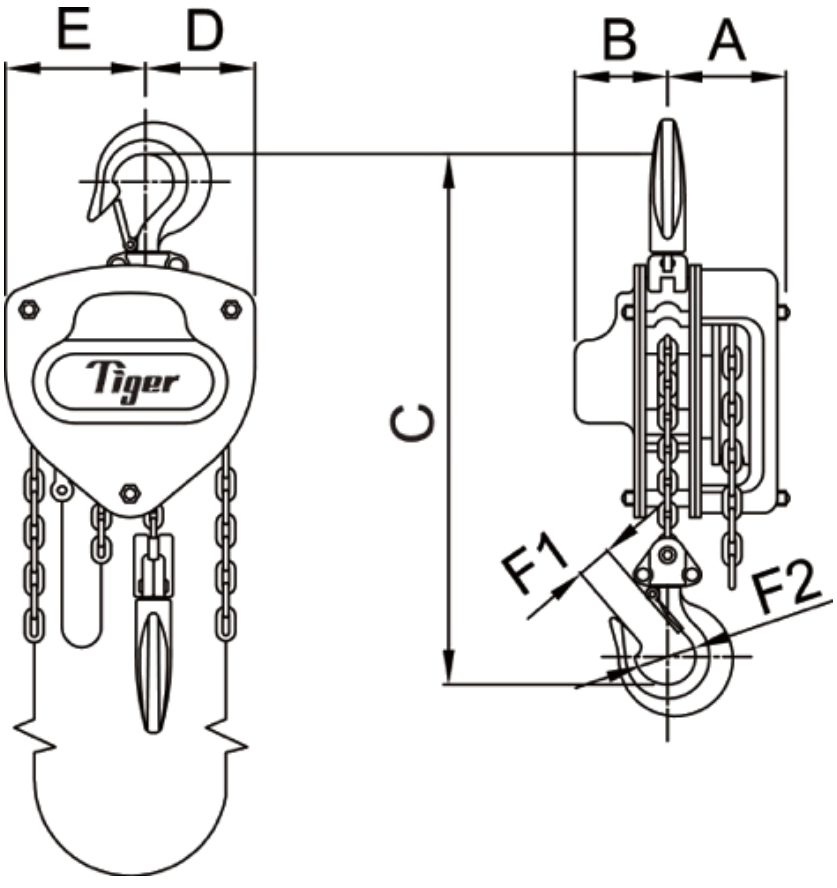
Please also refer to our terms and conditions which can be found at: **www.tigerlifting.com/terms-conditions/**

12. Technical Data

Chain blocks

Product Code	Capacity (tonne)	Effort (kg)	Dimensions (mm)							Load Chain		Standard HOL (m)	Mass @ standard HOL (kg)	Extra mass per metre HOL (kg)
			A	B	D	E	F1	F2	G	Diameter (mm)	No. of falls			
CB-0025	0.25	17	64	40	240	36	60	22	31	⌀4.0	1	3	3.8	0.5
CB-0050/SCB-0050	0.5	21	93	66	52	78	24	38	305	⌀6.3	1	3	10.8	1.86
CB-0100/SCB-0100	1.0	25	93	66	63	87	28	45	340	⌀6.3	1	3	11.8	1.86
CB-0150/SCB-0150	1.5	32	98	73	78	102	34	51	385	⌀7.1	1	3	16.2	2.10
CB-0200/SCB-0200	2.0	34	101	79	87	113	35	53	420	⌀8.0	1	3	20.0	2.39
CB-020L	2.0	42	98	73	78	102	35	53	399	⌀7.1	1	3	16.7	2.10
CB-0300/SCB-0300	3.0	38	109	84	98	157	36	56	550	⌀10.0	1	3	30.6	3.17
CB-030T	3.0	34	98	73	60	148	36	56	465	⌀7.1	2	3	23.3	3.20
CB-0500/SCB-0500	5.0	37	101	79	122	209	49	70	575	⌀8.0	3	3	37.8	5.17
CB-0600/SCB-0600	6.0	38	109	84	635	86	220	49	70	⌀10.0	2	3	45.5	5.3
CB-0800 (4 fall)	8.0	37	101	79	140	238	51	78	745	⌀8.0	4	3	64.0	6.56
CB-0800/SCB-0800 (3 fall)	8.0	34	109	84	610	153	263	51	78	⌀10.0	3	3	61.0	7.5
CB-1000/SCB-1000	10.0	40	109	84	153	263	54	87	660	⌀10.0	3	3	64.0	7.54
CB-1500/SCB-1500	15.0	41	109	84	225	378	59	81	840	⌀10.0	5	3	128.5	11.85
CB-2000/SCB-2000	20.0	43	161	90	148	360	81	110	1050	⌀10.0	6	3	178.7	14.20
CB-200T	20.0	43	161	161	383	383	81	110	1050	⌀10.0	6	3	210.4	15.20
CB-3000/SCB-3000	30.0	42	220	220	388	388	91	135	1200	⌀10.0	10	3	306.9	23.80
CB-3500	35.0	TBA	240	240	1200	390	390	91	135	⌀10.0	12	3	365.0	28.00

