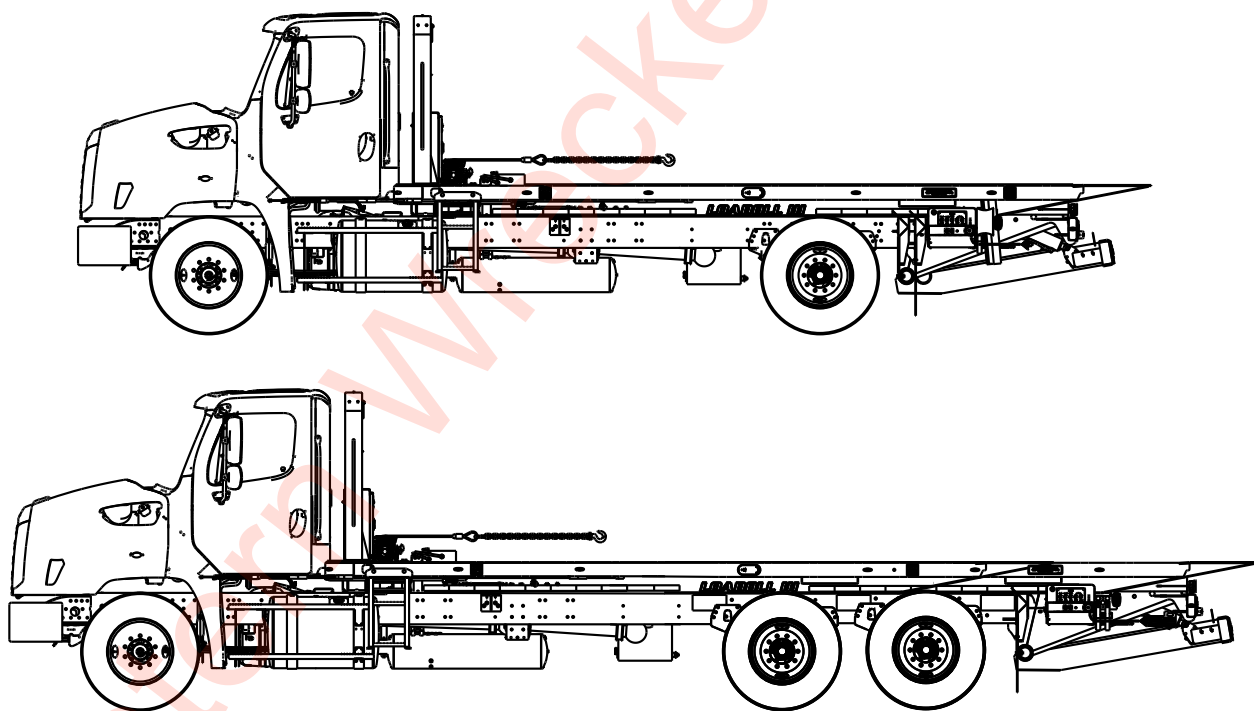




**HD LOADOLL III**  
**22' through 30'**  
**Parts and Operator's Manual**



**LANDOLL CORPORATION**

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## Introduction and Safety Information

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### Introduction

This manual provides operating, servicing, and maintenance instructions for Loadoll III manufactured by Landoll Corporation, Marysville, Kansas 66508.

**CHAPTER 1** gives basic instructions on the use of this manual and understanding the safety statements. Includes product specifications for the Loadoll III, including measurements and component.

**CHAPTER 2** gives instructions of the installation of the Landoll III Kit.

**CHAPTER 3** gives instructions for the proper operation of the equipment.

**CHAPTER 4** gives general maintenance and troubleshooting procedures, a maintenance schedule, and a lubrication schedule. Improper maintenance will void your warranty.

#### IF YOU HAVE ANY QUESTIONS CONTACT:

**LANDOLL CORPORATION**

**1900 NORTH STREET**

**MARYSVILLE, KANSAS 66508**

**PHONE # (785) 562-5381 or (800) 428-5655**

**OR FAX # (888) 527-3909**

**CHAPTER 5** shows the various assemblies, sub-assemblies, and systems parts. Refer to this chapter when ordering Landoll replacement parts. Order parts from your Landoll dealer.

**CHAPTER 6** Lists replacement parts in numerical order.

**NOTE: IMPROPER ASSEMBLY, MODIFICATION, OR MAINTENANCE OF YOUR LANDOLL MACHINE CAN VOID YOUR WARRANTY.**

**COMMENTS** Address comments or questions regarding this publication to:

**LANDOLL CORPORATION**

**1900 NORTH STREET**

**MARYSVILLE, KANSAS 66508**

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### Owner Assistance

If customer service or repairs are needed, contact your Landoll dealer. They have trained personnel, parts and service equipment specially designed for Landoll products. Your Loadoll III parts should only be replaced with Landoll parts. If items covered in this manual are not understood, contact your local Landoll Dealer.

### Warranty Registration

Landoll shall have no warranty obligation unless each product is registered within 10 days of retail purchase, using the Landoll Corporation on-line registration process. Please refer to the Policy and Procedures Manual, accessible at [www.landoll.com](http://www.landoll.com) for step by step instructions regarding product registration.

### Safety

#### Understanding Safety Statements

You will find various types of safety information on the following pages and on the implement decals (signs) attached to the implement. This section explains their meaning.

#### NOTICE

**Special notice - read and thoroughly understand.**



#### CAUTION

**Proceed with caution. Failure to heed caution may cause injury to person or damage product.**



#### WARNING

**Proceed with caution. Failure to heed warning will cause injury to person or damage product.**



#### DANGER

**Proceed with extreme caution. Failure to heed notice will cause injury or death to person and/or damage product.**

#### NOTE

*You should read and understand the information contained in this manual and on the decals before you attempt to operate or maintain this equipment.*

Examine safety decals and be sure you have the correct safety decals.

Order replacement decals through your Landoll dealer.

Keep these signs clean so they can be observed readily. Replace decals that become damaged or lost.



#### DANGER

**Do not allow anyone to ride on the machine. Riders could be struck by foreign objects or thrown from the machine. Never allow children to operate equipment. Keep bystanders away from machine during operation.**

### Transporting Safety

#### IMPORTANT

**It is the responsibility of the owner/operator to comply with all state and local laws.**

### Maintenance Safety

- Block the machine so it will not roll when working on or under it to prevent injury.
- Do not make adjustments or lubricate the machine while it is in motion.
- Make sure all moving parts have stopped.
- Understand the procedure before doing the work. Use proper tools and equipment.

### Protective Equipment

- Wear protective clothing & equipment appropriate for the job. Avoid loose fitting clothing.
- Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection, such as earmuffs or earplugs.

### Prepare for Emergencies

- Keep a First Aid Kit and Fire Extinguisher handy
- Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.

### High Pressure Fluid Safety

Escaping fluid under pressure can be nearly invisible and have enough force to penetrate the skin causing serious injury. Use a piece of cardboard, rather than hands, to search for suspected leaks.

Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.

Avoid the hazard by relieving pressure before disconnecting hydraulic lines.

#### NOTE

*Wear protective gloves and safety glasses or goggles when working with hydraulic systems.*

## **Safety Precautions**

Diesel and Gasoline Fuels are Toxic and Flammable. Skin and Eye Protection is Required. Good General Ventilation is Normally Adequate. Cap All Open Fuel Containers and Fuel Systems. Catch and Contain All Spillage in an Approved Fuel Container. Keep All Fuels Away from Open Flame, Sparks, Friction, and Other Ignition Sources. Failure to Properly Handle and Store Fuel May Result in Serious Personal Injury or Death.

Welding and Cutting Operations Produce Heat, Toxic Fumes, Radiation, Metal Slag, and Carbon Particles. Welding and Cutting Goggles (With the Proper Tinted Lenses), Gloves, Apron or Jacket, and Welders Boots are Required. Failure to Use Proper Safety Equipment May Result in Serious Personal Injury.

Engine Exhaust Produces Heat and Toxic Fumes. Use an Exhaust Evacuation System when Operating Inside Enclosed Areas. Failure to Provide Adequate Ventilation will Cause Serious Illness or Death. Direct Contact with Any Exhaust System May Cause Serious Personal Injury.

Do Not Handle the Winch Cable when the Winch is in the Engage Position. Hands or Clothing Could Get Caught in Cable and Be Pulled Into the Spool Causing Serious Personal Injury.

Never Attempt to Disengage the Winch Cable Spool when the Cable is Under Tension. The Load will be Allowed to Roll Away Causing Serious Injury or Death to Anyone or Anything in the Path of the Rolling Vehicle.

Both the Operator of the Loadall III and Passers-by Must Stay Clear of Load Being Winched Onto the Truck. If the Load Were to Become Disconnected from the Winch, The Load Could Be Allowed to Roll Away, Resulting in Serious Injury or Death to anyone in the Path of the Load or Flying Objects.

All Personnel Must Stay Clear of All Moving Parts While Operating the Loadall III. Never Get Between the Truck Frame and Sub-frame or Bed. Interfering with Moving Truck Components or Getting Between the Truck Frame and Sub-frame or Bed Could Result in Serious Personal Injury or Death. Serious Injury or Death May Result If You are Under, in Front of, or Behind the Bed, Sub-frame, Rear Bumper, or Chassis at Any Time During Operation of the Loadall III. The Sub-frame Can Move Back 6 Inches and the Bed Can Travel Back an Additional 126 Inches. Any Person or Object in the Same Areas May Be Damaged, or Cause Damage to the Loadall III.

Read and Study this Manual Before Attempting to Operate the Loadall III Improper Operation Could Result in Personal Injury or Death. The Loadall III could roll during Operations. Secure the Loadall III from Rolling By Blocking Front and Back of Each Wheel.

The Sub-frame can roll back Until the Bumper Contacts the Ground. Anything Under the Bumper will Be Pinned. Secure the Sub-frame by Installing Jack Stands Under the Rear Bumper Until the Hydraulics are Functional.

The Truck Transmission Must be in Neutral and the Parking Brake Applied when Operating the PTO.

Standard Specifications

BED LENGTH.....	22', 24', 26', 28' and 30'
LOAD BED HEIGHT*.....	11" Above Truck Frame
LOAD BED ANGLE*.....	12-1/2 to 20-1/2 Degrees
BED WIDTH.....	8' 6"
BED CAPACITY.....	20,000 lbs. or 30,000 lbs.
SYSTEM.....	12,000 lbs.
TOW-BAR or WHEEL LIFT OPTION CAPACITY.....	5,000 lbs.
WINCH WARN .....	12,000 lbs., 20,000 lbs. or 30,000 lbs.
HYDRAULIC RESERVOIR CAPACITY.....	35 Gallons
WEIGHT* (of kit only, add your chassis weight for total.....	6,800 lbs. to 7,600 lbs.
*DEPENDS ON THE TIRE SIZE AND MODEL OF TRUCK	

# Kit Installation

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This manual has been written for the installation of a LOADOLL III kit onto trucks capable of handling rated bed capacity. Any modification of the LOADOLL III kit as designed by LANDOLL CORPORATION may affect performance, operation, **AND SAFETY!** The truck must meet the requirements of LANDOLL ENGINEERING specifications LES-311-002. The kit shall be installed according to this manual and installation drawing 3-410-011225. Make sure the latest revision level of 3-410-011225 is obtained from the LANDOLL ENGINEERING DEPARTMENT before installation. The LANDOLL LOADOLL III is a quality product designed to give years of trouble-free performance. By following each step in this manual, your unit will look and perform as designed for you and your business.

### TOOLS AND SUPPLIES REQUIRED FOR INSTALLATION:

1. TIRE PRESSURE GAUGE
2. BASIC SET OF HAND TOOLS
3. TAPE MEASURE
4. PLASTIC TARP
5. FIRE EXTINGUISHER (suitable to be used on fuels)
6. APPROVED, PROPERLY LABELED FUEL CONTAINER
7. FRAMING SQUARE
8. (6) ADJUSTABLE JACK STANDS
9. CUTTING TORCH
10. PORTABLE HAND GRINDER
11. WELDER AND SAFETY SUPPLIES FOR WELDING
12. E-7018 WELDING ROD OR EQUIVALENT WIRE
13. MISC. C-CLAMPS
14. BLACK ENAMEL AUTOMOTIVE PAINT
15. ELECTRICAL WIRING PLIERS/TERMINAL CRIMPER
16. TWIST DRILL AND BITS (1/8" through 3/4")
17. POP RIVET GUN
18. MEANS TO LIFT 3000 LB. SUB-FRAME AND POSITION ON TRUCK FRAME
19. MEANS TO LIFT AND SLIDE THE BEDS THAT WEIGH BETWEEN 3000 LB. (19FT. X 102" wide)  
AND 3700 LB. (30FT. X 102" wide) ONTO THE SUB-FRAME.
20. 35 GALLON HYDRAULIC OIL (AMOCO RYCON MV or equivalent)

**NOTE:** ALL WELDING MUST BE DONE IN ACCORDANCE WITH THE AMERICAN WELDING STANDARD (AWS) D1.1 USING E-7018 WELDING ROD OR EQUIVALENT WIRE.

### Chassis Inspection

**2-1.1** Position chassis on a solid, level work area.

**2-1.2** INSPECT THE CHASSIS TIRES FOR THE FOLLOWING CONDITONS:

- a. All tires on the same axle must be of the same size.
- b. All tires are properly inflated to the recommended pressures. All tires of the same axle must have equal pressures.

**2-1.3** INSPECT THE CHASSIS FRAME AS DETAILED BELOW:

- a. Check both frame rails and all frame cross members for visible damages or rust. Any frame damage must be corrected before modification begins.
- b. Check the frame for being square. Measure diagonally from the front of one side to the back of the other side. Locate measurements off of cross member rivets. **(See Figure 2-1)** Record both diagonal measurements below. Both measurements must be within 1/4" of each other.

Diagonal A \_\_\_\_\_ inches.

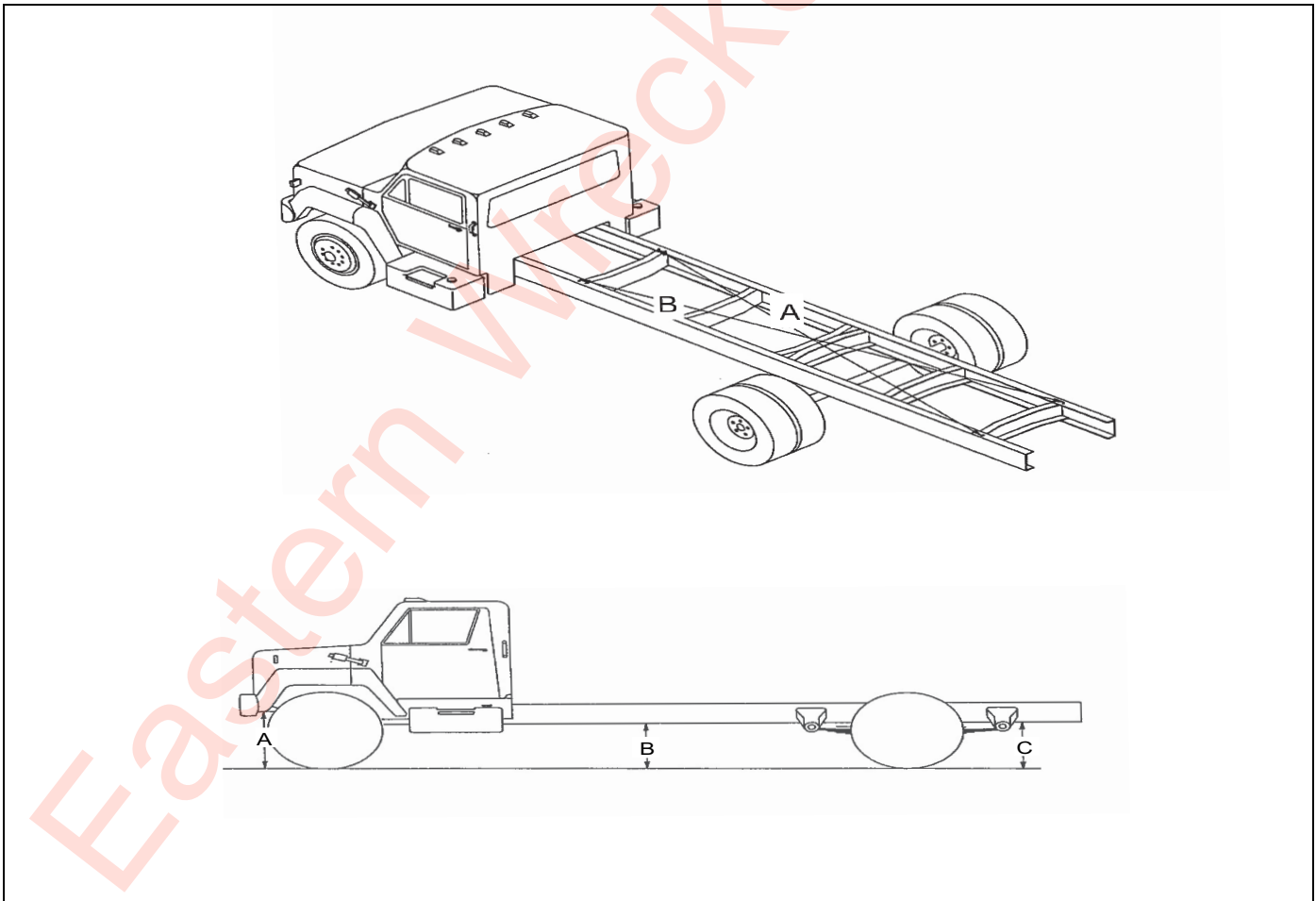
Diagonal B \_\_\_\_\_ inches.

- c. Check the frame height (ride height). Measure the distance between the frame and the ground on each side of the chassis at 3 check points; (A) just in front of the front axle, (B) 12 inches behind the cab, and (C) just behind the back mounting bracket of the rear axle springs. The measurement of both frames at the same check point must be within 1/4" of each other.

**(See Figure 2-1)**

- d. If any of the above frame checks fail, have the chassis checked and corrected by a qualified chassis technician before proceeding.

**2-1.4** Check to make sure chassis meets Landoll specifications LES-311-002. If the chassis does not meet these specifications, make necessary changes to meet specifications before proceeding.



**Figure 2-1: Chassis Inspection**

## Chassis Modification

**2-2.1** When welding next to fuel tanks, drain and remove fuel tanks and store in a safe place to prevent a chance of a fire or explosion.

**2-2.2** Disconnect the chassis wiring harness from the tail light harness at the rear of the truck frame.

**2-2.3** Disconnect wiring harness from truck frame from the rear of the frame up to the rear axle and roll it up to protect it for later use.

**2-2.4** Cut the frame off behind the rear axle according to installation drawing 3-410-011225.

**2-2.5** Grind the frame smooth and square where each cut was made.

## Installing Sub-Frame, Bed and Bulkhead

**2-3.1** Center the sub-frame on top of the truck frame.

At the rear end, there shall be at least 11/16" gap between the top of the truck frame and the bottom of the 4" x 6" SQ. tubes on the sub-frame. **See Pages 5-6, 5-7.**

**2-3.2** Weld sub-frame to truck frame per install drawing. Add frame gussets between sub-frame and truck frame. Locate and install front tilt cylinder cross member by welding it together inside the truck frame.

**2-3.3** Make the welds to the sub-frame at least as thick as the thinnest material being welded, using E7018 or equivalent welding wire.

**2-3.4** Slide the bed onto the rear of the sub-frame starting with the front of the bed at the back of the sub-frame. The bottom flange of the bed will slide in between sub-frame and truck frame. Slide the bed onto within 10" of the back of the cab. Pin the bed cylinder anchor to the bed cylinder then slide the bed until the holes in the cylinder anchor line up to the nearest holes in the anchor plate on the bed. Bolt the cylinder anchor on with 6 each, 5/8" bolts.

**See Pages 5-12, 5-14.**

**2-3.5** Mount bulkhead on the truck frame so the ears on the bulkhead fit tight into the slots in front of the beds main beams with the bed within 1/16" of all the way forward. A spacer plate will probably be required between the top of the truck frame and the bottom of the bulkhead to make sure the ears fit properly in the slots. The bulkhead will have an anchor plate with four holes in it and a flat bar welded to the bulkhead. The anchor plate will then bolt to the truck frame. **See Page 5-23** for detailed location.

**2-3.6** Mount the flex track, attached to the sub-frame, to the bottom of the bed on the mounting plate provided.

With the bed all the way forward, mount the track as far forward on the bed as possible.

## Hydraulic Installation

**2-4.1** When installing hydraulic plumbing, install trim-lock on all sharp edges that hydraulic hoses contact.

**2-4.2** Ty-wrap hoses to non-moving parts to avoid contact with sharp, abrasive or moving objects.

**2-4.3 DO NOT USE TEFLON TAPE or THREAD SEALANT!**

**2-4.4** The Landoll-supplied PTO is selected based on the transmission data supplied on the sales order.

**2-4.5** Kits ordered for vehicles with standard transmissions will have a PTO to be mounted directly on the transmission. The hydraulic pump is intended to be mounted directly on the PTO. The pump can be jack shaft mounted if necessary. If this is chosen, the jack shaft end which mates with the pump will have to be equipped with a spline compatible with pump.

**2-4.6** Every Landoll supplied PTO is shipped with a PTO mounting booklet, which serves as guide for installation. Follow the PTO instructions exactly and you will be assured of proper installation.

**2-4.7** Mount the PTO without the hydraulic pump attached. This will allow you to check the PTO for noise without operation of the pump.

**2-4.8** Refill the transmission with clean, approved lubricant after the PTO installation is complete.

**2-4.9** Start the vehicle engine and operate the PTO briefly to check for unusual noise.

**2-4.10** Check the engage and disengage of gear shifting functions. The PTO shaft should rotate when in gear, and stop rotating when the PTO is shifted to the neutral position. If

everything checks out properly, continue. If noise or shifting problems exist, correct before installing pump.

