

## End Trucks

### 200 Series

These instructions are for 200 Series End Trucks, as used on TC/American Crane 200 Series Patented Track rail.

For detailed information about the trolleys used on these end trucks, see the *200 Series Trolleys Installation Instructions*.

 **DANGER**

**Lifting Operations**

Installation of equipment such as TC/American Crane's End Trucks requires performance of overhead lifting operations. Proper lifting procedures involve training, skills and experience beyond the scope of this document. Workplace supervisors are responsible to assure that all persons under their supervision are properly trained, properly equipped, and are following safety practices appropriate for the lifting operation being employed.

 **DANGER**

**Overhead Mechanical Assembly**

Persons performing installation and assembly of overhead equipment must use caution while lifting, assembling and adjusting components. These operations are frequently conducted from manlifts or platforms that require specific knowledge, training and operation skills beyond the scope of this document.

Access to the floor below the work area must be restricted to reduce the potential of personnel injury due to falling objects.

Workplace supervisors are responsible to assure that all persons under their supervision are properly trained, properly equipped, and are following appropriate safety practices.

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## End Trucks

TC/American Crane offers several models of end trucks for use on cranes or carriers. Selection of the appropriate model depends upon the size of the rail on which the end truck will operate, the load to be carried, powered travel or hand pushed, service duty class, and other factors.

### End Truck Model Numbers:

(general information for all end trucks)

- The first character(s) of the Model Number identifies the rail size on which the End Truck operates:
  - 2 = 200 Series Rail
  - 3 = 325 Series Rail
  - 4 = 400 Series Rail
  - 45 = 450 Series Rail
- The second characters, "ET," identify the product as an "End Truck."
- The intermediate numbers are the end truck capacity; i.e.:
  - 2600 = 2600 pound capacity
  - 5400 = 5400 pound capacity
  - 12400 = 12400 pound capacity
  - 16000 = 16000 pound capacity
  - etc.
- The next number, or number and letters, identify the end truck by number of wheels, trolley type and, in some cases, wheelbase:
  - 4 = 4-wheel end truck with flanged wheels (end truck has two 2-wheel trolleys)
  - 4L = 4-wheel end truck with flanged wheels and long wheelbase
  - 4SR = 4-wheel end truck with flangeless wheels and side rollers ("SR")
  - 4SRL = 4-wheel end truck with flangeless wheels, side rollers and longer wheelbase
  - 4X = 4-wheel end truck with flanged wheels and shorter than standard wheelbase
  - 8 = 8-wheel end truck with flanged wheels (end truck has two 4-wheel trolleys)
  - 8L = 8-wheel end truck with flanged wheels and longer wheelbase
  - 8SR = 8-wheel end truck with flangeless wheels and side rollers ("SR")
  - 8SRL = 8-wheel end truck with flangeless wheels, side rollers and longer wheelbase
- The last character of the model number (if present) identifies the type of motorized trolley drive used on the end truck:
  - None = No motorized trolley drive used, or none available
  - A = "A" Drive
  - AT = "AT" Drive
  - B = "B" Drive
  - C = "C" Drive

Note: Many end trucks may be used with a drive tire system (either a rubber or polyurethane tire pressing against the underside of the riding tread). These end trucks do not have a unique model number. See the TC/American Crane Systems Catalog for end trucks that may be used in this application (requires adequate wheelbase length).

**NOTE: See the appropriate section(s) of these instructions for assembly, installation and maintenance details specific to your End Truck model.**

**NOTE: For a specific parts breakdown of the End Truck provided with an order, see the drawings provided with that shipment and the End Truck Section of TC/American Crane Systems Catalog.**

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## General Installation Instructions

### Before beginning the installation:

- When shipment is received, remove all shipping materials and check all parts for damage. Repair and/or replace if necessary.
- Check packing lists against materials received and identify all parts.
- Gather all TC/American Crane and other vendor equipment drawings and associated manuals (motor, reducer, brake, electrical components, etc.) as applicable and keep in a secure location for reference during installation and start-up, and to give to end user for future reference.
- Turn trolley wheels and guide rollers by hand to check for possible damage in shipment. Check for rough bearings, loose bearings and axles.
- Check electrical collectors (if provided) for condition and proper operation. Check collector wiring for routing and security.
- Store all equipment in a clean, secure area prior to final assembly.

