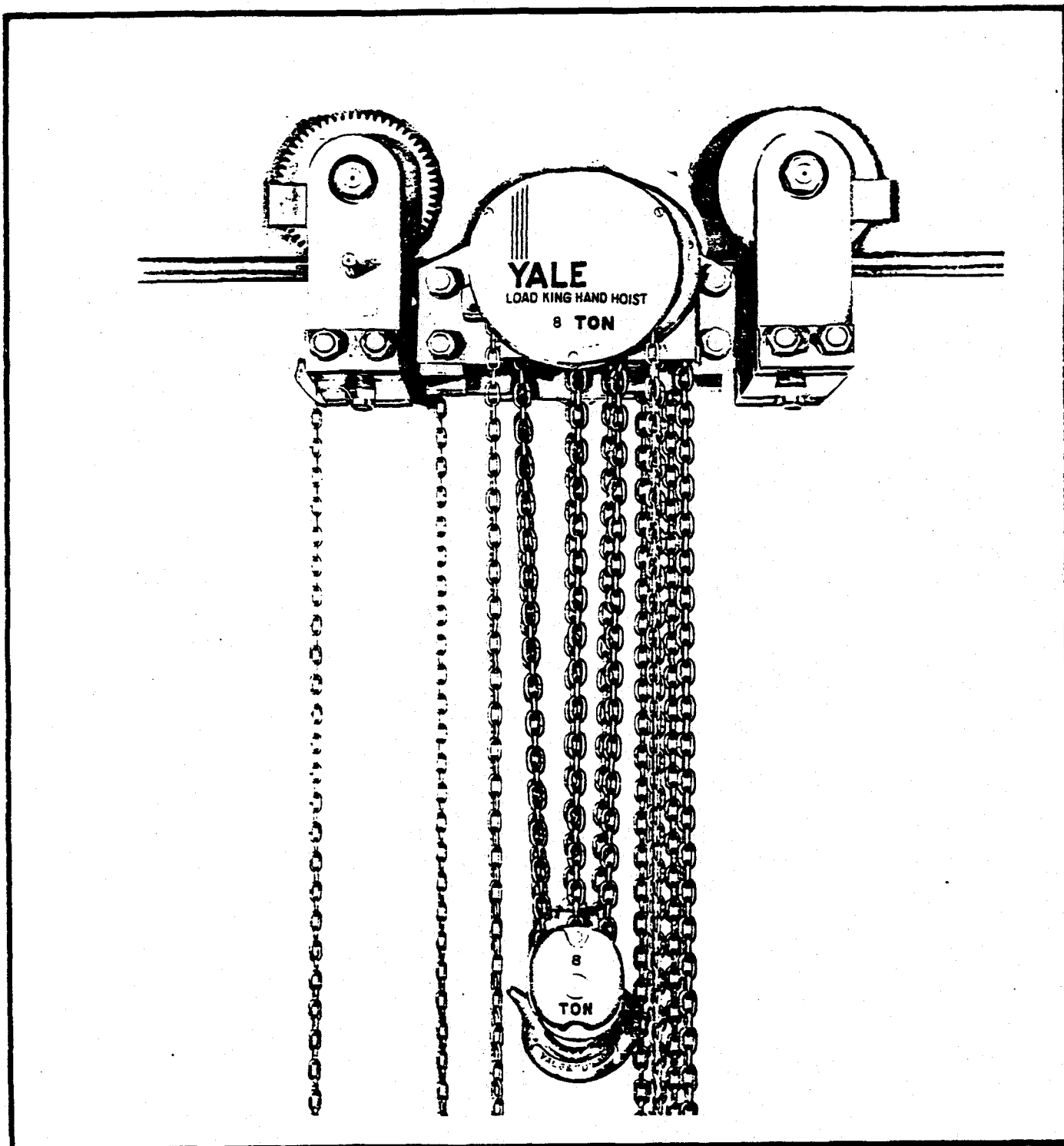


LRP - LRG Series S / R
Spark Resistant Construction
Parts and Instruction Manual

255

Yale®





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When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



Safe Hoisting Practices

Yale® LRP-LRG TROLLEY HOIST

For your own safety and that of your fellow workers, Material Handling Equipment must be used as recommended by the manufacturer. Failure to heed the following recommendations could endanger your life.

1. Never pick up a load beyond the rated capacity appearing on the hoist.
2. Never carry personnel on the hook or the load.
3. Never lift a load with the hoist until all personnel are clear.
4. Never use the chain as a sling.
5. Do not allow unqualified personnel to operate the hoist.
6. Do not transport load over personnel.
7. Do not use the chain as a ground for welding.
8. Never touch a welding electrode to the chain.
9. Do not leave a load suspended in the air for extended or unattended periods.
10. Center hoist unit over the load before lifting. Avoid side pull.
11. Be sure the sling is properly seated in the saddle of the hook.
12. Make sure a load clears neighboring stock piles or machinery before moving.
13. Avoid swinging of load or load hook when traveling the hoist.
14. Check braking mechanism daily for proper function. Check daily the chain for improper seating, twisting, wear, or other defects before operating the hoist.
15. Do not operate hoist if it is functioning improperly.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



Repair Parts Ordering Information

This instruction and parts manual is provided as a convenience to assist you in ordering repair parts for your YALE LOAD KING RAIL HUGGER. To insure prompt service, place all parts orders with your local distributor.

Give all information listed below in items a, b and c. This will enable your distributor to fill your order promptly.

- (a) Give complete data from hoist nameplate.
- (b) Give part numbers, description and quantity required.
- (c) Give the correct shipping destination.

If it becomes necessary to return the complete hoist or certain parts to the factory, a letter requesting such a return is necessary. This letter should contain an explanation for requesting the return. A return authorization will be issued giving you clearance for returning the hoist or parts to the factory. Should you need additional help in ordering, contact your local YALE distributor.

Installation Instructions

For installation on I-Beam other than the size preset at the factory follow the instructions listed below.

Measure the I-Beam flange width and temporarily install the trolley sideplates on the hoist before installation to determine the exact distribution of washers.

The distance between track wheel flanges should be $\frac{3}{16}$ inch greater than the beam flange width for straight runway beams, and $\frac{3}{16}$ to $\frac{1}{4}$ inch in runway system that includes sharp curve. The number of adjusting plates between the sideplates and the suspension yoke should be the same or differ only by one (1) adjusting plate, in order to keep the hoist centered under the I-Beam. The distribution of adjusting plates outside the trolley sideplates is unimportant except that the total number used be sufficient to keep the nuts engaged.

After the hoist and trolley are installed on the I-Beam, check proper fit, then operate the trolley over the entire length of beam with a capacity load to be sure that adjustment and operation is satisfactory.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



PREVENTIVE MAINTENANCE

The following inspection periods are based on average duty with a single shift of 40 hours per week under normal environmental conditions. If the hoist is used in heavier applications or in adverse environmental conditions, It should be inspected more frequently.

Daily Inspection

Inspect the following items before using the hoist.

1. BRAKE MECHANISM: Check for slipping brake.
2. LOAD CHAIN: Check for worn, broken or cracked links. Check for grit, dirt or other foreign matter which may be carried into the hoist mechanism. Check chain for proper lubrication.
3. HOOKS: Check for cracks or deformations. The bottom hook must swivel freely.

Note Bent or twisted hooks indicate overloading or abuse of the unit. Other load bearing components of the hoist should be inspected for damage.

CAUTION DO NOT OPERATE THE HOIST IF IT IS FUNCTIONING IMPROPERLY OR IF DAMAGE IS NOTED.

Annual Inspection

Inspect the following items at least once every year or more according to paragraph above.

1. LOAD CHAIN AND SHEAVES: Check for excessive wear of chain, load sheaves, bottom block sheaves and chain stretch. See table on page 12.
2. HOOKS: Magnetic particle or other suitable crack detecting inspection should be performed at least once a year. Replace hook if throat opening is 15% in excess of normal throat opening or 10° twist from normal plane of hook. The bottom hook must swivel freely. See table on page 6.
3. HARDWARE: Check hook retaining nut, collars or pins for wear. Check for loose bolts, nuts or rivets. Check for missing or damaged hook latch.
4. BRAKING MECHANISM: Check for worn, glazed or oil contaminated friction discs, worn pawls or ratchet. Corroded, stretched or broken pawl springs.
5. LOAD BEARING PARTS: Check for worn, cracked or distorted parts such as hook blocks, suspension bolts, shafts and bearings.
6. SUPPORTING STRUCTURE AND TROLLEY: If used, should be inspected for continued ability to support the imposed loads.

Note INSPECTION RECORD

The last page of this manual is an inspection record log to be filled out and signed by the person making the annual inspection.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



PREVENTIVE MAINTENANCE

Inspection And Care Of Load King Hoist continued

1. If the load chain is worn and requires replacing, also examine the load sheave and load chain guide and stripper. If these parts are worn they should be replaced to avoid damaging the new load chain. The new load chain should be installed with weld on vertical link as shown on page 12. The load chain guide should fit so there is approximately 1/8" clearance between the load chain guide side and the outside diameter of the load sheave.
2. Turn the handwheel to check the backlash and wear on the load brake parts. Normally, the handwheel should have a back movement equivalent to 1 or 1 1/2 pockets. If this backlash is equivalent to 2 or more pockets on the handwheel, some of the synchromatic load brake parts are worn. Inspect the raybestos disc, oilite disc and spring washer for possible replacement.
3. Check operation ring pawl and note that it engages ratchet disc properly.
4. When the hoist is disassembled for repairs, note the position of all parts to assure proper reassembling.
5. The Load King Hoists are designed with the safety of the operating personnel first in mind. Your own safety and that of your fellow workers will be assured when overhead materials handling equipment is used as recommended by the manufacturer. Disregarding such recommendations endangers life and property. You are referred to the SAFE HOISTING PRACTICES listed on page (2). Read this information carefully for your protection and protection of the equipment.

