

**INSTRUCTIONS AND PARTS LIST**  
**RIGID MOUNT I-BEAM TROLLEYS**  
(PUSH & HAND GEARED - 1/2, 1, 2 & 3 TON RATED LOADS)  
**AND PATENTED TRACK TROLLEYS**  
(PUSH - 1 & 2 TON RATED LOADS)

For Coil Chain Budget Electric Hoists, KEL2,  
Series 2000 Air Hoists, KAL2, YAL, CAH, Airstar,  
Series 6000 Air Hoists, Airstar 6,  
and USA Series Hand Chain Hoists.

**GENERAL**

Rigid Mount Trolleys are designed especially for use with Coil Chain Model Electric Hoists, Series 2000 Air Hoists, Series 6000 Air Hoists, and USA Series Hand Chain Hoists. They attach directly to suspension lugs of lug mounted model hoists, or, are used in combination with special Suspension Lugs to convert hook suspended model hoists for rigid mount trolley suspension. Instructions for installing lugs are not included herein. They are provided with suspension lug kits.

Trolleys are shipped partially disassembled to make it unnecessary to take them apart before mounting on hoist. This also makes it easier to properly adjust the trolleys to fit the particular beams on which they are to operate. Trolleys must be correctly fitted to properly support the rated load.

Your new Rigid Mount Trolley can be assembled to your Coil Chain Electric Hoist, KEL2, Series 2000 Air Hoist, KAL2, YAL, CAH, Airstar, Airstar6, or USA Series Hand Chain Hoist, and the complete unit then installed on its runway beam with a minimum of effort by following the directions given herein.

Patented track trolleys are designed to operate on patented track with a 3-1/4" wide flange.

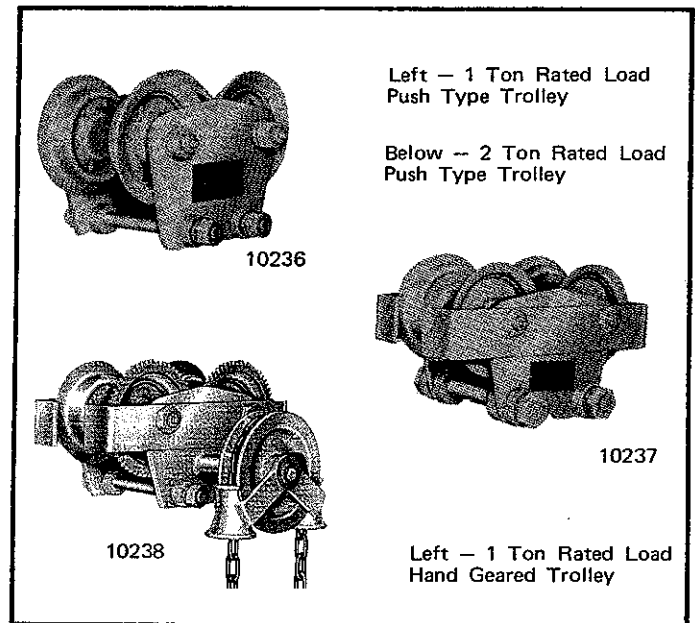


Figure 1.

NOTICE: Since rigid mounting does not allow hoist to rotate with pull of load, Rigid Mount Trolleys must not be used with hoists having roller type load chain.

**ASSEMBLY OF TROLLEY TO HOIST**

Place hoist on workbench, suspension lug facing up, and proceed as follows:

1. If trolley is a hand geared type, make certain that proper size anti-tilt roller is installed on inside of one side plate before assembling trolley to hoist. Two rollers are provided with each hand geared trolley to accommodate full range of beam sizes that trolley is designed for. A small roller, suitable for I-beam sizes of 10" up to largest specified for trolley has been pre-installed by the factory. If trolley is to operate on an I-beam smaller than 10", substitute the larger roller, which is shipped loose, by removing the outer "C" ring and replacing the smaller roller. For other than standard I-beams, measure beam flange thickness and allow not less than 1/16" clearance between roller and bottom of beam flange.
2. Before attaching trolley to hoist, first determine proper spacing of trolley side plates to provide adequate wheel clear-

ance (approximately 1/8") on both sides of I-beam, between inside faces of wheel flanges and edges of bottom beam flange. Proper spacing is obtained by varying number of spacer washers, (furnished with trolley) which are installed on suspension cross pins, between suspension lug and trolley side plates.

3. Due to manufacturing tolerances, I-beams having the same size designation may vary in the width of their flanges. This makes it impossible to prescribe the specific number of spacer washers required between trolley side plates and lug for any particular beam size. As a result the following procedure should be followed:

4. Measure exact width of bottom beam flange and add 1/4" to this dimension. This is the required distance between inside faces of wheel flanges to obtain proper operating clearance, as indicated in figures 2 through 8.

5. If trolley being mounted on hoist is to operate on minimum size I-beam for which it was designed, attach trolley to hoist with the spacer washers arranged on suspension cross pins as illustrated in figures 2 through 8, depending upon trolley type and capacity. As stated in paragraph 3, it may be necessary to adjust washer quantity to meet a non-standard flange width. Minimum beam size for 1/2 ton trolleys is 4"; 5" for 1 ton trolleys and 6" for 2 & 3 ton trolleys.

NOTE: It is important that all the spacer washers that come with trolley be used.

