

IMPORTANT - READ FIRST

WARNING

Do Not Load
Beyond
Rated Capacity

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WARNING

Do Not Use
For
Human Transport

INSTALLATION INSTRUCTIONS

SECTION I APPLICATION AND USE

8-1-90

- 1.1. The Model 44525 and Model ~~44600~~ Bridge Crane Kits can be used to construct bridge cranes ranging up to 4,000 pounds capacity. All necessary parts are included in this kit for the construction of the Bridge Crane unit, with the exception of the span-beam, parallel tracks, brace assembly, rubber bumpers, safety stops, and capacity decals.

The kit is intended for industrial use only and should not be used to lift, support, or otherwise transport people, or carry loads over people.

1.2. BRIDGE CRANE TRUCK DESIGN

The Model 44525 and Model 44600 Crane Truck is designed to fit 6 inch to 12 inch American Standard I-beam (3.33" to 5.06" flange width). The crane truck is a two piece angle constructed part with (flanged wheels), or (guide rollers and flangeless wheels) mounted on the assembly. No shims or spacers are required with these units to obtain sufficient flange clearance.

Both Models use tapered tread wheels to fit American Standard I-beams. The tapered tread wheel is of a unique design and can be used for wide flange or patented track having 3.33" to 5.06" flange widths.

1.3. SPAN-BEAM DETERMINATION

The size of the I-beam required to provide adequate strength for the span-beam depends on the rated load and the length of the span. Refer to Table 1 for the minimum beam size that should be used for various combinations of spans and load ratings.

The span-beam should be at least 8 inches longer than the span from centerline to centerline of the parallel tracks. As a safety measure, each end of the span-beam must have a rigid stop installed to prevent run-off of the hoist assembly. (See Figure 1-a)

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The following chart is to be used in determining the proper size span-beam to meet your overall capacity and span requirements.

| Capacity (Lbs.) | 10 ft. Span | 12.5 ft. Span | 15 ft. Span | 17.5 ft. Span | 20 ft. Span | 22.5 ft. Span | 25 ft. Span | 27.5 ft. Span | 30 ft. Span |
|--------------------|----------------|------------------|----------------|------------------|----------------|------------------|----------------|------------------|----------------|
| | Beam Size | Beam Size | Beam Size | Beam Size | Beam Size | Beam Size | Beam Size | Beam Size | Beam Size |
| 500 | 6" x 12.5# | 6" x 12.5# | 6" x 12.5# | 6" x 12.5# | 6" x 12.5# | 6" x 12.5# | 7" x 15.3# | 7" x 15.3# | 7" x 20.0# |
| 1000 | 6" x 12.5# | 7" x 15.3# | 7" x 15.3# | 7" x 15.3# | 7" x 20.0# | 8" x 18.4# | 8" x 23.0# | 10" x 25.4# | 10" x 25.4# |
| 2000 | 7" x 15.3# | 8" x 18.4# | 8" x 23.0# | 10" x 25.4# | 10" x 25.4# | 10" x 35.0# | 12" x 31.8# | 12" x 31.8# | 12" x 35.0# |
| 3000 | 8" x 23.0# | 10" x 25.4# | 10" x 35.0# | 12" x 31.8# | 12" x 35.0# | 15" x 42.9# | 15" x 42.9# | 15" x 42.9# | 15" x 42.9# |
| 4000 | 10" x 25.4# | 10" x 35.0# | 12" x 31.8# | 15" x 42.9# | 15" x 42.9# | 15" x 42.9# | 15" x 42.9# | — | — |

* Chain hoist and trolley included in capacity. Loads are based on steel beams ASTM-A7 or equal.

** Beam weights are per foot of beam. Multiply weight figure shown by length (in feet) of span beam used, in computing total installed weight.

SECTION II INSTALLATION

2.1. PREPARATION

- a. The first step when installing the bridge crane kit is to be sure that the runway beams are parallel within 1/8 inch maximum.
- b. Caution should be exercised to make certain each parallel track will withstand the capacities you will carry, plus the added weight of the span-beam, bridge unit, hoist and other accessories. A minimum safety factor of 5:1 should be used in determining if the parallel I-beam will support the intended load. If there is any doubt, a Structural Engineer should be consulted.

2.2. TRUCK POSITIONING

- a. Model 44525
Place the adjustable end truck on one of the parallel I-beams. Loosen the 3/8 inch bolt located in the slot at the end of the truck. Move the two end truck halves so that there is 1/8 inch clearance between the guide rollers and the I-beam flange on each side. Tighten the 3/8 inch bolt to 35 foot pounds torque. Repeat procedure for the other end of the truck. The 3/8 inch bolt must be tight or the truck might come off the beam. Repeat the above procedures on the second end truck included with your kit.
- b. Model 44600
Truck positioning is similar. Place the adjustable end truck on the parallel I beams. Loosen the 3/8 inch bolt located in the slot at the end of the truck. Move the two end truck halves in towards the I-beam so that there is 1/8 inch clearance between the wheel flanges and the flange on each side of the I-beam. Tighten the 3/8 inch bolt to 35 foot pounds torque. Repeat procedure for the other end of the truck. The 3/8 inch

bolt must be tight or the truck might come off the beam. Repeat the above procedures on the second end truck included with your kit.

