MME-X-NL 200508

DAESAN®

LEVER HOIST
3/4 - 9TONS

www.daesaninotec.com

NOTICE

It is the responsibility of the owner/user to install, inspect, test, maintain, and operate these Lever hoists in accordance with any applicable national and local codes and standard.

These general instructions deal with the normal installation, operation and maintenance situations encountered with the Lever hoists described herein. The instructions should not be interpreted to anticipate every possible contingency or to anticipate the final system or configuration that uses these Lever hoists. Read and observe the instructions stated in the manual furnished with equipment to be used with these Lever hoists.

If the lever hoist owner/user requires additional information, or if any information in these instruc tions is not clear, contact DAESAN INOTEC INC. Korea or the distributor of the lever hoist. Do not install, inspect, test, maintain, or operate this lever hoist unless this information is fully understood.

These instructions include information for a variety of Lever hoists. Therefore, all instructions and information may not apply to one specific lever hoist. Disregard those portions of the instructions that do not apply.

⚠ WARNING

This lever hoist 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 instruction 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 humans.

User should not use this lever hoist in conjunction with other equipment unless necessary and/or required safety devices applicable to the system are installed by the user.

Modifications to upgrade, rerate or otherwise alter these lever hoists shall be authorized only by the original equipment manufacturer or qualified professional engineer.

PRIOR TO INSTALLATION

Check for damage during shipment. Place claim with carrier if any damage is discovered. DO NOT install or use a damaged lever hoist.

Check and verify that structure or other equipment that will support the lever hoist has a rated load capacity equal to or greater than the rated load capacity of the lever hoist to be used.

⚠ WARNING

SAFETY PRECAUTIONS

1. READ these instructions before installing, operating, or maintaining this equipment.
2. DO NOT lift more than rated load.
3. DO NOT operate hoist when it is restricted from forming a straight line with the direction of loading. (Refer to Figure 1)
4. DO NOT operate with twisted, kinked, or damaged chain.
5. DO NOT operate if chain is not seated in sheaves or sprockets.
6. DO NOT wrap chain around load or use chain as a sling.
7. DO NOT operate unless load is properly applied to the saddle or bowl of the hook. (Refer to Figure 1)
8. DO NOT operate if load is applied to the tip of the hook. (Refer to Figure 1)
9. DO NOT operate with damaged or missing hook latches.
10. DO NOT operate hoist when it is in free-wheeling position. (Refer to Figure 2)
11. DO NOT lift people.
12. DO NOT lift or move loads over people.
13. DO NOT operate hoist with lever extensions.
14. DO NOT operate with side-pulling or side-loading of load to hoist.
15. DO NOT operate a damaged or malfunctioning hoist.
16. DO NOT lift or suspend loads with multiple hoists. (Refer to Figure 3)
17. DO NOT remove, deface, or obscure warning label or labels on hoist.
18. DO NOT leave load suspended when hoist is unattended unless specific precautions have been instituted and are in place.
19. WARN personnel of approaching loads.

FIGURE 1

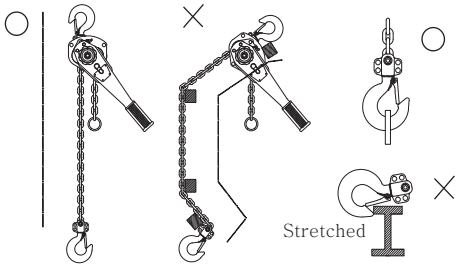


FIGURE 2

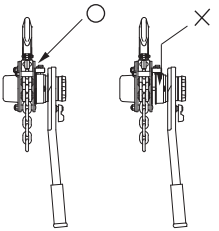
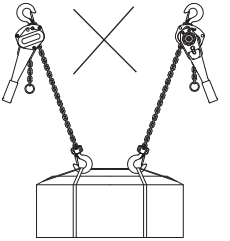