### Installing End Trucks on rail:

- Check crane or layout drawings for any notes about crane orientation or trolley positions.
- Trolley assemblies can be threaded onto an open end of rail (remove end stop). If there is no open end, or if obstructions or other barriers prevent access to an open end, install trolleys on the rail by removing trolley wheels from the trolley yoke (except for 2T-3000-2 and 2T-4000-4 Crane Trolleys). Reinstall wheels after the yoke is in place, straddling the riding tread of the rail.
- 2T-3000-2 and 2T-4000-4 Crane Trolleys must be installed on an open end of rail. See installation notes on Pages 7 and 8.
- For 2T-2000-2 or 2T-2000-2SR, verify that the “pocket” of the yoke is clean and smooth, and that the head of the end truck load bar swivel pin (see Figures 6 and 7, Page 6) are free to pivot within the yoke. The pocket of these trolleys does not require lubrication, but a coating of good quality EP grease may be applied if desired.
- Crane end trucks or carriers may use 2T-850-2C, 2T-2000-2, 2T-2000-2SR, 2T-3000-2 or 2T-4000-4 trolleys.
  - a. Install trolleys as noted above.
  - b. As required, install load bars and a “saddle” that is usually bolted to the end truck or carrier frame. Remove entire saddle and trolley by removing bolts, place trolley on rail and bring crane or carrier up to the saddle.
  - c. For trolleys with Load Bars, verify that Spherical Seats and Thrust Bearings are installed, if they are part of the trolley construction. Refer to drawings provided with the order and see typical instructions above.
- Lift into position on runway or monorail and re-assemble. Use extreme caution when lifting trolleys and other equipment into place.

### Initial Start-Up:

- Operate crane through entire length of system.
- Check clearances of trolleys to rail at rail joint bolts and suspension hardware.
- Check clearances of all portions of crane to the surrounding structures.
- Check operation through all speeds and confirm conformance to specifications.

## 200 Series End Trucks

### 4-Wheel End Trucks

**2ET-1300-4** Figure 1

Optional methods to Install End Trucks on Rail:

A. Remove trolleys from end trucks (if shipped mounted) and place on runway rail. Check crane or layout drawings for any notes about crane orientation or trolley positions. Remove Restraining Lugs. Lift crane into position and reassemble trolleys onto end truck from each end. Verify that Thrust Washer is in place on each trolley (see Fig. 2). Secure with cotter pin (see Fig. 3). Reassemble restraining lugs.

B. Remove trolley wheels from each trolley yoke, leaving the yoke attached to the end truck frame. Remove Restraining Lugs. Lift crane into position. Reassemble trolley wheels to yoke (see *200 Series Trolley Installation Instructions*). Reassemble restraining lugs.

