

# INSTRUCTIONS and REPAIR PART LIST

## for

# ELECTRIC MOTOR DRIVEN OVERHEAD HOIST

### SERIES 2EH20A

#### STANDARD HEADROOM SIZES

2EH20A15	15 Ft. Lift
2EH20A22	22 Ft. Lift
2EH20A28	28 Ft. Lift
2EH20A35	35 Ft. Lift
2EH20A40	40 Ft. Lift
2EH20A60	60 Ft. Lift
2EH20A100	100 Ft. Lift

#### LOW HEADROOM SIZES

2EH20A15LH	15 Ft. Lift
2EH20A22LH	22 Ft. Lift
2EH20A35LH	35 Ft. Lift

### SERIES 3EH20A

#### STANDARD HEADROOM SIZES

3EH20A15	15 Ft. Lift
3EH20A22	22 Ft. Lift
3EH20A28	28 Ft. Lift
3EH20A35	35 Ft. Lift
3EH20A40	40 Ft. Lift
3EH20A60	60 Ft. Lift
3EH20A100	100 Ft. Lift

#### LOW HEADROOM SIZES

3EH20A15LH	15 Ft. Lift
3EH20A22LH	22 Ft. Lift
3EH20A35LH	35 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.

# 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

### Gearing:

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

At regular intervals, check the Oil Level Gauge in the Gear Case. If necessary, add enough of 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.

### Sheaves and Trolley Wheels:

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

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

### Gear Case and Gearing

The Gear Case Cover (37) is retained on the Housing by two socket head Gear Cover Retaining Screws so that the Gear Case (28) can be removed from the Hoist without disturbing the Rope Drum (11) and related parts.

Use two  $\frac{3}{4}$ "-10 thd. x 6" long jack bolts to pull the Drum Gear (18) off the hub of the Rope Drum.

Press the Load Brake Shaft Inner Bearing (46) into the bearing recess in the Gear Case Cover (37) before pressing the Drum Gear onto the hub of the Rope Drum.

When assembling mechanical load brake parts, note that one side of the Brake Ratchet Assembly (107) and Load Brake Flange (102) is stamped with an "X". When these parts are assembled in the Gear Case (28), make certain that both "X"s face the Gear Case Cover (37).

## 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 rise 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 necessary 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 (91). 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 (74). The hook should automatically stop. Push **up** on the upper (plug reversing) Switch Lever Roller (74) 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" (+  $\frac{1}{16}$ ") below the flat top surface of the Housing. The bottom of the

(Cont'd on Page 3)

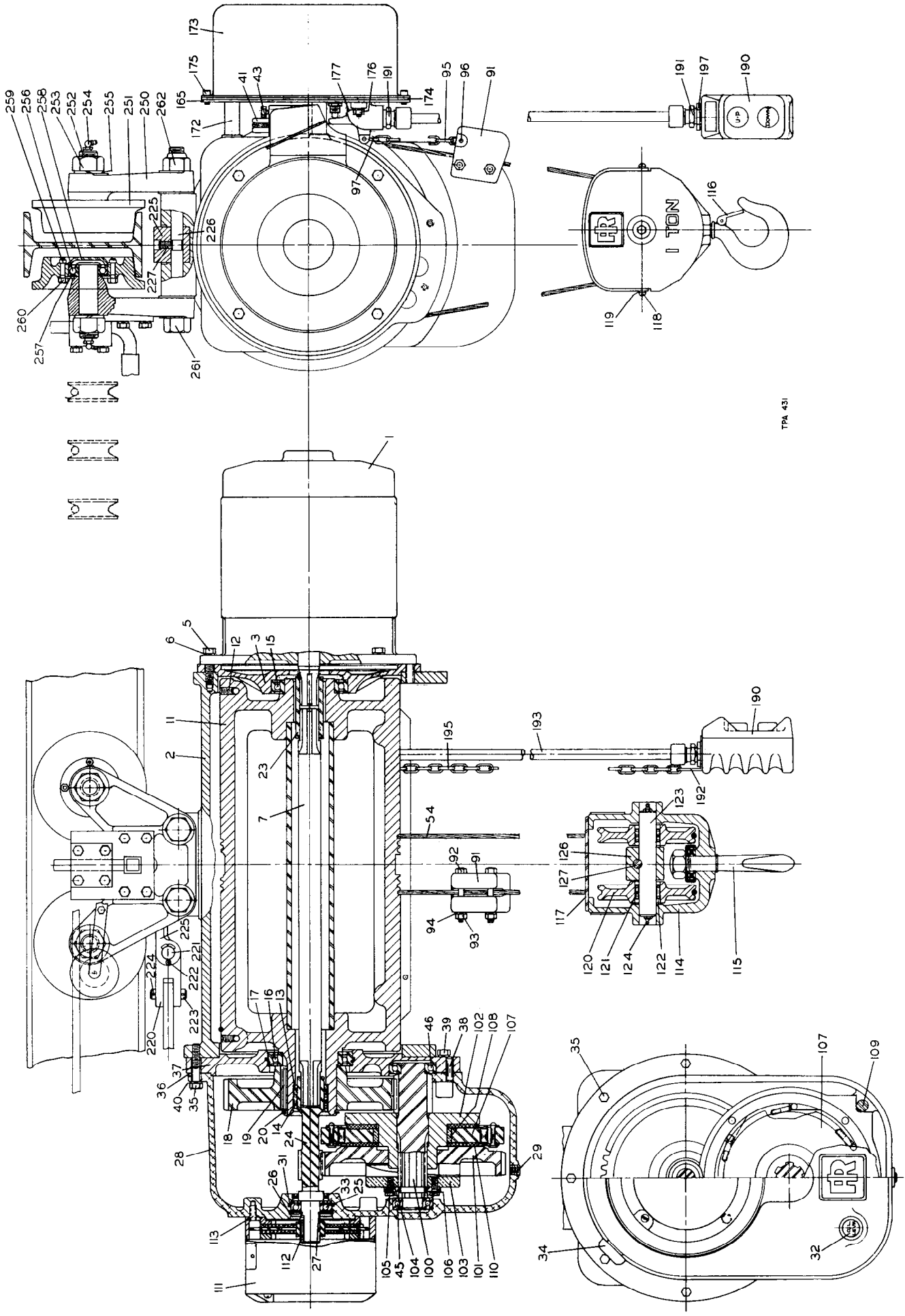
## INSTRUCTIONS

upper (plug reversing) Switch Lever Roller should be  $\frac{7}{8}$ " higher, or  $4\frac{1}{8}$ " ( $+ \frac{1}{16}$ ") 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 (67 in std. hoist) or Reversing Switch (71 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 (67) or Reversing Switch (71).

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 (62). The hook should automatically stop. If it does not stop, there is an error in the wiring connections or the Down Stop Switch (58) is defective. Recheck the wiring as instructed in step 3-(a). If the wiring is correct, replace the Down Stop Switch (58).