FIGURE 3

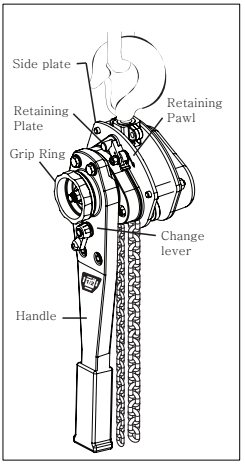


OPERATION

To Adjust Chain Length

1. To adjust a short distance, set change lever in central position and turn grip ring by hand. (Refer to Figure 4)
2. For major adjustment:
   a. Depress retaining pawl with finger and pull grip ring outward. Let pawl return to original position. (Refer to figure 5)
   b. Adjust chain freely in either direction. (Refer to Figure 6)
   c. Terminate free-wheeling as follows:
      Set change lever in DOWN position. While depressing retaining pawl as far as it goes, push grip ring gently to let pawl engage outer edge of retaining plate.Grasp ring and handle lever with one hand and push in while rotating handle lever clockwise. Retaining pawl is now in original position and free-wheeling or idling is terminated. (Refer to Figure 7)

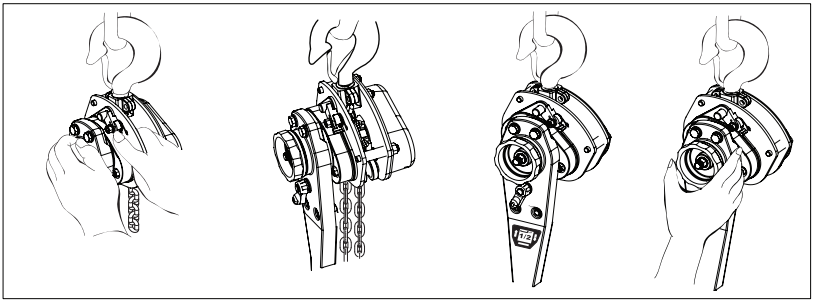
FIGURE 4



⚠WARNING

NEVER PUT THE HOIST IN FREE-WHEELING POSITION WHEN A LOAD IS ATTACHED TO THE HOIST ; AND NEVER ATTACH A LOAD TO THE HOIST WHEN THE HOIST IS IN FREE-WHEELING POSITION

FIGURE 5 **FIGURE 6** **FIGURE 7**



To Operate Lever Hoist

Set change lever in desired direction, UP ro DOWN, and operate handle back and forth to move load in desired direction DO NOT move chain to the extreme end in either direction. Brake is always active, regardless of direction of movement. However, DO NOT attach a load to the hoist when hoist is in free-wheeling mode.

To Test Brake

Lift a light load and set it down a few times to test for brake slippage.if the rotational play of the grip ring is excessive, adjust brake.

DISASSEMBLY, INSPECTION, MAINTENANCE, AND REASSEMBLY

DISASSEMBLY

During disassembly, any parts found to be damaged or having excessive wear must be replaced with new parts during reassembly.

Remove the chain and load block.
1. Disconnect end ring (Item 37) and Warning label.
2. Remove chain with hoist in free-wheeling mode.
3. Inspect chain, end ring, warning label, and load hook.

CHAIN

Inspect chain at least once a month. 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 with solvent 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.
4. Using caliper-type gauge, measure outside length of 11 links under light tension. Replace chain if measurement exceeds

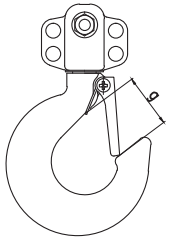
maximum allowable gauge length as follows:

MODEL NO	CAPACITY TONS	CHAIN WIRE DIAMETER	MAXIMUM ALLOWABLE GAUGE LENGTH
D 08	3/4	6.3mm	11 links = 216.4 mm
D 15	1-1/2	7.1mm	11 links = 237.9 mm
D 30	3	9.0mm	11 links = 303.9 mm
D 60	6	9.0mm	11 links = 303.9 mm
D 90	9	9.0mm	11 links = 303.9 mm

