



**William
Hackett**



WH-C4 QP CHAIN HOIST

USER MANUAL

A LONG LASTING
CONNECTION



Contents

This Manual is designed to provide you with clear, concise, and comprehensive information of (product/service/solution). For further assistance, please don't hesitate to contact us.

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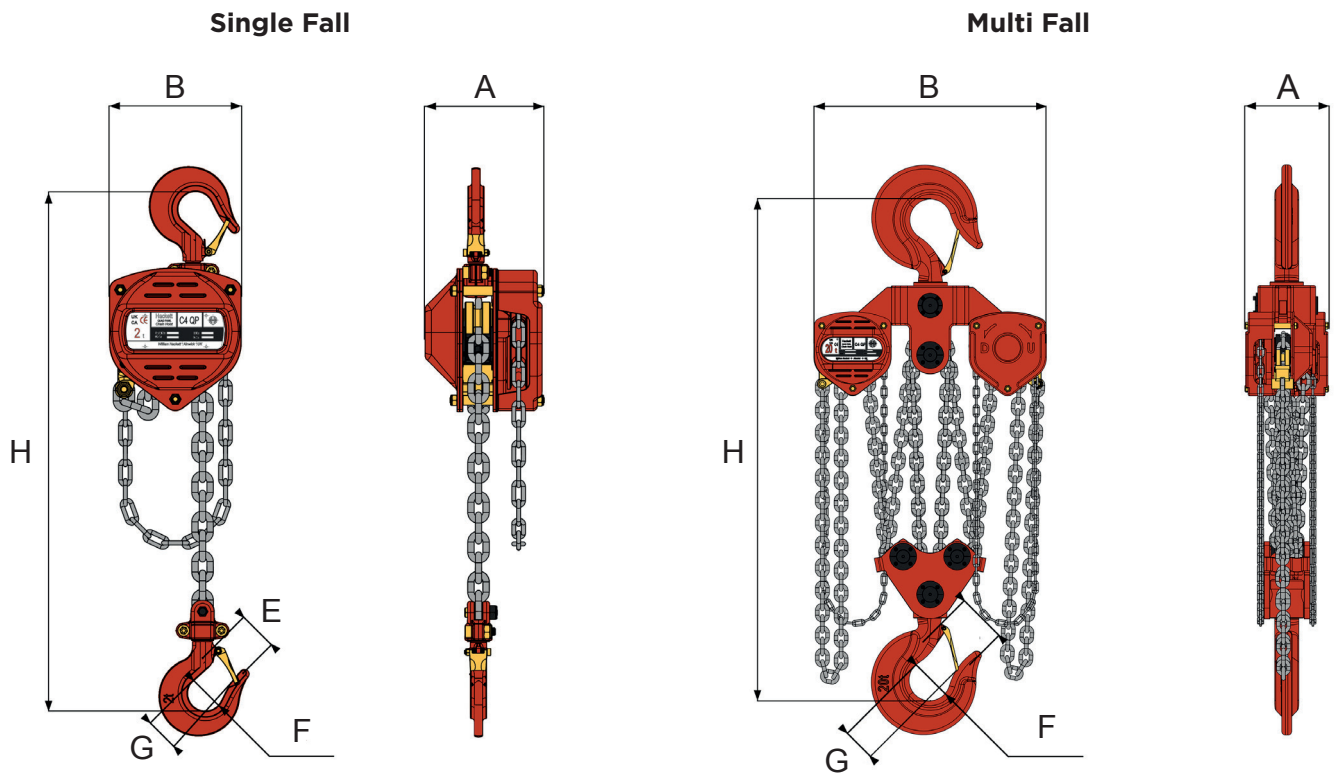


Table 1: Product specification, metric dimensions and WLL for William Hackett C4 QP chain hoists

PART CODE	WLL tonnes	NO. OF FALLS	LOAD CHAIN mm	HAND CHAIN mm	STD. LIFT m	A mm	B mm	E mm	F mm	G mm	H mm	MASS kg 3m HOL	EXTRA WEIGHT per m kg
025.053	0.50	1	6 x 18	5 x 25	3	134	155	49.0	40	25.5	350	11.1	1.7
025.103	1.00	1	6 x 18	5 x 25	3	134	155	49.0	40	25.5	350	11.1	1.7
025.163	1.60	1	8 x 24	5 x 25	3	151	173	51.5	40	30.0	390	16.8	2.2
025.203	2.00	1	8 x 24	5 x 25	3	157	185	54.5	44	30.0	410	16.8	2.2
025.323	3.20	2	8 x 24	5 x 25	3	157	235	61.0	48	37.5	495	24.2	3.6
025.503	5.00	2	10 x 30	5 x 25	3	180	262	85.0	60	43.0	635	38.4	5.2
025.753	7.50	3	10 x 30	5 x 25	3	180	373	89.0	83	53.0	775	58.2	7.6
025/1003	10.00	4	10 x 30	5 x 25	3	180	365	89.0	83	53.0	815	68.9	9.5
025/1503	15.00	6	10 x 30	5 x 25	3	210	406	-	108	80.0	1000	116.7	13.9
025/2003	20.00	8	10 x 30	5 x 25	3	225	550	-	108	80.0	1100	149.5	19.0
025/3003	30.00	12	10 x 30	5 x 25	3	460	800	-	140	112.0*	1550	515.0	27.7
025/5003	50.00	20	10 x 30	5 x 25	3	580	840	-	180	140.0*	2000	750.0	45.8

*Measurement without latch

Hoist Selection

William Hackett C4 QP chain hoists are designed for use in marine environments and are also suitable for use in topside and onshore lifting applications.

William Hackett C4 QP chain hoists are designed for use in fleeting applications for both lifting or pulling.

Careful consideration should be given to the mass of the load being lifted and any dynamic factors that may be likely to affect the load on the hoist. Select the hoist capacity equal to or greater than the load. Ideally lever hoists should not be used to lift loads below 10% of their rated WLL limit.

It is not intended that the recommendations in this manual take precedence over existing plant safety rules and regulations or OSHA regulations. In the event that conflict exists between a rule set forth in this publication and a similar rule already set by an individual company, the more stringent of the two should take precedence.

A thorough study of the information in this manual should provide a better understanding of safe operating procedures and afford a greater margin of safety for people and equipment.

In accordance with statutory requirements (e.g. The Lifting Operations and Lifting Equipment Regulations 1998), all lifts using chain block assemblies should be planned by a competent person; require risk assessment and the production of a task method statement; and be subject to execution by suitably trained operatives under the supervision of a responsible person. The specification of the lever hoist assemblies required to achieve a safe lifting operation must be determined by a competent person.

William Hackett C4 QP chain hoists are assembled, chained and tested to the height of lift specified by the end user. Careful consideration should be given to the headroom required to lift the load and the position of the operator before specifying the length of load chain and the hoist model.

William Hackett C4 manual hoists are suitable and approved for fleeting and cross hauling applications up to an angle of 60° from the vertical without deration.

William Hackett C4 QP chain hoists can be used within an operating temperature range of -20°C to +120°C.

The configuration of lever hoist assemblies are demonstrated on page 4, and are in accordance with the product specification, dimensions and working load limit (WLL) recorded in Table 1 (also on page 4).