6. If trolley is to operate on a beam of larger than minimum size, additional spacer washers, to those shown in figures 2 through 8 must be installed inside side plates (at each end of lug) to obtain the desired distance (Step 4) between inside faces of wheel flanges. The table on page 4 shows approximate number of washers needed for various beam sizes. Trolley should be temporarily assembled to hoist using prescribed number of washers from chart and then the distance between wheel flanges measured. An equal number of washers must be removed or added at each end of lug inside side plates) as required to obtain proper wheel spacing determined in step 4. When spacing is correct, remaining spacer washers are to be installed in equal numbers on outside ends of cross pins. Install lockwashers and tighten hex nuts.

7. On the 1 ton push trolley (Cat. No. 905409) used with the USA Series hand chain hoist only, one side plate has an anti-tilt roller which is to be installed on the side opposite the hoist hand chain. See paragraph 1 for proper roller installation.

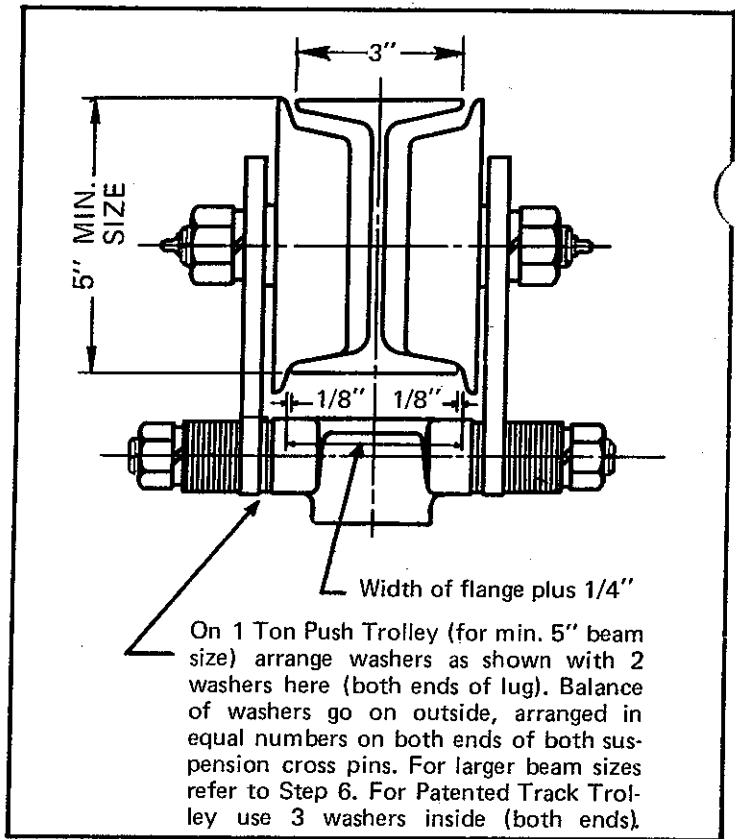


Figure 3. 1 Ton Push Trolley

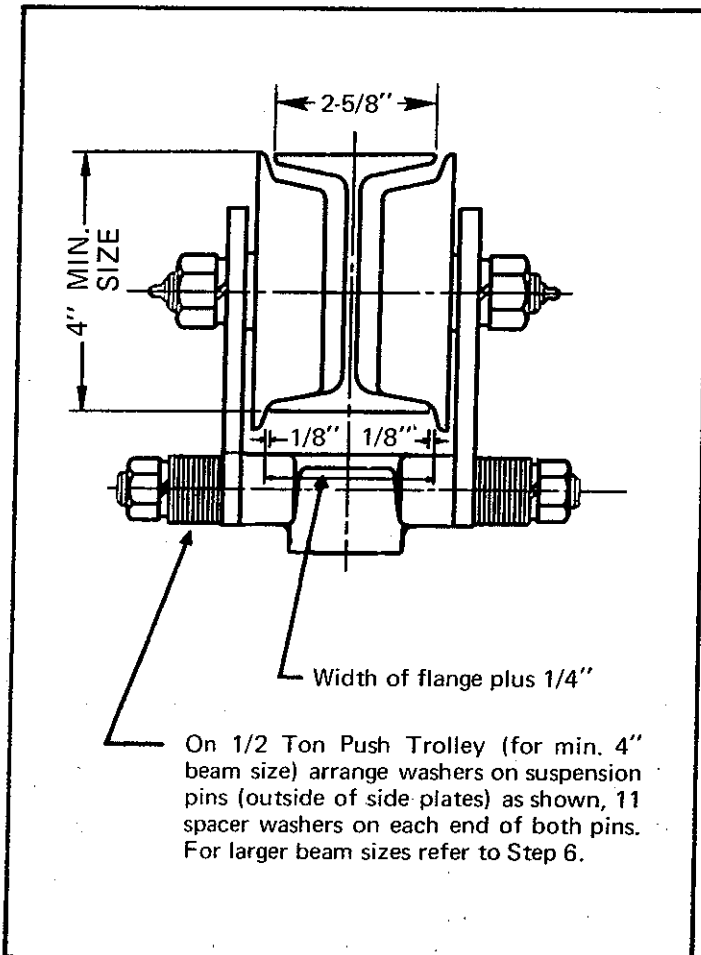


Figure 2. 1/2 Ton Push Trolley

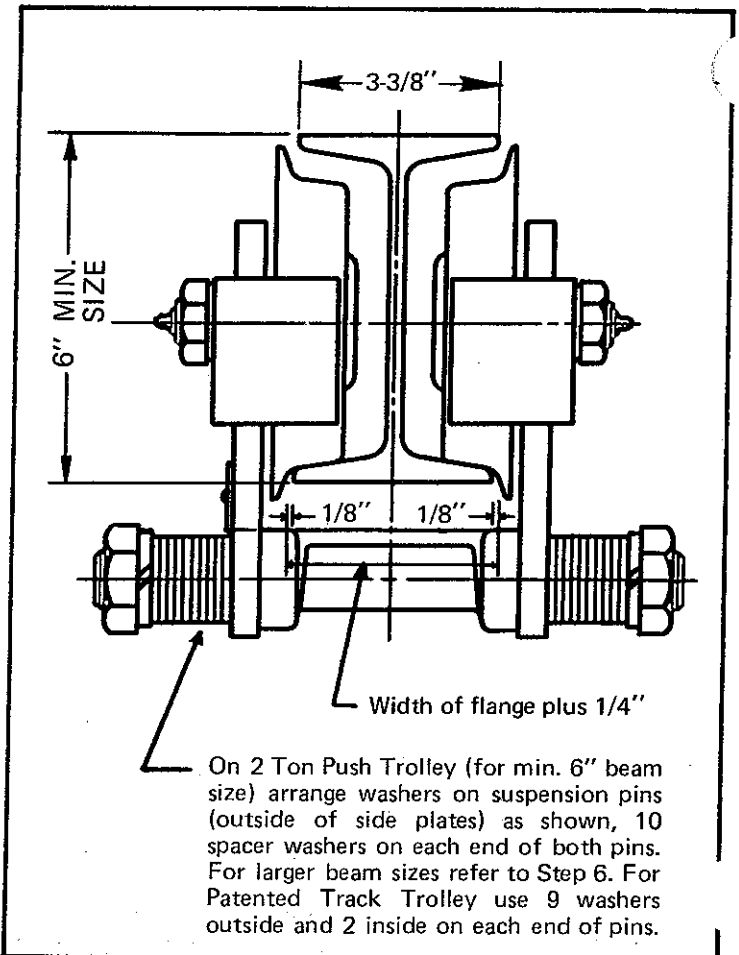