## TROUBLE SHOOTING

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



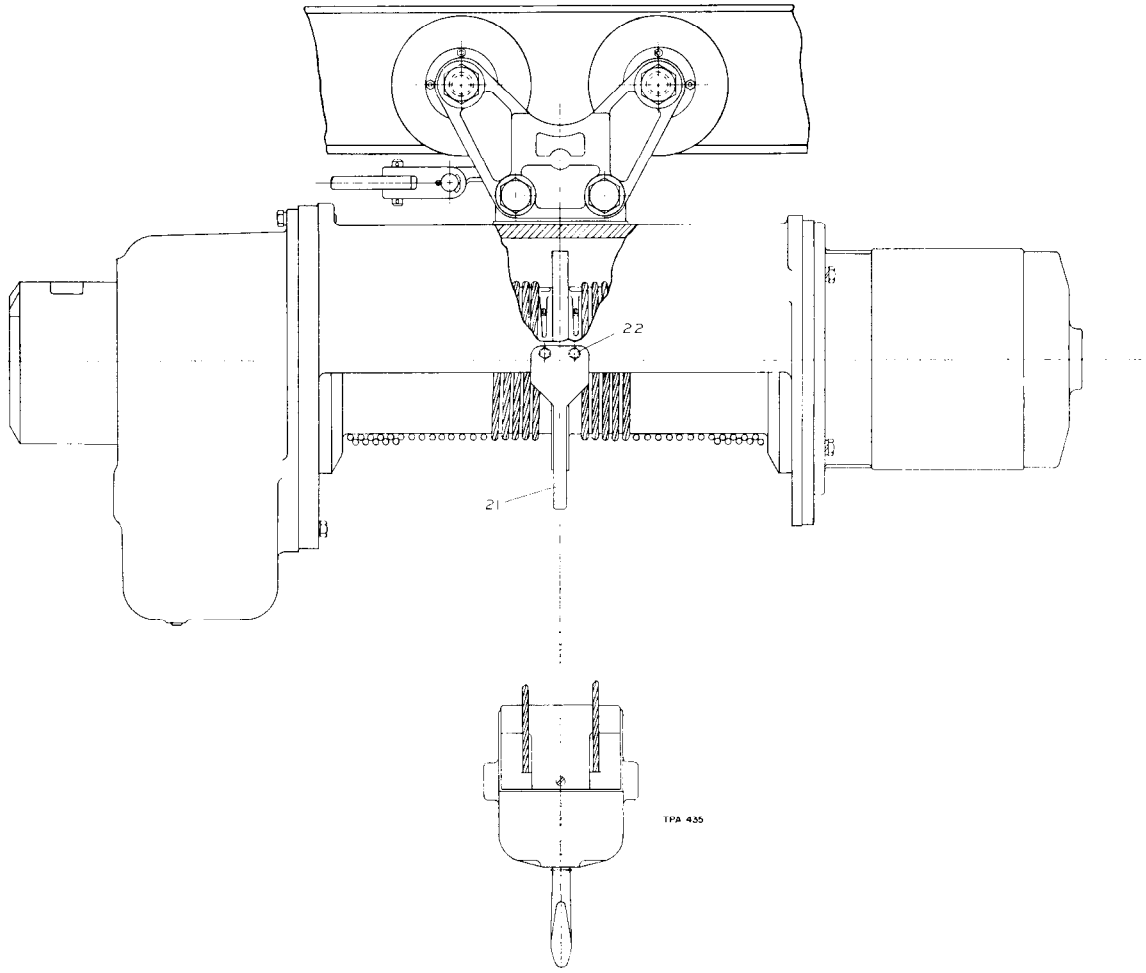
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**SIZES EH20A15, EH20A22 AND EH20A35 HOISTS**  
 Motor, Brake and Gearing Construction Typical  
 of all EH20A Hoists

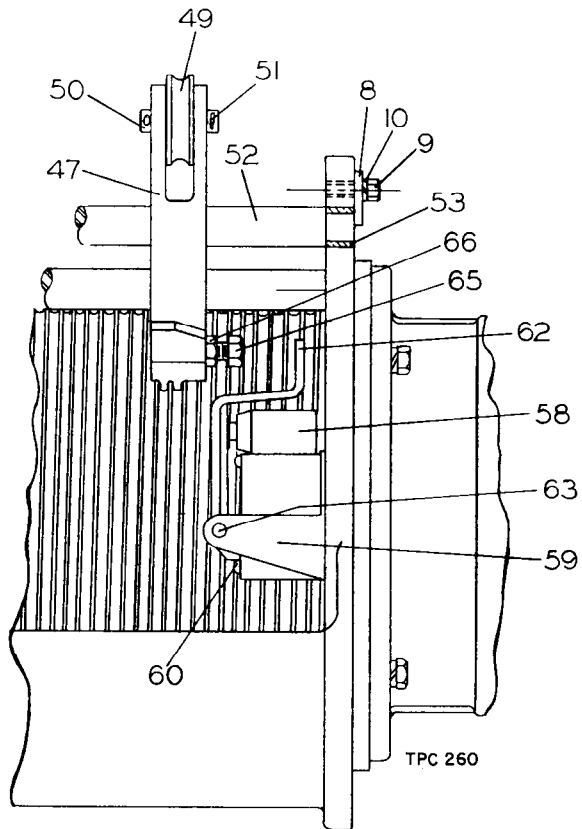
**REPAIR PART LIST**  
**MAIN HOIST PARTS**

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) 2 Horsepower..... 3 Horsepower..... Dual Speed (not reconnectable) 2/.7 Horsepower (for operation on 208-220 volt, 3 phase, 60 cycle cur- rent)..... 3/1 Horsepower (for operation on 208-220 volt, 3 phase, 60 cycle cur- rent)..... 2/.7 Horsepower (for operation on 440 volt, 3 phase, 60 cycle current)..... 3/1 Horsepower (for operation on 440 volt, 3 phase, 60 cycle current).....	2EH20A-275 3EH20A-275  2EH20A-277  3EH20A-277 2EH20A-276 3EH20A-276
2	Hoist Housing for Sizes EH20A15, 22, 28, 40 and 100..... for Sizes EH20A15LH and 22LH..... for Size EH20A35..... for Size EH20A35LH..... for Size EH20A60.....	C6H20A22-300 C6H20A22-L300 C6H20A35-300 C6H20A35-L300 C6H20A60-300
3	Motor Cover.....	2EH20A-502
*	Motor Cover Retaining Screw (2) (3/8"-16 thd. x 1" long).....	2EH20A-148
5	Motor Cap Screw (4) (1/2"-13 thd. x 1 3/4" long).....	215-37
6	1/2" Lock Washer (4).....	D10-322
7	Motor Shaft for Sizes EH20A15, 15LH, 22, 22LH, 28, 40 and 100..... for Sizes EH20A35, 35LH and 60.....	2EH20A22-316 2EH20A35-316
8	Guide Rod Retainer.....	2EH20A-359
9	Guide Rod Retaining Screw.....	TAASK-89
10	3/8" Lock Washer.....	D02-321
11	Rope Drum Assembly for Sizes EH20A15 and 15LH..... for Sizes EH20A22 and 22LH..... for Size EH20A28..... for Sizes EH20A35 and 35LH..... for Size EH20A40..... for Size EH20A60..... for Size EH20A100.....	C6H20A15-A371 C6H20A22-A371 C6H20A28-A371 C6H20A35-A371 C6H20A40-A371 C6H20A60-A371 C6H20A100-A324
12	Rope Set Screw for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100 (6)..... for Sizes EH20A28, 40 and 60 (3).....	C6H20A22-381 C6H20A28-381
13	Pinion Inner Seal.....	C6H20A-872
14	Pinion Inner Bearing (Torrington JH-2212 or its equivalent).....	C6H20A-589
15	Drum Bearing, Motor-End (New Departure Z4993L13-X1241B or its equivalent).....	C6H20A-467
16	Drum Bearing, Gear-End (New Departure Z4993L14 or its equivalent).....	C6H20A-466
17	Gear Case Cover Seal.....	C6H20A-103
18	Drum Gear.....	C6H20A-357
19	Drum Gear Key.....	C6H20A-323
20	Drum Gear Retainer.....	C6H20A-119
21	Drum Guard (for Size EH20A100).....	C6H20A100-298
22	Drum Guard Cap Screw (for Size EH20A100) (3) (3/8"-16 thd. x 7/8" long).....	D02-506
23	Motor Shaft Coupling.....	2EH20A-314
24	Motor Shaft Pinion.....	2EH20A-319
25	Pinion Outer Bearing (AFBMA No. 25BC02JDD).....	AM-318
26	Pinion Outer Bearing Retainer.....	C6H20A-118
27	Pinion Retainer.....	C6H20A-6

\*Not illustrated.



