

Acco® WRIGHT®

end truck - push-pull
product series 421
underhung
single girder

instruction
and parts
manual

WARNING

This equipment should not be installed, operated or maintained by any person who has not read all the contents of these instructions. Failure to read and comply with these instructions or any one of the limitations noted herein can result in serious bodily injury and/or property damage.

Only competent engineering and fabrication personnel, familiar with standard crane design and fabrication practices, should be employed to design and fabricate cranes using this equipment because of the necessity of properly interpreting these instructions and for the purposes of determining appropriate compatible equipment and product applications. Acco disclaims any responsibility for the quality of design and workmanship employed in the design and fabrication of a crane or other system using this equipment or the sufficiency of the structure in which and to which this equipment is to be installed or the sufficiency of the crane or system to sustain any particular load that may be imposed upon it. Contact Acco for additional information if necessary.

There are no other warranties which extend beyond the description on the Order Acknowledgment and as it may apply to the specifications provided in this publication. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. Acco shall in no event be liable for any special, direct, indirect, incidental or consequential damages to anyone beyond the cost of replacement of the goods sold hereby.

CAUTION

These general instructions deal with the normal installation, operation, and maintenance situations encountered with the equipment described herein. The instructions should not be interpreted to anticipate every possible contingency or to anticipate the final crane or system configuration that uses this equipment.

This manual includes instructions and parts information for a variety of crane component equipment. Therefore, all instructions and parts information may not apply to any one type or size of equipment. Disregard those portions of the instructions which do not apply.

Use only Acco authorized replacement parts in the service and maintenance of this equipment.

WARNING

Equipment described herein is not designed for and should not be used for lifting, supporting, or transporting humans.

Equipment described herein should not be used in conjunction with other equipment unless necessary and/or required safety devices applicable to the system, crane, and application are installed by the crane builder or user.

Modifications to upgrade, rerate, or otherwise alter this equipment shall be authorized only by the original equipment manufacturer or qualified professional engineer.

Equipment described herein is only for use in the design and manufacture of cranes. Additional equipment or devices may be required for the crane to comply with applicable crane design and safety standards. The crane designer, crane manufacturer, or user is responsible to furnish these additional items for compliance. Refer to ASME B30.11 for underhung single girder cranes.

Quantity and location of bolts furnished with these end trucks for attaching the bridge girder to the end trucks are of a general nature only. Actual quantity and location of bolts or other attachment methods must be determined by the crane designer or crane manufacturer to result in a connection that will structurally sustain the actual loads caused by the design and application of the crane in accordance with acceptable crane design standards and specifications. The crane designer or crane manufacturer must also determine if corner bracing or other bracing means will be required.

Beam and stop angle sizes are for reference/recommendation only. Actual beam and stop angle sizes must be determined by the crane designer or crane manufacturer to result in sizes that will structurally sustain the actual loads caused by the design and application of the crane in accordance with acceptable crane design standards and specifications.

Failure to read and comply with any one of the limitations noted herein can result in serious bodily injury and/or property damage.

SAFETY PRECAUTIONS

1. DO NOT overload end trucks.
2. DO NOT move loads over people.
3. DO NOT allow excessive wheel-to-beam flange clearance.
4. AVOID side-pulling or side-loading.
5. KEEP runaway beam flange surface free of foreign objects.
6. AVOID collisions on runway.
7. MINIMIZE impact at trolley end stops by approaching end slowly.
8. DO NOT use end trucks to transport humans.
9. PLACE stops on runway to prevent crane travel prior to performing maintenance on crane, trolley, or hoist suspended from trolley.

NOTE: It is the responsibility of the owner/user to install, inspect, test, maintain and operate the crane in accordance with the Safety Standard for Underhung Cranes (ASME B30.11)

INSPECTION

1. Check bolts for signs of distortion, corrosion, or deterioration.
2. Check wheels for distortion, corrosion, cracks, and wear.
3. Check wheel bearings for excessive play.
4. Replace any parts considered unsafe for further use.

