

INSTRUCTIONS and REPAIR PART LIST

for

ELECTRIC MOTOR DRIVEN OVERHEAD HOIST

SERIES 3EH40A STANDARD HEADROOM SIZES

3EH40A15	15 Ft. Lift
3EH40A22	22 Ft. Lift
3EH40A28	28 Ft. Lift
3EH40A35	35 Ft. Lift
3EH40A38	38 Ft. Lift
3EH40A57	57 Ft. Lift
3EH40A100	100 Ft. Lift

LOW HEADROOM SIZES

3EH40A15LH	15 Ft. Lift
3EH40A22LH	22 Ft. Lift
3EH40A35LH	35 Ft. Lift

SERIES 5EH60A STANDARD HEADROOM SIZES

5EH60A12	12 Ft. Lift
5EH60A20	20 Ft. Lift
5EH60A25	25 Ft. Lift
5EH60A30	30 Ft. Lift
5EH60A35	35 Ft. Lift
5EH60A52	52 Ft. Lift
5EH60A75	75 Ft. Lift

LOW HEADROOM SIZES

5EH60A12LH	12 Ft. Lift
5EH60A20LH	20 Ft. Lift
5EH60A30LH	30 Ft. Lift

HOW TO ORDER

Order all repair parts for your Ingersoll-Rand Tool by the **NAME and NUMBER** shown in the Repair Part List section. **Never** use the illustration numbers which appear in the first column.

For prompt service and genuine I-R parts, place orders with the nearest Ingersoll-Rand Branch Office.

Refer All Communications to the Nearest
Ingersoll-Rand Office or Distributor;
Not New York, N. Y.

Ingersoll-Rand

INSTRUCTIONS

PRE-OPERATION CHECKS

Before putting a new Electric Hoist into operation, check the following:

1. **Power Supply**—This must be the same voltage and frequency as stated on the tag attached to the motor. Unless otherwise specified, all Hoists are shipped from the factory with the motor and controls connected for operation on 440 volt, 3 phase, 60 cycle current. If a hoist motor connected for operation on 208/220 volt, 3 phase, 60 cycle current is connected to a 440 volt power supply, the motor will be burned out.
2. Make certain the large pipe plug is removed from the top of the Gear Case and replaced with the Gear Case Vent Cap packed with the Hoist. All Hoists are shipped from the factory with an initial filling of gear case lubricant. Operation of the Hoist with the pipe plug in place may result in pressure build-up and leakage caused by expansion of the oil and air with increase in temperature.
3. Depress and quickly release the **UP** button to make certain the hook travels in the correct direction. If the hook lowers when the **UP** button is depressed, transpose any two of the hot power supply leads. **WARNING:** It is extremely important that the **UP** button be depressed first. Should the **DOWN** button be depressed first when the hot power leads are incorrectly connected, the Sheave Block might rise into the Hoist resulting in serious damage to equipment and possible injury to personnel.

LUBRICATION

Recommended Gearing Lubricants

For smooth mechanical load brake action use Ingersoll-Rand Oil No. 10; or **only** this approved substitute—Mobil Kote No. 501, Socony-Mobil Co.

Sheaves and Trolley Wheels

Use Ingersoll-Rand Light Grease No. 31 or No. 2 Cup Grease.

Maintain Oil Level in Gear Case

At regular intervals, check the Oil Level Gauge in the Gear Case Cover. If necessary, add the recommended oil to maintain the oil level at the line on the glass.

WARNING: Improper, or lack of lubrication in the gearing will result in costly and unnecessary repairs.

Weekly, or as experience dictates, inject 2 or 3 strokes of the recommended grease into all Grease Fittings.

OPERATION AND MAINTENANCE

Keep the Wire Rope tightly wound on the grooved Rope Drum. Before putting a grooved-drum Hoist in service and periodically thereafter, run the Hoist in the lowering direction as far as the down-stop will permit, or until there is 1½ turns of rope left on the drum. Apply a load to the Hook and rewind the Rope on the Drum. During storage, shipment, or even operation, if the Hoist is used primarily for lowering loads, the Wire Rope tends to uncoil. If not corrected, loops will form which may in time cross over one another and cause serious damage.

Mechanical Load Brake Adjustment

Remove the Adjusting Nut Lock (55) and with a screw driver, turn the Brake Adjusting Nut (129) **clockwise** until a heavy drag is felt, then back the Nut off five notches. Replace the Adjusting Nut Lock making sure it enters one of the notches in the Adjusting Nut.

Gear Case and Gearing

The Secondary Ring Gear (20) is retained on the Housing by two socket head Ring Gear Retaining Screws so that the Gear Case (45) can be removed from the Hoist without disturbing the Rope Drum (11) and related parts.

To remove a Planet Gear Shaft (28 or 44) from a Gear Frame (22 or 37) support the Gear Frame, shaft or pinion end up, and press out the Planet Gear Shaft.

Before installing the Planet Gear Shaft in the Gear Frame, note that one end of the Planet Gear Shaft is beveled 30° and the other end 45°. Support the Gear Frame, shaft or pinion end down. Enter the 30° beveled end of the Planet Gear Shaft into the Gear Frame and press the Shaft into the Frame until the trailing end is flush with the Gear Frame face.

Press the Drum Bearing, Gear End (16) into the recess in the Ring Gear Cover (18) and press the Bearing and Ring Gear Cover on the Secondary Gear Frame Assembly (22).

Align one of the **Round Cam Followers** (in the Roller Carrier) with the Vent Cap and slide the Roller Carrier (112) into the Gear Case (45). Rotate the Carrier counterclockwise so that the Cam Followers are at the lowest points on the Load Brake Cam (110).

Slip the Primary Ring Gear (34) over the pinion end of the Primary Gear Frame Assembly (37) align-

ing the "X" on each Primary Planet Gear (41) with the "X's" on the Ring Gear.

Install the Primary Gear Frame Assembly and Ring Gear as a unit into the Gear Case aligning the notch in the Ring Gear with the Ring Gear Stop (35). Rotate the Ring Gear counterclockwise until it is stopped by the Ring Gear Stop so that the Cam Followers are at the lowest point on the Load Brake Cam (110).

In the stated sequence, install the following parts into the Gear Case: Brake Thrust Plate (123) flat surface trailing, Slip Disc (128), Slip Plate (125), one Friction Disc (127), one Brake Plate (124), one Friction Disc (128), and one Brake Plate (124).

Before installing the Gear Case Cover (50) on the Gear Case make sure that the face of the Brake Adjusting Nut (129) is flush or below the face of the Gear Case Cover.

AFTER-REPAIR CHECKS

After making any repairs or replacing any parts on an Electric Hoist, and before putting it back into regular operation, make the following checks in the sequence in which they are listed.

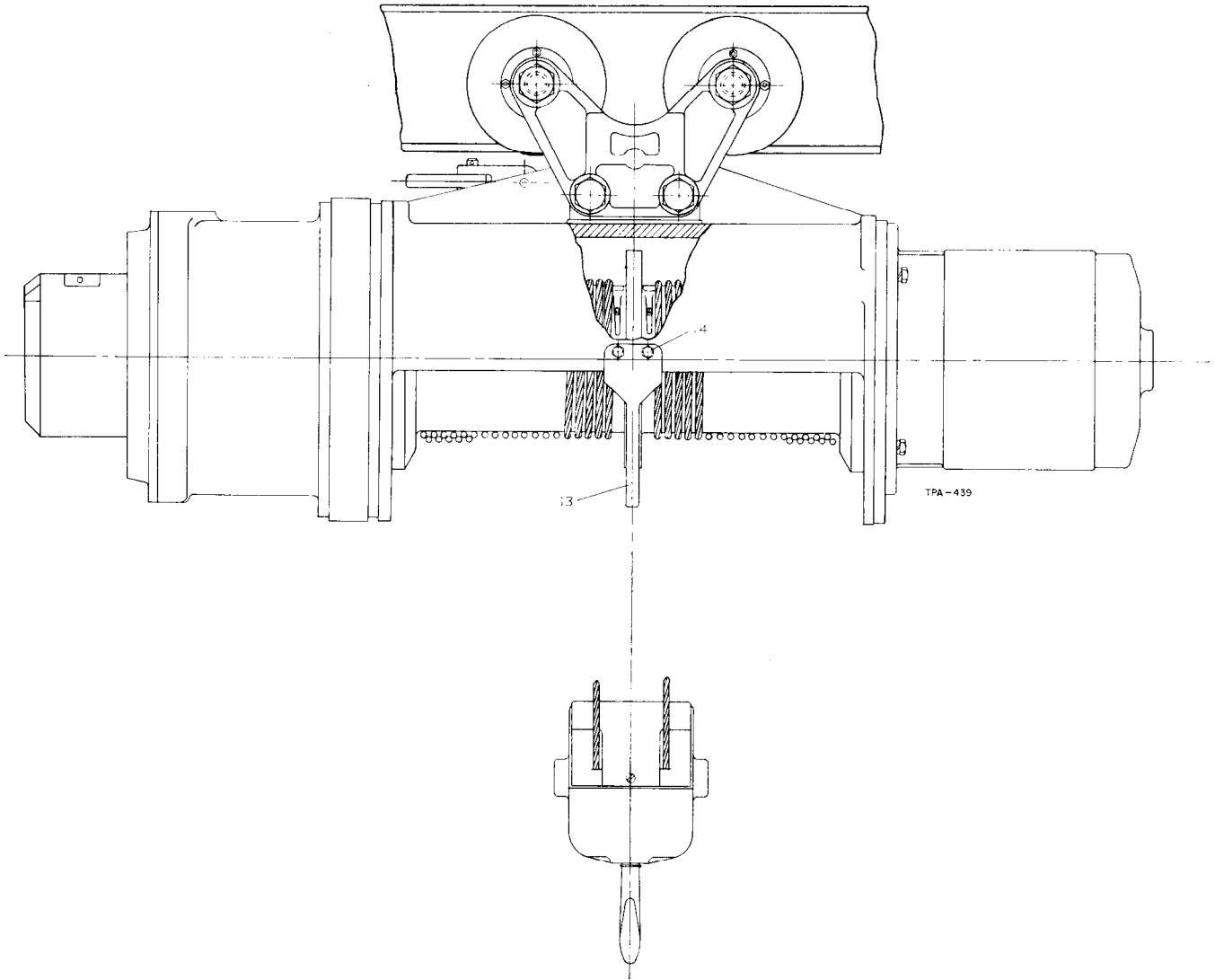
1. Check the power supply as instructed under "Pre-operation Checks."
2. Check lubrication of the gearing as instructed under "Lubrication."
3. Depress and quickly release the **UP** button to make certain the hook travels in the correct direction. **WARNING:** It is extremely important that the **UP** button be depressed first. Should the **DOWN** button be depressed first when the hot power leads are incorrectly connected, the Sheave Block might raise into the Hoist resulting in serious damage to equipment and possible injury to personnel. If the hook does not travel in the correct direction proceed as follows:
 - (a) Check the wiring of all electrical components against the wiring diagram inside the Control Housing Cover. Make any neces-

sary changes and then recheck the direction of hook travel.