Pre-use checks

Before the chain hoist is issued from the designated storage location a competent person must ensure that the appropriate certification is in place for the hoist.

Safe use instructions should be made available.

Possession of the relevant certification does not absolve the user from their responsibility to carry out pre-use inspections.

Conducting thorough and consistent checks on a chain hoist immediately prior to use will help identify problems due to accidental damage, internal corrosion, brake contamination or inappropriate storage.

Points to check before each period of use are:

- If necessary, the hoist should be cleaned before inspection.
- Name Plate – details clear and visible.
- Hook latches in good working order
- Is the load chain worn or damaged. Attention should be given to the wear which occurs on the bearing surfaces inside the links and to damage in the form of bent, notched, stretched, or excessively corroded links and the chain should move freely.
- Signs of hooks opening out increase in throat opening or any other form of distortion in the hooks or suspension fittings.
- Top and bottom hooks are free to rotate with no load applied.
- With no load applied turning the hand chain clockwise should produce a clear and positive clicking sound as the brake ratchet activates.
- On multiple fall hoists check that all chain sheaves are free to rotate whilst no load is applied.
- Check all fixings are in place and in good condition, split pins or nyloc nuts.
- Signs of damage to the hoist slack end chain anchor.
- General damage to the hoist body, this can be an indicator of neglect throughout the hoist.
- The load chain wheel should be checked for damage or debris.
- Chain guides and strippers should be free of debris and in good condition.

If any of these points are not satisfied the hoist MUST NOT be used.

Hoist Attachment / Mounting

Check the correct engagement of the top and bottom hooks. The hooks should be free to articulate fully when engaged with the load attachment points without overcrowding or point loading that is detrimental to the hook in any way.

Ensure that the suspension structure has sufficient load bearing strength and capacity to support the load being lifted.

If more than one hoist is to be used in a fleet arrangement, load attachment equipment should be chosen that allows for the angles of the lift.

Do not use the load chain of the chain hoist as a chain sling. The chain hoist is a lifting appliance and suitable lifting accessories should be incorporated into the lift plan to facilitate attachment to the load.

Make sure that the load chain is free from any twists or knotting. In the case of multi-fall chain hoists ensure that the bottom hook has not been capsized causing chain twist.

Safe Use Information

Do not attempt lifting operations unless you understand the use of the equipment, the lifting and slinging procedures and you have been suitably trained.

William Hackett C4 QP chain hoists are not designed for lifting people and should not be used for that purpose.

Use appropriate personal protective equipment (PPE).

Always inspect the chain hoist prior to use, and if any damage is apparent the block should be quarantined for inspection by a competent person. Labels should clearly show the identification and other data for the hoist.

Check the correct engagement of the top and bottom hooks.

Ensure that the suspension structure has sufficient load bearing strength and capacity to support the load.

Do not use the chain hoist as a chain sling; it is a lifting appliance and suitable lifting accessories should be incorporated into the lift plan to facilitate a safe lifting operation.

Establish a clearly defined zone around the area of the lifting operation.

Always stand aside from the load when operating the hoist and ensure that no one enters the lift zone unintentionally during the lifting operation.

Ensure that the load and hand chains are not twisted, particular care should be taken when using multi-fall blocks.

During the lift the load and hand chains should be straight and should not contact any angles or edges.

Take the load steadily and avoid shock loads.

Do not expose chain hoist assemblies, chain slings and components to chemicals or corrosive solutions (whether immersed in such solutions or used in atmospheres in which fumes are present), particularly acidic or strongly alkaline environments without consulting the supplier or manufacturer.

Do not leave suspended loads unattended. In an emergency cordon off the working area and establish safe exclusion zones.

Never return a damaged chain hoist to stores; it should be reported to a competent person.

Storage and control procedures

The equipment should ideally be stored in a purpose designed facility where it can be kept secure from unauthorised use. A responsible person should control the issue and receipt of all lifting appliances and accessories, and a system to manage statutory inspections should be in place.

Storage would normally be on suitable racks within a container in a manner that prevents accidental mechanical damage and where the load chains are clear from the ground.

The load chain should be dried and wrapped around the hoist, not left on the floor.

During transport to the worksite and whilst in store at the worksite, the equipment should be protected from exposure to any conditions which may affect its ability to operate safely. It should be protected from exposure to:

- water/sea water
- temperatures higher than can be comfortably tolerated by the hand
- temperatures below freezing point
- solvents
- corrosive chemicals or fumes
- grit, sand and wind-blown dust.

Any defects should be reported to the responsible person and damaged hoists should be quarantined.

Duty holders and actual users of lifting equipment, including hoists and associated components, can obtain more detailed information and guidance on safe use and compliance with statutory requirements from the following publications;

HSE Publication L22 (2014) Safe Use of Work Equipment.

HSE Publication L113 (2014) Safe Use of Lifting Equipment.

HSE Publication INDG422 (2008) Thorough Examination of Lifting Equipment.

HSE Publication L23 (2004) Manual Handling.

HSE Publication L25 (2005) Personal Protective Equipment at Work.

Practical considerations

As with any item of lifting equipment, the chain hoist will be specified for a maximum working load limit. This should not be exceeded during any lifting operation. It is important, therefore, when planning a lifting operation that the load to be lifted on the chain hoist is known or has been accurately estimated with an adequate allowance for safety. The possible effects of additional loading, such as friction, should be included when the chain hoist is being selected for the lift.

The design of chain hoists is such that a brake mechanism is used to suspend the load, but also requires a load to operate. When planning a lifting operation using a chain hoist or selecting a chain hoist for a lift, the light load limitation of the braking mechanism should be recognised. The William Hackett C4 QP chain hoist is tested and certified to have a light load capability at 2% of the chain hoist rated capacity.

A chain hoist should be loaded and unloaded using the hand chain. When a load is removed from a chain hoist other than by the use of the hand chain (e.g. by transfer of a load to a surface crane) the brake mechanism will remain locked together. Subsequent loading of the hoist (for example, by the transferring of a load on to the hoist from a surface crane) will result in the load being applied to a locked brake mechanism - something manufacturers regard as bad practice, potentially resulting in unexpected slippage as the hoist is then

operated. If a load is removed from a chain hoist, the chain hoist should be operated to unlock the brake and confirm the hoist is fully functional before the chain hoist is used for another lifting operation.

Practical Considerations in Spark Sensitive Environments

William Hackett ATEX range is specially designed for use in spark sensitive environments. ATEX hoists are clearly marked and are further identifiable by copper coated hooks.

Standard pre-use, storage, control and safe use instructions apply to these hoists.