**2-4.11** The hydraulic pump mounts directly to the PTO. The pump is BI-ROTATIONAL. Some PTO's rotate clockwise and some rotate counter-clockwise. To determine which port on the pump is the pressure port and which port is the suction port, after the pump is mounted to the PTO, engage PTO and operate for a second while your hand is covering a port. If your hand is sucked toward the port, the port is the suction port. If your hand is pushed away from the port, the port is the pressure port. **DO NOT PUT FINGER INTO PORT.**



### NOTE

*Do not operate the PTO for more than a second if the pump is attached and dry. Operating the pump for more than a second dry will cause permanent damage to the pump, affect hydraulic system performance, and cause possible damage to other hydraulic components.*

## Hydraulic Plumbing

**2-5.1** The hydraulic tank is mounted directly to the right side frame rail.

**2-5.2** Landoll hydraulic tanks are cleaned and preserved before shipping. Contaminants can enter the tank during shipping and handling. Clean hydraulic tank out thoroughly by sweeping the inside with a magnet and flushing with clean hydraulic oil.

**2-5.3** If breather cap/strainer assembly is not already installed, install the breather cap/strainer assembly by inserting strainer into the tank with a gasket between. Place the second gasket on the strainer flange and then the cap, securing flange on top. Align all 6 holes and secure to the tank with 6 screws provided with the kit.

**2-5.4** Assemble the hydraulic oil filter and attaching components. **See page 5-10.**

**2-5.5** Install hydraulic suction, pressure, and return lines accordingly.

**2-5.6** Route the hydraulic winch hose from valve through the flex track to winch hydraulic tubes on bed. Ty-wrap hoses up so they do not catch on anything.

**2-5.7** Fill the hydraulic reservoir. Cycle all cylinders and motors to remove air from the system. Add hydraulic fluid as required. Normal oil level is 1" below the top of the hydraulic tank when all cylinders are retracted.



# Chapter 3

## Operations

This section supplies information for operation of the Loadoll III. It describes and locates controls and gives general operation procedures. Read all instructions, warnings, cautions and danger notes before attempting to operate the carrier. Operators must have proper training before operating the carrier.

Do not operate your Loadoll III until a complete inspection has been performed. A defect may cause personal injury, damage to your Loadoll III, or time consuming down time. Operation of your Loadoll III is easy, efficient, and dependable if installation was done properly. The engine must be running and the PTO engaged before any controls will become functional. Some units require turning on the clearance lights to get power to the remote hydraulic control.



### WARNING

**Do Not Operate the Loadoll III with any known fault that might endanger the occupants, nearby workers, other traffic, the load, or the equipment.**



### WARNING

**Do Not Operate the Loadoll III until you have read the Operator's Manual and completely understand the proper use and function of all controls. Improper use can cause personal injury, Damage to your Semi -Trailer and Cargo, and cause time consuming breakdowns.**



### DANGER

**Serious Injury or Death May Result if a Person is Under, in Front of, or Behind: The Bed, Sub-frame, Rear Bumper, or Chassis at any time during operation of the Loadoll III. The Sub-frame can swing up and the bed can travel back 126" for 22' and 24' beds and 150" inches for 26', 28' and 30' beds any object in the same areas may be damaged, or cause damage to the Loadoll III.**



### CAUTION

**Do Not Handle the Winch Cable or Chain When the Winch or Gearbox is in the Engage Position. Hands or Clothing Could Get Caught In Cable and Causing Serious Personal Injury.**

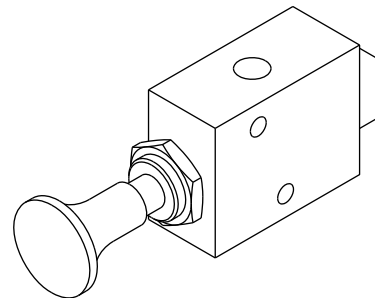
## Free Spool Clutch Operation

### (Warn Winch)

Warn Series XL winches are equipped with air operated free spool clutch.

1. The air free spool clutch is operated by application of air pressure to the fitting supplied on the winch gearbox housing. Follow decal instructions for winch engage and disengage. The fitting is designed to accept 1/4" rigid plastic tubing.

- To release the clutch (free spool operation), apply 50-120 psi air pressure to the air fitting by pulling out on the air valve knob.
- To engage the clutch (winch operation), remove all air pressure (0 psi) from the air fitting by pushing in on the air valve knob.



Located at front right corner of bed by bulkhead.

WINCH FREE SPOOL  
PUSH IN - WINCH ENGAGE  
PULL OUT - WINCH DISENGAGE

135184

Figure 3-1: Free Spool



### DANGER

1. The Winch is not designed or intended to be Used For Lifting Or Moving People. Using it this way can cause serious injury or death.
2. Make certain the Winch Cable Spool Clutch is set to engage and clutch is fully engaged before load tension is applied to winch cable. Never attempt to disengage the Winch Cable Spool when the cable is under tension. Loss of load control, property damage, injury or death can result.
3. Failure to leave at least five winch cable wraps on the winch cable spool could allow the cable to come off the spool, resulting in serious personal injury or death.

Cable: Five wraps minimum to hold load

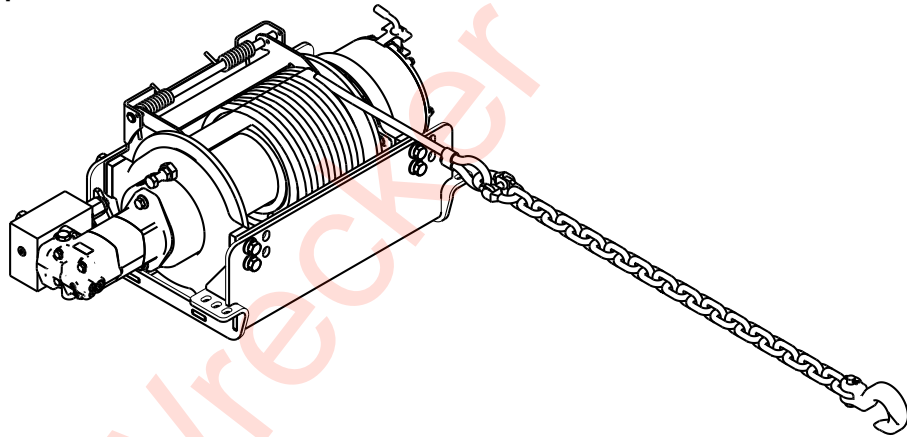


Figure 3-2: Warn Winch 12,000 lbs., 20,000 lbs. and 30,000 lbs.

The 12,000 lbs., 20,000 lbs. and 30,000 lbs. Warn Winch Free Spool Clutch is air operated.

**DISENGAGE:** In this position, the winch is disengaged. This allows the spool to “free-wheel”. **This is only used when there is no load on the winch cable.** This feature allows the cable to be pulled out fairly fast and does not require operating the hydraulic system.

**ENGAGE:** In this position, the winch is engaged. Cable may be “power” spooled on or off the winch spool. The winch is now controlled by the Winch Hydraulic Lever.



### CAUTION

A minimum of 5 wraps of cable must be left on the winch drum. See Figure 3-2.

The **HYDRAULIC WINCH CONTROL LEVER** is the second lever from the front of the truck it is labeled Winch on the decal. This control reels the winch cable IN in the IN position and OUT in the OUT position.

**IN:** In this position, the winch reels the winch cable in.

**NEUTRAL:** This is the neutral position. This position has some holding power, but cannot be relied upon to hold a load during transport.

**OUT:** In this position, the winch reels the winch cable out.

## Bed Tilt Control

The Bed Tilt Control is the first control located closest to the front of the truck. It is designated on the decal as **TILT**. See Figure 3-3.

Operating the control as shown on decal will prepare the Loadoll III for loading position.

Operate the control shown on decal causes the Loadoll III to move from loading position to transport position.

Do not tilt the unit up until the bed is slid back far enough for the bed to clear the nylatron hold-down blocks located behind the truck cab. When tilting down, the sub-frame must be tilted all the way down before the bed is all the way forward. The bed must be back far enough to clear the nylatron blocks when tilting down so the bed does not rest on top of the nylatron blocks.

## Bed Slide Control

The **BED SLIDE CONTROL** is the third control from the front of the truck. It is designated on the decal as **BED**. See Figure 3-3. Operating the control as shown on decal slides the bed OFF the sub-frame. Pulling the control OUT slides the bed back ON to the sub-frame.

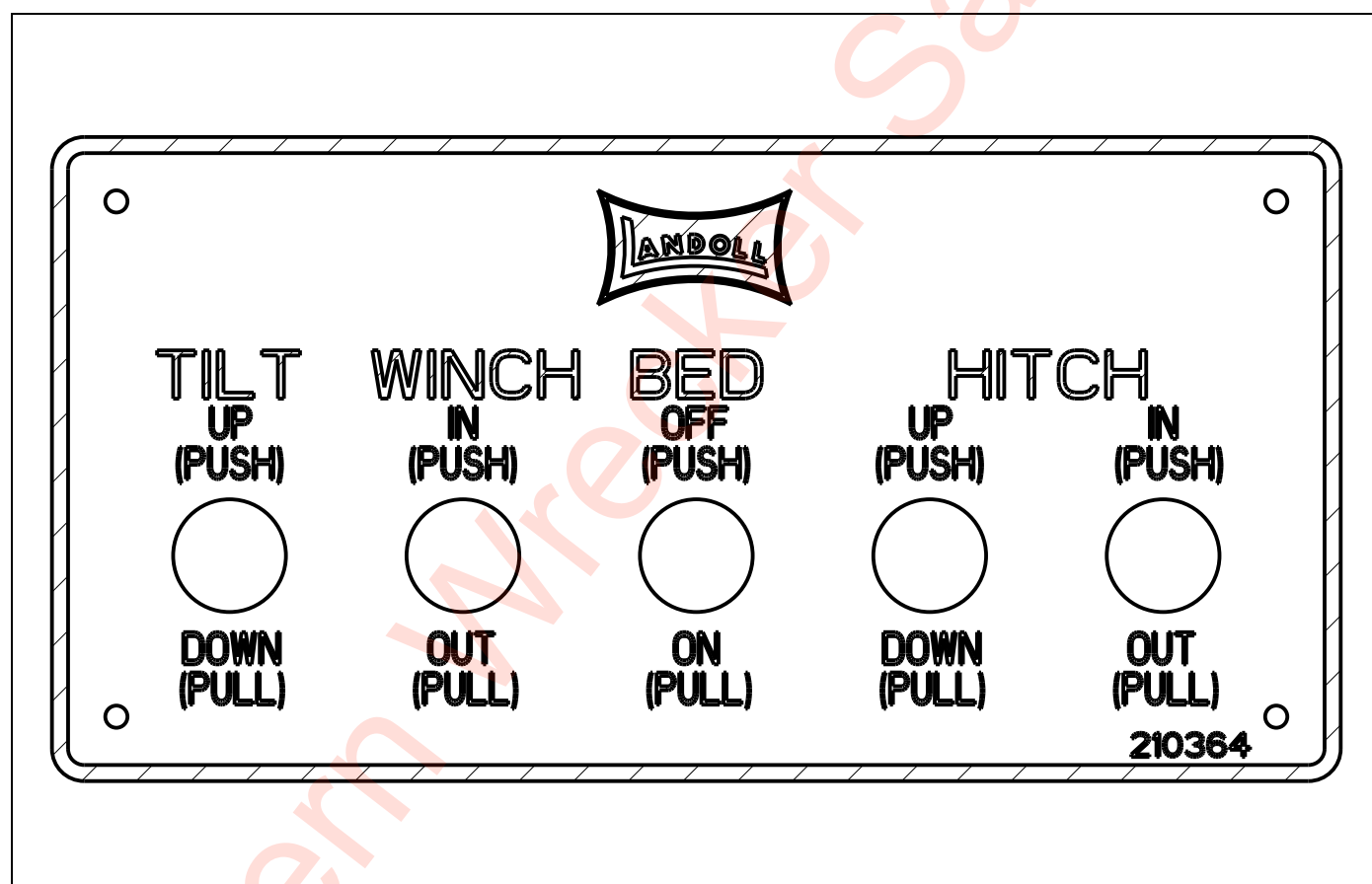


Figure 3-3: Load Control Decal

## Hitch Tilt and Frame Stabilizer (Optional)

The Hitch Tilt and Frame Stabilizer is the fourth lever from the front of the truck if the unit has these options. This control tilts the Hitch/Stabilizer up or down per the decal. See Figure 3-3.

## Hitch Controls (Optional)

The Hitch Telescope Control Option is the fifth lever from the front of the truck. It is labeled TELESCOPE on the decal. See Figure 3-3. This control extends the hitch out to the rear or retracts hitch per the decal.

### Power Take-Off (PTO)

The PTO control is located in the chassis cab. When the PTO is engaged, engine powers a high pressure hydraulic pump, thus providing power to the hydraulic controls.

#### IMPORTANT

**Most Truck Transmissions must be in Neutral and Park Brake applied when operating the PTO. Follow Instructions provided by PTO Manufacturer.**

#### IMPORTANT

**Never Transport with the PTO Control Engaged. Extensive Damage may result to the Chassis Transmission, PTO Unit, Hydraulic Pump, and other components.**

### Bed Loading

Back the Loadoll III up to the item to be retrieved. Align the Loadoll III so that the bed is in line with the item to be loaded. Back your unit about 10 feet (120 inches) from the item to be retrieved. This will allow room to Tilt and Slide the bed back.

- Shift the transmission to neutral and set parking brake securely.
- Shift the PTO in gear. Follow PTO manufacturer's instructions.
- The throttle control is to be set at 1000 engine RPM when the PTO is engaged.

#### IMPORTANT

**Do Not Exceed 1500 Engine RPM with the PTO Engaged. Pump and Hydraulic System Components will be Adversely Affected by Higher RPM's.**

Most units have the optional remote control that can be used to control the first three hydraulic controls. Some units require the clearance lights to be turned on to provide power to the remote. Other units provide power to the remote when the PTO is engaged.

If the remote does not operate after PTO is engaged, turn the clearance lights on. Slide bed back enough so that bed comes out of bed hold downs using the bed slide (bed) controls.

Tilt the bed up using the **BED TILT (TILT)** controls to about 10 degree angle.

Slide the bed back using the **BED SLIDE (BED)** control until the bed is slid all the way back. Tilt the bed until the bed touches the ground.

If the unit has the Hydraulic Stabilizer, tilt the stabilizer down until the stabilizer is firmly in contact with the ground. Units without the hydraulic stabilizer should have

the stabilizer feet set at the correct height to hit the ground when the sub-frame is tilted to the load position.

Load the bed. Use the winch or chain drive to pull the load onto the bed.



#### DANGER

**Serious Injury or Death may result if a person is under or in the path of item(s) being loaded, unloaded, or secured. Any object in the same areas may be damaged, or cause damage to the Loadoll III.**

Anchor the front, sides, and back of the load to the bed key hole slots per Cargo Securement Regulations.

#### IMPORTANT

**Never Rely on the Winch Cable or Chain Drive to tie down a load.**

Slide the bed forward only until the load is centered over the rear axle.

Tilt the bed down to the level, transport position. Slide the bed all the way forward now, disengage PTO.

Check all tie-downs securing the load before transporting.

### Bed Unloading

Locate the Loadoll III on a level, solid surface in an open area.

Shift the Loadoll III transmission to neutral and set parking brake securely. Shift the PTO into gear.

Throttle should adjust to 1000 RPM when PTO is engaged.

#### IMPORTANT

**Do Not Exceed 1500 Engine RPM with the PTO Engaged. Pump and Hydraulic System Components will be Adversely Affected by Higher RPM's.**

Slide bed back enough so the bed comes out of bed hold-downs using the bed slide (bed) controls. Continue sliding bed back until load is centered over the rear axles of truck.

If the unit has the Hydraulic Stabilizer, tilt the stabilizer down to same location as was used to load the bed.

Tilt the bed up until the Stabilizer feet or Hydraulic Stabilizer firmly contact the ground.

Slide the bed back until the bed or load touches the ground.

Secure the winch cable or chain drive to the load, and remove any cable or chain slack. Remove all securing chains.

If the load is a vehicle, shift the loaded vehicles' transmission to neutral, and release parking brake.

Operate the winch or chain drive to allow the load to be removed from the bed of the Loadall III.

After load is off and clear of the bed, secure the unloaded item from moving by blocking it or setting the parking brake.

Remove winch line and secure in stowing position. This would entail anchoring to any bed load anchor location and removing any slack in the cable.

### IMPORTANT

**Do Not Anchor the Winch Cable to the Rear Bumper or the Hitch.**

Slide the bed to the halfway forward position.

Tilt the bed fully down to the transport (level) position.

Slide the bed to the full forward position.

If the container is over hanging the bed the rear of the container will be touching the ground. If the container is not over hanging the bed, use the Chain Drive Pusher to push the container back to overhang bed by 16". Raise the stabilizer up enough to clear the ground. Pull the truck forward, until the container is slid off the bed far enough to clear the bed.

Slide the bed to the halfway forward position.

Tilt the bed fully down to the transport (level) position.

Slide the bed to the full forward position.

## Load Placement

In most situations, the load is to be placed as far forward on the bed as possible. If your load is confined to a small area (such as crated item at the weight limit), position so 10% of the load transfers to the front axle, and 90% of the load on the rear axle.

Containers usually overhang the rear of the bed 16" so they are easier to remove from bed unless it overloads the truck axles by doing so.

## Securing Loads to Bed

All vehicles, machinery, crated goods, or loose parts must be securely tied down to the bed of the Loadall III. Key holes are provided in front and rear of the bed to anchor chain.

The front sides and rear of the load must be secured to the front and to the rear of the bed. Do not rely on the winch to secure the load to the bed per Cargo Securement Regulations.

Do not allow any slack in the hold down chains. Slack will allow load to shift. A shifting load will create sufficient momentum to break chains. Remove chain slack by using chain boomers, or other slack adjusters designed to be used for securing loads.

## Hitch Operation (Optional)

This section is intended to provide safe, efficient operating instructions for the Loadall III Hitch. Read all instructions carefully before operating the hitch. Safety precautions are included to alert you to possible hazardous conditions. Be sure to read and understand all instructions completely before operating the hitch.



### DANGER

**Never attempt to carry more than specified of load limits on the hitch. Always maintain at least fifty percent (or one half) of the truck's original front axle weight when the hitch is loaded. Failure to maintain the proper weight ratio or attempting to carry more than 3,000 pounds on the hitch may result in loss of control of the vehicle resulting in damage to the Loadall III, the hitch, and/or the towed vehicle. serious personal injury or death may also result if loss of control over the Loadall III is experienced.**



### DANGER

**Never crawl under the truck or towed vehicle during Hitch Operations. Never crawl under the hitch at any time. Failure to comply may result in serious personal injury or death.**



### WARNING

**Never stand between the truck and the towed vehicle. Standing between the truck and the towed vehicle may result in serious personal injury.**

## Vehicle Towing

Back the Loadoll III to directly in front of the vehicle to be towed, leaving a minimum of 6 feet between the two vehicles. Set the parking brake on the truck. Set the Hitch to Towing Position.

### IMPORTANT

**The Truck Bed should remain in the forward position for the entire Hitch Operation.**

Adjust the Hitch Up or Down or Out to mate with the towed vehicle.

Make proper connections to the towed vehicle.

Do not exceed the towing limits listed on the standard specifications page at the front of this manual.

Connect breakaway cables and electrical connections as required.

Adjust Hitch Height so the towed vehicle is level.



### CAUTION

**Uneven roads, dips, bumps, and ramps should be avoided when ever possible. Never exceed ten miles per hour when one of these, or similar obstacles must be encountered. Proceed slowly while stopping occasionally to check the position of the towed vehicle. It may be necessary to raise or lower the hitch slightly to clear one of these type obstacles. Failure to exercise these cautions when encountering these types of obstacles may result in loss of the towed vehicle from the hitch resulting in damage to the hitch and/or the towed vehicle.**

Check to make sure the towed vehicle is ready to be towed, such as lifting support jacks and removing wheel chocks.

Retract the hitch as much as possible leaving enough clearance between the truck and the towed vehicle that the towed vehicle will not interfere with the trucks cornering capabilities.

Attach safety chains from the towed vehicle to Loadoll III.

## Vehicle Disconnection

Locate the towed vehicle in an open, level area. Apply the Loadoll's parking brakes. Disconnect safety chains and place back in storage compartment. Remove breakaway and electrical connections.

Lower jack and/or other supports required when vehicle is to be disconnected.

### IMPORTANT

**The bed of the Loadoll III should remain in the fully forward position for the entire Hitch Operation.**

Chock the wheels of the towed vehicle so it will not roll.

Lower the hitch so the towed vehicle is supported by the support jacks.

Move the hitch in or out to relieve any pressure from the hitch. Disconnect hitch.

Adjust hitch so it clears when Loadoll III is pulled ahead.

Move the Loadoll III forward if there is not enough room to lift the hitch.

Raise the hitch to a horizontal position, making sure that the rear lights of the Loadoll III are not obstructed.

Retract the hitch all the way and make sure the Loadoll III is ready to go down the road.

Some hitches need to have the end rotated forward before the Loadoll III can be tilted to the ground so the hitch does not hit the ground.

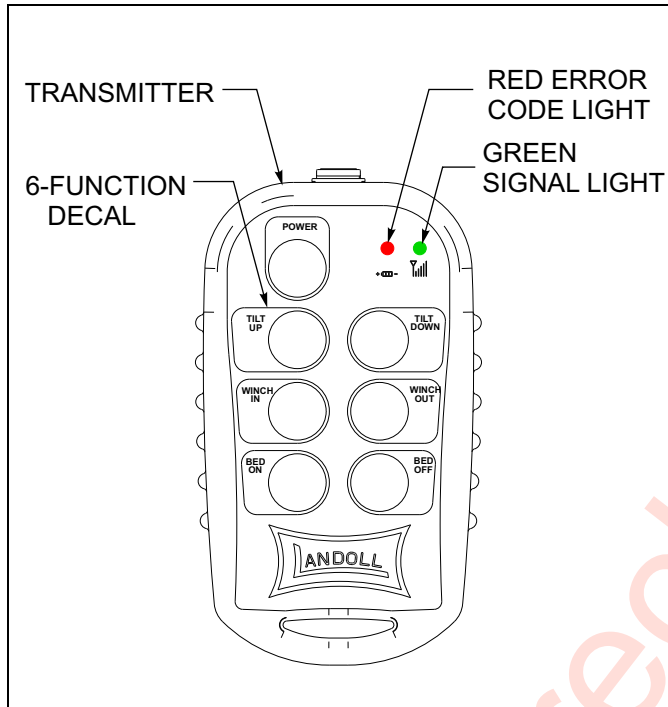


## Remote Control (Optional)

A wireless six function radio remote control is available **See Figure 3-4.**

The wireless radio remote has six momentary push button switches that operate the functions as labeled on the hand held remote.