- c. Position the trucks directly opposite one another on their runways. Be sure each truck is centered on its beam, not riding toward either side. Carefully measure the distance between the eight holes for attaching the span beam to the crane trucks. Drill the top flange of the span beam to accept 1/2 inch diameter Grade 5 bolts, which are included in your kit.
- d. The span beam should extend 4 inches on each end past the truck width. The span beam should be equipped with stops to prevent the hoist and trolley from traveling beyond the center of either parallel beam. (See Figure 1-a)
- e. Fasten the span beam to the trucks using the mounting hardware provided (see Figure 1). Double check to insure that the span beam is perpendicular to the runway beams and that the trucks are centered on the runway beams. Tighten beam mounting bolts to 90 foot pounds torque.
- f. Weld side adjustment bar to "Safe-T-Lug"[®] plate, on each end of the end-trucks (four places). (See Figure 2)

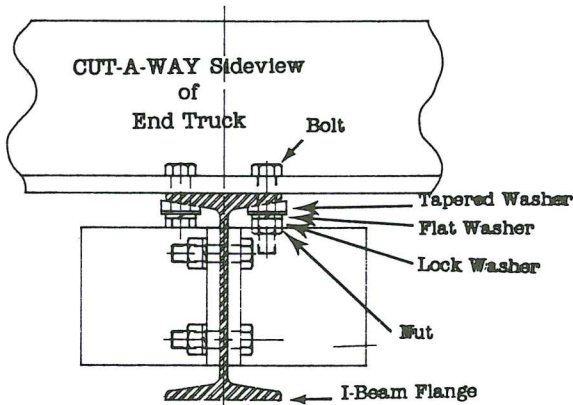


FIGURE 1

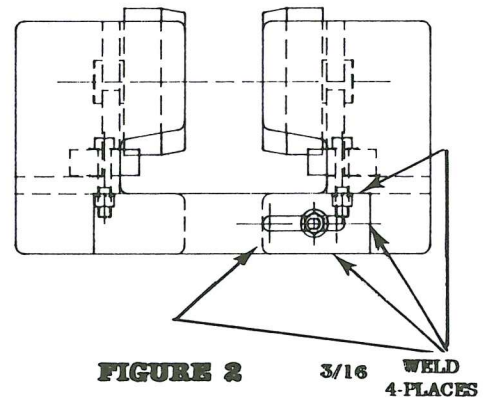
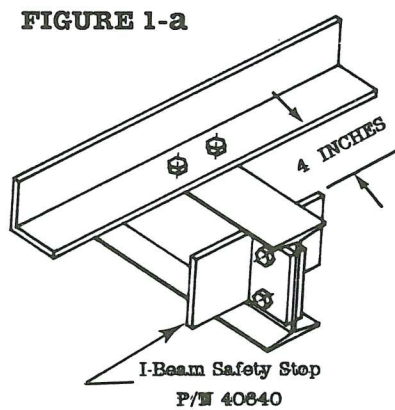


FIGURE 2

3/16 WELD
4-PLACES

2.3. LONGER SPAN CRANES

- a. On longer span cranes it may be desirable to add diagonal braces between the span beam and the crane trucks to insure against loss of truck alignment. Saginaw Brace p/n 44596 may be welded or bolted diagonally between the bottom of the truck and the top of the span beam. (See Figure 3)

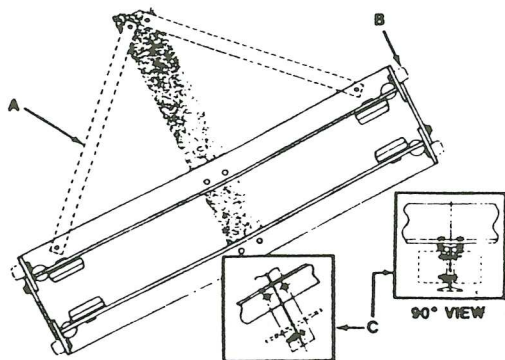


FIGURE 3

Accessories

- A Brace Assembly No. 44596
- B Rubber Bumper Kit No. 44601
- C Safety Stop Assembly No. 40840
- Capacity Decals** No. 44710 500 pound (1/4 ton)
- No. 44711 1,000 pound (1/2 ton)
- No. 44712 2,000 pound (1 ton)
- No. 44713 3,000 pound (1-1/2 ton)
- No. 44714 4,000 pound (2 ton)
- **Two (2) decals supplied per Set.

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2.4. LOAD RATING

The load rating of the bridge should be stenciled or permanently and visibly marked on both sides of the span beam. (Saginaw capacity decals 44710 thru 44714 can be used in lieu of stenciling.)

CAUTION

The designated load rating of the hoist or trolley should not exceed the rated load of the span beam. (See Table 1)

When desired, rubber bumpers p/n 44601 can be mounted to each end of the truck assembly to prevent possible damage to unit or other trolley assemblies in the system. (See Figure 3)

SECTION III INSPECTION OF COMPLETE ASSEMBLY, CHECK FOR:

- A. Loose nuts or bolts
- B. Trolley wheel wear
- C. Loose or damaged safety stops
- D. Missing or loose retainer rings on trolley wheels
- E. Cracked welds
- F. Distorted end truck sections, beams or misc. parts.
(any item on complete end truck assembly which shows damage)

Refer to American National Standard (ANSI) B 30.11., "Monorails and Underhung Cranes" for complete crane inspection and testing procedures.

LUBRICATION

All wheel bearings are permanently lubricated and sealed. No maintenance should be required other than routine visual inspection every 3 to 6 months.

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