HOOKS

Inspect hooks and measure hook throat opening at least once a month. Between regular inspections check visually daily for deformation, distortion, twisting, damage, and missing or damaged hook latches. inspect as follows:

1. Measure hook throat opening from metal to metal of the hook as shown by dimension g in Figure 8. DO NOT measure from latch to metal. Hook must be replaced when throat opening measurement has increased 15% over the original throat opening dimension of a new hook, as follows:



MODEL NO	CAPACITY TONS	DIMENSION g NEW HOOK	DIMENSION g REPLACE HOOK
D 08	3/4	30.0	34.5
D 15	$1^1/_2$	39.0	44.8
D 30	3	46.0	52.9
D 60	6	50.0	57.5
D 90	9	67.0	77.0

FIGURE 8

2. Measure hook depth at load bearing point (base, bowl, or saddle) of the hook. Hook must be replaced when wear at load bearing point is 10% of the original depth of the hook load bearing point.
3. A bend or twist of the hook exceeding 10° from the plane of the unbent hook requires replacement of the hook.
4. A hook latch, when required, that is missing shall be replaced.
5. A hook latch, when required, that is inoperative shall be repaired or replaced.
6. A hook with a hook latch that does not close the throat opening of the hook shall be removed from service or moused until the latch is replaced or repaired.
7. Hook having damage from chemicals, corrosion, or deformation shall be repaired or replaced. Damage in the form of cracks, nicks, and gouges may be repaired by a designated person by grinding longitudinally, following the contour of the hook, provided no dimension of the hook is reduced by more than 10% of the original dimension of a new hook. if the repair reduces the dimension of the hook by more than 10% of the original dimension of a new hook, the hook shall be replaced.

NOTICE

ANY HOOK THAT REQUIRES REPLACEMENT BECAUSE OF EXCESSIVE BENDS, TWISTS OR THROAT OPENING INDICATES ABUSE OR OVERLOADING OF THE HOIST. THEREFORE OTHER LOAD-SUPPORTING COMPONENTS OF THE HOIST SHOULD BE INSPECTED FOR POSSIBLE DAMAGE WHEN SUCH CONDITIONS ARE FOUND.

⚠ CAUTION

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.

NEVER WELD HANDLES OR OTHER ATTACHMENTS TO THE HOOK. HEAT APPLIED TO THE HOOK WILL ALTER THE ORIGINAL HEAT TREATMENT OF THE HOOK MATERIAL AND REDUCE THE STRENGTH OF THE HOOK.

DISASSEMBLY OF HANDLE AND BRAKE

Refer to illustrated parts list, Figure 12. Following the order of parts in the figure, disassemble from right to left.

1. Check handle, grip ring, push pin, brake plate, retaining plate, and hub C-washer for deformation or damage. Replace as required.
2. Check retaining ring and pawl. If pawl is to loose, tighten pawl retaining nut. DO NOT tighten to the point where free movement of the pawl is hindered.

DISASSEMBLY OF GEAR AND BODY

Refer to illustrated parts list, Figure 12. Following the order of parts in the figure, disassemble from left to right. Check gear cover, gears, side plate I, top hook, hook pin, chain guides, chain stripper, load sheave, pinion shaft, and sideplate II for deformation or damage. Replace as required.

REASSEMBLY

Refer to illustrated parts list, Figure 12. Reassemble following the order of parts in the figure

1. Prior to reassembly, wash or clean all parts as required.
2. Assemble gears. Refer to figures 9 and 10.
   a. 3/4 ton: Teeth between two marks on the gear spline (A) must be on horizontal centerline facing toward center as shown in Figure 9.
   b. 11/2 ton: No precise alignment is required. Gears may be assembled freely.
   c. 3 and 6 ton: Teeth between two marks on the gear splin (A) must be on horizontal centerline, one facing toward center and one facing outward as shown in Figure 10.
3. DO NOT lubricate the two brake discs (Item 23) or the friction surfaces contacting them.
4. Adjust brake referring to Figure 11.
   a. Disconnect grip ring
   b. With change lever in central position, pull hook end of load chain in the lowering direction. This sets the brake in an engaged position.
   c. Fit grip ring in such a manner that its projection mard will be aligned with the mark of the change gear.