**SIZE EH20A100 HOIST**

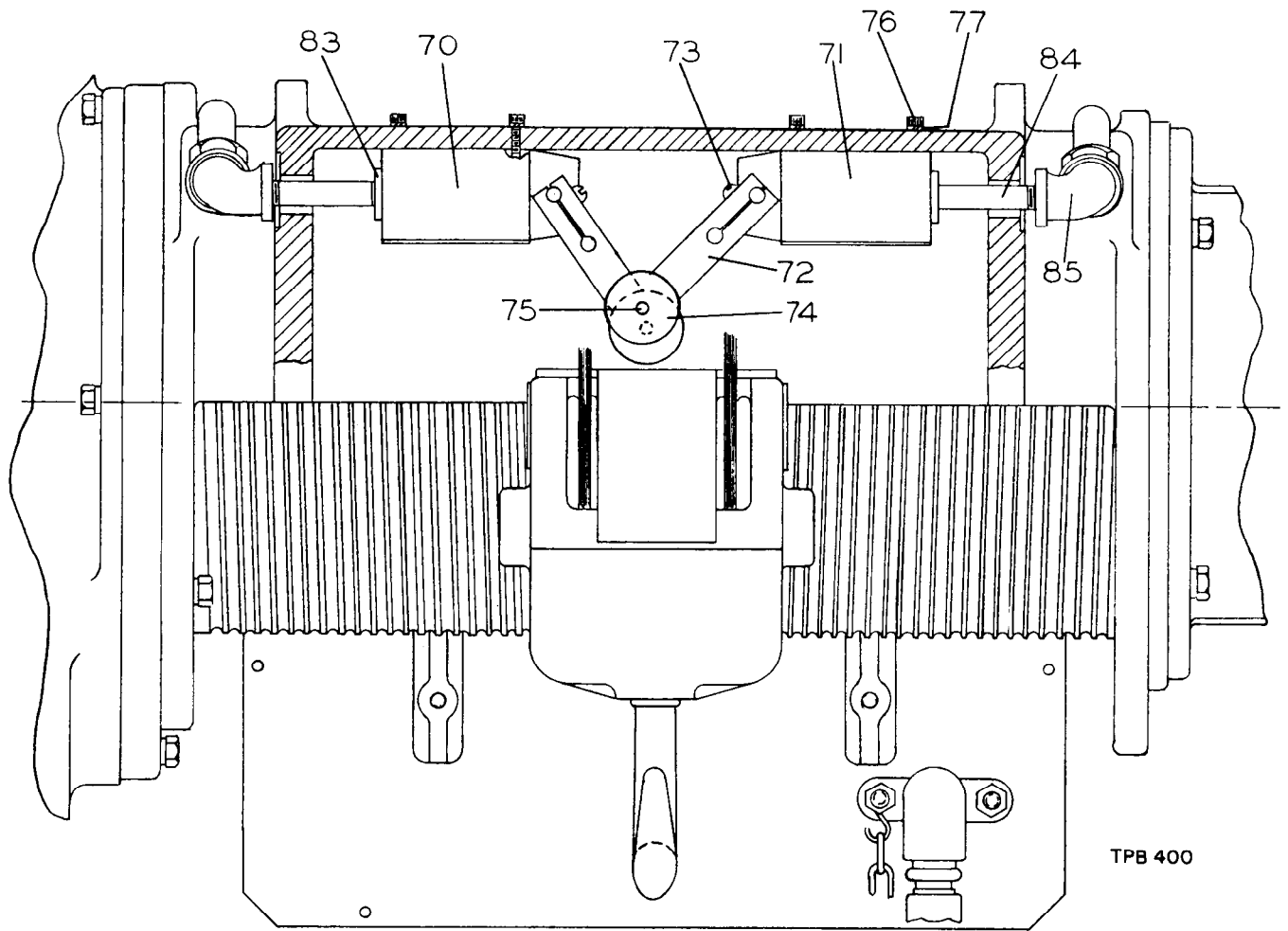


**ROPE GUIDE AND DOWN-STOP PARTS**

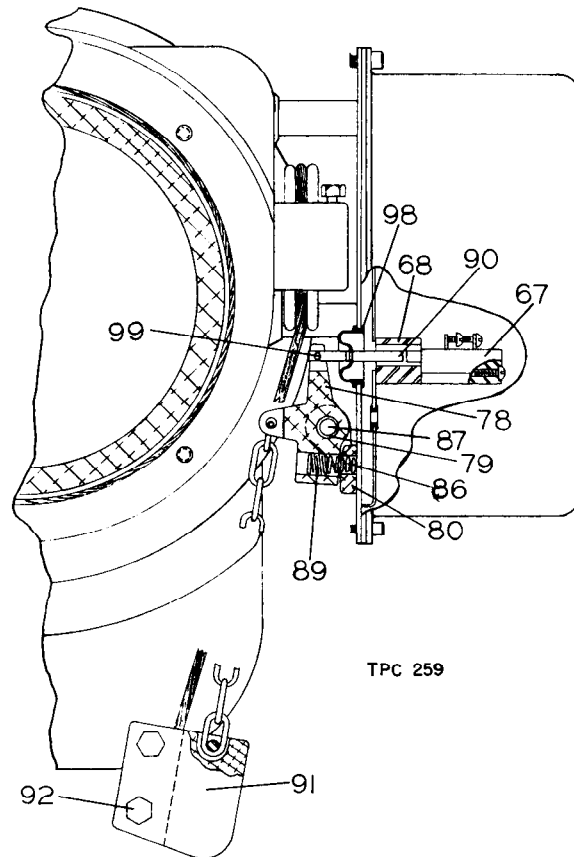
**REPAIR PART LIST**  
**MAIN HOIST PARTS**

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
28	Gear Case Assembly.....	C6H20A-A353
29	1/4" Pipe Plug.....	ROH-377
*	1/2" Pipe Plug.....	C6H20A-79
31	Pinion Outer Bearing Seal.....	R18-311
32	Oil Level Gauge.....	C6H20A-16
33	Pinion Outer Seal.....	C6H20A-271
34	Gear Case Vent Cap.....	C6H20A-19
35	Gear Case Screw (7) (3/8"-16 thd. x 2" long).....	D02-906
36	Gear Case Gasket.....	C6H20A-931
37	Gear Case Cover Assembly.....	C6H20A-A352
38	Gear Case Cover Dowel.....	HU-527
39	Gear Case Cover Screw (2) (3/8"-16 thd. x 1 3/8" long).....	D02-312
*	Gear Cover Retaining Screw (2) (3/8"-16 thd. x 1" long Socket Head).....	21-702
40	3/8" Lock Washer (12 for Size EH20A100; 9 for others).....	D02-321
41	Auxiliary Sheave (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100).....	C6H20A-638
42	Auxiliary Sheave Shaft or Rope Anchor for Standard Headroom Hoists.....	C6H20A-641
	for Low Headroom Hoists.....	C6H20A-L641
43	Auxiliary Sheave Shaft Screw or Rope Anchor Screw (5/16"-18 thd. x 3/4" long) (for Standard Headroom Hoists).....	C6H20A-643
44	Auxiliary Sheave Shaft Cotter (2) (3/16" dia. x 1 1/4" long) (for Low Headroom Hoists).....	C6H20A-146
45	Load Brake Shaft Outer Bearing (AFBMA No. 25BC02).....	G7-24
46	Load Brake Shaft Inner Bearing (AFBMA No. 30BC02).....	TA-22
47	Rope Guide, Motor-End (for Sizes EH20A15, 22 and 35).....	C6H20A22-790
*	Rope Guide, Gear-End (for Sizes EH20A15, 22 and 35).....	C6H20A22-789
49	Rope Guide Roller (2) (for Sizes EH20A15, 22 and 35).....	C6H20A-792
50	Guide Roller Pin (2) (for Sizes EH20A15, 22 and 35).....	C6H20A-793
51	Roller Pin Cotter (4) (for Sizes EH20A15, 22 and 35).....	D02-524
52	Guide Rod (2) for Sizes EH20A15, 15LH, 22 and 22LH.....	C6H20A22-791
	for Sizes EH20A35 and 35LH.....	C6H20A35-791
53	Guide Rod Sleeve (2) (for Sizes EH20A15, 15LH, 22, 22LH, 35 and 35LH).....	2EH20A-788
54	Wire Rope for Size EH20A15.....	C6H20A15-372
	for Size EH20A15LH.....	C6H20A15-L372
	for Size EH20A22.....	C6H20A22-372
	for Size EH20A22LH.....	C6H20A22-L372
	for Size EH20A28.....	C6H20A28-372
	for Size EH20A35.....	C6H20A35-372
	for Size EH20A35LH.....	C6H20A35-L372
	for Size EH20A40.....	C6H20A40-372
	for Size EH20A60.....	C6H20A60-372
	for Size EH20A100.....	C6H20A100-372
*	Rope Clamp (3) (for Sizes EH20A28, 40 and 60).....	DU-375
*	Rope Thimble (for Sizes EH20A28, 40 and 60).....	DU-602
*	Stop Cam for Sizes EH20A15, 15LH, 22, 22LH, 35 and 35LH.....	C6H20A22-L771
	for Sizes EH20A28, 40 and 60.....	C6H20A40-771
58	Down Stop Switch.....	2EH20A-256
59	Down Stop Switch Bracket.....	2EH20A-264
60	Down Stop Switch Screw (2).....	ST01-235
*	No. 10 Lock Washer (2).....	R2-320
62	Down Stop Switch Lever.....	2EH20A-267
63	Down Stop Switch Lever Pin.....	2EH20A-268
*	Lever Pin Cotter (2) (3/32" dia. x 3/4" long).....	D02-524
65	Down Stop Adjusting Screw for Sizes EH20A15, 15LH and 28.....	HU-865
	for Sizes EH20A22, 22LH, 35, 35LH, 40 and 60.....	2EH20A22-265
66	Adjusting Screw Lock Nut (for Sizes EH20A15, 15LH and 28).....	D02-558

\*Not Illustrated.