Figure 4. 2 Ton Push Trolley

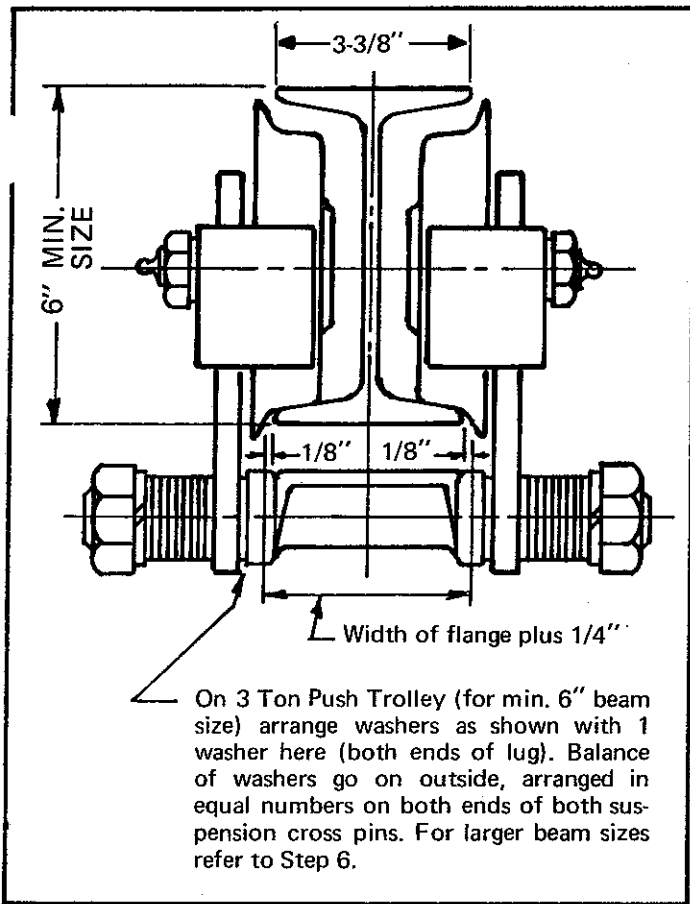


Figure 5. 3 Ton Push Trolley

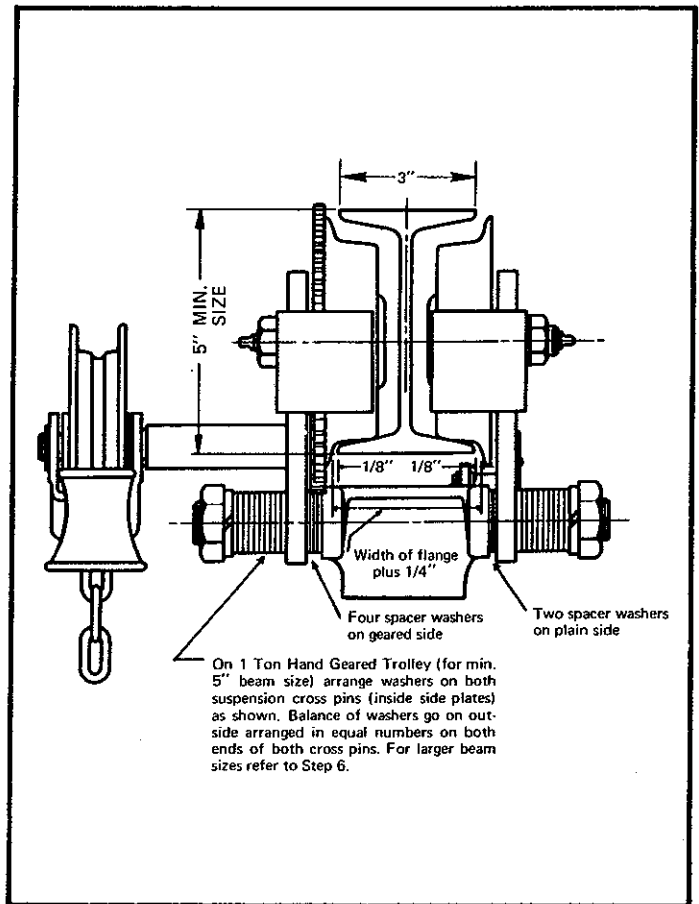


Figure 6. 1 Ton Hand Geared Trolley

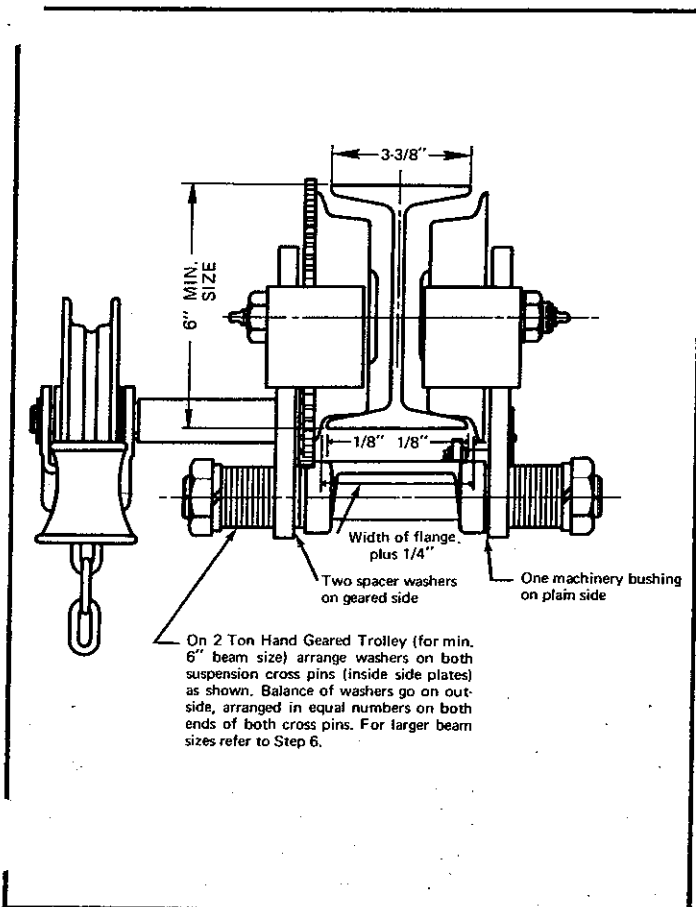


Figure 7. 2 Ton Hand Geared Trolley

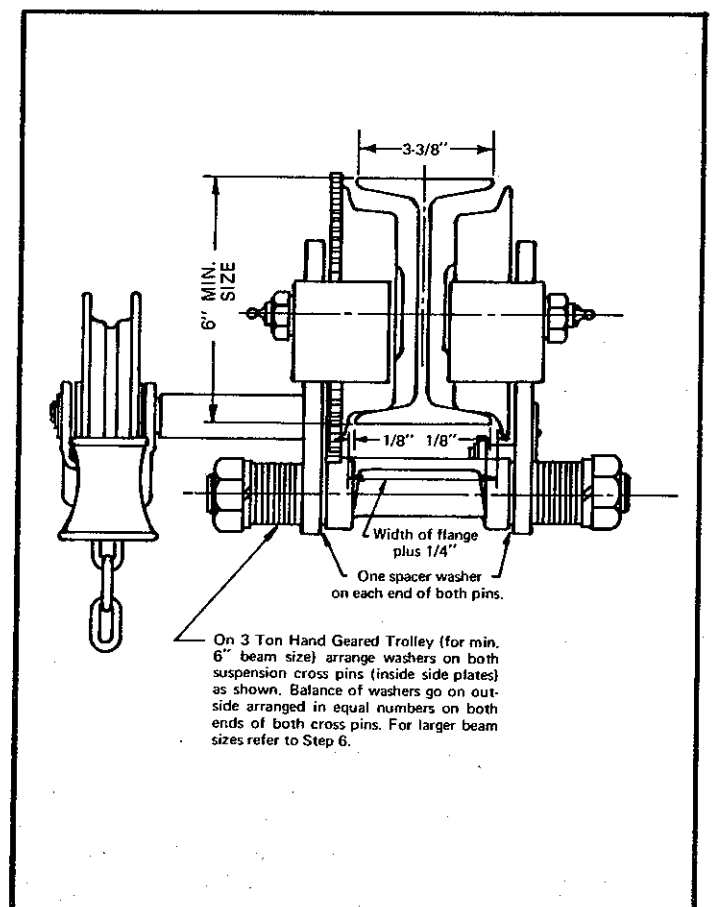


Figure 8. 3 Ton Hand Geared Trolley

**APPROXIMATE NUMBER OF INSIDE SPACER WASHERS REQUIRED  
ON CROSS PINS TO ADJUST WHEEL SPACING**

American Standard I-beam Size (Ins. & Lbs.)	Nominal Flange Width (Inches)	No. of Inside Washers on Cross Pins on Each Side of Suspension Lug (4 places)							
		Push Type Trolley			Push or Hand Geared	Hand Geared Trolley			
		1/2 Ton Rated Load	1 Ton Rated Load	2 Ton Rated Load	3 Ton Rated Load	1 Ton Rated Load		2 Ton Rated Load	
					Plain Side	Geared Side	*Plain Side	Geared Side	
4 x 7.7	2-5/8	0	—	—	—	—	—	—	—
4 x 9.5	2-3/4	1	—	—	—	—	—	—	—
5 x 10.0	3	2	2	—	—	2	4	—	—
5 x 14.75	3-1/4	4	3	—	—	3	5	—	—
6 x 12.5	3-3/8	5	4	0	1	4	6	0	2
6 x 17.25	3-5/8	6	5	1	2	5	7	1	3
7 x 15.3	3-5/8	6	5	1	2	5	7	1	3
7 x 20.0	3-7/8	7	6	2	3	6	8	2	4
8 x 18.4	4	8	7	2	3	7	9	2	4
8 x 23.0	4-1/8	9	8	3	4	8	10	3	5
10 x 25.4	4-5/8	11	10	5	5	10	12	5	7
10 x 35.0	5	—	12	6	6	12	14	6	8
12 x 31.8	5	—	12	6	6	12	14	6	8
12 x 35.0	5-1/8	—	13	7	7	13	15	7	9
