



# CHAIN BLOCK

## ***INSTRUCTION MANUAL***

Imported exclusively by Pacific Hoists Pty. Ltd. & Pacific Hoists Ltd.  
In support of cancer charities in Australia & New Zealand





# IMPORTANT

PLEASE READ THIS OPERATION MANUAL BEFORE USING THIS PRODUCT. THIS MANUAL CONTAINS IMPORTANT INFORMATION REGARDING SAFETY, OPERATION, INSTALLATION & MAINTENANCE.

ALWAYS OPERATE, INSPECT AND MAINTAIN THIS PRODUCT IN ACCORDANCE WITH AS1418.2

## INTRODUCTION

Thank you for purchasing your new Challenger Chain Block. This manual lifting device now uses the latest technology to ensure you of a higher quality, robust design with a high level of operator safety which is easier and safer to use, ensuring a longer service life. Choosing the Challenger brand also directly supports cancer charities in Australia.

It is important that this manual be kept in a safe place where any operator of the Challenger Chain Block can refer to it and understand the operating principles of this device. All users of this Challenger Chain Block should read this manual in full and understand the safe operating principles of the device.

## FEATURES

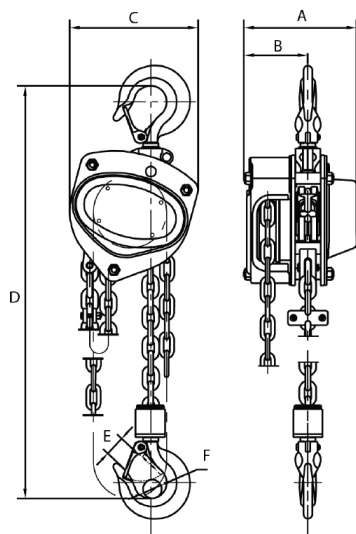
### FEATURES OF THE CHALLENGER CHAIN BLOCK INCLUDE THE FOLLOWING:

- Designed in accordance with European and Australian Standards
- Improved braking performance to ensure the integrity of the load under all conditions
- Design improvements result in 25% less operator effort to lift the rated load
- Safety of design has been prioritised to alleviate unexpected accidents
- New style load hooks with cast “notched” safety latches increase service life of the latches and improve the safety of the lifting operation
- Improved design of load sprockets for safer operation
- Key internal components are now CNC machined for improved overall product reliability
- All Challenger Chain Blocks are individually load tested in accordance with AS1418.2

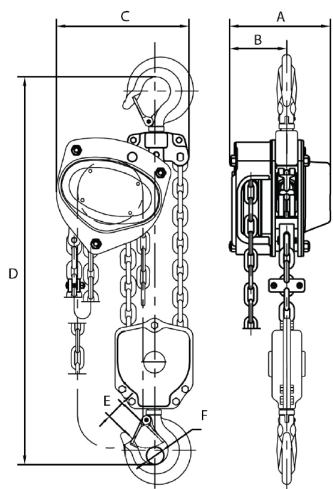
*A comprehensive range of spare parts is readily available.*



# SPECIFICATIONS



500kg / 1t / 2t



3t / 5t

# SPECIFICATIONS CONT.

Model	CCB203	CCB206	CCB213	CCB216
Rated Capacity	500kg		1t	
Lifting Height (m)	3	6	3	6
Test Load (kg)	750		1500	
Effort to Lift Full Load (N)	210		285	
No. of Load Chain Falls	1			
Hand Chain (mm x mm)	Φ5X23.7			
Headroom (mm) H	280		330	
Hand Chain Drop (m)	2	5	2	5
Dimension (mm) A	128		142	
B	75		76	
C	130		150	
D	20		25	
E	22		26	
Net W+eight	9	10	12	16

# SPECIFICATIONS CONT.

Model	CCB223	CCB226	CCB233	CCB236	CCB253	CCB256
Rated Capacity	2t		3t		5t	
Lifting Height (m)	3	6	3	6	3	6
Test Load (kg)	3000		4500		7500	
Effort to Lift Full Load (N)	355		340		400	
No. of Load Chain Falls	1		2		2	
Hand Chain (mm)	Φ5X23.7					
Headroom (mm) H	385		510		615	
Hand Chain Drop (m)	2	5	2	5	2	5
Dimension (mm) A	175		158		183	
B	88		80		90	
C	186		220		255	
D	33		36		43	
E	35		37		43	
Net Weight	20	25	23	29	39	50