UP-STOP PARTS FOR LOW HEADROOM HOISTS



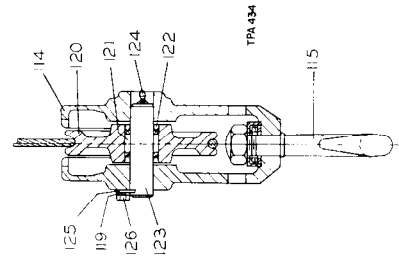
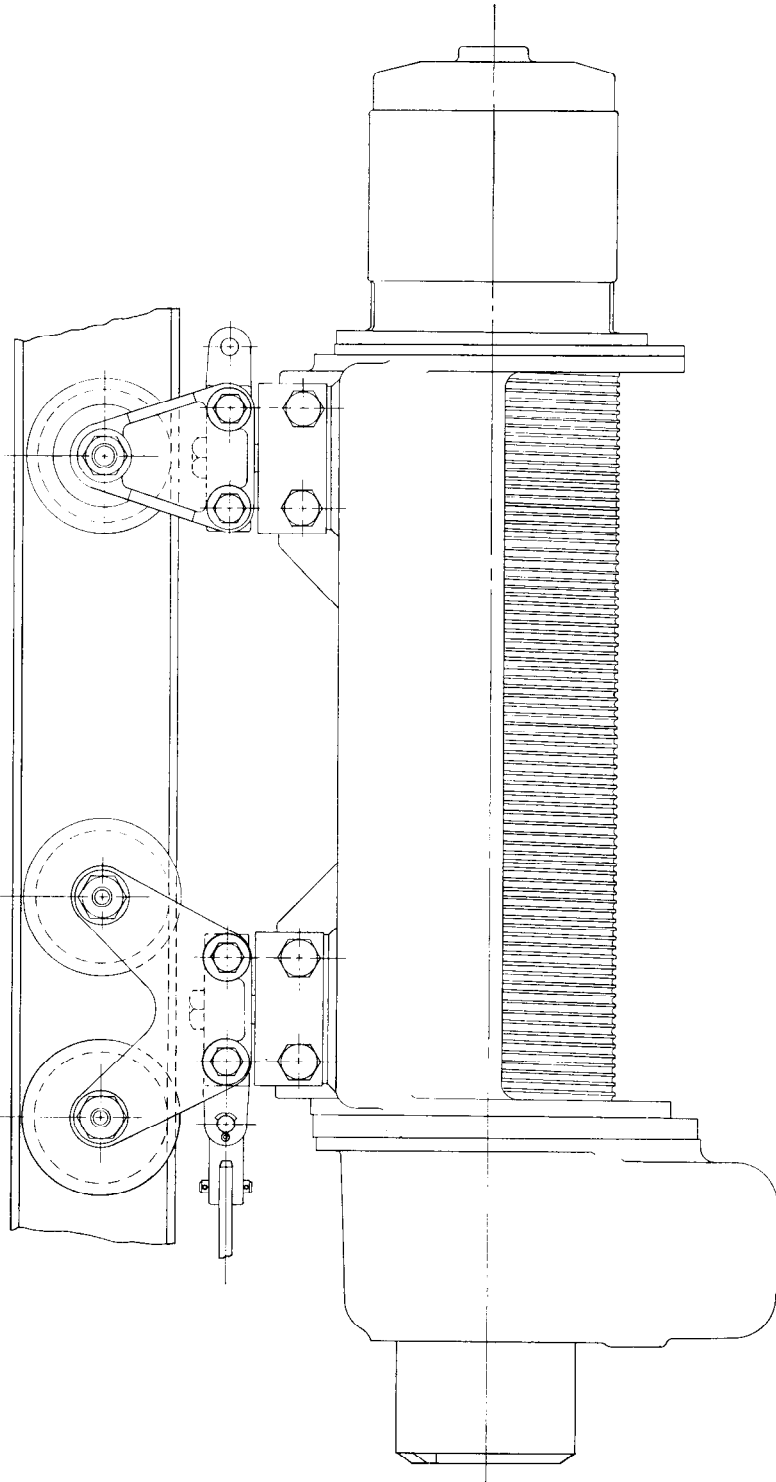
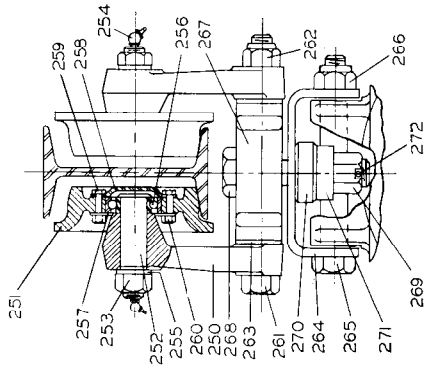
UP-STOP PARTS FOR STANDARD HEADROOM HOISTS



**REPAIR PART LIST**  
**MAIN HOIST 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
67	Up-Stop Switch (for Standard Headroom Hoists).....	HRE20A-525
68	Up-Stop Switch Bracket (for Standard Headroom Hoists).....	2EH20A-558
*	Up-Stop Switch Bracket Screw (2) (for Standard Headroom Hoists).....	2EH20A-552
*	Bracket Screw Lock Washer (2) (for Standard Headroom Hoists).....	R2-320
70	Up-Stop Switch (for Low Headroom Hoists).....	2EH20A-L255
71	Reversing Switch (for Low Headroom Hoists).....	2EH20A-L253
72	Up-Stop Switch Lever (2) (for Low Headroom Hoists).....	2EH20A-222A
73	Switch Lever Screw (2) (for Low Headroom Hoists).....	34U-463
74	Switch Lever Roller (2) (for Low Headroom Hoists).....	2EH20A-220
75	Switch Lever Roller Shaft (2) (for Low Headroom Hoists).....	804-503A
76	Switch Mounting Screw (4) (for Low Headroom Hoists).....	502-638
77	No. 10 Lock Washer (6) (for Low Headroom Hoists).....	4U-58
78	Switch Arm (for Standard Headroom Hoists).....	2EH20A-555
79	Switch Arm Bearing (2) (Torrington B57 or its equivalent) (for Standard Headroom Hoists).....	8U-654
80	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
83	3/4" x 1/2" Reducing Bushing (for Low Headroom Hoists).....	D02-420
84	Up-Stop Switch Nipple (2) (1/2" x 3" long) (for Low Headroom Hoists).....	2EH20A-290
85	1/2" Pipe Elbow (2) (for Low Headroom Hoists).....	AAM-289
86	Switch Arm Spring (for Standard Headroom Hoists).....	2EH20A-412
87	Switch Arm Pin (for Standard Headroom Hoists).....	2EH20A-523
*	Switch Arm Pin Cotter (3/32" x 3/4" long) (for Standard Headroom Hoists) (2).....	D02-524
89	Switch Arm Adjusting Screw (for Standard Headroom Hoists).....	2EH20A-553
90	Up-Stop Switch Plunger.....	2EH20A-557
91	Up-Stop Weight (for Standard Headroom Hoists).....	2EH20A-504
92	Up-Stop Weight Screw (2) (for Standard Headroom Hoists).....	R55H-312B
93	5/16"-18 thd. Hexagon Nut (2) (for Standard Headroom Hoists).....	D02-428
94	5/16" Lock Washer (2) (for Standard Headroom Hoists).....	T11-58
95	Up-Stop Chain (for Standard Headroom Hoists).....	2EH20A-506
96	Up-Stop Chain Pin (for Standard Headroom Hoists).....	5BM-278
97	S-Hook (for Standard Headroom Hoists).....	D01-221
98	Protector Boot (for Standard Headroom Hoists).....	HRE20A-511
99	Roll Pin (for Standard Headroom Hoists).....	FMD2-667
100	Load Brake Shaft.....	C6H20A-83
101	Load Brake Gear.....	C6H20A-82
102	Load Brake Flange.....	C6H20A-84
103	Load Brake Cam.....	C6H20A-88
104	Cam Retainer (2).....	C6H20A-89
105	Cam Retaining Screw (4) (1/4"-20 thd. x 3/4" long).....	R3-7
106	1/4" Lock Washer (4).....	L01-67
107	Brake Ratchet Assembly.....	C6H20A-A86
108	Brake Ratchet Bushing.....	C6H20A-87
109	Brake Ratchet Stop.....	C6H20A-81
110	Friction Disc (2).....	C6H20A-85
111	Electric Brake.....	2EH20A-200
112	Brake Key.....	J5-754
113	Brake Mounting Screw (2) (3/8"-16 thd. x 2" long - Socket Head).....	AHC68-22

\*Not Illustrated.