The wireless radio remote has specifications listed in **See Figure 3-5.**



**Figure 3-4: Remote Control Transmitter**

REMOTE SPECIFICATIONS	
RF	902-928 MHz FHSS 10mW
TEMPERATURE - RECEIVER	- 40° to 85° C
TEMPERATURE - TRANSMITTER	- 20° to 60° C
OUTPUT RATING	5 AMPS EACH (SOURCING) 20 AMP SYSTEM MAXIMUM
TRANSMITTER IP	- 66
POWER	3.7V LiPo BATTERY
BATTERY LIFE	30 - 40 HOURS CONTINUOUS

**Figure 3-5: Remote Specifications**

## To Operate the Remote

1. Press and hold the POWER button for at least 2 seconds and release.
2. The transmitter is designed with a power saving feature which turns the transmitter off after 15 minutes if no buttons are pressed.
3. There are Red and Green LED's both on the keypad of the transmitter and inside the receiver case. The Green LED will blink 2 times per second when the transmitter and receiver are communicating. It will blink 1 time per second if there is no communication (i.e. - no power to the receiver).
4. The Red LED on the transmitter and in the receiver will blink if there is a shorted or open output. **See Figures 3-6 and 3-7** and count the number of blinks to determine the output with the fault.
5. The transmitter's Red LED blinks 1 time per second if the batteries are low and need to be replaced. To confirm a low battery condition, turn the receiver off and leave the transmitter on. If the transmitter Red LED continues to blink, the battery is low and requires replacement. If the Red LED blinks only when the receiver is on, there is a fault with one or more outputs, as stated above.
6. The Red LED will stay on while charging and when the charge is completed the Green LED will stay on.
7. It will take longer to charge if the transmitter is on during charging.

TRANSMITTER ERROR CODE CHART	
ERROR CODE	PROBABLE CAUSE
1	LOW BATTERY
2	TILT DOWN FAULT
3	TILT UP FAULT
4	WINCH OUT FAULT
5	WINCH IN FAULT
6	BED OFF FAULT
7	BED ON FAULT

**Figure 3-6: Transmitter Error Code Chart**

RECEIVER ERROR CODE CHART	
ERROR CODE	PROBABLE CAUSE
1	RF COMMUNICATION PROBLEM
2	TILT DOWN FAULT
3	TILT UP FAULT
4	WINCH OUT FAULT
5	WINCH IN FAULT
6	AXLE BACK FAULT
7	AXLE AHEAD FAULT

Figure 3-7: Receiver Error Code Chart

## Synchronizing Transmitter and Receiver

### NOTE

*There are over 64,000 different addresses (id codes) available for each transmitter and receiver pair. Each transmitter and receiver pair is synchronized together at the factory. If a new transmitter is needed, synchronizing is required. Use the following procedure:*

1. With the transmitter off, press and hold the POWER button for >10 seconds until LED's blink, then release.
2. With power applied, press the red button on the receiver for >5 seconds until LED's toggle.
3. Wait for a few seconds until the Green LED's begin to blink.
4. Teach complete.

## Cold Weather Operation

Cold weather causes lubricants to congeal, insulation and rubber parts to become hard, which may lead to problems found in bearings, electrical systems, and air systems. Moisture attracted by warm parts can condense, collect and freeze to immobilize equipment. The vehicle operator must always be alert for indicators of cold weather malfunctions.

During any extended stop period, neither the service nor parking brake should be used as they can freeze up. Use wheel chocks to secure the vehicle from moving. chocks to secure the vehicle from moving.

Check all structural fasteners, air system fittings, gaskets, seals and bearings for looseness that can develop due to contraction with cold. Do not over-tighten.

Check tire inflation. Tire inflation decreases when the temperature decreases.

Periodically check drain holes in the storage compartments. They must be open at all times to avoid moisture entrapment.

## Hot Weather Operation

Hot weather operation can cause expansion of parts, resulting in tightening of bearings, fasteners, and moving parts. Failure of gaskets or seals can occur.

The vehicle should be parked in the shade if possible. Long exposure to the sun will shorten service life of rubber components (i.e., tires, light and hose grommets, hoses, etc.) and paint life.

Check tire pressure early in the day before beginning operations while the tire is cool. Put all valve stem caps back on after checking.

If the area is extremely humid, protect electrical terminals with ignition insulation spray. Coat paint and bare metal surfaces with an appropriate protective sealer.



# Maintenance and Troubleshooting

This chapter contains instructions necessary for proper maintenance of the Loadoll III. The Loadoll III is designed for years of service with minimal maintenance. However, proper maintenance is important for durability and safe operation and is an owner/user responsibility.



## DANGER

Operating the vehicle with defective, broken or missing parts may result in serious injury or death; damage to the vehicle, its cargo, or property in its path.



## DANGER

Serious injury or death may result if a person is under, in front of, or behind: The bed, sub-frame, rear bumper, or chassis at any time during operation of the Loadoll III. The sub-frame can swing up and the bed can travel back several feet. Any object in the same areas may be damaged or cause damage to the Loadoll III.

If maintenance is required in any of these areas, block both ends of the sub-frame to prevent it from tilting. secure the bed from moving.

LUBE	SEASON	BRAND & PRODUCT (WEIGHT AND/OR TYPE)				
		EXXON	MOBIL	PHILLIPS 66	TEXACO	SHELL
1	ALL YEAR	NUTO H 32	DTE 24	Mega Flow HVI 32 SAE 5W-20	Rando HD 32	Tellus T 32
2	ALL YEAR	-----	-----	-----	-----	Aeroshell 64MS
3	ALL YEAR	-----	-----	76 Moly Low Temp Grease	-----	-----
4	SUMMER	-----	Mobilube HD SAE 85W-140	-----	-----	-----
	WINTER	-----	Mobilube 1 SHC SAE 75W-90	-----	-----	-----
5	ALL YEAR	Teresstic 32	DTE Light	Condor 32 or Magnus 32	Regal Oil R&O 32	Turbo T 32

Figure 4-1: Lubrication Specifications

## Maintenance Schedule

Loadoll III maintenance includes periodic inspection and lubrication. **Figure 4-2, Maintenance Schedule**, lists the recommended maintenance and lubrication tasks by time interval and by accumulated mileage (use whichever occurs first).

### Inspection

Inspect the vehicle and deck system periodically for damage or signs of pending failure. Damaged or broken parts must be repaired or replaced at once. Determine the cause of any binding or hydraulic leakage at once. Correct the problem before using the vehicle.

Use the Troubleshooting Guide to check for "SYMPTOMS" and "PROBLEMS" of any vehicle system not functioning correctly, or where wear, distortion, or breakage are found. Administer "REMEDY" according to the right-hand column of the Troubleshooting Guide.

### Lubrication

**Figure 4-2, Maintenance Schedule**, details lubrication points and intervals, method of application, and lubricant required, and illustrates the location of each part to be lubricated. During inspections of the vehicle if lubricants are found to be fouled with dirt or sand, those parts should be cleaned with paint thinner, dried and re-lubricated immediately. Dirt in a lubricant forms an abrasive compound that will wear parts rapidly.

NORMAL OPERATING SERVICE INTERVALS							
ITEM	1st 5 Hours or 50 Miles	Weekly or 500 Miles	Monthly or 2,000 Miles	6 Months or 12,000 Miles	Yearly or 25,000 Miles	LUBE #	NOTES
LIGHTS	I	I					
WIRING & CONNECTIONS	I		I				
FASTENERS	I,T		I				
CHAIN GEAR BOX CASE	I		I			2	
BED SLIDE PLASTIC STRIPS	I		I			5	
SUBFRAME PIVOTS	L		L			3	
SUBFRAME AND HITCH CYLINDER PINS	L			L		3	
WINCH CABLE ASSEMBLY	I	I	I,L			4	
HYDRAULIC OIL	I	I			R	1	
HYDRAULIC FILTER	R			R			
TIRE INFLATION & WEAR	I	I					
HOSES	I		I				
WHEEL LUG NUTS	I,T	See Truck Owner's Manual for Service Intervals					
I - Inspect, R - Replace, T - Tighten/Adjust Torque, L - Lubricate, C - Clean							
a. Perform at the time shown. Shorten service intervals when operating in severe or dirty conditions.							
b. See Chapter 2 for correct torque specifications.							
c. See Table 5-1 for recommended lubricant.							
d. Inspect prior to and after each use.							
e. Recommended lubrication for Warn 12K Winch Planetary Gear Case - Aeroshell 64MS							

**Figure 4-2: Maintenance Schedule**

## Cleaning

Wash carrier to remove all accumulated dirt and grime. Clean the sliding surfaces with solvent or mineral spirits every six months or more frequently if exposed to extreme dirt or weather conditions. The slide wear strips are impregnated with a special lubricant, however, additional lubrication may be required to prevent chattering or squealing.

After disassembling any components, thoroughly clean dirt and old lubricant from **all parts**. Do not use a wire brush on any bearing parts or surfaces, use a stiff bristle brush. Do not use **compressed air**, or spin bearing parts when cleaning. These **practices** can throw solvents, dirt, or metal particles **into your eyes**. Dry clean parts with lint free, clean, soft, **absorbent**, cloth or paper. Wash and dry hands.

Inspect seals, seal wiping surfaces, bearing caps, and bearing cones for wear, pitting, chipping, or other damage.

Use Troubleshooting Guide to check for “**SYMPTOMS**” AND “**PROBLEMS**” of any carrier system not functioning correctly, or where wear distortion, or breakage can be found. Administer “**REMEDY**” according to right-hand column of Troubleshooting Guide.

## Frame and Deck

### Repairing Structural Defects

If any structural defect is found, the fault must be corrected before further use of the vehicle. To continue usage could endanger the vehicle, its load, personnel, traffic, and properties. Inspect the deck daily for broken or missing attachments. Replace any defective parts promptly.

## Hydraulic System

Check the hydraulic oil level weekly, or after any leakage.

**See Figure 4-1** for proper hydraulic oil.

Check the hydraulic oil level by sliding the deck back enough to gain access to the reservoir cap. Have the bed level with the chassis frame, and the hitch fully retracted. Shut off the engine. Proper oil level is 2" below top of oil reservoir. Filling to the top will result in overflow when the bed is slid forward.

If a cylinder seal leaks, disassemble the cylinder and determine the cause of the leak. Small scores caused by chips or contaminated fluid can usually be worked out with fine emery cloth to avoid re-occurring of the trouble. Any time a component is opened up, or whenever any seal replacement is necessary, it is advisable to thoroughly clean all components and replace all seals in that component. Seal kits are available from your Landoll dealer.



### WARNING

**Paint thinner and other solvents are flammable and toxic to eyes, skin, and respiratory tract. Avoid skin and eye contact. Good general ventilation is normally adequate. Keep away from open flames or other combustible items.**

## Standard Torque Values

**See Page 4-4** for torque values for standard hard ware and is intended as a guide for average applications involving typical stresses and mechanical surfaces. Values are based on the physical limitations of clean, plated, and lubricated hardware. In all cases, when an individual torque value is specified, it takes priority over values given in this table. Replace original fasteners with hardware of equal grade.

## General Torque Specifications

(rev. 4/97)

This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and capscrews assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 33% to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 capscrews. Use value in [ ] if using prevailing torque nuts

### TORQUE SPECIFIED IN FOOT POUNDS

UNC SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 8	UNF SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 8
1/4-20	4 [5]	6 [7]	9 [11]	1/4-28	5 [6]	7 [9]	10 [12]
5/16-18	8 [10]	13 [13]	18 [22]	5/16-24	9 [11]	14 [17]	20 [25]
3/8-16	15 [19]	23 [29]	35 [42]	3/8-24	17 [21]	25 [31]	35 [44]
7/16-14	24 [30]	35 [43]	55 [62]	7/16-20	27 [34]	40 [50]	60 [75]
1/2-13	35 [43]	55 [62]	80 [100]	1/2-20	40 [50]	65 [81]	90 [112]
9/16-12	55 [62]	80 [100]	110 [137]	9/16-18	60 [75]	90 [112]	130 [162]
5/8-11	75 [94]	110 [137]	170 [212]	5/8-18	85 [106]	130 [162]	180 [225]
3/4-10	130 [162]	200 [250]	280 [350]	3/4-16	150 [188]	220 [275]	320 [400]
7/8-9	125 [156]	320 [400]	460 [575]	7/8-14	140 [175]	360 [450]	500 [625]
1-8	190 [237]	408 [506]	680 [850]	1-14	210 [263]	540 [675]	760 [950]
1-1/8-7	270 [337]	600 [750]	960 [1200]	1-1/8-12	300 [375]	660 [825]	1080 [1350]
1-1/4-7	380 [475]	840 [1050]	1426 [1782]	1-1/4-12	420 [525]	920 [1150]	1500 [1875]
1-3/8-6	490 [612]	1010 [1375]	1780 [2225]	1-3/8-12	560 [700]	1260 [1575]	2010 [2512]
1-1/2-6	650 [812]	1460 [1825]	2360 [2950]	1-1/2-12	730 [912]	1640 [2050]	2660 [3325]

### METRIC:

Coarse thread metric class 10.9 fasteners and class 10.0 nuts and through hardened flat washers, phosphate coated, Rockwell "C" 38-45. Use value in [ ] if using prevailing torque nuts

Nominal thread diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque)	Nominal Thread Diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque)
6	10 [14]	7 [10]	20	385 [450]	290 [335]
7	16 [22]	12 [16]	24	670 [775]	500 [625]
8	23 [32]	17 [24]	27	980 [1105]	730 [825]
10	46 [60]	34 [47]	30	1330 [1470]	990 [1090]
12	80 [125]	60 [75]	33	1790 [1950]	1340 [1450]
14	125 [155]	90 [115]	36	2325 [2515]	1730 [1870]
16	200 [240]	150 [180]	39	3010 [3210]	2240 [2380]
18	275 [330]	205 [245]			

## Hydraulic Fitting Torque Specifications

37 degree JIC, ORS, &ORB (REV. 10/97)

This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and capscrews assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 33% to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 capscrews. Use value in [ ] if using prevailing torque nuts

### TORQUE SPECIFIED IN FOOT POUNDS

#### PARKER® BRAND FITTINGS

Dash Size	37 Deg. JIC	O-ring (ORS)	O-ring boss
-4	11-13	15-17	13-15
-5	14-16	-----	21-23
-6	20-22	34-36	25-29
-8	43-47	58-62	40-44
-10	55-65	100-110	58-62
-12	80-90	134-146	75-85
-16	115-125	202-218	109-121
-20	160-180	248-272	213-237
-24	185-215	303-327	238-262
-32	250-290	-----	310-340

#### GATES® BRAND FITTINGS

Dash Size	37 Deg. JIC	O-ring (ORS)	O-ring boss
-4	10-11	10-12	14-16
-5	13-15	-----	-----
-6	17-19	18-20	24-26
-8	34-38	32-40	37-44
-10	50-56	46-56	50-60
-12	70-78	65-80	75-83
-14	-----	65-80	-----
-16	94-104	92-105	111-125
-20	124-138	125-140	133-152
-24	156-173	150-180	156-184
-32	219-243	-----	-----

#### AEROQUIP® BRAND FITTINGS

Dash Size	37 Deg. JIC	O-ring (ORS)	O-ring boss
-4	11-12	10-12	14-16
-5	15-16	-----	16-20
-6	18-20	18-20	24-26
-8	38-42	32-35	50-60
-10	57-62	46-50	75-80
-12	79-87	65-70	125-135
-14	-----	-----	160-180
-16	108-113	92-100	200-220
-20	127-133	125-140	210-280
-24	158-167	150-165	270-360

### Fasteners

Before operating your Loadall III, check all hardware for tightness. Use the Tightening Torque Table as a guide.

After a few hours of use, check entire machine and tighten any loose nuts or bolts. Daily or periodic checks should be made thereafter.

When replacing bolts, be sure to use fasteners of equal grade.

# Trouble Shooting

Troubleshooting should be performed by a trained technician. Landoll Corporation is not responsible for equipment that is improperly maintained. Contact an authorized Landoll Service Center for servicing.

## Electrical

Most electrical system problems show up as a burned out light or fuse, or inoperative electrical component. Wiring, grounds, or components may be at fault. Locate the symptom in this section that best identifies your electrical problem. Check out each possible problem under that symptom. If the problem cannot be located, see an automotive electrical specialist.

SYMPTOM	PROBLEM: REMEDY
NO LIGHTS	<b>Fuse blown:</b> replace fuse. <b>Connection at plug-in:</b> tighten connection. <b>Broken or corroded wires:</b> replace wire. <b>Ground wire loose:</b> clean and tighten ground. <b>Light burned out:</b> replace light.
LIGHTS FLICKERING OR DIM	<b>Vibration:</b> locate source of vibration and repair. <b>Short circuit:</b> replace fuse and try all accessories. If fuse blows right away, locate short and repair. <b>Loose connection:</b> check lamp sockets and ground connections. <b>Intermittent short:</b> locate short and repair. <b>Improper voltage:</b> check voltage regulator output.
FUSE BLOW-OUT OR CIRCUIT BREAKER TRIPPING	<b>Vibration:</b> locate source of vibration and repair. <b>Short circuit:</b> replace fuse and try all accessories. If fuse blows right away, locate short and repair.
REMOTE CONTROL WINCH: DOES NOT OPERATE	<b>Fuse blown:</b> replace fuse. <b>Defective switch:</b> repair and replace. <b>Broken or corroded wires:</b> replace wire. <b>Ground wire loose or bad:</b> clean and tighten ground or replace. <b>No power to remote:</b> turn clearance lights on or turn PTO on.
OPERATES ONE WAY ONLY	<b>Incorrect wiring:</b> confirm proper wiring. <b>Defective switch:</b> repair and replace. <b>Broken or corroded wires:</b> replace wire.
OPERATES WRONG DIRECTION	<b>Wires reversed on solenoid:</b> reverse wires

## Hydraulic System

Most hydraulic system failures follow the same pattern: a gradual or sudden loss of pressure or flow with a resulting loss of cylinder or motor power. Any one of the system's components may be at fault. By following step-by-step procedures, the trouble can be located in a short time.

SYMPTOM	PROBLEM: REMEDY
SYSTEM INOPERATIVE	<p><b>Not enough oil in system:</b> fill, check for leaks.</p> <p><b>Wrong oil in system:</b> change oil, see specifications.</p> <p><b>Filter dirty or clogged:</b> drain oil and replace filter.</p> <p><b>Hydraulic lines dirty or collapsed:</b> clean or replace as necessary.</p> <p><b>Air leaks in pump suction line:</b> repair or replace as necessary.</p> <p><b>Worn or dirty pump:</b> clean, repair or replace. Check for contaminated oil. Drain and flush.</p> <p><b>Badly worn components:</b> examine for internal leakage. Replace faulty components. Check for cause of wear.</p> <p><b>Leakage:</b> check all components, and relief valve for proper settings.</p> <p><b>Excessive load:</b> check unit specifications for load limits.</p> <p><b>Slipping or broken pump drive:</b> repair or replace couplings. Check for alignment.</p>
SYSTEM OPERATES ERRATICALLY	<p><b>Air in the system:</b> check suction side of system for leaks. Repair leaks.</p> <p><b>Cold oil:</b> allow ample warm-up time. Use proper weight oil for operating temperature.</p> <p><b>Dirty or damaged components:</b> clean or repair as needed.</p> <p><b>Restriction in filters or lines:</b> clean and/or replace filter or lines.</p> <p><b>Not enough oil in system:</b> fill and check for leaks.</p>
SYSTEM OPERATES SLOWLY	<p><b>Oil viscosity too high, or "cold oil":</b> Allow oil to warm up before operating.</p> <p><b>Low pump drive speed:</b> increase engine speed (check pump owners manual for specifications).</p> <p><b>Low oil level:</b> check reservoir and add oil as necessary.</p> <p><b>Air in system:</b> check suction side for leaks. Repair leaks.</p> <p><b>Badly worn pump, valves, cylinder:</b> repair or replace faulty component(s) as necessary.</p> <p><b>Restrictions in lines or filter:</b> clean and/or replace filter or lines.</p> <p><b>Improper adjustments:</b> check orifices, relief valves, etc. Adjust as necessary.</p> <p><b>Oil leaks:</b> tighten fittings. Replace seals, gaskets and damaged lines.</p>
SYSTEM OPERATES TOO FAST	<p><b>Wrong size or incorrectly adjusted restrictor:</b> Replace or adjust as necessary.</p> <p><b>Engine running too fast:</b> reduce engine speed.</p>
OVER HEATING OF OIL IN SYSTEM	<p><b>Oil passing thru relief valve for excessive time:</b> Return control valve to neutral when not in use.</p> <p><b>Incorrect, low, dirty oil:</b> use recommended oil. Fill reservoir with clean oil. Replace filter.</p> <p><b>Engine running too fast:</b> reduce engine speed.</p> <p><b>Excessive component internal leakage:</b> repair or replace component as necessary.</p> <p><b>Restriction in filters or lines:</b> clean and/or replace filter or lines.</p> <p><b>Insufficient heat radiation:</b> clean dirt and mud from reservoir and components.</p> <p><b>Malfunctioning component:</b> repair or replace.</p>



## Hydraulic System (continued)

SYMPTOM	PROBLEM: REMEDY
FOAMING OF OIL	<p><b>Incorrect, low, or dirty oil:</b> replace, clean or add oil as needed.</p> <p><b>Water in oil:</b> replace oil</p> <p><b>Air leaks:</b> check suction line and component seals for suction leaks. Replace defective parts.</p>
NOISY PUMP	<p><b>Low, incorrect, foamy oil:</b> replace, clean, or add oil as needed.</p> <p><b>Suction line plugged:</b> clean out obstruction or replace line. Flush system, replace filter.</p> <p><b>Pump damaged:</b> repair or place.</p>
LEAKY PUMP	<p><b>Damaged or worn shaft seal:</b> Replace seal and/or shaft and check for misalignment.</p> <p><b>Loose or broken parts:</b> Tighten or replace.</p>
CYLINDERS MOVE WITH CONTROL VALVE IN NEUTRAL POSITION	<p><b>Leaking cylinder seals or fittings:</b> Replace worn seals or fittings.</p> <p><b>Control valve not centering when released:</b> Check linkage for binding and repair.</p> <p><b>Valve damaged:</b> Repair or replace.</p> <p><b>Counterbalance Valve Worn or Contaminated:</b> Clean out obstruction or replace valve.</p>
CONTROL VALVE LEAKS	<p><b>Seals damaged or worn:</b> Replace.</p>
CYLINDER LEAKS	<p><b>Seals worn or damaged:</b> Replace.</p> <p><b>Rod damaged:</b> Replace.</p> <p><b>Barrel damaged:</b> Replace.</p>
CYLINDERS DO NOT FUNCTION, OR CREEP WITH PTO DISENGAGED	<p><b>Leaking fittings or cylinder seals:</b> Tighten loose fittings. Replace worn seals or fittings.</p> <p><b>Counterbalance valve or o-ring leak:</b> Replace defective component.</p>
SUBFRAME WILL NOT TILT	<p>Some units have a proximity switch so the subframe does not tilt until the bed is slide back far enough, so that metal plate is not directly above the proximity switch. Slide bed back far enough so plate is not above switch.</p> <p>The proximity switch should have indicator light on when PTO is engaged. The PTO wire engages a relay that powers the proximity switch. The proximity switch needs to have between 1/32" to 1/4" clearance with the metal plate at rear of bed to work properly. The magnet in the proximity switch allows the switch to send a signal to the hydraulic dump valve to dump oil to the hydraulic tank so no pressure builds up to tilt subframe.</p>



# Hydraulic Pressure Testing

**SET-UP:** With the Loadoll unloaded, install a 0 to 3000 psi pressure gauge between the pump pressure hose and the valve "IN" port, using a "T" fitting and close pipe nipple.