# PRE-START CHECKLIST

**REGULAR INSPECTION OF YOUR CHALLENGER CHAIN BLOCK WILL HAVE A TWOFOLD RESULT BY ENSURING THE UNIT IS SUITABLE FOR SAFE OPERATION AND WILL ASSIST WITH EXTENDING THE OPERATING LIFE OF THE UNIT. THE FOLLOWING INSPECTION SHOULD BE PERFORMED BOTH PRIOR TO, AND AFTER, EVERY USE:**

- Ensure the chain block is correctly suspended from a suitable support which keeps the load chain off the ground whilst in storage
- Ensure the selected chain block is the correct capacity to perform the task required
- Handle your chain block with care and do not throw, drop or drag it along the ground
- Familiarise yourself with how the unit operates and understand its safety features
- Inspect the unit for any missing parts before and after every use
- Ensure the safety latches are working correctly and are aligned properly in the hook
- Check the load hooks for ease of rotation
- Inspect the load chain before and after each use

# ON SITE CHECKS

## THERE ARE A NUMBER OF CHECKS RECOMMENDED WHEN USING THE CHALLENGER CHAIN BLOCK ON SITE:

- ❑ Chain blocks must only be used for vertical lifting
- ❑ Only competent persons should operate Challenger Chain Blocks and should have read the instruction manual and understood the operation of the device before its use.
- ❑ Follow all site safety rules where applicable in relation to the movement of suspended loads
- ❑ It is recommended that the chain block should not be exposed to elements such as: water, salt spray, steam or chemicals that may compromise the integrity of the device, without consulting your supplier
- ❑ Adopt safe slinging practices and follow all instructions carefully
- ❑ Ensure the load requirement of the job is within the load capacity rating of the chain block
- ❑ Check that labelling and/or identification is correct and legible
- ❑ Ensure the Pre-Start Check List, as shown previously, has been conducted
- ❑ Make sure that no oil and/or grease makes contact with the braking system of the chain block
- ❑ Check the environment and locality of the job for hazards to ensure personnel safety for intended use.
- ❑ Check that the load connection point, where the chain block is to be attached, is capable of safely handling the intended load
- ❑ Where trolley suspension is required, ensure the trolley is correctly set for the beam width and that it moves freely along the beam
- ❑ Once the chain block is suspended, both hooks must be seated correctly ensuring the safety latches are engaged in the closed position
- ❑ Ensure the free end of the load chain is clear of any obstructions before and during operation
- ❑ Check that the bottom hook will reach its lowest point without fully extending the load chain
- ❑ The load should be free to move and the landing area cleared before starting any lifting operation
- ❑ When using a chain block with 2 falls (or more) of load chain, ensure that the lower hook block has not been inverted or twisted
- ❑ Start the lifting process carefully, and once the load is just clear, stop and check the integrity of the chain block and load assembly, including any rigging, before continuing the lift
- ❑ The operator should always have a clear view of the complete travel path of the load



- Ensure that the load will not be suspended from the chain block for any extended period of time without secondary restraint. It's advisable that suspended loads should not be left unattended
- Take care when placing heavy loads down into position that fingers and toes are kept clear