Spare parts inspection category

SPECIAL INSPECTION - Type 1			Corrosion Protected / Stainless Steel / Copper Components (Do Not Shotblast)
STANDARD INSPECTION - Type 2			Non-Corrosion Protected or Painted Components
PART CODE	QTY.	DESCRIPTION	INSPECTION TYPE (1 OR 2) C4 QP
C4.QP.01	1	Top Hook Assembly	2
C4.QP.02	2	Latch Kit	2
C4.QP.03	1	Top Hook Pin	2
C4.QP.04	1	Bottom Hook Assembly	2
C4.QP.05	1	Bottom Hook Chain Fixing Pin	2
C4.QP.07	6	Nut	2
C4.QP.08	4	Label Rivets	N/A
C4.QP.09	1	Label	2
C4.QP.10	1	Gear Cover Assembly	2
C4.QP.11	1	Pinion Shaft	2
C4.QP.12	2	Pinion Gear (pair)	2
C4.QP.13	1	Snap Ring	2
C4.QP.14	1	Load Gear	2
C4.QP.15	1	Gear Side Plate	2
C4.QP.16	1	Stripper	2
C4.QP.17	2	Guide Roller	2
C4.QP.18	2	Caged Roller Bearings	2
C4.QP.19	1	Load Sheave	2
C4.QP.20N	1	Wheel Side Plate Assembly	2
C4.QP.21	1	Disc Hub	2
C4.QP.22	2	Friction Disc (pair)	2
C4.QP.23N	1	Ratchet Gear	2
C4.QP.24N	2	Pawl Spring	1
C4.QP.25AN	2	Primary Pawl	2
C4.QP.25BN	2	Secondary Pawl	2
C4.QP.26	2	Snap Ring	N/A
C4.QP.27N	1	Brake Cover	2
C4.QP.28	1	Hand Chain	2
C4.QP.29	1	Hand Chain Wheel	2
C4.QP.29L	1	Overload Limiter Assembly	2
C4.QP.30	1	Pinion Nut	2
C4.QP.31	1	Cotter Pin	N/A
C4.QP.32	1	Hand Wheel Cover	2
C4.QP.33	1	Chain Anchor Plate	2
C4.QP.34	1	Split Pin	N/A
C4.QP.35	1	Chain Anchor Pin	N/A
C4.QP.36	1	Top Hook Pin and Lock Nut	2

Parts List

PART CODE	PART NAME	C4 QP FINISH
C4.QP.01	Top Hook Assembly	Powder Coating & Zinc
C4.QP.02	Latch Kit	Zinc Passivate
C4.QP.03	Top Hook Pin	Self Colour
C4.QP.04	Bottom Hook Assembly	Powder Coating & Zinc
C4.QP.05	Bottom Hook Chain Fixing Pin	Powder Coating & Zinc
C4.QP.07	Nut	Zinc Passivate
C4.QP.08	Label Rivets	Aluminium
C4.QP.09	Label	Aluminium
C4.QP.10	Gear Cover Assembly	Powder Coating
C4.QP.11	Pinion Shaft	Self Colour
C4.QP.12	Pinion Gear (pair)	Self Colour
C4.QP.13	Snap Ring	Self Colour
C4.QP.14	Load Gear	Self Colour
C4.QP.15	Gear Side Plate	Powder Coating
C4.QP.16	Stripper	Zinc Passivate
C4.QP.17	Guide Roller	Zinc Passivate
C4.QP.18	Caged Roller Bearings	Self Colour
C4.QP.19	Load Sheave	Self Colour
C4.QP.20N	Wheel Side Plate Assembly	Powder Coating
C4.QP.21	Disc Hub	Zinc Passivate
C4.QP.22	Friction Disc (pair)	N/A
C4.QP.23N	Ratchet Gear	Zinc Passivate
C4.QP.24N	Pawl Spring	Stainless Steel
C4.QP.25AN	Primary Pawl	Zinc Passivate
C4.QP.25BN	Secondary Pawl	Zinc Passivate
C4.QP.26	Snap Ring	Self Colour
C4.QP.27N	Brake Cover	Powder Coating
C4.QP.28	Hand Chain	N/A
C4.QP.29	Hand Chain Wheel	Powder Coating
C4.QP.29L	Overload Limiter Assembly	N/A
C4.QP.30	Pinion Nut	Self Colour
C4.QP.31	Cotter Pin	Steel
C4.QP.32	Hand Wheel Cover	Powder Coating
C4.QP.33	Chain Anchor Plate	Zinc Passivate
C4.QP.34	Split Pin	Steel
C4.QP.35	Chain Anchor Pin	Steel
C4.QP.36	Top Hook Pin and Lock Nut	Self Colour & Zinc



Part Code	Part Name
C4.QP01	Top Hook Assembly
C4.QP02	Latch Kit
C4.QP03	Top Hook Pin
C4.QP04	Bottom Hook Assembly
C4.QP05	Chain Fixing Pin
C4.QP07	Nut
C4.QP08	Label Rivets
C4.QP09	Label
C4.QP10	Gear Cover Assembly

Part Code	Part Name
C4.QP11	Pinion Shaft
C4.QP12	Pinion Gear (pair)
C4.QP13	Snap Ring
C4.QP14	Load Gear
C4.QP15	Gear Side Plate
C4.QP16	Stripper
C4.QP17	Guide Roller
C4.QP18	Caged Roller Bearings
C4.QP19	Load Sheave

Part Code	Part Name
C4.QP20N	Wheel Side Plate Assembly
C4.QP21	Disc Hub
C4.QP22	Friction Disc (pair)
C4.QP23N	Ratchet Gear
C4.QP24N	Pawl Spring
C4.QP25AN	Primary Pawl
C4.QP25BN	Secondary Pawl
C4.QP26	Snap Ring
C4.QP27N	Brake Cover

Part Code	Part Name
C4.QP28	Hand Chain (5 x 25mm)
C4.QP29	Hand Chain Wheel
C4.QP 29L	Overload Limiter
C4.QP30	Pinion Nut
C4.QP31	Cotter Pin
C4.QP32	Hand Wheel Cover
C4.QP33	Chain Anchor Plate
C4.QP35	Chain Anchor Pin
C4.QP36	Top Hook Pin and Lock Nut

Hoist disassembly

C4 Servicing Tool Requirements

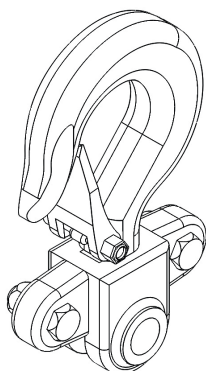
Metric spanners or socket set 5mm-19mm	Long nose pliers
Circlip pliers	Nylon/Dead blow hammer
Ball Pein hammer	Solvent free brake cleaner
120-180 grit Sandpaper	Cross head screw driver
Metric Allen Key set 3mm-12mm	Vernier caliper
Pop Rivet Gun	Drill (for speed link removal)

The following procedures should only be performed by a competent person.

It is the responsibility of the owner/user to install, operate, inspect and maintain product in accordance with all applicable Standards and Regulations. If the product is installed as part of a lifting system, it is also the responsibility of the owner/user to comply with the applicable standards that address other types of equipment used.