Function Testing

After repair of hoist, test with a light load for proper function. Load test unit with 125% of the rated capacity by lifting and lowering through a short distance.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

PREVENTIVE MAINTENANCE Lubrication



LUBRICANT	LUBRICATION POINT	LUBRICATION INSTRUCTIONS
Houghton Sta-Put #580 Gulf Crown Grease #2 Humble Multi-Purpose Grease Shell Aluma #2 Shell Retinex A	Load sheave pockets. Thread in friction plate. Bore and teeth in ratchet disc. Fingers on ring pawl. Ring pawl studs. All gears and pinions. Idler sheave bearings.	Apply a light coat of grease at reassembly and as needed.
Humble Pen-O-Led EP5 Houghton Sta-Put #415 Top-Sail Lubricant Gulf Multi-Purpose Gear Lube 140	Chain	Run entire chain into a can or pan of oil. Allow chain to soak. Remove from oil and allow oil to drip. Wipe excess oil from chain.

Note LOAD SHEAVE, DRIVING PINION AND INTERMEDIATE GEAR AND PINION BEARING ARE LUBRICATED FOR LIFE AND SEALED. THESE BEARINGS SHOULD NOT REQUIRE ANY MAINTENANCE ATTENTION. IDLER SHEAVE BEARINGS WILL REQUIRE PERIODIC INSPECTION AND LUBRICATION BASED UPON FREQUENCY OF USE. ALL GEARS ARE PACKED WITH A PERMANENT GREASE. LOAD CHAIN SHOULD BE KEPT LUBRICATED FOR SATISFACTORY SERVICE.

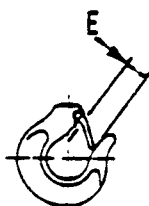
NORMAL HOOK OPENINGS

LRP AND LRG SERIES RAIL HUGGER

CAPACITY IN TONS	BOTTOM HOOK NORMAL
---------------------	-----------------------

1	1 1/8
1 1/2	1 9/16
2	2
3	2
4	2 7/16
5	3
6	3
8	3
10	3

OPENING WITH
SAFETY LATCH

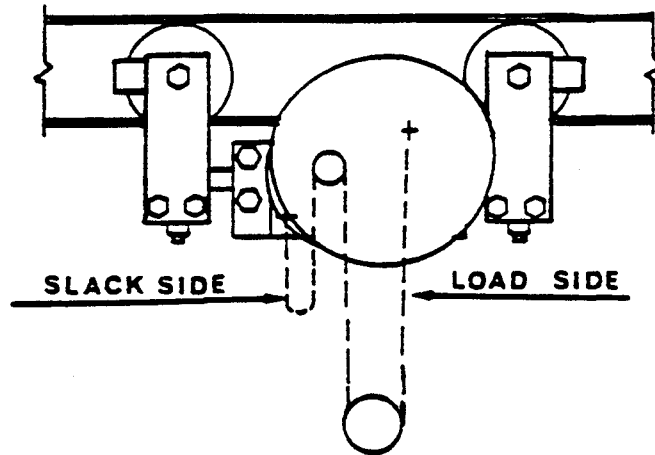


When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

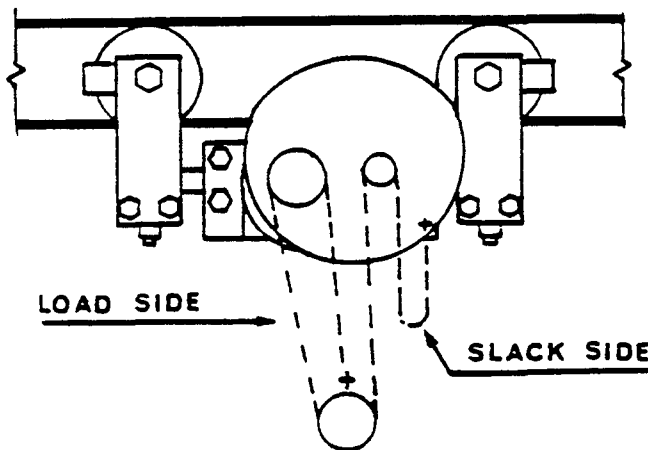
Chain Reeving

LOOKING AT HANDWHEEL SIDE OF HOIST

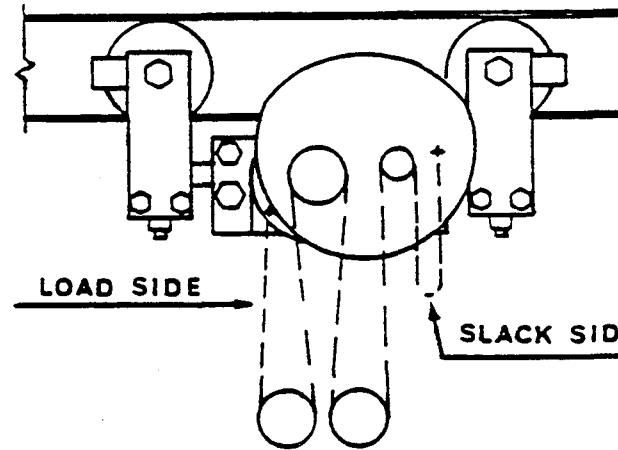
When the hoist is disassembled for repairs, note the position of all parts to assure proper reassembling. When repairs are made, hoist should be tested with loads of full capacity before placing hoist in service.



1 / 2 THROUGH 4 TON S / R



5 & 6 TON S / R



8 & 10 TON S / R

Note: WHEN REPLACING CHAIN FOR ANY REASON, CHAIN MUST BE REEVED AS SHOWN FOR EACH CAPACITY AS ILLUSTRATED.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



DISASSEMBLY

General Disassembly Procedure

- (a) It is suggested the following items be removed before any maintenance is performed:
- (b) Handwheel cover & hand chain.
- (c) Gear cover and counterweight.
- (d) Load chain.
- (e) Remove three (3) self-tapping screws to disassemble handwheel cover & hand chain.
- (f) Remove three (3) self-tapping screws from gear cover.
- (g) Remove two (2) capscrews & lockwashers from counterweight.
- (h) The following disassemble procedure applies to both strands of load chain. Refer to page 7 for illustrations of the various methods of chain reeving which is based on the capacity of the hoist.
- (i) Lower bottom block assembly to floor level or to a position where it is fully supported to prevent damage when assembly is disengaged.
- (j) Remove cotter key & flatwasher from chain end pin on "no load" end of chain and free chain link.
- (k) Remove cotter key and chain anchor pin from the suspension frame. The chain link on the "load" end will now fall free.
- (l) Turn the handwheel in the "down" direction to clear hoist of load chain.
- (m) To remove hoist and trolley assembly from beam, loosen trolley double end studs to allow the track wheels to clear the beam flanges. Be sure unit is sufficiently supported to prevent damage and falling. If it is necessary, the hoist can be taken down without removing the trolleys in the following manner: Remove cotter key, nut, king pin and thrust washer from suspension frame.
- (n) Roll trolleys out from under suspension yokes.
- (o) Lower hoist to floor.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



To Disassemble Load Brake

- (a) Remove cotter key from end of driving pinion.
- (b) Remove pinion nut and check washer.
- (c) Back handwheel off hoist by turning counter clockwise.
- (d) The spring washer, oilite interlock disc, ratchet disc and brake lining disc can be lifted straight off.
- (e) Back off the friction brake plate from the driving pinion by turning counter clockwise.
- (f) Remove tru-arc retaining rings, three (3) from pawl studs which are riveted into suspension frame adapter.
- (g) Remove ring pawl and cushion springs, three (3). Note the smallest end of spring coil must be faced up against the ring pawl when assembled.

To Disassemble Suspension Frame

- (a) Remove four (4) nuts and lockwashers from tie bolts and suspension yokes together.
- (b) Remove tie bolts and suspension yokes.
- (c) Pry extension shaft off both load sheaves.

To Disassemble Gears and Idler Sheaves (ALL CAPACITIES)

- (a) Remove three (3) screws from suspension frame adapter.
- (b) Pry adapter off of suspension frame.

Note: EXERCISE EXTREME CAUTION TO AVOID DAMAGING RABBIT ON THE ALUMINUM ADAPTER.

4 THRU 10 TON UNITS:

- (c) Pry intermediate gear & pinion out of suspension frame. When the hoist is disassembled to this point, remove the cotter pin from the gear case end of the idler sheave shaft. The shaft, idler sheave and bearing can be removed for inspection.

When Replacement Parts Are Needed, Order Only YALE[®] Factory Engineered Parts

DISASSEMBLY



Gears and Idler Sheaves Continued

(ALL CAPACITIES)

- (d) Remove retaining ring from the end of the load sheave.
- (e) Pry load gear off of load sheave.
- (f) Remove driving pinion & pinion bearing from suspension frame.

To Disassemble Stripper, Load Sheave and Chain Guide

Procedure applies to either or both sides of frame.

- (a) Remove cap screw holding stripper in frame.
- (b) Grasp stripper on each side and slide out of channel.
- (c) Drive roll pin out of load sheave shaft.
- (d) Remove retaining ring holding outside load sheave bearing in suspension frame.
- (e) Drive out load sheave from inside of frame. The outside load sheave bearing will come out with the load sheave.
- (f) Remove two (2) cap screws holding load chain guide in frame.
- (g) Drive inside load sheave bearing back into frame.
- (h) Load chain guide can now be removed from the hoist frame.
- (i) Remove the inside load sheave bearing.

To Disassemble Bottom Blocks

1 THRU 3 TON

- (a) Remove two (2) nuts, lockwashers and bolts from bottom guard and guide. Idler sheave and guard and guide can be removed from the crosshead.

4 THRU 6 TON

- (a) Remove two (2) nuts, lockwashers and bolts holding the bottom blocks to the crosshead.
- (b) Remove four (4) nuts and bolts which hold block halves together.
- (c) Separate block halves to remove idler sheave.

When Replacement Parts Are Needed, Order Only YALE[®] Factory Engineered Parts

Bottom Blocks Continued

8 & 10 TON

- (a) Remove four (4) locknuts and bolts holding guard and guide to crosshead. Idler sheaves, bearings, and pins will come out as an assembly with the guard and guide.
- (b) To replace any of the idler sheaves, remove the cotter pins and slide sheave pins out of sheave and guard and guide. Idler sheaves and bearings can now be lifted out and inspected.

To Disassemble Bottom Hooks

(ALL CAPACITIES)

- (a) To remove hook, grind off riveted portion of hook shank and back hook nut off of shank. See instructions on page 6 for proper procedure when replacing hooks.