# GENERAL PRECAUTIONS

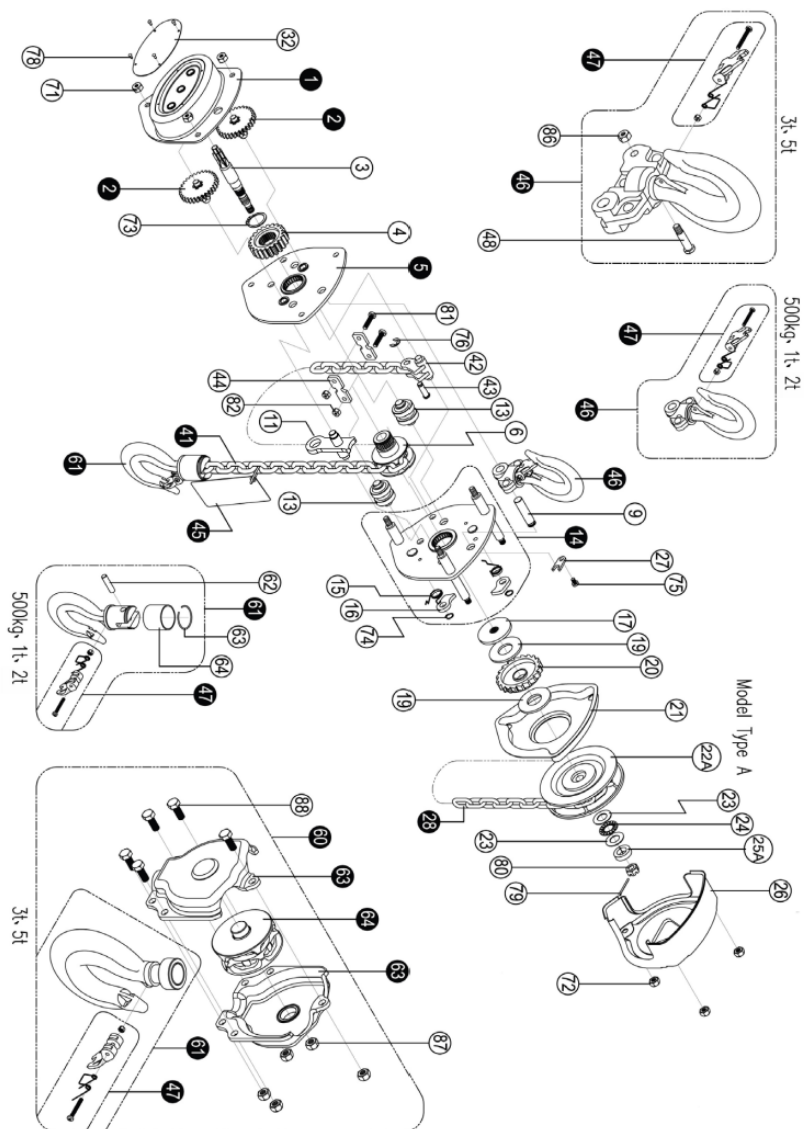
- Always understand the operation of the lifting device before putting it to use
- Always ensure you are working within the required guidelines of Workplace Health and Safety regulations relevant to the task being undertaken
- Never use a chain block to lift a load greater than its rated capacity
- Always check for personnel within the work area and DO NOT use chain blocks to suspend loads over people
- Never use chain blocks for lifting or transporting people under any circumstances
- Never use the load chain of a chain block to wrap around the load
- Never operate a chain block with a kinked or twisted load chain
- Always keep control of the load and do not allow it to swing excessively
- Avoid shock loading the chain block as it may seriously damage the operating system. If this occurs, remove the device from use and return it to your supplier for inspection
- Always ensure any slings or rigging gear being used are connected into the hooks ensuring safety latches are engaged in the closed position
- Check for fixed obstructions which may catch the load during the lifting operation
- Chain blocks are designed for manual use only and must not be converted for power operation in any way
- Never modify your chain block from its designed configuration in any way
- Ensure only the original manufacturers' spare parts are used in the repair of any chain block
- Replace any load chain with original manufacturers specified chain only
- Galvanising or plating of load chain or load bearing parts is not recommended without the express approval of the supplier
- Never replace a worn load chain without having the chain block inspected by a qualified technician.

# OPERATING INSTRUCTIONS

The Challenger Chain Block has been designed for manual operation only. It utilises a hand chain to drive a series of gears via a unique braking system to raise and lower a load vertically.

