

**VEW SERIES**  
**Electric Wire Rope Hoist**

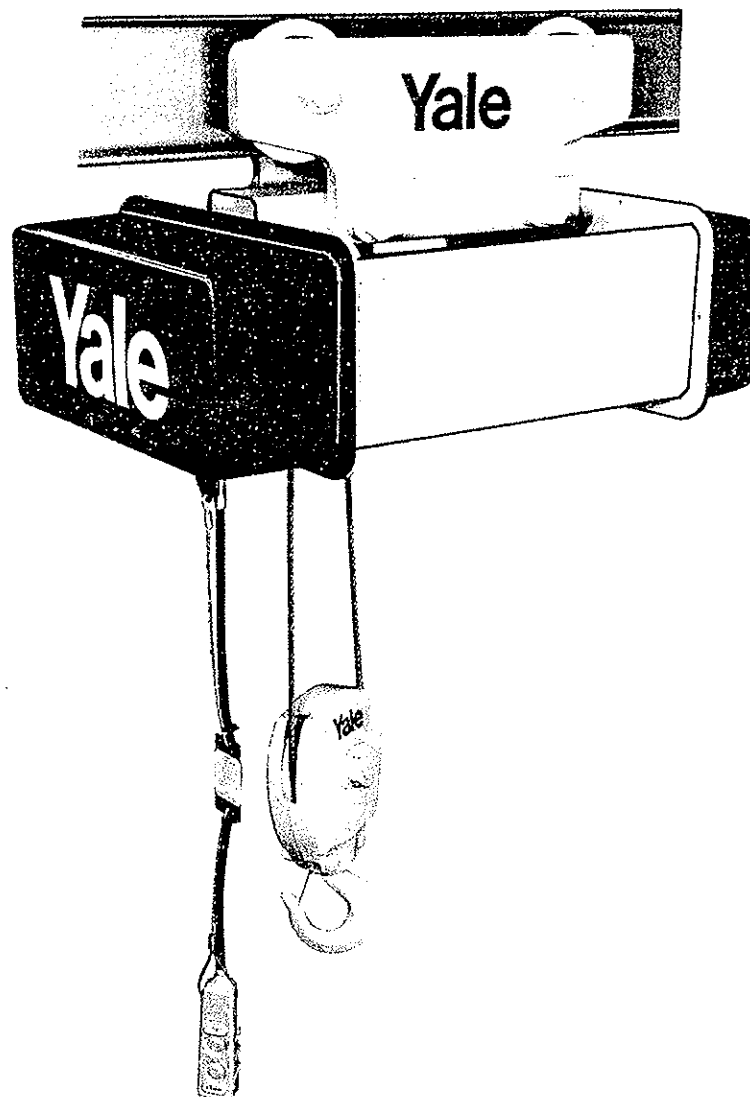
3498

Parts, Instructions and Operation  
Manual

# Yale

Fill in the information below before  
installing the hoist.

Hoist Model No. \_\_\_\_\_  
Trolley Model No. \_\_\_\_\_  
Voltage \_\_\_\_\_  
Capacity \_\_\_\_\_  
Date of Purchase \_\_\_\_\_





# Yale Hoisting Equipment

## SECTION A

### COMMON MODEL NUMBER CODE FOR POWERED HOISTS

FRAME DESIGN	V	E	W	2	X	14	12	D2
POWER SOURCE								
E - ELECTRIC								
A - AIR								
LIFTING MEDIUM								
W - WIRE ROPE								
CAPACITY IN TONS								
GEAR TRAIN SIZE								
LIFT IN FEET								

#### SUSPENSION OR MOUNTING

AM AMERICAN MONORAIL  
 BM BASE MOUNTED  
 CB CRANE BUILDERS SPECIAL  
 CC CLEVIS  
 CM CEILING MOUNTED WINCH  
 CT CLEVELAND TRAMRAIL  
 DM DECK MOUNTED WINCH  
 FM FOOT MOUNTED WINCH  
 GT GEARED TROLLEY  
 LA LOUDEN ACCO-WRIGHT  
 LG LUG MOUNTED  
 LP LOW PROFILE TOP RUNNER  
 PT PLAIN TROLLEY

NC NON ROTATION CLEVIS  
 NH NON ROTATION HOOK  
 ST ST MOTORIZED TROLLEY  
 SM SPAN MASTER  
 TC TWIN CITY  
 TH TOP HOOK  
 TT TRACTOR TROLLEY  
 TR TOP RUNNING TROLLEY  
 WC WHITING CORPORATION  
 WM WALL MOUNTED WINCH  
 WT WT MOTORIZED TROLLEY  
 TL TOP RUNNER LESS CARRIERS

#### SPEED IN FPM

#### REEVING

##### S = STANDARD HEADROOM

S1 ONE PART SINGLE REEVED  
 S2 TWO PART SINGLE REEVED  
 S3 THREE PART SINGLE REEVED  
 S4 FOUR PART SINGLE REEVED

##### D = CLOSE HEADROOM

D1 ONE PART DOUBLE REEVED  
 D2 TWO PART DOUBLE REEVED  
 D3 THREE PART DOUBLE REEVED  
 D4 FOUR PART DOUBLE REEVED  
 D5 FIVE PART DOUBLE REEVED  
 D6 SIX PART DOUBLE REEVED

##### X = STD. HEADROOM, SPECIAL RIGHT ANGLE MTG.

X1 ONE PART SINGLE REEVED  
 X2 TWO PART SINGLE REEVED  
 X3 THREE PART SINGLE REEVED  
 X4 FOUR PART SINGLE REEVED

##### P = CLOSE HEADROOM, SPECIAL PARALLEL MTG.

P1 ONE PART DOUBLE REEVED  
 P2 TWO PART DOUBLE REEVED  
 P3 THREE PART DOUBLE REEVED  
 P4 FOUR PART DOUBLE REEVED  
 P5 FIVE PART DOUBLE REEVED  
 P6 SIX PART DOUBLE REEVED

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

## SECTION A

### SAFE HOISTING PRACTICES

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. Use good common sense and judgment at all times. Safety is the responsibility of the operator of the equipment. You must be competent and attempt to foresee and avoid all hazardous conditions. To be safe as possible, the hoist must be given proper preventive maintenance and testing as described in the **ANSI B30.16** Safety Code for Overhead Hoists and this manual.

#### BEFORE OPERATING HOIST-OPERATOR MUST READ THIS MANUAL;

1. Do not operate hoist unless you are properly trained, physically fit, and authorized to do so. You must be familiar with all operating controls of the hoist, warnings and instructions on the hoist, the safe hoisting practices listed in this manual, **ANSI B30.16** Safety Code for Overhead Hoists, and all pertinent Federal, State, and Local regulations before beginning operating.
2. Do not allow unqualified personnel to operate the hoist.
3. Test all controls and limit switches and make sure hoist is well lubricated at beginning of each shift. Make sure needed lubrication, adjustments or repairs are made by appointed personnel before operations are begun.
4. Be familiar with the equipment and its proper care. Do not operate hoist if adjustments or repairs are necessary, if any damage or undue wear is known or suspected, or if any warning, operating, or capacity instructions normally attached to hoist are damaged, obscured or missing. Report these items promptly to the proper person and also notify next operator when changing shifts.
5. Do not operate hoist if it is functioning improperly.
6. Do not operate hoist with an out - of - order sign attached until sign has been removed by a properly authorized person.
7. Do not adjust or repair hoist unless qualified for maintenance of hoist.
8. Be sure the power supply is disconnected before maintenance and repair procedure is performed.
9. Do not use the wire rope as a ground for welding.
10. Do not touch a welding electrode to the wire rope.

#### APPLYING THE LOAD

11. Never wrap the wire rope around the load, or allow it to drag under load.
12. Always use slings or other approved devices to attach load.
13. Be sure the sling is properly seated in the saddle of the hook. Do not allow hook latch to support any part of load.

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

# Yale Hoisting Equipment

## SECTION A

## APPLYING LOAD (Continued)

14. Do not apply a load to tip of hook, or in such a way as to cause bending or prying forces on the hook or hook support block.
15. Be sure wire ropes are not kinked or twisted or that multiple part ropes are not twisted about each other.
16. Do not operate hoist if wire rope is not seated properly in the grooves of the drum or sheaves.
17. Do not load hoist with less than two wraps of rope on the drum, unless a lower limit device is provided, in which case, no less than one wrap shall remain on drum.
18. Center hoist unit over the load before lifting. Avoid side pull.
19. Never pick up a load beyond the rated capacity appearing on the hoist, except for properly authorized tests.
20. Do not use a load limiting device to measure the maximum load to be lifted. It is a safety device only.

## MOVING THE LOAD

21. Do not engage in any activity which will divert your attention while operating hoist.
22. Respond to signals from designated personnel only, except for stop signals.
23. Never lift a load with the hoist until you and all other personnel are clear of load.
24. Never carry personnel on the hook or the load.
25. Inch the hoist slowly into engagement with a load, but avoid excessive plugging, inching, and quick reversals of load.
26. Do not lift load more than a few inches until it is well balanced in the sling or lifting device.
27. Each time a load approaching rated capacity is handled, check load brake action by raising load just clear of supports and continuing only after you are sure brake is operating properly.
28. Do not transport load over personnel.
29. Make sure load has proper clearance before moving.
30. Avoid swinging of load or load hook when traveling the hoist.
31. On trolley mounted hoists, avoid sharp contact between trolleys or between trolleys and rail stops.
32. Do not use limit devices as a normal means of stopping the hoist. These are emergency devices only.
33. Do not exceed the maximum duty cycle specified by the manufacturer.

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

## SECTION A

### PARKING

34. Do not leave load suspended in the air for extended or unattended periods.
35. Keep load block above head level when not in use.

### SAFETY LAWS FOR PASSENGER ELEVATORS

**CAUTION****DO NOT USE YALE HOISTS OR TROLLEYS FOR PASSENGER ELEVATOR APPLICATIONS.**

The safety laws for passenger elevators specify construction details that are not incorporated in Yale Industrial Hoists. We recommend that passenger elevator operation equipment be used that meets all state and national safety codes. Yale Industrial Products, Inc. will not accept responsibility for applications of Yale Hoists on passenger elevators.

### INSPECTION, PREVENTIVE MAINTENANCE AND TESTING

A preventive maintenance program should be initiated for this hoist immediately after it is entered into service. The preventive maintenance program should comply with recommendations in the applicable Yale Parts and Instruction Manual, and all pertinent National, Federal, State and local regulations. Regular inspections, maintenance, and testing required should be followed for the life of the hoist and written inspection records kept as specified. Sample inspection check lists are included at back of this manual. Extra inspection check lists can be obtained from your nearest authorized Yale Distributor.

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

# Yale Hoisting Equipment

## SECTION B

### REPAIR PARTS ORDERING INFORMATION

This parts and instruction manual contains information required to install and maintain your Yale VEW Series Hoist. To insure prompt service, each repair parts order should be placed with your local distributor, and must contain the following information:

Please give all information listed below in items (a) thru (e). This will enable your distributor to fill your order promptly.

- (a) Give complete data from hoist nameplate, including hoist serial number, model number, voltage, frequency, and hertz.
- (b) Give part numbers, description and quantity of parts required.
- (c) Give correct shipping destination.
- (d) For ordering motor repair parts, give all data on the hoist and motor nameplates.
- (e) If hoist has been purchased for a special application or environment (such as plating, spark resistant, special hook, special controls, etc.), some of the standard parts listed in this manual may not apply and some special parts may not be shown. In such cases you should contact the factory or your nearest Yale authorized repair station for assistance in ordering parts. A full description of the special application or environment for which the hoist has been adapted will be required.

### HOIST SERIAL NUMBERS

The hoist serial number is stamped in the nameplate. Trolley serial numbers are stamped on the trolley sideplate. The nameplates also designate the model number, capacity, speed, current characteristics, and service rating of the hoist or trolley.

### RETURN OF PARTS

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.

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

## SECTION B

## INSTALLATION INSTRUCTIONS

Before the unit is shipped from the factory it is rigidly tested and carefully adjusted for proper operation. However, the following points must be checked to insure correct installation and avoid damage to the hoist.

**Suspension** - Suspend the hoist following the installation procedures for the type of suspension used on your hoist. See pages 8.


**Rope And Drum** - Check the hoist rope for any signs of damage and make sure it lies properly in the grooves of the drum and sheaves. Make sure the rope is well lubricated. (See chart on page 13.)

 **CAUTION** BEFORE OPERATING THE HOIST, REMOVE THE WOODEN SHIPPING WEDGE

**Current Supply** - Make sure the electric current supply corresponds with the rating listed on the hoist nameplate. Make sure duty cycle capabilities of hoist are fully understood by all operators.

**Electrical Connections** - Open the control box and check all the electrical connections to be sure they are tight and that none of the hardware vibrated loose during shipment.

Connect the **power lines** to the point on the reversing switch indicated by the tag and remove tag. If current collectors are used, be sure they make good contact with the conductor bars.

 **CAUTION** THE HOIST MUST BE GROUNDED. TO DO THIS, CONNECT ONE END OF THE GREEN WIRE IN THE POWER CORD TO A SOLID GROUND AND THE OTHER END TO THE SPECIFIED GROUNDING LUG PROVIDED ON THE HOIST.

**Push Button Control**

 **CAUTION** ON POLY PHASE AC HOISTS, IT IS IMPOSSIBLE TO KNOW HOW TO CONNECT THE POWER LINE FOR CORRECT DIRECTION OF THE HOOK TRAVEL.

TO INSURE CORRECT OPERATION OF THE SAFETY LIMIT STOPS IT IS VERY IMPORTANT THAT THE HOOK TRAVEL IS IN THE HOISTING DIRECTION WHEN THE UP BUTTON IS PRESSED. IF IT IS NOT, INTERCHANGE TWO OF THE LINE WIRES FOR 3 PHASE OR TWO OF THE LINE WIRES OF ANY ONE PHASE FOR 2 PHASE OPERATION. IF THE HOIST IS OPERATED WITH INCORRECT POWER CONNECTIONS THE SAFETY LIMIT STOPS WILL BE INEFFECTIVE AND SERIOUS HOIST DAMAGE AND DANGEROUS ACCIDENTS MAY RESULT.

 **CAUTION** DO NOT ATTEMPT TO REWIRE THE PUSH BUTTON.

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



# Yale Hoisting Equipment

INSTALLATION INSTRUCTIONS (Continued)

SECTION B

## Adjustment Of Limit Switches

### 1. UPPER AND LOWER LIMIT SWITCH.



#### WARNING

EACH STEP OUTLINED BELOW MUST BE FOLLOWED FOR PROTECTION AGAINST ELECTRICAL SHOCK AND INJURY FROM MOVING COMPONENTS.