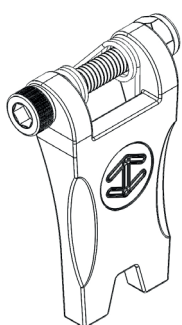
Disassembly

1. On single fall chain hoists remove bottom hook #4 and disassemble for inspection including latch.
 2. Depending on the model, remove either split or bolt and locking nut from chain anchor #33.
 3. The load chain can now be fed out from the hoist body using the hand chain, this is easiest when the hoist is hung from its top hook, take care that the chain does not catch or jam between the guides and sheave on removal #17 & 19.
 4. On multiple fall hoists remove the chain end fixing #36 and feed the chain from the hook sheaves.
 5. Loosen and remove the 3pcs of nyloc nuts from the hand wheel cover #32.
 6. Remove hand chain for inspection, pay attention to the pop riveted speed link connection.
 7. Remove and discard the split pin #31.
 8. Remove castle nut #30.
 9. The handle wheel #29 can now be rotated counter clockwise and removed from the pinion shaft.
 10. Lift the brake cover from the hoist body.
 11. Lift the upper friction disc, ratchet gear and lower friction disc from the disc hub, 22 (2pcs) and 23.
 12. The disc hub is removed by turning counter clockwise. Tip- after the hoist has been loaded the disc hub can become tight to remove, this can be freed with a gentle tap using a nylon hammer, whilst holding the pinion shaft tap the disc hub in the counter clockwise direction.
 13. Remove the pawl circlips #26.
 14. Lift the pawls and pawl springs #24 & 25 (on certain models the pawls are secured using counter sunk bolts).
 15. Remove the top hook pin #3 and lift the top hook #4 from the hoist body.
 16. Turn the hoist over and remove 3pcs nylon nut #7 then lift the gear cover #10 from the hoist body.
- NOTE: At this point it is advisable to take notice of how the pawls (#25) are tensioned and located to the ratchet disc (#23)
17. Remove pinion gears #12 (2pcs).
 18. Lift the pinion shaft #11 from the sheave #19.
 19. Remove the load gear circlip #13 then lift the load gear #14 from the sheave.
 20. Gear side plate #15 can now be removed, it is recommended to make a note of the position of each component within the side plates.
 21. Remove guides, stripper, sheave and anchor, #16, 17, 19 & 33, disassembly complete.



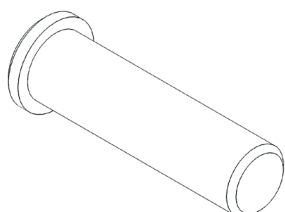
C4.QP.01 Top Hook Assembly

INSPECTION TYPE	Visual and Dimensional - contact manufacturer
QUANTITY	1 Check for distortion, damage, fractures and stretching. The hook shall be free and smooth to rotate, the hook to housing contact points should have even wear, check top hook bolt hole to diagram.
ACTION	Shotblast and repaint or replace if required.



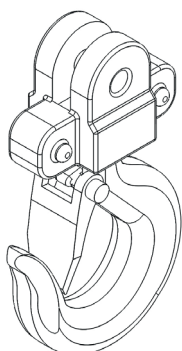
C4.QP.02 Latch Kit

INSPECTION TYPE	Visual
QUANTITY	2 Latch assemblies shall be secure and free/smooth to open and close.
ACTION	Replace if necessary.



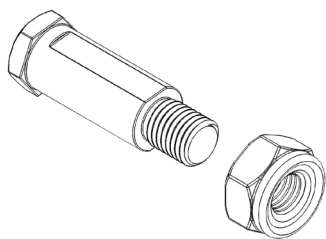
C4.QP.03 Top Hook Pin

INSPECTION TYPE	Visual and Dimensional - contact manufacturer
QUANTITY	1 Check dimensionally and visually for damage or wear.
ACTION	Replace if necessary.



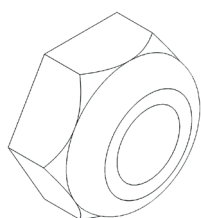
C4.QP.04 Bottom Hook Assembly

INSPECTION TYPE	Visual and Dimensional - contact manufacturer
QUANTITY	1 Check for distortion, damage, fractures and stretching. The hook shall be free and smooth to rotate, the hook to housing contact points should have even wear.
ACTION	Shotblast and repaint or replace if required.



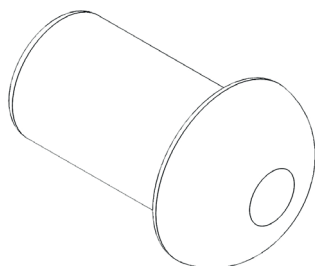
C4.QP.05 Bottom Hook Chain Fixing Pin

INSPECTION TYPE	Visual
QUANTITY	1 Check for damage or wear.
ACTION	Check and replace if necessary.



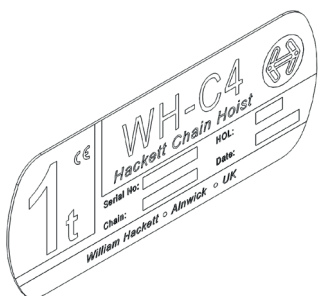
C4.QP.07 Nut

INSPECTION TYPE	Not Applicable
QUANTITY	6
ACTION	Discard and replace.



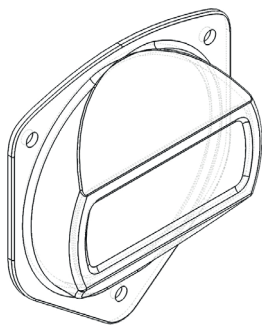
C4.QP.08 Label Rivets

INSPECTION TYPE	Not Applicable
QUANTITY	4
ACTION	Discard and replace.



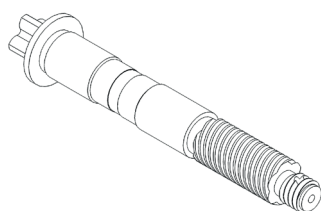
C4.QP.09 Label

INSPECTION TYPE	Visual
QUANTITY	1 Check nameplate is secure and in good condition, the unique hoist Ser no, WLL, HOL, chain grade and dimension should all be legible.
ACTION	Check and replace if necessary.



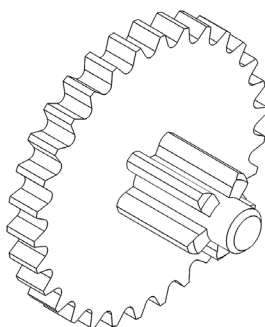
C4.QP.10 Gear Cover Assembly

INSPECTION TYPE	Visual
QUANTITY	1 Examine for cracks, distortion, damaged or broken parts, check gear bushings are secure and in good condition.
ACTION	Shotblast and repaint or replace if necessary.



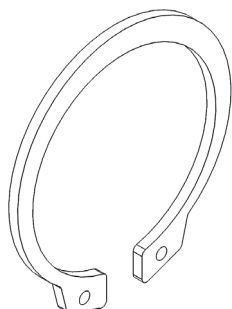
C4.QP.11 Pinion Shaft

INSPECTION TYPE	Visual
QUANTITY	1 Check for wear and damage
ACTION	Clean or replace.



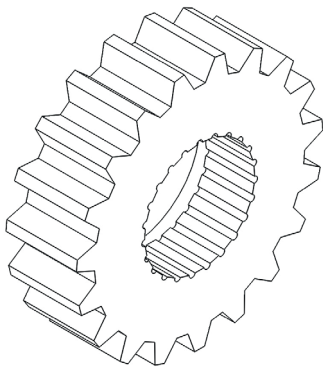
C4.QP.12 Pinion Gear (pair)

INSPECTION TYPE	Visual
QUANTITY	2 Examine gears for wear, fractures and alignment.
ACTION	Clean, reapply grease or replace if necessary.