12 x 40.8	5-1/4	—	—	7	7	—	—	7	9
12 x 50.0	5-1/2	—	—	8	8	—	—	8	10
15 x 42.9	5-1/2	—	—	8	8	—	—	8	10
15 x 50.0	5-5/8	—	—	9	8	—	—	9	11
18 x 54.7	6	—	—	10	9	—	—	10	12
Pat. Trk.	3-1/4	—	3	2	—	—	—	—	—

\* Machinery bushing (illustrated in Figure 7) is not included in quantities given here, but must be used on this side for all flange sizes.

**SUSPENDING TROLLEY AND HOIST**

1. On push type trolley models determine whether hoist is to be suspended with frame parallel to runway beam or cross mounted (90 degrees to beam). Refer to hoist manual for instructions on suspension lug rotation.
2. On hand geared models the trolley is restricted to parallel mounting on hoist frame because of the handwheel and chain. When hoist chain container is to be used, trolley hand chain must be placed on side opposite tail chain of hoist (where chain container is mounted).
3. Hoist and trolley may be installed on I-beam by one of two methods. If trolley can be slipped directly over end of beam, it need not be partially disassembled. If this is impossible, remove hex nuts, lockwashers, outer spacer washers and one side plate from one side of trolley and reassemble on beam.

**CAUTION:** In all cases, after trolley and hoist have been installed on I-beam, make sure a suitable stop is secured to each end of beam to prevent trolley rolling off. Make certain lockwashers are in place on cross pins and hex nuts are tight.

Recheck clearance dimensions between wheel flanges and beam flanges.

**⚠ WARNING**

**If trolley is mounted on an open-end beam, end stops must be installed to prevent trolley from running off the end of the beam resulting in injury to operator and others, including danger to life and limb, and damages to load and other property.**

**OPERATING PRECAUTIONS**

**DO NOT** load trolley beyond rated capacity.

**DO NOT** subject trolley to side loads. Always center trolley over load when hoisting.

**DO NOT** ram trolley into end stops, other trolleys, or any obstruction on beam. Improper and careless operation can result in a hazardous condition for operator and load.

**ALWAYS** be sure hoist suspension hook, clevis or hook adaptor is centered on cross pin, seated in recess on pin.

**ALWAYS** be sure load is clear of obstructions before traversing load and trolley.

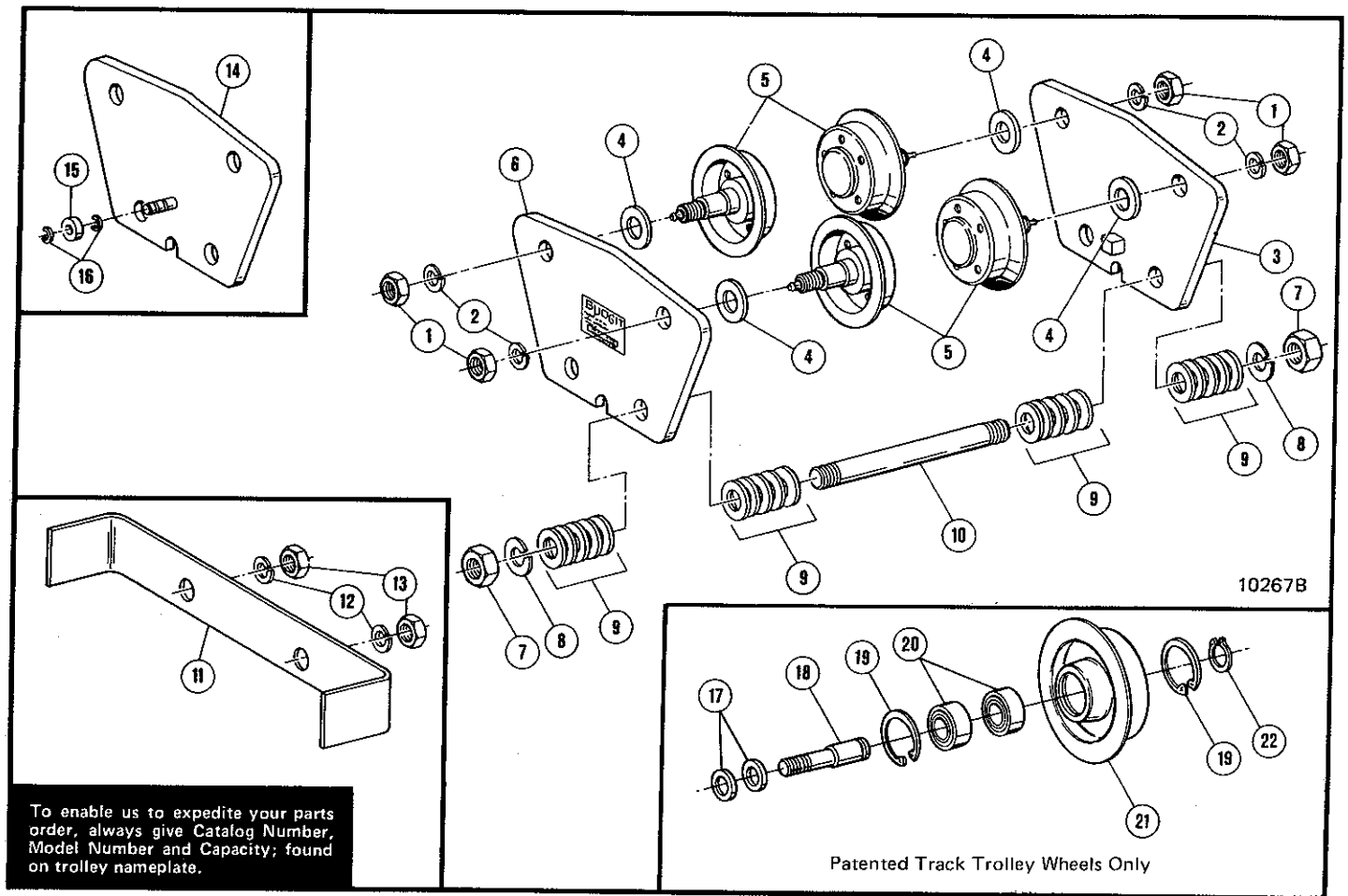
**DO NOT** stand and **DO NOT** cause or allow others to stand or get under any load the trolley is supporting. **DO** keep clear, and make sure others keep clear, of any load the trolley is supporting.