REASSEMBLY

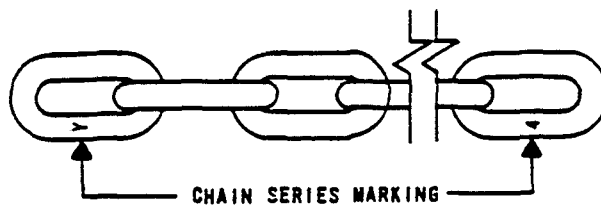
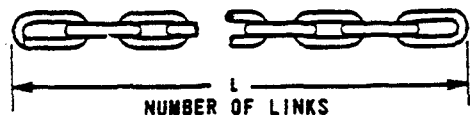
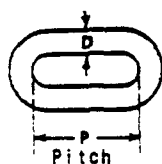
To reassemble hoist after repair is completed, reverse the disassembly instructions.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Part

REPAIR PARTS



New Load Chain Will Measure These Dimensions:

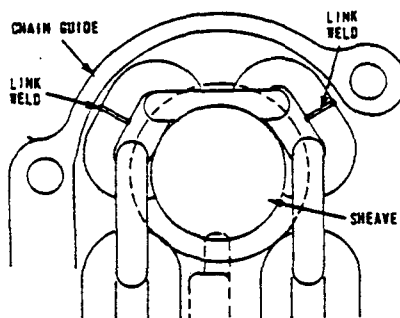


Y3, Y4 AND Y5 LOAD CHAIN (Link)

PART NUMBER	CHAIN SERIES	D DIAMETER	P PITCH	L GAUGE LENGTH NOMINAL	L GAUGE LENGTH MAXIMUM	L NUMBER OF LINKS IN GAUGE
33640 33641*	Y4	1/4	.75	14.79	15.00	19
33650 33651*	Y3	3/8	1.13	22.13	22.46	19

*CADMIUM PLATED

Chain Attachment



WELD ON STANDING LINK MUST FACE AWAY FROM SHEAVE

Recommended Spare Parts For 1 Year

QUANTITY PER HOIST	DESCRIPTION	PART NUMBER
1	BRAKE DISC	0154041-00
1	OILITE DISC	0154042-00
1	RING PAWL	0156405-00
3	RING PAWL SPRING	0159622-00
1	SPRING WASHER	0159671-00

When Replacement Parts Are Needed, Order Only **YALE®** Factory Engineered Parts



Hoist Unit-LRP-LRG Series S / R

CAPACITY 1 - 3 TON

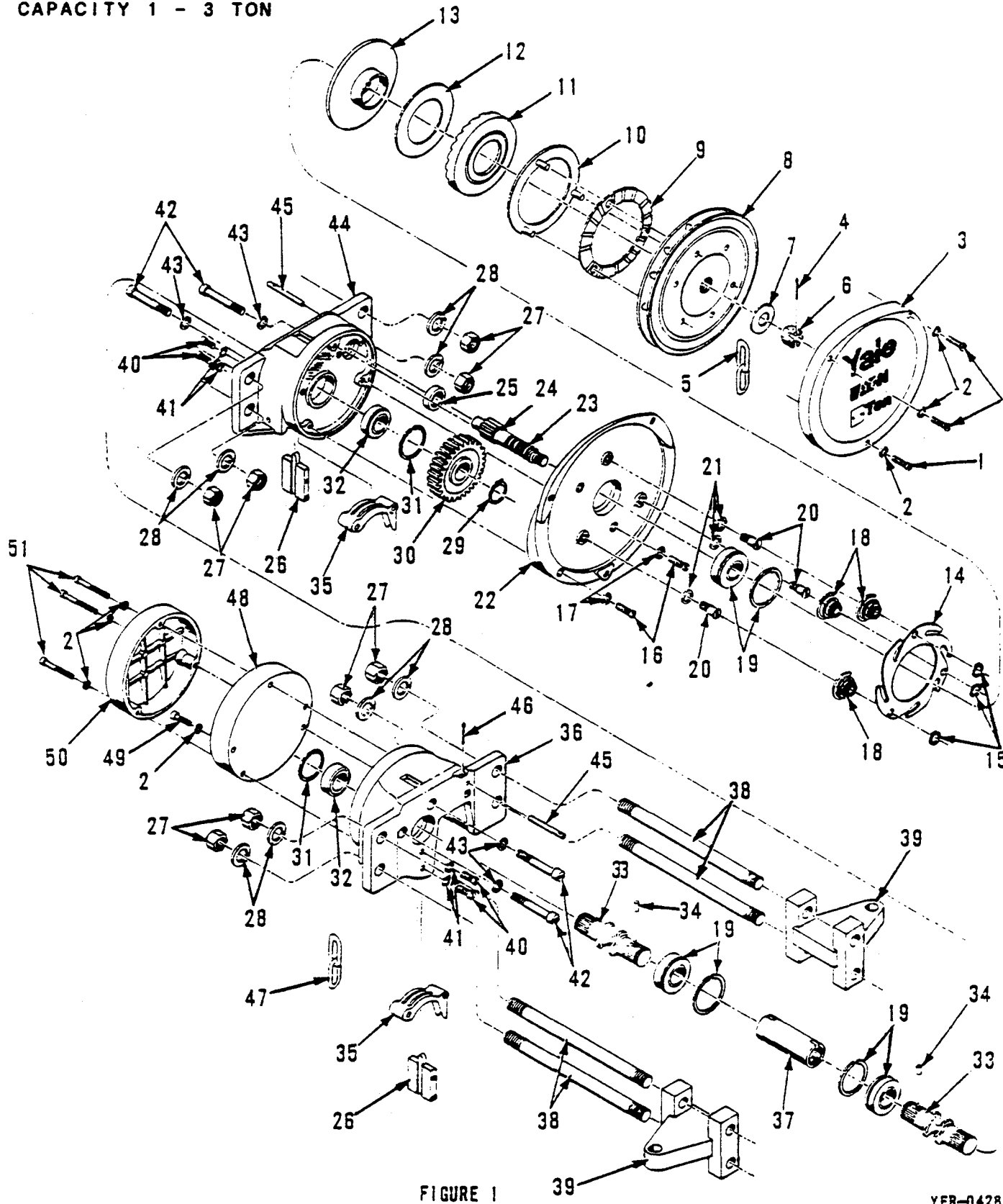


FIGURE 1

YER-0428

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

REPAIR PARTS



Hoist Unit

LRP-LRG Series CAPACITY 1 - 3 TON S / R

ITEM	PART NUMBER	DESCRIPTION	QTY
1	6401209-12	FILLISTER HEAD SCREW	3
2	0150321-00	LOCKWASHER	8
3	0595052-00	HANDCHAIN GUIDE & COVER	1
4	0154200-00	COTTER PIN	1
*5	5024471-81	HAND CHAIN	*
6	0149779-00	CASTELLATED NUT	1
7	0161405-00	CHECK WASHER	1
8	0165100-00	HANDWHEEL	1
9	0159671-00	SPRING WASHER	1
10	0154042-00	OILITE DISC	1
11	0158079-00	RATCHET DISC	1
12	0154041-00	BRAKE DISC	1
13	0127232-00	FRICTION PLATE	1
14	0156405-00	RING PAWL	1
15	0159148-00	RETAINING RING	3
16	0655732-00	FILLISTER HD. SCREW	3
17	0401002-00	LOCKWASHER	3
18	0159622-00	RING PAWL SPRING	3
19	0151277-00	BEARING, BALL	3
20	0159799-00	RING PAWL STUD	3
21	5021389-01	PAWL STUD LOCKWASHER	3
22	6496900-00	SUSPENSION FRAME ADAPTER	1
23	SEE TABLE 8	DRIVING PINION	1
24	0159131-00	RETAINING RING (NOT SHOWN)	1
25	0100836-00	BEARING	1
26	6406851-00	STRIPPER	2
27	0149375-00	TIE BOLT NUT	8
28	0150270-00	LOCKWASHER (TIE BOLT)	8
29	0159156-00	RETAINING RING	1
30	SEE TABLE 9	LOAD GEAR	1
31	6400469-06	RETAINING RING	2
32	0151283-00	BEARING, BALL	2
33	6433534-00	LOAD SHEAVE	2
34	5004099-01	ROLL PIN	2
35	0164954-00	LOAD CHAIN GUIDE	2
36	5000477-00	SUSPENSION FRAME (HANDWHEEL SIDE)	1
37	6403983-00	LOAD SHEAVE EXTENSION SHAFT	1
38	SEE TABLE 10	TIE BOLT	4
39	SEE TABLE 2	SUSPENSION YOKE	2
40	0621437-00	FILLISTER HEAD SCREW	4
41	0325860-00	LOCKWASHER	4
42	0655801-00	FILLISTER HEAD SCREW	4
43	0656195-00	LOCKWASHER	4
44	5000487-00	SUSPENSION FRAME (GEAR COVER SIDE)	1
45	5022541-00	CHAIN ANCHOR PIN (LOAD END)	2