**SIZE EH20A60 HOIST**  
**Sheave Block Construction Typical of Sizes**  
**EH20A28 and EH20A40 Hoists**

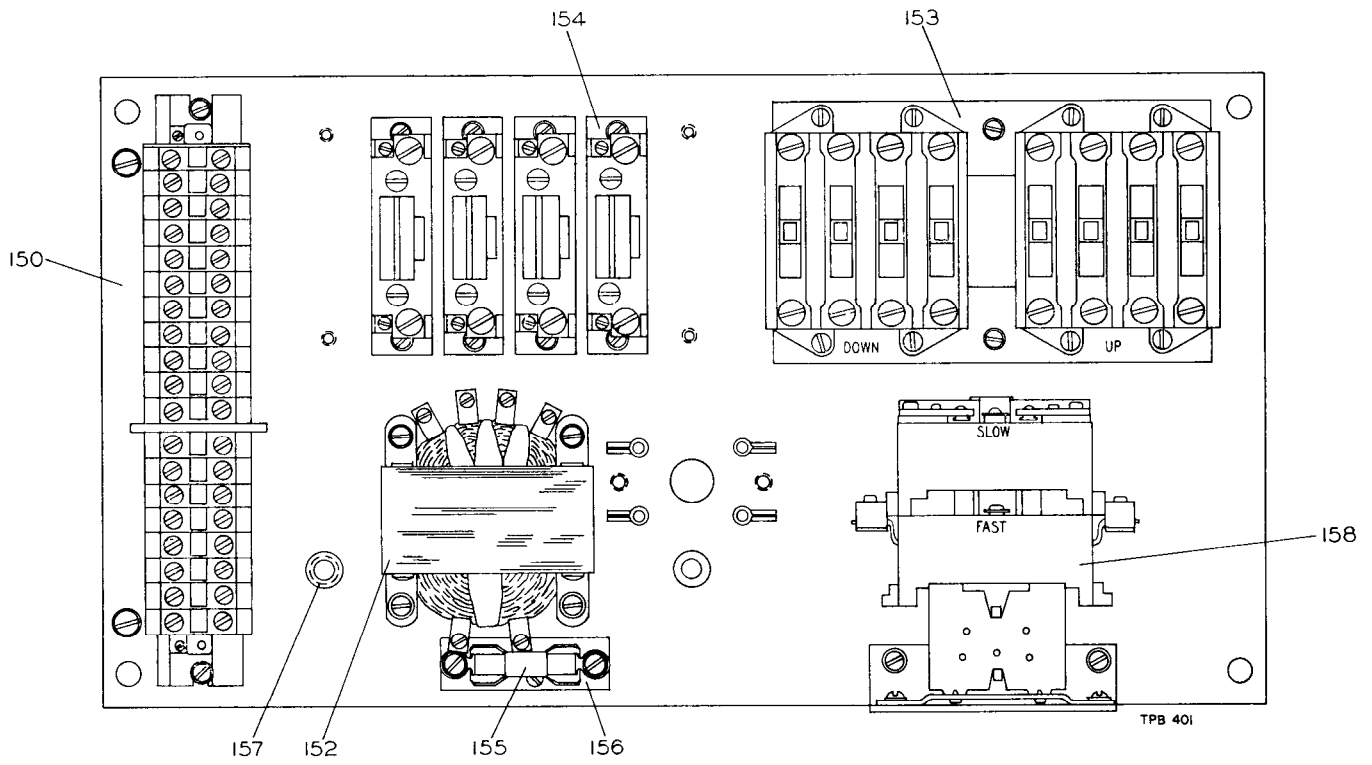
**REPAIR PART LIST  
MAIN HOIST PARTS**

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
114	Sheave Block and Hook Assembly For Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100 with Open Hook..... with Safety Hook..... with Bullard-Burnham Safety Hook..... For Sizes EH20A28, 40 and 60 with Open Hook..... with Safety Hook..... with Bullard-Burnham Safety Hook.....	C6H20A22-A378 C6H20A22-AS378 C6H20A22-ABB378  C6H20A28-A378 C6H20A28-AS378 C6H20A28-ABB378
115	Bottom Hook, Nut and Bearing Assembly Open Hook..... Safety Hook..... Bullard-Burnham Safety Hook.....	C6H20A-A377 C6H20A-AS377 C6H20A-ABB377
116	Safety Latch Kit (individual parts not sold separately).....	D01-S123
117	Sheave Block Cover (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100).....	C6H20A-441
118	Sheave Block Cover Screw (2) (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100).....	I-376
119	1/4" Lock Washer (2).....	L01-67
120	Sheave Assembly for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100 (2)..... for Sizes EH20A28, 40 and 60.....	C6H20A22-A380 C6H20A28-A380
121	Sheave Bearing for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100 (2)..... for Sizes EH20A28, 40 and 60.....	C6H20A22-753 C6H20A28-753
122	Sheave Bearing Seal for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100 (4)..... for Sizes EH20A28, 40 and 60 (2).....	C6H20A22-754 C6H20A28-754
123	Sheave Shaft Assembly for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100..... for Sizes EH20A28, 40 and 60.....	C6H20A22-A382 C6H20A28-A382
124	Grease Fitting (1 for Sizes EH20A28, 40 and 60; 2 for others).....	23-188
125	Sheave Shaft Lock (for Sizes EH20A28, 40 and 60).....	MR20-383
126	Sheave Shaft Lock Screw (2) (for Sizes EH20A28, 40 and 60).....	JC3350-103
126	Sheave Shaft Anchor (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100).....	C6H20A-448
127	Sheave Shaft Anchor Bolt (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100).....	DRC-643
*	Sheave Shaft Anchor Bolt Nut (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100).....	D02-418
*	3/8" Lock Washer (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100).....	D02-321

\*Not Illustrated.

**MAINTENANCE TOOLS**

Tool Number for Ordering	Tool Name for Ordering	Operation
P25-228	Grease Gun.....	Lubrication.
4U-478	Rope Set Screw Wrench (5/32" hexagon key) (for Sizes EH-20A15, 15LH, 22, 22LH, 35, 35LH and 100)	Loosening or tightening the Rope Set Screws (12) in the Rope Drum (11).
JA4-478	Rope Set Screw Wrench (3/16" hexagon key) (for Sizes EH-20A28, 40 and 60)	Loosening or tightening the Rope Set Screws (12) in the Rope Drum (11).
76557	Pinion Inner Bearing Inserting Tool.....	Installing the Pinion Inner Bearing (14) in the Rope Drum (11).
76558	Sheave Bearing Inserting Tool (for Sizes EH20A15, 15LH, 22, 22LH, 35, 35LH and 100)	Installing the Sheave Bearing (121) in the Sheave (120).
76559	Sheave Bearing Inserting Tool (for Sizes EH20A28, 40 and 60)	Installing the Sheave Bearing (121) in the Sheave (120).

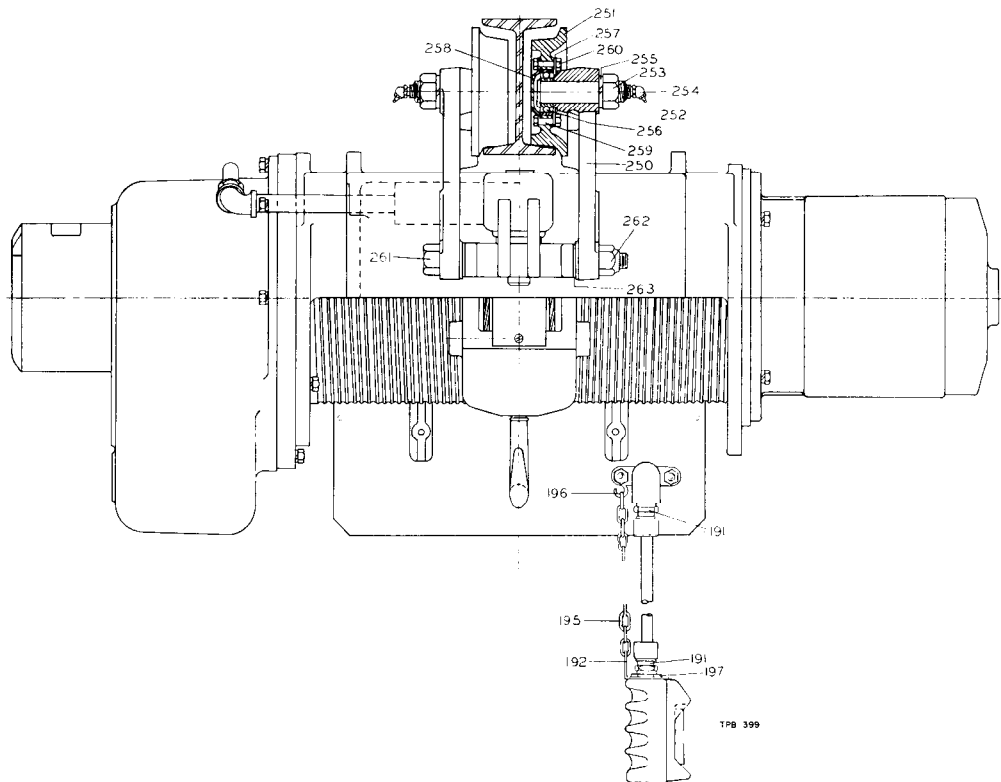


CONTROL PANEL ASSEMBLY

CONTROL PANEL ASSEMBLY PARTS

ILLUS. NO. (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.