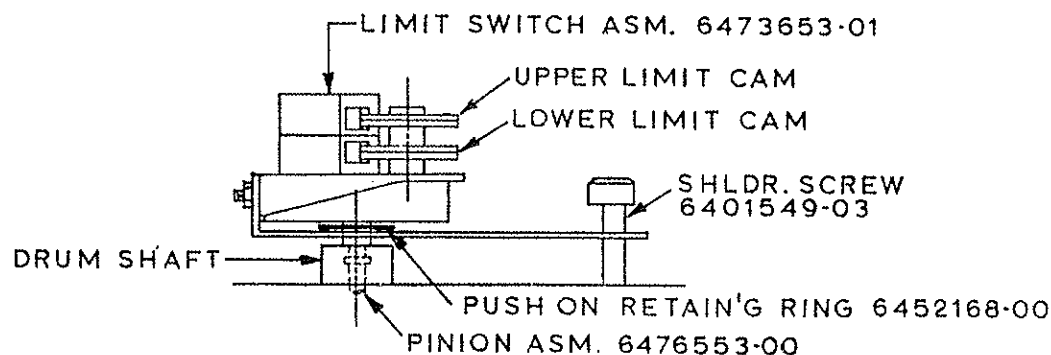
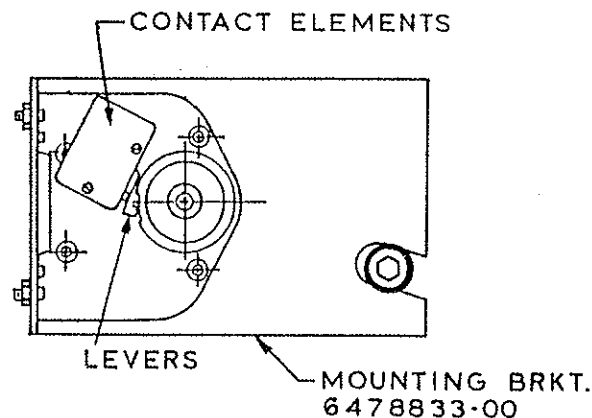
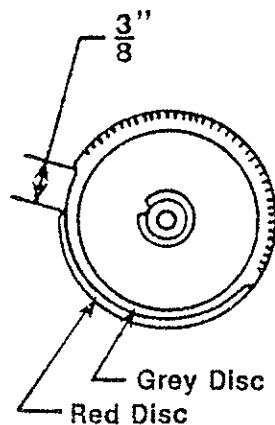
To adjust the traveling nut limit switches, or to set them at other levels:

- Remove all electrical power from the hoist.
- Remove control cover.
- Adjustment discs rotate in a clockwise direction when hoist is lifting and in a counter-clockwise direction when lowering.
- For upper limit switch, move the external adjusting disc.
- For lower limit switch, move the internal adjusting disc.
- Each disc includes two movable sectors independent from each other (one red and one grey).
- Move each of the two red and grey discs in the desired direction keeping a gap of  $\frac{3}{8}$ " between the discs.



#### WARNING

AT LEAST 1 WRAP OF ROPE MUST REMAIN ON THE DRUM IN THE LOWEST POSITION.



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

JAN 1986

# Yale Hoisting Equipment

## SECTION B

**Basic Suspensions** - The basic hoist suspension types are ; lug mounted, frame mounted plain trolley, hand chain operated trolley and single beam under running motorized trolley. Before connecting hoist to supporting structure, or mounting on beam or rail, make sure supporting structure has adequate strength to safely support the loading which will be imposed.

When installing lug mounted types, make sure hoist is bolted securely in place with the proper size bolts, that it is level, that nuts on mounting hole bolts are tightened securely, and the lockwashers, or other means of locking the nuts are used.

If hoist is furnished with a motorized trolley, record the serial number in this book for future reference, and refer to the trolley manual included.

To hang hoist furnished with plain, hand chain operated, motorized trolley, first determine the beam size on which the trolley is to be used, then refer to trolley adjustment instructions below for proper spacer arrangements.

**Trolley Adjustment** - All Yale under running trolleys are properly adjusted at the factory to fit the I-Beam size stated on the order.


**NOTE:** When disassembling the trolley for installation on the I-Beam, take note of the arrangement of the spacers and washers for correct reassembly.

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  $\frac{3}{16}$  inches greater than the beam flange width for straight runway beams, and  $\frac{3}{16}$  to  $\frac{1}{4}$  inches on runway systems that include sharp curves. To keep the hoist centered under the I-Beam, the number of washers between the sideplates and the hoist lug should be the same or differ only by one (1) washer. The distribution of washers outside the trolley sideplates is unimportant except that the total number used must be sufficient to keep the nuts engaged.

**NOTE:** When installing hoist and trolley on beam, tighten nuts snugly so that the trolley sideplates are parallel and vertical.

 **CAUTION** BE SURE THERE IS A LOCKWASHER UNDER EACH NUT.

After the hoist and trolley are installed on the I-Beam, operate the trolley over the entire length of the beam with a capacity load to be sure that adjustment and operation is satisfactory. Then tighten all sideplate nuts to maximum standard torque for bolt size used.

**Trolley With Guide Rollers** - To adjust trolleys equipped with guide rollers add spacers in even quantities on each side of the spacer block until the distance between guide rollers is  $\frac{1}{8}$  inches wider than the beam flange width.

**NOTE:** When properly installed and adjusted the guide rollers should be  $\frac{1}{16}$  inches from the edge of the I-Beam.

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

# Yale Hoisting Equipment

## SECTION B

### PREVENTIVE MAINTENANCE SCHEDULE

The required periods between inspections will vary due to the wide range of duty cycles and operating conditions encountered with the type of equipment. The following recommended inspection periods are based on duty of specified service rating with single shift operation (40 hours per week) under normal environmental conditions. If the hoist is used under adverse environmental conditions it should be inspected more frequently,

**Daily Inspection - Inspect the following items before operating hoist.**

- 1 **Manual Controls** - Check all manual controls for proper operation.
- 2 **Electrical Connections** - Check for worn or frayed wires, for loose connections and for damage to, or improper operation of, push button assembly.
- 3 **Limit Switch** - Check the upper and lower limit switch by running the hook **without load**, and at the slowest speed obtainable, to the maximum up and maximum down positions. Then test with increasing speeds up to maximum. The switch should shut the hoist off before the bottom block contacts the rod or weight type limit switch at the upper extreme. 1 Wrap of rope should remain on the drum at the shut-off point at the lowest extreme. If adjustment is necessary, see page 7.
- 4 **Hook** - Check for cracks or deformation. Check for damaged or missing latch. A bent or twisted hook indicates overloading or abuse of unit. Other load bearing components of the hoist or trolley should be inspected if overloading is apparent or suspected. The bottom hook must swivel freely.
- 5 **Wire Rope** - Check for proper seating in drum grooves. Check for wear, unstranding, fraying, kinks, or broken wires in the wire rope, and condition of end connections. (If damage is noted, see wire rope instructions under monthly inspection.)
- 6 **Hook Drift** - With a load, the hook should stop promptly when the push button is released. Hook drift of more than 2 inches indicates that the hoist brake is malfunctioning. (See monthly and annual inspection instructions for more details.)
- 7 **Unusual Conditions** - Excessive noise, lubrication leaks, etc. should be investigated.



**CAUTION:**

**DO NOT OPERATE THE HOIST IF ABOVE INSPECTION INDICATES THAT MAINTENANCE IS NEEDED.**

### Monthly Inspection

1. ALL ITEMS UNDER DAILY INSPECTION.
2. **Hook** - Check hook retaining nuts and collars, and means used to secure them. Replace hook if throat opening is in excess of maximum shown in table on page 12, or if there is 10 degrees or more twist from normal plane of hook.
3. **Brake** - Check the function of the brake by lifting a light load (approximately 25% of rated load) 6 to 12 inches above the floor.
4. **Contactors** - Check for burned or badly pitted contacts.
5. **Push Button** - Check the ground connections to be sure that the wire cores from the push button cable and the power cord are secured. Tighten the grounding screw and replace the lockwasher if it is missing. On two button station, replace push button pendant when diaphragm buttons become cracked.

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

## SECTION B

### Monthly Inspection (Continued)

6. **Bearings** - Check all bearings for noisy operation, which is an indication of wear.
7. **Hardware** - Check for loose bolts, nuts and rivets.
8. **Wire Rope** - Check condition of wire rope using inspection check list. (See instructions page 14.)  
Lubricate per chart on page 13 needed.



**WARNING NEVER ALLOW WIRE ROPE TO OPERATE DRY.**

9. **Warning Labels** - Check for absence or illegibility of warning decals and tags and replace if necessary.
10. **Supporting Structure Or Trolley** - If used, should be checked for continued ability to support the imposed loads. Check for loose suspension or support bolts, axle nuts, etc.
11. **Inspection Check List** - Fill out inspection check list at the back of this manual, sign, date and file for future reference.

### Quarterly Inspection

1. **ALL ITEMS UNDER DAILY AND MONTHLY INSPECTIONS.**
2. **Gearing** - Remove gearbox cover and visually inspect gearing for excessive or uneven wear of the gear teeth. Replace if necessary.
3. **Brake** - Check for excessive or uneven disc wear. Clean solenoid plunger seat and check for uneven seating between the plunger and coil.

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

# Yale Hoisting Equipment

SECTION B

## Annual Inspection

1. ALL ITEMS UNDER DAILY, MONTHLY AND QUARTERLY INSPECTIONS.
2. **Hooks** - Magnetic particle or other suitable crack detecting inspection should be performed if need is indicated by external appearance. Check for loose retaining nuts and collars.
3. **Load Bearing Parts** - Check for worn, cracked or distorted parts, such as suspension housings, outriggers, clevises, yokes, hook blocks, suspension bolts, shafts, locking devices and bearings on hoist, (also on trolley, if so equipped).

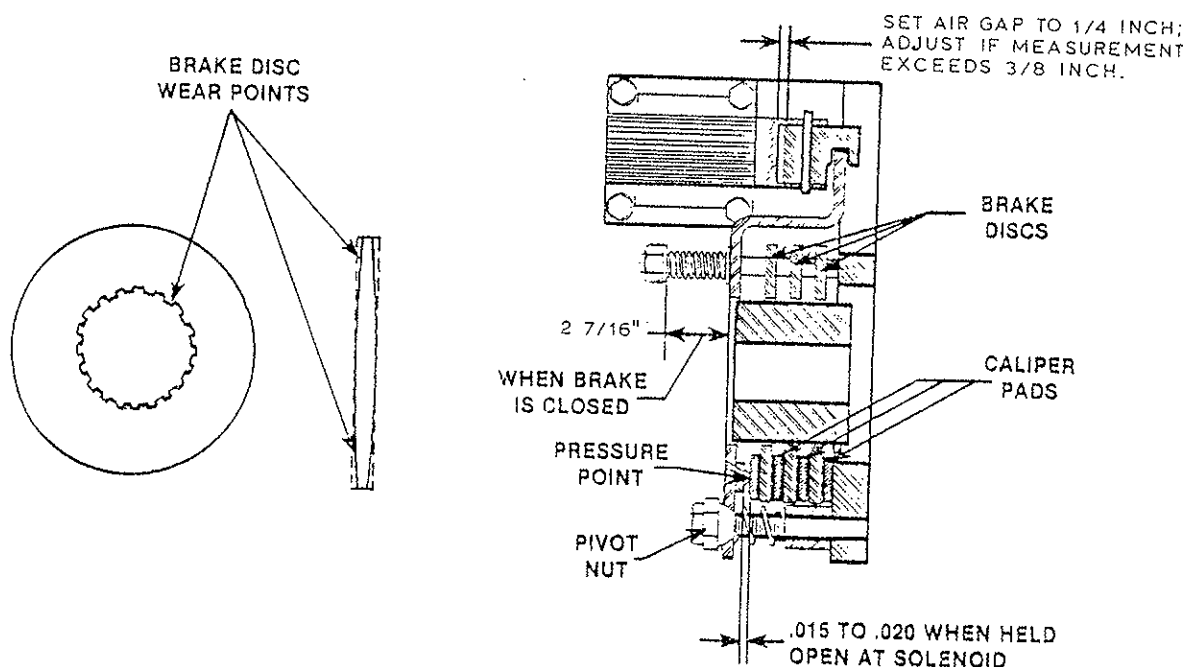


Figure 3

4. **Hoist Brake** - Check for excessive or uneven wear of the discs and caliper pads, and excessive play between the splines in the discs and the brake hub. Clean the solenoid plunger seat and check for uneven seating between the plunger and the coil. Manually hold the brake open and check adjustment as shown in Fig. 3.



### CAUTION

PRIOR TO TESTING, ALL SUPPORTING STRUCTURES, ANCHORAGES, AND/OR SUSPENSIONS MUST BE APPROVED BY THE APPOINTED PERSON FOR THE TEST LOADS USED

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


## SECTION B

### Annual Inspection (Cont'd.)

5. **Wiring And Terminals** - See that all connections are tight. Terminals are to be securely crimped to wires and the insulation sound. Bent terminals can usually be straightened to provide a tight fit. Replace terminals or wire if necessary.
6. **Sheaves And Drums** - Inspect rope sheaves and drums for excessive wear. When the groove of a sheave or rope drum becomes worn excessively it should be replaced. Worn grooves on the drum or sheave can greatly reduce the useful life of the hoisting rope.
7. **Bearing Lubrication** - The motor, sheave and outer drum bearings are packed with grease at the factory and normally will not need to be lubricated. If conditions require, repack with grease as needed.
8. **Inspection Check List** - Fill out inspection check list at the back of this manual, sign, date and file for future reference.

### FUNCTION TESTING AFTER REPAIR

After repair or replacement of parts, function test hoist by operating unloaded hoist into both upper and lower limits, first with slowest speed possible, then with increasing speeds up to maximum. Limit switch mechanisms must be adjusted so they will trip in sufficient time to prevent damage to any part of the hoisting arrangement. See instructions for adjustment of limit switches on page 7. Then test operation of hoist and brake by lifting 100% of rated load. (A normal load lifted may be substituted if no load bearing parts were altered.) A written report of the test should be prepared by the person responsible and kept on file for future reference.

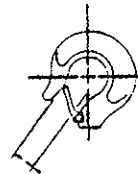
 **CAUTION** PRIOR TO TESTING ALL SUPPORTING STRUCTURES, ANCHORAGES, AND/OR SUSPENSIONS MUST BE APPROVED BY THE APPOINTED PERSON FOR THE TEST LOADS USED.

#### HOOK DIMENSIONS

CAPACITY IN TONS	E (in.) NORMAL	E (in.) MAXIMUM
1/2	1 1/32	1 7/32
1	1 9/64	1 11/32
1 1/2	1 21/64	1 9/16
2	1 21/64	1 9/16
2 1/2	1 15/16	2 1/4
3	1 15/16	2 1/4
5	1 15/16	2 1/4
6	1 15/16	2 1/4
7 1/2	1 15/16	2 1/4
8	3 1/16	3 9/16
10	3 1/16	3 9/16



**WARNING**



**E OPENING WITH LATCH**

IF "E" EXCEEDS  
MAXIMUM SHOWN  
IN TABLE, REPLACE  
HOOK AND CHECK OTHER  
LOAD BEARING PARTS

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

# Yale Hoisting Equipment

SECTION B

## LUBRICATION HOIST

PART	LUBRICANT	LUBRICATION POINT	LUBRICATION INSTRUCTIONS	DRAIN POINT
Gear-case	Moly Cote Grease	Pinion & Gear Teeth		
Wire Rope	Keystone WRD-OW Spray Type Wire Rope Dressing, Or Other Prepared Cable Lubricant	Wire Rope	Light Coat Of Lubricant	

## PLAIN AND HAND CHAIN OPERATED TROLLEYS

Alemite Fittings	GULF EP No. 2, Grease or equal
Ball Valve Oil Holes	Light Machine Oil

## ST, WT RT, & TR SERIES TROLLEYS

PART	LUBRICANT	LUBRICATION POINT	LUBRICATION INSTRUCTIONS	DRAIN POINT
Gear-Case	Gulf EP No. 2 Grease Or Equal For ST. Use I40 EP Gear Oil For WT And TR	Socket Head Plug In side of Gearcase	Fill Until Lubricant Is Level With Hole	Socket Head Plug In Bottom Of Gearcase
Track Wheel Pinion & Gear Teeth	Moly Cote Grease	Pinion & Gear Teeth	Depending On Applications Light Coating Of Grease	

## TT SERIES TROLLEYS

PART	LUBRICANT	LUBRICATION POINT	LUBRICATION INSTRUCTIONS	DRAIN POINT
Gear-case & Chain Case	Gulf EP No. 2 Grease Or Equal	Socket Head Plug On Side Of Chain Case	Fill Until Grease Is Level With Hole	Socket Head Plug In Bottom Of Gearcase

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



## SECTION B

### WIRE ROPE INSPECTION

All wire rope should be inspected once a month and a signed and dated inspection report maintained. The Inspection Check Lists at back of this manual can be used to record these inspections. Wire rope should be replaced if any of the following conditions are noted.

