TiTAN

OPERATOR'S MANUAL

HAND CHAIN HOIST

250 KG
THROUGH
30 TONNE

These Hand Chain Hoists meet or exceed the following standards:

CE

AS1418.2
ANSI B30.21
ANSI B30.16

TiTAN
LIFTING TECHNOLOGIES

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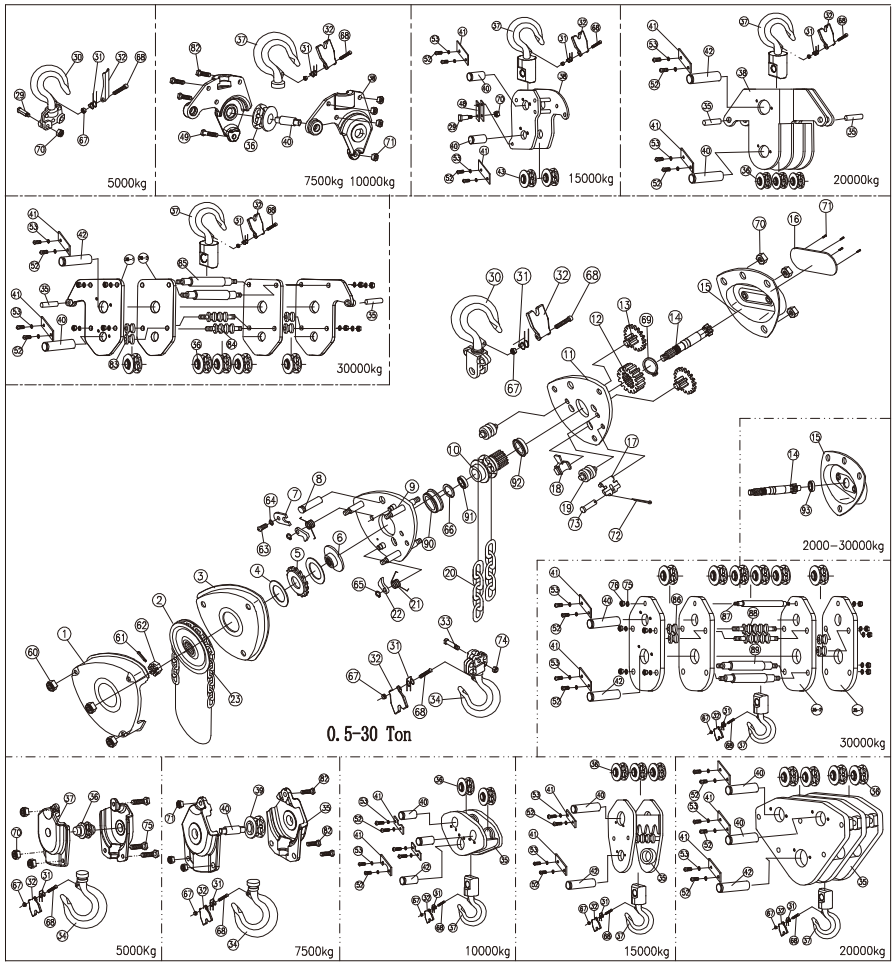
SERVICE NOTES

SPARE PARTS (0.25Tonne - 20 Tonne)



ONE YEAR LIMITED WARRANTY

Titan products are guaranteed to be free of defects in materials and workmanship. If one of these products fails during the first year of operation due to defective materials or workmanship it will be repaired or replaced at our discretion. Normal wear and tear of moving parts is excluded from this guarantee. This guarantee does not apply to any product showing signs of misuse, overloading, alteration or improper maintenance.

WARRANTY POLICY

Any product for which there is a warranty claim must be returned prepaid to an authorized **Titan** warranty depot along with proof of purchase.

For information on **Titan** products, please contact your local distributor:

TiTAN
LIFTING TECHNOLOGIES
42 Clements Avenue,
Bundoora. Vic. 3083.
Australia.
Tel: 61-3-9466-7840 Fax: 61-3-9466-7743
Email: sales@titanlifting.com

SAFETY INFORMATION

It is the responsibility of the owner/user to install, inspect, test, maintain, and operate these products in accordance with AS1418.2 standards.

These general instructions deal with the normal installation, operation and maintenance situations encountered with the products described herein.