* Specify Length.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



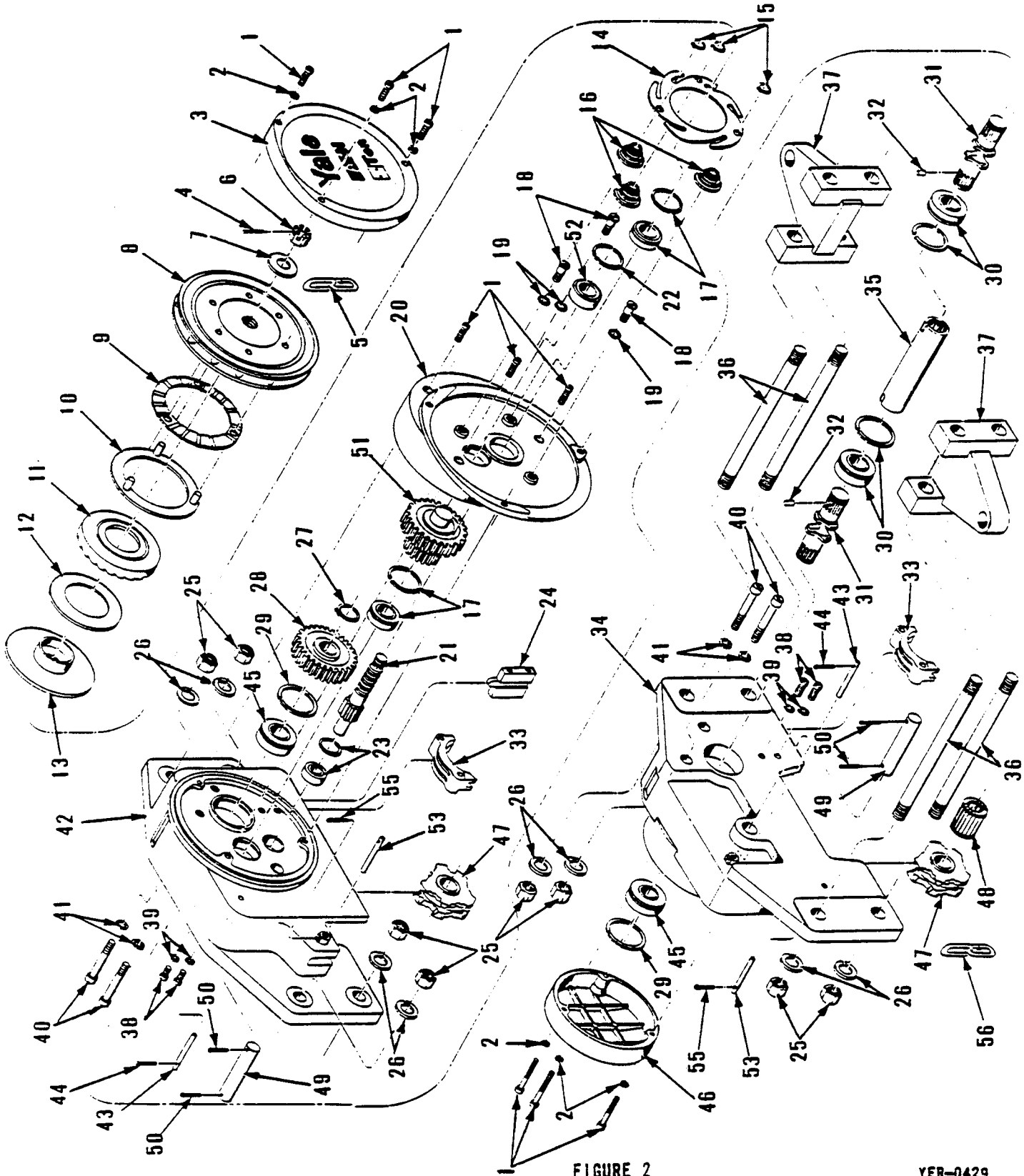
Hoist Unit

LRP-LRG Series CAPACITY 1 - 3 TON S / R

ITEM	PART NUMBER	DESCRIPTION	QTY
46	0154167-00	COTTER PIN	
*47	5029941-81	1/4" CHAIN	
48	6404604-00	COUNTERWEIGHT	
49	0109227-00	FILLISTER HEAD SCREW	
50	0155189-00	GEAR COVER	
51	0655767-00	FILLISTER HEAD SCREW	
52	0621285-00	SLACK END SCREW (NOT SHOWN)	
53	0401002-00	SLACK END WASHER (NOT SHOWN)	
54	0379012-00	SLACK END NUT (NOT SHOWN)	
55	0513771-00	NAMEPLATE (NOT SHOWN)	
56	SEE TABLE 4	CAPACITY PLATE (NOT SHOWN)	
57	0149878-00	RIVET (NOT SHOWN)	

* SPECIFY LENGTH.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



YER-0429

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



Hoist Unit

LRP - LRG Series CAPACITY 4 - 10 TON S / R

ITEM	PART NUMBER	DESCRIPTION	QTY
1	6401209-12	FILLISTER HD. SCREW	9
2	0150321-00	LOCKWASHER	9
3	0514017-00	HAND CHAIN GUIDE & COVER	1
4	0154200-00	COTTER PIN	3
*5	5024471-81	HAND CHAIN	*
6	0149779-00	CASTELLATED NUT	1
7	0161405-00	CHECK WASHER	1
8	0165102-00	HANDWHEEL	1
9	0159671-00	SPRING WASHER	1
10	0154042-00	OILITE DISC	1
11	0158079-00	RATCHET DISC	1
12	0154041-00	BRAKE DISC	1
13	0127232-00	FRICITION PLATE	1
14	0156405-00	RING PAWL	1
15	0159148-00	RETAINING RING	3
16	0159622-00	RING PAWL SPRING	3
17	0151277-00	BALL BEARING	2
18	0159799-00	RING PAWL STUD	3
19	5021389-01	PAWL STUD LOCKWASHER	3
20	5000627-00	SUSPENSION FRAME ADAPTER	1
21	5029363-00	DRIVING PINION	1
22	6400469-01	RETAINING RING	1
23	5005079-02	BEARING	1
24	6406841-00	STRIPPER	2
25	0149378-00	TIE BOLT NUT	8
26	0150273-00	LOCKWASHER	8
27	0159163-00	RETAINING RING	1
28	0155366-00	LOAD GEAR	1
29	6400469-20	RETAINING RING	2
30	5005079-01	BEARING	2
31	6451854-00	LOAD SHEAVE	2
32	0230210-00	ROLL PIN	2
33	6423604-00	LOAD CHAIN GUIDE	2
34	5000607-00	SUSPENSION FRAME (L.H.)	1
35	5036574-00	EXTENSION SHAFT	1
36	5037741-00	TIE BOLT	4
37	SEE TABLE 2	SUSPENSION YOKE	2
38	0603055-00	FILLISTER HD. SCREW	4
39	0150365-00	LOCKWASHER (STRIPPER)	4
40	6412041-00	FILLISTER HEAD SCREW	4
41	0150368-00	LOCKWASHER	4
42	5000617-00	SUSPENSION FRAME (R.H.)	1
43	5031331-00	CHAIN ANCHOR PIN	2
44	0154182-00	COTTER PIN	2
45	0151281-00	BALL BEARING	2

* Specify Length.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Pa

REPAIR PARTS



Hoist Unit

LRP-LRG Series CAPACITY 4 - 10 TON S / R

ITEM	PART NUMBER	DESCRIPTION	QTY
46	0155192-00	GEAR COVER	1
**47	6443613-00	IDLER SHEAVE	2
**48	6400269-01	BEARING (IDLER SHEAVE)	2
**49	5031271-00	IDLER SHEAVE SHAFT	2
**50	0154235-00	COTTER PIN	4
51	0526154-00	INTERMEDIATE GEAR & PINION	1
52	0245223-00	BEARING	1
53	5031301-00	CHAIN END PIN	2
54	0161040-00	WASHER (NOT SHOWN)	2
55	0154167-00	COTTER PIN	2
56	5034481-81	3/8 CHAIN	*
57	0149878-00	RIVET (NOT SHOWN)	2
58	0513771-00	NAME PLATE (NOT SHOWN)	1
59	SEE TABLE 4	CAPACITY PLATE (NOT SHOWN)	1
60	0209149-00	RD. HEAD DR. SCREW (NOT SHOWN)	2

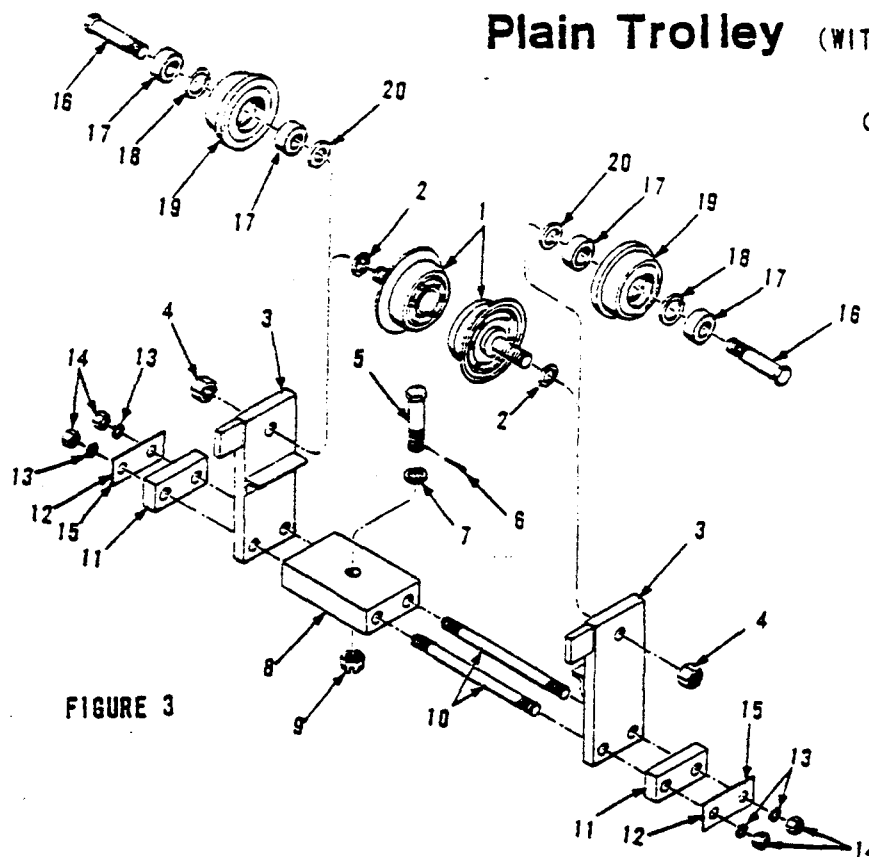
* Specify Length.