C. Thread the end trucks and trolleys of an assembled crane onto the runway rail at an open end (remove end stop).

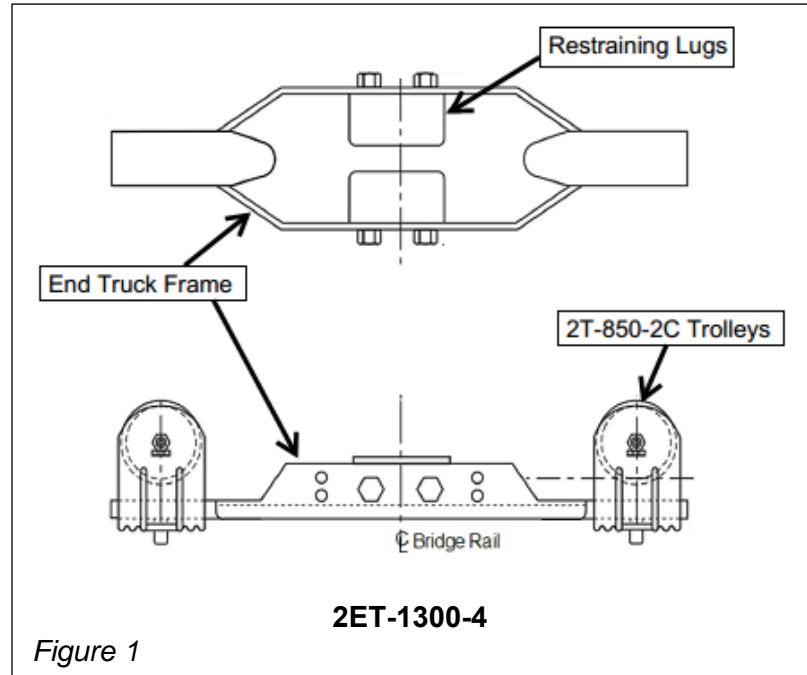


Figure 1

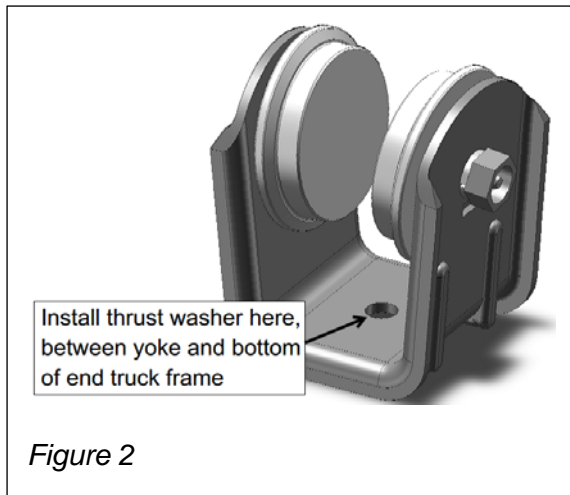


Figure 2

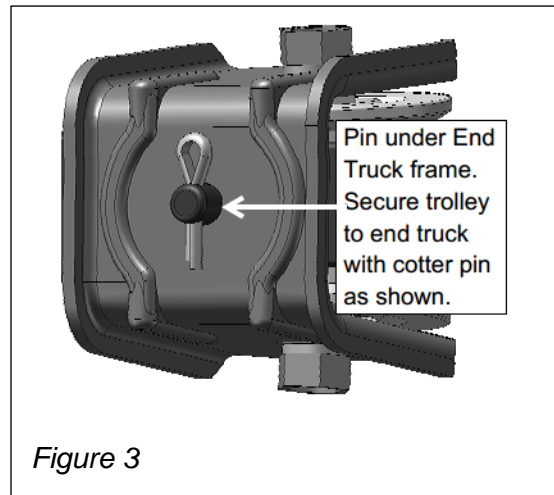


Figure 3

**200 Series End Trucks**

**4-Wheel End Trucks**

- 2ET-2600-4** Figure 4
- 2ET-2600-4SR** Not Shown  
(similar to 2ET-2600-4, but with 2T-2000-2SR trolleys)

Optional methods to Install End Trucks on Rail:

- A. Disassemble trolleys from end trucks (trolley has “bolt together” yokes). See Fig. 5 and 7. Also see *200 Series Trolley Installation Instructions*. Remove Restraining Lugs. Lift crane into position and reassemble trolleys onto end truck swivel pins (see Fig. 6) at each end. Reassemble restraining lugs.
- B. Thread the end trucks and trolleys of an assembled crane onto the runway rail at an open end (remove end stop).