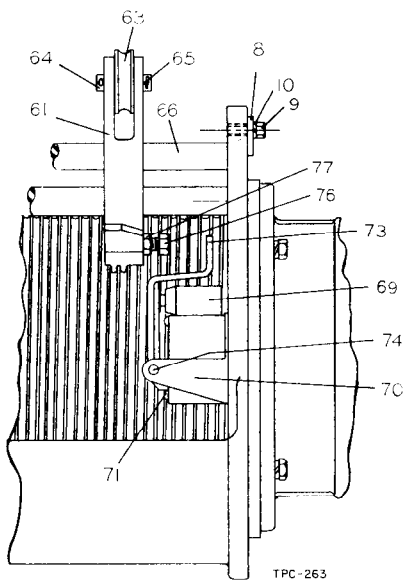
- (b) If all electrical components are wired exactly as shown in the wiring diagram, and the direction of hook travel is still incorrect, transpose any two of the hot power supply leads.
4. (a) For Standard Headroom Hoists. Depress the "up" button and, while the hook is rising, push **up** on the Up-Stop Weight (101). The hook should automatically reverse direction of travel.
 - (b) For Low Headroom Hoist. Depress the "up" button and, while the hook is rising, push **up** on the lower (Up-Stop) Switch Lever Roller (84). The hook should automatically stop. Push **up** on the upper (plug reversing) Switch Lever Roller (84) and the hook should automatically reverse direction of travel. In the normal position the bottom of the lower (up-stop) Switch Lever Roller should be $5\frac{1}{8}$ " ($+ \frac{1}{16}$ ") below the flat top surface of the Housing. The bottom of the upper (plug reversing) Switch Lever Roller should be $\frac{7}{8}$ " higher, or $4\frac{1}{4}$ " ($+ \frac{1}{16}$ ") from the same Housing surface. If the hook does not automatically reverse, there is an error in the wiring connections or the Up-Stop Switch (78 in std. hoist) or Reversing Switch (81 in low headroom hoist) is defective. Recheck the wiring as instructed in step 3-(a). If the wiring is correct, replace the Up-Stop Switch (78) or Reversing Switch (81).
 5. If the Hoist is equipped with a down stop, depress the "down" button and, while the hook is lowering, push on the Down Stop Switch Lever (73). The hook should automatically stop. If it does not stop, there is an error in the wiring connections or the Down Stop Switch (69) is defective. Recheck the wiring as instructed in step 3-(a). If the wiring is correct, replace the Down Stop Switch (69).

TROUBLE SHOOTING

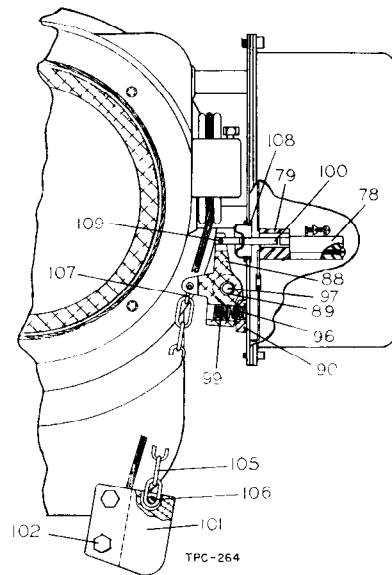
Trouble	Probable Cause	Remedy
Hoist Will Not Operate.	<ul style="list-style-type: none"> a. No power to Hoist or Power Supply "single-phased". b. Wrong voltage or frequency. c. Loose or broken wire connections in hoist electrical system. d. Contactor assembly not functioning. e. Defective transformer. f. Motor burned out. g. Motor Shaft brake not released. 	<ul style="list-style-type: none"> a. Check switches, circuit breakers or fuses and connections in power supply lines. b. Check voltage and frequency rating on motor data plate against power supply. Check wiring connections against wiring diagrams. c. Shut off power supply, remove control housing cover and check wiring connections. Check connections in push button station. d. Check contact points. Replace if excessively burned or pitted. Check for burned out solenoid coil. See that necessary jumper wires are properly installed. e. Check transformer coils for signs of overheating and open circuit. Replace if burned out. f. Replace motor. g. Check Brake solenoid operation and adjustment of gap.
Hook moves in wrong direction.	<ul style="list-style-type: none"> a. Reverse phasing. b. Hoist wired wrong. 	<ul style="list-style-type: none"> a. Follow instructions in "After-Repair Checks." b. Check wiring connections with appropriate wiring diagram.
Hook will rise but not lower.	<ul style="list-style-type: none"> a. Lower electrical circuit open. b. Contactor not functioning. 	<ul style="list-style-type: none"> a. Check for loose connections. See that necessary jumper wires are properly installed on contactor. Check for defective lower Limit Switch. b. Check for burned or pitted contact points or burned out solenoid coil.
Hook will lower but not rise.	<ul style="list-style-type: none"> a. Excessive load. b. Hoist circuit open. c. Contactor not functioning. 	<ul style="list-style-type: none"> a. Reduce loading to rated capacity of Hoist. b. Check for loose connections. See that necessary jumper wires are properly installed on contactor. Check for defective upper Limit Switch. c. Check for burned or pitted contact points or burned out solenoid coil.
Hoist will not lift rated load.	<ul style="list-style-type: none"> a. Low voltage. 	<ul style="list-style-type: none"> a. See that power supply current is same voltage as listed on motor data plate. Check size of power supply lines. Check wiring connections against wiring diagrams.
Load Drifts Excessively when hoist is stopped.	<ul style="list-style-type: none"> a. Motor shaft brake not holding. b. Load brake not holding. 	<ul style="list-style-type: none"> a. Check motor shaft brake for adjustment of gap between solenoid frame and armature. b. Remove load brake and inspect parts.
Hoist motor overheats.	<ul style="list-style-type: none"> a. Excessive load. b. Wrong voltage or frequency. c. Excessive jogging. 	<ul style="list-style-type: none"> a. Reduce loading to rated capacity of hoist. b. Check current rating on motor data plate against power supply. c. Reduce frequency of raise-lower cycles.



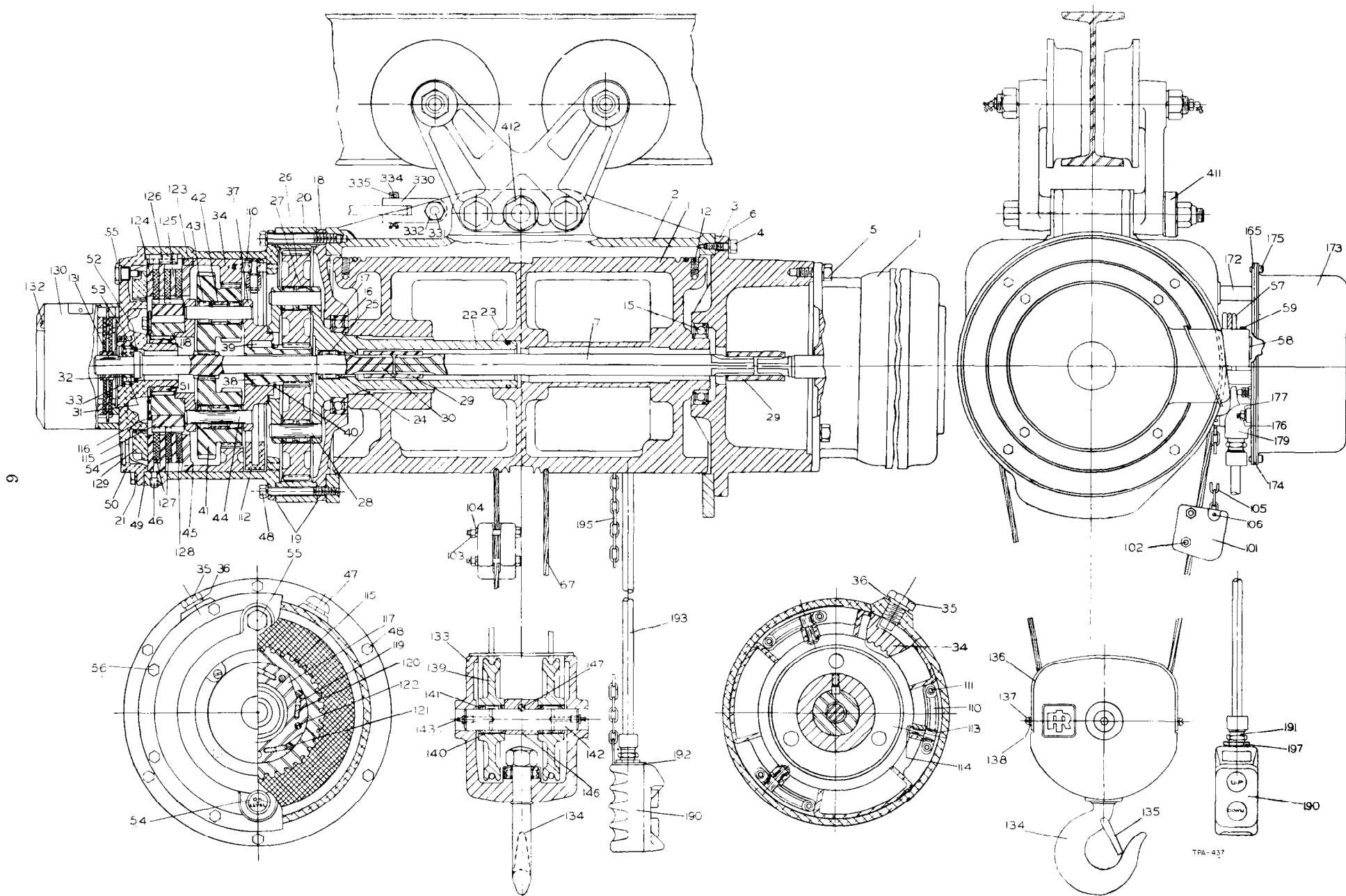
Sizes EH40A100 or EH60A75



Rope Guide and Down-Stop Parts



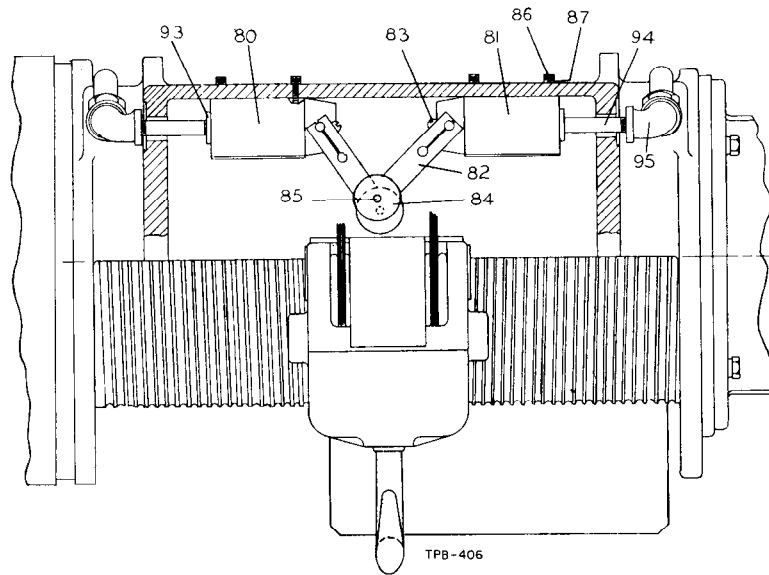
Up-Stop Parts for Standard Headroom Hoist



Size EH40A15
(Motor, Brake and Gearing Construction Typical of all EH40A or EH60A Hoists.)