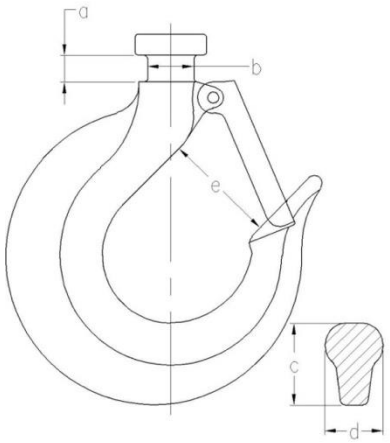
Tolerance for capacities below 10t ±1.0mm
Tolerance for capacities 10t and above ±1.5mm



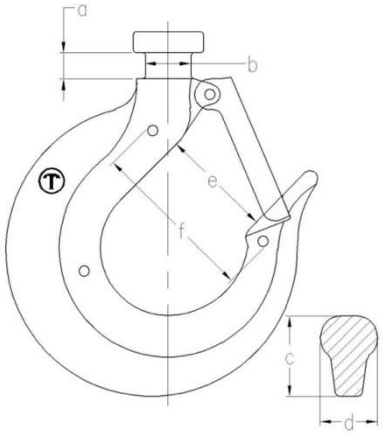
Hooks

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 throat Opening (mm)		"EZ Check" measurement (mm)	
	a		b		c		d		e		f	
	Normal	Discard ≥	Normal	Discard ≤	Normal	Discard ≤	Normal	Discard ≤	Normal	Discard ≥	Normal	Discard ≥
0.25	5	5.3	8	7.5	18	17	12	11.5	26	27.5	43	45
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	9	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
5.0/6.0	19	20.5	30	28.5	43	40.5	36	34	57	63.5	86	91.5
8.0	20.7	23	33	31.4	50	47	43	40.5	60	69	110	119
10.0	20	21.5	33	31.4	52	49	48	45	70	78	121	129
15.0	-	-	36	34.2	67	63	60	57	65	80	130	143
20.0	-	-	48	45.6	77	72.5	72	68	90	105	162	177
30.0/35.0	-	-	56	53.2	94	89	78	73.5	101	120	177	195

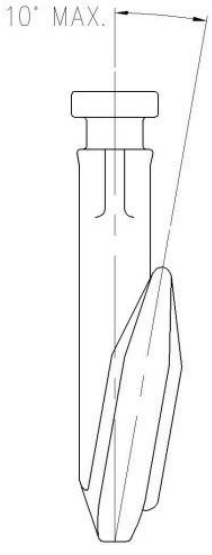


Traditional Tiger Hooks



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

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



13. Inspection Log

Test Certificate/DOC Number	Model Number	Product Description

Date introduced into service		Serial Number	

Date	Comments	Signature

Owner's Notes

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