FIGURE 9

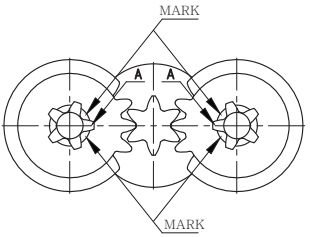


FIGURE 10

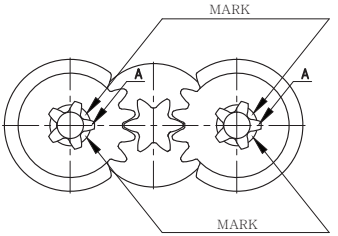
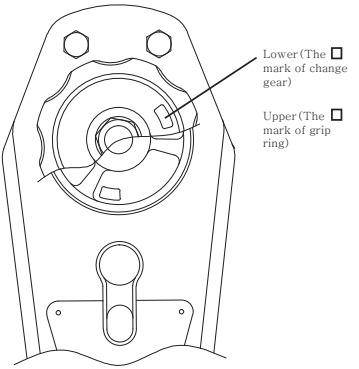


FIGURE 11



LUVRICATION

Apply NLGI No. 2 grease to gears as required.
Lubricate load chain with AGMA No. 2 oil.

GENERAL CONDITIONS OF WARRANTY

WARRANTIES: The Seller warrants to the original using Buyer there of that the goods sold under this Agreement are free from defects in workmanship and materials for a period of one year from the date of shipment to the original using Buyer. No other express warranties are given and no affirmation of Seller or Seller's agents, by word or action, shall constitute a warranty. No warranty is made for components and accessories made by others when such items are warranted by their respective manufacturers.

Installation or operation of the equipment in any manner other than as recommended by Seller, shall void the warranty.

Any variations in details between the goods furnished herein and those covered in Buyer's specifications are due to standardsof manufacture not to be construed as exceptions to the specifications.

DISCLAIMER OF IMPLIED WARRANTIES:

(a) SELLER MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO THE GOODS SOLD UNDER THIS AGREEMENT.

(b) This sale is made WITHOUT ANY WARRANTY BY SELLER THAT THE GOODS ARE SUITABLE FOR ANY PARTICULAR PURPOSE..

(c) Buyer hereby waives all other warranties, guarantees, obligations, liabilities, rights, and remedies arising by law or otherwise including any obligation or liability of the Seller arising from tort, and Buyer shall indemnify Seller from any liability, loss, damage, or claim arising from Buyer's tortious use of the goods sold hereby.

REMEDIES:

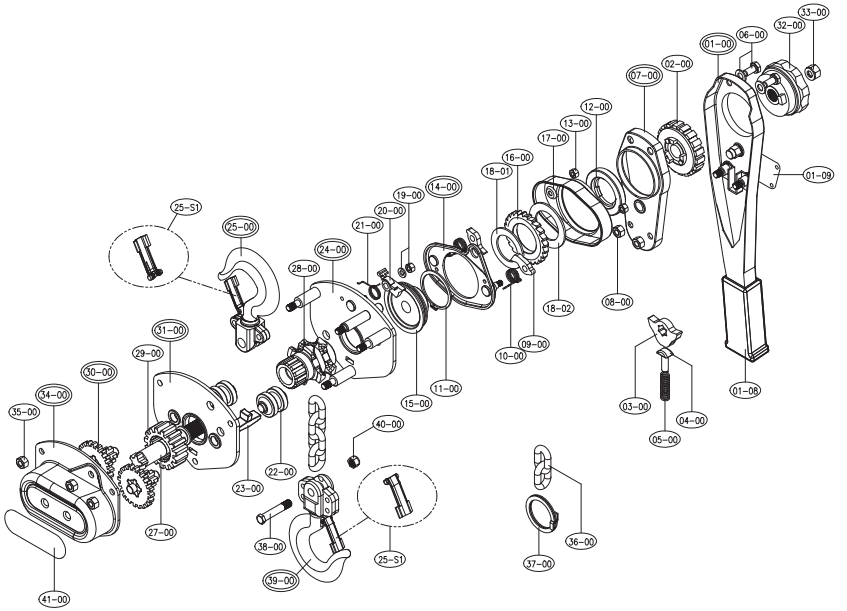
(a) Under no conditions shall any goods be returned to Seller without it's prior written consent.