** Used on 5 Thru 10 Ton Only

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

Plain Trolley (WITH CAST OR SAGINAW WHEELS)

CAPACITY 1 - 3 TON



ITEM NO.	DESCRIPTION	PART NUMBER			QTY
		1 & 1 1/2 TON	2 TON	3 TON	
**1	PLAIN WHEEL (SAGINAW)	0579193-00	-----	-----	2
**2	WASHER (FOR SAGINAW WHEEL)	5006371-00	0250699-00	-----	2
3	SIDEPLATE, PLAIN	5022184-00	6404614-00	5022344-00	2
4	LOCK NUT	0150160-00	0149715-00	0213606-00	2
5	KING PIN	6402511-00	5022511-00	5022511-00	1
6	COTTER PIN	0154185-00	0154185-00	0154185-00	1
7	THRUST WASHER	0143735-00	0144735-00	0144735-00	1
8	SEPARATOR BLOCK	5017303-00	5019723-00	5019723-00	1
9	SLOTTED NUT	0149779-00	0149780-00	0149780-00	1
10	DOUBLE END STUD	6402551-00	6402641-00	5022571-00	2
11	ADJUSTING BLOCK	5060721-00	5022581-00	5022581-00	2
12	ADJUSTING PLATE	6402541-00	6402651-00	6402651-00	10
13	LOCKWASHER	0150268-00	0150270-00	0150270-00	4
14	HEX NUT	0149374-00	0149375-00	0149375-00	4
15	ADJUSTING PLATE (NOT SHOWN)	6406631-00	6406641-00	6406641-00	4
16	AXLE	0639076-00	0250576-00	0664038-00	2
17	BEARING ASSEMBLY	0250645-00	0250647-00	0664037-00	4
18	SPACER OR RETAINING RING	6400469-02	6400469-04	0664040-00	2
19	PLAIN WHEEL	0525318-00	5005343-00	6405663-00	2
20	SPACER	5006371-00	0250699-00	6402671-00	2
21	RIVETS (NOT SHOWN)	0149878-00	0149878-00	0149878-00	2
22	NAME PLATE (NOT SHOWN)	0513771-00	0513771-00	0513771-00	1

* 3 Ton Units Use A Cup & Cone Type Bearing. Order Assembly #0664037-00.

** For Units With Saginaw Wheels Only.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

REPAIR PARTS

Plain Trolley S / R

CAPACITY 4 - 10 TON

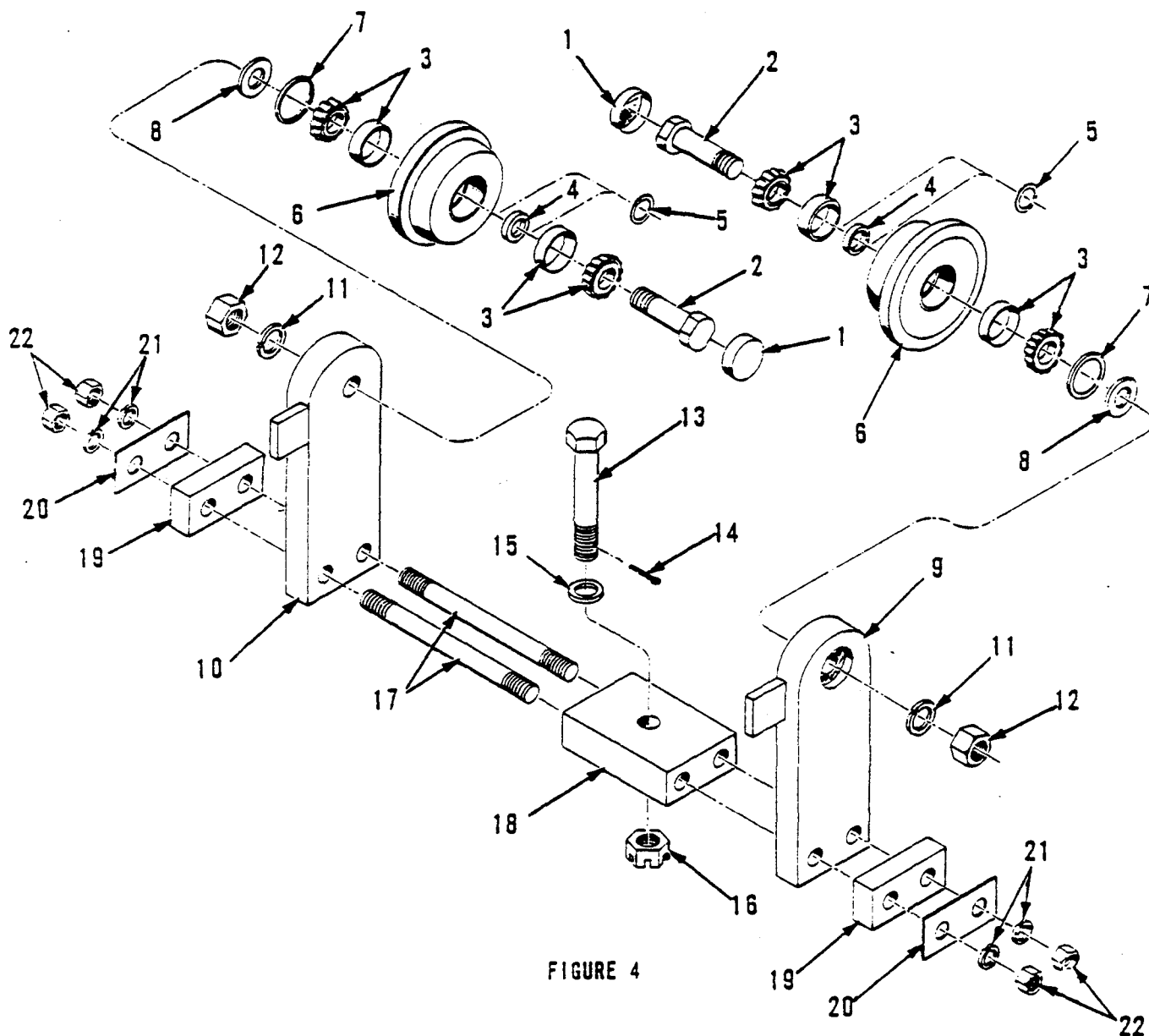


FIGURE 4

YE-0430

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



Plain Trolley S / R

CAPACITY 4 - 10 TON

ITEM NUMBER	DESCRIPTION	PART NUMBER		QTY
		4 TON	5 - 10 TON	
*1	DUST COVER (OUTER)		0646667-00	2
2	AXLE	0579173-00	0664012-00	2
3	BEARING ASSEMBLY	0578982-00	0646669-00	4
4	BEARING SPACER	0601083-00	0646668-00	2
5	BEARING SHIM	0111950-00	0111948-00	4
6	WHEEL, PLAIN	0664887-00	6404364-00	2
*7	DUST COVER (INNER)		0646666-00	2
8	WHEEL SPACER	0579174-00	0236024-00	2
9	SIDEPLATE (R.H.)	5040004-00	5036474-00	1
10	SIDEPLATE (L.H.)	5036704-00	5036484-00	1
11	LOCKWASHER	0150299-00	0150300-00	2
12	JAM NUT	0149718-00	0149719-00	2
13	KING PIN	6402751-00	5060881-00	1
14	COTTER PIN	0150239-00	0154239-00	1
15	THRUST WASHER	0250670-00	0250670-00	1
16	SLOTTED NUT	0149784-00	0149784-00	1
17	DOUBLE END STUD	5037781-00	5031311-00	2
18	SEPARATOR BLOCK	5029443-00	5036514-00	1
19	ADJUSTING BLOCK	5029453-00	5029373-00	2
20	ADJUSTING PLATE	6402741-00	5022461-00	10
21	LOCKWASHER	0150272-00	0150273-00	4
22	HEX NUT	X379004-00	0149378-00	4
23	ADJUSTING PLATE (NOT SHOWN)	6406811-00	6407351-00	4
24	NAMEPLATE	0513771-00	0513771-00	1

* Used on 5 - 10 Ton Only.