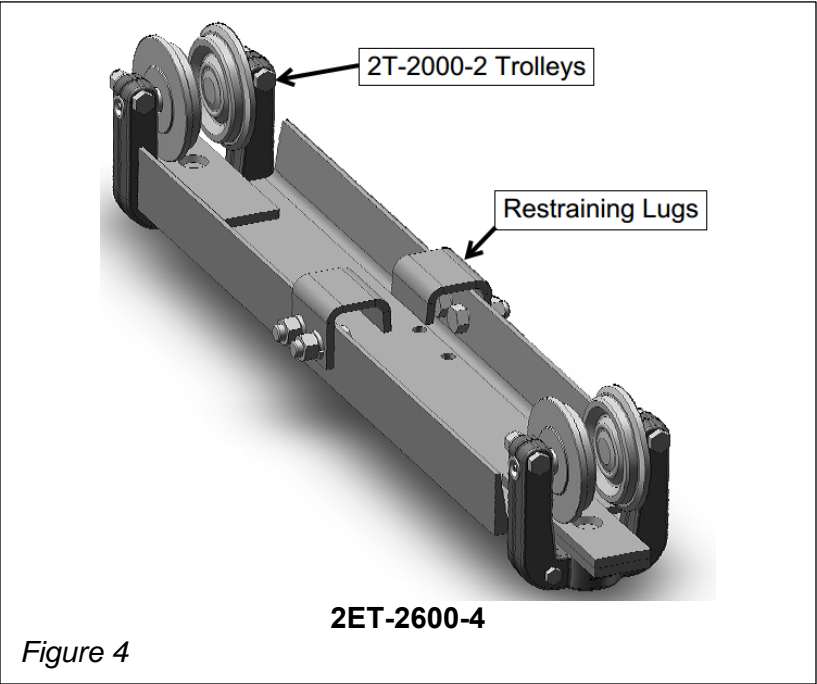


Figure 4

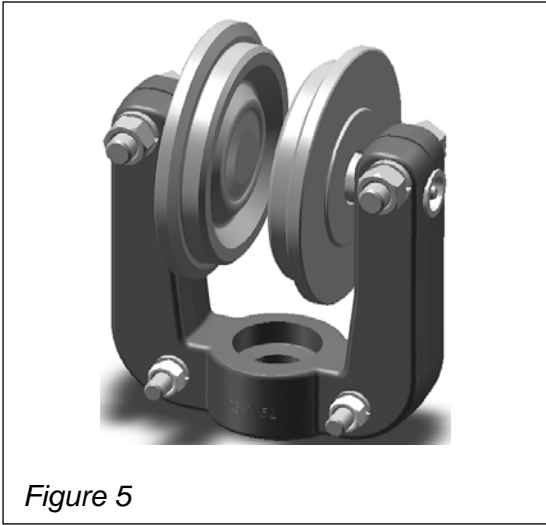


Figure 5

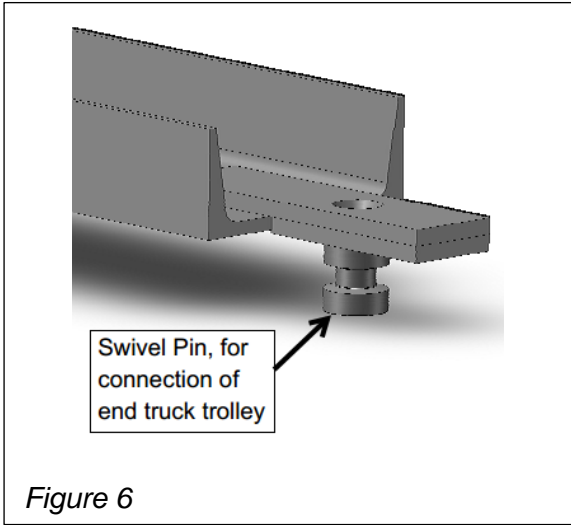


Figure 6

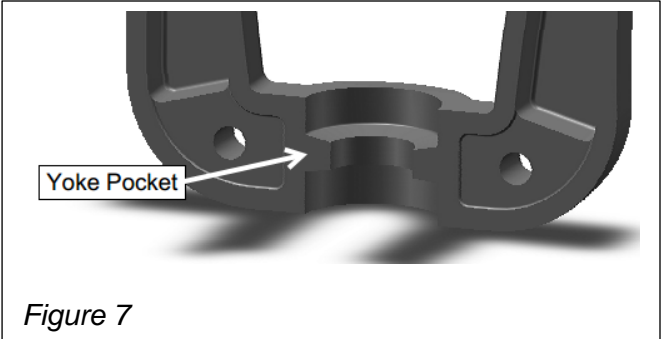


Figure 7

## 200 Series End Trucks

### 4-Wheel End Trucks

**2ET-3700-4** Figure 8

**2ET-3800-4** Figure 9

Method to Install End Trucks on Rail:

Place trolleys for end trucks on runway rail. Check crane or layout drawings for any notes about crane orientation or trolley positions. Remove Restraining Lugs. Lift crane into position.

