

# Rugby Manufacturing TB-8/10/12/14 Hoist Manual

## Preface

### INSTALLATION & OPERATION MANUAL



## INTRODUCTION

*IMPORTANT!! Read this manual thoroughly prior to installation and operation. This manual outlines the installation and operation of a TB-Series hoist manufactured by Rugby Manufacturing Co. This manual should be kept readily accessible for any potential operator at all times. Should you have any questions or concerns, please contact your dealer or a Rugby Manufacturing customer service representative before use.*

Toll Free: 1-800-869-9162 • Office: 1-701-776-5722 • Fax: 1-701-776-6235  
Visit [www.rugbymfg.com](http://www.rugbymfg.com) for further information.

**Body Serial Number:** \_\_\_\_\_

**In Service Date:** \_\_\_\_\_

# Rugby Manufacturing TB-8/10/12/14 Hoist Manual

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# Rugby Manufacturing TB-8/10/12/14 Hoist Manual

## How to Use This Manual

This manual provides guidelines, and instructions for correctly assembling, operating and maintaining your Rugby Manufacturing product. Any and all people that own and operate this product must read and fully understand each section in this manual.

## Labels

Throughout this manual, the three following types of labels will be used: danger, warning, and caution. It is imperative that all labels are obeyed, for the safety of the operator.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

## Reference Information

### Serial Number

This information is required for any warranty or service inquiries, and should be recorded on the front page of this manual for easy reference.

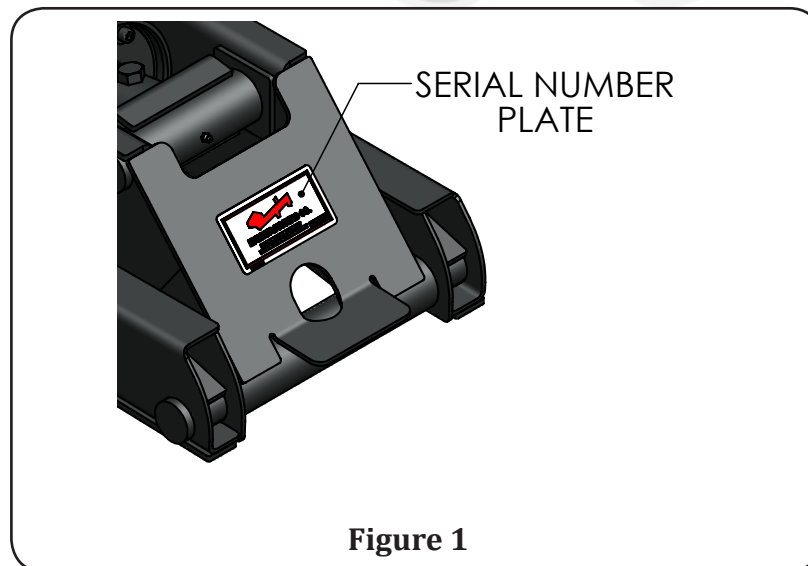


Figure 1

The serial number plate is located on the rear spacer plate of the hoist (**Figure 1**).

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## Capacity Charts

TB-8 Trailer Scissor Hoist			
Body Length	Rear Overhang	Cap. 45° Dump	Cap. 50° Dump
7'	0"	3.2T	2.9T
8'	12"	3.8T	3.4T
8'	18"	4.5T	4.1T
9'	12"	3.1T	2.9T
9'	18"	3.8T	3.4T
9'	24"	4.5T	4.1T
10'	18"	3.2T	2.9T
10'	24"	3.8T	3.4T
10'	30"	4.5T	4.1T
Mounting Distance (M)		51.50"	46.75"
Mounting Height (H)		5.25"	

TB-10 Trailer Scissor Hoist			
Body Length	Rear Overhang	Cap. 45° Dump	Cap. 50° Dump
8'	12"	8.0T	7.2T
9'	12"	6.8T	6.2T
9'	18"	8.0T	7.2T
10'	12"	6.0T	5.4T
10'	18"	6.8T	6.2T
10'	24"	8.0T	7.2T
12'	12"	4.8T	4.3T
12'	18"	5.3T	4.8T
12'	24"	6.0T	5.4T
Mounting Distance (M)		79.00"	71.50"
Mounting Height (H)		6.50"	

TB-12 Trailer Scissor Hoist			
Body Length	Rear Overhang	Cap. 45° Dump	Cap. 50° Dump
10'	18"	10.9T	9.9T
12'	18"	8.5T	7.7T
14'	18"	6.9T	6.3T
Mounting Distance (M)		77.25"	70.00"
Mounting Height (H)		7.25"	

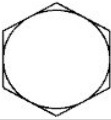

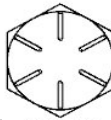
TB-14 Trailer Scissor Hoist			
Body Length	Rear Overhang	Cap. 45° Dump	Cap. 50° Dump
10'	18"	13.3T	12.0T
12'	18"	10.3T	9.3T
14'	18"	8.4T	7.6T
16'	18"	7.1T	6.4T
Mounting Distance (M)		79.00"	71.50"
Mounting Height (H)		7.88"	

**Figure 2**

The Capacity Charts (**Figure 2**) are to be used as a reference when determining capacity based on overhang.