**TEST 1:** Start the vehicle engine and operate the PTO. Do not run vehicle engine more than 1200 RPM. Check pressure without operating any function.

From 25 to 300 psi:	NORMAL
Greater than 300 psi:	Restriction in valve, filter, or plumbing.
Less than 25 psi:	Weak pump or restriction in pressure line.

**NOTE:** If STEP 1 indicates normal pressures, proceed to STEP 2. STEP 1 pressures must be normal for the following tests!

**TEST 2:** Run the bed forward to the transport position. Hold the valve in the "BED ON" position to cause hydraulic oil to go through the pressure relief valve. Read pressure, then return the control valve to neutral. Do the same test on the tilt cylinder, checking it while the bed is in the transport position.

From 1800 to 2500 psi:	NORMAL
Greater than 2500 psi:	Pressure relief valve is set too high. Pressure relief valve is malfunctioning.
Less than 1800 psi:	*Internal cylinder leak. ** Pressure relief valve set too low. **Weak pump.

\* This may be the problem if one cylinder is at the normal pressure and the other is at a lower pressure.

\*\* This may be the problem if both cylinders show the same pressure.

**TEST 3:** Run the tilt cylinder until the bumper almost touches the ground. Return the cylinder to the transport position. Check pressures while the bed is tilting.

From 1000 to 2500 psi:	NORMAL
Greater than 2500 psi:	Restriction in return hoses or cylinder. Binding cylinder. Binding tilt mechanism.
Less than 1000 psi:	Weak pump. Pressure hose restriction. Internal cylinder leak.

**TEST 4:** Slide the bed cylinder back and then forward. Check pressures while the bed is moving out. The following pressures are with the bed installed.

From 300 to 900 psi:	NORMAL
Greater than 900 psi:	Restriction in return hoses or cylinder. Binding cylinder. Binding slide mechanism.
Less than 300 psi:	Weak pump. Pressure hose restriction. Internal cylinder leak.

**TEST 5:** Unhook the winch cable and lay it loosely on the bed. Operate the winch both directions. Check pressures while the winch is operating.

From 800 to 1200 psi:	NORMAL
Greater than 1200 psi:	Restriction in return hoses or winch motor. Binding winch motor. Binding winch gears or drum.
Less than 800 psi:	Weak pump. Pressure hose restriction. Internal motor leak.

### Miscellaneous Problems

BED CHATTERS OR SQUEALS  
WHEN SLIDING

**Rough slide tubes on subframe:** file or sand smooth and lubricate with dry silicone or other non dirt and grit collecting lubricant.

WORN NYLATRON SLIDES

When Nylatron wears enough that screws heads are rubbing on slide tubes, replace Nylatron slides.

**PIVOT PINS**  
EXCESSIVE WEAR

**Not lubricated:** grease pins at grease zerk.  
**Bent or broke subframe:** check for bows or cracks in sub-frame.

PREMATURE BREAKAGE

**Overweight loads and/or rough road conditions:** check weight limitations and adjust driving style to road conditions.

BED SLIDE STRIPS EXCESSIVE  
WEAR

**Lubricated with heavy grease:** remove grease and use dry silicone or other non dirt and grit collecting lubricant.  
**Rough slide tubes on subframe:** smooth tubes.

REMOTE WILL NOT COME ON

Some units require the clearance lights to be on to power the remote.

# Illustrated Parts List

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## Instructions for Ordering Parts

**\*\* Repair parts must be ordered through an authorized dealer \*\***

### DEALER INSTRUCTIONS FOR ORDERING PARTS FROM LANDOLL PARTS DISTRIBUTION CENTER

PHONE #: 800-423-4320 OR 785-562-5381

FAX #: 888-527-3909

ORDER ONLINE: [Dealer.landoll.com](http://Dealer.landoll.com)

### IDENTIFICATION PLATE

The Identification Plate, which lists the model and serial number of the equipment. It is located on the tilting sub-frame back behind the driver's side controls.

### SERIAL NUMBER NOMENCLATURE

The serial number for the Loadoll III is located on the identification plate.

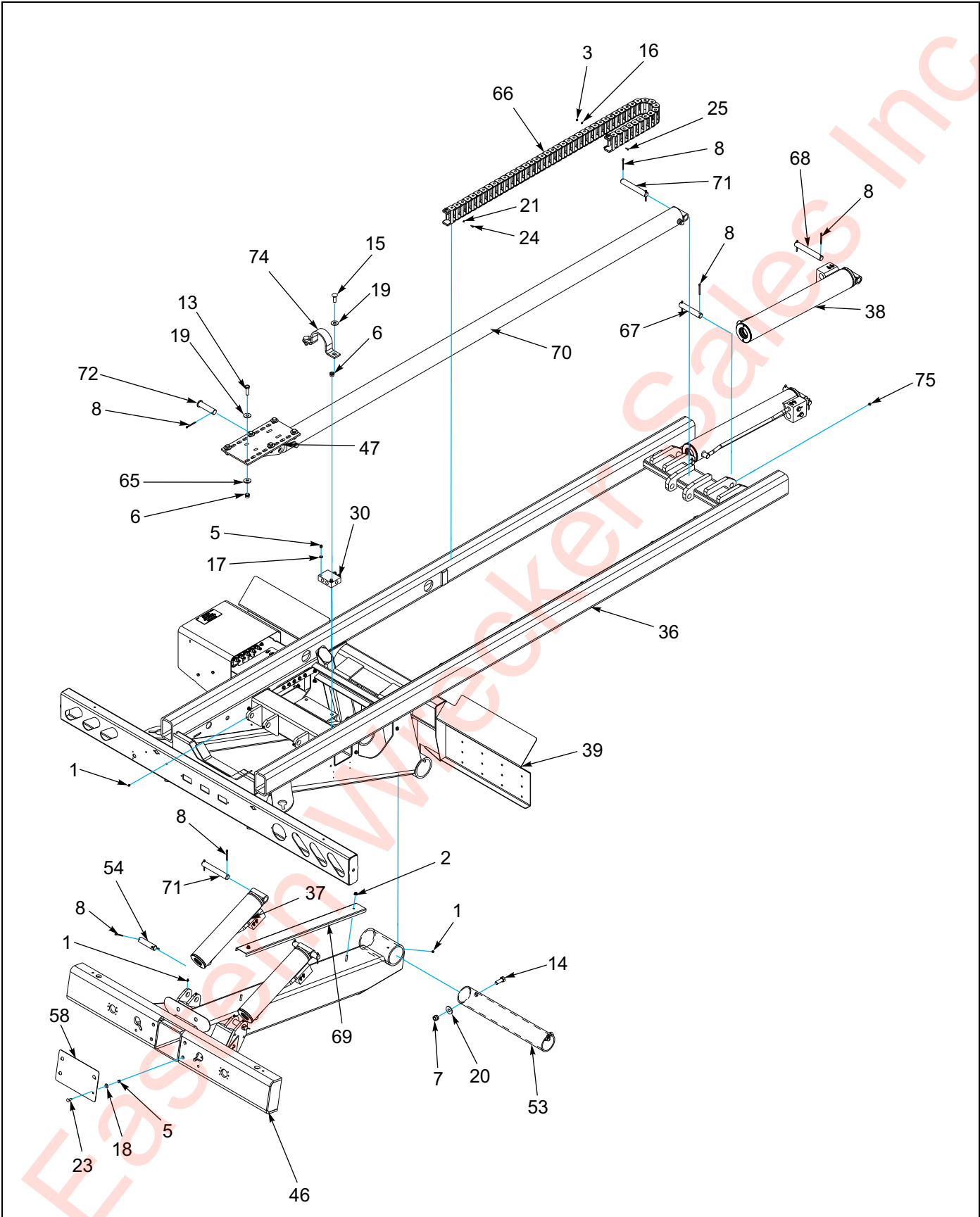


Figure 5-1: Sub-Frame, 22' and 24' Beds (1 of 2)

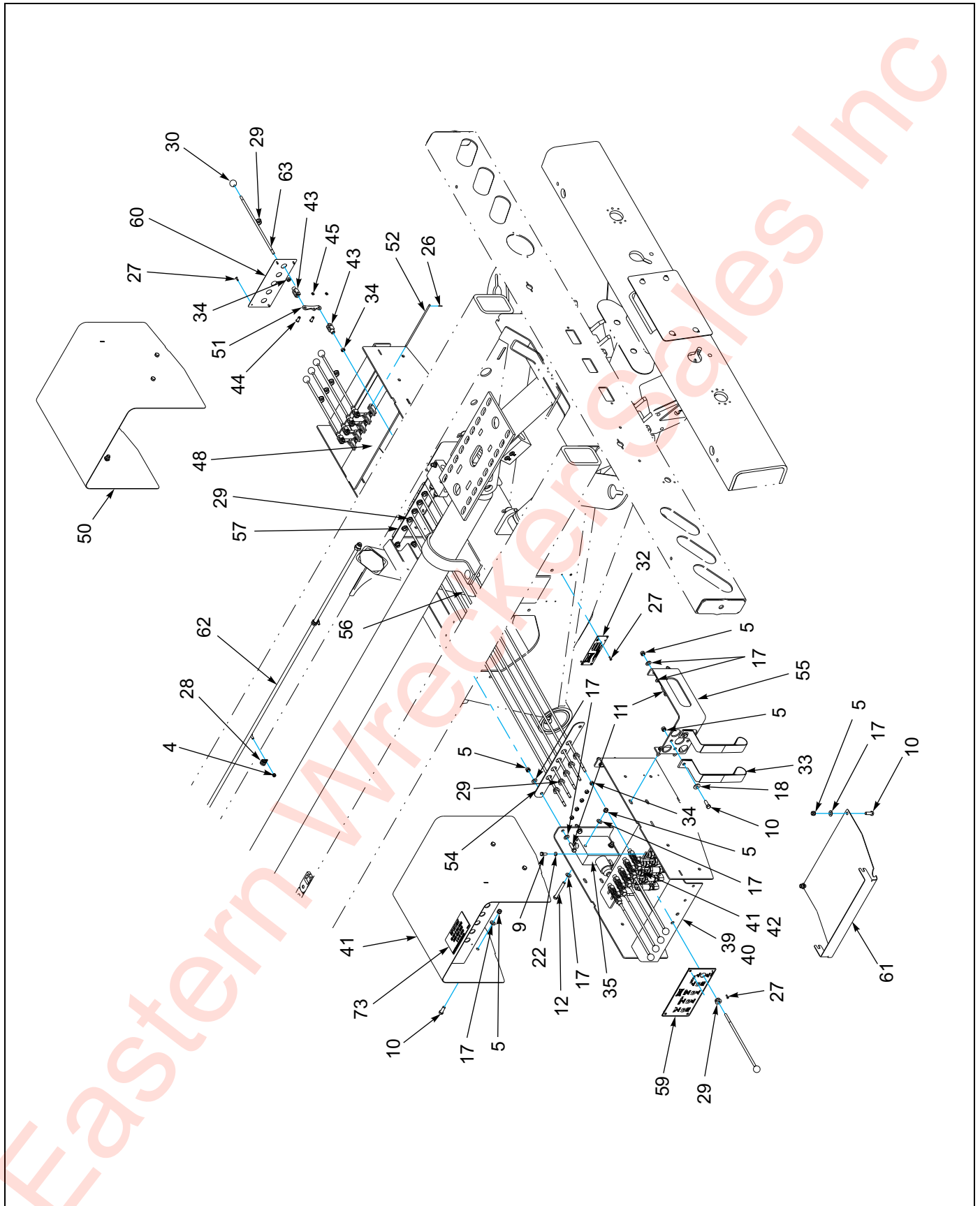


Figure 5-2: Sub-Frame, 22' and 24' Beds (2 of 2)

**Sub-Frame, 22' and 24' Beds**

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-298-010001-1	FITTING, GREASE 1/4 28 STR SHORT	11
2	1-510 -010001	NUT, 3/8-1/6 UNC FLANGE LOCK	2
3	1-512-010003-06	NUT,HEX,SLFLKG W/NYL #10 -24	4
4	1-512-010005-01	NUT,HEX,SLFLKG, 1/4 -20 UNC,GRB	5
5	1-512-010005-05	NUT, HEX, SLFLKG, 3/8-1/6 UNC, GRB	34
6	1-512-010005-13	NUT,HEX,SLFLKG,5/8-11 UNC,GRB	8
7	1-512-010005-15	NUT, HEX, SLFLKG, 3/4-10 UNC, GRB	2
8	1-557-0103 62-65	PIN, COTTER, 1/4 X 2 1/2	19
9	1- 654-010049-03	SCREW, HEX, 5/ 16-18 UNC X 3/4 GR5	4
10	1- 654-010051-05	SCREW, HEX, 3/8-16UNC X 1 GR5	14
11	1- 654-010051-06	SCREW,HEX,3/8-16UNC X 1-1/ 4 GR5	12
12	1- 654-010051-13	SCREW, HEX, 3/8-16UNC X 3 GR5	2
13	1-654 010059-05	SCREW,HEX,5/8-11UNC X 2 GR5	6
14	1-654-010061-05	SCREW, HEX, 3/ 4-10UNC X 2 GR5	2
15	1-654-010126-05	SCREW,RDH,SQ NK,5/8-11X 2	2
16	1-861 010032-03	WASHER, FLAT,Z P/ CD,#10	4
17	1-861-010032-10	WASHER, FLAT, ZP/CD, 3/8N	42
18	1-861-010032-11	WASHER, FLAT, ZP/CD, 3/8W	6
19	1-861-010032-19	WASHER, FLAT, ZP/CD, 5/8W	8
20	1-861-010032-21	WASHER,FLAT,ZP/CD,3/4 W	2
21	1-861-010034-07	WASHER,LKG,HLCL SPR, #10	4
22	1-861-010034-10	WASHER,LKG,HLCL SPR, 5/16	4
23	101864	SCREW,RDH,SQ NK,3/8-16 X 1-1/4	4
24	109394	SCREW,BHSC 10-24UNC X 5/8	4
25	109410	SCRE W,BHSC 10-24UNC X 3/4	4
26	114067	PIN,1/16 X 1/2 COTTER	2
27	1-242-0301-017	RIVET, BLIND .156 X 1/4 GRIP	12
28	125893	CLAMP, CABLE 1/2 SST	5
29	178444	BUSHING NYLON INSERT 9/16 ID	20
30	184585	VALVE, DUAL COUNTERBALANCE, 30 GPM	1
31	186877	KNOB BLACK 1" ROUND,M8 X 1.25 THD	5
32	192013	SERIAL NUMBER PLATE	1
33	192037	HANGING STRAP 5" DIA.	2
34	IDM8ER	NUT,M8-1 .25 HEX 8.8 ZP	15
35	200427	VALVE N.O. SOLENOID HYDR. 2 W	1
36	208099	FRAME, SUB -TILT WLDMT	1
37	208107	CYLINDER 4 X 16 W/ CB VALVE	2
38	208108	CYLINDER, 4-1/2 X 30 W/ CB VALVE	2
39	208118	FRAME -SUB NON -TILTING	REF
40	208120	SUPPORT, VALVE WLDMT HDCL RMT	1
41	208126	SHIELD VALVE WLDM'T	1
42	208131	VALVE 5 SPL REXROTH HDCL III	1
43	208133	CLEVIS END M8-1.25 SIZE	10
44	208134	PIN CLEVIS JOINT M8 X 1.25	10
45	208135	E RING CLEVIS JOINT MS 1.25	10
46	208146	HITCH WLDM'T MAIN SHORT	1
47	208160	ANCHOR CYL WLDM'T BOLT-ON	1
48	208179	SUPPORT, VALVE WLDMT HDCL RH	1

## Sub-Frame, 22' and 24' Beds

ITEM	PART NUMBER	DESCRIPTION	QTY.
49	208658	GALV OF 208099 (CL SUB FRM)	1
50	208871	VALVE SHIELD WLDMT, RH	1
51	208873	PLATE, CONTROL PIVOT	5
52	208875	PIN, VALVE HANDLE	1
53	209131	TUBE PIVOT MAIN TILT HD CL	1
54	209132	PIN 1-1/4" X 5-1/4" CYLINDER	2
55	210359	BRACKET TOOL HOLDER	1
56	210360	ROD HANDLE 61", M8 X 1.25 ENDS	5
57	210361	SUPPORT ROD HANDLE	2
58	210362	COVER HITCH OPENING	1
59	210364	PLACARD LH CL CONTROL PANEL	1
60	210366	PLACARD RH CL CONTROL PANEL	1
61	210367	PLATE BOTTOM COVER CONTROLS	2
62	210368	TUBE ASSY 1/2" X 120" #8 MJIC ENDS	1
63	210372	ROD HANDLE, 12, M8 X 1.25 ENDS	5
64	210376	GALV OF 20814 6 (HITCH WLDMT)	1
65	210398	WASHER 11/16" ID X 1-3/4" OD X 3/16" T	6
66	210435	SUPPORT E4-28 E-CHAIN 7'	1
67	212350	PIN CYL 1-1/4 IN DIA X 6	2
68	212351	PIN CYL 1-1/4 IN DIA X 8	2
69	3-181-010040	CLAMP, HOSE LONG	1
70	3-242-010185	CYLINDER 4 X 126 LOADOLL	1
71	3-557-010447	PIN, CYL 4 FRT	3
72	3-557-010494	PIN, CYL, ROD END, 1-1/4 WLDMT	1
73	3-573-010105	DECAL IMPORTANT BED FOWARD	1
74	3-755-010003	SUPPORT CYL MIDDLE	1
75	5410	FITTING, GREASE 1/4-28 90	4

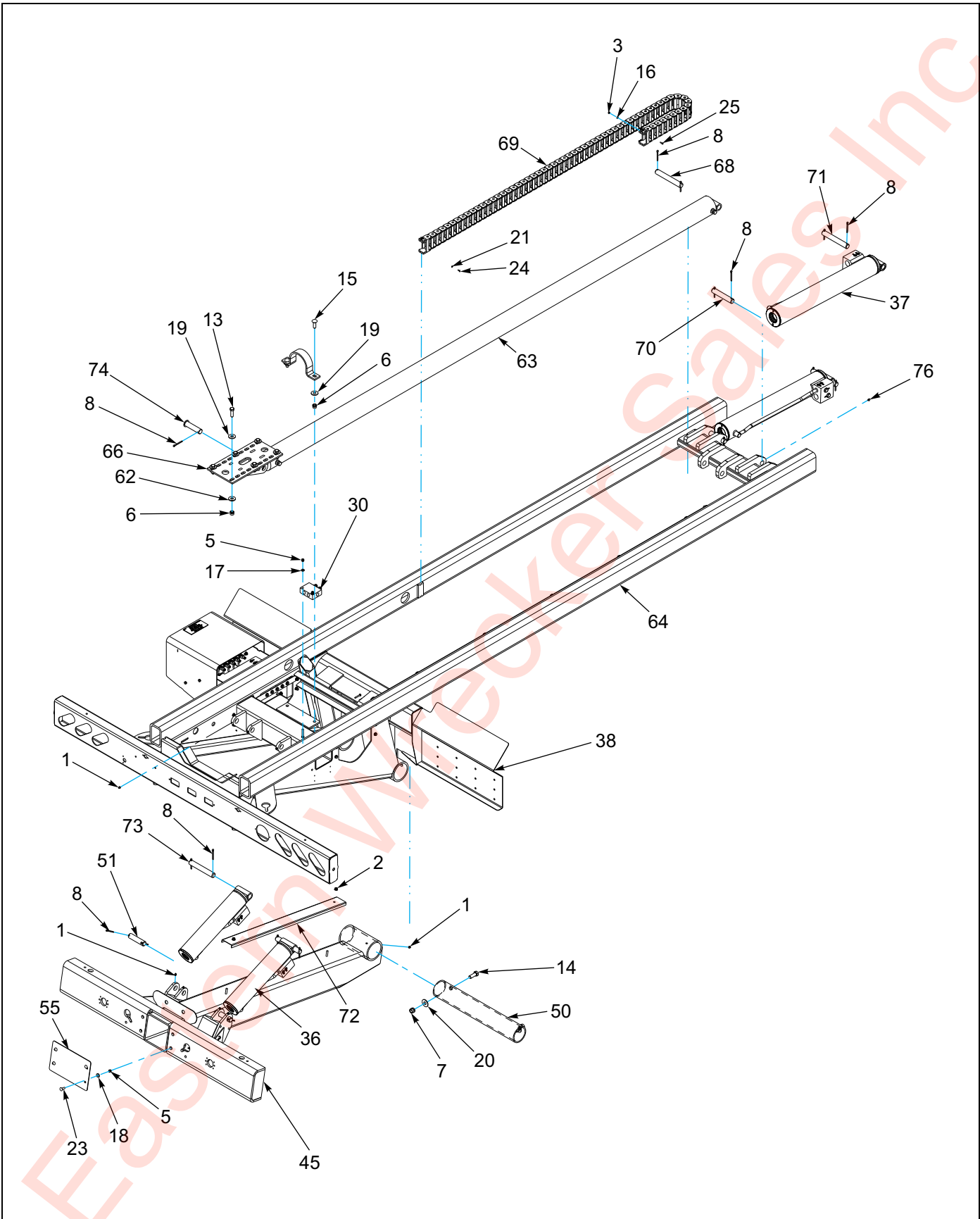


Figure 5-3: Sub-Frame, 26', 28' and 30' Beds (1 of 2)