**⚠ WARNING**

**These trolleys are not designed nor intended to be used to support or transport people or for supporting or transporting loads over people.**

**MAINTENANCE AND LUBRICATION**

Rigid Mount Trolleys are built to give years of service, but should be inspected regularly for evidence of damage or wear, particularly when subjected to unusually severe operating conditions. Wheel axles are fitted with pressure fittings for lubrication of wheel bearings except patented track trolley bearings (lifetime lubricated). Apply light grease a minimum of every six (6) months; oftener if needed. If replacement parts are ever needed, see exploded view parts illustrations and parts lists on the following pages.



To enable us to expedite your parts order, always give Catalog Number, Model Number and Capacity; found on trolley nameplate.

Patented Track Trolley Wheels Only

Figure 9. Push Type Rigid Mount Trolley Assembly (1/2, 1, 2 & 3 Ton Rated Loads)

Ref. No.	1/2 Ton		1 Ton				2 Ton				3 Ton		DESCRIPTION
	Part No.	Quan	Part No.		Part No.		Part No.		Part No.		Quan		
			I-beam	Quan	Pat. Trk.	Quan	I-beam	Quan	Pat. Trk.	Quan	Part No.	Quan	
1	BT-1001	4	BT-1002	4	—	—	—	—	—	—	—	—	Nut — hex.
2	BT-1003	4	BT-1004	4	—	—	—	—	—	—	—	—	Lockwasher — Spring Type
3	BT-1005	1	*BT-1006	1	BT-1006	1	BT-1007	1	BT-1051	1	BT-1031	1	Plate Assembly — side
4	BT-1008	4	BT-1009	4	—	—	BT-1010	4	—	—	—	—	Washer — Spacer, wheel
5	BT-1011	4	BT-1012	4	BT-1052	4	BT-1013	4	BT-1053	4	BT-1033	4	Wheel & Axle Assembly
6	BT-1014	1	BT-1015	1	BT-1006	1	BT-1016	1	BT-1051	1	BT-1034	1	Plate — side (drilled for nameplate)
7	BT-1017	4	BT-1017	4	BT-1054	4	BT-1018	4	BT-1018	4	BT-1035	4	Nut — hex, cross pin
8	BT-1019	4	BT-1019	4	BT-1055	4	BT-1020	4	BT-1020	4	BT-1036	4	Lockwasher — Spring Type
9	BT-1021	44	BT-1021	52	BT-1021	32	BT-1022	44	BT-1022	44	BT-1037	40	Washer — Spacer, cross pin
10	BT-1023	2	BT-1024	2	BT-1056	2	BT-1025	2	BT-1025	2	BT-1038	2	Pin — Cross, suspension
11	—	—	—	—	BT-1057	2	BT-1026	2	BT-1026	2	BT-1039	2	Bumper
12	—	—	—	—	BT-1027	4	BT-1027	4	BT-1027	4	BT-1027	4	Lockwasher — Spring Type
13	—	—	—	—	BT-1028	4	BT-1028	4	BT-1028	4	BT-1028	4	Nut — hex, Thin
14	—	—	*BT-1105	1	—	—	—	—	—	—	—	—	Plate Assembly — side
15	—	—	*BT-1135	1	—	—	—	—	—	—	—	—	Roller — Anti-tilt
16	—	—	*BT-1134	2	—	—	—	—	—	—	—	—	Ring — Snap
17	—	—	—	—	BT-1058	8	—	—	BT-1058	8	—	—	Washer — Spacer, wheel
18	—	—	—	—	BT-1059	4	—	—	BT-1060	4	—	—	Axle
19	—	—	—	—	BT-1061	8	—	—	BT-1061	8	—	—	Ring — Retaining
20	—	—	—	—	BT-1062	4	—	—	BT-1062	8	—	—	Bearing — Ball
21	—	—	—	—	BT-1063	4	—	—	BT-1064	4	—	—	Wheel
22	—	—	—	—	BT-1065	4	—	—	BT-1065	4	—	—	Ring — Retaining

\*Ref. Nos. 14, 15 and 16 replace Ref. No. 3 for 1 ton trolley (Cat. No. 905409) used with USA Series hand chain hoist only.