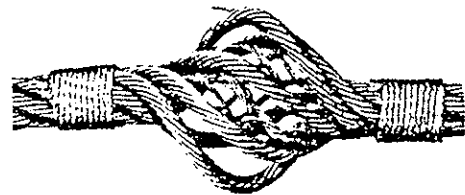
1. Twelve randomly distributed broken wires in one rope lay, or four broken wires in one strand in one rope lay.
2. Wear of one-third ( $1/3$ ) of the original diameter of outside individual wires.
3. Kinking, crushing, bridging or any distortion of the wire rope structure.
4. Evidence of heat damage.



"Broken Wires"



"Kinked"



Bird Cage

5. Reductions from nominal diameter of more than the following values.

New Rope Diameter	Maximum Reduction
5/16 Inch and under	1/64 Inch
3/8 Inch Thru 1/2 Inch	1/32 Inch
9/16 Inch Thru 3/4 Inch	3/64 Inch
7/8 Inch Thru 1 1/8 Inch	1/16 Inch

6. Rope sockets should be inspected for broken wires. If broken wires are noted, the rope should be replaced.



#### CAUTION

REPLACEMENT WIRE ROPE SHOULD BE THE SAME SIZE, GRADE AND CONSTRUCTION AS THE ORIGINAL WIRE ROPE. BEFORE REPLACING WIRE ROPE, READ PROCEDURE ON PAGE 19. AFTER WIRE ROPE REPLACEMENT CHECK FOR PROPER LIMIT SWITCH OPERATION. (SEE PAGE 7.)



#### CAUTION

ROPE PILE-UP ON THE HOISTING DRUM WILL SEVERLY DAMAGE THE HOISTING ROPE. IF THIS CONDITION IS NOTED THE HOISTING ROPE SHOULD BE INSPECTED ACCORDING TO THE ABOVE PARAGRAPH ON WIRE ROPE INSPECTION. IF DAMAGED ROPE IS FOUND, CHECK DRUM AND FRAME MEMBERS FOR DAMAGE.

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

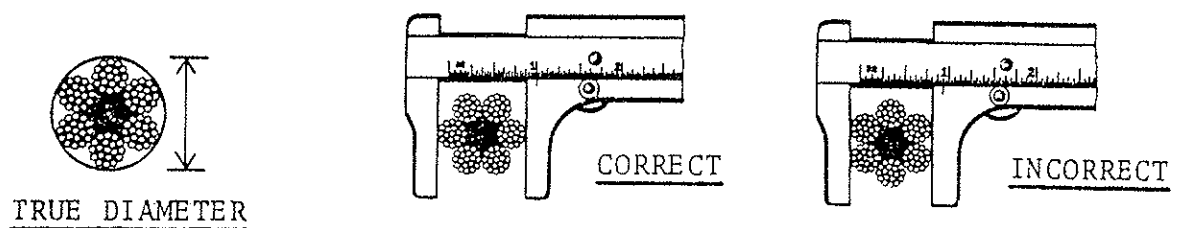


# Yale Hoisting Equipment

## SECTION B

### HOW TO MEASURE WIRE ROPE

The correct diameter of a wire rope is the diameter of a circumscribed circle which will enclose all the strands. It is the largest cross-sectional measurement as illustrated below. The measurement should be made carefully with calipers. The illustrations below show the correct and incorrect method of measuring the diameter of wire rope.



### PROCEDURE FOR REEVING WIRE ROPE ON DRUM

**NOTE** UPPER AND LOWER LIMIT SWITCH MUST BE PRESET BEFORE REEVING, PER INSTRUCTION PAGE AND RE-ADJUSTED AFTER REEVING.

#### DOUBLE REEVED UNITS:

1. Anchor the rope in the drum on one side. Install rope retainer.
2. Stretch out rope to make sure there are no twists or kinks.
3. Reeve the free end of the rope through the bottom block and all sheaves. (See page 17.)
4. Anchor the free end of the rope in the other side of the drum. Install rope retainer.
5. Push the "UP" button to reeve both sides of the drum, making sure there is enough force on the rope to insure proper reeving in all drum grooves.

**NOTE** WHEN THE BOTTOM BLOCK IS RAISED TO THE UPPER LIMIT THE BLOCK SHOULD BE AT THE MID-POINT OF THE UNGROOVED PORTION OF THE DRUM AND EVEN WITH THE IDLER SHEAVE. IF THIS IS NOT SO, THE UNIT IS REEVED INCORRECTLY.

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

## SECTION B

### SINGLE REEVED UNITS:

1. Anchor the rope in the drum. Install rope retainer.
2. Stretch out rope to make sure there are no twists or kinks.
3. Reeve the free end of the rope through the bottom block. (see next page.)
4. Attach the dead end of the rope to the suspension frame.
5. Push the "UP" button to reeve the drum making sure there is enough force on the rope to insure proper reeving in all drum grooves.



#### CAUTION

**ALL UNITS MUST HAVE A MINIMUM OF 1 WRAP OF WIRE ROPE ON THE DRUM WHEN THE BOTTOM BLOCK IS IN THE LOWEST POSITION.**

### REEVING TYPES

Yale powered wire rope hoists and winches are reeved in various ways to gain desired advantages. Proper reeving insures maximum life of the hoist drum, wire rope and bottom block assembly while obtaining the best characteristics of capacity, lift and speed for the basic unit.

Reeving is either "single" or "double," i.e. one or two ropes coming from the drum. Standard headroom hoists are single reeved; close headroom hoists are double reeved. Part designates the mechanical use of each rope coming from the drum.

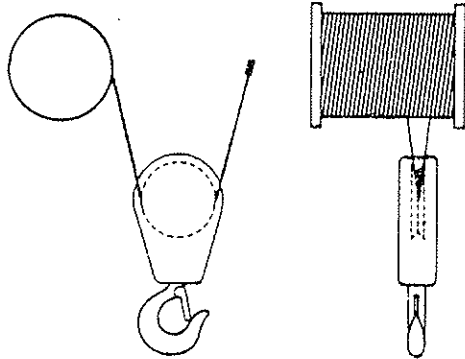
The table and drawings pictured on the next page show the characteristics of each principal method of reeving.

The advantages of single reeved units are fewer ropes and longer lifts from comparable units. Advantages of double reeved units include minimum lateral hook drift (keeping load in the same approximate position in relation to the drum and beam) and a lower hoist headroom requirement in certain configurations.

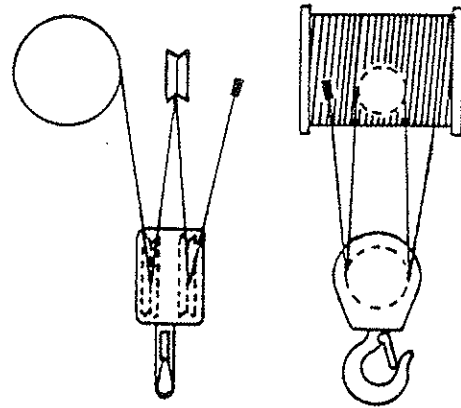
**When Replacement Parts Are Needed, Order Only Yale® Factory Engineered Parts**

## SECTION B

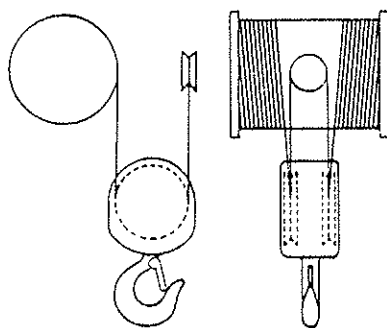
### REEVING TYPES



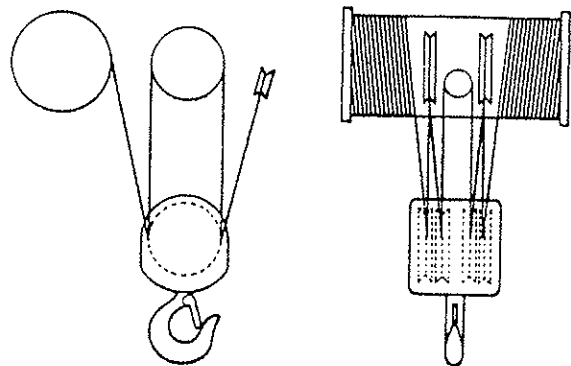
2 part single  
**S2**



4 part single  
**S4**



2 part double  
**D2**



4 part double  
**D4**

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

**SECTION B****DISASSEMBLY**

**CAUTION:** BEFORE DOING MAINTENANCE WORK ON THIS HOIST, READ THE FOLLOWING INSTRUCTIONS THOROUGHLY. REFER TO THE REPLACEMENT PARTS SECTION FOR PARTS IDENTIFICATION.

To completely disassemble the hoist, follow the disassembly procedures in the order listed.

To disassemble any one specific part of the hoist, follow the instructions for that specific section.

**DISASSEMBLY****I. Remove Hoist Rope, Bottom Block Or Bottom Hook****A. Standard Headroom Hoist**

1. Remove or re-adjust upper and lower limit switch to negate lower limit [see instructions on page 7.]
2. Operate hoist in down direction until no cable remains on the drum. Remove rope retainers and pull rope sockets from the drum.
3. Remove power from the hoist.
4. Disassemble bottom block and remove hoist rope.
5. Remove pin holding the cable in the hoist frame.

**B. Low Headroom Hoist**

1. Follow procedures in I.A - 1, 2 and 3.
2. Remove pin holding equalizer sheave yoke in hoist frame.
3. Remove axle holding the sheave in the yoke and remove cable.

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

# Yale Hoisting Equipment

## SECTION B

## REPAIR PARTS

### DISASSEMBLY (Continued)

#### II. Remove Hoist Motor



**CAUTION:** CUT OFF ALL POWER TO THE HOIST BY DIS-CONNECTING THE POWER FEED LINE BEFORE ATTEMPTING SERVICE OR REPAIR.

1. Run hoist in lowering direction and clear all rope from the hoist drum.
2. Remove gear cover and remove snap ring around motor pinion bearing.
3. Pull out motor pinion with bearing attached.
4. Disconnect motor and motor brake leads
5. Support the weight of motor and brake assembly before proceeding.
6. Remove our (4) bolts under gear cover which hold the motor brake assembly to the frame end plate and pull assembly out of hoist frame. (With larger motors it may be necessary to also remove one of the frame brace bars to clear motor conduit box.)
7. Unbolt motor from brake assembly.

#### III. Remove Gearing

1. Loosen and remove four (4) nuts holding back bearing plate.
2. Remove back plate.
3. Remove snap rings to remove drum gear or motor pinion.

#### IV. Remove Hoist Brake

1. Run hoist in down direction and clear all rope from the hoist drum.
2. Remove motor and brake assembly as in procedure II.
3. Unbolt motor from brake assembly.

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

## SECTION B

## DISASSEMBLY (Continued)

## V. Remove Hoist Rope Drum

1. Follow procedures above to remove bottom block and rope assembly and to remove drum gear.
2. Remove upper and lower limit switch (located under the control cover).
3. Remove bolts holding frame end plates to the top suspension member, the 2 frame brace bars and the frame support plate.
4. Spread the sideplates to allow the drum to be removed.

## VI. Remove Upper and Lower Limit Switch.

1. Disconnect all power from hoist.
2. Remove the control cover, disconnect the limit switch wiring. Note the color coding or tag the wires so they can be reconnected correctly.
3. Remove the two screws and lockwashers that hold the limit switch assembly to the mounting brackets. Carefully remove the limit switch assembly.

## VII. Remove Controls

1. Remove all power from the hoist.
2. Remove control and cover. Disconnect and tag all wires coming into the control area.
3. Remove screws holding control panel on sideplate.
4. Remove control panel.

## REASSEMBLY

The assembly sequence is basically the reverse of the disassembly sequence previously described. The following special instructions should be observed during reassembly:

1. Inspect the **drum support bearing** at both ends of the hoist drum. Replace if damaged.
2. Be sure the **motor brake** is properly adjusted before it is installed on the hoist. See Page 11.

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

# Yale Hoisting Equipment

## SECTION B

## REPAIR PARTS

### TROUBLE SHOOTING

#### UNIT NOISY

Possible Cause	Remedy
(a) Nicked gears.	(a) Examine teeth for nicks and burrs. Remove with honing stone, replace if teeth are severely damaged.
(b) No grease on gears.	(b) Apply grease to pinion and gear teeth.
(c) Defective bearing.	(c) Replace.

#### LOAD DRIFTS OR DROPS

Possible Cause	Remedy
(a) Brake slipping.	(e) Adjust brake. Check for oil on brake discs.
(b) Brake not closing.	(f) Adjust for proper clearance. (See Page 11).

#### BRAKE COIL BURNED OUT

**CAUTION****ALWAYS DISCONNECT POWER CIRCUIT BEFORE WORKING ON ELECTRICAL COMPONENTS.**

Possible Cause	Remedy
(a) Wrong coil.	(a) Replace with proper voltage coil.
(b) Brake too tight.	(b) Adjust brake (See Section J).

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

**SECTION B****TROUBLE SHOOTING (Continued)****HOIST DOES NOT OPERATE**

Possible Cause	Remedy
(a) Blown or loose fuse.	(a) Replace or tighten fuse.
(b) Tripped breaker.	(b) Reset breaker.
(c) Loose terminal screws.	(c) Check and tighten all loose screws.
(d) Low voltage.	(d) Check voltage at line side of reversing switch.
(e) Low voltage or no voltage to push button circuit.	(e) Check voltage at output side of transformer. Wrong voltage tap may have been selected. For example: 460 volt tap used when line voltage is 230 volt. Check control circuit fuse.
(f) Defective push button.	(f) Check contact points at push button to see if points touch. If not, replace.
(g) Defective push-button cord. (Wire may be pinched, broken or bare).	(g) Check for continuity of ground.
(h) Burned coil in reversing switch.	(h) Replace.
(i) Reversing switch plunger jammed in switch.	(i) Check for burned coil. Dis-assemble and replace defective components. Do not lubricate.
(j) Burned contact tips.	(j) Replace tips.
(k) Brake coil burned.	(k) Replace, check to make sure coil is proper coil for voltage applied.
(l) Defective stator.	(l) Rewind stator.
(m) Rotor loose on shaft.	(m) Reposition rotor and tack weld in place.