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## Torque Values Chart

Size	Grade 2 Torque	Grade 5 Torque	Grade 8 Torque
			
1/4-20	3-4 lb-ft	6-7 lb-ft	10-11 lb-ft
1/4-28	4-5 lb-ft	8-9 lb-ft	11-12 lb-ft
5/16-18	8-9 lb-ft	14-15 lb-ft	21-22 lb-ft
5/16-24	9-10 lb-ft	15-16 lb-ft	21-22 lb-ft
3/8-16	17-18 lb-ft	24-26 lb-ft	37-40 lb-ft
3/8-24	19-20 lb-ft	28-30 lb-ft	40-43 lb-ft
1/2-13	38-42 lb-ft	60-65 lb-ft	90-100 lb-ft
1/2-20	43-47 lb-ft	70-75 lb-ft	95-105 lb-ft
5/8-11	75-80 lb-ft	122-130 lb-ft	180-190 lb-ft
5/8-18	85-90 lb-ft	145-150 lb-ft	200-210 lb-ft
3/4-10	132-140 lb-ft	220-230 lb-ft	315-330 lb-ft
3/4-16	152-160 lb-ft	250-260 lb-ft	355-370 lb-ft

**Figure 3**

The Torque Values Chart (**Figure 3**) is to be used as a guide during installation.

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## Body Prop Application Chart

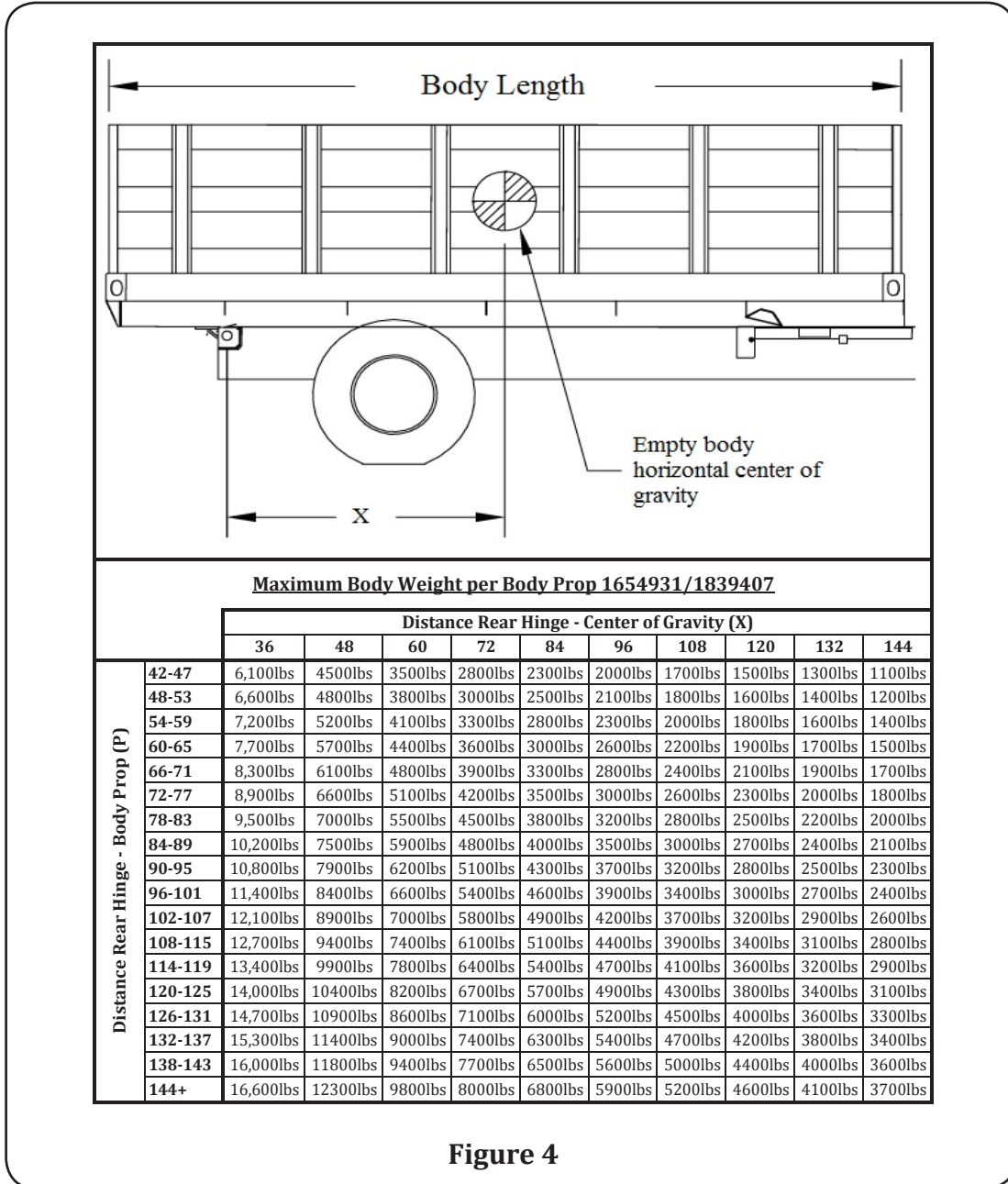


Figure 4

The Body Prop Application Chart (**Figure 4**) is to be used along with the below instructions to determine whether a second body prop will be necessary for your application.