**LONGITUDINAL VIEW OF LOW HEADROOM HOISTS**  
**Sizes EH20A15LH, EH20A22LH and EH20A35LH**

**CONTROL CABINET PARTS**

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING	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. NO. (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

ILLUSTRATION NUMBER (Do not use for ordering)	PART NAME FOR ORDERING	PART NUMBER FOR ORDERING
220	Drawbar Yoke .....	C6H20A-607
221	Yoke Hinge Pin .....	C6H20A-608
222	Hinge Pin Cotter (2) (1/8" x 1 1/4") .....	D02-330
223	Drawbar Pin .....	C6H20A-793
224	Drawbar Pin Cotter (2) (3/32" x 3/4") .....	D02-524
225	Drawbar Bracket (for Standard Headroom Hoists) .....	C6H20A-611
226	Bracket Hinge Pin (for Standard Headroom Hoists) .....	C6H20A-612
227	Hinge Pin Set Screw (for Standard Headroom Hoists) .....	D10-449

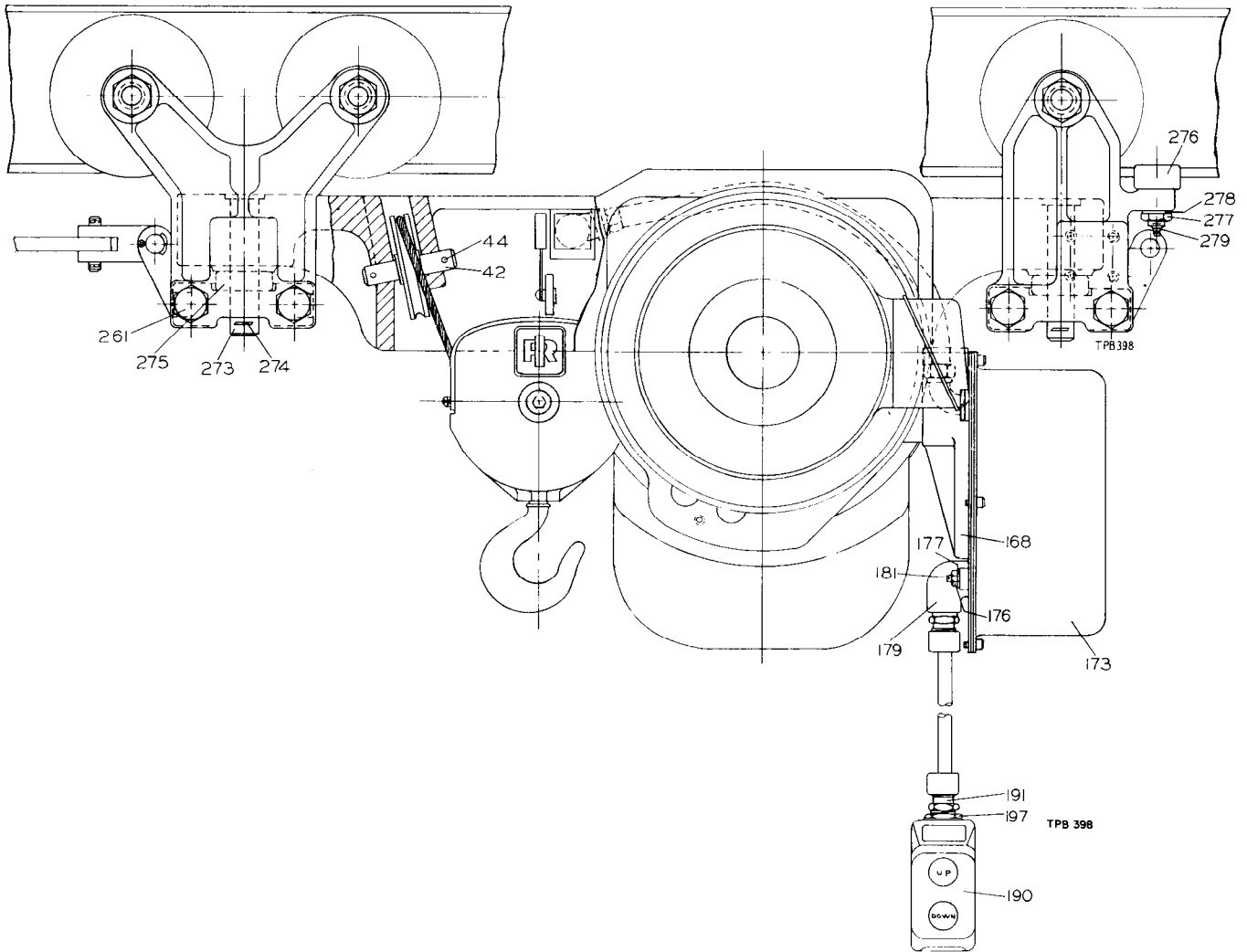
## CONDUIT, CONDUIT FITTINGS, LEAD WIRE, POWER CABLE, ETC.

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

### PLAIN TROLLEYS

When ordering one of the Trolleys listed below,  
always specify the 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
Rigid Trolley for all Standard Headroom Hoists for I-beam or Richards-Wilcox Tru-Tred Track .....	C6H20A-A430
for Flat-Tread Monorail .....	C6H20A-A430T
Auxiliary Rigid Trolley for Size EH20A60 Standard Headroom Hoist for I-beam or Richards-Wilcox Tru-Tred Track .....	C6H20A60-A700
for Flat-Tread Monorail .....	C6H20A60-A700T
Swivel Trolley for all Low Headroom Hoists for I-beam or Richards-Wilcox Tru-Tred Track .....	C6H20A-AL430
for Flat-Tread Monorail .....	C6H20A-AL430T
Auxiliary Swivel Trolley for all Low Headroom Hoists for I-beam or Richards-Wilcox Tru-Tred Track .....	C6H20A-AL690
for Flat-Tread Monorail .....	C6H20A-AL690T
Swivel Trolley for Size EH20A60 Standard Headroom Hoists for I-beam or Richards-Wilcox Tru-Tred Track .....	2EH20A60-AS430
for Flat-Tread Monorail .....	2EH20A60-AS430T
Auxiliary Swivel Trolley for Size EH20A60 Standard Headroom Hoist for I-beam or Richards-Wilcox Tru-Tred Track .....	C6H20A60-AS700
for Flat-Tread Monorail .....	C6H20A60-AS700T



MOTOR END VIEW OF LOW HEADROOM HOISTS  
 Sizes EH20A15LH, EH20A22LH and EH20A35LH

COMPONENT PARTS OF PLAIN TROLLEYS

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	
250	Assembled Trolley Bracket (2)	
	for Trolley No. C6H20A-A430 .....	C6H20A-B430
	for Trolley No. C6H20A-A430T .....	C6H20A-B430T
	for Trolley No. C6H20A60-A700 or C6H20A60-AS700 .....	C6H20A60-B700
	for Trolley No. C6H20A60-A700T or C6H20A60-AS700T .....	C6H20A60-B700T
	for Trolley No. C6H20A-AL430 or 2EH20A60-AS430 .....	C6H20A-BL430
	for Trolley No. C6H20A-AL430T or 2EH20A60-AS430T .....	C6H20A-BL430T
	for Trolley No. C6H20A-AL690	
	Gear End Bracket .....	C6H20A-BL689
	Motor End Bracket .....	C6H20A-BL690
	for Trolley No. C6H20A-AL690T	
	Gear End Bracket .....	C6H20A-BL689T
Motor End Bracket .....	C6H20A-BL690T	
Trolley Bracket		
for Trolley No. C6H20A-A430 or C6H20A-A430T .....	C6H20A-430	
for Trolley No. C6H20A-A700, C6H20A60-AS700, C6H20A60-A700T or C6H20A60-AS700T .....	C6H20A60-700	
for Trolley No. C6H20A-AL430, C6H20A-AL430T, 2EH20A60-AS430 or 2EH20A60-AS430T .....	C6H20A-L430	
for Trolley No. C6H20A-AL690 or C6H20A-AL690T		
Gear End Bracket .....	C6H20A-L689	
Motor End Bracket .....	C6H20A-L690	