**MOTOR OVERHEATS, EXCESSIVE AMPERAGE DRAW**

Possible Cause	Remedy
(a) Defective stator.	(a) Replace or rewind stator.
(b) Worn motor bearings.	(b) Replace.
(c) Bent rotor shaft.	(c) Replace rotor shaft.
(d) Rotor dragging in stator.	(d) Tighten motor bolts. Check for foreign matter between rotor and stator. Check for worn motor bearings.
(e) Stator loose in frame.	(e) Rewind stator if necessary. Reposition and anchor in accordance with motor manufacturers instructions.

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



# Yale Hoisting Equipment

## REPAIR PARTS

SECTION B

### TROUBLE SHOOTING (Continued)

#### MOTOR NOISY

Possible Cause	Remedy
(a) Motor bolts loose.	(a) Tighten.
(b) Rotor dragging in stator.	(b) Check for bent rotor shaft or worn bearings. Replace defective parts.
(c) Motor bearings loose.	(c) Replace bearings.

#### TRANSFORMER OVERHEATS OR BURNS OUT

Possible Cause	Remedy
(a) Wrong tap used on primary side.	(a) Replace transformer if necessary. Primary tap must match line voltage.
(b) Shorted transformer.	(b) Replace.
(c) Shorted control circuit.	(c) Correct short.

#### REVERSING SWITCH COIL BURNED OUT

Possible Cause	Remedy
(a) Wrong coil used.	(a) Replace coil. Be sure coil conforms to voltage of circuit it is used on.
(b) Jammed plunger.	(b) Disassemble and clean. Do not lubricate plunger or coil.
(c) Shorted coil.	(c) Replace.

#### HOIST SHOCKS OPERATOR

Possible Cause	Remedy
(a) Power leads or control wires shorted to hoist frame.	(a) Repair or replace.
(b) Grounded motor.	(b) Replace.
(c) Slight electrical leakage from any of the electrical components on hoist.	(c) Make sure hoist is properly grounded.
(d) Pendant diaphragm buttons have become cracked.	(d) Replace pendant.

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

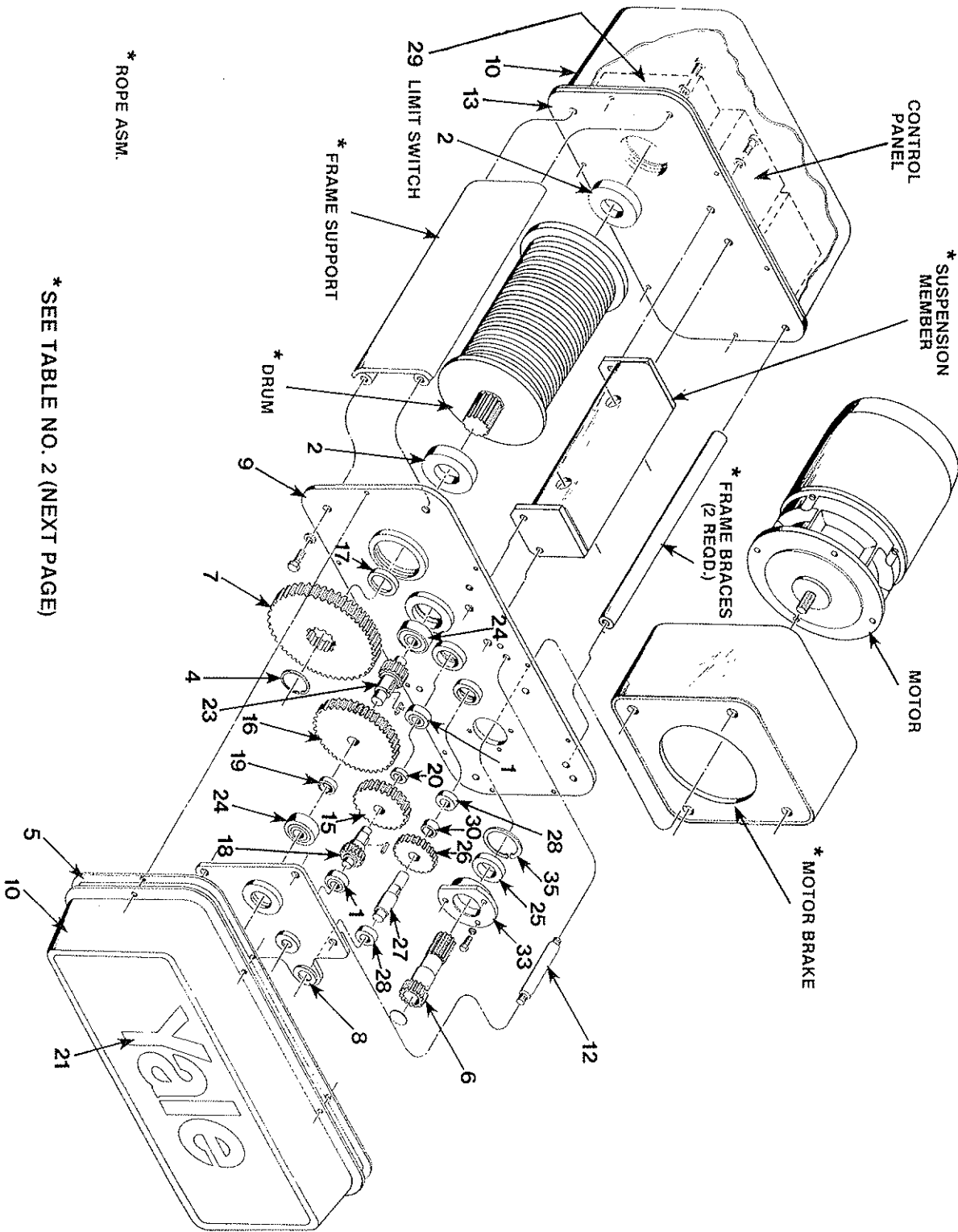
# REPAIR PARTS

## Recommended Spare Parts

### PAGE NUMBER

1. Motor Brake Solenoid. _____	38
2. Contactor Magnetic Coils. _____	41
3. Contactor Parts Kit. _____	41
4. Wire Rope. _____	26
5. Hook Latch Kit. _____	27
6. Transformers. _____	42
7. Gasket. _____	26
8. Motor Brake Disc. _____	38

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



\* SEE TABLE NO. 2 (NEXT PAGE)

\* ROPE ASM.

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

ITEM NUMBER	PART NUMBER	DESCRIPTION	QTY.
1	0151264-00	BRG. BALL	2
2	6401629-03	BRG. BALL	2
4	5001869-07	RET. RING EXT.	1
5	6456373-81	GASKET SELF ADH 1/4X5/8 FT	24
6	6475123-00	DR. PINION VEW 17T	1
7	6475113-00	DRUM GEAR VEW 46T	1
8	6475193-00	BACK PLATE, VEW GEARCASE	1
9	6474783-00	FRAME S/PLATE, VEW GRCASE SID	1
10	6475863-00	END COVER, VEW (FINISHED)	2
12	6475183-00	STAND-OFF VEW GEARCASE	4
13	6474773-00	FRAME, S/PLATE, VEW CONTROL SI	1
15	6475083-00	1ST RED. GEAR, VEW 71T	1
16	SEE TABLE 1	2ND RED. GEAR, VEW	1
17	6472053-07	GEAR SPACER (VEW)	1
18	SEE TABLE 1	1ST INTERMEDIATE PINION (VEW)	1
19	6472053-06	GEAR SPACER (VEW)	1
20	6472053-05	GEAR SPACER (VEW)	1
21	6476683-00	DECAL, (YALE CHALLENGER)	2
23	6475093-00	2ND INT. PINION VEW 12T	1
24	6421761-00	BRG. BALL	2
25	0151275-00	BRG. BALL	1
26	6475063-00	IDLER GEAR VEW 42T	1
27	6475053-00	IDLER SHAFT VEW	1
28	0151204-00	BRG BALL SKF 6205-2RSS	2
29	6473653-01	LIMIT SWITCH - SAIA 12S	1
30	6484363-00	GEAR SPACER (VEW)	
33	6476193-00	BEARING CAP U & VEW	1
35	0159173-00	RET. RING. EXT. .062 x 1.82	1

TABLE 1

ITEM 16			ITEM 18	
RATIO	NO. TEETH	PART NO.	NO. TEETH	PART NO.
89.4:1	67	647510302	12	647507302
58.4:1	62	647510301	17	647507301

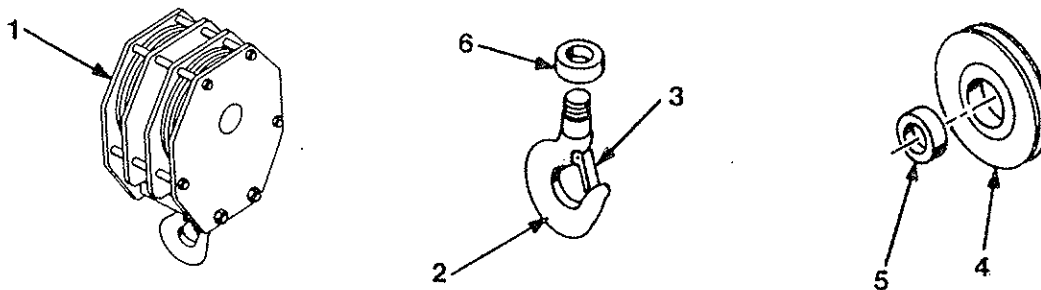
TABLE 2

MODEL			SUSP. MEMBER	FRAME SUPPORT	SUSP. MEMBER	DRUM	ROPE ASM.	TROLLEY GEARED	TROLLEY PLAIN	TROLLEY MTG. KIT
CAP.	RVG.	LIFT								
3	S2	69	647489309	647480303	647589303	647469303	644740203	644546201	644543201	647149206
3	S2	87	647489301	647480304	647589304	647469304	644730204	644546201	644543201	647149206
3	S2	108	647489302	647480305	647590305	647469305	644740205	644546201	644543201	647149206
5	S2	60	647489309	647480303	647590303	647468303	644741203	644546201	644544201	647149206
5	S2	75	647489301	647480304	647590304	647468304	644741204	644546201	644542201	647149206
5	S2	94	647489302	647480305	6475903045	647468305	644741205	644546201	644542201	647149206
5	S4	40	647489310	647480303	647590303	647470303	647157203	644546201	644544201	647149206
5	S4	50	647489303	647480304	647590304	647470304	647157204	644546201	644544201	647149206
5	S4	62	647489304	647480305	647590305	647470305	647157205	644546201	644544201	647149206
7 1/2	S4	34	647489311	647480303	647590303	647469303	644743203	644546201	644544201	647149206
7 1/2	S4	43	647489305	647480304	647590304	647469304	644743204	644546201	644544201	637149206
7 1/2	S4	54	647489306	647480305	647590305	647469305	644743205	644546201	644544201	647149206
10	S4	30	647569300	647480303	647590303	647468303	644744203	644552201	644551201	647149208
10	S4	37	647489307	647480304	647590304	647468304	644744204	644552201	644551201	647149208
10	S4	47	647489308	647480305	647590305	647468305	644744205	644552201	644551201	647149208
15	S6	25	647579304	647480304	647590304	647468304	647209204	644558201	644555201	647149210
15	S6	31	647579305	647480305	647590305	647468305	647209205	644558201	644555201	647149210
3	D2	39	647525303	647480303	647590303	647537303	644634203	644546201	644543201	647149206
3	D2	52	647525304	647480304	647590304	647537304	644634204	644546201	644543201	647149206
3	D2	66	647525305	647480305	647590305	647537305	644634205	644546201	644543201	647149206
5	D2	33	647525303	647480303	647590303	647526303	644635203	644546201	644544201	637149206
5	D2	43	647525304	647480304	647590304	647526304	644635204	644546201	644544201	647149206
5	D2	55	647525305	647480305	647590305	647526305	644635205	644546201	644544201	647149206
5	D2	21	647571303	647480303	647590303	647580303	647208203	644546201	644544201	647149206
5	D4	28	647571304	647480304	647590204	647580204	647208204	644546201	644544201	647149206
5	D4	36	647571305	647480305	647590305	647580305	647208205	644546201	644544201	647149206
7 1/2	D4	25	647532303	647480303	647590303	647537304	647172204	644546201	644544201	647149206
7 1/2	D4	32	647532304	647480304	647590304	647537305	647172205	644546201	644544201	637149206
10	D4	21	647532301	647480301	647590301	647526304	647163204	644552201	644551201	647149208
10	D4	27	647532302	647480302	647590302	647526305	647163205	644552201	644551201	647149208

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

# Yale Hoisting Equipment

## BOTTOM BLOCKS



## D2 & D4 REEVING

ITEM	DESCRIPTION	3 TON D2	5 TON D2	5 TON D4	7 ½ TON D4	10 TON D4	
1A	COMPLETE ASM. - STEEL HOOK	010155201	643294200	645619100	643418201	640919700	
1B	COMPLETE ASM. - BRONZE HOOK	643442201	643444200	643451201	643453201	643454200	
1C	COMPLETE ASM. - BULLARD HOOK	500589001	643461200	643468201	643470201	643440200	
2A	STEEL HOOK	644360400	644361400	644361400	644361400	644330400	
2B	BRONZE HOOK	643701300	642288100	642288100	642288100	644772300	
2C	BULLARD HOOK	644991400	645321400	645321400	645321400	645169400	
3A	STEEL LATCH KIT	066940600	066940600	066940600	066940600	066940700	
3B	BRONZE/STAINLESS LATCH KIT	500695800	061667500	061667500	061667500	061667500	
3C	BULLARD LATCH KIT	N/A	N/A	N/A	N/A	N/A	
4	SHEAVE	010988501	010988500	010988500	010988501	061665200	
5	SHEAVE BEARING	015128100	022109000	015128100	015128100	010082200	
6	HOOK THRUST BEARING	646516800	033412000	033412000	033412000	051389200	