### TB-8/10 Hoist:

Body prop item number 1654931 is to be used with the TB-8/10 hoists. To determine how many body props will be necessary for your application, refer to the below steps.

### TB-12/14 Hoist:

Body prop item number 1655659/1839407 is designed to be installed on the TB-12/14 hoist arm. To determine if additional body props will be necessary for your application, refer to the below steps.

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1. Pick the X Value that is equal to or immediately larger than the X value for your application.
2. The weights shown below each "X" value reflect the maximum empty body weights that can be supported by the integrated body prop included with the SR series hoists. If your body weighs more than the amount listed, an additional body prop will need to be installed. Contact Rugby Manufacturing to order an additional body prop.

## General Safety

### Hydraulic System

The hydraulic system supplied with an SR-series hoist manufactured by Rugby Manufacturing Co. is made up of components (pump, valves, reservoir, hoses, cylinder, etc.) that are designed to be compatible with each other. Several different types of pump and hydraulic components are available to power the SR-series hoists. Refer to the pump and hydraulic component Installation and Operation Manual for more information.

If hydraulic components are substituted, it is the installer's responsibility to be sure they are compatible with the components supplied by Rugby Manufacturing Co. Incompatible hydraulic components may cause failure of the hoist which in turn could damage the truck, damage other property, and cause human injury or death.

All Rugby Manufacturing Company's liability and warranty for a given hoist will be voided if it is determined by Rugby Manufacturing Co. that substituted hydraulic components were used that were incompatible with those supplied by Rugby Manufacturing Co.

### **DANGER**

Bouncing or jerking of the hoist is to be avoided as it may result in component failure, injury or death.

### **DANGER**

Do not raise or drive a raised body against another object. Doing so could result in equipment or property damage, injury or death.

### **DANGER**

Connecting the hoist to a hydraulic system with more pressure (psi) or flow (gpm) than is recommended can lead to damage, serious injury, or death.

### **DANGER**

Do not operate the hoist until bystanders are free & clear of the hoist and body.

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## Installation

### Body Prop Installation

A body prop & required hardware is supplied with every SR-series hoist package. To determine whether a second body prop is necessary for your application, refer to the **Body Prop Application Chart**. For instructions on how to raise and lower the body prop, refer to the **Operation** section of this manual.

**⚠ DANGER**

The body prop is only to be used to prop an unloaded body. Serious injury or death can occur if the body prop is misused.

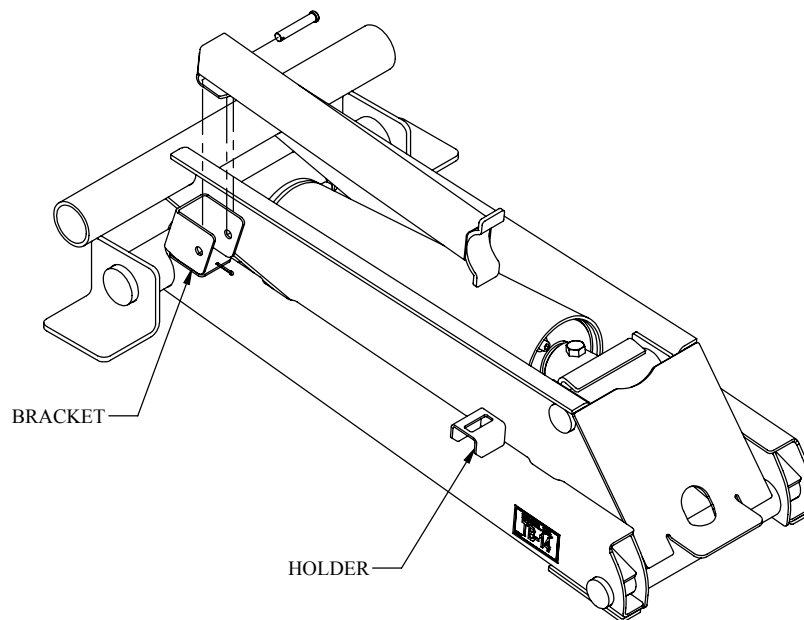


Figure 5

1. Insert the body prop into the body prop bracket. (**Figure 5**).
2. Fasten the body prop to the body prop bracket using the supplied hardware.
3. Lower the body prop to the down position & align with slot until the body prop rests against the top of the holder.



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## Hoist Installation

The following steps are to be used as a guideline when installing the TB-Series hoist. It is not possible to be specific about every aspect of the hoist installation due to the wide range in trailer designs.