(b) The Buyer's sole and exclusive remedy for breach of any warranty is limited to Seller furnishing, at it's expense, duplicate or repaired parts F.O.B. Seller's plant with installation at Buyer's expense if discovery of a claimed defect occurs during the allowable warranty period, and if Seller's inspection determines a defect exists.

(c) The quantity of material shown by invoice shall in all cases govern settlement for shortages, unless notice of shortage, ap- propriately documented, is given to the carrier and the Seller upon delivery by the Carrier.

(d) Claims for errors, deficiencies or imperfections shall be deemed waived by the Buyer unless Seller is notified in writing of the basis of such claims within 10 days after discovery of claimed defect and such discovery occurs within the warranted period.

(e) Neither Buyer nor User shall be entitled under this Agreement to recover from Seller any incidental or consequential damages of any nature including but not limited to the cost of any labor expended by others in connection with the goods sold hereby by reason of any alleged nonconformity or breach of warranty on the part of the Seller, nor costs of material of account thereof, nor any lost profits whether determinable or speculative.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36-00
01-00
02-00
07-00
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16-00
18-01
01-09
14-00
19-00
20-00
21-00
25-S1
25-00
24-00
28-00
18-02
08-00
09-00
10-00
11-00
15-00
01-08
03-00
04-00
05-00
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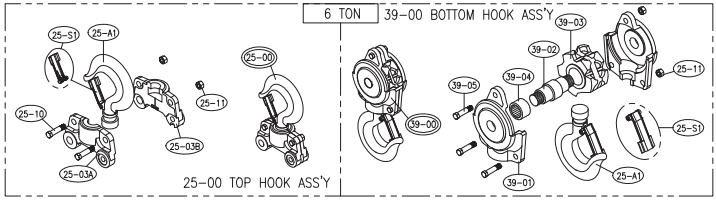
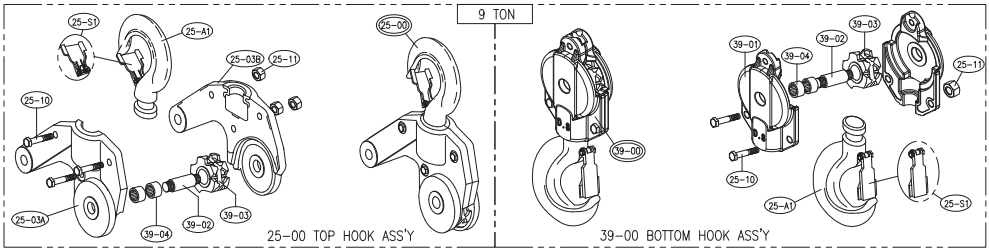
37-00
41-00


6 TON
39-00 BOTTOM HOOK ASS'Y
25-S1
25-A1
25-00
25-11
25-10
25-03B
25-03A
25-00 TOP HOOK ASS'Y
39-03
39-02
39-04
39-05
39-00
39-01
25-11
25-S1
25-A1


9 TON
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25-A1
25-03B
25-11
25-00
25-10
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39-04
39-02
39-03
25-00 TOP HOOK ASS'Y
39-00
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39-04
39-02
39-03
25-11
25-10
25-A1
25-S1
39-00 BOTTOM HOOK ASS'Y