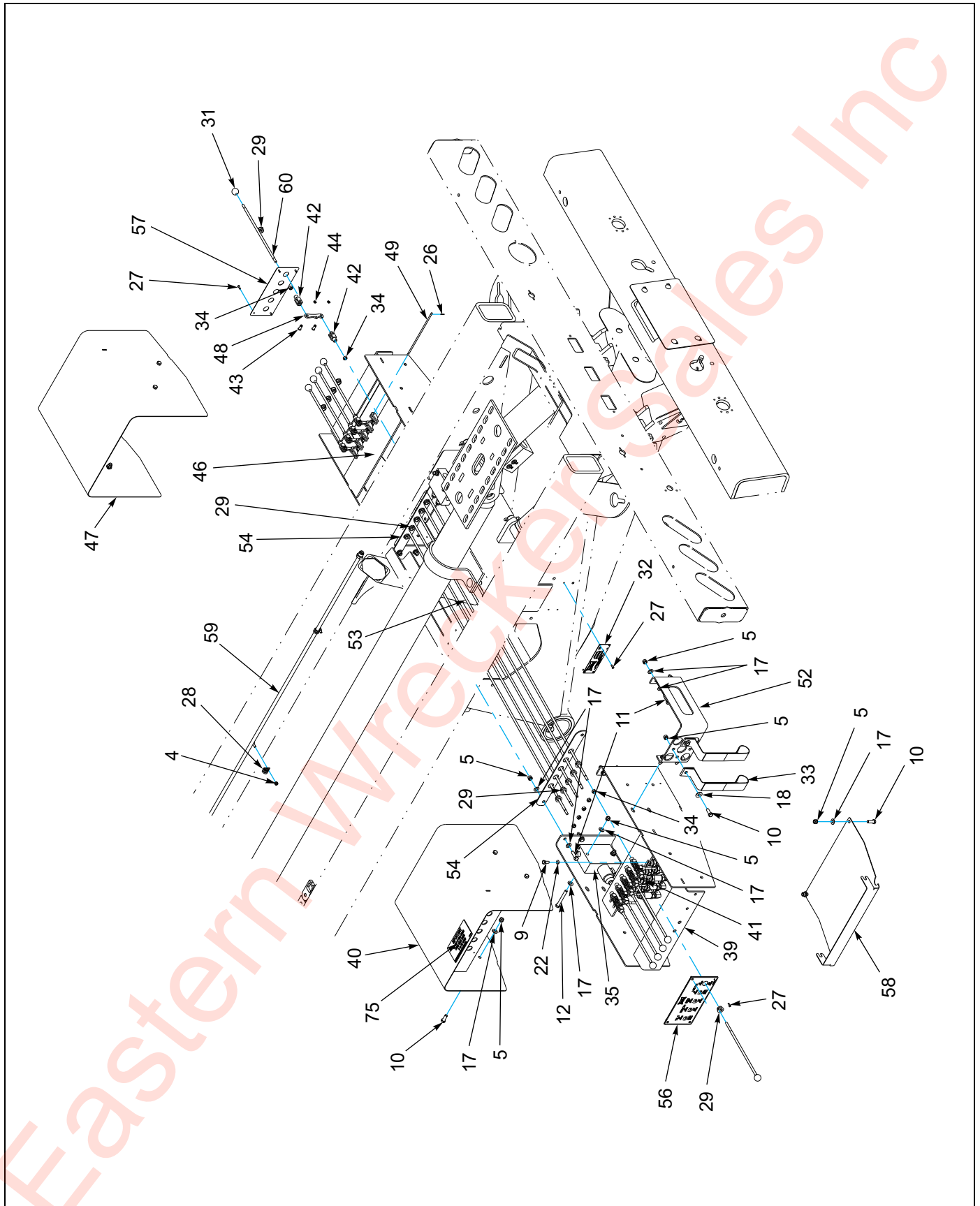


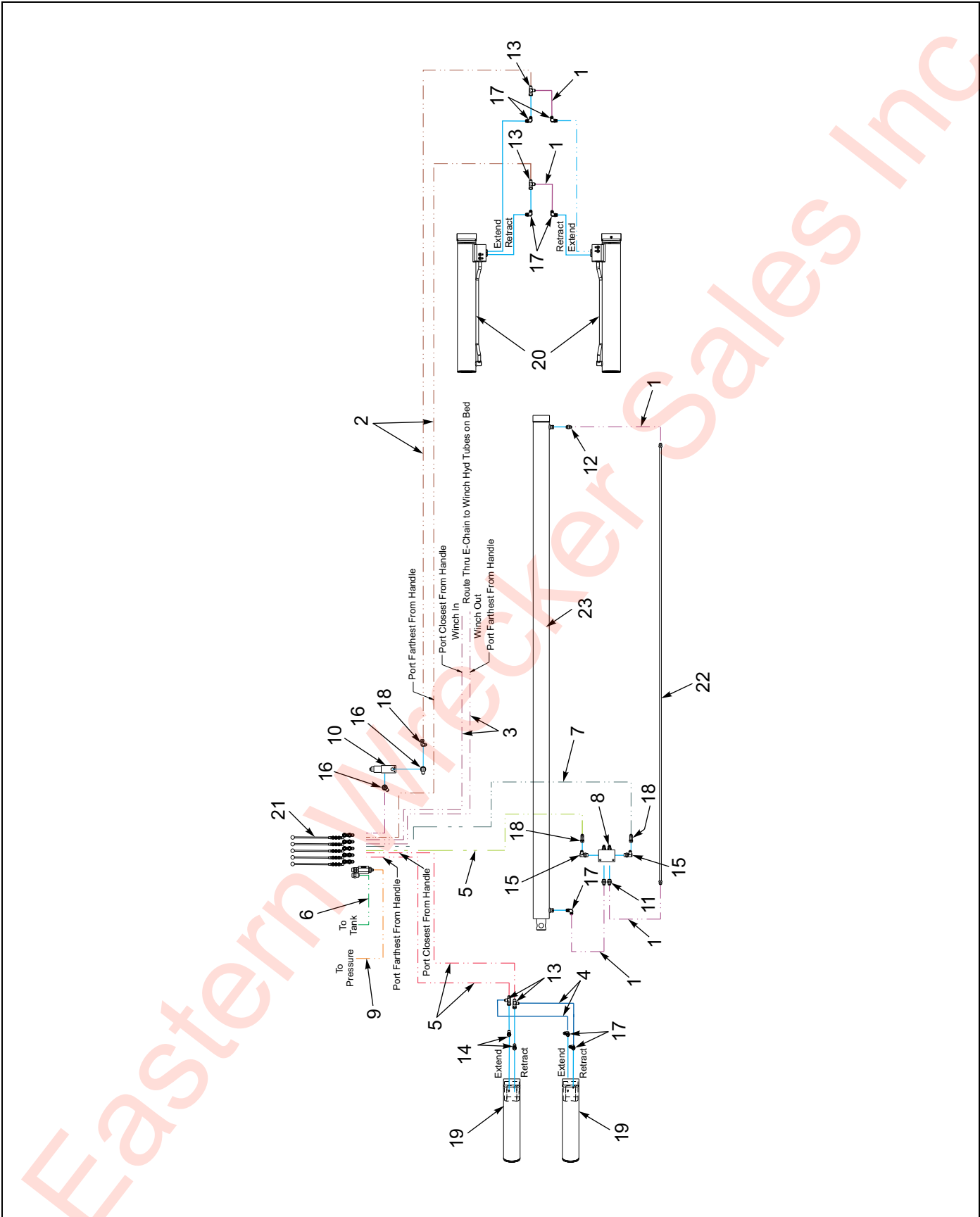
Figure 5-4: Sub-Frame, 26', 28' and 30' Beds (2 of 2)

**Sub-Frame, 26', 28' and 30' Beds**

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-298-010001-1	FITTING, GREASE 1/4-28 STR SHORT	11
2	1-510-010001	NUT, 3/8-1/6 UNC FLANGE LOCK	2
3	1-512-010003-06	NUT,HEX,SLFLKG W/NYL #10-24	4
4	1-512-010005-01	NUT,HEX,SLFLKG, 1/4-20 UNC,GRB	5
5	1-512-010005-05	NUT, HEX, SLFLKG, 3/8-1/6 UNC, GRB	34
6	1-512-010005-13	NUT,HEX,SLFLKG,5/8-11 UNC,GRB	8
7	1-512-010005-15	NUT, HEX, SLFLKG, 3/4-10 UNC, GRB	2
8	1-557-010362-65	PIN, COTTER, 1/4 X 2 1/2	19
9	1-654-010049-03	SCREW, HEX, 5/16-18 UNC X 3/4 GR5	4
10	1-654-010051-05	SCREW, HEX, 3/8-16UNC X 1 GR5	14
11	1-654-010051-06	SCREW,HEX,3/8-16UNC X 1-1/4 GR5	12
12	1-654-010051-13	SCREW, HEX, 3/8-16UNC X 3 GR5	2
13	1-654 010059-05	SCREW,HEX,5/8-11UNC X 2 GR5	6
14	1-654-010061-05	SCREW, HEX, 3/4-10UNC X 2 GR5	2
15	1-654-010126-05	SCREW,RDH,SQ NK,5/8-11 X 2	2
16	1-861 010032-03	WASHER, FLAT,Z P/ CD,#10	4
17	1-861-010032-10	WASHER, FLAT, ZP/CD, 3/8N	42
18	1-861-010032-11	WASHER, FLAT, ZP/CD, 3/8W	6
19	1-861-010032-19	WASHER, FLAT, ZP/CD, 5/8W	8
20	1-861-010032-21	WASHER,FLAT, ZP/CD, 3/4 W	2
21	1-861-010034-07	WASHER,LKG,HLCL SPR, #10	4
22	1-861-010034-10	WASHER,LKG,HLCL SPR, 5/16	4
23	101864	SCREW,RDH,SQ NK,3/8-16 X 1-1/4	4
24	109394	SCREW,BHSC 10-24UNC X 5/8	4
25	109410	SCRE W,BHSC 10-24UNC X 3/4	4
26	114067	PIN,1/16 X 1/2 COTTER	2
27	1-242-0301-017	RIVET, BLIND .156 X 1/4 GRIP	12
28	125893	CLAMP, CABLE 1/2 SST	5
29	178444	BUSHING NYLON INSERT 9/16 ID	20
30	184585	VALVE, DUAL COUNTERBALANCE, 30 GPM	1
31	186877	KNOB BLACK 1" ROUND,M8 X 1.25 THD	5
32	192013	SERIAL NUMBER PLATE	1
33	192037	HANGING STRAP 5" DIA.	2
34	IDM8ER	NUT,M8-1 .25 HEX 8.8 ZP	15
35	200427	VALVE N.O. SOLENOID HYDR. 2 W	1
36	208107	CYLINDER 4 X 16 W/ CB VALVE	2
37	208108	CYLINDER, 4-1/2 X 30 W/ CB VALVE	2
38	208118	FRAME -SUB NON -TILTING	REF
39	208120	SUPPORT, VALVE WLDMT HDCL RMT	1
40	208126	SHIELD VALVE WLDMT	1
41	208131	VALVE 5 SPL REXROTH HDCL III	1
42	208133	CLEVIS END M8-1.25 SIZE	10
43	208134	PIN CLEVIS JOINT M8 X 1.25	10
44	208135	E RING CLEVIS JOINT MS 1.25	10
45	208146	HITCH WLDMT MAIN SHORT	1
46	208179	SUPPORT, VALVE WLDMT HDCL RH	1
47	208871	VALVE SHIELD WLDMT, RH	1
48	208873	PLATE, CONTROL PIVOT	5

## Sub-Frame, 26', 28' and 30' Beds

ITEM	PART NUMBER	DESCRIPTION	QTY.
49	208875	PIN, VALVE HANDLE	1
50	209131	TUBE PIVOT MAIN TILT HD CL	1
51	209132	PIN 1-1/4" X 5-1/4" CYLINDER	2
52	210359	BRACKET TOOL HOLDER	1
53	210360	ROD HANDLE, 61", M8 X 1.25 ENDS	5
54	210361	SUPPORT ROD HANDLE	2
55	210362	COVER HITCH OPENING	1
56	210364	PLACARD LH CL CONTROL PANEL	1
57	210366	PLACARD RH CL CONTROL PANEL	1
58	210367	PLATE BOTTOM COVER CONTROLS	2
59	210368	TUBE ASSY 1/2" X 120" #8 MJIC ENDS	1
60	210372	ROD HANDLE, 12, M8 X 1.25 ENDS	5
61	210376	GALV OF 20814 6 (HITCH WLDMT)	1
62	210398	WASHER 11/16" ID X 1-3/4" OD X 3/16" T	6
63	210399	CYLINDER 4-1/2 X 150 LOADOLL	1
64	210419	SUB FRAME WLDMT LDOLL III LONG	1
65	210420	GALV OF 210419	1
66	210435	SUPPORT E4-28 E-CHAIN 7'	1
67	210427	SUPPORT CYLINDER 4-1/2" CYLINDER	1
68	210429	PIN 1-1/4" X 9	1
69	210436	SUPPORT E4-28 E-CHAIN 9'	1
70	212350	PIN CYL 1-1/4 IN DIA X 6	2
71	212351	PIN CYL 1-1/4 IN DIA X 8	2
72	3 18 010040	CLAMP, HOSE LONG	1
73	3-557-010447	PIN, CYL 4 FRT	2
74	3 557 010494	PIN, CYL., ROD END, 1-1/4 WLDMT	1
75	3573010105	DECAL IMPORTANT BED FOWARD	1
76	5410	FITTING, GREASE 1/4 28 90	4



## Sub-Frame Hydraulics

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-397-010301018	HOSE ASSY 1/2 X 18,SAE 37,STR -STR	6
2	1-397-010301194	HOSE ASSY 1/2 X 194 SAE 37 STR	2
3	1-397-010301208	HOSE ASSY 1/2 X 208 SAE 37 STR	2
4	111301	HOSE ASSY, 1/2 X 36,SAE 37,STR STR	2
5	124130	HYD HOSE ASSY 1/2 X 44 SAE 37 STR -STR	3
6	125558	HOSE ASSY, 3/4 X 188,SAE 37,STR	1
7	1410119	HOSE ASSY, 1/2 X 50, SAE 37, STR 90	1
8	184585	VALVE.DUAL COUNTERBALANCE, 30 GPM	REF
9	192034	HOSE ASSY 1/2 X 342,SAE 37,STR	1
10	200427	VALVE N,O, SOLENOID HYDR. 2W	REF
11	202702-10-8S	ADAPTER, #10 O-RING #8 TUBE	2
12	202702-8-8S	ADAPTER, #8 O-RING TO #8 TUBE	1
13	203102-8-8S	ADAPTER, TEE, 8JIC -8JIC -8S WVL	4
14	2061-8-8S	ADAPTER,4 5,#8 O-RING TUBE	2
15	2062-10-8S	ADAPTER, 90, #10 O-RING - #8 TUBE	2
16	2062-12-8S	ADAPTER, 90, 12 O-RING 8 TUBE	2
17	2062-8-8S	ADAPTER, 90, #8 O-RING -TUBE	7
18	2071-8-8S	ADAPTER 90 #8 FLR SWIVEL #8JIC	3
19	208107	CYLINDER 4 X 16 W/ CB VALVE	REF
20	208108	CYLINDER, 4 -1/2 X 30 W/ CB VALVE	REF
21	208131	VALVE 5 SPL REXROTH HDCL 111	REF
22	210368	TUBE ASSY 1/2" X 120" #8 MJIC ENDS	REF
23	3-242-010185	CYLINDER 4 X 126 LOADOLL (SHORT FRAME)	REF
23	210399	CYLINDER 4-1/2 X 150 LOADOLL (LONG FRAME)	REF

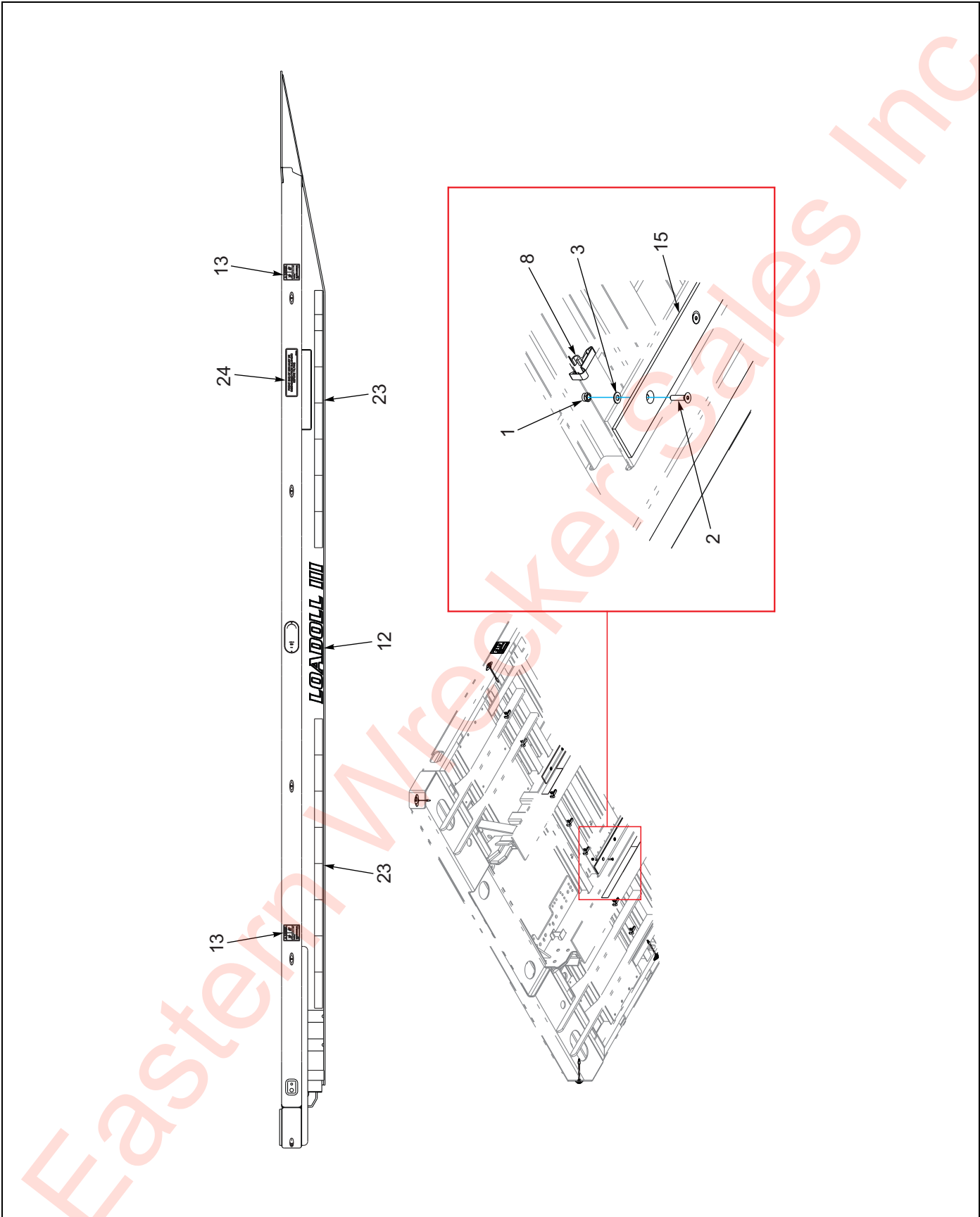


Figure 5-6: Short Bed Frame Assembly (1 of 2)