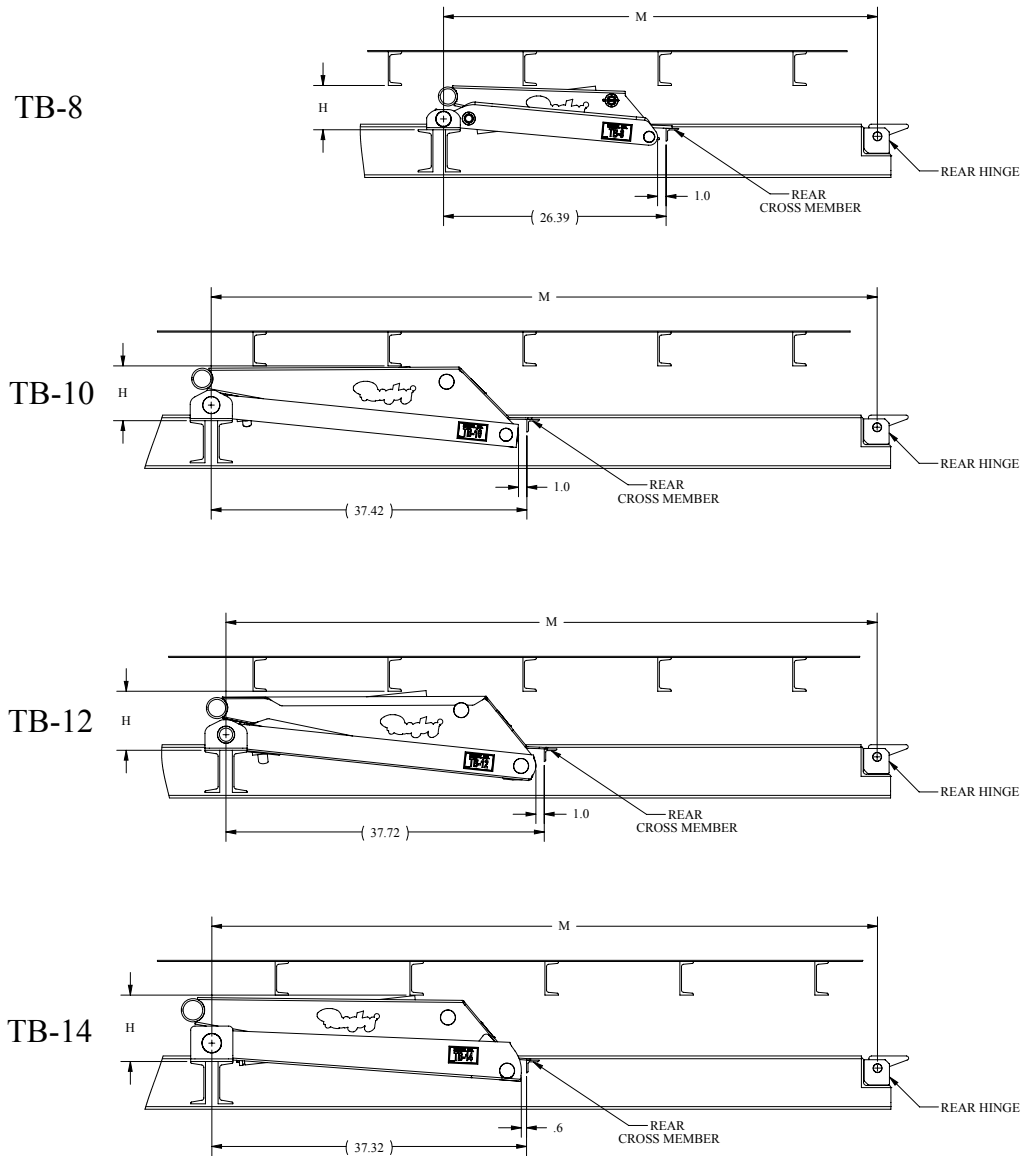


Figure 6

1. Determine the correct mounting distance for the dump angle and capacity required prior to installation. Refer to Figure 2 for TB-series hoist capacities.
2. Position the cross members, hoist, & rear hinge onto the trailer frame as shown in Figure 6. The top of the front & rear cross members should be at the same height.

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## Hoist Installation cont.