Roll trolleys into position under the end truck load bar. Assure that Spherical Washer is in place in yoke (see Fig. 10). Reassemble onto end truck by inserting End Truck Pin up from the bottom of the trolley, through the spherical washer and into a hole in the load bar (see Figs. 10 and 11). Secure end truck pin to the trolley yoke with cotter pin (see Fig. 10). Reassemble restraining lugs. Also see *200 Series Trolley Installation Instructions*.

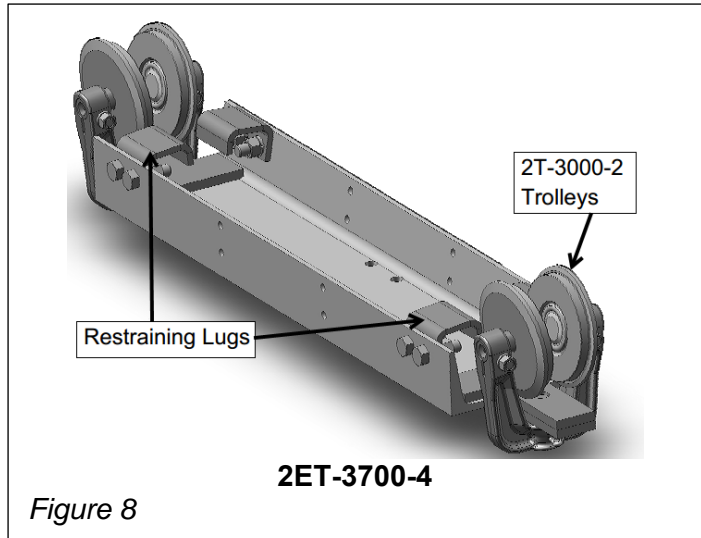


Figure 8

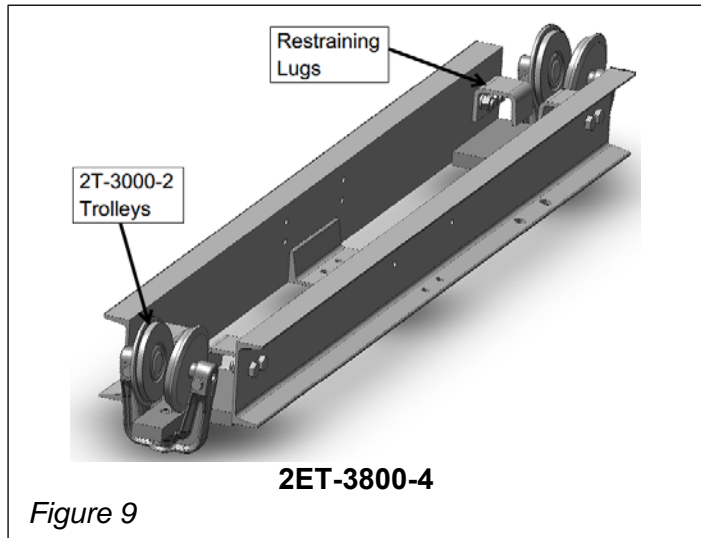
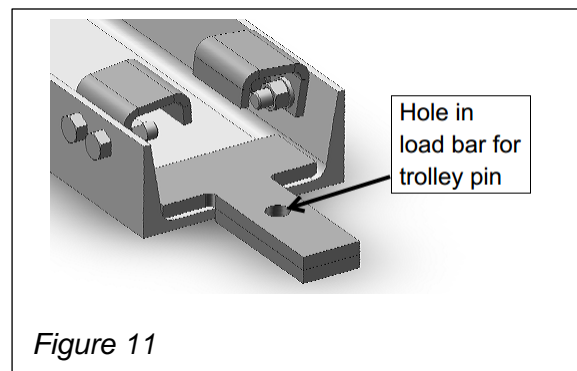
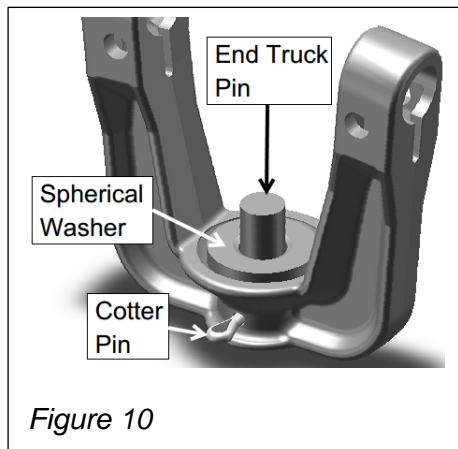