When Replacement Parts Are Needed, Order Only YALE[®] Factory Engineered Pa

REPAIR PARTS



Geared Trolley S / R

CAPACITY 1 - 3 TON

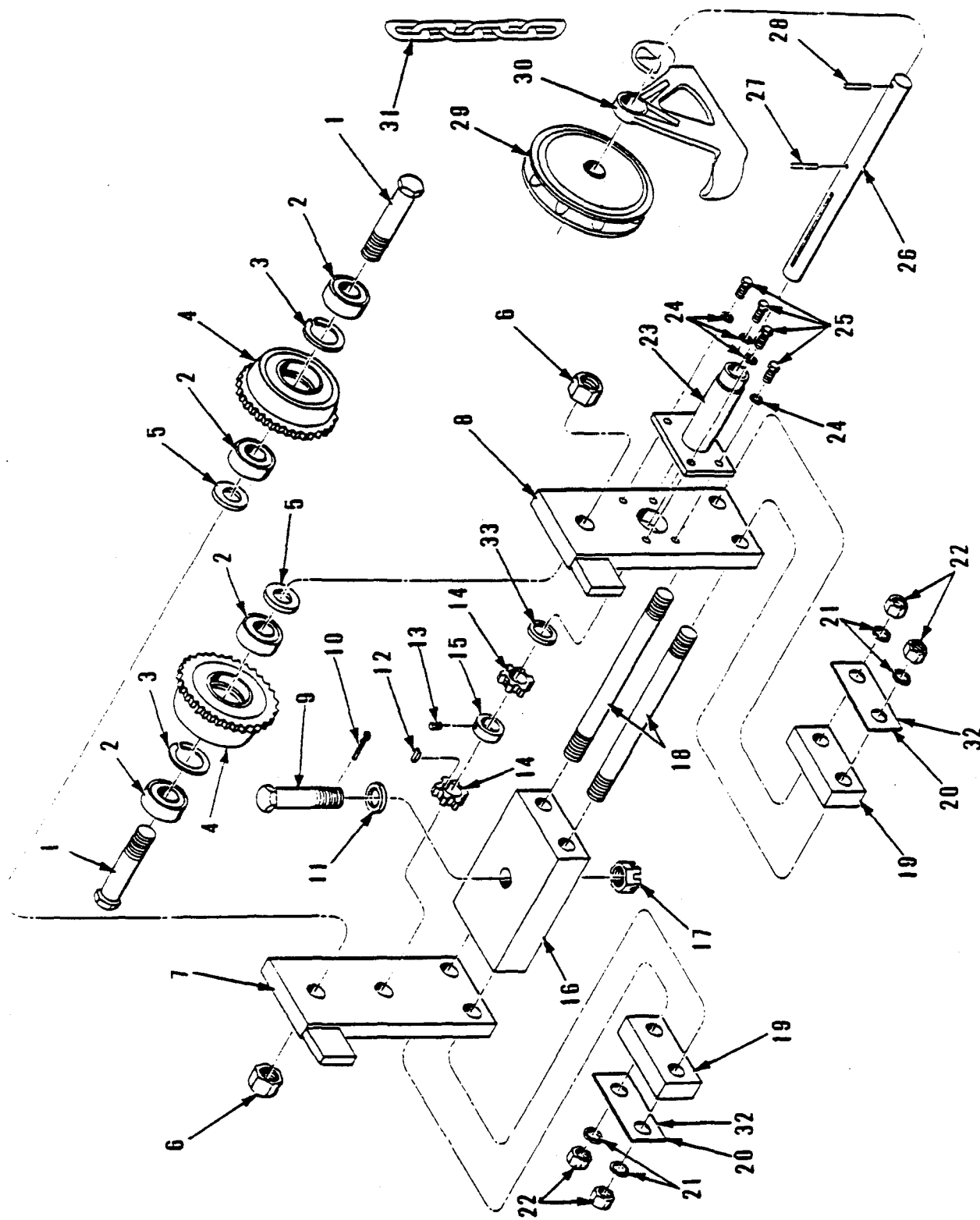


FIGURE 5

YC-0431

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

Geared Trolley S / R

CAPACITY 1 - 3 TON

ITEM	PART NUMBER	DESCRIPTION	QTY
1	SEE TABLE 3	AXLE	2
+2	SEE TABLE 3	BEARING	4
3	SEE TABLE 3	SNAP RING OR SPACER	2
4	SEE TABLE 3	GEARED WHEEL	2
5	SEE TABLE 3	WASHER	4
6	SEE TABLE 3	LOCK NUT	2
7	SEE TABLE 3	SIDEPLATE (R.H.) GEARED	1
8	SEE TABLE 3	SIDEPLATE (L.H.) GEARED	1
9	SEE TABLE 3	KING PIN	1
10	0154185-00	COTTER PIN	1
11	SEE TABLE 3	THRUST WASHER	1
12	6402571-00	PINION KEY	1
13	0148097-00	SET SCREW	1
14	5022501-00	WHEEL PINION	2
15	6402561-00	COLLAR	1
16	SEE TABLE 3	SEPARATOR BLOCK	1
17	SEE TABLE 3	HEX NUT	1
18	SEE TABLE 3	DOUBLE END STUD	2
19	SEE TABLE 3	ADJUSTING BLOCK	2
20	SEE TABLE 3	ADJUSTING PLATE	10
21	0150268-00	LOCKWASHER	4
22	SEE TABLE 3	HEX NUT	4
23	5017283-00	EXTENSION BRACKET	1
24	5021389-01	LOCKWASHER	4
25	0597115-00	EXTENSION BRACKET SCREW	4
26	SEE TABLE 3	SHAFT, PINION	1
27	5004099-02	ROLL PIN	1
28	0230207-00	3/16 x 1 - 1/4 ROLL PIN	1
29	6401803-00	HANDWHEEL	1
30	0610949-00	HAND CHAIN GUIDE	1
*31	5024471-81	HAND CHAIN	*
32	SEE TABLE 3	ADJUSTING PLATE (NOT SHOWN)	4
**33	SEE TABLE 3	SPACER	1
34	0149878-00	RIVET (NOT SHOWN)	2
35	0513771-00	NAMEPLATE (NOT SHOWN)	1

+ 3 Ton Units Use A Cup And Cone Bearing Assembly # 0664037-00.

* Specify Length.

** Used On 2 & 3 Ton Only.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Part

REPAIR PARTS



Geared Trolley S/R

CAPACITY 4 - 10 TON

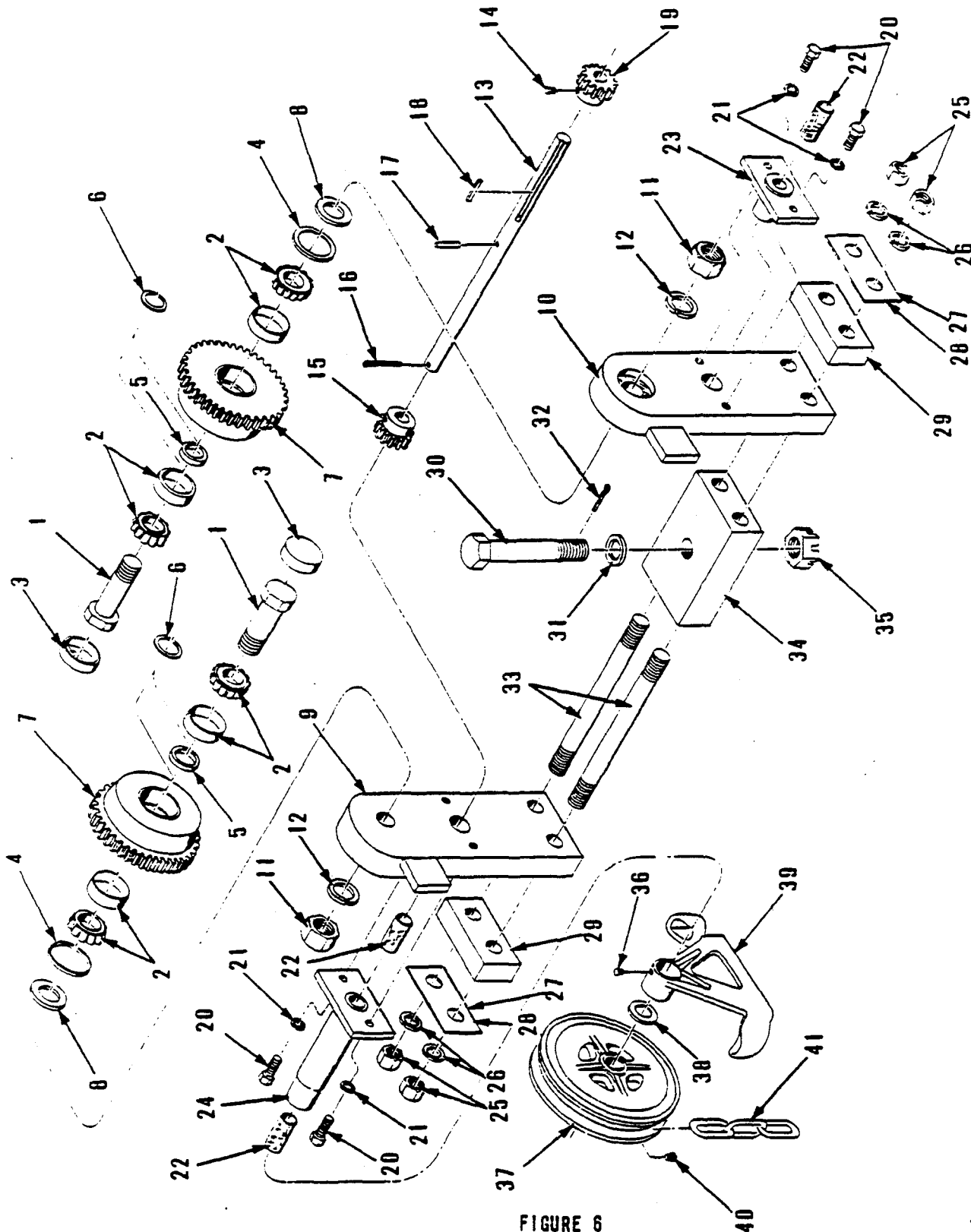


FIGURE 6

YE-0432

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

Geared Trolley

CAPACITY 4 - 12 TON

ITEM	PART NUMBER	DESCRIPTION	QTY
1	SEE TABLE 1	AXLE	2
2	SEE TABLE 1	BEARING	4
**3	0646667-00	DUST COVER (OUTER)	2
**4	0646666-00	DUST COVER (INNER)	2
5	SEE TABLE 1	SPACER, BEARING	2
6	SEE TABLE 1	SHIM, BEARING	4
7	SEE TABLE 1	WHEEL	2
8	SEE TABLE 1	SPACER, WHEEL	2
9	SEE TABLE 1	SIDEPLATE GEARED (L.H.)	1
10	SEE TABLE 1	SIDEPLATE GEARED (R.H.)	1
11	SEE TABLE 1	NUT, AXLE	2
12	SEE TABLE 1	LOCKWASHER, AXLE	2
13	SEE TABLE 1	PINION SHAFT	1
14	0333847-00	SCREW, PINION	1
15	SEE TABLE 1	PINION (FOR ROLL PIN)	1
16	SEE TABLE 1	3/16 x 1 - 1/4 C. PIN	1
17	SEE TABLE 1	1/4 x 1 - 1/4 ROLL PIN	1
18	0162410-00	KEY	1
19	SEE TABLE 1	PINION (FOR SET SCREW)	1
20	0554850-00	SCREW (FOR EXT. BKT.)	4
21	0150266-00	WASHER (FOR EXT. BKT.)	4
22	SEE TABLE 1	BUSHING (BRONZE)	3
23	SEE TABLE 1	SUPPORT PLATE	1
24	SEE TABLE 1	EXTENSION BRACKET	1
25	SEE TABLE 1	1 - 3 HEX NUT	1
26	SEE TABLE 1	LOCKWASHER	4
27	SEE TABLE 1	ADJUSTING PLATE	16
28	SEE TABLE 1	ADJUSTING PLATE	4
29	SEE TABLE 1	ADJUSTING BLOCK	2
30	SEE TABLE 1	KING PIN	1
31	0250670-00	THRUST WASHER	1
32	0154239-00	1/4 x 2 - 1/2 C. PIN	1
33	SEE TABLE 1	DOUBLE END STUDS	2
34	SEE TABLE 1	SEPARATOR BLOCK	1
35	0149784-00	1 - 1/4 - 7 HEX NUT	1
36	0182552-00	BALL VALVE OIL COVER	1
37	SEE TABLE 1	HANDWHEEL	1
38	SEE TABLE 1	FLAT WASHER	1
39	SEE TABLE 1	HANDCHAIN GUIDE	1
40	SEE TABLE 1	SQUARE HEAD SCREW	1
*41	SEE TABLE 1	HAND CHAIN	*
42	0513771-00	NAMEPLATE (NOT SHOWN)	2
43	0209149-00	RD. HEAD DRIVE SCREW (NOT SHOWN)	2

* SPECIFY LENGTH.