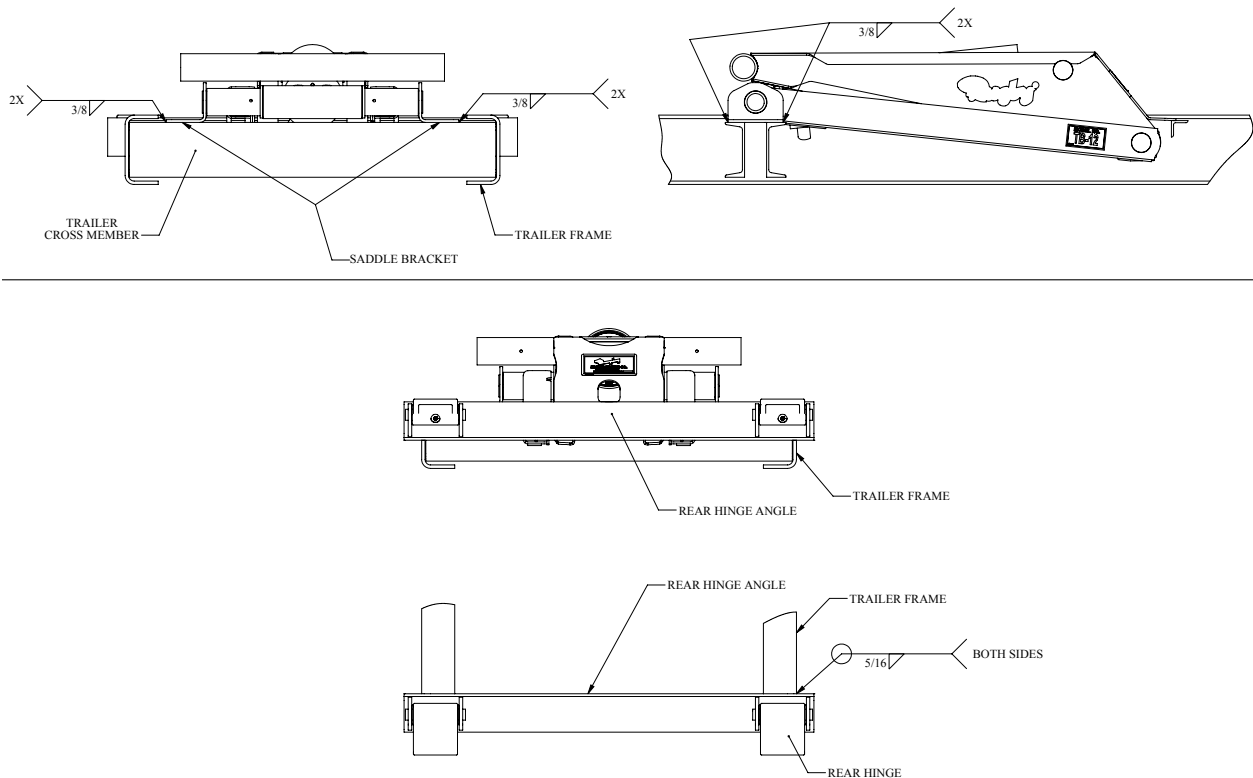


Figure 7

1. Once the hoist is positioned, weld the saddle brackets & the rear hinge to the trailer frame as shown. (**Figure 7.**) Be sure to maintain clearance between the rear cross member and the rear of the hoist as shown in Figure 6.

**! DANGER**

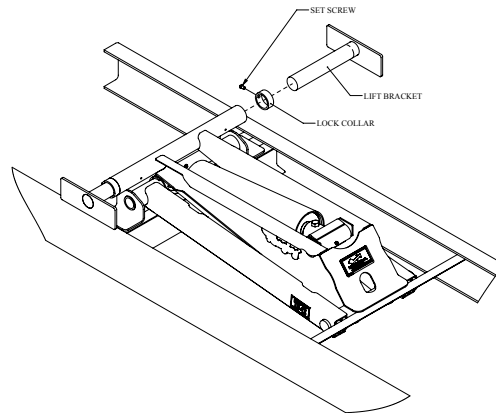
Welding, oxy-fuel cutting, or grinding sparks can cause fuel to ignite which in turn can lead to injury or death. Always take adequate steps to avoid ignition of fuel from fuel tanks when welding, grinding, or oxy-fuel cutting during equipment installation.

**! DANGER**

Heat from the truck's exhaust system can cause hydraulic component failure and may lead to a fire which could cause injury or death. Always install equipment in locations where heat from the exhaust system will not damage any hydraulic components.

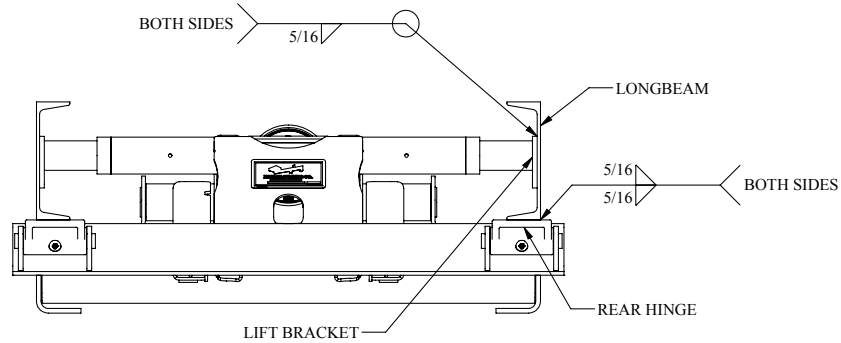
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## Hoist Installation cont.



**Figure 8**

2. Slide a lock collar onto each lift shaft. Slide a lift shaft with lock collar into each end of the hoist lift tube. (Figure 8)

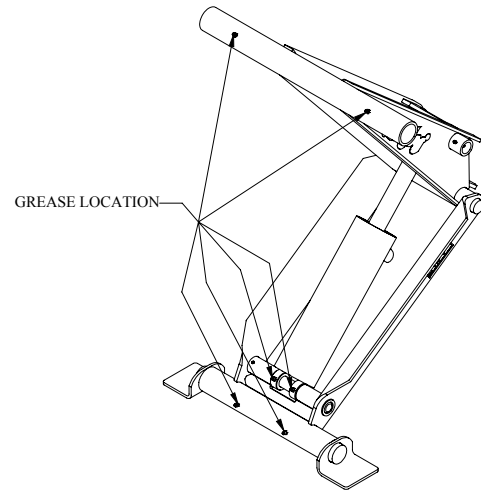
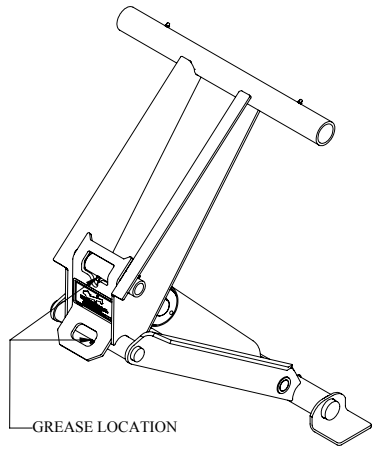