Figure 9



*Note: Trolley wheels on these end trucks are angled to provide clearance to 2H-407 hangers on 2R3-5T rail.*

**200 Series End Trucks**

**8-Wheel End Trucks**

- 2ET-7700-8** Figure 12
- 2ET-7800-8** Not Shown (similar to 2ET-7700-8, but longer wheelbase)

Method to Install End Trucks on Rail:

End truck trolleys and load bars are shipped loose. Unbolt Saddle Weldment from End Truck Frame and remove Restraining Lugs.

Place 4-wheel end truck trolley assemblies (see Fig. 13) on runway rail. Place Saddle Weldment on Loadbar Pin as shown in Fig. 14. Lift crane into position under trolleys and reattach end truck frame to saddles. Reassemble restraining lugs.

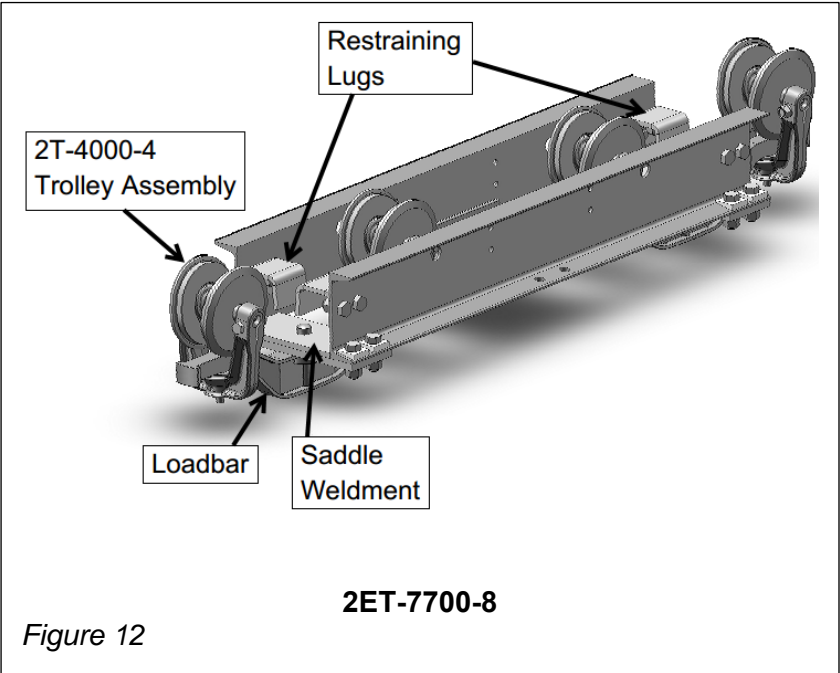


Figure 12

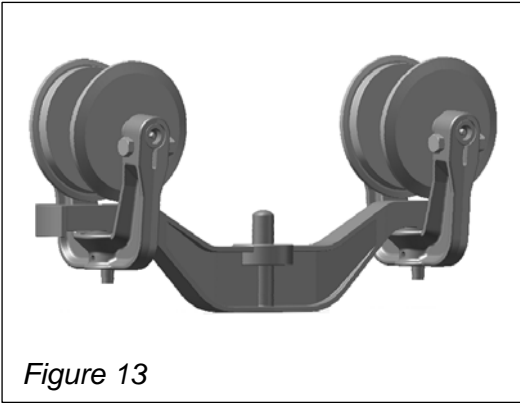


Figure 13

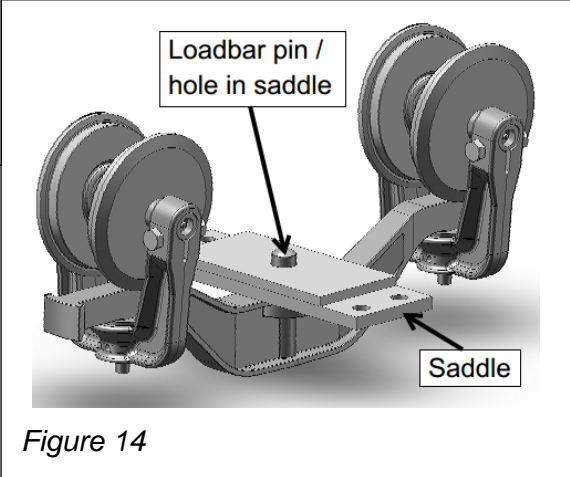


Figure 14

Note: Trolley wheels on these end trucks are angled to provide clearance to 2H-407 hangers on 2R3-5T rail.



## Drive Tire Adjustment

For motor driven cranes with tire drives, correct pressure of the drive tire to the bottom of the patented track tee section is very important. Excessive tire pressure by over-tightening will cause tire failure and put undue stress on other components of the drive system. Inadequate tire pressure will cause the drive tire to slip, making starts and stops difficult to control.

Tire pressure adjustments should be done when the crane is fully loaded, or at the maximum typical load. This adjustment process is the same for new installations or when tires are replaced on older cranes.