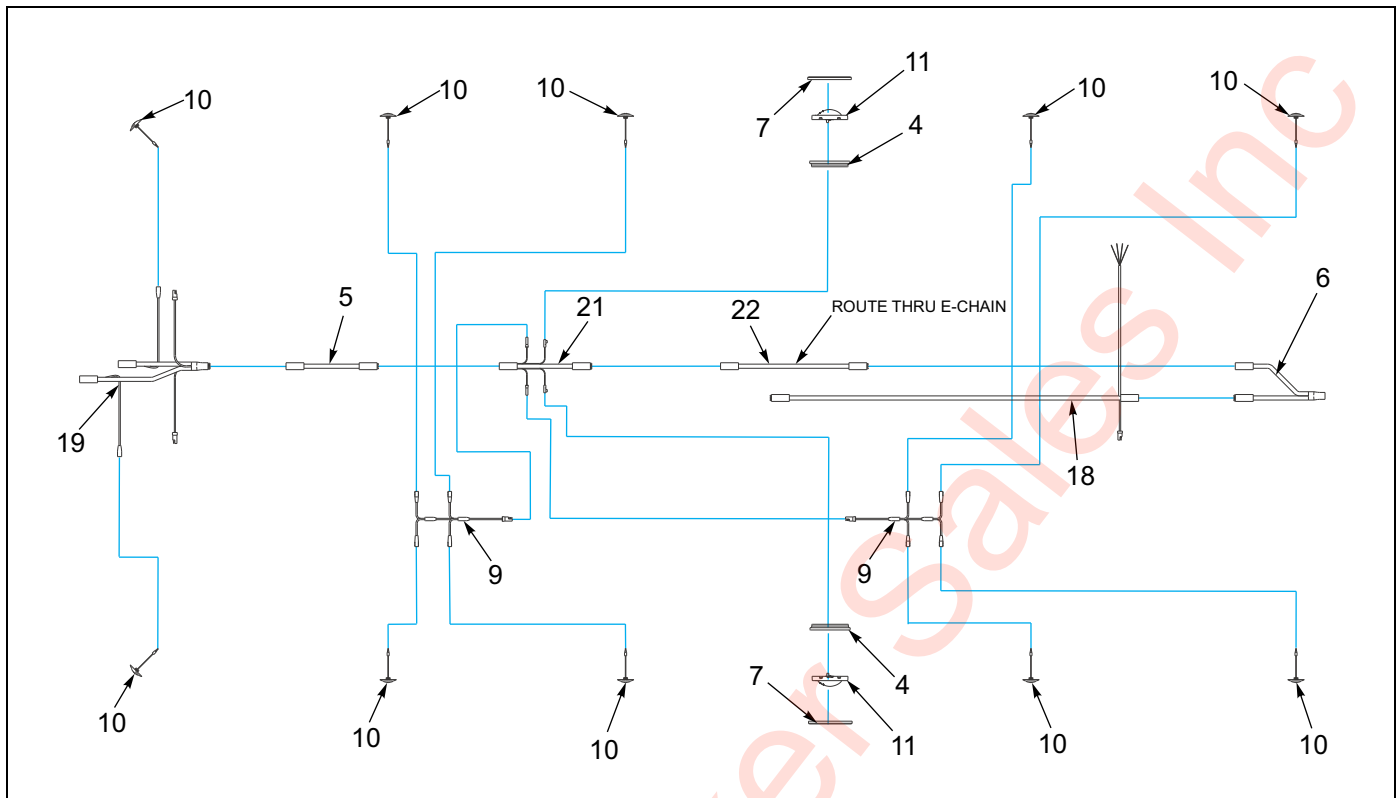


Figure 5-7: Short Bed Frame Assembly (2 of 2)

### Short Bed Frame Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-512 010005-03	NUT, HEX SLFLKG, 5/16-18 UNC GRB	50
2	1-654-010034-06	SCREW, HX SKT CTSK, 5/16 X 1-1/4	50
3	1-861-010032-08	WASHER, FLAT, ZP/CD 5/16N	50
4	143114	GROMMET OVAL GROTE	2
5	143167	HARNESS EXT 84IN GROTE	1
6	146929	HARNESS Y SPILITTER GROTE	1
7	180570	COVER CHROME OBLONG GROMMET	2
8	187833	CLIP HARNESS, CROSS-MEMBER	35
9	187855	HARNESS MARKER UPR DECK	2
10	187863	LIGHT YEL LED .75CL/MK CLEAR CB	10
11	187868	LIGHT MID-TURN LED CLEAR LENS	2
12	199189	DECAL LOADOLL III LARGE	2
13	2-573 010335	DECAL, DANGER, PINCHING	4
14	208100	BED WLDMT LOADOLL III 22'	1
15	208879	NYLATRON PAD, 120"	2
16	208880	NYLATRON PAD, 80"	2
17	209091	BED MOD BULKHEAD MOUNT	REF
18	209119	HARNESS MAIN REAR CL	REF
19	209120	HARNESS Y SPLITTER GROTE	REF
20	209130	GALV OF 208100 (BED WLDMT 22')	--
21	212343	HARNESS BED MAIN LOADOLL	1
22	212352	HARNESS EXT 7-COND 240 IN	1
23	3-573-010377	DECAL, 2" REFLEXITE TAPE, RD/WHT	272
24	3-573 010419	DECAL BED SLID BEFORE TILT	2



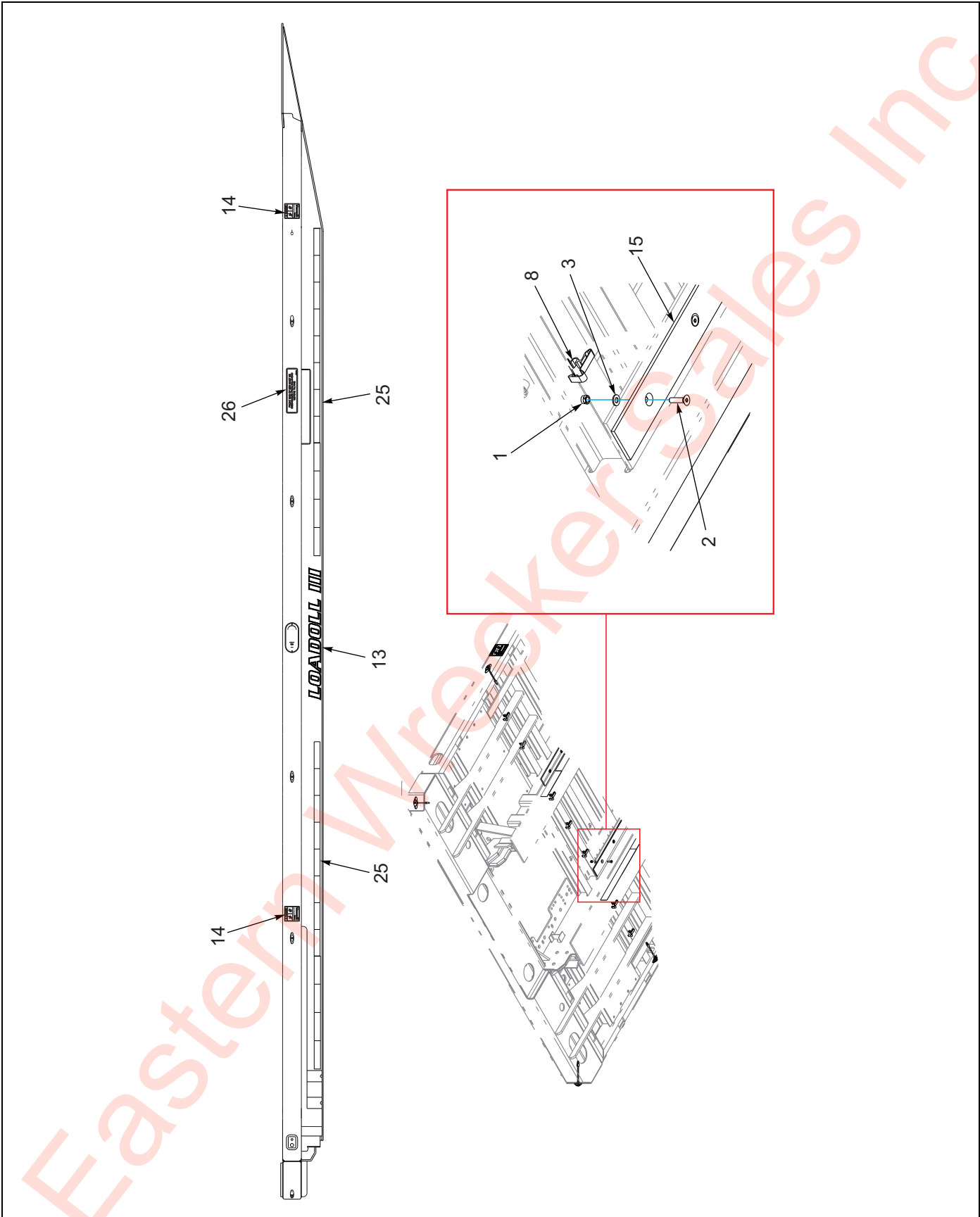


Figure 5-8: Long Bed Frame Assembly (1 of 2)

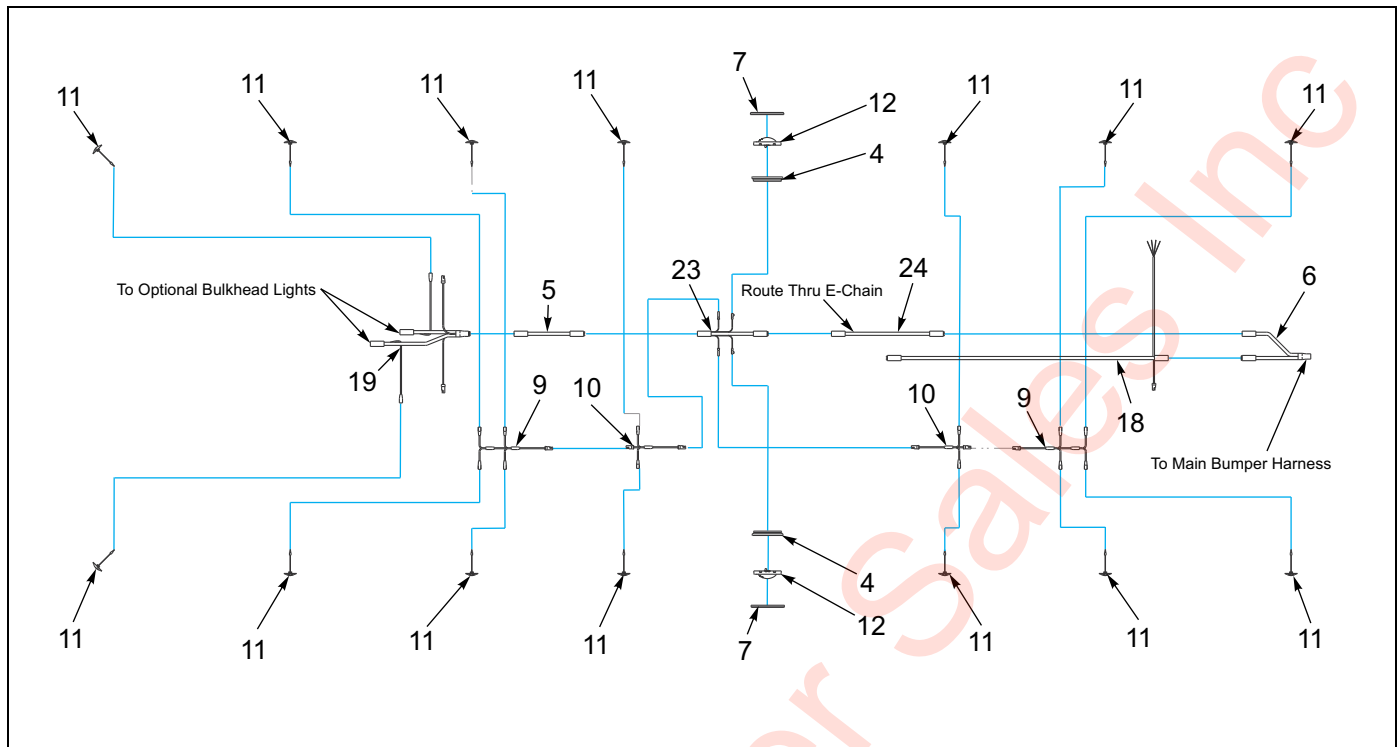


Figure 5-9: Long Bed Frame Assembly (2 of 2)

### Long Bed Frame Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-512 010005-03	NUT, HEX SLFLKG, 5/16-18 UNC GRB	68
2	1-654-010034-06	SCREW, HX SKT CTSK, 5/16 X 1-1/4	68
3	1-861-010032-08	WASHER, FLAT, ZP/CD 5/16N	68
4	143114	GROMMET OVAL GROTE	2
5	143167	HARNESS EXT 84IN GROTE	1
6	146929	HARNESS Y SPILITTER GROTE	1
7	180570	COVER CHROME OBLONG GROMMET	2
8	187833	CLIP HARNESS, CROSS-MEMBER	49
9	187855	HARNESS MARKER UPR DECK	2
10	187857	HARNESS MARKER ADDITION	2
11	187863	LIGHT YELLOW LED .75CL/MK CLEAR CB	14
12	187868	LIGHT MID-TURN LED CLEAR LENS	2
13	199189	DECAL LOADOLL III LARGE	2
14	2-573-010335	DECAL, DANGER, PINCHING	4
15	208879	NYLATRON PAD, 120"	2
16	208880	NYLATRON PAD, 80"	2
17	209091	BED MOD BULKHEAD MOUNT	REF
18	209119	HARNESS MAIN REAR CL	REF
19	209120	HARNESS Y SPLITTER GROTE	REF
20	210404	BED WLDMT 28' LOADOLL III	1
21	210405	GALV OF 210404 (BED WLDMNT 28')	1
22	210443	NYLATRON PAD, 72-1/8"	2
23	212343	HARNESS BED MAIN LOADOLL	1
24	212352	HARNESS EXT 7-COND 240 IN	1
25	3-573-010377	DECAL, 2" REFLEXITE TAPE, RD/WHT	400
26	3-573-010419	DECAL BED SLID BEFORE TILT	2

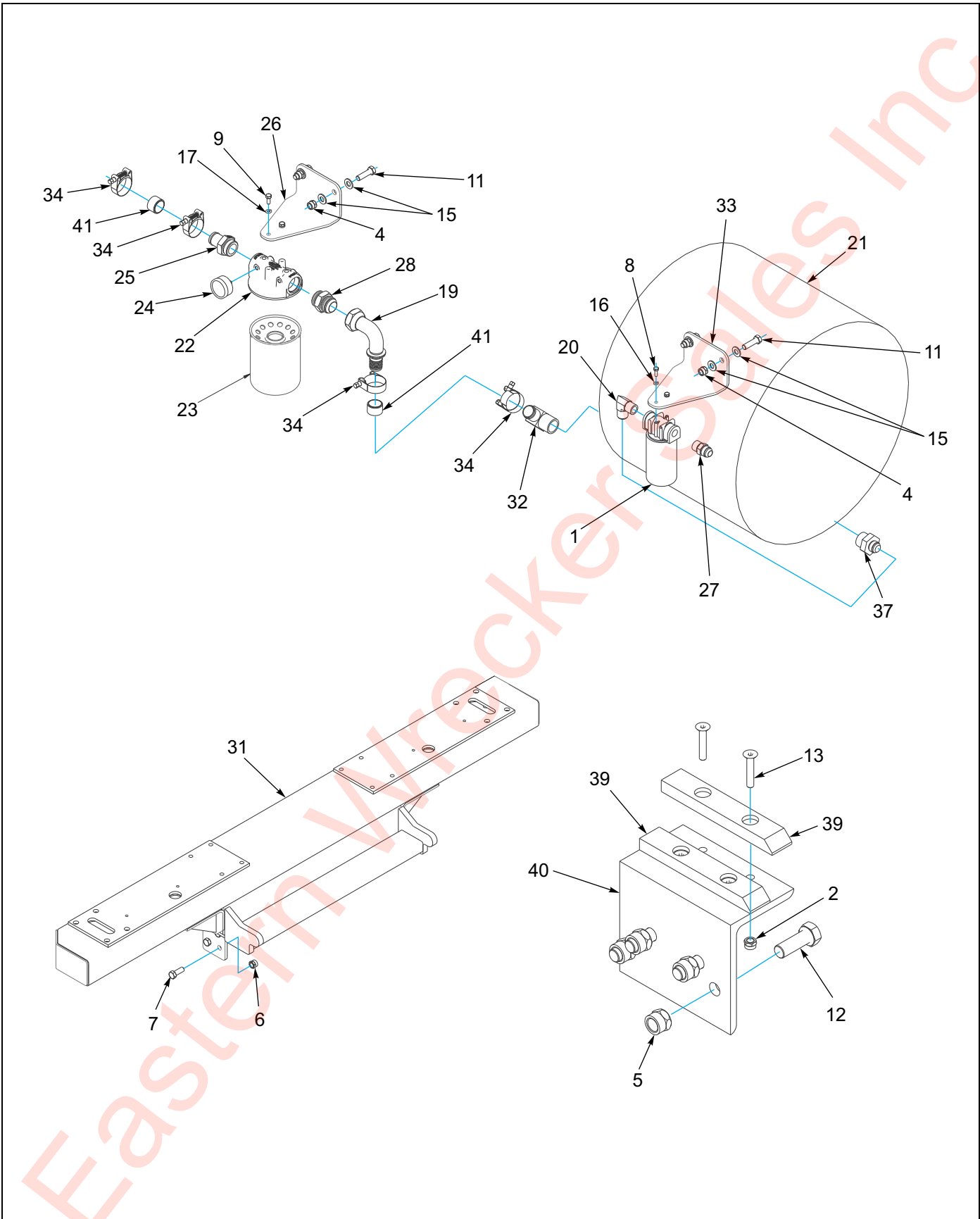


Figure 5-10: Frame Mounting Kit (1 of 2)

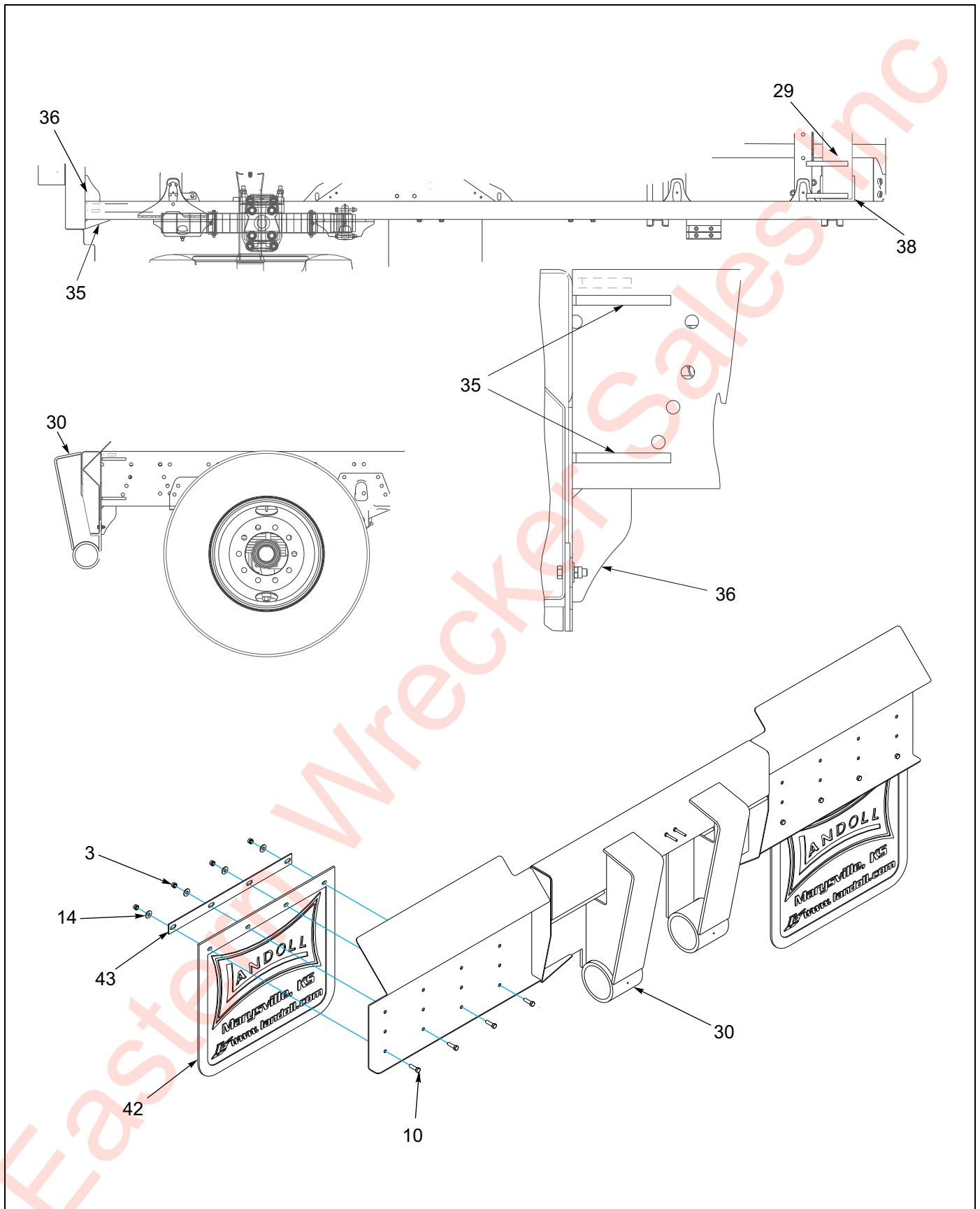


Figure 5-11: Frame Mounting Kit (2 of 2)

**Frame Mounting Kit**

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-295-010001	RETURN LINE FILTER	1
2	1-512-00005-03	NUT,HEX,SLFLKG,5/16-18 UNC,GRB	8
3	1-512-00005-05	NUT,HEX,SLFLKG,3/8-16 UNC,GRB	8
4	1-512-00005-10	NUT, HEX,SLFLKG, 1/2-20 UNF,GRB	4
5	1-512-00005-13	NUT,HEX,SLFLKG,5/8-11 UNC,GRB	8
6	1-512-00005-15	NUT,HEX,SLFLKG,3/4-10 UNC,GRB	8
7	1-654-00032-05	SCREW, HEX, 3/4-10UNC X 2 GR8	8
8	1-654-00047-04	SCREW, HEX, 1/4-20UNC X 3/4 GR5	2
9	1-654-00049-03	SCREW, HEX, 5/16-18UNC X 3/4 GR5	2
10	1-654-00051-06	SCREW, HEX, 3/8-16UNC X 1-1/ 4 GR5	8
11	1-654-00055-04	SCREW, HEX, 1/2-13UNC X 1-3/4 GR5	4
12	1-654-00059-04	SCREW, HEX, 5/8-11 UNC X 1-3/4 GR5	8
13	1-654-00121-08	SCREW,HX SKT CTSK,5/16 X 1-3/4 ZP	8
14	1-861-00032-11	WASHER, FLAT, ZP/CD, 3/8W	8
15	1-861-00032-14	WASHER,FLAT,ZP/CD, 1/2N	8
16	1-861-00034-09	WASHER,LKG,HLCL SPR, 1/4	2
17	1-861-00034-10	WASHER,LKG,HLCL SPR, 5/16	2
18	112813	HOSE ASSY, 3/4 X 38,SAE37.STR90	1
19	116330	FITTING, I.25F 37 - 1.25 BARB, 90	1
20	1408243	ELBOW, 90 SWIVEL, #12 PIPE - #12 TUBE	1
21	166735	HYDRAULIC TANK ALUM 35GAL	1
22	194420	SUCTION FILTER HEAD	1
23	194421	SUCTION FILTER	2
24	194422	SUCTION FILTER GAUGE	1
25	194423	ADAPTER 20 O-RING TO 1-1/4 H	1
26	194430	BRACKET FILTER SUPPORT	1
27	2021-12-12S	ADAPTER 3/4M PIPE X 1-1/16 MJIC	1
28	202702-20-20S	ADAPTER #20 O-RING #20 TUBE	1
29	208116	CROSSMEMBER, FRT WLDM 'T 21'	1
30	208118	FRAME SUB NON TILTING	1
31	208919	BULKHEAD BASE WLDMT, FRAME	1
32	208977	FITTING, 1-1/4 NPT - 1-1/4 BARB	1
33	208978	BRACKET FILTER SUPPORT	1
34	209878	HOSE CLAMP T-BOLT 25/32 X 1-3/4	4
35	210396	GUSSET REAR NON-TILT FRAME	4
36	210397	GUSSET BIG NON-TILT FRAME	4
37	210456	ADAPTER 1-1/4 MNPT X #12 JIC	1
38	212218	CROSSMEMBER, CYL GUSSET, WLDMT	2
39	3-311-012719	NYLATRON BED SUPPORT	4
40	3-311-012787	UNIVERSAL BED SUPPORT ANGLE	2
41	3-399-010001	HOSE, 1-1/4 I .D. SUCTION	19
42	3-485-010001	MUD FLAP 21"	2
43	3-762-010017	CLAMP.MUD FLAP	2

Table provided for general use.