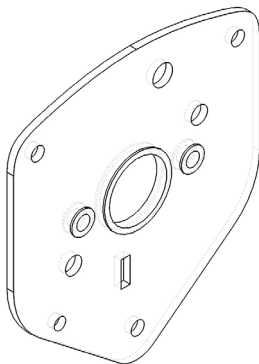
C4.QP.13 Snap Ring

INSPECTION TYPE	Visual
QUANTITY	1 Examine for cracks, distortion or damage.
ACTION	Replace it if necessary.



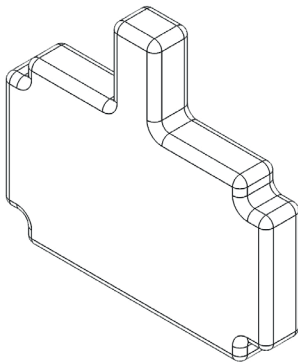
C4.QP.14 Load Gear

INSPECTION TYPE	Visual
QUANTITY	1 Examine gear for wear, fracture and alignment.
ACTION	Clean, reapply grease or replace if necessary.



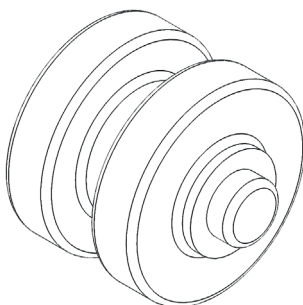
C4.QP.15 Gear Side Plate

INSPECTION TYPE	Visual
QUANTITY	1 Examine gear/right side plates for alignment and ensure they are free from excessive wear and distortion, examine load pin, guide, stripper and stay bolt holes for signs of wear and stretch, check gear bushings are secure and in good condition.
ACTION	Shotblast and repaint or replace if necessary.



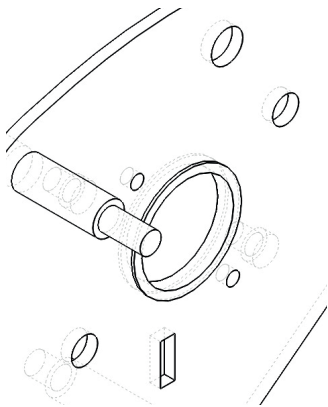
C4.QP.16 Stripper

INSPECTION TYPE	Visual
QUANTITY	1 Examine chain stripper for wear and damage.
ACTION	Replace if necessary.



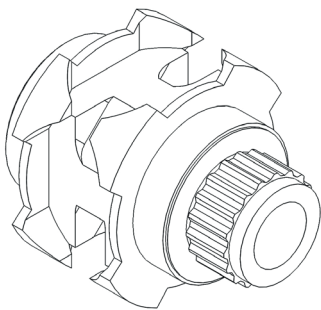
C4.QP.17 Guide Roller

INSPECTION TYPE	Visual
QUANTITY	2 Examine chain guide for wear and damage.
ACTION	Replace it if necessary.



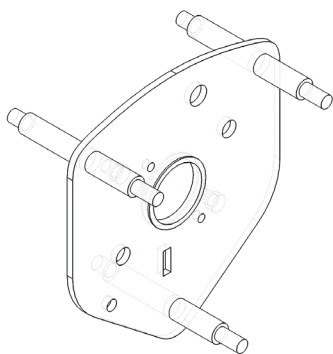
C4.QP.18 Caged Roller Bearings

INSPECTION TYPE	Visual
QUANTITY	2 Examine bearings for excessive condition and wear, the bearings should be smooth and free to operate when a slight pressure is applied.
ACTION	Clean, reapply grease or replace if necessary.



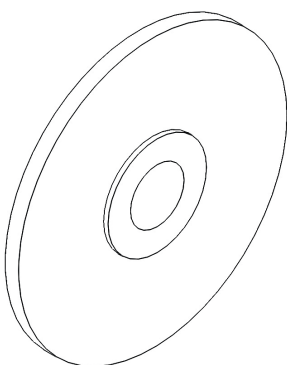
C4.QP.19 Load Sheave

INSPECTION TYPE	Visual
QUANTITY	1 Check load chain pockets for wear and damage, ensuring satisfactory seating of load chain in pockets.
ACTION	Clean, reapply grease or replace if necessary.



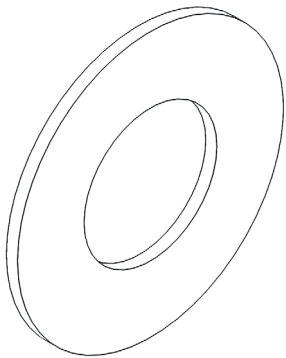
C4.QP.20 Wheel Side Plate Assembly

INSPECTION TYPE	Visual
QUANTITY	1 Examine chain stripper for wear and damage. Examine body plates for alignment and ensure they are free from wear and distortion, examine load pin, guide and stripper holes for signs of wear and stretch, check stay bolts and pawl stands are secure and free from defects.
ACTION	Shotblast and repaint or replace if necessary.



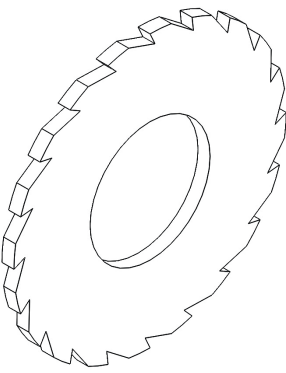
C4.QP.21 Disc Hub

INSPECTION TYPE	Visual
QUANTITY	1 Check splines and ensure the component mating surfaces are smooth, flat and without excessive corrosion.
ACTION	Replace it if necessary.



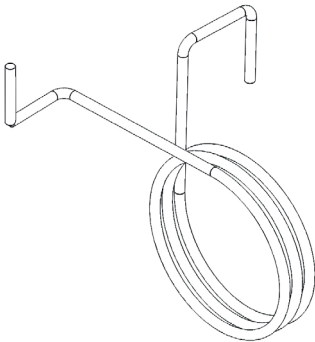
C4.QP.22 Friction Discs

INSPECTION TYPE	Visual and Dimensional - see miscellaneous
QUANTITY	2
	Check for fractures, wear and damage ensuring mating surfaces are flat and clean and free from contaminants.
ACTION	Replace if any defects found or below tolerance.



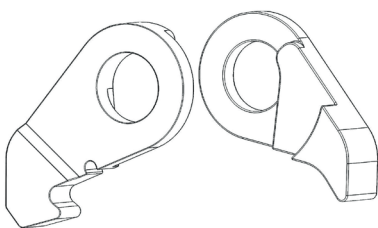
C4.QP.23 Ratchet Gear

INSPECTION TYPE	Visual and Dimensional - see miscellaneous
QUANTITY	1
	Examine ratchet teeth and brake component surfaces ensuring they are smooth and flat.
ACTION	Replace if any defects found or below tolerance.



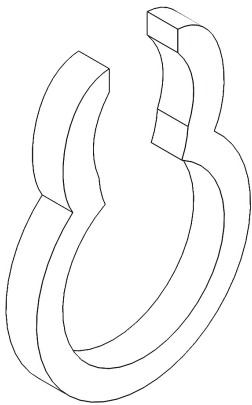
C4.QP.24 Pawl Spring

INSPECTION TYPE	Visual
QUANTITY	2
	Examine pawl springs for corrosion and fractures, ensure the spring is in good working order and not deformed or stretched.
ACTION	Replace it if necessary.