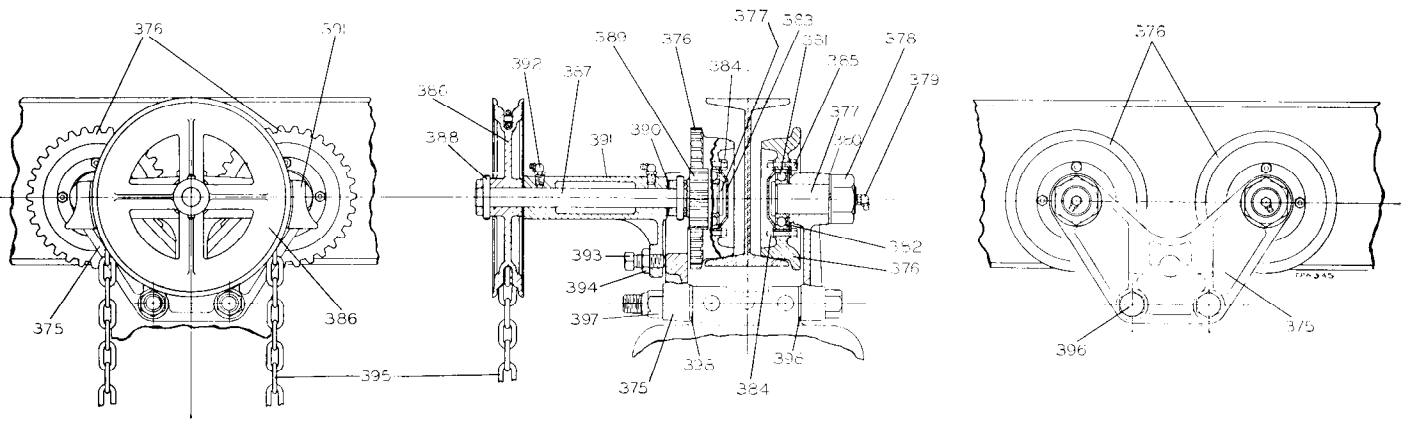
**COMPONENT PARTS OF PLAIN TROLLEYS (Cont'd.)**

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
251	Trolley Wheel (1 for Bracket No. C6H20A60-700, C6H20A-L689 or C6H20A-L690; 2 for others) for I-beam or Richards-Wilcox Tru-Tred Track..... for Flat-Tread Monorail.....	D02-431A D02-T431
252	Trolley Wheel Shaft Assembly (1 for each Wheel).....	D02-435A
253	Trolley Wheel Shaft Nut (1 for each Shaft).....	DU-562
254	Angle Grease Fitting (1 for each Shaft).....	23-189
255	3/4" Lock Washer (1 for each Shaft).....	D01-692
256	Trolley Wheel Bearing (AFBMA No. 25BC02JP) (1 for each Wheel).....	58-96
257	Bearing Plate (1 for each Wheel).....	D02-955
258	Bearing Cap (1 for each Wheel).....	D02-954
259	1/4" Cap Screw (4 for each Wheel).....	D02-957
260	1/4" Elastic Stop Nut (4 for each Wheel).....	501-639
261	Trolley Bracket Bolt (refer to Table A on page 20) for Trolleys used on all Standard Headroom Hoists 9" long..... 9 1/2" long..... 10 1/2" long..... 11 1/2" long..... for Trolleys used on all Low Headroom Hoists 8" long..... 8 1/2" long..... 9" long..... 9 1/2" long..... 10 1/2" long.....	C6H20A-439-9 C6H20A-439-9 1/2 C6H20A-439-10 1/2 C6H20A-439-11 1/2  D01-694-8 C6H20A-L439-8 1/2 D01-694-9 D01-694-9 1/2 C6H20A-L439-10 1/2
262	Trolley Bracket Bolt Nut (1 for each Bolt) for Trolleys used on all Standard Headroom Hoists..... for Trolleys used on all Low Headroom Hoists.....	C6H20A-440 D01-341A
263	Trolley Bracket Spacer (refer to Table A on page 20) for Trolleys used on all Standard Headroom Hoists 1/6" thick..... 1/4" thick..... 1/2" thick..... for Trolleys used on all Low Headroom Hoists 1/6" thick..... 1/4" thick..... 1/2" thick.....	C6H20A-442-1/6 C6H20A-442-1/4 C6H20A-442-1/2  C6H20A-L442-1/6 C6H20A-L442-1/4 C6H20A-L442-1/2
†264	Swivel Trolley Yoke (1 for each Trolley).....	C6H20A60-827
†265	Swivel Yoke Bolt (2 for each Yoke).....	C6H20A-339
†266	Yoke Bolt Nut (1 for each Bolt).....	C6H20A-440
267	Trolley Mounting Swivel Block (1 for each Trolley) for Trolley No. 2EH20A60-AS430, 2EH20A60-AS430T, C6H20A60-AS700 or C6H20A60-AS700T..... for Trolleys used on all Low Headroom Hoists.....	C6H20A60-425 C6H20A-L425
†268	Swivel Block Bolt (1 for each Swivel Block).....	C6H20A60-823
†269	Swivel Bolt Nut (1 for each Bolt).....	C6H20A60-824
†270	Swivel Bolt Spacer (1 for each Bolt).....	D02-1591
†271	Swivel Thrust Bearing (1 for each Trolley).....	D02-1379
†272	Swivel Bolt Pin (1 for each Bolt).....	C6H20A-826
●273	Swivel Block Pin (1 for each Trolley).....	C6H20A-L823
●274	Swivel Block Pin Cotter (3/16" x 1 1/2" long) (1 for each Trolley).....	C6H20A-438
●275	Swivel Thrust Bearing (1 for each Trolley).....	D02-1379
◎276	Trolley Guide Roller (2).....	C6H20A-688
◎277	Guide Roller Nut (2).....	D01-305
◎278	Guide Roller Lock Washer (2).....	A-67
◎279	Guide Roller Grease Fitting (2).....	C6H20A-327

†Parts used only with Swivel Trolleys for Size EH20A60 Hoists.

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

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



**HAND CHAIN DRIVEN TROLLEY**

**HAND CHAIN DRIVEN TROLLEY 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
●	Hand Chain Driven Trolley Assembly Rigid Type for Standard Headroom Hoists operating on I-beam or Richards-Wilcox Tru-Tred Track..... for Standard Headroom Hoists operating on Flat-Tread Monorail..... Swivel Type for Low Headroom Hoists operating on I-beam or Richards-Wilcox Tru-Tred Track..... for Low Headroom Hoists operating on Flat-Tread Monorail..... for Size EH20A60 operating on I-beam or Richards-Wilcox Tru-Tred Track..... for Size EH20A60 operating on Flat-Tread Monorail..... Assembled Trolley Bracket Geared Side for Standard Headroom Hoists operating on I-beam or Richards-Wilcox Tru-Tred Track..... for Standard Headroom Hoists operating on Flat-Tread Monorail..... for Low Headroom Hoists operating on I-beam or Richards-Wilcox Tru-Tred Track..... for Low Headroom Hoists operating on Flat-Tread Monorail..... Plain Side for Standard Headroom Hoists operating on I-beam or Richards-Wilcox Tru-Tred Track..... for Standard Headroom Hoists operating on Flat-Tread Monorail..... for Low Headroom Hoists operating on I-beam or Richards-Wilcox Tru-Tred Track..... for Low Headroom Hoists operating on Flat-Tread Monorail.....	C6H20A-A471 C6H20A-A471T  C6H20A-AL471 C6H20A-AL471T  C6H20A60-A471 C6H20A60-A471T  C6H20A-G430 C6H20A-G430T  C6H20A-GL430 C6H20A-GL430T  C6H20A-B430 C6H20A-B430T  C6H20A-BL430 C6H20A-BL430T
375	Trolley Bracket (1 for each Assembled Trolley Bracket)	
	for Standard Headroom Hoists..... for Low Headroom Hoists.....	C6H20A-430 C6H20A-L430
376	Trolley Wheel Geared Side (2) for operation on I-beam or Richards-Wilcox Tru-Tred Track..... for operation on Flat-Tread Monorail..... Plain Side for operation on I-beam or Richards-Wilcox Tru-Tred Track..... for operation on Flat-Tread Monorail.....	D02-472A D02-T472  D02-431A D02-T431

●Always specify the size and flange width of I-beam or Monorail on which Trolley is to operate.