**Figure 9**

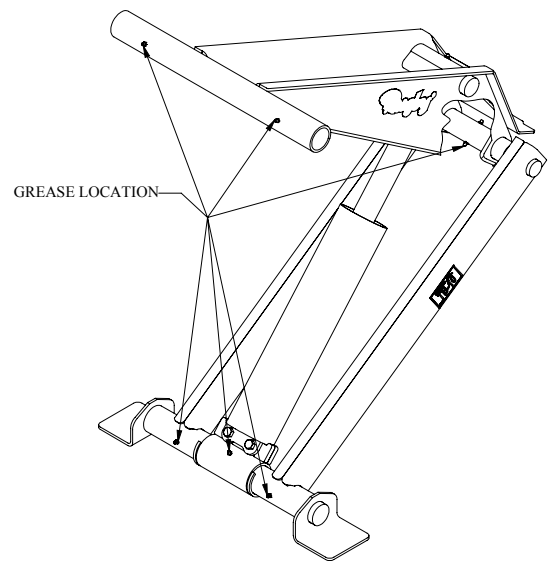
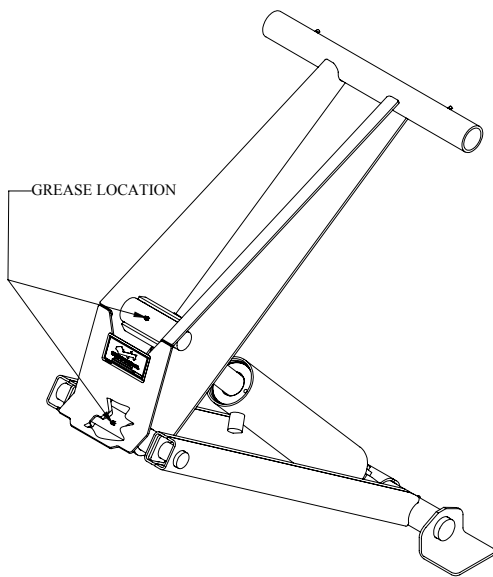
3. Position the body onto the trailer frame and weld the longbeams to the rear hinge as shown in Figure 9.
4. Slide each lift bracket all the way out against the trailer long beams and weld as shown. (**Figure 9**)
5. With the lift brackets secured, slide each lock collar against the hoist lifting tube and secure by tightening each set screw.

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*Hoist Installation cont.*



TB-8



TB-10/12/14

**Figure 10**

6. Install and grease the fittings as shown in **Figure 10**.

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## Decal Locations

One Warning decal is supplied with each TB-series hoist. This decal must be positioned on the driver's side of the trailer near the front. The decal must be in a location where any person can read the decal without going under the body and must be free of any viewing obstructions.

Two Danger decals are supplied with each TB-series hoist. These decals must be positioned on both the left and right hand sides of the trailer. The decals must be in a location where any person can read the decal without going under the body and must be free of any viewing obstructions.



Missing or damaged decals can lead to accidents which may cause serious injury or death. If any decals are missing or damaged, they must be replaced immediately.

*To obtain replacement decals, contact your Rugby dealer or Rugby Manufacturing Co.*

## Operation

### Body Prop Operation

1. Raise unloaded body to sufficient height and shut off all power.
2. While positioning yourself as far as possible from underneath the truck, grasp prop from latched position.
3. Rotate prop upwards to vertical position.
4. Push down until the prop locks in vertical position.
5. To lower the body prop for operation of trailer, "reverse" the above procedure.



The body prop is only to be used to prop an unloaded body. Serious injury or death can occur if the body prop is misused.

## Maintenance

Grease all hoist and rear hinge grease fittings every 100 cycles or every two months. Some grease fittings are in hard to find locations - Refer to Figure 10 for all grease fitting locations.

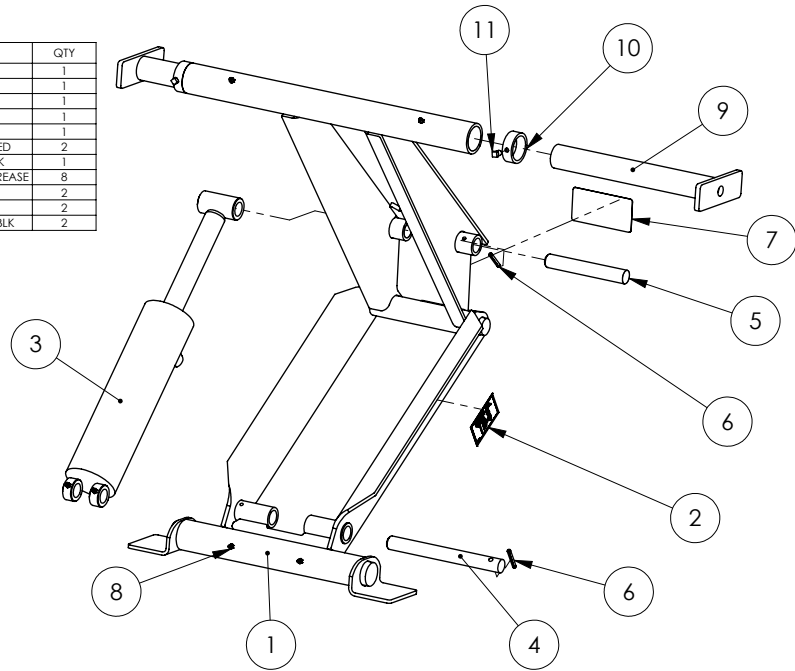
Check hardware regularly and re-tighten as needed. Refer to Figure 2 for torque guidelines.