REPAIR PART LIST
MAIN HOISTS PARTS

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING
1	Electric Motor Single Speed (reconnectable; for operation on 208-220/440 volt, 3 phase, 60 cycle current) 3 Horsepower..... 5 Horsepower..... Dual Speed (not reconnectable) 3/1 Horsepower (for operation on 208-220 volt, 3 phase, 60 cycle current) 5/1.7 Horsepower (for operation on 208-220 volt, 3 phase, 60 cycle cur- rent)..... 3/1 Horsepower (for operation on 440 volt, 3 phase, 60 cycle current).. 5/1.7 Horsepower (for operation on 440 volt, 3 phase, 60 cycle current).	3EH20A-275 5EH60A-275 3EH20A-277 5EH60A-277 3EH20A-276 5EH60A-276
2	Hoist Housing for Sizes EH40A15, 22, 28, 38 and 100; EH60A12, 20, 25, 35 and 75.... for Sizes EH40A15LH and 22LH; EH60A12LH and 20LH..... for Sizes EH40A35 and EH60A30..... for Sizes EH40A35LH and EH60A30LH..... for Sizes EH40A57 and EH60A52.....	C6H40A22-300 C6H40A22-L300 C6H40A35-300 C6H40A35-L300 C6H40A57-300
3	Motor Cover for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52..... for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30, 30LH and 75.....	3EH40A-502 3EH40A-702
4	Motor Cover Cap Screw (6) (1/2"-13 thd. x 1 1/4" long).....	215-148
5	Motor Cap Screw (4) (1/2"-13 thd. x 1 3/8" long).....	PCG107AC-162
6	1/2" Lock Washer (10).....	D10-322
7	Motor Shaft for Sizes EH40A28 and 38; EH60A25 and 35..... for Sizes EH40A57 and EH60A52..... for Sizes EH40A15, 15LH, 22, 22LH and 100; EH60A12, 12LH, 20, 20LH and 75..... for Sizes EH40A35 and 35LH; EH60A30 and 30LH.....	3EH40A22-316 3EH40A35-316 3EH40A22-716 3EH40A35-716
8	Guide Rod Retainer.....	2EH20A-359
9	Guide Rod Retainer Screw.....	TAASK-89
10	3/8" Lock Washer.....	D02-321
11	Rope Drum Assembly for Sizes EH40A15 and 15LH..... for Sizes EH40A22 and 22LH..... for Size EH40A28..... for Sizes EH40A35 and 35LH..... for Size EH40A38..... for Size EH40A57..... for Size EH40A100..... for Sizes EH60A12 and 12LH..... for Sizes EH60A20 and 20LH..... for Size EH60A25..... for Sizes EH60A30 and 30LH..... for Size EH60A35..... for Size EH60A52..... for Size EH60A75.....	C6H40A15-A371 C6H40A22-A371 C6H40A28-A371 C6H40A35-A371 C6H40A38-A371 C6H40A57-A371 C6H40A100-A324 D6H60A12-A371 D6H60A20-A371 D6H60A25-A371 D6H60A30-A371 D6H60A35-A371 D6H60A52-A371 C6H40A100-A324
12	Rope Set Screw for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30, 30LH and 75 (6)..... for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52 (3).....	BU-381 HU-381
13	Drum Guard (for Sizes EH40A100 and EH60A75).....	C6H40A100-298
14	Drum Guard Cap Screw (3) (for Sizes EH40A100 and EH60A75).....	D02-506
15	Drum Bearing, Motor End (New Departure Z4993L14 or its equivalent).....	C6H20A-466
16	Drum Bearing, Gear End (MRC 117KSZZG or its equivalent).....	C6H40A-466
17	Ring Gear Cover Seal.....	C6H40A-103
18	Ring Gear Cover.....	C6H40A-350
19	Ring Gear Gasket (2).....	C6H40A-931
20	Secondary Ring Gear.....	C6H40A-781A
*	Ring Gear Retaining Screw (2).....	C6H40A-356



Up-Stop Parts for Low Headroom Hoists

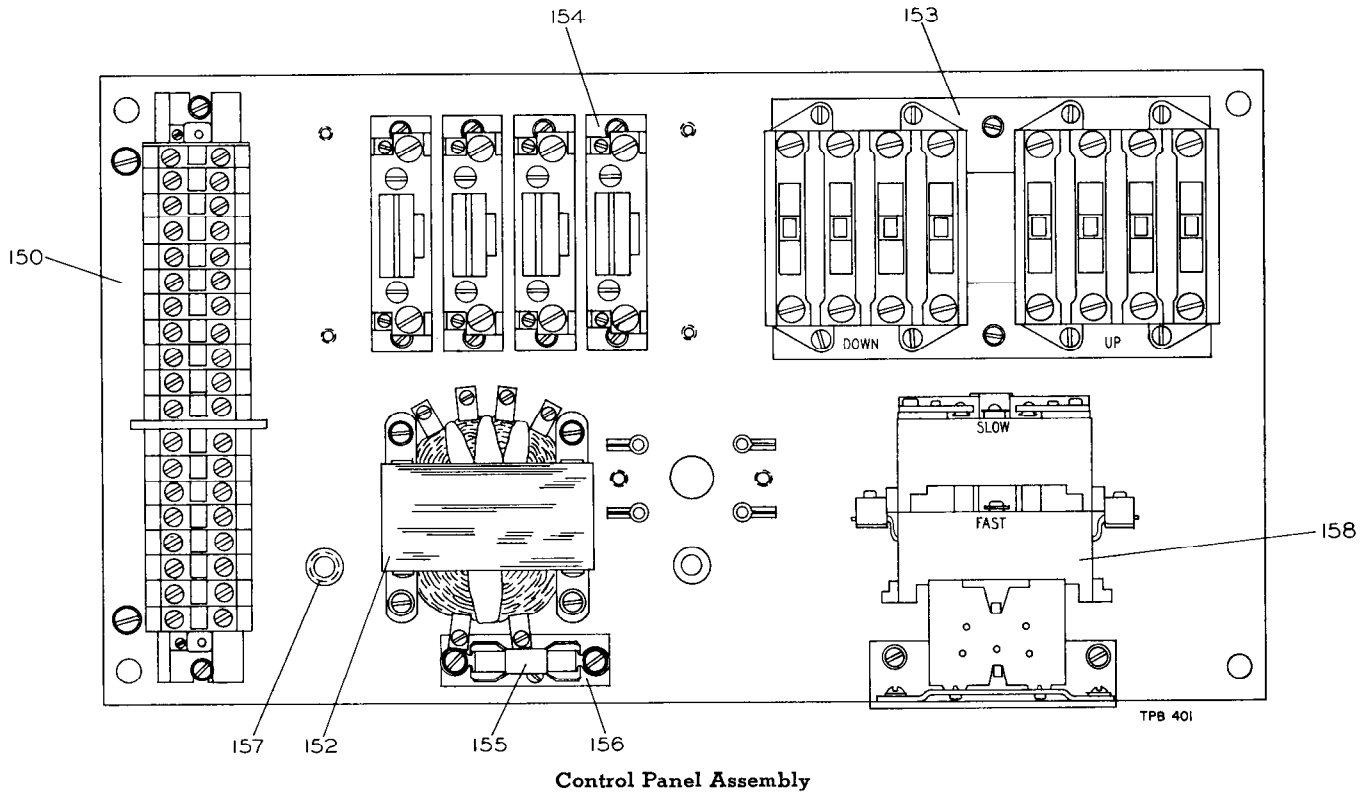
ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING
21	3/8" Lock Washer (13)	D02-321
22	Secondary Gear Frame Assembly	C6H40A-A786
23	Gear Frame Seal Ring	R38-311
24	Pinion Inner Seal	C6H40A-872
25	Pinion Inner Bearing (Torrington Roller Bearing HJ-162416 or its equivalent)	C6H40A-589
26	Secondary Planet Gear Assembly (3)	C6H40A-A779
27	Secondary Planet Gear Bearing (Roller Bearing Co. of America's Pitchlign Bearing Co. SJ7153 or its equivalent (2 for each Gear)	5BM-24
28	Secondary Planet Gear Shaft (3)	C6H40A-787
29	Motor Shaft Coupling (2)	2EH20A-314
30	Motor Shaft Pinion	3EH40A-319
31	Pinion Outer Bearing (AFBMA No. 25BC02IDD)	AM-318
32	Pinion Retainer	C6H20A-6
33	Pinion Outer Bearing Retainer	C6H20A-118
34	Primary Ring Gear	3EH40A-797
35	Ring Gear Stop	C6H40A-798
36	3/4" Lock Washer	D01-692
37	Primary Gear Frame Assembly	3EH40A-A367A
38	Gear Frame Pinion	C6H40A-734
39	Gear Frame Pinion Key	C6H40A-735
40	Gear Frame Pinion Retainer	C6H40A-736
41	Primary Planet Gear Assembly (2)	3EH40A-A364
42	Primary Planet Gear Bearing Spacer (1 for each Gear)	C6H40A-363
43	Primary Planet Gear Bearing (Roller Bearing Co. of America's Pitchlign Bearing No. SJ7153 or its equivalent) (2 for each Gear)	5BM-24
44	Primary Planet Gear Shaft (2)	C6H40A-365
45	Gear Case	C6H40A-353
46	1/4" Pipe Plug	ROH-377
47	Gear Case Vent Cap	C6H20A-19
48	Gear Case Screw (6) (1/2"-13 thd. x 4" long)	207-W37
49	Gear Case Cover Gasket	C6H40A-351
50	Gear Case Cover Assembly	C6H40A-A352
51	Ratchet Bearing Sleeve	C6H40A-154
52	Pinion Outer Seal	C6H20A-271
53	Pinion Outer Bearing Seal	R18-311
54	Oil Level Gauge	C6H20A-16
55	Adjusting Nut Lock	C6H40A-148
56	Gear Case Cover Screw (8) (3/8"-16 thd. x 1" long)	D02-354

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING
57	Auxiliary Sheave (for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30, 30LH and 75)	C6H40A-638
58	Auxiliary Sheave Shaft or Rope Anchor for Standard Headroom Hoists for Low Headroom Hoists	C6H40A-641 C6H40A-L641
59	Auxiliary Sheave Shaft Screw or Rope Anchor Screw (for Standard Headroom Hoists) (5/16"-18 thd. x 3/4" long)	C6H20A-643
60	Auxiliary Sheave Shaft Cotter (2) (for Low Headroom Hoists) (1/4" dia. x 1 3/4" long)	215-124
61	Rope Guide, Motor End for Sizes EH40A15, 22 and 35 for Sizes EH60A12, 20 and 30	C6H40A22-790 D6H60A20-790
*	Rope Guide, Gear End for Sizes EH40A15, 22 and 35 for Sizes EH60A12, 20 and 30	C6H40A22-789 D6H60A20-789
63	Rope Guide Roller (2) (for Sizes EH40A15, 22 and 35; EH60A12, 20 and 30)	C6H20A-792
64	Guide Roller Pin (1 for each Rope Guide Roller)	C6H20A-793
65	Guide Roller Pin Cotter (2 for each Rope Guide Roller)	D02-524
66	Guide Rod (2) for Sizes EH40A15, 15LH, 22, 22LH, 28 and 38; EH60A12, 12LH, 20, 20LH, 25 and 35 for Sizes EH40A35, 35LH and 57; EH60A30, 30LH and 52	C6H40A22-791 C6H40A35-791
67	Wire Rope for Size EH40A15 for Size EH40A15LH for Size EH40A22 for Size EH40A22LH for Size EH40A28 for Size EH40A35 for Size EH40A35LH for Size EH40A38 for Size EH40A57 for Size EH40A100 for Size EH60A12 for Size EH60A12LH for Size EH60A20 for Size EH60A20LH for Size EH60A25 for Size EH60A30 for Size EH60A30LH for Size EH60A35 for Size EH60A52 for Size EH60A75	C6H40A15-372 C6H40A15-L372 C6H40A22-372 C6H40A22-L372 C6H40A28-372 C6H40A35-372 C6H40A35-L372 C6H40A38-372 C6H40A57-372 C6H40A100-372 D6H60A12-372 D6H60A12-L372 D6H60A20-372 D6H60A20-L372 D6H60A25-372 D6H60A30-372 D6H60A30-L372 D6H60A35-372 D6H60A52-372 D6H60A75-372
*	Rope Clamp (for Sizes EH40A28, 38 and 57; EH60A25, 35, and 52) (2)	D04-464
*	Rope Thimble (for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52)	D10-721
*	Stop Cam for Sizes EH40A15, 15LH, 22, 22LH, 35 and 35LH for Sizes EH40A28, 38 and 57 for Sizes EH60A12, 12LH, 20, 20LH, 30 and 30LH for Sizes EH60A25, 35 and 52	C6H40A22-L771 C6H40A38-771 D6H60A20-L771 D6H60A35-771
69	Down Stop Switch	2EH20A-256
70	Down Stop Switch Bracket	2EH20A-264
71	Down Stop Switch Screw (2)	ST01-235
*	No. 10 Lock Washer (2)	R2-320
73	Down Stop Switch Lever	2EH20A-267
74	Down Stop Switch Lever Pin	2EH20A-268
*	Lever Pin Cotter (2) (3/32" dia. x 3/4" long)	D02-524
76	Down Stop Adjusting Screw for Sizes EH40A15, 15LH and 28; EH60A12, 12LH and 25 for Sizes EH40A22, 22LH, 35, 35LH, 38 and 57; EH60A20, 20LH, 30, 30LH, 35 and 52	J3-823 2EH20A22-265
77	Adjusting Screw Lock Nut (for Sizes EH40A15, 15LH and 28; EH60A12, 12LH and 25)	D02-558
78	Up-Stop Switch (for Standard Headroom Hoists)	HRE20A-525
79	Up-Stop Switch Bracket (for Standard Headroom Hoists)	2EH20A-558