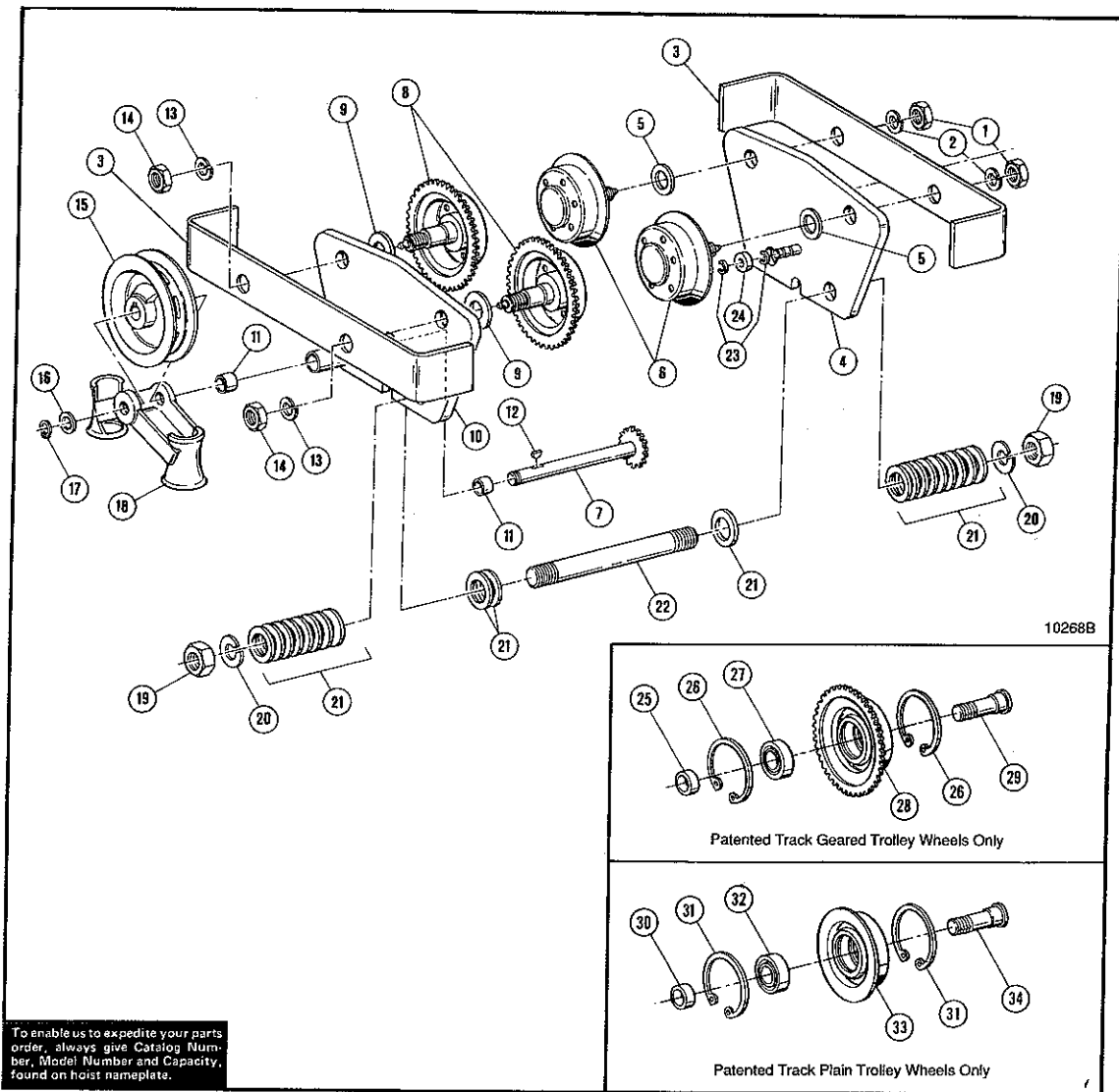


Figure 10. Hand Geared Rigid Mount Trolley Assembly (1, 2 & 3 Ton Rated Loads)

Ref. No.	1 TON		2 TON		3 TON		DESCRIPTION
	Part No.	Quan.	Part No.	Quan.	Part No.	Quan.	
1	BT-1101	2	BT-1101	2	BT-1101	2	Nut – hex, Jam
2	BT-1102	2	BT-1102	2	BT-1102	2	Lockwasher, Spring Type
3	BT-1103	2	BT-1104	2	BT-1141	2	Bumper
4	BT-1105	1	BT-1106	1	BT-1142	1	Plate assembly – side
5	BT-1107	2	BT-1107	2	–	–	Washer – Spacer, plainwheel
6	BT-1108	2	BT-1109	2	BT-1144	2	Wheel & Axle Assembly – Plain
7	BT-1110	1	BT-1110	1	BT-1145	1	Pinion & Shaft Assembly
8	BT-1111	2	BT-1112	2	BT-1146	2	Wheel & Axle Assembly – Geared
9	BT-1113	2	BT-1113	2	–	–	Spacer Washer – Geared Wheel
10	BT-1114	1	BT-1115	1	BT-1148	1	Plate & Tube Assembly (Incl. Ref. 11)
11	BT-1116	2	BT-1116	2	BT-1116	2	Bushing – Pinion Shaft
12	BT-1117	1	BT-1117	1	BT-1117	1	Key – Woodruff
13*	BT-1118	2	–	–	BT-1102	2	Lockwasher – Spring Type