Check hydraulic components regularly for any leaks or signs of wear. Replace damaged or leaking components as needed. Refer to the pump or hydraulic components installation and operation manual for more service information.

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## Diagrams

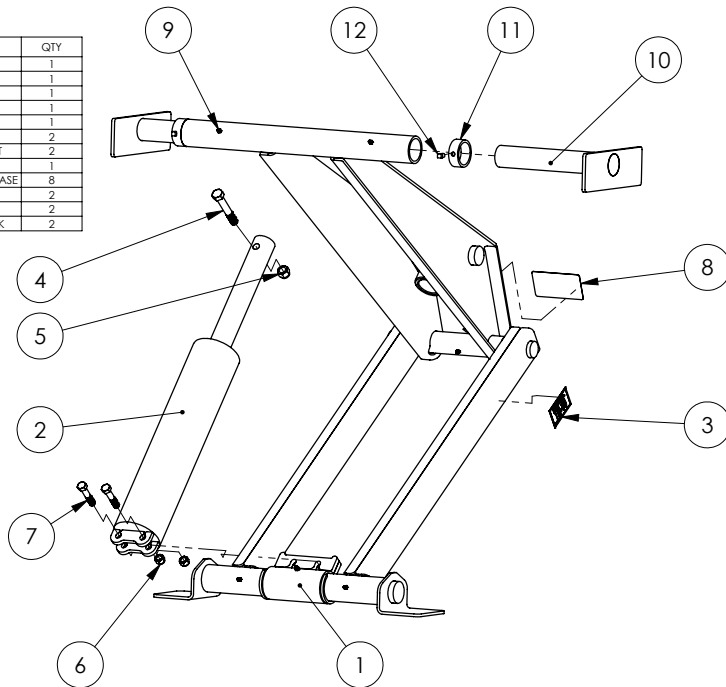
ITEM	PART #	DESCRIPTION	QTY
1	1656982	FRAME, TB-8 PCBLK HOIST	1
2	1200083	DECAL, TB-8	1
3	1621263	CYLINDER, 3.5 X 10, O-RINGS	1
4	1655479	SHAFT, CYLINDER PIN	1
5	1655082	SHAFT, CYLINDER ROD END	1
6	1654011	PIN - ROLL 1/4" X 1 3/4" NOT PLATED	2
7	1581116	SERIAL NO. PLATE, POLY W/MASK	1
8	1520370	FITTING, 1/4-28 THREAD FORMING GREASE	8
9	1655198	LIFTING SHAFT SA	2
10	1655176	LOCK RING	2
11	1653845	SET SCREW, 3/8-16 X 5/8 SQR HD, BLK	2



**Figure 11**

Refer to Figure 11 for the TB-8.

ITEM	PART #	DESCRIPTION	QTY
1	1656961	FRAME, TB-10 PCBLK HOIST	1
2	1621265	CYLINDER, 4X16, TH-410	1
3	1200084	DECAL, TB-10	1
4	1653838	HHC SCREW, 5/8-11 X 4, GR8, PLT	1
5	1643070	NUT, 5/8-11 NYLOCK - NE, GR. 5 STL	1
6	1642984	NUT, 1/2-13 NYLOCK - NE, GR8 STL	2
7	1620051	HHC SCREW, 1/2-13 X 2.5, GR. 8, PLT	2
8	1581116	SERIAL NO. PLATE, POLY W/MASK	1
9	1520370	FITTING, 1/4-28 THREAD FORMING GREASE	8
10	1654901	LIFTING SHAFT, TB-10-12-14	2
11	1654905	LOCK COLLAR, 2.00	2
12	1653845	SET SCREW, 3/8-16 X 5/8 SQR HD, BLK	2



**Figure 12**

Refer to Figure 12 for the TB-10.

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Diagrams cont.

ITEM	PART #	DESCRIPTION	QTY
1	1822288	FRAME, TB-12 PCBLK HOIST	1
2	1621474	CYLINDER, 5 X 16 HR-520	1
3	1620051	HHC SCREW, 1/2-13 X 2.5, GR. 8, PLT	2
4	1642984	NUT, 1/2-13 NYLOCK - NE, GR8 STL	2
5	1653838	HHC SCREW, 5/8-11 X 4, GR8, PLT	1
6	1643070	NUT, 5/8-11 NYLOCK - NE, GR. 5 STL	1
7	1520370	FITTING, 1/4-28 THREAD FORMING GREASE	7
8	1654901	LIFTING SHAFT, TB-10-12-14	2
9	1654905	LOCK COLLAR, 2.00	2
10	1653845	SET SCREW, 3/8-16 X 5/8 SQR HD, BLK	2
11	1200085	DECAL, TB-12	1
12	1581116	SERIAL NO. PLATE, POLY W/MASK	1
13	1839407	PROP. BODY PCBLK	1
14	1653917	PIN, 1/8" X 1" PLATED COTTER	1
15	1857937	PIN, 1/2" X 2.75" ZP CLEVIS	1