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING
*	Up-Stop Switch Bracket Screw (2) (for Standard Headroom Hoists).....	2EH20A-552
*	Bracket Screw Lock Washer (2) (for Standard Headroom Hoists).....	R2-320
80	Up-Stop Switch (for Low Headroom Hoists).....	2EH20A-L255
81	Reversing Switch (for Low Headroom Hoists).....	2EH20A-L253
82	Up-Stop Switch Lever (2) (for Low Headroom Hoists).....	3EH40A-222
83	Switch Lever Screw (2) (for Low Headroom Hoists).....	34U-463
84	Switch Lever Roller (2) (for Low Headroom Hoists).....	2EH20A-220
85	Switch Lever Roller Shaft (2) (for Low Headroom Hoists).....	804-503A
86	Switch Mounting Screw (4) (for Low Headroom Hoists).....	502-638
87	No. 10 Lock Washer (6) (for Low Headroom Hoists).....	4U-58
88	Switch Arm (for Standard Headroom Hoists).....	3EH40A-555
89	Switch Arm Bearing (2) Torrington B57 or its equivalent) (for Standard Headroom Hoists).....	8U-654
90	Switch Arm Bracket (for Standard Headroom Hoists).....	2EH20A-556
*	Switch Arm Bracket Screw (2) (for Standard Headroom Hoists).....	R2N-103
*	1/4" Lock Washer (2) (for Standard Headroom Hoists).....	L01-67
93	3/4" x 1/2" Reducing Bushing (for Low Headroom Hoists).....	D02-420
94	Up-Stop Switch Nipple (2) (for Low Headroom Hoists).....	2EH20A-290
95	1/2" Pipe Elbow (2) (for Low Headroom Hoists).....	AAM-289
96	Switch Arm Spring (for Standard Headroom Hoists).....	2EH20A-412
97	Switch Arm Pin (for Standard Headroom Hoists).....	2EH20A-523
*	Switch Arm Cotter (2) (for Standard Headroom Hoists).....	D02-524
99	Switch Arm Adjusting Screw (for Standard Headroom Hoists).....	2EH20A-553
100	Up-Stop Switch Plunger (for Standard Headroom Hoists).....	2EH20A-557
101	Up-Stop Weight for Sizes EH40A15, 22, 35 and 100; EH60A12, 20, 30 and 75.....	2EH20A-504
	for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52.....	3EH40A-504
102	Up-Stop Weight Screw (2) (for Standard Headroom Hoists).....	R55H-312B
103	5/16"-18 thd. Hexagon Nut (2) (for Standard Headroom Hoists).....	D02-428
104	5/16" Lock Washer (2) (for Standard Headroom Hoists).....	T11-58
105	Up-Stop Chain (for Standard Headroom Hoists).....	2EH20A-506
106	Up-Stop Chain Pin (for Standard Headroom Hoists).....	5BM-278
107	S-Hook (for Standard Headroom Hoists).....	D01-221
108	Protector Boot (for Standard Headroom Hoists).....	HRE20A-511
109	Roll Pin (for Standard Headroom Hoists).....	FMD2-667
110	Load Brake Cam (6).....	C6H40A-88
111	Cam Retaining Screw (12).....	G57T-634
*	Retaining Screw Lock Washer (12).....	8U-58
112	Roller Carrier.....	C6H40A-85
113	Cam Follower round.....	C6H40A-86
	square (2).....	D6H60A-286
114	Cam Roller Retainer (3).....	4E-6
115	Ratchet Race.....	C6H40A-157A
116	Ratchet Side Plate.....	C6H40A-158
117	Brake Ratchet Assembly.....	C6H40A-A156
118	Ratchet Bearing (Torrington Needle Bearing No. B4420 or its equivalent.).....	K6U-466
119	Ratchet Plunger (5).....	C6H40A-160
120	Plunger Spring (5).....	C6H40A-159
121	Ratchet Roller (5).....	C6H40A-161
122	Ratchet Retaining Screw (5).....	HU-865
123	Brake Thrust Plate.....	C6H40A-151
124	Brake Plate (2).....	C6H40A-150
125	Slip Plate.....	C6H40A-163
126	Brake Plate Key.....	C6H40A-149
127	Friction Disc (2).....	C6H40A-152
128	Slip Disc.....	C6H40A-164
129	Brake Adjusting Nut.....	C6H40A-153
130	Electric Brake for Series EH40A.....	2EH20A-200
	for Series EH60A.....	5EH60A-200
131	Brake Key.....	J5-754
132	Brake Mounting Screw (2).....	AHC68-22

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING
133	Sheave Block and Hook Assembly for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100 with Open Hook with Safety Hook for Sizes EH40A28, 38 and 57 with Open Hook with Safety Hook for Series EH60A12, 12LH, 20, 20LH, 30, 30LH and 75 with Open Hook with Safety Hook for Series EH60A25, 35 and 52 with Open Hook with Safety Hook	C6H40A22-A378 C6H40A22-AS378 C6H40A28-A378 C6H40A28-AS378 D6H60A20-A378 D6H60A20-AS378 D6H60A25-A378 D6H60A25-AS378
134	Bottom Hook, Nut and Bearing Assembly for Series EH40A with Open Hook with Safety Hook for Series EH60A with Open Hook with Safety Hook	C6H40A-A377 C6H40A-AS377 D6H60A-A377 D6H60A-AS377
135	Safety Latch Kit (individual parts not sold separately) (for Safety Hook) for Series EH40A for Series EH60A	D02-S123 D04-S123
136	Sheave Block Cover (for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30 and 75)	C6H40A-441
137	Sheave Block Cover Screw (2)	J-376
138	1/4" Lock Washer (2)	L01-67
139	Sheave Assembly for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100 for Sizes EH40A28, 38 and 57 for Sizes EH60A12, 12LH, 20, 20LH, 30, 30LH and 75 for Sizes EH60A25, 35 and 52	C6H40A22-A380 C6H40A28-A380 D6H60A20-A380 D6H60A25-A380
140	Sheave Bearing for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30, 30LH and 75 (Torrington No. HJ-182616 or its equivalent) (2) for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52 (Torrington No. HJ- 243320 or its equivalent)	C6H20A28-753 C6H40A28-753
141	Sheave Bearing Seal for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30, 30LH and 75 (4) for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52 (2)	C6H20A28-754 C6H40A28-754
142	Sheave Shaft for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30, 30LH and 75 for Sizes EH40A28, 38 and 57; EH60A25, 35, and 52	C6H40A22-382 C6H40A28-382
143	Grease Fitting (1 for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52; 2 for others)	23-188
144	Sheave Shaft Lock (for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52)	MR20-383
145	Sheave Shaft Lock Screw (2) (for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52)	JC3350-103
146	Sheave Shaft Anchor (for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH and 100; EH60A12, 12LH, 20, 20LH, 30, 30LH and 75)	C6H40A-448
147	Sheave Shaft Anchor Bolt	DRC-643
*	Sheave Shaft Anchor Bolt Nut (for Hoist with Sheave Shaft Anchor)	D02-418
*	3/8" Lock Washer (for Hoist with Sheave Shaft Anchor)	D02-321

*Not illustrated.



CONTROL PANEL ASSEMBLY

ILLUS. NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING	
		24 Volt Circuit	110 Volt Circuit
150	Control Panel Assembly		
	Single Speed	2EH20A-A260-1	2EH20A-A260-3
	Dual Speed	2EH20A-A260-2	2EH20A-A260-4
*	Wire Harness		
	Single Speed	2EH20A-98	2EH20A-98
	Dual Speed	2EH20A-99	2EH20A-99
152	Control Transformer	2EH20A-70	2EH20A-70-1
153	Reversing Contactor	2EH20A-78	2EH20A-78-1
154	Overload Relay (2 for Single Speed; 4 for Dual Speed)	2EH20A-80	2EH20A-80
155	Fuse	2EH20A-74	2EH20A-74
156	Fuse Block	2EH20A-76	2EH20A-76
157	Rubber Grommet (2)	2EH20A-66	2EH20A-66
158	Speed Selector (for Dual Speed Hoists)	2EH20A-71	2EH20A-71-1

*Not illustrated.

CONTROL CABINET PARTS

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING	
165	Control Cabinet Base.....	2EH20A-250	
*	Large Cabinet Base Plug (3).....	2EH20A-77	
*	Cabinet Base Mounting Screw (4) for Standard Headroom Hoists.....	J3-823	
	for Low Headroom Hoists.....	D02-506	
168	Cabinet Mounting Bracket (2) (for Low Headroom Hoists).....	2EH20A-245	
*	Mounting Bracket Screw (4) (for Low Headroom Hoists).....	844-638	
*	Small Cabinet Base Plug (2) (for Low Headroom Hoists).....	2EH20A-193	
*	3/8" Lock Washer (4 for Standard Headroom Hoists; 8 for others).....	D02-321	
172	Control Cabinet Spacer (4) (for Standard Headroom Hoists).....	2EH20A-246	
173	Control Cabinet Cover.....	2EH20A-252	
174	Cabinet Cover Gasket.....	2EH20A-258	
175	Cabinet Cover Screw (10).....	RV1-376	
176	5/16"-18 thd. Hex. Nut (7).....	D02-428	
177	5/16" Lock Washer (7).....	T11-58	
*	1/4" Lock Washer (10).....	L01-67	
179	Pendent Control Cord Elbow for Single Speed Hoists.....	2EH20A-247	
	for Dual Speed Hoists.....	2EH20A-244	
*	Control Cord Elbow Gasket.....	2EH20A-248	
181	Short Cord Elbow Screw or Control Panel Screw (6).....	SP9-11B	
*	5/16" Plain Washer.....	B8-259	
*	Long Cord Elbow Screw.....	R5H-104	

*Not illustrated.

PENDENT CONTROL STATION PARTS

ILLUS. NUMBER (Do not use for ordering)	PART NAME FOR ORDERING	PART NUMBER FOR ORDERING	
		For Single-Speed Hoists	For Dual-Speed Hoists
190	Push Button Control Station.....	2EH20A-A269	2EH20A-A279
191	Control Station Cord Fitting (2).....	2EH20A-241	2EH20A-242
192	Control Station Hanger.....	2EH20A-270	2EH20A-280
193	Pendent Control Cord (length as specified).....	2EH20A-B238	2EH20A-B239
*	Pendent Control Cord Tie Strap.....	HRE20A-283	HRE20A-283
195	Control Station Chain (length as specified).....	D02-L413	D02-L413
196	S-Hook.....	D01-221	D01-221
197	Fitting Lock Nut.....	2EH20A-180	2EH20A-190

*Not illustrated.