- Suspend the chain block into the required position to perform the lifting operation, ensuring the top hook is positioned correctly with the safety latch engaged as required
- To raise the bottom hook, pull down on the hand chain to rotate the hand chain wheel in a clockwise direction (looking from the hand wheel cover side)
- Continuously pulling the hand chain in this direction using a “hand over hand” method will raise the bottom hook until you have it in the required position
- To lower the bottom hook, pull down on the hand chain to rotate the hand chain wheel in a anti-clockwise direction, (looking from the hand wheel cover side)
- Continuously pulling the hand chain using the above mentioned “hand over hand” method will either raise or lower the bottom hook into the position required to fix the load
- Fitment of the load to the lower hook needs care to ensure the safety latch is engaged into the closed position, thereby securing the load to the chain block
- Start the lifting process carefully, and once the load is just clear, stop and check the integrity of the chain block, the load assembly (including any rigging gear) and that the load path is clear before continuing the lift
- Lift the load until the required height is achieved
- Before commencing lowering of the load, ensure that the load path is clear and unobstructed
- Releasing the hand chain in either direction will stop the load movement and the braking system will hold the load in that position
- The desired operation is a smooth hand over hand movement when raising or lowering a load and excessive speed is not recommended in either direction
- Once the load is in the desired position, release the pressure on the load chain further by pulling the hand chain to rotate the hand wheel in the anti-clockwise direction
- After ensuring the load has been placed safely and securely, release the safety latch of the bottom hook and remove it from its suspension point
- After removing the chain block from use, a visual inspection should be performed to cover the points listed in the Pre-Start Check List previously described

# SPARE PARTS FOR 500KG - 5 TONNE MODELS



# SPARE PARTS FOR 500KG MODEL

CODE	NO	DESCRIPTION
710050	1	Gear cover assy
710051	2	Disc gear assy
710052	3	Drive shaft
710053	4	Splined gear
710054	5	Right side plate assy
710055	6	Load chain sprocket
710056	9	Top hook shaft
710057	11	Chain stripper
710058	13	Guide roller
710059	14	Left side plate assy
710060	15	Pawl spring
710061	16	Pawl
710062	17	Brake seat
710063	19	Friction plate
710064	20	Ratchet wheel
710065	21	Brake cover
710066	22	Hand chain wheel
710067	23	Thrust washer 12x26x1
710068	24	Thrust bearing 12x26x2
710069	25	Step washer
710070	26	Hand chain cover

CODE	NO	DESCRIPTION
710071	27	Positioned plate
710072	32	Nameplate
CHN100	41	Load Chain mm 5 x 15
710073	42	End anchor
710074	43	End anchor pin
710075	44	Protected plate
710076	45	Warning plate assy
710077	46	Top hook assy
710078	47	Safety latch assy
710079	61	Bottom hook assy
710080	62	Hook shaft
710081	63	Steel wire retainer
710082	64	Bush
710083	71	Metal lock nut M8
710084	72	Metal lock nut M8
710085	73	Circlip 22
710086	74	Circlip 10
710087	75	Cross head screw M4x10
710088	76	Split retainer 5
710089	78	Nameplate 2.5x6
710090	79	Split pin 2x16
710091	80	Hexagon recess nut M8
710092	81	Cross head nut M6x22
710093	82	Metal locked nut M6

# SPARE PARTS FOR 1 TONNE MODEL

CODE	NO	DESCRIPTION
710100	1	Gear cover assy
710101	2	Disc gear assy
710102	3	Drive shaft
710103	4	Splined gear
710104	5	Right side plate assy
710105	6	Load chain sprocket
710106	9	Top hook shaft
710107	11	Chain stripper
710108	13	Guide roller
710109	14	Left side plate assy
710110	15	Pawl spring
710111	16	Pawl
710112	17	Brake seat
710113	19	Friction plate
710114	20	Ratchet wheel
710115	21	Brake cover
710116	22	Hand chain wheel
710117	23	Thrust washer 15x28x2
710118	24	Thrust bearing 15x28x2
710119	25	Step washer
710120	26	Hand chain cover