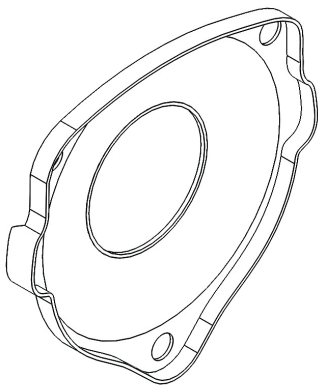
C4.QP.25AN/BN Primary and Secondary Pawl

INSPECTION TYPE	Visual
QUANTITY	2 x 25AN, 2 x 25BN
FINISH	Zinc Flake
	Check pawl for wear ensuring pawl is free to move on pawl shaft.
ACTION	Do not shotblast - replace.



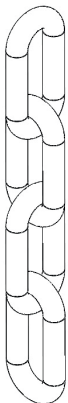
C4.QP.26 Snap Ring

INSPECTION TYPE	Not Applicable
QUANTITY	2
ACTION	Discard and replace.



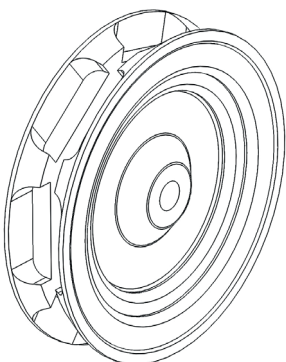
C4.QP.27 Brake Cover

INSPECTION TYPE	Visual
QUANTITY	1 Examine for wear, damage and fractures.
ACTION	Shotblast and repaint or replace if necessary.



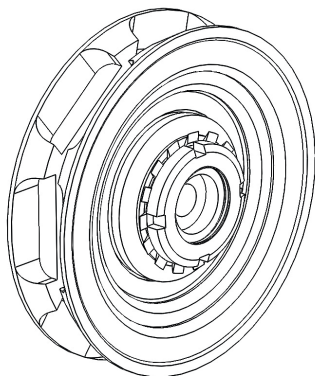
C4.QP.28 Hand Chain

INSPECTION TYPE	Visual and Dimensional - see miscellaneous
QUANTITY	1 Examine hand chain for damaged or distorted links, sharp edges, corrosion. Check condition of speed link if present.
ACTION	Replace it if necessary.



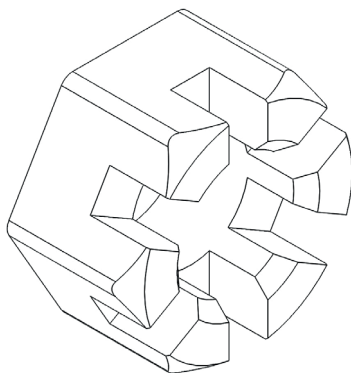
C4.QP.29 Hand Chain Wheel

INSPECTION TYPE	Visual
QUANTITY	2 Check handwheel for damage, fractures, ensure brake surfaces are smooth and free from defects.
ACTION	Shotblast and repaint or replace if necessary. Ensure threads and brake surfaces are free from paint or powder coating if reconditioning.



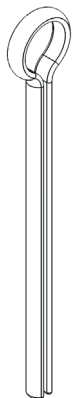
C4.QP.29L Overload Limiter Assembly

INSPECTION TYPE	Not Applicable
QUANTITY	1
ACTION	Contact manufacturer.



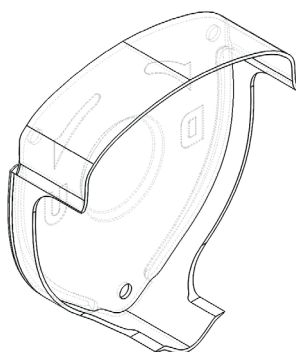
C4.QP.30 Pinion Nut

INSPECTION TYPE	Visual
QUANTITY	1 Check thread condition, check for wear or fractures.
ACTION	Replace it if necessary.



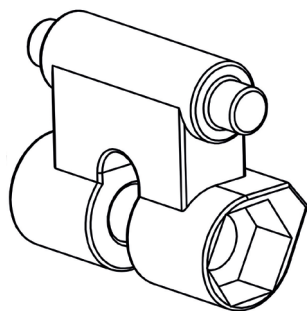
C4.QP.31 Cotter Pin

INSPECTION TYPE	Not Applicable
QUANTITY	1
ACTION	Discard and replace.



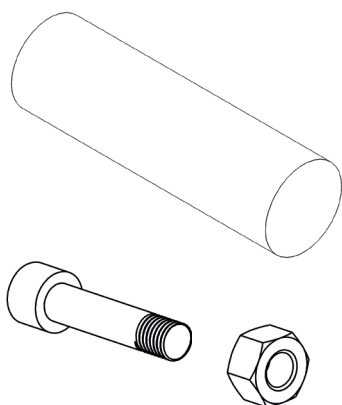
C4.QP.32 Hand Wheel Cover

INSPECTION TYPE	Visual
QUANTITY	1 Examine for cracks, distortion, damage or wear and the covers of good condition and secure. Check cover assembly fixings.
ACTION	Shotblast and repaint or replace if necessary. Ensure threads and brake surfaces are free from paint or powder coating if reconditioning.



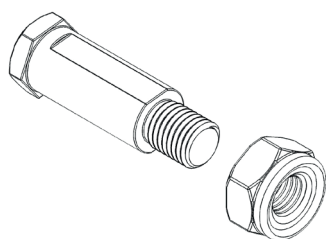
C4.QP.33 Chain Anchor Plate

INSPECTION TYPE	Visual
QUANTITY	1 Check for damage and wear on all components of the anchor, pay attention to chain contact points including load pin.
ACTION	Shotblast and repaint or replace if necessary.



C4.QP.35 Chain Anchor Pin

INSPECTION TYPE	Visual
QUANTITY	1 Check for damage and wear on all components of the anchor, pay attention to chain contact points including load pin.
ACTION	Check and replace it if necessary.



C4.QP.36 Top Hook Pin and Lock Nut

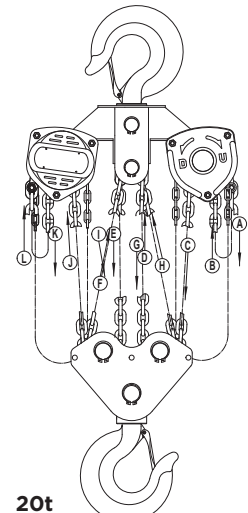
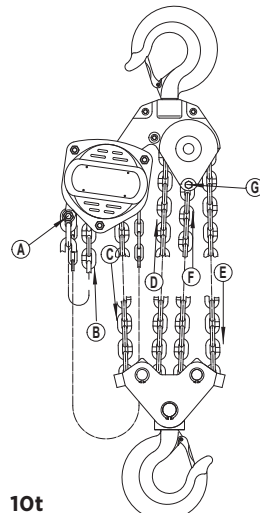
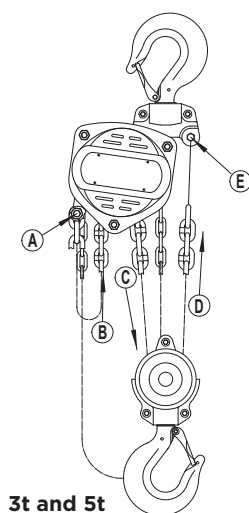
INSPECTION TYPE	Visual
QUANTITY	1 Check for damage or wear.
ACTION	Check and replace it if necessary.