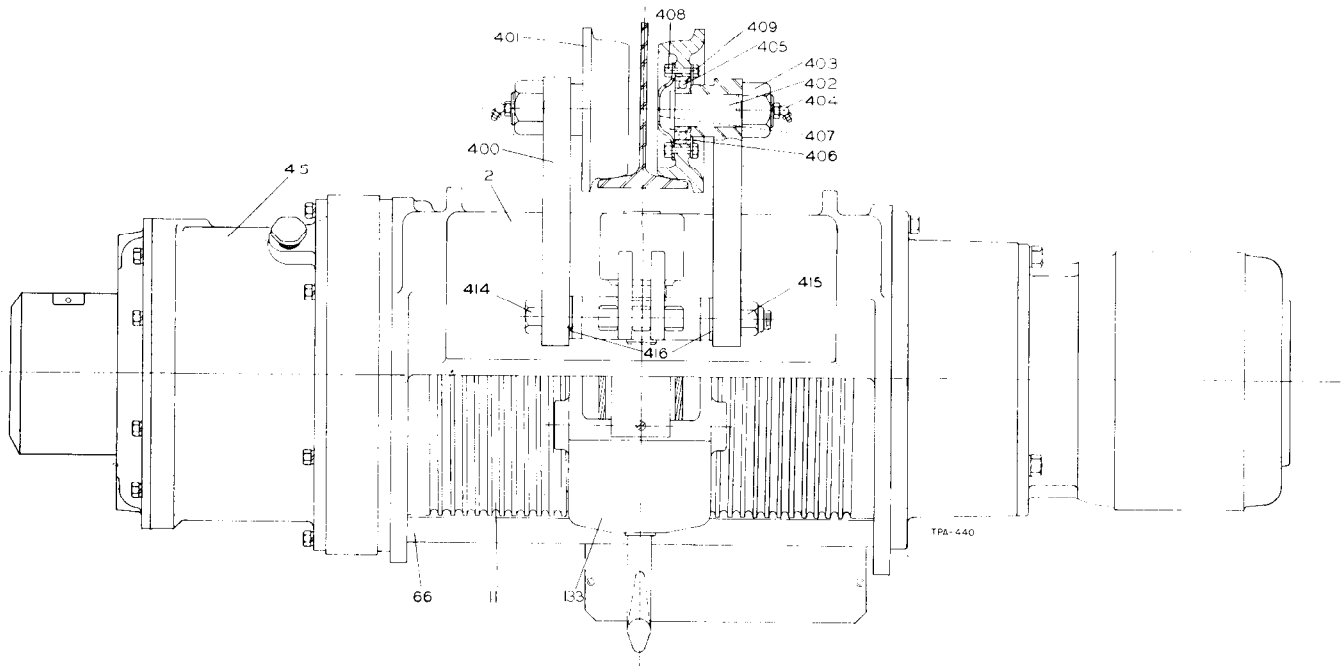
DRAWBAR PARTS

ILLUS. NUMBER (Do not use for ordering)	PART NAME FOR ORDERING	PART NUMBER FOR ORDERING	
		Standard Headroom Hoists	Low Headroom Hoists
330	Drawbar Yoke.....	C6H20A-607	C6H20A-607
331	Yoke Hinge Bolt or Pin for all Standard Headroom Sizes except EH40A57 and EH60A52..	BU-629	.....
	for EH40A57, EH60A52 and all Low Headroom Hoists.....	C6H20A-608	C6H20A-608
332	Yoke Hinge Bolt Nut (for all Standard Headroom Sizes except EH40A57 and EH60A52).....	D01-341A	.....
333	Hinge Pin Cotter (2) (1/8" dia. x 1/4" long) (for Standard Headroom Sizes EH- 40A57, EH60A52 and all Low Headroom Hoists).....	D02-330	D02-330
334	Drawbar Pin.....	C6H20A-793	C6H20A-793
335	Drawbar Pin Cotter (2) (3/32" x 3/4" long).....	D02-524	D02-524
*	Drawbar Bracket (for Sizes EH40A57 and EH60A52).....	D6H60A-611	.....
*	Drawbar Bracket Hinge Pin (for Sizes EH40A57 and EH60A52).....	C6H40A-612	.....
*	Hinge Pin Set Screw (for Sizes EH40A57 and EH60A52).....	D10-449	.....
*	Drawbar Bracket (used with 90° Angle Attachment).....	C6H40A-711	.....

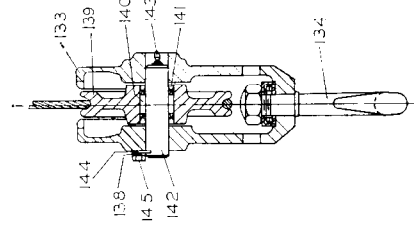
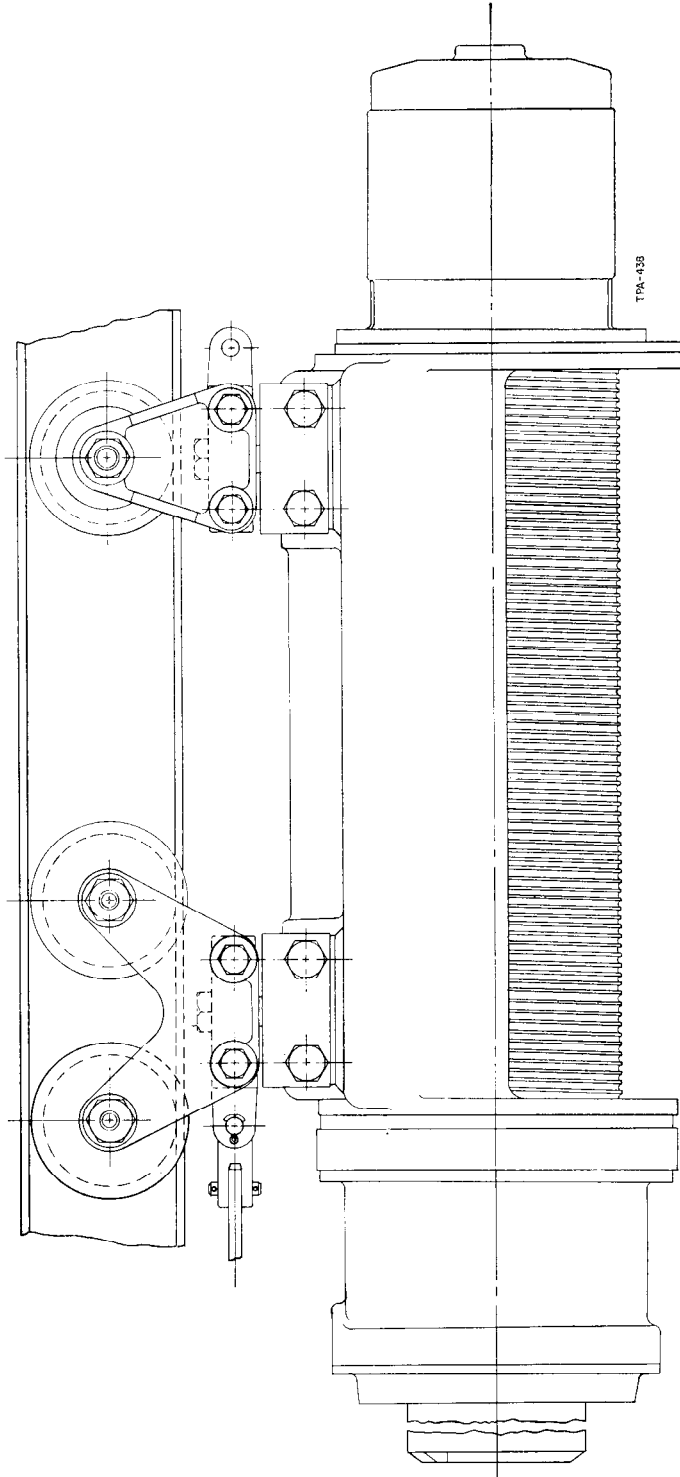
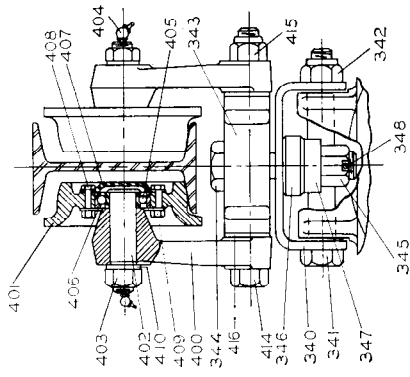
*Not illustrated.

CONDUIT, CONDUIT FITTINGS, LEAD WIRE, POWER CABLE, ETC.

PART NAME FOR ORDERING	PART NUMBER FOR ORDERING
3/4" Flexible Conduit (American Brass Co. 3/4" Sealtite Conduit Type CSA) (length as specified)	2EH20A-B186
3/8" Flexible Conduit (American Brass Co. 3/8" Sealtite Conduit Type CSA) (length as specified)	2EH20A-B184
3/4" x 3/4" x 90° Conduit Elbow	2EH20A-194
3/4" Conduit Connector	2EH20A-185
3/4" Conduit Fitting Gasket	2EH20A-195
3/4" Conduit Fitting Lock Nut	2EH20A-190
3/8" x 1/2" x 45° Conduit Elbow	2EH20A-187
3/8" x 1/2" x 90° Conduit Elbow	2EH20A-182
3/8" x 1/2" Conduit Fitting	2EH20A-181
1/2" Conduit Fitting Gasket	2EH20A-183
1/2" Conduit Fitting Lock Nut	2EH20A-180
Lead Wire (Type TFF Stranded Machine Tool Wire 600 volt No. 16 AWG with black insulation) (length as specified)	2EH20A-B210
Lead Wire (Type TFF Stranded Machine Tool Wire 600 volt No. 16 AWG with red insulation) (length as specified)	2EH20A-B204
Lead Wire (Type TFF Stranded Machine Tool Wire 600 volt No. 12 AWG with red insulation) (length as specified)	2EH20A-B272
No. 1 Wire Connector	2EH20A-273
Power Supply Cable (length as specified)	HRE20A-L756
Coiled Power Supply Cable	2EH20A-757
1/2" x 90° Male-Female Elbow	HRE30A-285
Strain Relief	HRE20A-757



Longitudinal View of Series 3EH40A or 5EH60A Low Headroom Hoist

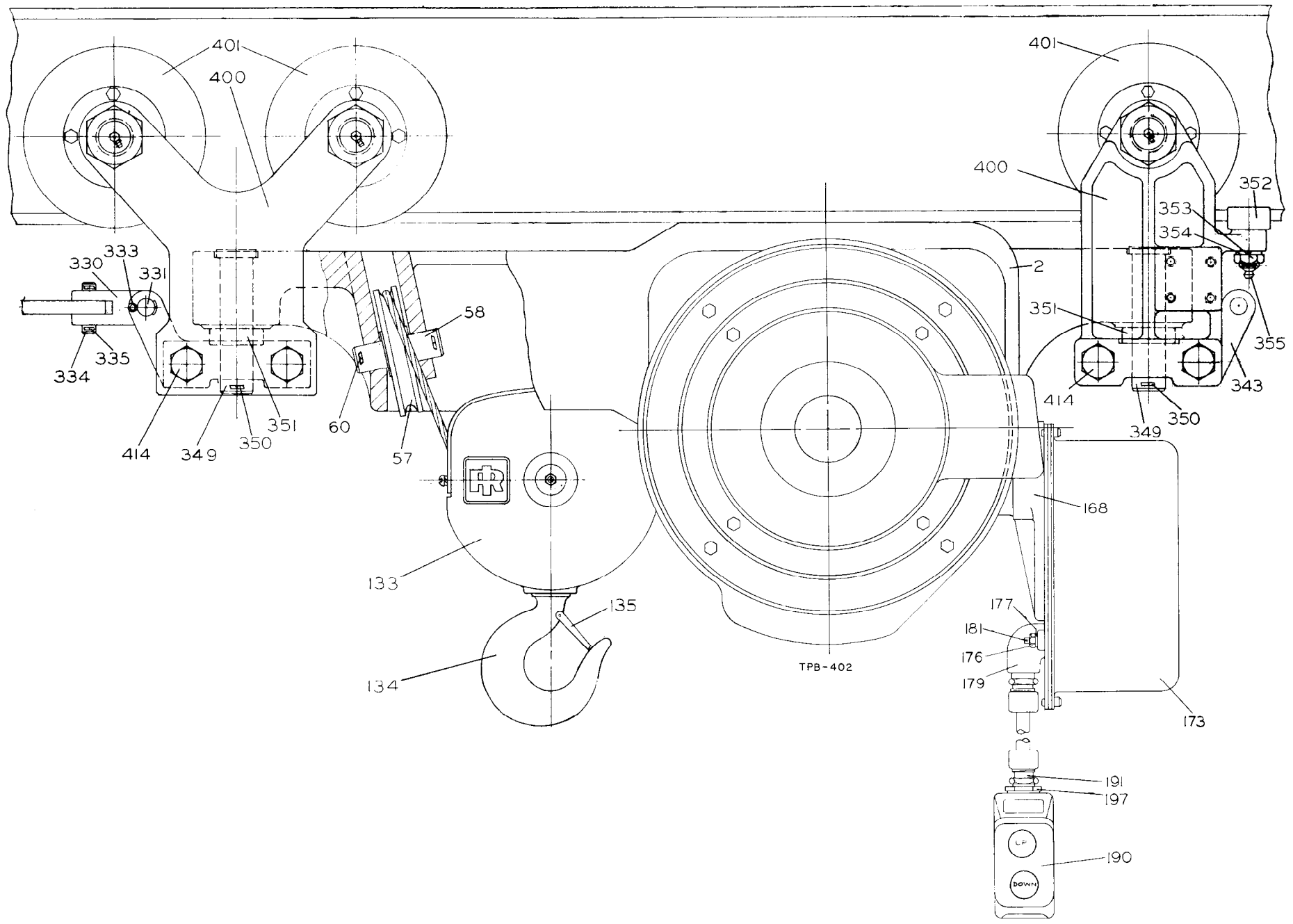


Size EH40A57
 (Sheave Block Construction Typical of EH40A28, 38; EH60A25, 35 and 52)

PLAIN TROLLEYS

When ordering one of the Trolleys listed below,
always specify the type, size and flange width of the
I-beam or Monorail on which it is to operate.