Figure 10. Hand Geared Trolley – Continued

Ref. No.	1 TON		2 TON		3 TON		DESCRIPTION
	Part No.	Quan.	Part No.	Quan.	Part No.	Quan.	
14	BT-1119	2	BT-1101	2	BT-1101	2	Nut – hex
15	BT-1121	1	BT-1121	1	BT-1211	1	Wheel – Hand Chain
16	BT-1122	1	BT-1122	1	BT-1122	1	Washer – Spacer
17	BT-1123	1	BT-1123	1	BT-1123	1	Ring – retaining, external
18	BT-1124	1	BT-1124	1	BT-1124	1	Guide – Chain Wheel
19	BT-1125	4	BT-1126	4	BT-1151	4	Nut – hex
20	BT-1127	4	BT-1128	4	BT-1152	4	Lockwasher – Spring Type
21	BT-1129	56	BT-1130	44	BT-1153	40	Washer, Spacer
	-	-	BT-1131	2	-	-	Bushing, Machinery (not shown)
22	BT-1132	2	BT-1133	2	BT-1155	2	Pin-cross, suspension
23	BT-1134	2	BT-1134	2	BT-1134	2	Ring – Snap
24	BT-1135	1	BT-1136	1	BT-1136	1	Roller – Anti-tilt
25	BT-1160	2	-	-	-	-	Spacer
26	BT-1161	4	-	-	-	-	Ring – retaining
27	BT-1162	2	-	-	-	-	Ball Bearing
28	BT-1163	2	-	-	-	-	Wheel – Patented Track-Geared
29	BT-1164	2	-	-	-	-	Axle
30	BT-1160	2	-	-	-	-	Spacer
31	BT-1161	4	-	-	-	-	Ring – retaining
32	BT-1162	2	-	-	-	-	Ball Bearing
33	BT-1165	2	-	-	-	-	Wheel – Patented Track-Plain
34	BT-1164	2	-	-	-	-	Axle
**	BT-1137	as req'd	BT-1137	as req'd	BT-1137	as req'd	Chain, hand (not shown)
	BT-1138	1	BT-1138	1	BT-1138	1	Link – Open (not shown)

\* On 2-ton model, wheel shaft nuts on hand wheel side only are special self-locking nuts. Lockwashers are not required.

\*\* Specify length of hand chain required. Length equals two times hoist lift plus one foot.

**IMPORTANT:** Replacement parts can be ordered only from an authorized Repair Station or from the Distributor from whom you purchased your trolley. Do not order parts directly from the factory.

## ⚠ WARNING

**Equipment illustrated and described in this manual is not designed or suitable for lifting or lowering persons.**

**NOTICE: INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE.**

## Recommended Spare Parts for Your Trolley

Certain parts of your trolley will, in time, require replacement under normal wear conditions. It is suggested that the following parts be purchased for your trolley as spares for future use.

1 Set of Wheels (I-Beam Trolley with Formed Steel Wheels Only)

NOTE: When ordering parts always furnish Model Number of trolley.

Parts for your hoist are available from your local authorized repair station. For the location of your nearest repair station, write:

### In USA

**LIFT-TECH INTERNATIONAL**  
P.O. BOX 769  
MUSKEGON, MICHIGAN 49443  
800-866-6696

**YALE HOISTS**  
P.O. BOX 769  
MUSKEGON, MICHIGAN 49443  
866-805-2962

**COFFING HOISTS**  
P.O. BOX 779  
WADESBORO, NORTH CAROLINA 28170  
800-477-5004

**COLUMBUS MC KINNON CORPORATION**  
140 JOHN JAMES AUDUBON PKWY  
AMHERST, NEW YORK 14228  
800-888-0985

### In CANADA

**COLUMBUS MC KINNON, LTD.**  
P.O. BOX 1106  
10 BROOK RD., NORTH  
COBOURG, ONTARIO K9A 4W5  
905-372-0153

# WARRANTY

## WARRANTY AND LIMITATION OF REMEDY AND LIABILITY

A. Seller warrants that its products and parts, when shipped, and its work (including installation, construction and start-up), when performed, will meet applicable specifications, will be of good quality and will be free from defects in material and workmanship. All claims for defective products or parts under this warranty must be made in writing immediately upon discovery and, in any event, within one (1) year from shipment of the applicable item unless Seller specifically assumes installation, construction or start-up responsibility. All claims for defective products or parts when Seller specifically assumes installation, construction or start-up responsibility, and all claims for defective work must be made in writing immediately upon discovery and, in any event, within one (1) year from completion of the applicable work by Seller, provided; however, all claims for defective products and parts must be made in writing no later than eighteen (18) months after shipment. Defective items must be held for Seller's inspection and returned to the original f.o.b. point upon request. **THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESS, IMPLIED AND STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS.**

B. Upon Buyer's submission of a claim as provided above and its substantiation, Seller shall at its option either (i) repair or replace its product, part or work at either the original f.o.b. point of delivery or at Seller's authorized service station nearest Buyer or (ii) refund an equitable portion of the purchase price.

C. This warranty is contingent upon Buyer's proper maintenance and care of Seller's products, and does not extend to normal wear and tear. Seller reserves the right to void warranty in event of Buyer's use of inappropriate materials in the course of repair or maintenance, or if Seller's products have been dismantled prior to submission to Seller for warranty inspection.

D. The foregoing is Seller's only obligation and Buyer's exclusive remedy for breach of warranty, and is Buyer's exclusive remedy hereunder by way of breach of contract, tort, strict liability or otherwise. In no event shall Buyer be entitled to or Seller liable for incidental or consequential damages. Any action for breach of this agreement must be commenced within one (1) year after the cause of action has accrued.