Assembly instructions

1. With the wheel side plate facing pawl stands down, lubricate the sheave to bush contact points and insert the load sheave #19 with the splined section upwards.
2. Install chain guides, stripper and chain anchor #16, 17 & 33.
3. Again, lubricate the sheave to bush contact points and install gear side plate #15 ensuring correct alignment with wheel side plate.
4. Lubricate and install load gear #14, refit circlip ensuring it is secure and fully seated in its recess.
5. Lubricate the pinion shaft taking care not to apply excessive amounts around the threaded/splined brake section then insert through load gear.
6. Install the pinion gears making sure the alignment marks are correctly positioned, apply a liberal amount of grease to the assembly then secure the gear cover using 3 nylon locking nuts.
7. Turn the hoist over so that the brake side faces upwards then reinstall the top hook, ensure the top hook pin is fully seated.
8. Install the pawl assemblies lightly greasing the pawl shafts, ensure the pawl springs are secured correctly, and the circlip is seated firmly in its recess.
9. Install the disc hub #21 by rotating clockwise on to the pinion shaft.
10. Tension the pawls by turning them clockwise against the pawl spring, do not over tension.
11. Fit the lower friction disc, ratchet gear and upper friction disc ensuring the ratchet tooth profile matches that of the pawls.
12. Install the brake cover #27.
13. Hold the end of the pinion shaft with a set of pliers and wind the load limiter/handwheel down the pinion shaft in a clockwise direction by hand until the load limiter comes to a stop.
14. Line up the castellated nut with the threaded pinion shaft and fasten by hand in a clockwise direction until the castellated nut comes into contact with the handwheel or load limiter shim/washer as applicable. Rotate the castellated nut anti-clockwise until one of the castellated slots in the nut aligns with the drilled hole located near the end of the pinion shaft so that a new split pin can be inserted. The drilled hole should align with the first or second available castellated slot. Insert and secure split pin. Ensure the handwheel rotates freely in both a clockwise and anti-clockwise direction.
15. Insert the split pin through both the castellated slot in the nut and the drilled hole of the pinion shaft, ensuring these are aligned. The split pin used should be size 3/32 x 1. The head of the split pin should be seated inside the slot of the castellated nut, with the eye of the split pin sitting in the vertical plane. The top leg of the split pin should be folded over and positioned flat on top of the pinion shaft. The bottom leg should be shortened with a cutting tool and folded down the edge of the castellated nut. Ensure that the legs of the split pin do not interact or interfere with any other components, including the shim/washer.
16. The hoist is now ready for chain installation.

Chain Installation

The Chain shall be installed with the weld facing away from the main hoist sheave in a vertical plain.



RAISING THE LOAD

To raise load, pull the right side of hand chain (A, Figure 5) so that the wheel turns clockwise. To lower the load, pull left side of hand chain (B, Figure 1) so that wheel turns anti-clockwise. Important: Make sure the hoist has an adequate length of load chain to raise or lower the load in a safe manner. Do not attempt to lower the hoist beyond its limit.

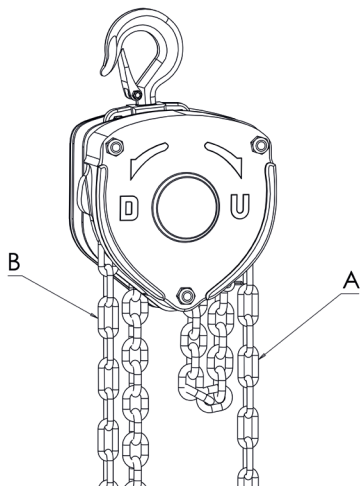
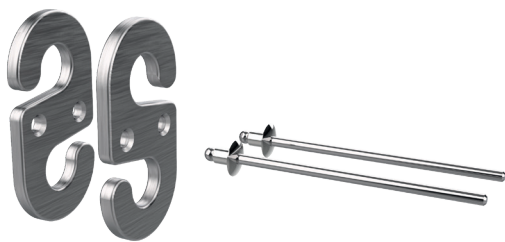


Figure 1

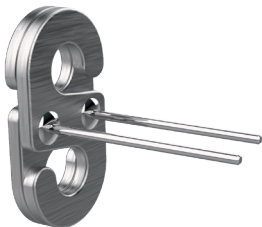
HAND CHAIN: JOINING AND INSTALLING

- 1. Cut the required length of 5mm x 25mm hand chain so that the links at either end plain in the same direction.



- 2. Make sure the chain is not twisted and bring the two ends together.

- 3. Join the two ends of hooking speed links over each side making sure that the chamfered edge of the speed link is to the outside.



- 4. Fix the two halves of the speed link together with two 2.4mm x 6mm stainless steel pop rivets.



Note: The indicated ‘speed links’ must only be used on hand chain which fully complies with the dimensional detail indicated within this script. The hand chain runs over a specific calibrated pocket wheel and the chain is also calibrated to suit this particular pocket wheel.

LOAD AND WEAR LIMITS

Alloy Steel Chain

Carefully inspect the entire load chain. Measure five consecutive links with calipers to measure the length. Check every metre and especially where excessive wear is indicated. Any load chain that shows noticeable deformation or heat influence must be replaced with a new one. Never extend the load chain by welding a second piece to the original.

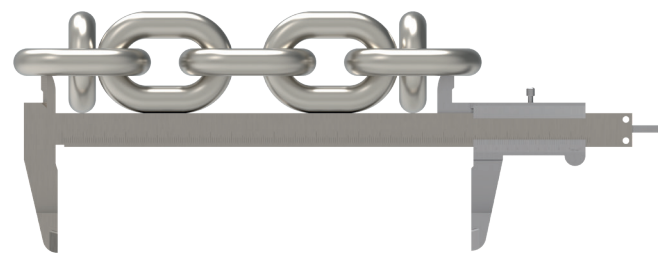


Figure 2

CAPACITY t	5 LINKS Normal mm	5 LINKS LIMIT Replace if more than:
0.5	75	77.3
1.0	90	92.6
1.6	120	123.4
2.0	120	123.4
3.2	120	123.4
5.0 - 50.0	150	154.3

Miscellaneous

BRAKE DISC

Replacement limits for brake disc

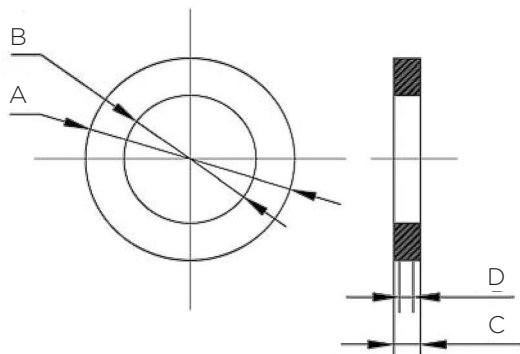


Figure 3

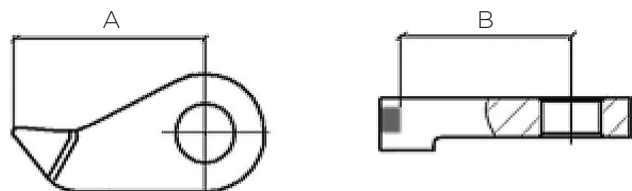
CAPACITY t	A mm	B mm	C mm	D mm
0.5	60	30.5	2.5	2
1.0	60	30.5	2	1.5
1.6	68	35.5	2	1.5
2.0	68	35.5	2	1.5
3.2	68	35.5	2	1.5
5.0 - 50.0	85	45.5	2.5	2