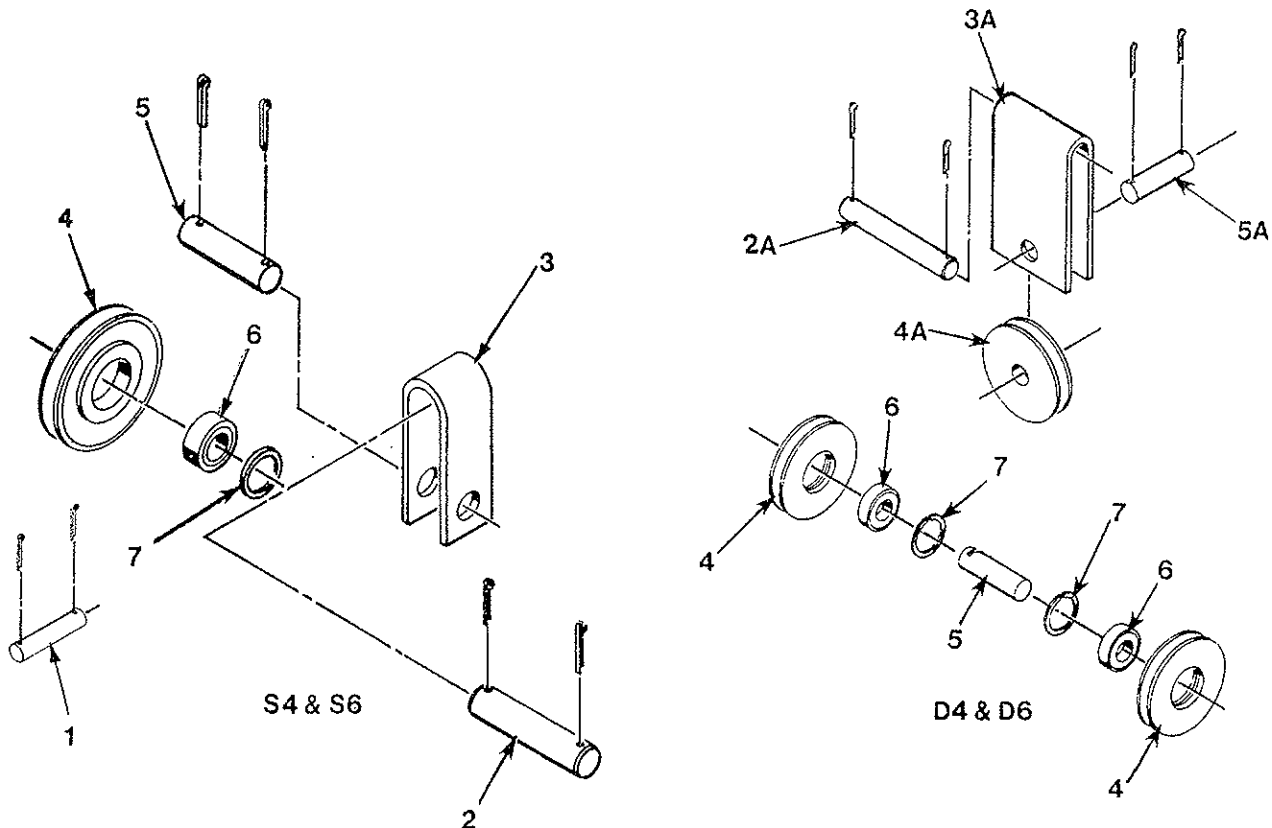
## S2 & S4 REEVING

ITEM	DESCRIPTION	3 TON S2	5 TON S2	5 TON S4	7 ½ TON S4	10 TON S4	15 TON S6
1A	COMPLETE ASM. - STEEL HOOK	010156301	050087800	643294200	644889200	010137600	647190201
1B	COMPLETE ASM. - BRONZE HOOK	643433201	643435200	643444201	646009200	643448200	647190202
1C	COMPLETE ASM. - BULLARD HOOK	066443601	643447200	643461200	646011200	643933000	647190203
2A	STEEL HOOK	644360400	644361400	644361400	644361400	644362400	644363400
2B	BRONZE HOOK	643701300	642288100	642288100	642288100	644497400	643359400
2C	BULLARD HOOK	644991400	645321400	645321400	645321400	645067400	645067400
3A	STEEL LATCH KIT	066940600	066940600	066940600	066940600	061667500	057814000
3B	BRONZE/STAINLESS LATCH KIT	500695800	061667500	061667500	061667500	061667500	643797800
3C	BULLARD LATCH KIT	N/A	N/A	N/A	N/A	N/A	N/A
4	SHEAVE	010987601	010993000	010988500	061665200	010994600	010999600
5	SHEAVE BEARING	015128100	010082200	015128100	010082200	0377053SS	027420500
6	HOOK THRUST BEARING	646516800	033412000	033412000	033412000	010091600	010091600

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

# REPAIR PARTS

## VIEW REEVING KITS



ITEM	DESCRIPTION	S2 3 - 5 TON	S4 5 TON	S4 7½-10TON	S6 15 TON	D2 3 TON	D2 5 TON	D4 5 TON	D4 7 ½ TON	D4 10 TON
	COMP. REEVING KIT	644694202	644695201	644695202	647187200	647204200	647159200	647206200	647166200	647161200
1	ROPE ANCHOR PIN	644495108	644495108	644495108	647574300	-	-	-	-	-
2	IDLER SHEAVE PIN (TOP)	-	645203116	645203109	647549300	-	-	-	-	-
2A	EQUAL. SHEAVE PIN (TOP)	-	-	-	-	647523300	647523300	647523300	647523300	647523300
3	YOKE (IDLER)	-	648284101	648284102	647553300	-	-	-	-	-
3A	YOKE (EQUALIZER)	-	-	-	-	645204108	645204108	645204106	645204108	645204108
4	IDLER SHEAVE	-	010988500	010999600	010999600	-	-	010988501	061665200	061665200
4A	EQUALIZER SHEAVE	-	-	-	-	645777101	645777100	647908100	645777102	645777100
5	IDLER SHEAVE PIN	-	644399109	648612101	647550300	-	-	645203120	645203119	545203119
5A	EQUALIZER SHEAVE PIN	-	-	-	-	645407100	645407100	645407100	645407100	645407100
6	IDLER SHEAVE BEARING	-	015128100	500353905	027420500	-	-	015128100	010082200	010082200
7	BEARING RETAINER	-	500343914	501989909	501989909	-	-	500343914	500343915	500343915

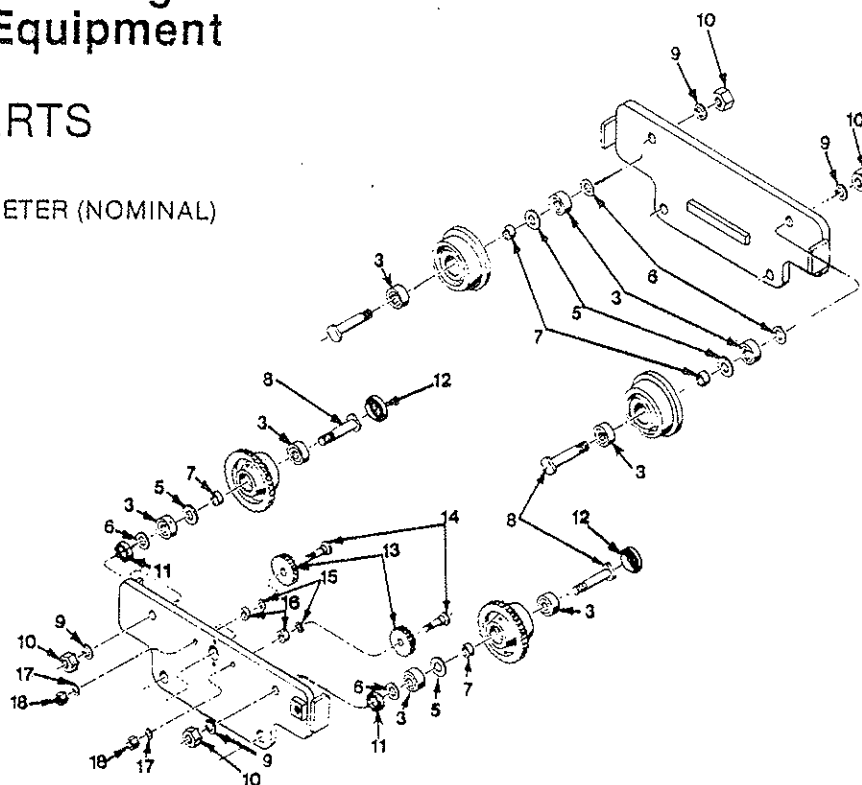
When Replacement Parts Are Needed, Order Only Yale® Factory Engineered Parts

# Yale Hoisting Equipment

## TROLLEY PARTS

### REPAIR PARTS

4 7/8" TREAD DIAMETER (NOMINAL)



ITEM NUMBER	COMPONENT NUMBER	PART DESCRIPTION	QTY.
3	0641327-00	BEARING CONE	8
4	0641326-00	BEARING CUP	8
5	5024531-00	BEARING SHIM	16
6	0664040-00	BEARING SPACER	4
7	0664039-00	WHEEL SPACER	4
8	0664038-00	AXLE	4
9	0213606-00	AXLE NUT	4
13A	6456801-00	IDLER GEAR, STEEL (WHEN REQUIRED)	2
13B	6487501-00	IDLER GEAR, BRONZE (WHEN REQUIRED)	2
14	6400811-00	IDLER GEAR STUD (WHEN REQUIRED)	2

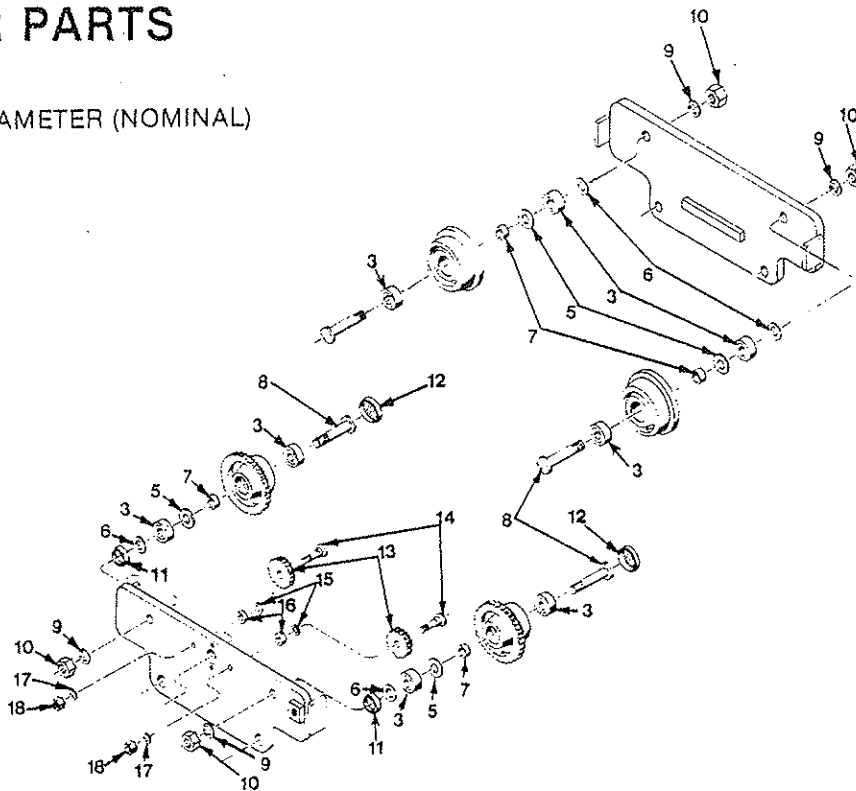
TREAD TYPE	WHEEL TYPE	BEAM TYPE	MATERIAL	WHEEL PART NUMBER
Ball	Plain	ASI	Standard	6412133-00
Ball	Geared	ASI	Standard	6412143-00
Ball	Geared	ASI	Bronze	6405663-00
Ball	Geared	ASI	Bronze	6405673-00
Flat	Plain	WF	Bronze	6450431-00
Flat	Geared	WF	Bronze	6450441-00
Flat	Plain	Pat. Track	Standard	6465981-00
Flat	Geared	Pat. Track	Standard	6465991-00
Flat	Plain	WF	Standard	6450411-00
Flat	Geared	WF	Standard	6450421-00
Flat	Plain	Pat. Track	Bronze	6468751-00
Flat	Geared	Pat. Track	Bronze	6468761-00

When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.



# REPAIR PARTS

6" TREAD DIAMETER (NOMINAL)



ITEM NUMBER	COMPONENT NUMBER	PART DESCRIPTION	QTY.
3	0578982-00	BEARING TAPERED	8
5	0111950-00	BEARING SHIM	16
6	0601083-00	BEARING SPACER	4
7	0579147-00	WHEEL SPACER	4
8	0664049-00	AXLE	4
9	0401010-00	LOCKWASHER 1 1/4	4
10	0379032-00	AXLE NUT	4
13A	0664433-00	IDLER GEAR, STEEL (WHEN REQUIRED)	2
13B	6421663-00	IDLER GEAR, BRONZE (WHEN REQUIRED)	2
14	6400811-00	IDLER GEAR STUD (WHEN REQUIRED)	2

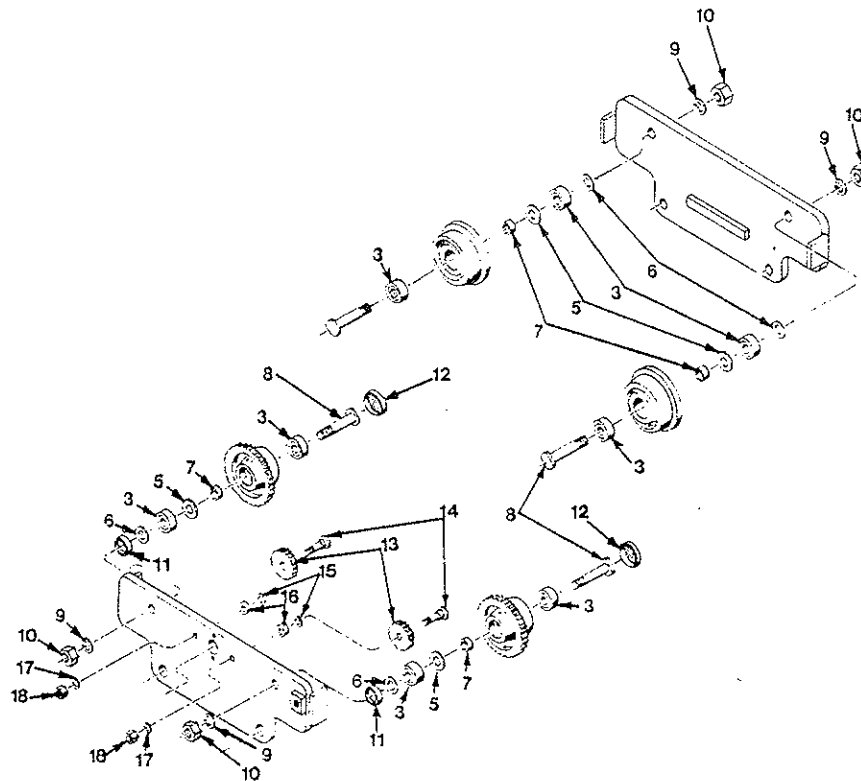
TREAD TYPE	WHEEL TYPE	BEAM TYPE	MATERIAL	WHEEL PART NUMBER
Ball	Plain	ASI	Standard	6403844-00
Ball	Geared	ASI	Standard	6403854-00
Ball	Geared	ASI	Bronze	0664887-00
Ball	Geared	ASI	Bronze	0664886-00
Flat	Geared	Pat. Track	Standard	6454164-00
Flat	Plain	Pat. Track	Standard	6454154-00
Flat	Plain	WF	Bronze	6450471-00
Flat	Geared	WF	Bronze	6450481-00
Flat	Plain	WF	Standard	6450451-00
Flat	Geared	WF	Standard	6450461-00
Flat	Plain	Pat. Track	Bronze	6484291-00
Flat	Geared	Pat. Track	Bronze	6484211-00
Flat	Plain	Pat. Track	Standard	6454154-00
Flat	Geared	Pat. Track	Standard	6454164-00
Flat	Plain	Pat. Track	Bronze	6407373-00
Flat	Geared	Pat. Track	Bronze	6407383-00

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



## TROLLEY PARTS

8" TREAD DIAMETER (NOMINAL)