** Used on 5 - 10 Ton Only.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts



REPAIR PARTS

Bottom Block S / R

LRP-LRG Series CAPACITY 1 - 3 TON

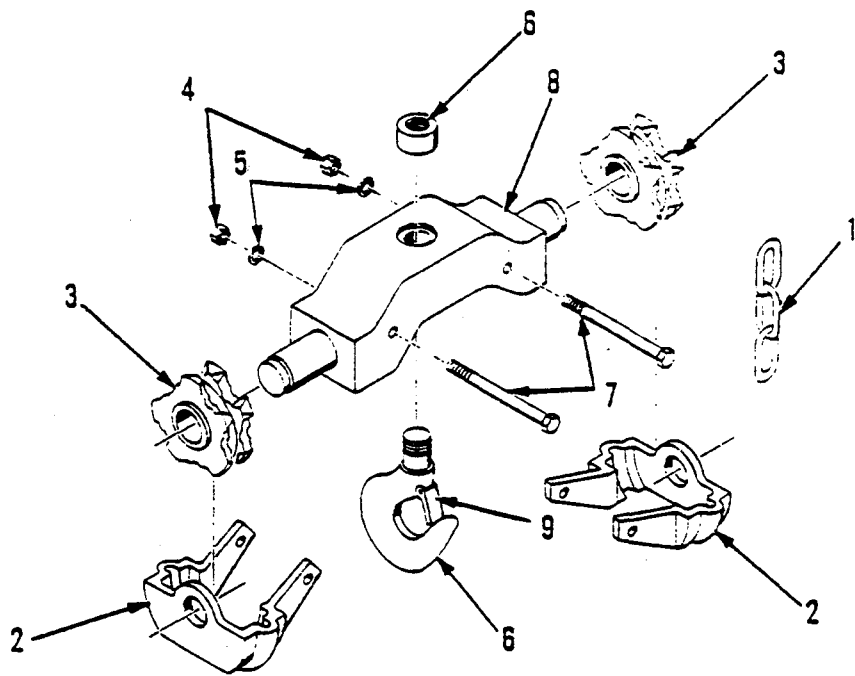


FIGURE 7

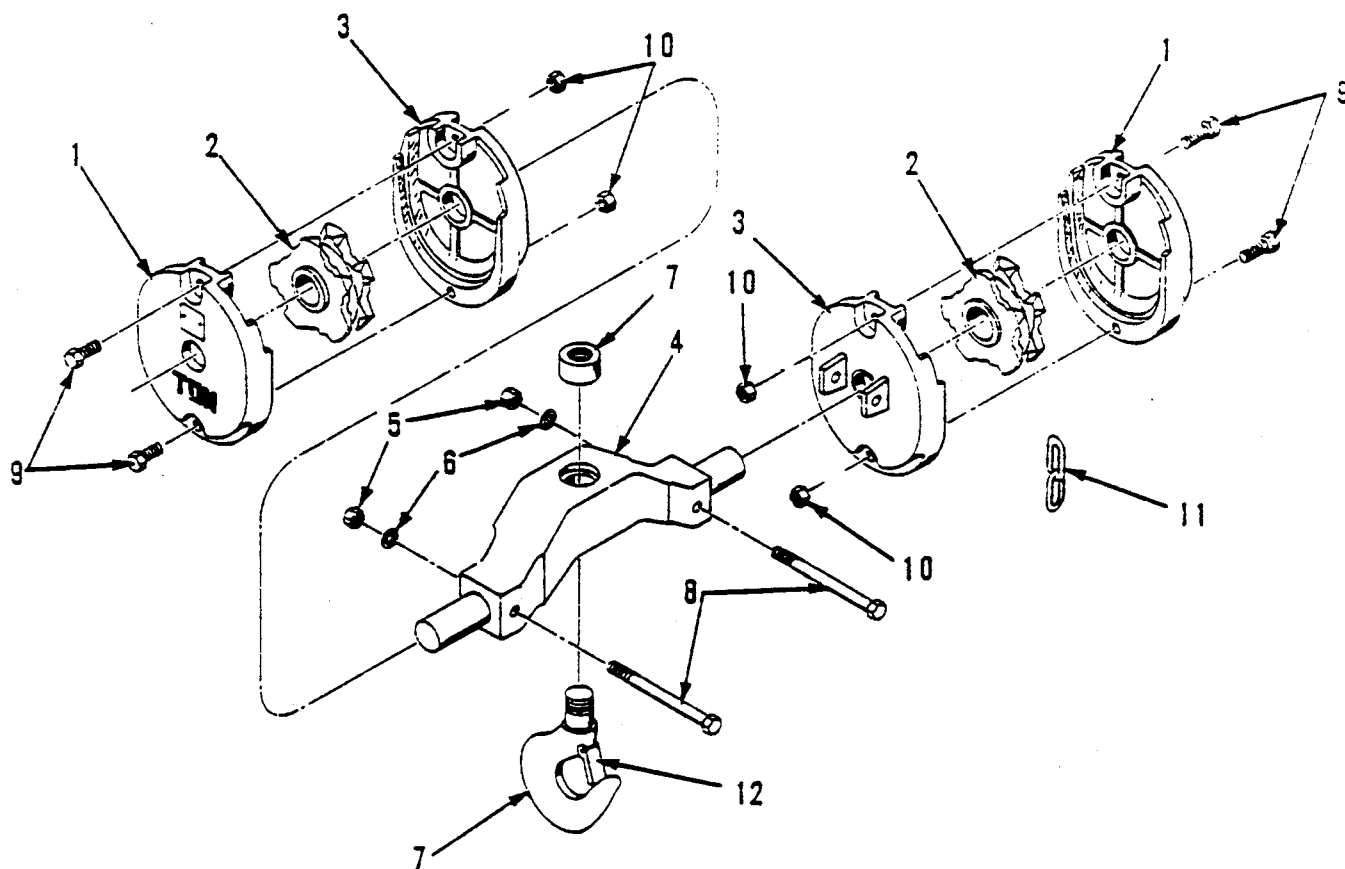
YC-0434

ITEM	PART NUMBER	DESCRIPTION	QTY
*1	5029941-81	LOAD CHAIN	*
2	5022114-00	GUARD & GUIDE	2
3	6426973-00	SHEAVE	2
4	0379017-00	NUT	2
5	0161035-00	LOCKWASHER	2
6	SEE TABLE 7	HOOK & NUT W/SAFETY LATCH	1
7	0576996-00	BOLT	2
8	SEE TABLE 5	BOTTOM CROSSHEAD	1
9	SEE TABLE 6	LATCH KIT	1

* SPECIFY LENGTH.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

Bottom Block S/R LRP-LRG Series CAPACITY 4 - 6 TON


FIGURE 8

YE-0435

ITEM	PART NUMBER	DESCRIPTION	QTY
1	5036384-00	BOTTOM BLOCK HALF	2
2	6443613-00	SHEAVE	2
3	5036374-00	BOTTOM BLOCK HALF	2
4	SEE TABLE 5	BOTTOM CROSSHEAD	1
5	0149709-00	NUT	2
6	0150264-00	LOCKWASHER	2
7	SEE TABLE 7	HOOK & NUT W/SAFETY LATCH	1
8	0597191-00	BOLT	2
9	5037741-00	BOLT	4
10	0588346-00	LOCK NUT	4
*11	5024481-81	LOAD CHAIN	*
12	SEE TABLE 6	SAFETY LATCH KIT	1

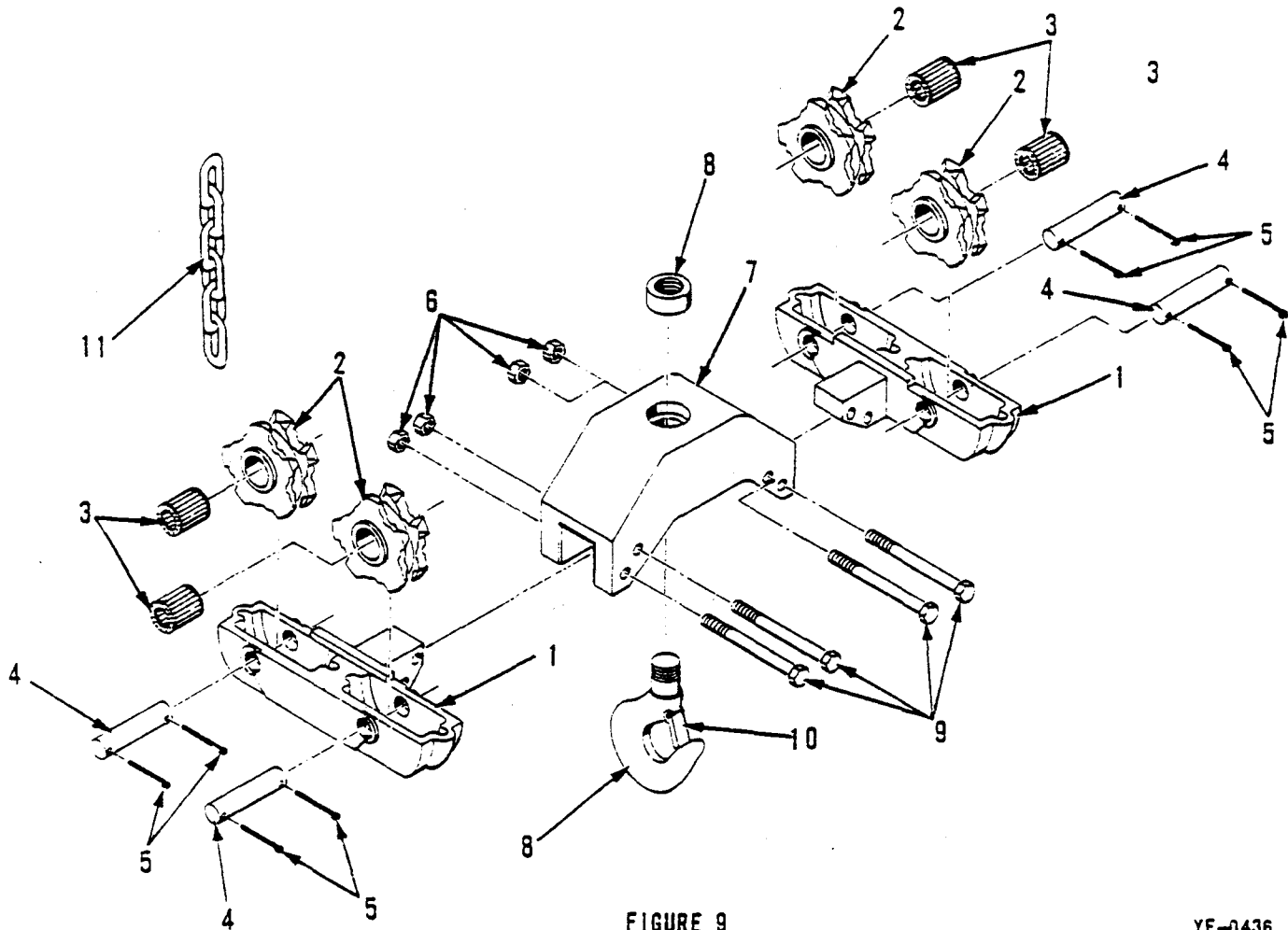
* Specify Length.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