B = inner diameter C = normal measurement

A = outer diameter D = replacement limit

Table 1

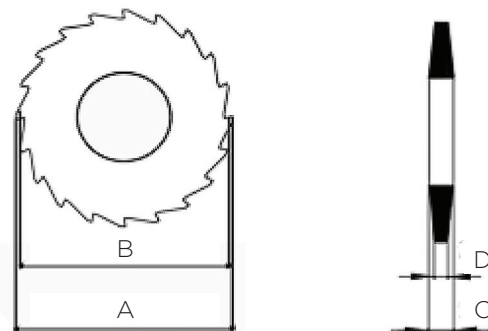
Replacement limits for Pawl



CAPACITY t	A mm	B min mm
0.5	14.5	13.5
1.0	25	23.5
1.6 - 3.2	30	27.5
5.0	35	33.5

Table 2

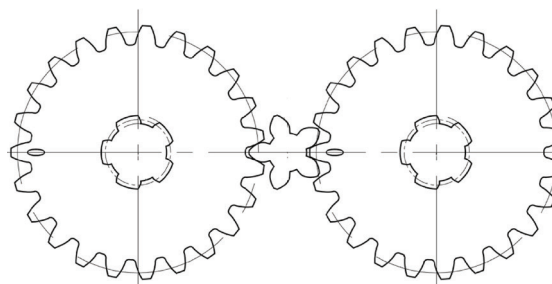
Replacement limits for Ratchet Brake System



CAPACITY t	A mm	B min mm	C mm	D min mm
0.5	68	66	2	1.5
1.0	68	67	2	1.5
1.6 - 3.2	80	78	2	1.5
5.0 - 50.0	100	98	2.5	2

Table 3

Gear Alignment



0.5t - 50t

Figure 5

LUBRICATION

C4 Chain Hoist

Recommended lubricant type: Mobilgrease XHP™ 222

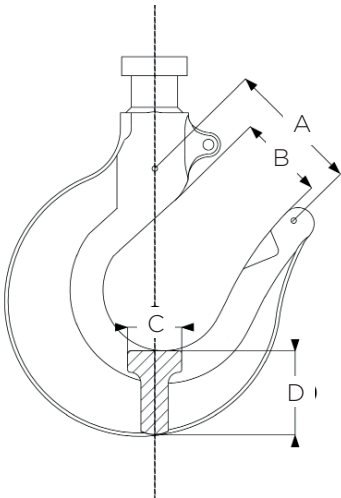
C4 Chain Hoist Load Chain

Recommended Lubricant: Lear Chem ACF-50 fluid or Lear Chem Corrosion Block Fluid

TORQUE VALUE TABLE

Bolt/nut size	Min Nm	Max Nm
M5	5	6
M6	6	8
M8	20	22
M10	22	24
M12	25	27

C4 DIMENSIONS AND DISCARD CRITERIA



Capacity t	A (mm)		B (mm)		C (mm)		D (mm)	
	Nominal	Discard	Nominal	Discard	Nominal	Discard	Nominal	Discard
0.5	42.5	46.8	26.5	29.2	14.2	12.8	20.0	18.0
1.0	49.0	53.9	32.5	35.8	15.0	13.5	21.1	19.0
1.6	51.5	56.7	34.5	38.0	19.0	17.1	26.5	23.9
2.0	54.5	60.0	34.0	37.4	19.5	17.6	27.8	25.0
3.2	61.0	67.1	42.5	46.8	24.4	22.0	31.2	28.1
5.0	85.0	93.5	52.6	57.9	34.0	30.6	45.4	40.9
7.5	89.0	97.9	63.5	69.9	40.0	36.0	60.4	54.4
10.0	89.0	97.9	63.5	69.9	40.0	36.0	60.4	54.4
15.0	-	-	83.0	91.3	56.0	50.4	84.8	76.3
20.0	-	-	83.0	91.3	56.0	50.4	84.8	76.3

Warranty

When supplied new the C4 QP hoist will be supplied with a Declaration of Conformity which sanctions the use of the product for a maximum period of 12 months before re-certification is required by a competent person.

The C4 QP is a lifting appliance and should be thoroughly examined by a competent person at least every 12 months or following each period of deployment.

Only original William Hackett spare parts should be used.

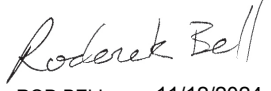
William Hackett guarantees the performance of the C4 QP hoist for a period of 12 months from the date of sale subject to the purchaser and users complying with the safe use, storage, routine maintenance and servicing instructions, and there being no excessive wear and tear or misuse of the product.

These points do not affect the purchasers' statutory rights.



Delivery Address		Supplied To:	ABC123
ABC DISTRIBUTORS ALPHABET DRIVE ALPHABETTUS YOUR COUNTY YO13 ABC		Certificate Number:	0030007888
		Customer Order Number:	123456
		Certificate Date:	11/12/2024
		PRODUCTS REQUIRING A DECLARATION OF CONFORMITY ARE INDICATED BY (A) THOSE REQUIRING JUST A MANUFACTURER'S CERTIFICATE ARE INDICATED BY (B)	

DUAL PURPOSE DOCUMENT

UKCA DECLARATION OF CONFORMITY (A)	EC DECLARATION OF CONFORMITY (A)	MANUFACTURER'S CERTIFICATE (B)
I DECLARE THAT THE ITEMS DESCRIBED ON THIS DOCUMENT MEET THE ESSENTIAL SAFETY REQUIREMENTS OF THE SUPPLY OF MACHINERY (SAFETY) REGULATIONS 2008 & SECTION 6 OF THE HEALTH AND SAFETY AT WORK ACT 1974	I DECLARE THAT THE ITEMS DESCRIBED ON THIS DOCUMENT COMPLY WITH THE REQUIREMENTS OF THE MACHINERY DIRECTIVE 2006/42/EC	CERTIFIED ON BEHALF OF THE COMPANY  ROD BELL 11/12/2024

Authorised person for the configuration of the declaration documents: Roderick Bell, William Hackett Lifting Products, Alnwick, UK

A/B	Batch/ Serial No.	Item Code	Description	Qty	Working Load Limit	Proof Load	Min Breaking Load
A	403130058	022.053	500kg Hackett chain hoist 3m HOL C4 to EN13157	1.0	500kg	750kg	
A	403130061L	033.080	800kg Hackett lever hoist 1.5m HOL L4 to EN13157	1.0	800kg	1.2t	

WH-C4 QP CHAIN HOIST USER MANUAL



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WH-C4 QP CHAIN HOIST USER MANUAL
WHM-0008 REV. 9



A LONG LASTING
CONNECTION