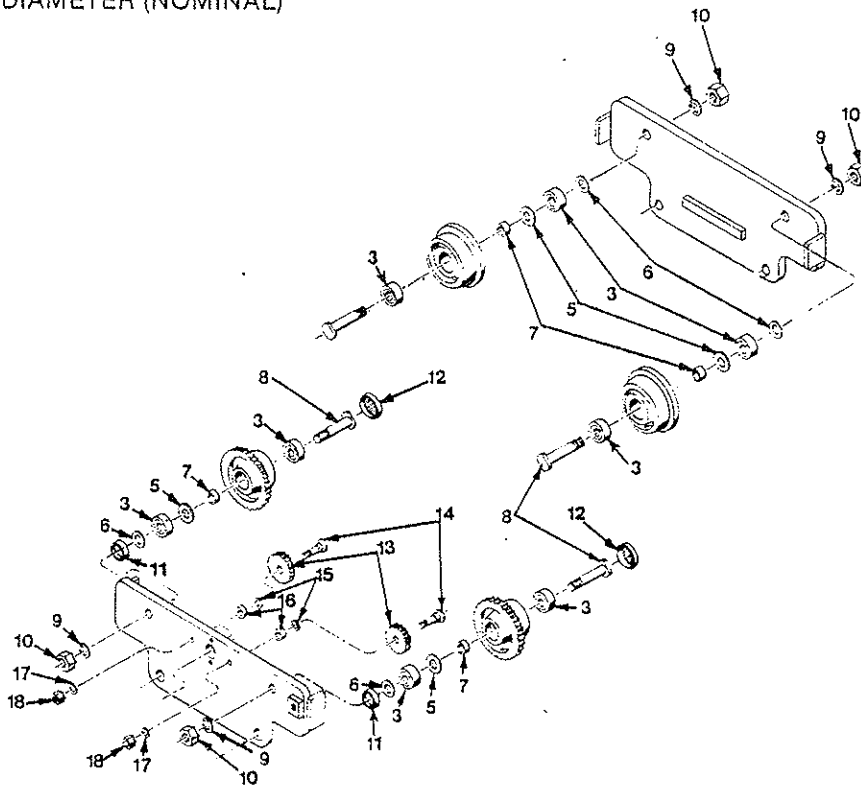
ITEM NUMBER	COMPONENT NUMBER	PART DESCRIPTION	QTY.
3	0646669-00	BEARING TAPERED	8
5	0111948-00	BEARING SHIM	16
6	0644668-00	BEARING SPACER	4
7	0236024-00	WHEEL SPACER	4
8	0664012-00	AXLE	4
9	0150300-00	LOCKWASHER 1 3/8	4
10	0149713-00	AXLE NUT 1 3/8 - 6	4
11	0646666-00	DUST COVER INSIDE	4
12	0646667-00	DUST COVER OUTSIDE	4
13A	0664821-00	IDLER GEAR, STEEL (WHEN REQUIRED)	2
13B	6490241-00	IDLER GEAR, BRONZE (WHEN REQUIRED)	2
14	0664826-00	IDLER GEAR STUD (WHEN REQUIRED)	2

TREAD TYPE	WHEEL TYPE	BEAM TYPE	MATERIAL	WHEEL PART NUMBER
Ball	Plain	ASI	Standard	6442494-00
Ball	Geared	ASI	Standard	6442504-00
Ball	Geared	ASI	Bronze	6404364-00
Ball	Geared	ASI	Bronze	6404374-00
Flat	Geared	WF	Standard	6433774-00
Flat	Plain	WF	Standard	6433764-00
Flat	Plain	Pat. Track	Standard	6446414-00
Flat	Geared	Pat. Track	Standard	6446424-00

When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.

## TROLLEY PARTS

10" TREAD DIAMETER (NOMINAL)



ITEM NUMBER	COMPONENT NUMBER	PART DESCRIPTION	QTY.
3	0651247-00	BEARING CONE	8
4	0651248-00	BEARING CUP	8
5	0651256-00	BEARING SHIM	16
6	0651249-00	BEARING SPACER	4
7	0651250-00	WHEEL SPACER	4
8	0651243-00	AXLE	4
9	5021379-02	LOCKWASHER	4
10	6401679-00	AXLE NUT	4
11	0651252-00	DUST COVER INSIDE	4
12	0651253-00	DUST COVER OUTSIDE	4
13A	0664821-00	IDLER GEAR, STEEL (WHEN REQUIRED)	2
13B	6490241-00	IDLER GEAR, BRONZE (WHEN REQUIRED)	2
14	0664826-00	IDLER GEAR STUD (WHEN REQUIRED)	2

TREAD TYPE	WHEEL TYPE	BEAM TYPE	MATERIAL	WHEEL PART NUMBER
Ball	Plain	ASI	Standard	0664017-00
Ball	Geared	ASI	Standard	0664432-00
Ball	Geared	ASI	Bronze	6426896-00
Ball	Geared	ASI	Bronze	6426906-00
Flat	Plain	WF	Standard	6450511-00
Flat	Geared	WF	Standard	6450521-00
Flat	Geared	Pat. Track	Standard	6473431-00
Flat	Plain	Pat. Track	Standard	6472651-00

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

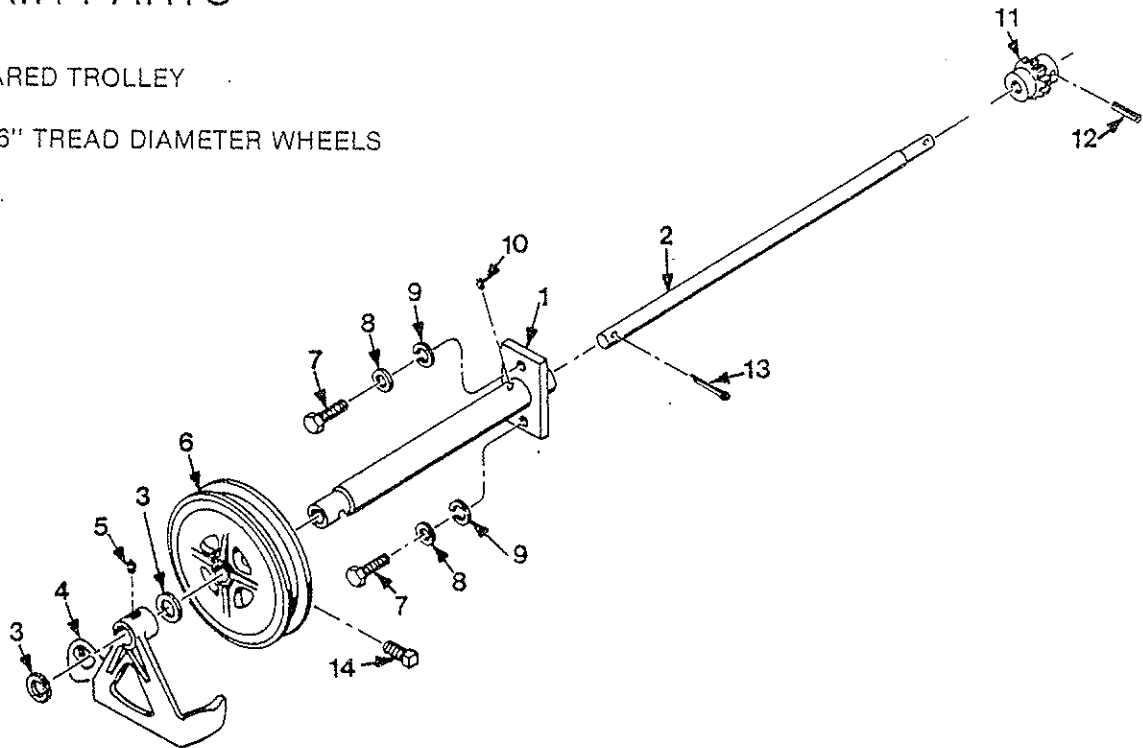
# Yale Hoisting Equipment

## REPAIR PARTS

### TROLLEY HAND WHEEL GROUP

GT - GEARED TROLLEY

4 7/8" &amp; 6" TREAD DIAMETER WHEELS



TABLE

4 7/8" TREAD DIAMETER WHEELS					6" TREAD DIAMETER WHEELS				
ASSEMBLY NUMBER	ITEM 1	ITEM 2	ITEM 11	ITEM 12	ASSEMBLY NUMBER	ITEM 1	ITEM 2	ITEM 11	ITEM 12
	EXTENSION	SHAFT	PINION	ROLL PIN		EXTENSION	SHAFT	PINION	ROLL PIN
6434722-04	6452881-01	6456491-04	0250202-00	0230207-00	6434732-05	6452881-02	6452891-02	0588168-00	0559292-00

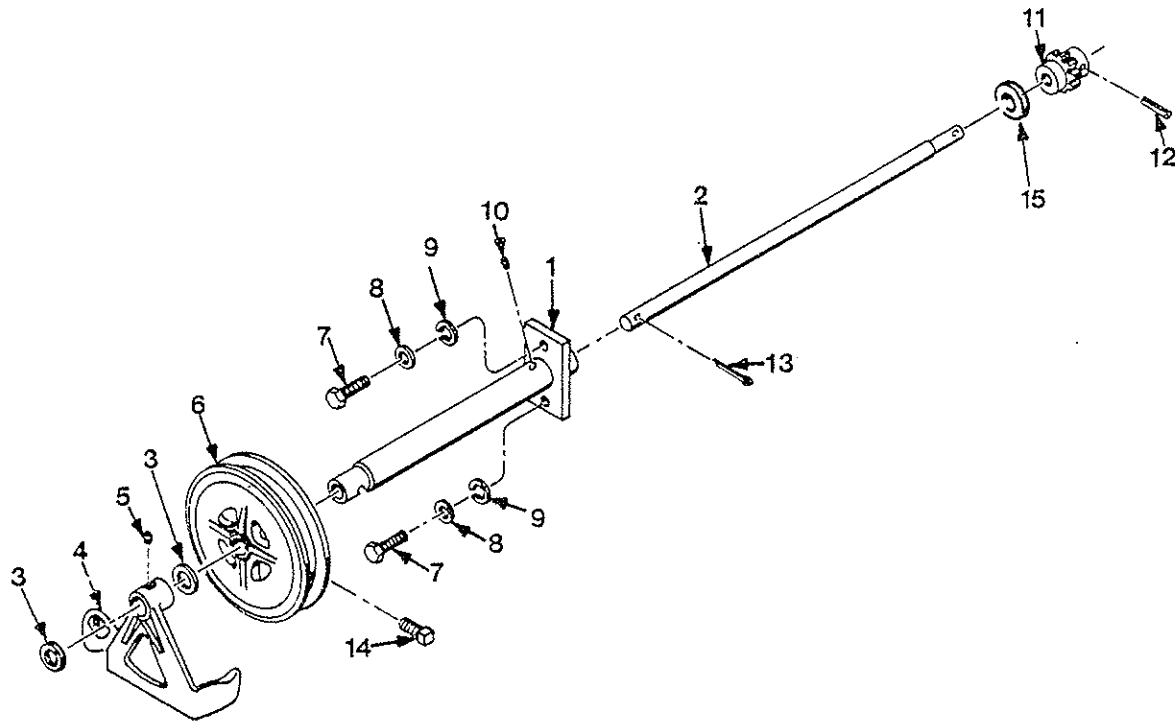
ITEM NUMBER	PART NUMBER	DESCRIPTION	QTY.
3	0250668-00	WASHER	2
4	0588165-00	GUIDE	1
5	0156289-00	FITTING	1
6	0111132-00	HANDWHEEL	1
7	0554850-00	1/2-13 X 1 1/4 HEX HEAD SCREW	2
8	0142209-00	WASHER	2
9	0150266-00	LOCKWASHER	2
10	0227845-00	FITTING	1
13	0381400-00	COTTER PIN	1
14	0388054-00	7/16-14X1 SQUARE HEAD SCREW	1
15	0033730-00	HAND CHAIN (NOT SHOWN) SPECIFY LENGTH	

When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.

## TROLLEY HAND WHEEL GROUP

GT - GEARED TROLLEY

8 &amp; 10" TREAD DIAMETER WHEELS



ASM. NUMBER 6434742-05

ITEM NUM.	PART NUMBER	DESCRIPTION	QTY.
1	6467781-01	EXTENSION	1
2	6419981-03	SHAFT	1
3	0250664-00	WASHER	2
4	0591410-00	GUIDE	1
5	0156289-00	FITTING	1
6	0535795-00	HANDWHEEL	1
7	0596946-00	1/2 - 13 X 1 1/2 HEX HEAD SCREW	2
8	0142209-00	WASHER	2
9	0150266-00	LOCKWASHER	2
10	0227845-00	FITTING	1
11	0589690-00	PINION	1
12	0230236-00	ROLL PIN	1
13	0154214-00	COTTER PIN	1
14	0388014-00	1/2 - 13 SQUARE HEAD SCREW	1
15	0665193-00	SPACER	1
16	0033730-00	HAND CHAIN (NOT SHOWN) SPECIFY LENGTH	1

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

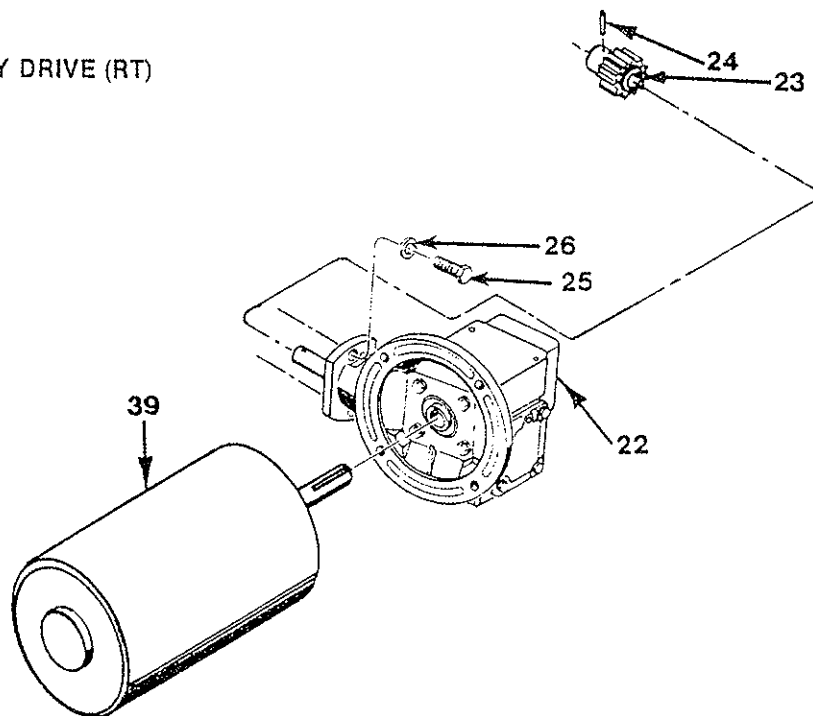
# Yale Hoisting Equipment

## REPAIR PARTS

### MOTORIZED TROLLEY DRIVE (RT)

Trolley Assembly

4 7/8" Tread Diameter



ITEM NBR	PART NUMBER	DESCRIPTION	QTY.
22	SEE TABLE 646700200	GEAR CASE RT MGT. KIT (Incl. Items 23, 24, 25 & 26)	1
23	6462883-00	PINION	1
24	6462973-01	GROOVE PIN	1
25	0554856-00	BOLT	2
26	0150266-00	LOCK WASHER	2
39	*	MOTOR	1

\*When Ordering Motors Give Complete Data On Motor Nameplate.