Start the adjustment procedure with the drive tire just touching the underside of the tee section, and all pressure adjusting nuts snug (see Fig. 15, typical drive tire and bearing assembly for 200 Series end trucks). Turn the pressure nuts one full turn. Note: all drive wheels must be adjusted at the same time. Start and stop the crane. If the tires slip in either motion, adjust the pressure nuts one half turn and again start and stop the crane. If the tires slip in either direction, adjust the pressure nuts another one half turn. Continue this process until the tire does not slip at initial start or stop. Tighten the pressure nuts an additional one half turn and tighten all remaining hardware to lock in place.

Note: moisture, dirt, oils from a manufacturing process, or paint on the underside of the tee section may affect the ability of a tire to resist slipping. Clean as required.

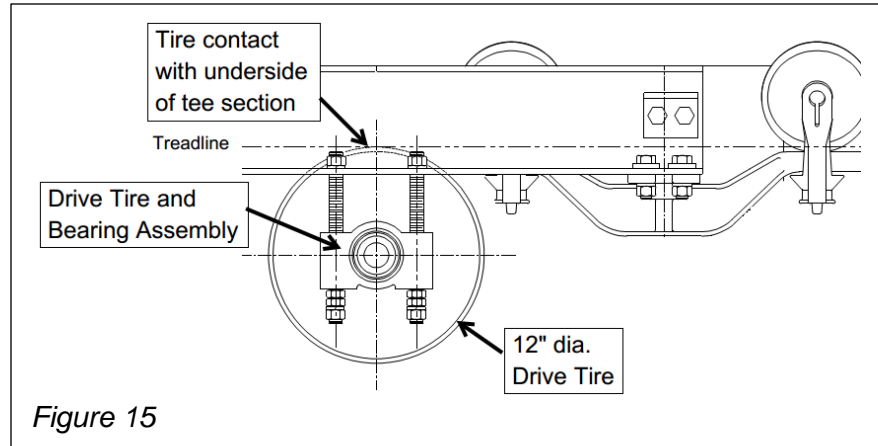


Figure 15

### WARNING

#### Drive Tire Pressure Adjustment Process

Use extreme caution while performing Drive Tire Pressure adjustments. Access to the drive tire area of a crane is likely done with a manlift or similar equipment. Be sure all personnel doing the adjustments are clear of the crane before engaging the crane controls for crane movement. Persons operating the crane must have a clear view to the drive tire areas and must coordinate the method of communication between themselves and the mechanics before the process is begun.

## Lubrication

### General Lubrication Information

See TC/American Crane 200 Series Trolley Installation Instructions for trolley lubrication.

**NOTE:** before lubricating equipment that will be taken onto a customer's site, check with the customer for any preferences on brands or types (to maintain customer stock uniformity of products used and records maintenance).

**NOTE:** have Material Safety Data Sheet (MSDS) info available for any lubricants brought onto a work site.

**NOTE:** verify with customer that lubricants being used will not have an effect upon any production processes.