CRANE FABRICATION

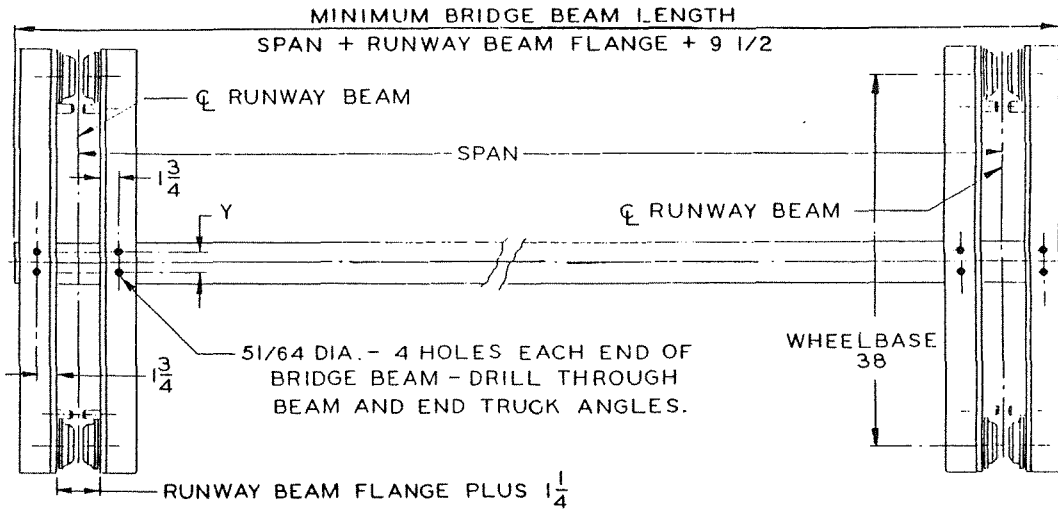


Figure 3

Refer to Figure 3.

1. Select bridge beam from Table 4.
2. Determine length by using formula –
Length = Span plus runway beam flange* plus 9-1/2 inches.

***NOTE**

Measure actual width of beam flange. It may vary from nominal width because of mill tolerances.

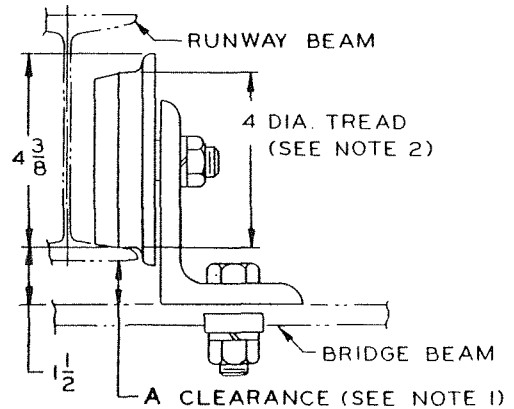


FIGURE 4

3. Mark centerlines of runway beams on ends of bridge beam. (Minimum distance from end of bridge beam must be one-half the actual flange width of runway beam plus 4-3/4 in.)
4. Position end truck angles on bridge beam as shown (angles perpendicular to bridge beam, parallel to runway beam centerlines).
5. Clamp securely.
6. Drill 8 holes as indicated thru end truck angles and bridge beam (4 on each end). For Y dimension refer to Table 4.
7. Using hardware recommended in Table 2, assemble as shown in Figure 1.
8. Remove clamps.

NOTE:

1. For clearance between runway beam and bridge beam (Dimension A in Fig. 4) Subtract toe of beam from 1-1/2 inches.
2. Wheels have dual tread, for S beam or W beam application.

TABLE 4

1 TON CRANE		
SPAN FT	RECOMMENDED BRIDGE BEAM	Y INCHES
10	6"x12.5#	2
15	8"x18.4#	2-1/4
20	10"x25.4#	2-3/4
25	12"x31.8#	3
2 TON CRANE		
SPAN FT	RECOMMENDED BRIDGE BEAM	Y INCHES
10	8"x18.4#	2-1/4
15	10"x25.4#	2-3/4
20	12"x31.8#	3
25	15"x42.9#	3-1/2

NOTE

It is the responsibility of the crane builder to mark the rated load of the crane plainly on each side of the bridge beam so that it is clearly legible from the loading position

END TRUCK PARTS

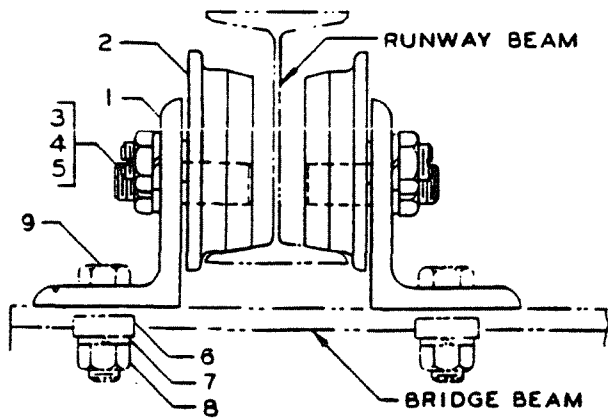


FIGURE 1

**TABLE 1
END TRUCK ASSEMBLY**

ITEM NO.	PART NUMBER	DESCRIPTION	(a) QTY.
1	62644	Angle	4
2	62256-01	Wheel Assy. Cast Iron	8
	62256-02	Bronze	
3	65027	Restraining Lug	8
4	17-14	Lockwasher, 7/8	8
5	24-14	Jam Nut, 7/8-9	8