GEAR TABLE

TRAVEL SPEED (FT/MIN)	GEAR CASE	RATIO
15	6462923-30	30:1
30	6462923-15	15:1
45	6462923-10	10:1
90	6462923-05	5:1

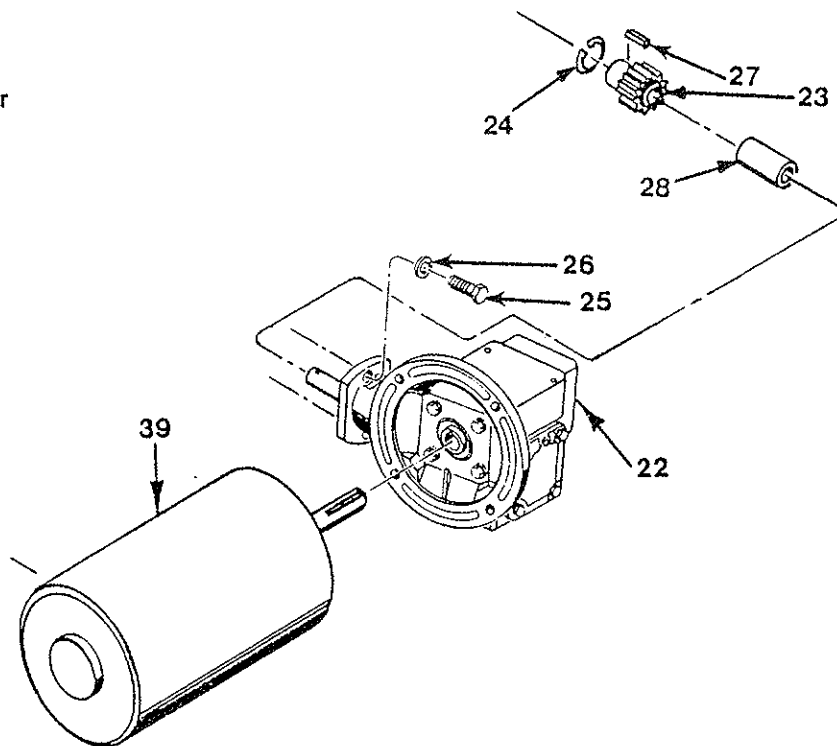
When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.

## REPAIR PARTS

### MOTORIZED TROLLEY DRIVE (RT)

Trolley Assembly

6" Tread Diameter



ITEM NBR	PART NUMBER	DESCRIPTION	QTY.
22	SEE TABLE 646701200	GEAR CASE RT MGT. KIT (Incl. Items 23, 24, 25 & 26)	1
23	6462893-00	PINION	1
24	5002279-04	RETAINING RING	1
25	0554856-00	BOLT	2
26	0150266-00	LOCK WASHER	2
39	*	MOTOR	1
27	6462913-01	KEY	1
28	6457173-06	SPACER	1

\*When Ordering Motors Give Complete Data On Motor Nameplate.

GEAR TABLE

TRAVEL SPEED (FT/MIN)	GEAR CASE	RATIO
15	6467093-06	40:1
30	6467093-04	20:1
45	6467093-03	15:1
65	6467093-02	10:1

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

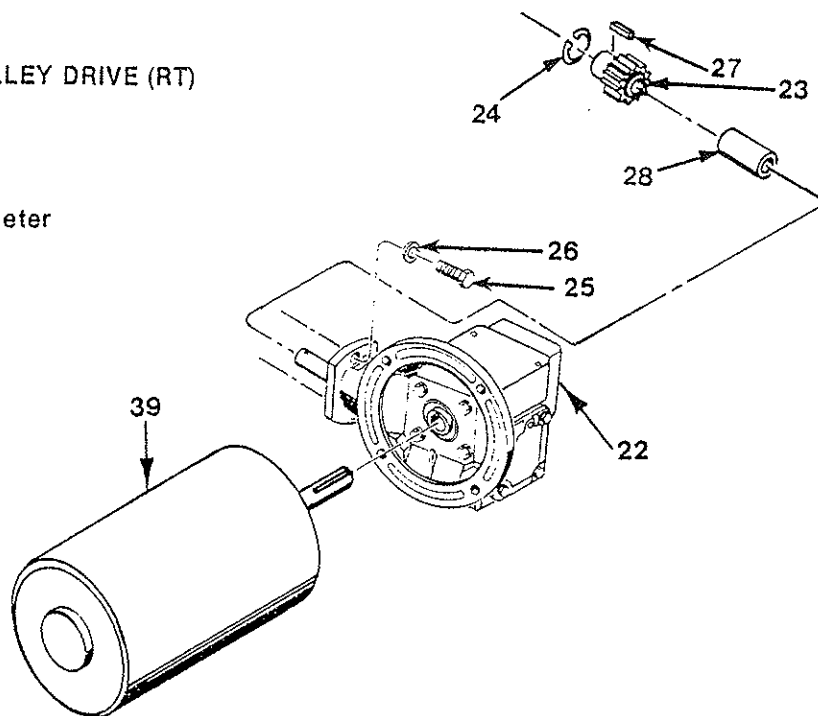
# Yale Hoisting Equipment

## REPAIR PARTS

### MOTORIZED TROLLEY DRIVE (RT)

#### Trolley Assembly

8 & 10" Tread Diameter



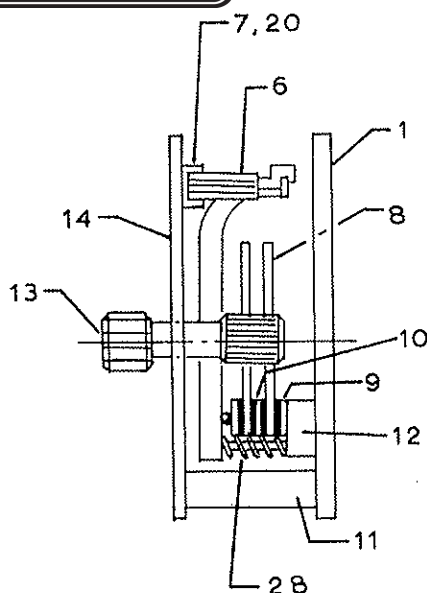
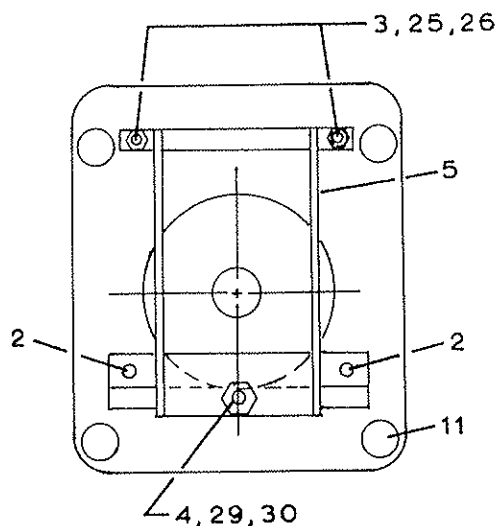
ITEM NBR	PART NUMBER	DESCRIPTION	QTY.
22	SEE TABLE	GEAR CASE	1
23	646702200	RT MGT. KIT (Incl. Items 23, 24, 25 & 26)	1
24	6462903-00	PINION	1
25	5002279-04	RETAINING RING	1
26	0554856-00	BOLT	2
27	0150266-00	LOCK WASHER	2
39	*	MOTOR	1
27	6462913-02	KEY	1
28	6457173-07	SPACER	1

\*When Ordering Motors Give Complete Data On Motor Nameplate.

#### GEAR TABLE

TRAVEL SPEED (FT/MIN)	GEAR CASE	RATIO
15	6467093-06	40:1
30	6467093-04	20:1
45	6467093-03	15:1
65	6467093-02	10:1

When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.



ITEM	QTY	1 SPD P/N	2 SPD P/N	DESCRIPTION
1	1	647457300	647458300	MTR. ADAPTER/BASE PLATE
2	2	647905300	647905300	GUIDE ROD
3	2	647236300	647236300	SPRING ROD
4	1	647514300	647514300	PIVOT POST
5	1	648921300	648921300	LEVER ASM.
6	SELECT	647472202	647473202	SOLENOID KIT 200V
	1	647472203	647473203	SOLENOID KIT 230V
		647472203	647473204	SOLENOID KIT 460V
		647472205	647473205	SOLENOID KIT 575V
7	1	647889300	647898300	SOLENOID BRKT.
8	2	647141300		BRAKE PLATE
	3		647141300	BRAKE PLATE
9	2	647910301	647910301	CALIPER ASM. (SINGLE)
10	1	647910302		CALIPER ASM. (DOUBLE)
	2		647910302	CALIPER ASM. (DOUBLE)
11	4	647513300	647513300	STANDOFF
12	1	647907300	647906300	PIN GUIDE
13	1	647512300	647512300	INPUT PINION/BRAKE HUB
14	1	647460300	647460300	COVER PLATE
15	1	647213200	647213200	COVER ASM.
16	2	*	*	LOCKWASHER, SOL. BRKT.
17	2	*	*	HEX HD SCREW, SOL. BRKT.
18	2	*		HEX HD SCREW 2 1/4 LG., SOLENOID
19	2		*	HEX HD SCREW 3 LG., SOLENOID
20	8	*	*	SPACER, SOLENOID
21	2	*	*	LOCKNUT FOR ITEM 18 & 19
22	2	*	*	LOCKWASHER, PIN GUIDE
23	2	*		HEX HD SCREW 1 1/4 LG., PIN GUIDE
24	2		*	HEX HD SCREW 3/4 LG., PIN GUIDE
25	2	*	*	SPRING 3 LG., SPRING ROD
26	4	*	*	FLAT WASHER, SPRING ROD
27	2	*	*	LOCKNUT, SPRING ROD
28	1	*	*	SPRING 2 1/2 LG., PIVOT POST
29	1	*	*	SPHERICAL NUT & WASHER, PIVOT POST
30	1	*	*	HEX JAM NUT, PIVOT POST
31	1		647515300	SPACER, PIVOT POST


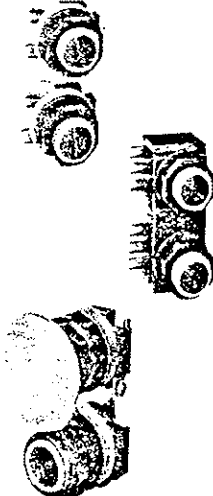




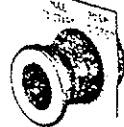

\*HARDWARE KIT 647474200

When Replacement Parts Are Needed, Order Only Yale Factory  
Engineered Parts.  
VEW SERIES



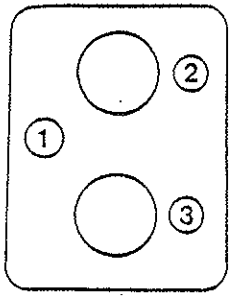
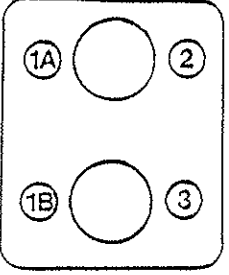
# Yale Hoisting Equipment

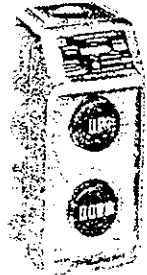

## PUSH BUTTON

		Enclosure (Less) (Elements)	Two Button Four Button Six Button Eight Button Ten Button	6452753-02 6452753-04 6452753-06 6452753-08 6452753-10
		Elements	Single Speed (Pair)	6452763-01
			Two Speed (Pair)	6452763-02
			Five Speed (Pair)	6452763-05
			Maintained/ Momentary	6455953-00
		Selector Switch	Two Position Three Position	6463493-00 6455983-00
		Pilot Light	115 Volt Red	6455973-00
		Potentiometer	1000 Ohm	6451821-01
		Elements	Single Button (One)	6456263-00
		Off/On Element	Locking Non-Locking	6455963-00
		Closing Plate		6452883-00

When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.

# PUSH BUTTON


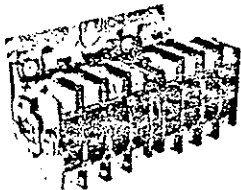



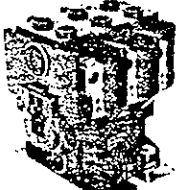
2760	Component Number	Markings				
		1	1A	1B	2	3
	6452803-01	Hoist			Up	Down
	6452803-02	Trolley			East	West
	6452803-03	Trolley			Forward	Reverse
	6452803-04	Trolley			North	South
	6452803-05	Bridge			Foward	Reverse
	6452803-06	Bridge			East	West
	6452803-07	Bridge			North	South
	6452803-08				Start	Stop
	6452803-09				Reset	Stop
	6452803-10					
	6452803-11				Foward	Reverse
	6452803-12				North	South
	6452803-13				East	West
	6452803-14				In	Out
	6452803-15				Left	Right
	6452803-16	Crane			Forward	Reverse
	6452803-17				Off	On
	6452803-18				On	Off
	6452803-19				Stop	Start
	6452803-20				Stop	Reset
	6452803-21			Inch		Run
	6452803-22			Slow		Fast

2710		Complete Station	Two Button	Up-Down	6480701-01
			S / Speed	Fwd- Rev	6480701-02
			Two Button	Up-Down	6469823-01
			Two Speed	Fwd-Rev	6469823-02
2710		COMPLETE STATION	TWO BUTTON S/SPEED		6471993-00
2710					

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

# Yale Hoisting Equipment

## CONTACTOR

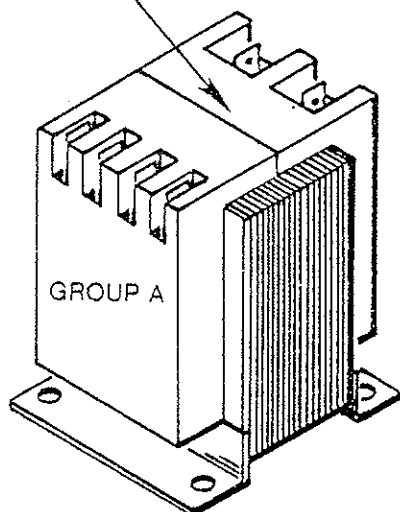
	COIL VOLTAGE	CONTACTOR PART NO.	COIL PART NO.	CONTACT KIT	AUXILIARY CONTACT
	24	6401559-01	5030618-00	6400028-00	6446608-01 (N.O.)
	115	6401559-02	5030628-00		6446608-02 (N.C.)
	24	6495701-01	6455871-11	6455871-10 (2) Req'd.	6424981-20
	115	6495701-02	6455871-12		
	24	6455808-01	6453168-00	6455898-00 (2) Req'd.	6453218-00 (N.O.)
	115	6455808-02	6453178-00		6453228-00 (N.C.)
	24	6424981-01	6424981-11	6424981-10 (2) Req'd.	6424981-20
	115	6424981-02	6424981-12		
	24	6455881-01	6455871-11	6455881-10	6424981-20
	115	6455881-02	6455871-12		
	24	6455891-01	6424981-01	6424981-10	6424981-20
	115	6455891-02	6424981-02		

When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.