REPAIR PARTS

Bottom Block S / R

LRP-LRG Series CAPACITY 8 & 10 TON


FIGURE 9

YE-0436

ITEM	PART NUMBER	DESCRIPTION	QTY
1	5022126-00	BOTTOM GUARD & GUIDE	2
2	6405463-00	IDLER SHEAVE	4
3	6400269-01	BEARINGS	4
4	5037731-00	SHEAVE PINS	4
5	0154219-00	COTTER PINS	8
6	0149713-00	LOCK NUT	4
7	5022176-00	BOTTOM CROSSHEAD	1
8	6421472-00	HOOK	1
9	5037741-00	HEX HEAD BOLT	4
10	0616675-00	LATCH KIT	1
*11	5024481-81	LOAD CHAIN	*

* Specify Length.

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

LRP-LRG Series S / R

TABLE 1 - GEARED TROLLEY 4 THRU 10 TON

ITEM NUMBER	PART NUMBER		DESCRIPTION
	4 TON	5 - 10 TON	
1	0579173-00	0664012-00	AXLE
2	0578982-00	0646669-00	BEARING
5	0601083-00	0646668-00	SPACER, BEARING
6	0111950-00	0111948-00	SHIM, BEARING
7	0664886-00	6404374-00	WHEEL
8	0579174-00	0236024-00	SPACER, WHEEL
9	5040014-00	5036494-00	SIDEPLATE, GEARED (L.H.)
10	5040024-00	5036504-00	SIDEPLATE, GEARED (R.H.)
11	0149718-00	0149719-00	NUT, AXLE
12	0150299-00	0150300-00	LOCKWASHER (AXLE)
13	5040044-00	5036554-00	PINION SHAFT
15	0588168-00	5060951-00	PINION (ROLL PIN)
16	0154213-00	0154214-00	3/16 - 1 - 1/4 C. PIN
17	0559292-00	0230236-00	1/4 x 1 - 1/4 ROLL PIN
19	5029463-00	5024013-00	PINION (FOR SET SCREW)
22	0508441-00	0508443-00	BUSHING (BRONZE)
23	6412923-00	6412833-00	SUPPORT PLATE
24	6414924-00	6414634-00	EXTENSION BRACKET
25	X379004-00	0149378-00	1 - 8 HEX NUT
26	0150272-00	0150273-00	LOCKWASHER
27	6402741-00	5022461-00	ADJUSTING PLATE
28	6406811-00	6407351-00	ADJUSTING PLATE
29	5029453-00	5029373-00	ADJUSTING BLOCK
30	6402751-00	5060881-00	KING PIN
33	5037781-00	5031311-00	DOUBLE END STUDS
34	5029443-00	5036514-00	SEPARATOR BLOCK
37	6405614-00	6405624-00	HAND WHEEL
38	0250668-00	0250664-00	FLAT WASHER
39	6405514-00	6405524-00	HANDCHAIN GUIDE
40	0388054-00	0388010-00	SQUARE HEAD SCREW
*41	5024471-81	5024471-81	HAND CHAIN

TABLE 2 - SUSPENSION YOKES 1 THRU 10 TON

ITEM NUMBER	CAPACITY	PART NUMBER
39	1 - 1 1/2 TON	5022354-00
39	2 - 3 TON	5022124-00
37	4 TON	6403166-00
37	5 - 10 TON	5022166-00

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

LRP-LRG Series

TABLE 3 - GEARED TROLLEY 1 THRU 3 TON

ITEM NUMBER	PART NUMBER			DESCRIPTION
	1 & 1 1/2 TON	2 TON	3 TON	
1	0639076-00	0250576-00	0664038-00	AXLE
2	0250645-00	0250647-00	0664037-00	BEARING
3	6400469-02	6400469-04	0664040-00	SNAP RING OR SPACER
4	5028573-00	0666220-00	6405673-00	GEARED WHEEL
5	5006371-00	0250699-00	6402671-00	WASHER
6	0150160-00	0150157-00	0231606-00	LOCK NUT
7	5022204-00	6404634-00	5024724-00	SIDEPLATE GEARED (R.H.)
8	5022194-00	6404624-00	5024714-00	SIDEPLATE GEARED (L.H.)
9	6402511-00	5022511-00	5022511-00	KING PIN
11	0143734-00	0144735-00	0144735-00	THRUST WASHER
16	5017303-00	5019723-00	5019723-00	SEPARATOR BLOCK
17	0149779-00	0149780-00	0149780-00	HEX NUT
18	6402551-00	6402641-00	5022571-00	DOUBLE END STUD
19	5060721-00	5022581-00	5022581-00	ADJUSTING BLOCK
20	6402541-00	6402651-00	6402651-00	ADJUSTING PLATE
22	0149374-00	0419375-00	0149375-00	HEX NUT
26	6407603-00	6404353-00	5019713-00	PINION SHAFT
32	6406631-00	6406641-00	6406641-00	ADJUSTING PLATE
*33		0272326-00	6407391-00	SPACER

* Used On 2 & 3 Ton Only.

TABLE 4 - CAPACITY PLATES 4 THRU 10 TON

ITEM	CAPACITY	PART NUMBER
56	1 TON	0595028-00
56	1 1/2 TON	0595053-00
56	2 TON	0595029-00
56	3 TON	0595054-00
59	4 TON	0595055-00
59	5 TON	0595056-00
59	6 TON	0595057-00
59	8 TON	0595058-00
59	10 TON	0595059-00

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

REPAIR PARTS

Hoist Unit LRG - LRP Series

TABLE 5-BOTTOM CROSSHEAD 1 THRU 6 TON

ITEM NUMBER	CAPACITY	PART NUMBER
8	1 TON	5017213-00
	1 1/2 TON	6404033-00
	2 TON	6404654-00
	3 TON	5022234-00
4	4 TON	5039066-00
	5 & 6 TON	5039316-00

TABLE 6 -- LATCH KIT 1 THRU 6 TON

ITEM NUMBER	CAPACITY	PART NUMBER
9	1 TON	6462548-00
	2 - 1 1/2 TON	5006908-00
	3 TON	5006958-00
12	4 TON	0628120-00
	5 & 6 TON	0616675-00

TABLE 7-HOOK & NUT WITH SAFETY LATCH
1 THRU 6 TON

ITEM NUMBER	CAPACITY	PART NUMBER
6	1 TON	6474862-01
	1 1/2 TON	6461382-00
	2 & 3 TON	6474862-03
7	4 TON	6454492-00
	5 & 6 TON	6474862-08

TABLE 8 - DRIVING PINION 1 THRU 3 TON

ITEM NUMBER	CAPACITY	PART NUMBER
23	1 - 1 1/2 TON	5017163-00
	2 - 3 TON	5017333-00

TABLE 9 - LOAD GEARS 1 THRU 3 TON

ITEM NUMBER	CAPACITY	PART NUMBER
30	1 - 1 1/2 TON	0155355-00
	2 - 3 TON	0155356-00

TABLE 10 - TIE BOLT 1 THRU 3 TON

ITEM NUMBER	CAPACITY	PART NUMBER
38	1 - 1 1/2 TON	6404013-00
	2 - 3 TON	5017203-00



INSPECTION

INSPECTION RECORD

1. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

2. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

3. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

4. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

5. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

6. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

7. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

8. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

9. DATE _____	PERSON INSPECTING HOIST _____
COMMENTS _____	

Additional inspection log pages may be obtained by ordering from:
Eaton Corporation-Hoisting Equipment Division-Hwy. No.1, north
Forrest City, Arkansas 72335 - Attn: Distribution Center.

YA-0177

When Replacement Parts Are Needed, Order Only YALE® Factory Engineered Parts

Yale®

HOISTS

Warranty

Every hoist is thoroughly inspected and tested prior to shipment from the factory. Should any problems develop, return the complete hoist prepaid to your nearest Yale Authorized Warranty Repair Station.

This warranty does not apply where: (1) deterioration is caused by normal wear, abuse, improper or inadequate power supply, eccentric or side loading, overloading, chemical or abrasive actions, improper maintenance or excessive heat; (2) problems resulted from repairs, modifications or alterations made by persons other than factory or Duff-Norton personnel;

(3) the hoist has been abused or damaged as a result of an accident; (4) repair parts or accessories other than those supplied by Duff-Norton are used on the hoist. Equipment and accessories not of the seller's manufacture are warranted only to the extent that they are warranted by the manufacturer. EXCEPT AS STATED HEREIN, DUFF-NORTON MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Improvements:

Yale is constantly striving to improve its product. Changes in design and improvements will be made whenever the manufacturer believes the efficiency of the product will be improved without incurring any obligation to incorporate such improvements in any products which have been shipped or are in service.

Important Notice:

Use of chain, wire rope or replacement parts other than as supplied as original equipment on Yale hoists may lead to dangerous operation. Accordingly, Yale cannot be responsible in such cases and our warranty should be voided.

For more information write Yale Hoists, Forrest City, Arkansas 72335.



Yale® Hoists
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P.O. Box 1000
Forrest City, Arkansas 72335
Customer Service Phone (800) 999-6318
Fax (800) 766-0223

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