**TABLE 2
CRANE ASSEMBLING HARDWARE**

ITEM NO.	PART NUMBER	DESCRIPTION	(a) QTY.
6	A1970-3	Bevel Washer, 3/4	8 (b)
7	17-12 C	Lockwasher, 3/4	8
8	22-12 C	Nuts, 3/4-10	8
9	35-12-36	Bolt, 3/4-10x2-1/4	8

(a) Quantities are for one complete pair of end trucks.

(b) Bevel washer used only with American Standard S beams.

BRIDGE BEAM STOP ANGLES

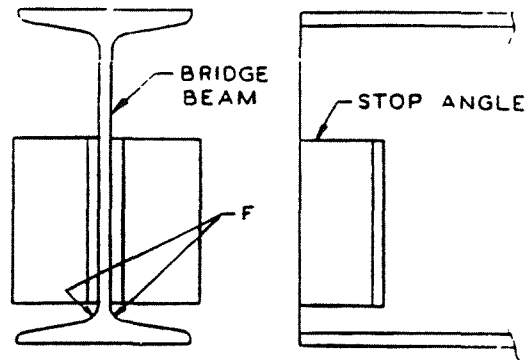


FIGURE 2

**TABLE 3
RECOMMENDED STOP ANGLES**

BRIDGE BEAM	STOP ANGLES
6"x12.5#	2x2x1/4x4
8"x18.4#	2x2x1/4x5
10"x25.4#	2x2x1/4x5
12"x31.8#	2x2x1/4x5
15"x42.9#	2-1/2x2-1/2x5/16x5

Stop angles (not furnished by Acco) are required on ends of bridge beam. See Figure 2. Weld or bolt angles to web as follows:

Vertical Position - bottom edge of angle at or near end of beam fillet (F).

Horizontal Position - to be determined for each application, to prevent hoist from striking wall or any obstruction at end of beam.

LUBRICATION

Wheel bearings are packed for normal life and conditions with NLGI No. 2 or No. 2 EP grease.

GENERAL CONDITIONS OF WARRANTY

WARRANTIES: The Seller warrants to the original using Buyer thereof that the goods sold under this Agreement are free from defects in workmanship and materials for a period of two years from the date of shipment to the original using Buyer. No other express warranties are given and no affirmation of Seller or Seller's agents, by word or action, shall constitute a warranty. No warranty is made for components and accessories made by others when such items are warranted by their respective manufacturers.

Installation or operation of the equipment in any manner other than as recommended by Seller, shall void the warranty.

Any variations in details between the goods furnished herein and those covered in Buyer's specifications are due to standards of manufacture not to be construed as exceptions to the specifications.

DISCLAIMER OF IMPLIED WARRANTIES:

- (a) SELLER MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO THE GOODS SOLD UNDER THIS AGREEMENT.
- (b) This sale is made WITHOUT ANY WARRANTY BY SELLER THAT THE GOODS ARE SUITABLE FOR ANY PARTICULAR PURPOSE.
- (c) Buyer hereby waives all other warranties, guarantees, obligations, liabilities, rights, and remedies arising by law or otherwise including any obligation or liability of the Seller arising from tort, and Buyer shall indemnify Seller from any liability, loss, damage, or claim arising from Buyer's tortious use of the goods sold hereby.

REMEDIES:

- (a) Under no conditions shall any goods be returned to Seller without its prior written consent.
- (b) The Buyer's sole and exclusive remedy for breach of any warranty is limited to Seller furnishing, at its expense, duplicate or repaired parts F.O.B. Seller's plant with installation at Buyer's expense if discovery of a claimed defect occurs during the allowable warranty period, and if Seller's inspection determines a defect exists.
- (c) The quantity of material shown by invoice shall in all cases govern settlement for shortages, unless notice of shortage, appropriately documented, is given to the carrier and the Seller upon delivery by the Carrier.
- (d) Claims for errors, deficiencies or imperfections shall be deemed waived by the Buyer unless Seller is notified in writing of the basis of such claims within 10 days after discovery of claimed defect and such discovery occurs within the warranted period.
- (e) Neither Buyer nor User shall be entitled under this Agreement to recover from Seller any incidental or consequential damages of any nature including but not limited to the cost of any labor expended by others in connection with the goods sold hereby by reason of any alleged nonconformity or breach of warranty on the part of the Seller, nor costs of material or account thereof, nor any lost profits whether determinable or speculative.



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