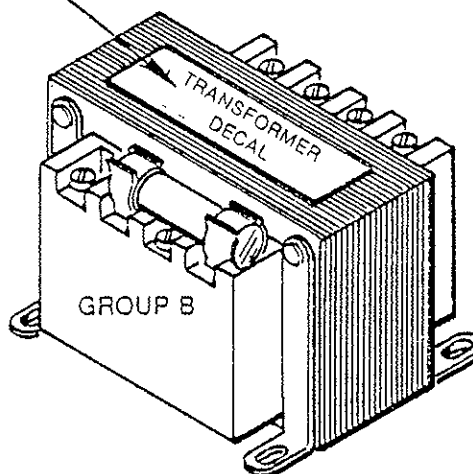
# REPAIR PARTS

## TRANSFORMER

TRANSFORMER NINE DIGIT PART  
NUMBER STAMPED HERE



1. FIND VA, PRIMARY & SECONDARY VOLTS.
2. USE PARTS LIST IN FRONT COVER OR  
CHART TO SELECT TRANSFORMER



GROUP A

VA	Primary Volts	Secondary Volts	Hertz	Part Number	Replacement Fuse
25	115/230	24	50/60	6437393-01	N/R
	230/460	24	50/60	6437393-02	N/R
	115/230	110	50/60	6437393-03	N/R
	230/460	110	50/60	6437393-04	N/R
	200	24	50/60	6437393-05	N/R
	200	110	50/60	6437393-06	N/R
	575	24	50/60	6437393-07	N/R
	575	110	50/60	6437393-08	N/R

GROUP B (Including Fuse)

50	200	115	50/60	6437373-01	6458398-04
	230/460	115	50/60	6437373-02	6458398-04
	575	115	50/60	6437373-03	6458398-04
	200	24	50/60	6437373-04	6458398-11
	230/460	24	50/60	6437373-05	6458398-11
	575	24	50/60	6437373-06	6458398-11
150	200	115	50/60	6437373-07	6458398-08
	230/460	115	50/60	6437373-08	6458398-08
	575	115	50/60	6437373-09	6458398-08
	200	24	50/60	6437373-10	6458398-20
	230/460	24	50/60	6437373-11	6458398-20
	575	24	50/60	6437373-12	6458398-20
300	200	115	50/60	6437373-13	6458398-12
	230/460	115	50/60	6437373-14	6458398-12
	575	115	50/60	6437373-15	6458398-12
	200	24	50/60	6437373-16	6458398-25
	230/460	24	50/60	6437373-17	6458398-25
	575	24	50/60	6437373-18	6458398-25

N/R NOT REQUIRED

YA - 0383

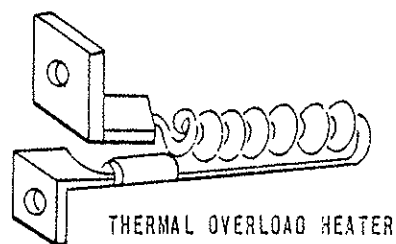
FORM NO. 165-909-006

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

# Yale Hoisting Equipment

## REPAIR PARTS

### THERMAL OVERLOAD HEATERS



The Overload Heater Illustrated Above May Not Exactly Represent The Actual Appearance Of Your Overload Heater. However, It Is Typical.

Manufacturers Identification	Part Number	Full Load Amp Rating When Used In Overload Relay Number			
		6452508-00 (SEO—6B2) (3 Pole) Rating	6481811-01 (SEO—9B2) (3 Pole) Rating	0106755-00 0106756-00 (ARO—1) (1 Pole) Rating	(ATO—1) (1 Pole) Rating
AR .71	6400789-01	.52—.56		.56—.60	
AR .78	6400789-04	.57—.62		.61—.66	
AR 1.05	6400789-03	.77—.84		.82—.89	
AR 1.15	0579103-00	.85—.92		.90—.98	
AR 1.26	0106784-00	.93—1.01		.99—1.08	
AR 1.39	6400789-07	1.02—1.12		1.09—1.19	
AR 1.53	0106775-00	1.13—1.23		1.20—1.31	
AR 1.68		1.24—1.35		1.32—1.45	
AR 1.85	0106772-00	1.36—1.50		1.46—1.60	
AR 2.04	0106787-00	1.51—1.65		1.61—1.76	
AR 2.24	0106776-00	1.66—1.81		1.77—1.93	
AR 2.46	6400789-02	1.82—1.99		1.94—2.13	
AR 2.71	0106782-00	2.00—2.19		2.14—2.34	
AR 2.98	0546128-00	2.20—2.41		2.35—2.58	
AR 3.28	0106770-00	2.42—2.67		2.59—2.85	
AR 3.62	0106778-00	2.68—2.93		2.86—3.13	
AR 3.98	6400789-06	2.94—3.22		3.14—3.44	
AR 4.37	0560153-00	3.23—3.54		3.45—3.78	

FORM NO. 165-909-013

When Replacement Parts Are Needed, Order Only Yale Factory Engineered Parts.

# REPAIR PARTS

## THERMAL OVERLOAD HEATERS

Manufacturers Identification	Part Number	Full Load Amp Rating When Used In Overload Relay Number			
		6452508-00 (SEO—6B2) (3 Pole) Rating	6481811-01 (SEO—9B2) (3 Pole) Rating	0106755-00 0106756-00 (ARO—1) (1 Pole) Rating	(ATO—1) (1 Pole) Rating
AR 4.80	6400789-05	3.55—3.91		3.79—4.17	
AR 5.3	0106783-00	3.92—4.28		4.18—4.57	
AR 5.8	0106771-00	4.29—4.72		4.58—5.04	
AR 6.4	0586636-00	4.73—5.17		5.05—5.52	
AR 7.0	0106779-00	5.18—5.68		5.53—6.07	
AR 7.7	0106762-00	5.69—6.28		6.08—6.70	
AR 8.5	0106768-00	6.29—6.87		6.71—7.33	
AR 9.3	0106769-00	6.88—7.54	5.11—5.60	7.34—8.05	7.34—8.05
AR 10.2	0106767-00	7.55—8.28	5.61—6.15	8.06—8.84	8.06—8.84
AR 11.2	0106781-00	8.29—9.16	6.16—6.81	8.85—9.78	8.85—9.78
AR 12.4	0106774-00	9.17—9.99	6.82—7.47	9.79—10.6	9.79—10.6
AR 13.6	0106766-00	10.0 —11.3	7.48—8.47	10.7 —12.0	10.7 —12.0
AR 15.4	0106785-00	11.4 —12.9	8.47—9.67	12.1 —13.8	12.1 —13.8
AR 17.6	0106763-00	13.0 —15.1	9.68—11.2	13.9 —16.1	13.9 —16.1
AR 20.5	0106777-00	15.2 —16.9	11.3—12.5	16.2 —18.1	16.2 —18.1
AR 23.	0106764-00	17.0 —19.9	12.6—14.8	18.2 —21.2	18.2 —21.2
AR 27.	0106765-00	20.0 —22.1	14.9—16.4	21.3 —23.6	21.3 —23.6
AR 30.	0106768-00	22.2 —24.8	16.5 —19.1	23.7 —27.5	23.7 —27.5
AR 35.	0106780-00	25.9 —28.5	19.2 —21.9	27.6 —31.5	27.6 —31.5
AR 40.	0547894-00	29.6 —31.5	22.0 —23.1		31.6 —33.6
AR 44.	6486548-00		24.2 —25.7		34.7 —37.0
AR 47.			25.8 —27.9		37.1 —40.2
AR 51.	0548711-00		28.0 —30.1		40.3 —43.3
AR 55.	0594821-00		30.2 —32.9		43.4 —47.3
AR 60.			33.0 —36.2		47.4 —52.0
AR 66.			36.3 —39.5		
AR 72.			39.6 —43.3		
AR 79.			43.4 —47.2		
AR 86.			47.3 —51.6		
AR 94.			51.7 —55.0		

NO.09-013

FORM NO. 185-909-013

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

# POWERED HOIST INSPECTION CHECK LIST

SEE PREVENTIVE MAINTENANCE SECTION OF INSTRUCTION MANUAL FOR DETAILS.

CHECK ONLY COMPONENTS APPLICABLE FOR SPECIFIC EQUIPMENT AND INSPECTION TYPE.

HOIST MODEL \_\_\_\_\_

HOIST S/N \_\_\_\_\_

HOOKS	YES	NO	CABLE	YES	NO	CHAINS	YES	NO
HARDWARE LOOSE	<input type="checkbox"/>	<input type="checkbox"/>	BROKEN WIRES AT ENDS	<input type="checkbox"/>	<input type="checkbox"/>	BINDING	<input type="checkbox"/>	<input type="checkbox"/>
CRACKS	<input type="checkbox"/>	<input type="checkbox"/>	BROKEN WIRES EXCESSIVE	<input type="checkbox"/>	<input type="checkbox"/>	CRACKED	<input type="checkbox"/>	<input type="checkbox"/>
EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>	EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>	TWISTED	<input type="checkbox"/>	<input type="checkbox"/>
BENT	<input type="checkbox"/>	<input type="checkbox"/>	KINKED OR DISTORTED	<input type="checkbox"/>	<input type="checkbox"/>	DISTORTED	<input type="checkbox"/>	<input type="checkbox"/>
SPREADING	<input type="checkbox"/>	<input type="checkbox"/>	CORROSION	<input type="checkbox"/>	<input type="checkbox"/>	CORRODED	<input type="checkbox"/>	<input type="checkbox"/>
FREELY ROTATE	<input type="checkbox"/>	<input type="checkbox"/>	HEAT DAMAGED	<input type="checkbox"/>	<input type="checkbox"/>	EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>
LATCH DAMAGED	<input type="checkbox"/>	<input type="checkbox"/>				WORN CHAIN GUIDES	<input type="checkbox"/>	<input type="checkbox"/>
						POCKET WHEELS WORN	<input type="checkbox"/>	<input type="checkbox"/>
BRAKES	YES	NO	WIRING	YES	NO	DRUM & SHEAVES	YES	NO
MOTOR BRAKE WORN OR NOT OPERATING	<input type="checkbox"/>	<input type="checkbox"/>	LOOSE CONNECTIONS	<input type="checkbox"/>	<input type="checkbox"/>	WORN EXCESSIVELY	<input type="checkbox"/>	<input type="checkbox"/>
EXCESSIVE LOADBRAKE DRIFT OR BLACKLASH	<input type="checkbox"/>	<input type="checkbox"/>	FRAYED	<input type="checkbox"/>	<input type="checkbox"/>	CRACKED OR SCORED	<input type="checkbox"/>	<input type="checkbox"/>
EXCESSIVE DISC WEAR	<input type="checkbox"/>	<input type="checkbox"/>	DAMAGED	<input type="checkbox"/>	<input type="checkbox"/>			
			PROPER GROUNDING	<input type="checkbox"/>	<input type="checkbox"/>			
LIMIT SWITCHES	YES	NO	LOAD LIMITING DEVICE	YES	NO	COLLECTORS	YES	NO
OPERATING PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	OPERATING PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	BINDING	<input type="checkbox"/>	<input type="checkbox"/>
						EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>
HOUSING	YES	NO	OPERATION CONTROLS	YES	NO	LUBRICATION	YES	NO
DISTORTED	<input type="checkbox"/>	<input type="checkbox"/>	CONTACTOR PITTING	<input type="checkbox"/>	<input type="checkbox"/>	ALL POINTS LUBRICATED AS GIVEN IN LUB CHART	<input type="checkbox"/>	<input type="checkbox"/>
CRACKS	<input type="checkbox"/>	<input type="checkbox"/>	OPERATING PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	OIL DARK OR LOW	<input type="checkbox"/>	<input type="checkbox"/>
LOOSE HARDWARE	<input type="checkbox"/>	<input type="checkbox"/>	DAMAGED PUSH BUTTON	<input type="checkbox"/>	<input type="checkbox"/>	OIL LEAKS	<input type="checkbox"/>	<input type="checkbox"/>
BEARING NOISE	<input type="checkbox"/>	<input type="checkbox"/>	HOUSING	<input type="checkbox"/>	<input type="checkbox"/>			
SUPPORTING STRUCTURE	YES	NO	AIR SYSTEM	YES	NO	WARNING LABELS	YES	NO
CONTINUED ABILITY TO SUPPORT IMPOSED LOADS	<input type="checkbox"/>	<input type="checkbox"/>	LEAKING	<input type="checkbox"/>	<input type="checkbox"/>	MISSING	<input type="checkbox"/>	<input type="checkbox"/>
WORN OR DISTORTED TROLLEY PARTS	<input type="checkbox"/>	<input type="checkbox"/>	LOOSE CONNECTIONS	<input type="checkbox"/>	<input type="checkbox"/>	ILLEGIBLE	<input type="checkbox"/>	<input type="checkbox"/>
			BROKEN CONTROL PENDANT	<input type="checkbox"/>	<input type="checkbox"/>			

NOTE: IF ANY ( ) IS CHECKED DO NOT OPERATE THE HOIST UNTIL REPAIRS HAVE BEEN MADE.

REMARKS AND REPAIRS MADE \_\_\_\_\_

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SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_ CLOCK NUMBER \_\_\_\_\_



# POWERED HOIST INSPECTION CHECK LIST

SEE PREVENTIVE MAINTENANCE SECTION OF INSTRUCTION MANUAL FOR DETAILS.

CHECK ONLY COMPONENTS APPLICABLE FOR SPECIFIC EQUIPMENT AND INSPECTION TYPE.

HOIST MODEL \_\_\_\_\_

HOIST S/N \_\_\_\_\_

HOOKS		YES		NO		CABLE		YES		NO		CHAINS		YES		NO	
HARDWARE LOOSE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BROKEN WIRES AT ENDS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BINDING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CRACKS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BROKEN WIRES EXCESSIVE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CRACKED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TWISTED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BENT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KINKED OR DISTORTED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DISTORTED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SPREADING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CORROSION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CORRODED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FREELY ROTATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HEAT DAMAGED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LATCH DAMAGED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						WORN CHAIN GUIDES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
											POCKET WHEELS WORN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRAKES		YES		NO		WIRING		YES		NO		DRUM & SHEAVES		YES		NO	
MOTOR BRAKE WORN OR NOT OPERATING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LOOSE CONNECTIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WORN EXCESSIVELY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCESSIVE LOADBRAKE DRIFT OR BLACKLASH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FRAYED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CRACKED OR SCORED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCESSIVE DISC WEAR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DAMAGED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
						PROPER GROUNDING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
LIMIT SWITCHES		YES		NO		LOAD LIMITING DEVICE		YES		NO		COLLECTORS		YES		NO	
OPERATING PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OPERATING PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BINDING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
											EXCESSIVE WEAR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOUSING		YES		NO		OPERATION CONTROLS		YES		NO		LUBRICATION		YES		NO	
DISTORTED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CONTACTOR PITTING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ALL POINTS LUBRICATED AS GIVEN IN LUB CHART	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CRACKS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OPERATING PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OIL DARK OR LOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LOOSE HARDWARE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DAMAGED PUSH BUTTON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OIL LEAKS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BEARING NOISE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HOUSING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
SUPPORTING STRUCTURE		YES		NO		AIR SYSTEM		YES		NO		WARNING LABELS		YES		NO	
CONTINUED ABILITY TO SUPPORT IMPOSED LOADS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LEAKING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MISSING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WORN OR DISTORTED TROLLEY PARTS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LOOSE CONNECTIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ILLEGIBLE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						BROKEN CONTROL PENDANT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							

NOTE: IF ANY ( ) IS CHECKED DO NOT OPERATE THE HOIST UNTIL REPAIRS HAVE BEEN MADE.

REMARKS AND REPAIRS MADE \_\_\_\_\_

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SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_ CLOCK NUMBER \_\_\_\_\_



## Yale® Hoists Warranty

# Yale

## 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 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.

ALL SHIPMENTS SUBJECT TO CHANGE WITHOUT NOTICE AND MAY BE ADJUSTED TO SELLER'S PRICE IN EFFECT AT TIME OF SHIPMENT.  
THIS CANCELS AND SUPERSEDES ALL PREVIOUS PRICES.  
ALL PRICES IN U.S. DOLLARS.



Yale® Hoists  
Highway 1 North  
P.O. Box 1000  
Forrest City, Arkansas 72335  
Customer Service Phone (800) 999-6318  
Fax (800) 766-0223

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Yale Hoists

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