CODE	NO	DESCRIPTION
710121	27	Positioned plate
710122	32	Nameplate
CHN112	41	Load Chain mm 6.3 x 19.1
710123	42	End anchor
710124	43	End anchor pin
710125	44	Protected plate
710126	45	Warning plate assy
710127	46	Top hook assy
710128	47	Safety latch assy
710129	61	Bottom hook assy
710130	62	Hook shaft
710131	63	Steel wire retainer
710132	64	Bush
710133	71	Metal lock nut M8
710134	72	Metal lock nut M8
710135	73	Circlip 26
710136	74	Circlip 10
710137	75	Cross head Screw M4x10
710138	76	Split retainer 6
710139	78	Nameplate 2.5x6
710140	79	Split pin 2.5x25
710091	80	Hexagon recess nut M10
710092	81	Cross head nut M6x25
710093	82	Metal locked nut M6

# SPARE PARTS FOR 2 TONNE MODEL

CODE	NO	DESCRIPTION
710200	1	Gear cover assy
710201	2	Disc gear assy
710202	3	Drive shaft
710203	4	Splined gear
710204	5	Right side plate assy
710205	6	Load chain sprocket
710206	9	Top hook shaft
710207	11	Chain stripper
710208	13	Guide roller
710209	14	Left side plate assy
710210	15	Pawl spring
710211	16	Pawl
710212	17	Brake seat
710213	19	Friction plate
710214	20	Ratchet wheel
710215	21	Brake cover
710216	22	Hand chain wheel
710217	23	Thrust washer 17x30x1
710218	24	Thrust bearing 17x30x2
710219	25	Step washer
710220	26	Hand chain cover

CODE	NO	DESCRIPTION
710221	27	Positioned plate
710222	32	Nameplate
CHN107	41	Load Chain mm 8x24
710223	42	End anchor
710224	43	End anchor pin
710225	44	Protected plate
710226	45	Warning plate assy
710227	46	Top hook assy
710228	47	Safety latch assy
710229	61	Bottom hook assy
710230	62	Hook shaft
710231	63	Steel wire retainer
710232	64	Bush
710233	71	Metal lock nut M10
710234	72	Metal lock nut M8
710235	73	Circlip 30
710236	74	Circlip 10
710237	75	Cross head screw M6x10
710238	76	Split retainer 8
710239	78	Nameplate 2.5x6
710240	79	Split pin 2.5x25
710241	80	Hexagon recess nut M12
710242	81	Cross head screw m6x25
710243	82	Metal locked nut M6

# SPARE PARTS FOR 3 TONNE MODEL

CODE	NO	DESCRIPTION
710250	1	Gear cover assy
710251	2	Disc gear assy
710252	3	Drive shaft
710253	4	Splined gear
710254	5	Right side plate assy
710255	6	Load chain sprocket
710256	9	Top hook shaft
710257	11	Chain stripper
710258	13	Guide roller
710259	14	Left side plate assy
710260	15	Pawl spring
710261	16	Pawl
710262	17	Brake seat
710263	19	Friction plate
710264	20	Ratchet wheel
710265	21	Brake cover
710266	22	Hand chain wheel
710267	23	Thrust washer 15x28x1
710268	24	Thrust bearing 15x28x2
710269	25	Step washer
710270	26	Hand chain cover
710294	86	Metal locked nut M8
710295	87	Metal locked nut M8
710296	88	Hexagon head bolt M8x20

CODE	NO	DESCRIPTION
710271	27	Positioned plate
710272	32	Nameplate
CHN415	41	Load Chain mm 7.1 x 21
710273	42	End anchor
710274	43	End anchor pin
710275	44	Protected plate
710276	45	Warning plate assy
710277	46	Top hook assy
710278	47	Safety latch assy
710279	48	Bottom hook pin
710280	61	Bottom hook assy
710281	63	Bottom hook connector assy
710282	64	Idler sheave assy
710283	71	Complete metal locked nut M8
710284	72	Complete metal locked nut M8
710285	73	Circlip 30
710286	74	Circlip 10
710287	75	Cross recess head screw M6x10
710288	76	Split retainer 6
710289	78	Nameplate 2.5x6
710290	79	Split pin 2.5x25
710291	80	Hexagon recess nut M10
710292	81	Cross head screw M6x25
710293	82	Metal locked nut M6