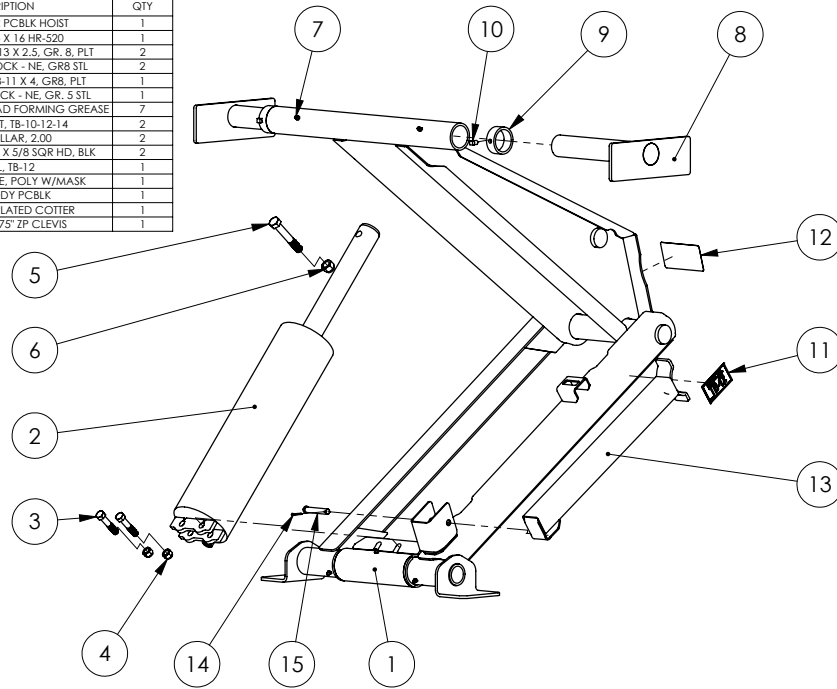


Figure 13

Refer to Figure 13 for the TB-12

ITEM	PART #	DESCRIPTION	QTY
1	1841507	FRAME, TB-14 PCBLK HOIST	1
2	1846304	CYLINDER, 5.5 X 16 PNT	1
3	1620051	HHC SCREW, 1/2-13 X 2.5, GR. 8, PLT	2
4	1642984	NUT, 1/2-13 NYLOCK - NE, GR8 STL	2
5	1653838	HHC SCREW, 5/8-11 X 4, GR8, PLT	1
6	1643070	NUT, 5/8-11 NYLOCK - NE, GR. 5 STL	1
7	1520370	FITTING, 1/4-28 THREAD FORMING GREASE	7
8	1667441	DECAL, TB-14	1
9	1847773	BRACKET, PCBLK TB-14 LIFT	2
10	1656191	LOCK COLLAR, 2.25	2
11	1839407	PROP. BODY PCBLK	1
12	1857937	PIN, 1/2" X 2.75" ZP CLEVIS	1
13	1653917	PIN, 1/8" X 1" PLATED COTTER	1
14	1653845	SET SCREW, 3/8-16 X 5/8 SQR HD, BLK	1
15	1581116	SERIAL NO. PLATE, POLY W/MASK	1

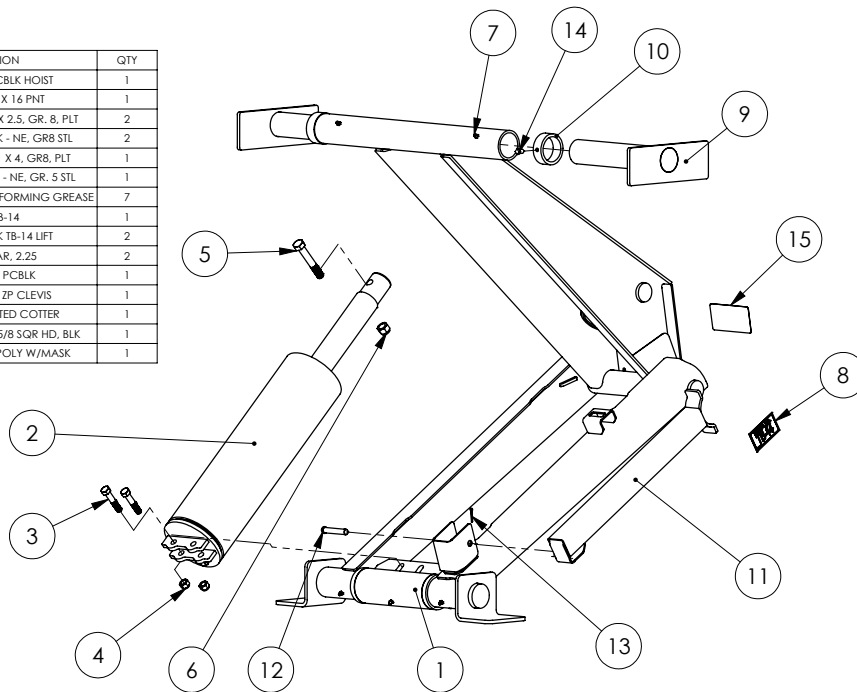


Figure 14

Refer to Figure 14 for the TB-14.