TYPE OF TROLLEY AND HOIST ON WHICH IT IS USED	TROLLEY NUMBER FOR ORDERING
Trolley Assembly for all Standard Headroom Hoists except Sizes EH40A57 and EH60A52	
for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track	D04-A430-6
for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track	D04-A430
for Flat Tread Monorail	D04-AT430
Rigid Trolley Assembly for Standard Headroom Hoists, Sizes EH40A57 and EH60A52	
for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track	D04-C430-6
for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track	D04-C430
for Flat Tread Monorail	D04-CT430
Swivel Trolley Assembly for Standard Headroom Hoists, Sizes EH40A57 and EH60A52	
for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track	3EH40A57-AS430-6
for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track	3EH40A57-AS430
for Flat Tread Monorail	3EH40A57-AS430T
Auxiliary Rigid Trolley Assembly for Standard Headroom Hoists, Sizes EH40A57 and EH60A52	
for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A57-A700-6
for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A57-A700
for Flat Thread Monorail	C6H40A57-A700T
Auxiliary Swivel Trolley Assembly for Standard Headroom Hoists, Sizes EH40A57 and EH40A52	
for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A57-AS700-6
for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A57-AS700
for Flat Tread Monorail	C6H40A57-AS700T
Swivel Trolley Assembly for Low Headroom Hoists	
for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A-AL430-6
for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A-AL430
for Flat Tread Monorail	C6H40A-AL430T
Auxiliary Swivel Trolley Assembly for Low Headroom Hoists	
for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A-AL690-6
for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track	C6H40A-AL690
for Flat Tread Monorail	C6H40A-AL690T



Motor End View of Series 3EH40A or 5EH60A Low Headroom Hoist

COMPONENT PARTS OF PLAIN TROLLEYS

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING
	Assembled Trolley Bracket (2)	
	for Trolley No. D04-A430-6	
	Hinged Type.....	D04-B427-6
	Rigid Type.....	D04-B430-6
	for Trolley No. D04-A430	
	Hinged Type.....	D04-B427
	Rigid Type.....	D04-B430
	for Trolley No. D04-AT430	
	Hinged Type.....	D04-BT427
	Rigid Type.....	D04-BT430
	for Trolley No. D04-C430-6 or 3EH40A57-AS430-6.....	D04-B430-6
	for Trolley No. D04-C430 or 3EH40A57-AS430.....	D04-B430
	for Trolley No. D04-CT430 or 3EH40A57-AS430T.....	D04-BT430
	for Trolley No. C6H40A57-A700-6 or C6H40A57-AS700-6.....	C6H40A57-B700-6
	for Trolley No. C6H40A57-A700 or C6H40A57-AS700.....	C6H40A57-B700
	for Trolley No. C6H40A57-A700T or C6H40A57-AS700T.....	C6H40A57-B700T
	for Trolley No. C6H40A-AL430-6.....	C6H40A-BL430-6
	for Trolley No. C6H40A-AL430.....	C6H40A-BL430
	for Trolley No. C6H40A-AL430T.....	C6H40A-BL430T
	for Trolley No. C6H40A-AL690-6	
	Gear End.....	C6H40A-BL689-6
	Motor End.....	C6H40A-BL690-6
	for Trolley No. C6H40A-AL690	
	Gear End.....	C6H40A-BL689
	Motor End.....	C6H40A-BL690
	for Trolley No. C6H40A-AL690T	
	Gear End.....	C6H40A-BL689T
	Motor End.....	C6H40A-BL690T
400	Trolley Bracket	
	for Trolley No. D04-A430-6, D04-A430 or D04-AT430	
	Hinged Type.....	D04-427
	Rigid Type.....	D04-430
	for Trolley No. D04-C430-6, D04-C430 or D04-CT430.....	D04-430
	for Trolley No. C6H40A57-A700-6, C6H40A57-A700 or C6H40A-A700T.....	C6H40A57-700
	for Trolley No. C6H40A-AL430-6, C6H40A-AL430 or C6H40A-AL430T.....	C6H40A-L430
	for Trolley No. C6H40A-AL690-6, C6H40A-AL690 or C6H40A-AL690T	
	Gear End.....	C6H40A-L689
	Motor End.....	C6H40A-L690
401	Trolley Wheel (1 for Brackets C6H40A57-700, C6H40A-L430, C6H40A-L689 and C6H40A-L690; 2 for others)	
	for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track.....	D04-231
	for 8" to 18" I-Beam or Richards-Wilcox Tru-Tred Track.....	D04-431
	for Flat Tread Monorail.....	D04-T431
402	Trolley Wheel Shaft (1 for each Wheel).....	D04-435
403	Trolley Wheel Shaft Nut (1 for each Shaft).....	D10-305
404	Angle Grease Fitting (1 for each Shaft).....	23-189
405	Trolley Wheel Bearing (1 for each Wheel) (AFBMA No. 35BC02IP).....	D04-956
406	Bearing Plate (1 for each Wheel).....	D04-955
407	Bearing Cap (1 for each Wheel).....	D04-954
408	1/4"-28 thd. x 1 1/4" long Cap Screw (4 for each Wheel).....	501-638
409	1/4"-28 thd. Elastic Stop Nut (1 for each Cap Screw).....	501-639
410	Trolley Wheel Bearing Spacer (for 6" or 7" I-Beam or Richards-Wilcox Tru-Tred Track).....	D04-963
411	Trolley Bracket Yoke (for Trolley No. D04-A430-6, D04-A430 or D04-AT430).....	D04-952
412	Bracket Hinge Pin (for Trolley No. D04-A430-6, D04-A430 or D04-AT430) (Refer to Table A on page 25)	
	10 1/2" long.....	D04-953-10 1/2
	11 1/2" long.....	D04-953-11 1/2
	12" long.....	D04-953-12

COMPONENT PARTS OF PLAIN TROLLEYS (continued)

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING	PART NUMBER FOR ORDERING
	Parts Indented After An Item Are Included With That Item	
* 414	Hinge Pin Nut (for Trolley No. D04-A430-6, D04-A430 or D04-AT430)	D04-959A
	Trolley Bracket Bolt (Refer to Table A on page 25)	
	for Trolleys used on all Standard Headroom Hoists	
	10" long	D02-439A-10
	11" long	D02-439A-11
	12" long	D02-439A-12
	for Trolleys used on all Low Headroom Hoists	
	10" long	C6H20A-439-10
	10½" long	C6H20A-439-10½
	11" long	C6H20A-439-11
	11½" long	C6H20A-439-11½
415	Trolley Bracket Bolt Nut (1 for each Bolt)	
	for Trolleys used on all Standard Headroom Hoists	D02-440B
	for Trolleys used on all Low Headroom Hoists	C6H20A-440
416	Trolley Bracket Spacer (Refer to Table A on page 25)	
	for Trolleys used on all Standard Headroom Hoists	
	1/6" thick	D02-442A-1/6
	1/4" thick	D02-442A-1/4
	3/8" thick	D02-442A-3/8
	1/2" thick	D02-442A-1/2
	3/4" thick	D02-442A-3/4
	1" thick	D02-442A-1
	for Trolleys used on all Low Headroom Hoists	
	1/6" thick	C6H20A-442-1/6
	1/4" thick	C6H20A-442-1/4
	3/8" thick	C6H20A-442-3/8
	1/2" thick	C6H20A-442-1/2
†340	Swivel Trolley Yoke (1 for each Trolley)	D6H60A-590
†341	Swivel Yoke Bolt (2 for each Yoke)	D02-339
†342	Yoke Bolt Nut (1 for each Bolt)	D02-440B
343	Trolley Mounting Swivel Block	
	for Trolley No. D04-C430-6, D04-C430, D04-CT430, C6H40A57-A700-6, C6H40A57-A700 and C6H40A57-A700T	C6H40A57-425
	for Trolleys used on all Low Headroom Hoists	C6H40A-L425
†344	Swivel Block Bolt (1 for each Swivel Block)	C6H40A57-823
†345	Swivel Bolt Nut (1 for each Bolt)	C6H40A57-824
†346	Swivel Bolt Spacer (1 for each Bolt)	C6H40A57-825
†347	Swivel Thrust Bearing (1 for each Trolley)	D06-379A
†348	Swivel Bolt Pin (1 for each Bolt)	599-115
●349	Swivel Block Pin (1 for each Trolley)	C6H40A-L823
●350	Swivel Block Pin Cotter (1 for each Pin)	215-124
●351	Swivel Thrust Bearing	D06-379A
●352	Trolley Guide Roller (2)	C6H20A-688
●353	Guide Roller Nut (2)	D01-305
●354	Guide Roller Lock Washer (2)	A-67
●355	Guide Roller Grease Fitting (2)	C6H20A-327

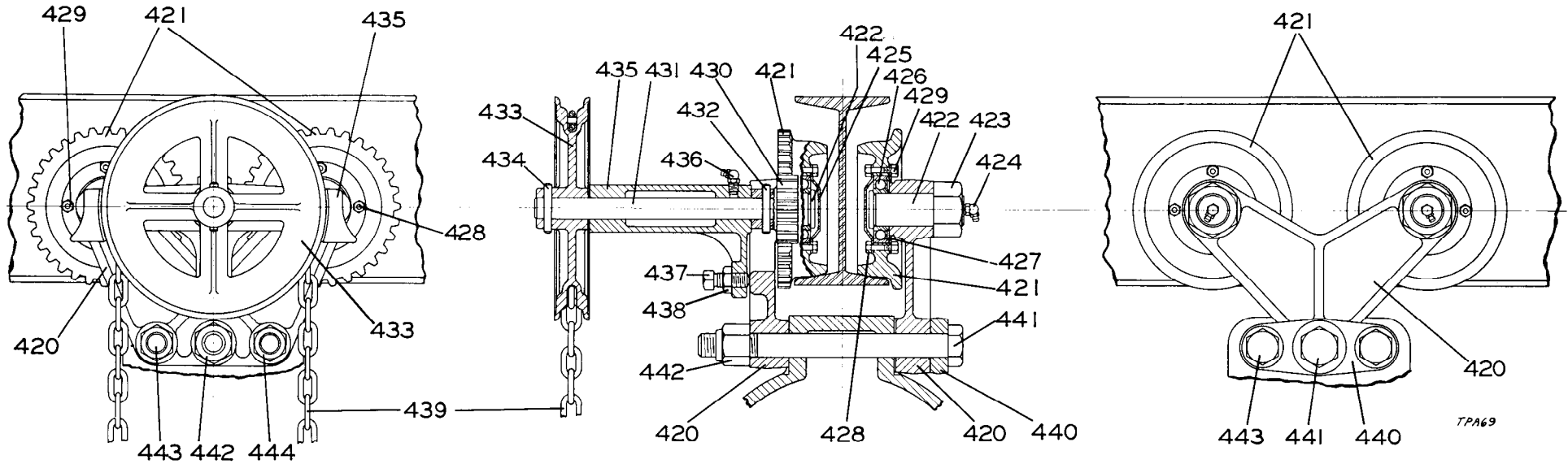
*Not illustrated.

†Parts used only with Swivel Trolleys for Sizes EH40A57 and EH60A52.

●Parts used only with Swivel Trolleys for Low Headroom Hoists.

◎Parts used only with Auxiliary Swivel Trolleys for all Low Headroom Hoists.