# SPARE PARTS FOR 5 TONNE MODEL

CODE	NO	DESCRIPTION
710300	1	Gear cover assy
710301	2	Disc gear assy
710302	3	Drive shaft
710303	4	Splined gear
710304	5	Right side plate assy
710305	6	Load chain sprocket
710306	9	Top hook shaft
710307	11	Chain stripper
710308	13	Guide roller
710309	14	Left side plate assy
710310	15	Pawl spring
710311	16	Pawl
710312	17	Brake seat
710313	19	Friction plate
710314	20	Ratchet wheel
710315	21	Brake cover
710316	22	Hand chain wheel
710317	23	Thrust washer 17x30x1
710318	24	Thrust bearing 17x30x2
710319	25	Step washer
710320	26	Hand chain cover
710344	86	Metal locked nut M10
710345	87	Hexagon head bolt M10x25
710346	88	Metal locked nut m10

CODE	NO	DESCRIPTION
710321	27	Positioned plate
710322	32	Nameplate
CHN435	41	Load Chain mm 9x27
710323	42	End anchor
710324	43	End anchor pin
710325	44	Protected plate
710326	45	Warning plate assy
710327	46	Top hook assy
710328	47	Safety latch assy
710329	48	Top hook pin
710330	61	Bottom hook assy
710331	63	Bottom hook connector assy
710332	64	Idler sheave assy
710333	71	Metal locked nut M12
710334	72	Metal locked nut M8
710335	73	Circlip 30
710336	74	Circlip 10
710337	75	Cross head screw M6x10
710338	76	Split retainer 9
710339	78	Nameplate 2.5x6
710340	79	Split pin 2.5x25
710341	80	Hexagob recess nut M10
710342	81	Hexagon head bolt M8x35
710343	82	Metal locked nut M8

# MAINTENANCE

It is the responsibility of the owner/operator to ensure chain blocks are maintained and tested in accordance with AS1418.2. Regular maintenance is vital in upkeeping the efficiency of the chain blocks and also maximises their lifetime.

- Only authorised personnel should undertake to do repairs and testing on lifting equipment
- Keep load chains lubricated
- Always check the operation of the brake before starting to move a load
- Brakes must be kept free of oil and grease
- Safety latches should be free of defect and move freely with proper fitment to the hook

**If any of the following defects are evident, the chain block should be referred to an authorised or qualified person for a more thorough examination, servicing and testing:**

- Evidence of possible wear to hooks and fittings
- Damaged or distorted chain end anchor
- Chain wear including bends, notches, elongations, corrosion, not hanging freely or twisted
- Load slipping, jamming or will not lift
- Damaged covers
- Illegible markings

# SPARE PARTS

General inspections are visual and should be carried out by the operator or any designated persons responsible for the equipment

Service Inspections should only be performed by authorised personnel qualified to undertake Service, Repairs and Testing

ITEM	CHECK	GENERAL INSPECTIONS	SERVICE INSPECTIONS
Brake Assembly	Slipping under load or difficulty of release	X	X
Brake Disc	Glazing or score marks. Oil or contamination		X
Pawl: Ratchet	Worn or damaged		X
Pawl: Spring	Engagement, corrosion, stretching		X
Top and Bottom Hooks	Corrosion, deformation	X	X
Hook Retaining Components Nuts, Bolts, Pins	Not tight or secure	X	X
Hook Latches	Damaged, do not engage	X	X
Suspension Members, Sheaves, Hand Wheels, Chain Guides, Attachments, Suspension Pins and Bolts	Wear, cracks, elongation	X	X
Gears	Distortion, worn or broken teeth, lack of lubrication		X
Load Chain	Grade, wear, elongation, twisted or damaged, lack of lubrication	X	X
Covers, Labelling	Removed, damaged or illegible	X	X



# INSPECTION LOG

INITIAL SERVICE DATE:

SERIAL NO:

DATE	NOTES	AUTH SIGNATURE

Imported exclusively by Pacific Hoists Pty. Ltd. and Pacific Hoists Ltd.  
For further information in relation to this product,  
please contact the branch where the product was purchased.

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Thank you for choosing the Challenger brand. Not only are you choosing a quality and reliable brand but you are also helping to support cancer charities in Australia & New Zealand.