## HAND CHAIN DRIVEN TROLLEY PARTS (Cont'd)

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
377	Trolley Wheel Shaft Assembly	
	Geared Side (2) .....	D02-474A
	Plain Side (2) .....	D02-435A
378	Trolley Wheel Shaft Nut (1 for each Shaft) .....	DU-562
379	Angle Grease Fitting (1 for each Shaft) .....	23-189
380	3/4" Lock Washer (4) .....	D01-692
381	Trolley Wheel Bearing (1 for each Wheel) (AFBMA No. 25BC02JP) .....	58-96
382	Bearing Plate (1 for each Wheel) .....	D02-955
383	Bearing Cap (1 for each Wheel) .....	D02-954
384	Cap Screw (4 for each Wheel) (1/4"-28 thd. x 1 1/8" long) .....	D02-957
385	Cap Screw Nut (4 for each Wheel) (1/4"-28 thd. Elastic Stop Nut) .....	501-639
386	Chain Sprocket .....	D02-470
387	Chain Sprocket Shaft .....	D02-475
388	Taper Pin (2) .....	D02-520
389	Drive Pinion .....	D02-473
390	Drive Pinion Spacer (for Trolley-operating on Flat-Tread Monorail) .....	D02-442-1/6
391	Chain Sprocket Bracket Assembly .....	D02-471
392	Angle Grease Fitting (2) .....	23-189
393	Bracket Set Screw .....	D02-480A
394	Bracket Set Screw Nut .....	G7-18
395	Hand Chain (length as specified) .....	D02-L476
396	Trolley Bracket Bolt (2) (See Table A on page 20)	
	for Standard Headroom Hoists	
	9" long .....	C6H20A-439-9
	9 1/2" long .....	C6H20A-439-9 1/2
	10 1/2" long .....	C6H20A-439-10 1/2
	11 1/2" long .....	C6H20A-439-11 1/2
	for Low Headroom Hoists	
	8" long .....	D01-694-8
	8 1/2" long .....	C6H20A-L439-8 1/2
	9" long .....	D01-694-9
	9 1/2" long .....	D01-694-9 1/2
	10 1/2" long .....	C6H20A-L439-10 1/2
397	Trolley Bracket Bolt Nut (2)	
	for Standard Headroom Hoists .....	C6H20A-440
	for Low Headroom Hoists .....	D01-341A
398	Trolley Bracket Spacer (as required) (See Table A on page 20)	
	for Standard Headroom Hoists	
	1/6" thick .....	C6H20A-442-1/6
	1/4" thick .....	C6H20A-442-1/4
	1/2" thick .....	C6H20A-442-1/2
	for Low Headroom Hoists	
	1/6" thick .....	C6H20A-L442-1/6
	1/4" thick .....	C6H20A-L442-1/4
	1/2" thick .....	C6H20A-L442-1/2
†274	Swivel Trolley Yoke .....	C6H20A60-827
†275	Swivel Yoke Bolt (2) .....	C6H20A-339
†276	Yoke Bolt Nut (2) .....	C6H20A-440
†277	Trolley Mounting Swivel Block .....	C6H20A60-425
†278	Swivel Trolley Bolt .....	C6H20A60-823
†279	Swivel Trolley Bolt Nut .....	C6H20A60-824
†280	Swivel Trolley Bolt Spacer .....	D02-1591
†281	Swivel Trolley Thrust Bearing .....	D02-1379
†282	Swivel Trolley Bolt Pin .....	C6H20A-826
Δ314	Trolley Mounting Swivel Block .....	C6H20A-L425
Δ315	Swivel Block Pin .....	C6H20A-L823
Δ316	Swivel Block Pin Cotter .....	C6H20A-438
Δ317	Swivel Thrust Bearing .....	D02-1379

†Used only with Swivel type Trolley for Size EH20A60.

ΔUsed only on Low Headroom Hoists.

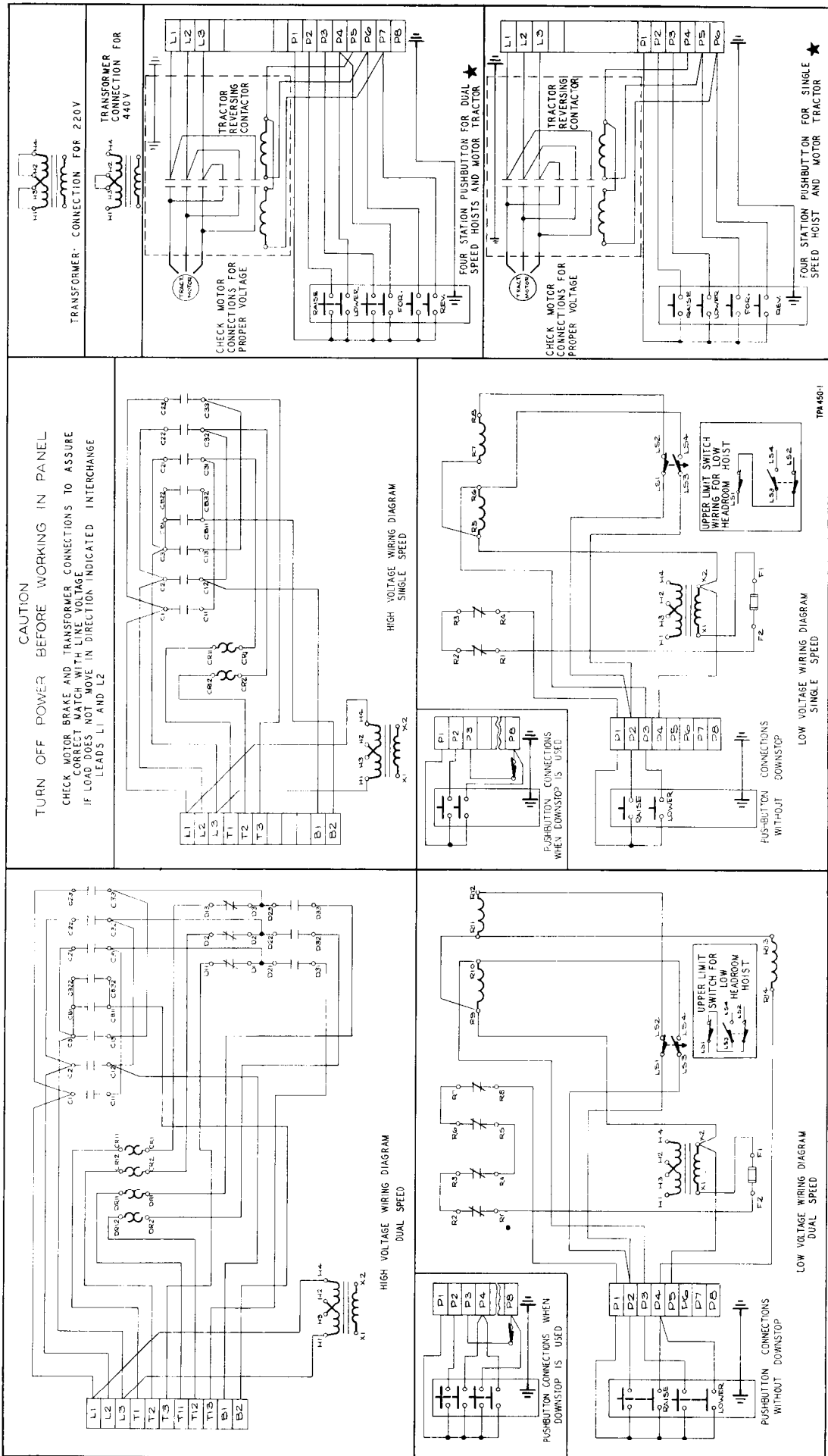
**TABLE A**  
**TROLLEY BRACKET BOLTS AND TROLLEY BRACKET SPACERS REQUIRED FOR MOUNTING**  
**TROLLEY ON VARIOUS TRACKS**

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.	Trolley Bracket Spacers		Trolley Bracket Bolt Length, in.	Trolley Bracket Spacers	
					Thickness, in.	Quantity		Thickness, in.	Quantity
6	152	3.33	85	9	...	..	8	...	..
7	178	3.66	93	9	1/6	4	8-1/2	1/6	4
8	203	4.00	102	9-1/2	1/6	8	9	1/6	8
10	254	4.66	118	10-1/2	1/6 1/2	4 4	9-1/2	1/6 1/2	4 4
12	305	5.00	127	10-1/2	1/6 1/2	8 4	9-1/2	1/6 1/2	8 4
15	381	5.50	140	11-1/2	1/6 1/4 1/2	8 4 4	10-1/2	1/6 1/4 1/2	8 4 4
18	457	6.00	152	11-1/2	1/6 1/2	8 8	10-1/2	1/6 1/2	8 8

Flat-Tread Monorails

Flange Width of Monorail		For Standard Headroom Hoists			For Low Headroom Hoists		
in.	mm	Trolley Bracket Bolt 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	9-1/2	1/6	8	9	1/6	8
4-1/16	103	10-1/2	1/4 1/2	4 4	9-1/2	1/4 1/2	4 4
4-1/2	114	10-1/2	1/6 1/4 1/2	4 4 4	10-1/2	1/6 1/4 1/2	4 4 4



**Wiring Diagram**

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

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