HAND CHAIN DRIVEN TROLLEY PARTS



Hand Chain Driven Trolley Parts

21

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING			
		Standard Headroom Hoists		Low Headroom Hoists	
		I-Beam or Richards-Wilcox Tru-Tred Track	Flat Tread Monorail	I-Beam or Richards-Wilcox Tru-Tred Track	Flat Tread Monorail
★	Hand Chain Driven Trolley Assembly				
	Plain Type (for all Standard Headroom Hoists except Sizes EH40A57 and EH60A52)	D04-A471	D04-AT471	.....	.....
	Plain Type (for Sizes EH40A57 and EH60A52)	D04-C471	D04-CT471	.....	.....
	Swivel Type (for Sizes EH40A57 and EH60A52)	C6H40A57-A471	C6H40A57-A471T	.....	.....
	Swivel Type (for all Low Headroom Hoists) .....	.....	.....	C6H40A-AL471	C6H40A-AL471T
	Assembled Trolley Bracket				
	Geared Side	D04-G430	D04-G430	C6H40A-GL430	C6H40A-GL430T
	Plain Side (not for Sizes EH40A57 and EH60A52)	D04-B427	D04-BT427	C6H40A-BL430	C6H40A-BL430T
	Plain Side (for Sizes EH40A57 and EH60A52)	D04-B430	D04-BT430	.....	.....
420	Trolley Bracket				
	Geared Side	D04-430	D04-430	C6H40A-L430	C6H40A-L430
	Plain Side (not for Sizes EH40A57 and EH60A52)	D04-427	D04-427	C6H40A-L430	C6H40A-L430
	Plain Side (for Sizes EH40A57 and EH60A52)	D04-430	D04-430	.....	.....
421	Trolley Wheel (2 for each Bracket)				
	Geared Side	D04-472	D04-T472	D04-472	D04-T472
	Plain Side	D04-431	D04-T431	D04-431	D04-T431

HAND CHAIN DRIVEN TROLLEY PARTS (Continued)

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING			
		Standard Headroom Hoists		Low Headroom Hoists	
		I-Beam or Richards-Wilcox Tru-Tred Track	Flat Tread Monorail	I-Beam or Richards-Wilcox Tru-Tred Track	Flat Tread Monorail
422	Trolley Wheel Shaft (1 for each Wheel)				
	Geared Side	D04-474	D04-474	D04-474	D04-474
	Plain Side	D04-435	D04-435	D04-435	D04-435
423	Trolley Wheel Shaft Nut (1 for each Shaft)				
	Geared Side	DU-562	DU-562	DU-562	DU-562
	Plain Side	D10-305	D10-305	D10-305	D10-305
424	Angle Grease Fitting (1 for each Shaft)	23-189	23-189	23-189	23-189
425	Bearing Cap (1 for each Wheel)	D04-954	D04-954	D04-954	D04-954
426	Trolley Wheel Bearing (1 for each Wheel) (AFBAM No. 35BC02JP)	D04-956	D04-956	D04-956	D04-956
427	Bearing Plate (1 for each Wheel)	D04-955	D04-955	D04-955	D04-955
428	Cap Screw (4 for each Wheel) (1/4"-28 thd. x 1 1/4" long)	501-638	501-638	501-638	501-638
429	Elastic Stop Nut (1 for each Cap Screw) (1/4"-28 thd.)	501-639	501-639	501-639	501-639
*	3/4" Lock Washer (2)	D01-692	D01-692	D01-692	D01-692
430	Drive Pinion	D02-473	D02-T473	D02-473	D02-T473
431	Chain Sprocket Shaft	D02-475	D02-475	D02-475	D02-475
432	Taper Pin	D02-520	D02-520	D02-520	D02-520
433	Chain Sprocket	D02-470	D02-470	D02-470	D02-470
434	Taper Pin	D02-520	D02-520	D02-520	D02-520
435	Chain Sprocket Bracket	D04-471	D04-471	D04-471	D04-471
436	Angle Grease Fitting	23-189	23-189	23-189	23-189
437	Bracket Set Screw	D02-48A	D02-480A	D02-480A	D02-480A
438	Set Screw Nut	G7-18	G7-18	G7-18	G7-18
439	Hand Chain (specify length)	D02-L476	D02-L476	D02-L476	D02-L476
440	Trolley Bracket Yoke (not for Sizes EH40A57 and EH60A52)	D04-952	D04-952	.....	.....
441	Bracket Hinge Pin (not for Sizes EH40A57 and EH60A52) (Refer to Table A on page 25)				
	10 1/2" long	D04-953-10 1/2	D04-953-10 1/2	.....	.....
	11 1/2" long	D04-953-11 1/2	D04-953-11 1/2	.....	.....
	12" long	D04-953-12	.....	.....	.....
442	Hinge Pin Nut (not for Sizes EH40A57 and EH60A52)	D04-959A	D04-959A	.....	.....
443	Trolley Bracket Bolt (2) (Refer to Table A on page 25)				
	10" long	D02-439A-10	D02-439A-10	C6H20A-439-10	C6H20A-439-10
	10 1/2" long .....	.....	.....	C6H20A-439-10 1/2	C6H20A-439-10 1/2
	11" long	D02-439A-11	D02-439A-11	.....	C6H20A-439-11
	11 1/2" long .....	.....	.....	C6H20A-439-11 1/2	.....
	12" long	D02-439A-12	.....	.....	.....

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING			
		Standard Headroom Hoists		Low Headroom Hoists	
		I-Beam or Richards-Wilcox Tru-Tred Track	Flat Tread Monorail	I-Beam or Richards-Wilcox Tru-Tred Track	Flat Tread Monorail
444	Trolley Bracket Bolt Nut (2).....	D02-440B	D02-440B	C6H20A-440	C6H20A-440
*	Trolley Bracket Spacer (Refer to Table A on page 25)				
	1/6" long.....	D02-442A-1/6		C6H20A-442-1/6	
	1/4" long.....		D02-442A-1/4	C6H20A-442-1/4	C6H20A-442-1/4
	3/8" long.....		D02-442A-3/8		C6H20A-442-3/8
	1/2" long.....	D02-442A-1/2		C6H20A-442-1/2	
	3/4" long.....	D02-442A-3/4			
	1" long.....	D02-442A-1			
†340	Swivel Trolley Yoke.....	D6H60A-590	D6H60A-590		
†341	Swivel Yoke Bolt (2).....	D02-339	D02-339		
†342	Yoke Bolt Nut (2).....	D02-440B	D02-440B		
†343	Trolley Mounting Swivel Block.....	C6H40A57-425	C6H40A57-425		
†344	Swivel Block Bolt.....	C6H40A57-823	C6H40A57-823		
†345	Swivel Bolt Nut.....	C6H40A57-824	C6H40A57-824		
†346	Swivel Bolt Spacer.....	C6H40A57-825	C6H40A57-825		
†347	Swivel Thrust Bearing.....	D06-379A	D06-379A		
†348	Swivel Bolt Pin.....	S99-115	S99-115		
Δ343	Trolley Mounting Swivel Block.....			C6H40A-L425	C6H40A-L425
Δ349	Swivel Block Pin.....			C6H40A-L823	C6H40A-L823
Δ350	Swivel Block Pin Cotter.....			215-124	215-124
Δ351	Swivel Thrust Bearing.....			D06-379A	D06-379A
⊙	Auxiliary Trolley Assembly				
	For Sizes EH40A57 and EH60A52				
	Rigid Type.....	C6H40A57-A700	C6H40A57-A700T		
	Swivel Type.....	C6H40A57-AS700	C6H40A57-AS700T		
	Swivel Type for Low Headroom Hoists.....			C6H40A-AL690	C6H40A-AL690

*Not illustrated.

★Always specify the type, size and flange width of track on which Trolley is to operate.

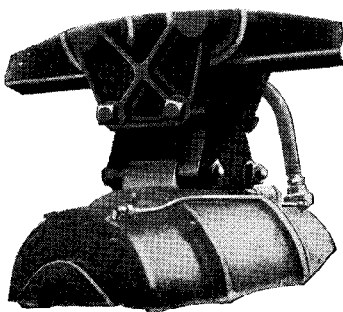
†Parts used only in the Swivel Trolley Assembly for Sizes EH40A57 and EH60A52.

ΔRefer to illustrations of Low Headroom Hoists on pages 8 and 18.

⊙The Auxiliary Trolley Assembly is not included in the Hand Chain Trolley Assembly and must be ordered as an additional item. For Sizes EH40A57 and EH60A52 refer to the Auxiliary Trolley Assembly on page 17. For Low Headroom Hoists refer to Auxiliary Swivel Trolley Assembly on page 17.

MAINTENANCE TOOLS

TOOL NUMBER FOR ORDERING	TOOL NAME FOR ORDERING	OPERATION
P25-228 D02-426	Grease Gun	Lubrication
	Rope Set Screw Wrench (Hex. Key 1/4" across flats) ..	Loosening and tightening the Rope Set Screws (12) in the Rope Drum (11) (for Sizes EH40A28, 38 and 57; EH60A25, 35 and 52).
IA4-478	Rope Set Screw Wrench (Hex. Key 3/16" across flats) ..	Loosening and tightening the Rope Set Screws (12) in the Rope Drum (11) (for Sizes EH40A15, 15LH, 22, 22LH, 35, 35LH, EH60A12, 12LH, 20, 20LH, 30, 30LH and 75.)
76559	Sheave Bearing Inserting Tool	Installing the Sheave Bearing (140) in the Sheave (139).



**90° ANGLE ATTACHMENT
ILLUSTRATION Nos. 665,
666 and 667**

ACCESSORIES

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING Parts Indented After An Item Are Included With That Item	PART NUMBER FOR ORDERING
665	90° Angle Attachment Assembly (for Standard Headroom Hoist except EH40A57 and EH60A52)	D02-444B
666	Angle Attachment Bolt (2)	D01C-694
667	Angle Attachment Bolt Nut (2)	D02-440B