This product should not be installed, operated or maintained by any person who has not read all the contents of these instructions. Failure to read and comply with these instructions or any of the warnings or limitations noted herein can result in serious bodily injury or death, and/or property damage.

Only trained and qualified personnel shall operate and maintain this equipment.

Equipment described herein is not designed for, and should not be used for lifting, supporting or transporting people.

Modifications to up-grade, re-rate or otherwise alter these products can only be authorized by the manufacturer.

PRE-INSTALLATION INSTRUCTIONS

Check for damage during shipment. DO NOT install or use a damaged product. Check and verify any structure or other equipment that will support the product has a rated load capacity equal to or greater than the rated load capacity of the product to be used.

OPERATION

Before initial operation:

1. Read and comply with all instructions and warnings furnished with or attached to the product if applicable.
2. Check lubricant.
3. Check operation of brake.
4. Where applicable, check that chain is properly seated in sheaves and that chain is not twisted, kinked or damaged.

Before each shift, where applicable:

1. Inspect hooks for nicks, gouges, cracks, and signs of pulling apart or twisting.
2. Inspect hook latch for proper operation.
3. Check chain for kinks or twists.
4. Check operation of brake.
5. Replace warning label if missing or illegible.

Before operating:

1. Be certain all personnel are clear of the load to be lifted and moved.
2. Make sure load will clear stock piles, machinery, or other obstructions when hoisting and travelling the load.

SAFETY PRECAUTIONS

A. **READ** these instructions and relevant Australian Standard - AS1418.2 before installing, operating, or maintaining this equipment.

B. **WARN** personnel of approaching loads.

SPARE PARTS LIST

1	hand wheel cover assembly
2	hand wheel
3	brake cover
4	friction plate
5	ratchet disc
6	brake seat
7	lock plate
8	top pin
9	side plate assembly B
10	chain sprocket
11	side plate assembly A
12	splined gear
13	driven shaft
14	gear case assembly
15	name plate
16	suspension plate
17	stripper
18	guide roller
19	load chain
20	pawl spring
21	pawl
22	hand chain
23	top hook assembly
30	double spring
31	safety latch
32	chain pin
33	bottom hook assembly
34	chain pin

35	hook hanger compoment
36	idle sheave assembly
37	hook assembly
38	bottom hook assembly
40	idle sheave pin
41	idle sheave pin plate
42	hook pin
52	screw
53	spring washer
60	prevailing torque type nut
61	split pin
62	hexagonal castle nut
63	screw
64	spring washer
65	snap ring
66	snap ring
67	prevailing torque type nut
68	screw
69	snap ring
70	prevailing torque type nut
71	rivet
72	split pin
73	pin
74	prevailing torque type nut
75	hexagonal screw
90	bearing A
91	pin bearing
92	bearing B

CHAIN

Inspect chain before each use. Between regular inspections, check visually daily for nicks, gouges, weld splatter, corrosion, or distorted links. Inspect chain thoroughly if it does not feed smoothly over load sheaves. Inspect as follows.

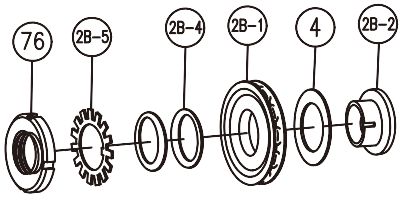
1. Clean chain before inspection.
2. Test hoist with load and observe operation of chain over load sheaves.
3. Slacken chain and inspect contact points for excessive wear. Refer to Figure 2.

Figure 2

OVERLOAD PROTECTION

If you have purchased an **Titan** Hand Chain Hoist fitted with overload protection, the following information should be read in conjunction with all other information contained in this Operator's Manual:

- The "LOAD-SAFE" overload protection consists of the components shown as sub-parts of part #30 in the exploded view of the product.
- The overload protection is calibrated at the time of manufacture and should not require re-calibration if the hoist is used as intended.
- The overload clutch can be re-calibrated using factory supplied tools available only to **Titan** repair agents.
- In the unlikely event of the overload clutch being damaged, complete replacement kits are available. Individual clutch components are NOT available.