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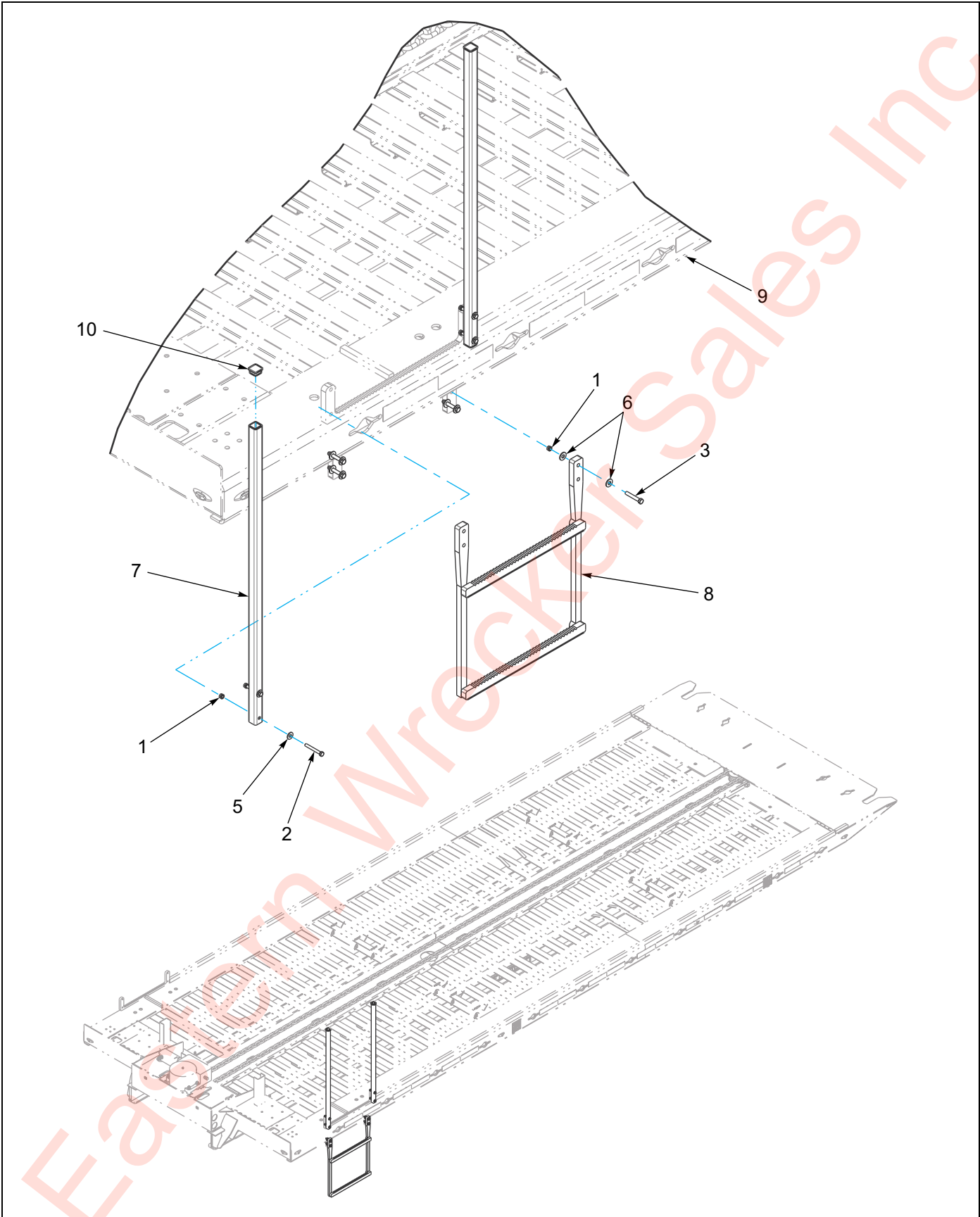


Figure 5-12: Ladder Assembly



## Ladder Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY.
	190703	LADDER ASSEMBLY	
1	1-512-010005-03	NUT, HEX, SLFLKG, 5/16-18UNC,GRB	8
2	1-654-010049-11	SCREW, HEX, 5/16-18UNC X 2-1/2 GR5	4
3	1-654-010051-10	SCREW, HEX 3/8-16UNC X 2-1/4 GR5	4
4	1-660-010006	SILICONE, CLEAR RTV	0.1
5	1-861-010032-09	WASHER, FLAT, ZP/CD, 5/16	4
6	1-861-010032-11	WASHER, FLAT, ZP/CD, 3/8	8
7	188287	HANDLE, STOW LADDER STOW	2
8	188910	LADDER WLDMY	1
9	188932	BED ASM 25.5 X 102 CHAINDRIVE	REF
10	208980	PLUG, SQUARE TUBE 1-1/4, 10-14 GA	2

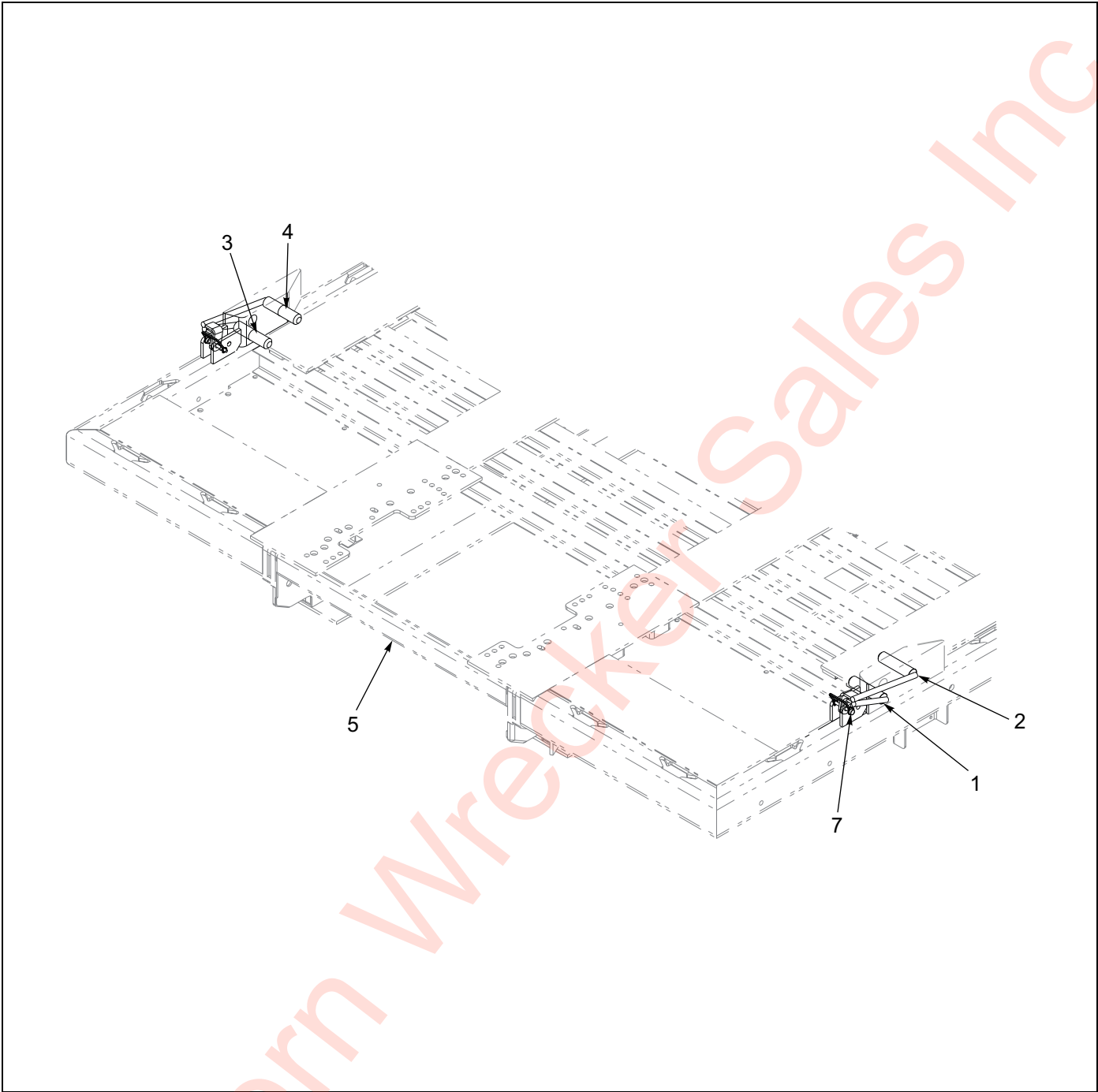


Figure 5-13: Lock Assembly

Lock Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	170394	PIN, WLDMT HOLD-DOWN LF	1
2	170395	PIN, WLDMT HOLD-DOWN LR	1
3	170396	PIN, WLDMT HOLD-DOWN RF	1
4	170397	PIN, WLDMT HOLD-DOWN RR	1
5	209077	WLDMT LOCK INSTL CONT	1
6	209078	GALV OF 209077 (LOCK INSTL)	1
7	516-22PTL	PIN, MUD FLAP	2

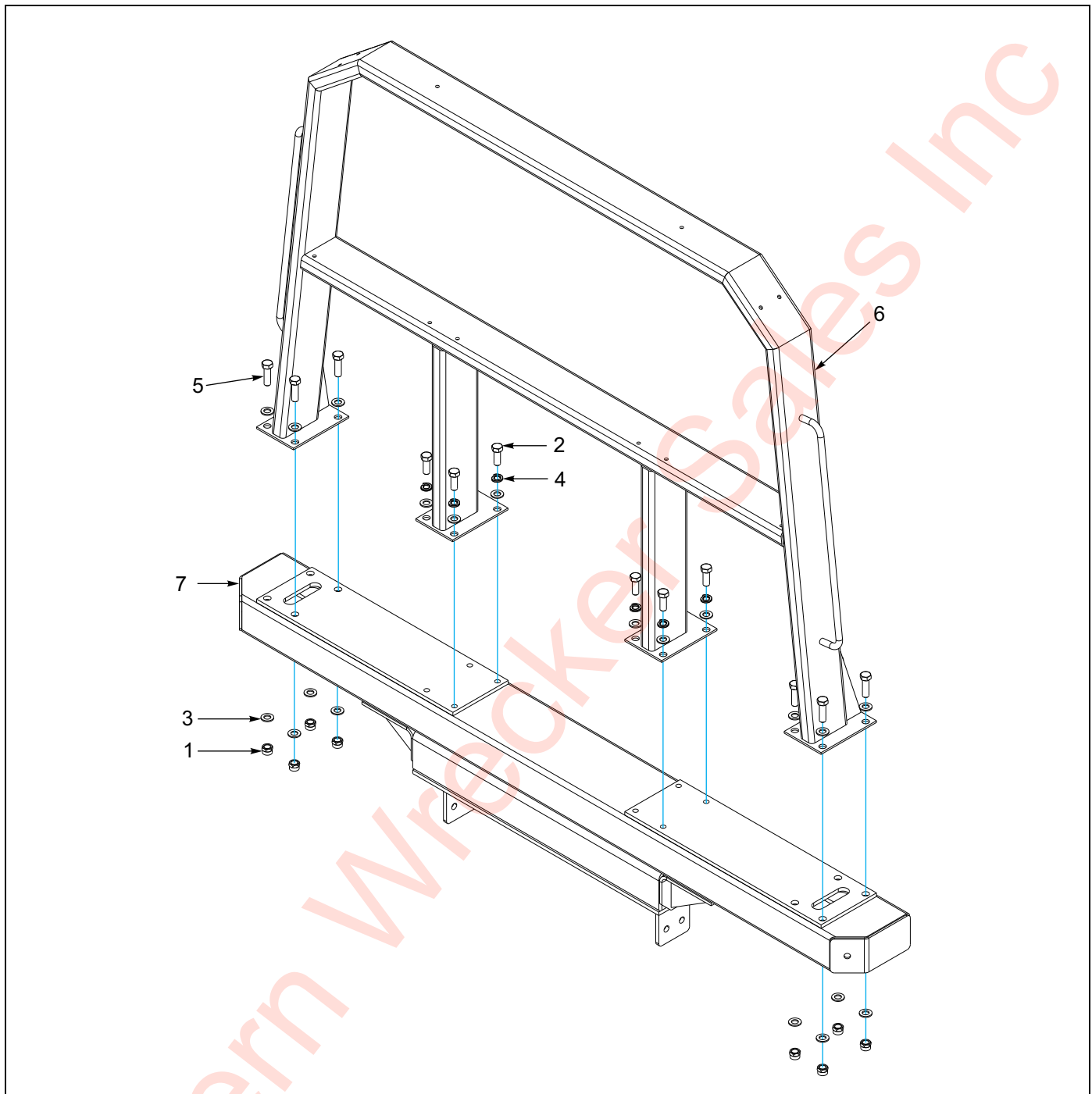


Figure 5-14: Bulkhead Assembly, Frame Mount

### Bulkhead Assembly, Frame Mount

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-512-010005-15	NUT,HEX,SLFLKG,3/4-10 UNC,GRB	8
2	1-654-010032-05	SCREW,HEX,3/4-10 UNC X 2 GR8	8
3	1-861-010032-20	WASHER,FLAT,ZP/CD,3/4N	24
4	1-861-010034-17	WASHER,LKG,HLCL SPR, 3/4	8
5	104483	SCREW, HEX, 3/4-10UNC X 2-1/2 GR8	8
6	208918	WLDMT, BULKHEAD	1
7	208919	BULKHEAD BASE WLDMT, FRAME	REF

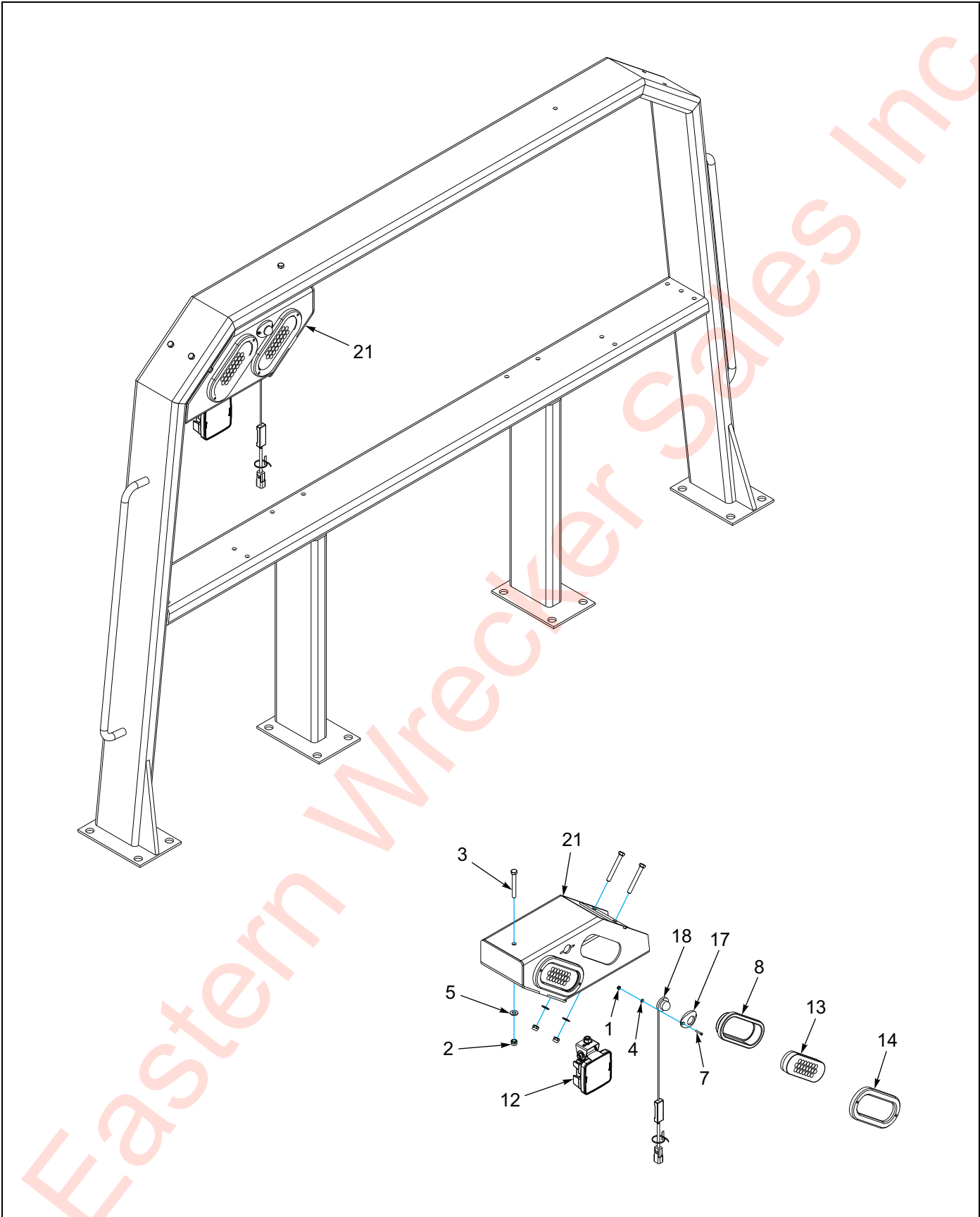


Figure 5-15: Lights Bulkhead (1 of 2)

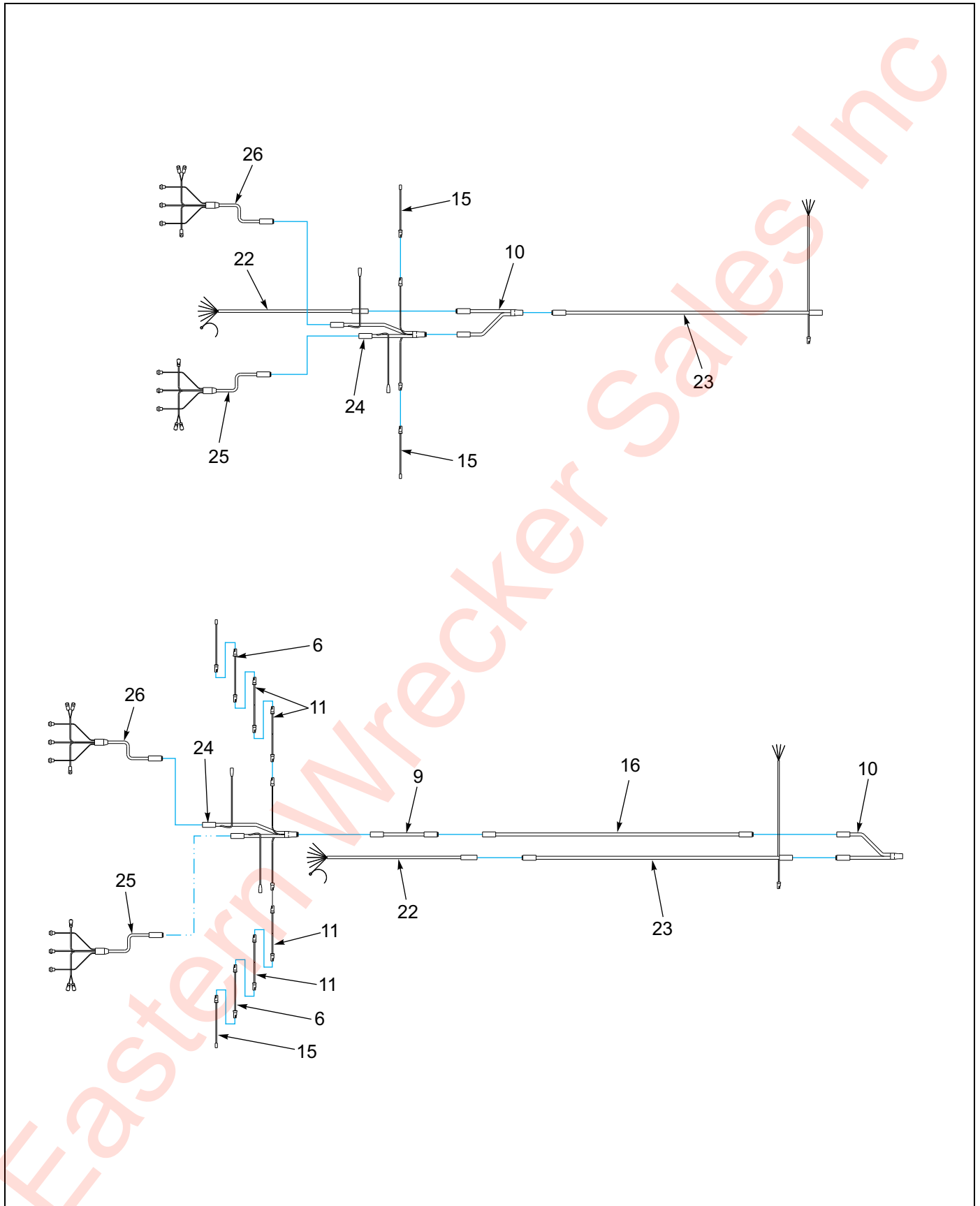


Figure 5-16: Lights Bulkhead (2 of 2)

## Lights Bulkhead

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-512-010003-02	NUT,HEX,SLFLKG W/NYL #6-32	4
2	1-512-010005-05	NUT,HEX,SLFLKG,3/8-16 UNC,GRB	6
3	1-654-010051-13	SCREW, HEX, 3/8-16UNC X 3 GR5	6
4	1-861-010032-01	WASHER,FLAT,ZP/CD,#6	4
5	1-86101003210	WASHER, FLAT, ZP/CD, 3/8N	6
6	3-368-010252	HARNESS ASSY BKHD LIGHT EXT	2
7	122187	SCREW,MACH,SLOT FILL,6-32 X 3/4	4
8	143114	GROMMET OVAL GROTE	4
9	143167	HARNESS EXT 84IN GROTE	REF
10	146929	HARNESS Y SPLITTER GROTE	1
11	150111	HARNESS 300 IN MALE/FEMALE BULLET	4
12	163996	LIGHT LED WHITE FLOOD LAMP	2
13	179902	LIGHT SIT IT RED CLEAR LENS GROTE	4
14	180570	COVER CHROME OBLONG GROMMET	4
15	190744	HARNESS 60" BRANCH WORK LIGHT	2
16	202088	HARNESS EXT 320 IN GROTE	REF
17	207291	BEZEL CHROME SURFACE MT VERTEX	2
18	207292	LIGHT ASSY STROBE/CONNECTOR	2
19	208918	WLDMT, BULKHEAD	REF
20	208964	BULKHEAD LIGHT BRKT WLDMT LH	1
21	208965	BULKHEAD LIGHT BRKT WLDMT RH	1
22	209118	HARNESS MAIN FRONT CLASSY	REF
23	209119	HARNESS MAIN REAR CL	REF
24	209120	HARNESS Y SPLITTER GROTE	REF
25	209121	HARNESS BULKHEAD LH CL	1
26	209122	HARNESS BULKHEAD RH CL	1

Table provided for general use.