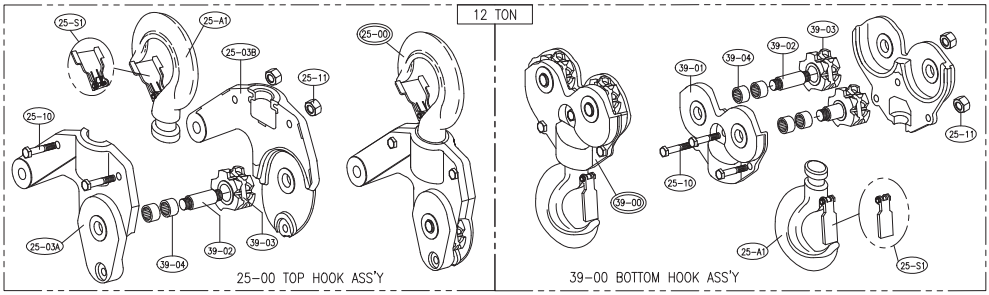
12 TON
25-S1
25-A1
25-03B
25-11
25-00
25-10
25-03A
39-04
39-02
39-03
25-00 TOP HOOK ASS'Y
39-01
39-04
39-02
39-03
25-11
25-10
39-00
25-A1
25-S1
39-00 BOTTOM HOOK ASS'Y

FIGURE 12

	Description	Quantity							Remark
		0.8T	1.5T	2T	3T	6T	9T	12T	
01-00	LEVER ASS'Y(Including RUBBER GRIP)	1							
01-08	RUBBER GRIP	1							
01-09	NAME PLATE	1							
02-00	CHANGE GEAR	1							
03-00	CHANGE PAWL	1							
04-00	PUSH PIN	1							
05-00	PUSH SPRING	1							
06-00	BOLT S/W	2							
07-00	LEVER COVER ASS'Y	1							
08-00	U-NUT(M8)	2							
09-00	PAWL	2							
10-00	PAWL SPRING	2							
11-00	SNAP RING	1							
12-00	BRAKE WASHER	1							
13-00	U-NUT	2							
14-00	REVERSE PLATE ASS'Y	1							
15-00	HUB	1							
16-00	RATCHET GEAR	1							
17-00	BRAKE COVER	1							
18-01	DISC A	2			1				
18-02	DISC B	N/A			1				
19-00	U-NUT P/W	1							
20-00	LOCK LEVER	1							
21-00	LOCK LEVER SPRING	1							
22-00	GUIDE	2							
23-00	STRIPPER	1							
24-00	SIDE PLATE 1 ASS'Y	1							
25-00	TOP HOOK ASS'Y	1							
25-A1	HOOK ASS'Y	N/A				2			
25-S1	SAFETY LATCH SET	2							
25-03A	TOP FRMAE A	N/A				1			
25-03B	TOP FRAME B	N/A				1			
25-10	HEX BOLT	N/A				2	5		
25-11	U-NUT	N/A				5			
27-00	PINION SHAFT	1							
28-00	LOAD SHEAVE	1							
29-00	1ST GEAR	1							
30-00	2ND GEAR & 3RD GEAR ASS'Y	2							
31-00	SIDE PLATE 2 ASS'Y	1							
32-00	GRIP RING	1							
33-00	PINION NUT	1							
34-00	GEAR COVER ASS'Y	1							
35-00	U-NUT	3							
36-00	LOAD CHAIN	--							
37-00	END RING	1							
38-00	HOOK BOLT	1							
39-00	BOTTOM HOOK ASS'Y	1							
39-01	BOTTOM FRAME (W)	N/A				1			
39-02	AXLE	N/A				1	2	3	
39-03	SHEAVE	N/A				1	2	3	
39-04	NEEDLE BEARING	N/A				2	4	6	
39-05	HEX BOLT	N/A				3			
40-00	U-NUT	1							
41-00	COVER PLATE	1							

NOTICE

TO ORDER PARTS: Provide product name and serial number, lever hoist capacity part number, part description, and quantity required. Use only DAESAN® authorized replacement parts in the service and maintenance of this lever hoist.

DAESAN®

Lift your confidence

DAESAN INOTEC INC.
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