TABLE A

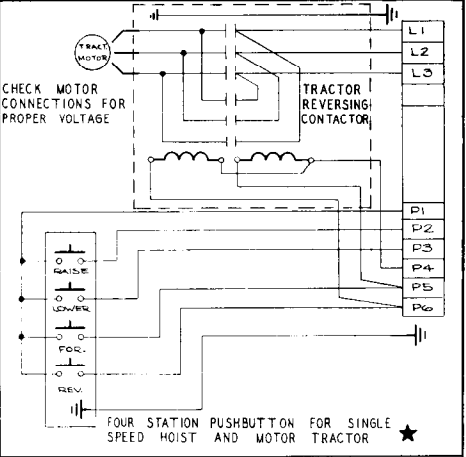
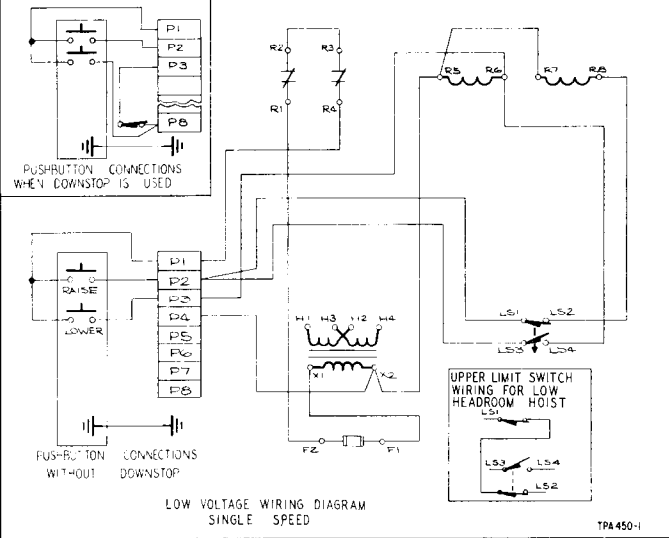
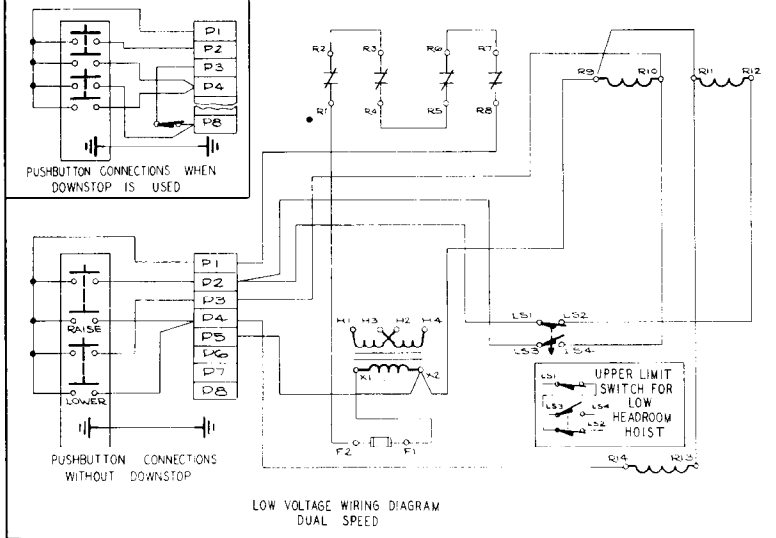
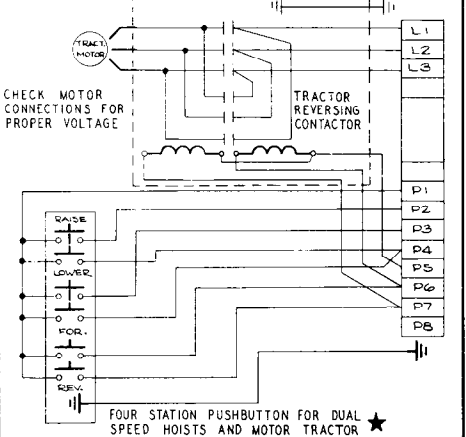
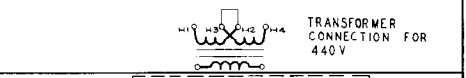
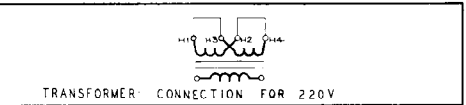
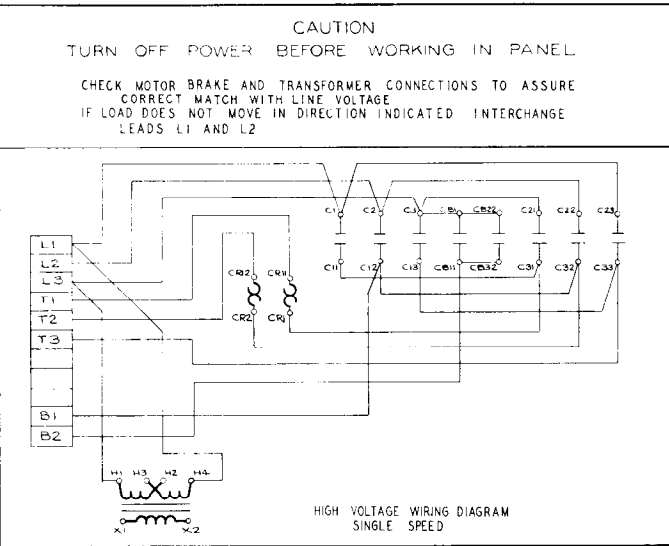
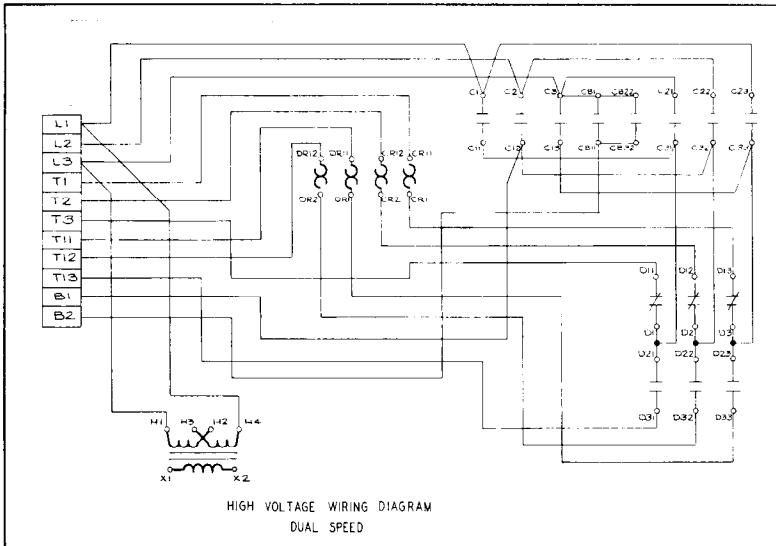
TROLLEY BRACKET BOLTS, HINGE PINS AND TROLLEY BRACKET SPACERS REQUIRED FOR MOUNTING TROLLEYS ON VARIOUS TRACKS

I-Beams and Richards-Wilcox "Tru-Tred" Tracks

Beam Size		Flange Width		For Standard Headroom Hoists				For Low Headroom Hoists		
in.	mm	in.	mm	Trolley Bracket Bolt Length in.	Hinge Pin Length in.	Trolley Bracket Spacers		Trolley Bracket Bolt Length in.	Trolley Bracket Spacers	
						Thickness in.	Quantity		Thickness in.	Quantity
6	152	3.33	85	10	10½	—	—	10	—	—
7	178	3.66	93	10	10½	1/6	4	10	1/6	8
8	203	4.00	102	10	10½	—	—	10	—	—
9	229	4.33	110	10	10½	1/6	4	10	1/6	8
10	254	4.66	118	11	10½	1/6	8	10½	1/6	16
12	305	5.00	127	11	11½	½	4	10½	½	8
15	381	5.50	140	11	11½	¾	4	11½	¼ ½	8 8
18	457	6.00	152	12	12	1	4	11½	½	16

Flat-Tread Monorails

Flange Width of Monorail		For Standard Headroom Hoists				For Low Headroom Hoists		
in.	mm	Trolley Bracket Bolt Length in.	Hinge Pin Length in.	Trolley Bracket Spacers		Trolley Bracket Bolt Length in.	Trolley Bracket Spacers	
				Thickness in.	Quantity		Thickness in.	Quantity
3.25 to 3.33	82 to 85	10	10½	—	—	10	—	—
4⅛	103	11	11½	¾	4	10½	¾	8
4½	114	11	11½	¾ ¼	4 4	11	¼ ¾	8 8



Wiring Diagram

★For Hoists with downstop, see inset in appropriate "Low Voltage Wiring Diagram".



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P. O. Box 626, Canberra City

● **West Australia, Perth**
Ingersoll-Rand (Australia) Pty., Ltd.
P. O. Box 69, Belmont

● **Queensland, Brisbane**
Ingersoll-Rand (Australia) Pty., Ltd.
68 Commercial Road, Fortitude Valley

● **South Australia, Adelaide**
Ingersoll-Rand (Australia) Pty., Ltd.
P. O. Box 178-C GPO

● **Tasmania, Hobart**
Ingersoll-Rand (Australia) Pty., Ltd.
G.P.O. Box 564-F

● **New Zealand, Auckland**
Ingersoll-Rand (N. Z.) Ltd.
Box 3570 Central P. O.

CENTRAL AMERICA and the WEST INDIES

● **Bahamas, Nassau**
Bahamian Industries, Ltd.
P. O. Box 1159

● **Costa Rica, San Jose**
H. T. Purdy, Inc.
Apartado 750

● **Dominican Republic, Santo Domingo**
Dominican Motors C por A

● **Guatemala, C. A.**
Cia. Guatemalteca de Maquinaria
Apartado 1363

● **Haiti, Port-au-Prince**
Charles Fequiere & Cia.
P. O. Box 398

● **Jamaica, Kingston**
R. Ehrenstein & Co., Ltd.
P. O. Box 414

● **Netherlands West Indies, Curacao**
S. E. L. Maduro & Son, Inc.

● **Nicaragua, Managua D. N.**
Equipos y Accesorios S. A.
Apartado 2010

● **Puerto Rico, San Juan 00902**
Ingersoll-Rand de Puerto Rico Inc.
P. O. Box 1222

● **Republic of Panama, Panama**
The Amado Engineering Co.
P. O. Box 4241

● **Salvador, San Salvador**
Cia. Importadora de Maquinaria S.A.
Calle Roosevelt y 53 Avenida

● **West Indies, Trinidad**
Port-of-Spain
Neal & Massy Ltd.
61-63 Edward St.

ASIA and The EAST

● **Aden**
Awad Salem Baobeid & Son
P. O. Box 184

● **Afghanistan, Kabul**
Indamer, Afghan Industries
P. O. Box 37

● **Bahrain, Manama**
Alawi Stores
P. O. Box 154

● **Ceylon, Colombo**
Chatham House, Ltd.
P. O. Box 743

● **Hong Kong**
Jardine Engineering Corp. Ltd.
14-16 Pedder St., P. O. Box 517

● **India, Bombay**
Ingersoll-Rand (India) Private Ltd.
17-B Horniman Circle, Fort
P. O. Box 468

● **India, Calcutta**
Ingersoll-Rand (India) Private Ltd.
7 Welsley Pl., P. O. Box 2307

● **Israel, Tel-Aviv**
Engineering & Mfg. Co. Ltd.
7 Rothschild Blvd., P. O. Box 1191

● **Iran, Tehran**
Diesel Power Trading Co. Ltd.
P. O. Box 1454

● **Japan, Tokyo**
Ingersoll-Rand (Japan) Ltd.
Nishimoto Bldg., 21 4-Chome
Aoyama-Kitamachi, Minato-Ku

● **Korea, Seoul**
American Trading Co.
P. O. Box 1103

● **Kuwait, State of Kuwait**
Contracting & Trading Co.
Trading Dept.
P. O. Box 2159

● **Lebanon, Beirut**
Contracting & Trading Co.
P. O. Box 4766

● **Malaysia, Singapore 1**
Ingersoll-Rand Malaysia, Ltd.
P. O. Box 2062
General Post Office

● **Pakistan, Karachi**
Javed Ltd.
7 W. Wharf Rd., P. O. Box 5191

● **Philippines, Manila**
Ingersoll-Rand Philippines, Inc.
P. O. Box 3887

● **Qatar, Doha**
Al Nasr Trading Co.
P. O. Box 28

● **Saudi Arabia, Jeddah**
M. M. Zahid & Bros.
P. O. Box 102

● **Syria, Damascus**
Shukri H. Shammam
Al-Fardos Str.
P. O. Box 2205

● **Taiwan, Taipei**
Jardine Matheson Ltd.
P.O. Box 81

● **Thailand, Bangkok**
American Trading Co., Thailand, Ltd.
P. O. Box 1777

● **Vietnam, Saigon**
American Trading Co., Vietnam, Ltd.
Boite Postale 667

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Transvaal, Alrode via Alberton
Ingersoll-Rand Co. So. Africa (Pty.) Ltd.
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Ingersoll-Rand Co. So. Africa (Pty.) Ltd.
P.O. Box 48, Paardeneiland

● **Cape Province, Port Elizabeth**
Ingersoll-Rand Co. South Africa (Pty.) Ltd
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Ingersoll-Rand Co. So. Africa (Pty.) Ltd.
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● **Kenya, Nairobi**
Gilfillan & Co. Ltd.
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● **Rhodesia, Bulawayo**
Ingersoll-Rand Co. So. Africa (Pty.) Ltd.
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● **Rhodesia, Salisbury**
Ingersoll-Rand Co. So. Africa (Pty.) Ltd.
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Cie. Ingersoll-Rand
13, Chemin Vauban

● **Egypt, Cairo**
The Tractor & Engineering Co., S.A.E.
P. O. Box 366

● **Ghana, Accra**
Cie Francaise de L'Afrique Occidentale
P. O. Box 2710

● **Libya, Tripoli**
Solico Limited
Km 1 Sidi Mesri Road
P. O. Box 374

● **Morocco, Casablanca**
Etablissements Peggary
29 bis, Rue Mohamed Diouri

● **Mauritius, Port Louis**
Blyth Brothers and Co. Ltd.
P. O. Box 56

● **Nigeria, Apapa**
Nigerian Motor Industries, Ltd.
P. M. Bag 1032
26 Wharf Road

● **Portuguese East Africa, Lourenco Marques**
Santos Marques and Silva Limitada
P.O. Box 166

● **Sierra Leone, Freetown**
Cie Francaise de L'Afrique Occidentale
P. O. Box 823

● **Senegal, Dakar**
Compagnie Francaise de
L'Afrique Occidentale

● **Tunisia, Tunis**
Mine Unie et Comptoir des Mines Reunis
11, Avenue de Carthage

● **Zambia, Ndola**
Ingersoll-Rand Company, Ltd.
P. O. Box 74