76	Round Nut
2B-5	Brake Washer
2B-4	Butterfly Spring
2B-2	Brake Disc
4	Friction Disc
2B-1	Hand Wheel

C. **DO NOT,** WHERE APPLICABLE:

1. Lift more the rated load.
2. Operate the product when it is restricted from forming a straight line with the direction of loading.
3. Operate with twisted, kinked or damaged chain.
4. Operate if chain is not seated in sheaves or sprockets.
5. Wrap chain around load or use chain as a sling.
6. Operate unless load is properly applied to the saddle or bowl of the hook.
7. Operate if load is applied to the tip of the hook.
8. Operate with damaged or missing hook latches.
9. Lift people or lift loads over people.
10. Operate with side-pulling or side-loading of load to hoist.
11. Operate a damaged or malfunctioning product.
12. Operate with other than hand power.
13. Remove, deface, or obscure warning label or labels.
14. Leave load suspended if unattended, unless specific precautions have been instituted.
15. Lengthen load chain or repair damaged load chain by welding.
16. Use chain as a ground for welding.

INSPECTION AND MAINTENANCE

Prior to initial use, all new, modified and repaired products shall be inspected in accordance with Table 1. Thereafter, items to be inspected are indicated in Table 1 by F (Frequent) or P (Periodic).

Frequent Inspections - Visual inspection by the operator or other authorized person. This inspection includes listening for unusual sounds while the product is operated that may indicate deficiencies.

Periodic Inspections - Audible-visual inspection as for Frequent Inspections, with some disassembly to allow a more detailed inspection if external conditions indicate the need.

Exception: Brakes require more than audible-visual inspection. Check daily by operating the product with and without load, stopping at various positions to ensure safe operation.

TABLE 1 - INSPECTION CHART

In chart, F indicates Frequent Inspection, P indicates Pericdic Inspection

LOCATION		CHECK FOR	F	P
Braking mechanism		Slipping under load	✓	
		Hard to release	✓	
Brake parts:	Brake Discs	Glazing		✓
		Oil contamination		✓
	Pawl: Ratchet	Excessive wear		✓
	Pawl: Spring	Corrosion: stretch		✓
Hook		Chemical damage	✓	
		Deformation	✓	
		Cracks (dye penetrant, magnetic particle, or other suitable detection method)		✓
Hook retaining members (Pins, Bolts, Nuts)		Not tight or secure		✓
Hook Latch		Damaged; does not close	✓	
Suspension Members (Sheaves,		Excessive wear		✓
Hand-wheels, Chain attachments, Suspension bolts or pins)		Cracks	✓	✓
Gears		Distortion		✓
		Broken or worn teeth		✓
		Cracks		✓
		Inadequate lubrication		✓
Load Block: Suspension housing		Distortion	✓	✓
		Cracks	✓	✓
Trolley: Supporting structure		Possible inability to continue supporting loads		✓
Bolts, Nuts, Rivets		Not tight or secure		✓
WARNING Label		Removed or illegible	✓	

HOOKS

WARNING

1. Any hook that requires replacement because of excessive bends, twists, or throat opening indicates abuse or overloading of the procuct. Therefore, other load-supporting components of the product should be inspected for posssible damage when such conditions are found.
2. Never repair hooks by welding or reshaping. Heat applied to the hook will alter the original heat treatment of the hook material and reduce the strength of the hook.
3. Never weld handles or other attachments to the hook.

HOOK INSPECTION

Where applicable, inspect hooks and measure throat opening at least once a month. Between regular inspections check visually daily for deformatcn, distortion, twisting, damage and missing or damaged hook latches.

Hooks damaged from chemicals, deformations or cracks,or that have more than 10° twist from the plane of the unbent hook or excessive opening or seat wear, must be replaced. Also, hooks that are opened to the extent that the latch does not engage the tip must be replaced. See figure 1.

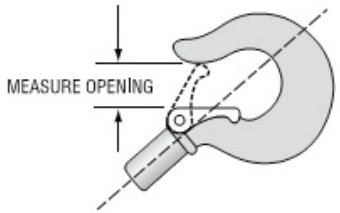


Figure 1 - Hook throat opening

Note: Top and Bottom Hooks have same dimensions.

Replace hook when opening is greater than	Hoist capacity (tonnes)
25mm	0.25
25.5mm	0.5
30mm	1
35.5mm	1.5
39mm	2
45mm	3
49mm	5
62mm	7.5
60mm	10
56mm	15
56mm	20
56mm	30