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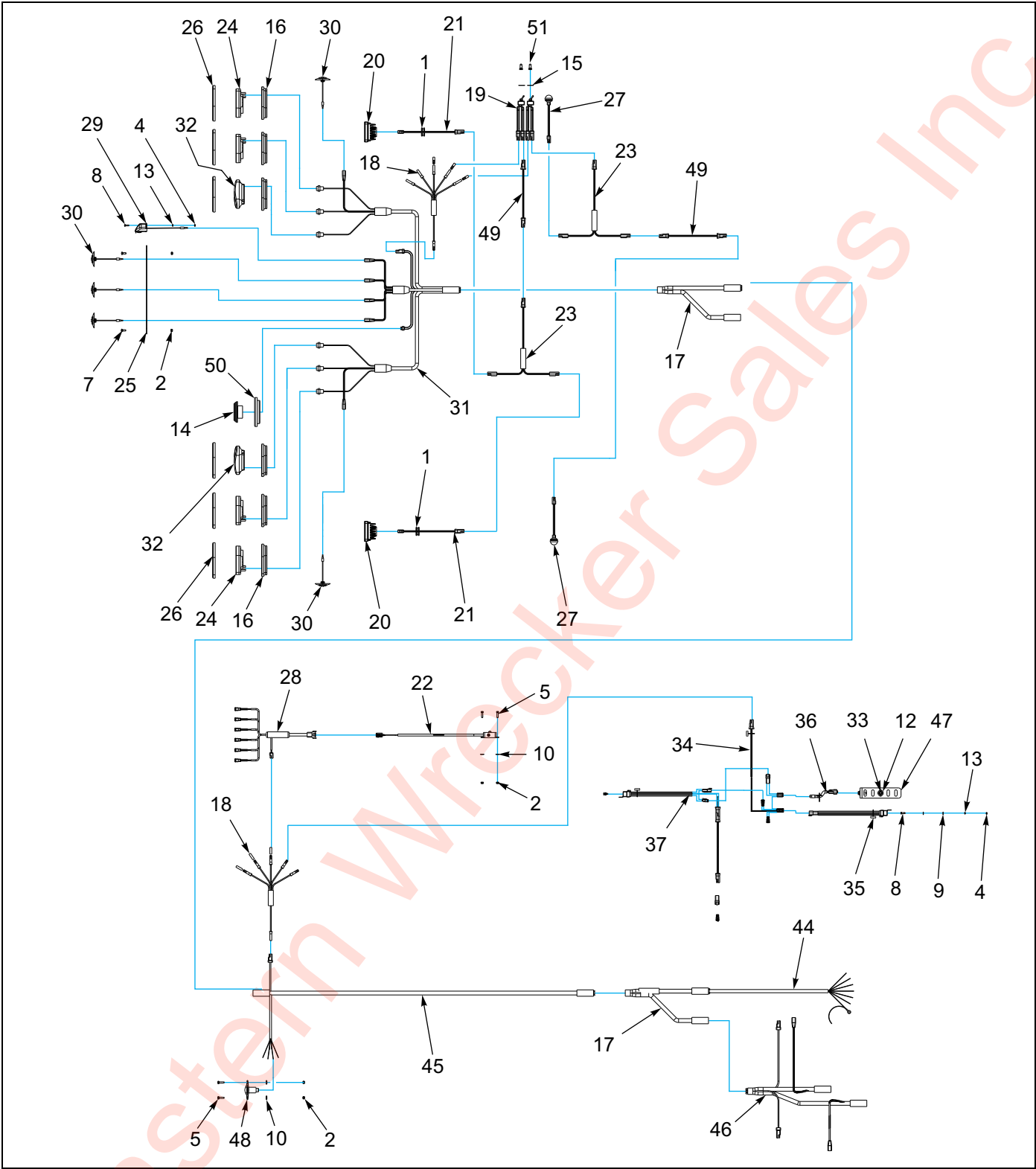


Figure 5-17: Wiring Harness - Short Bed

Wiring Harness, Short Bed

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-343-010006	GROMMET 7/8 IDX 1/4GWX 1-1/4GD	2
2	1-512-010005-01	NUT, HEX,SLFLKG, 1/4-20 UNC,GRB	6

## Wiring Harness, Short Bed

ITEM	PART NUMBER	DESCRIPTION	QTY.
3	1 -512-010005-05	NUT,HEX,SLFLKG,3/8-16 UNC,GRB	2
4	1- 512 010007-03	NUT, HEX, #10-24 UNC.GR2	4
5	1- 654 010047-06	SCREW, HEX, 1/4-20UNC X 1GR5	4
6	1-654-010051-06	SCREW, HEX, 3/8-16UNC X 1-1/4 GR5	2
7	1-654-0100158-1	SCREW,RDH,SQ NCK, 1/4 20 X 3/4	2
8	1- 656 010003051	SCREW.RD HD MACH #10 24 X 3/4	4
9	1 -861-010032-04	WASHER,FLAT,ZP/CD,3/16	4
10	1-861 010032-07	WASHER,FLAT,ZP/CD, 1/4W	4
11	1-861-010032-11	WASHER, FLAT, ZP/CD, 3/ 8W	4
12	1-861-010032-14	WASHER, FLAT, ZP/CD, 1/2N	2
13	1-861-010034-07	WASHER,LKG,HLCL SPR, # 10	4
14	123436	ALARM BACKUP 12 VOLT	1
15	130116	DECAL, ON/OFF LIGHT	2
16	143114	GROMMET OVAL GROTE	6
17	146929	HARNESS Y SPLITTER GROTE	2
18	150093	HARNESS 5 AUX BRANCHES GROTE	2
19	150117	TOGGLE SWITCH SEALED S.P.S. T.	2
20	163996	LIGHT LED WHITE FLOOD LAMP	2
21	164052	HARNESS 60" BRANCH WORK LIGHT	2
22	168650	RECEIVER/TRANS MACRO KAR CL	1
23	169853	HARNESS JUMPER T-POWER	2
24	179902	LIGHT S/T/T RED CLEAR LENS GROTE	4
25	179906	PLATE MTG MICRO ID LIGHTS	1
26	180570	COVER CHROME OBLONG GROMMET	6
27	185059	LIGHT, LED COURTESY, GROTE	2
28	186882	HARNESS.CONTROL VALVE,DUETSCH	1
29	187860	LIGHT ASSY LICENSE LED GROTE	1
30	187864	LIGHT RED LED . 75CL/MK CLEAR CB	5
31	190733	HARNESS REAR SILL CL	1
32	190735	LIGHT BACK-UP LED CLEAR	2
33	200431	SENSOR, PROXIMITY XL RANGE	1
34	201526	HARNESS, LOADOLL DEUTSCH	1
35	201527	CONNECTOR, SEALED RELAY, DEUTSCH	1
36	201528	HARNESS, PROXIMITY SWITCH, DEUTSCH	1
37	202759	HARNESS PTO TO RELAY	1
38	208099	FRAME, SUB TILT WLDMT	REF
39	208120	SUPPORT, VALVE WLDMT HDCL RMT	REF
40	208126	SHIELD VALVE WLDM'T	REF
41	208146	HITCH WLDM'T MAIN SHORT	REF
42	208179	SUPPORT, VALVE WLDMT HDCL RH	REF
43	208871	VALVE SHIELD WLDMT, RH	REF
44	209117	HARNESS MAIN FRONT CL	1
45	209119	HARNESS MAIN REAR CL	1
46	209120	HARNESS Y SPLITTER GROTE	1
47	210378	MOUNT SENSOR TILT STOP	1
48	3-272-010003	4 POLE ELECTRICAL FEMALE CONNECTOR	1
49	3-368-010252	HARNESS ASSY BKHD LIGHT EXT	2
50	40100	GROMMET 4 LAMP TRUCK LI TE	1
51	81264	RUBBER BOOT FOR ELECT SWITCH	2

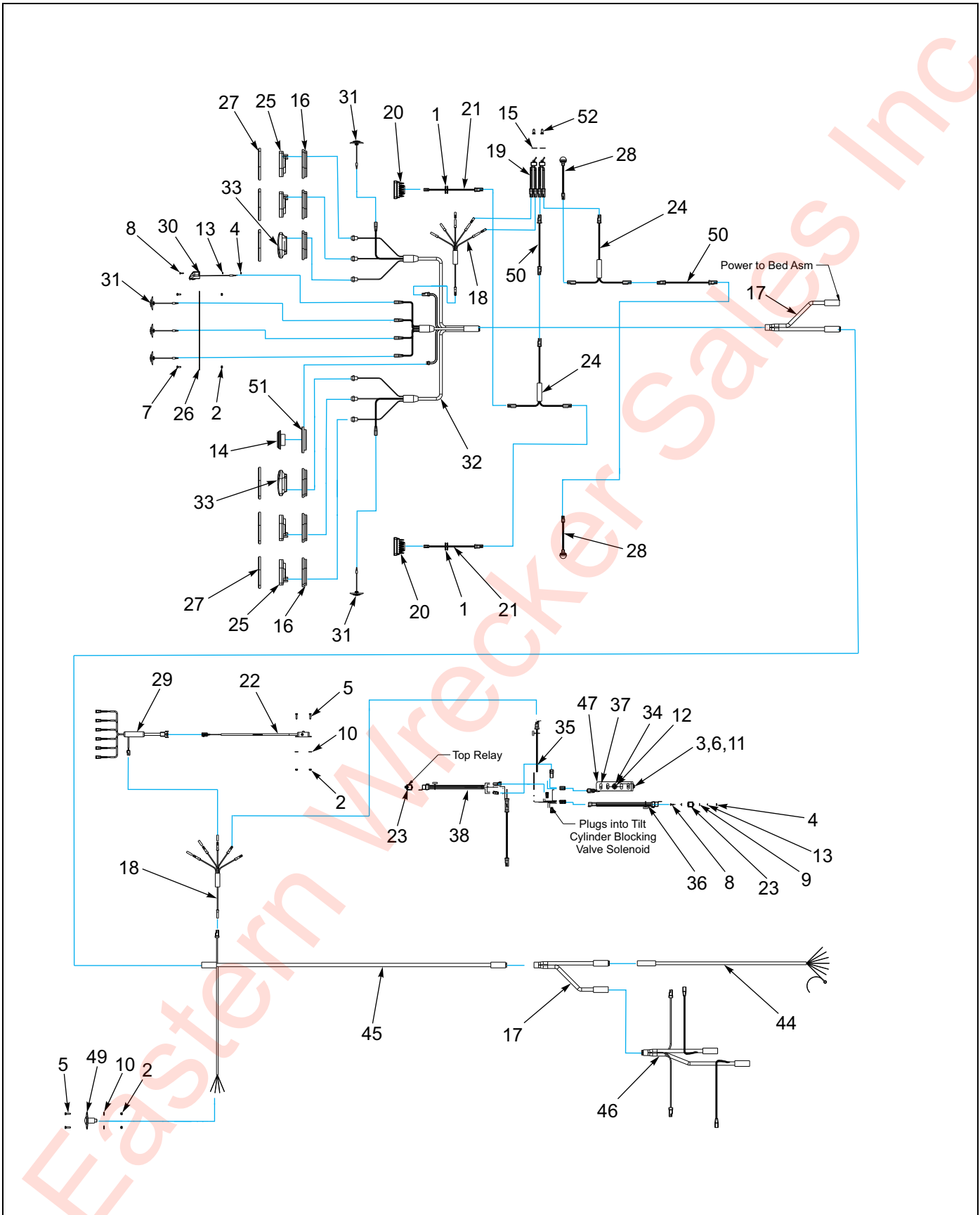


Figure 5-18: Wiring Harness Long Bed (1 of 2)

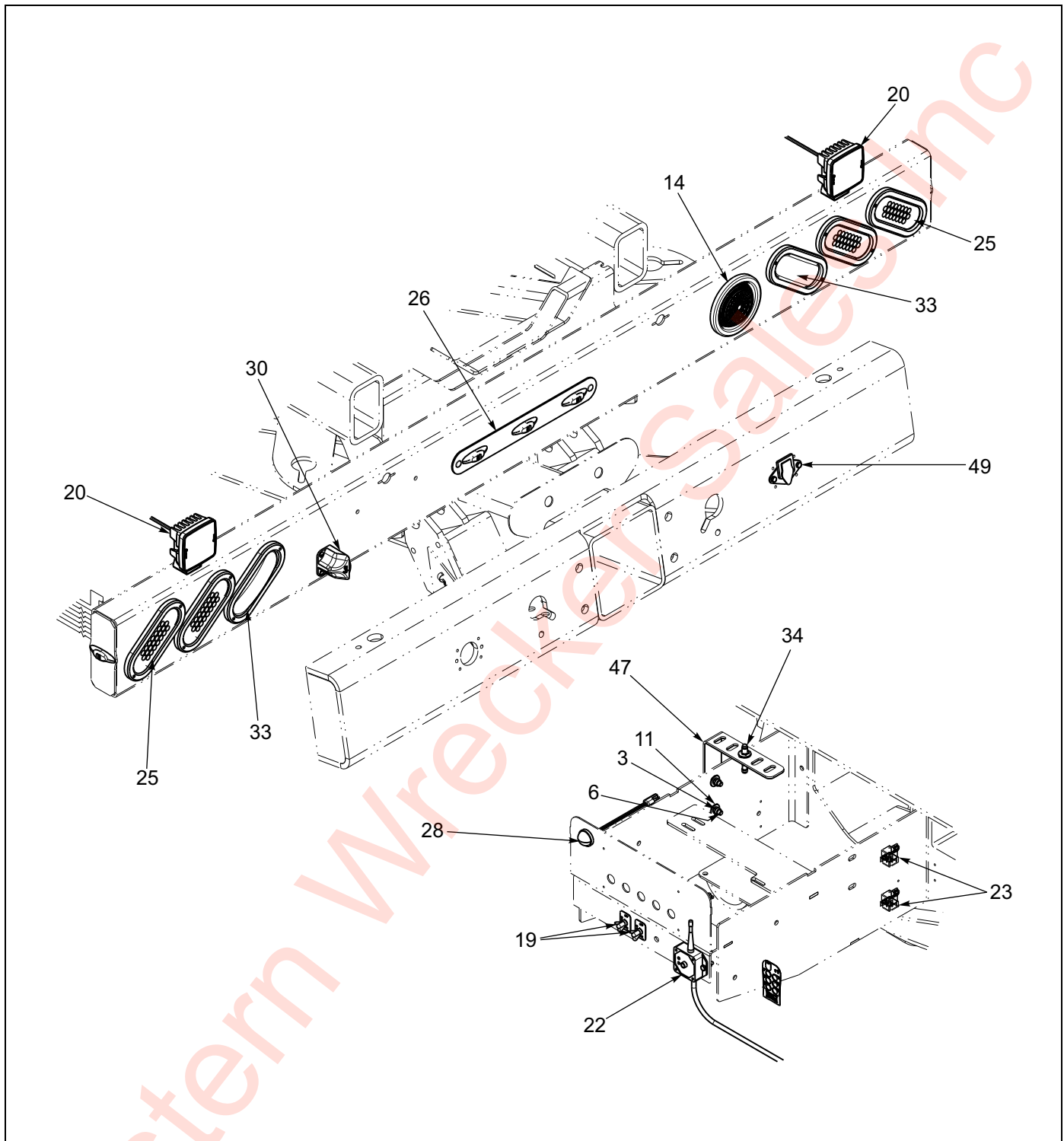


Figure 5-19: Wiring Harness Long Bed (2 of 2)

### Wiring Harness Long Bed

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-343-010006	GROMMET 7/8 IDX 1/4GWX 1-1/4GD	2
2	1-512-010005-01	NUT, HEX,SLFLKG, 1/4-20 UNC,GRB	6
3	1-512-010005-05	NUT,HEX,SLFLKG,3/8-16 UNC,GRB	2
4	1-512 010007-03	NUT, HEX, #10-24 UNC.GRB	4

**Wiring Harness Long Bed**

ITEM	PART NUMBER	DESCRIPTION	QTY.
5	1-654 010047-06	SCREW, HEX, 1/4-20UNC X 1GR5	4
6	1-654-010051-06	SCREW, HEX, 3/8-16UNC X 1-1/4 GR5	2
7	1-654-010158-1	SCREW,RDH,SQ NCK, 1/4 20 X 3/4	2
8	1-656 010003051	SCREW.RD HD MACH #10 24 X 3/4	4
9	1-861-010032-04	WASHER,FLAT,ZP/CD,3/16	4
10	1-861 010032-07	WASHER,FLAT,ZP/CD, 1/4W	4
11	1-861-010032-11	WASHER, FLAT, ZP/CD, 3/8W	4
12	1-861-010032-14	WASHER, FLAT, ZP/CD, 1/2N	2
13	1-861-010034-07	WASHER,LKG,HLCL SPR, #10	4
14	123436	ALARM BACKUP 12 VOLT	1
15	130116	DECAL, ON/OFF LIGHT	2
16	143114	GROMMET OVAL GROTE	6
17	146929	HARNESS Y SPLITTER GROTE	2
18	150093	HARNESS 5 AUX BRANCHES GROTE	2
19	150117	TOGGLE SWITCH SEALED S.P.S. T.	2
20	163996	LIGHT LED WHITE FLOOD LAMP	2
21	164052	HARNESS 60" BRANCH WORK LIGHT	2
22	168650	RECEIVER/TRANS MACRO KAR CL	1
23	169534	RELAY, SEALED, 20/40A, SPDT, 12V	REF
24	169853	HARNESS JUMPER T-POWER	2
25	179902	LIGHT S/T/T RED CLEAR LENS GROTE	4
26	179906	PLATE MTG MICRO ID LIGHTS	1
27	180570	COVER CHROME OBLONG GROMMET	6
28	185059	LIGHT, LED COURTESY, GROTE	2
29	186882	HARNESS.CONTROL VALVE,DUETSCH	1
30	187860	LIGHT ASSY LICENSE LED GROTE	1
31	187864	LIGHT RED LED . 75CL/MK CLEAR CB	5
32	190733	HARNESS REAR SILL CL	1
33	190735	LIGHT BACK-UP LED CLEAR	2
34	200431	SENSOR, PROXIMITY XL RANGE	1
35	201526	HARNESS, LOADOLL DEUTSCH	1
36	201527	CONNECTOR, SEALED RELAY, DEUTSCH	1
37	201528	HARNESS, PROXIMITY SWITCH, DEUTSCH	1
38	202759	HARNESS PTO TO RELAY	1
39	208120	SUPPORT, VALVE WLDMT HDCL RMT	REF
40	208126	SHIELD VALVE WLDMT	REF
41	208146	HITCH WLDMT MAIN SHORT	REF
42	208179	SUPPORT, VALVE WLDMT HDCL RH	REF
43	208871	VALVE SHIELD WLDMT, RH	REF
44	209117	HARNESS MAIN FRONT CL	1
45	209119	HARNESS MAIN REAR CL	1
46	209120	HARNESS Y SPLITTER GROTE	1
47	210378	MOUNT SENSOR TILT STOP	1
48	210419	SUB FRAME WLDMT LOADOLL III LONG	REF
49	3-272-010003	4 POLE ELECTRICAL FEMALE CONNECTOR	1
50	3-368-010252	HARNESS ASSY BKHD LIGHT EXT	2
51	40100	GROMMET 4 LAMP TRUCK LI TE	1
52	81264	RUBBER BOOT FOR ELECT SWITCH	2

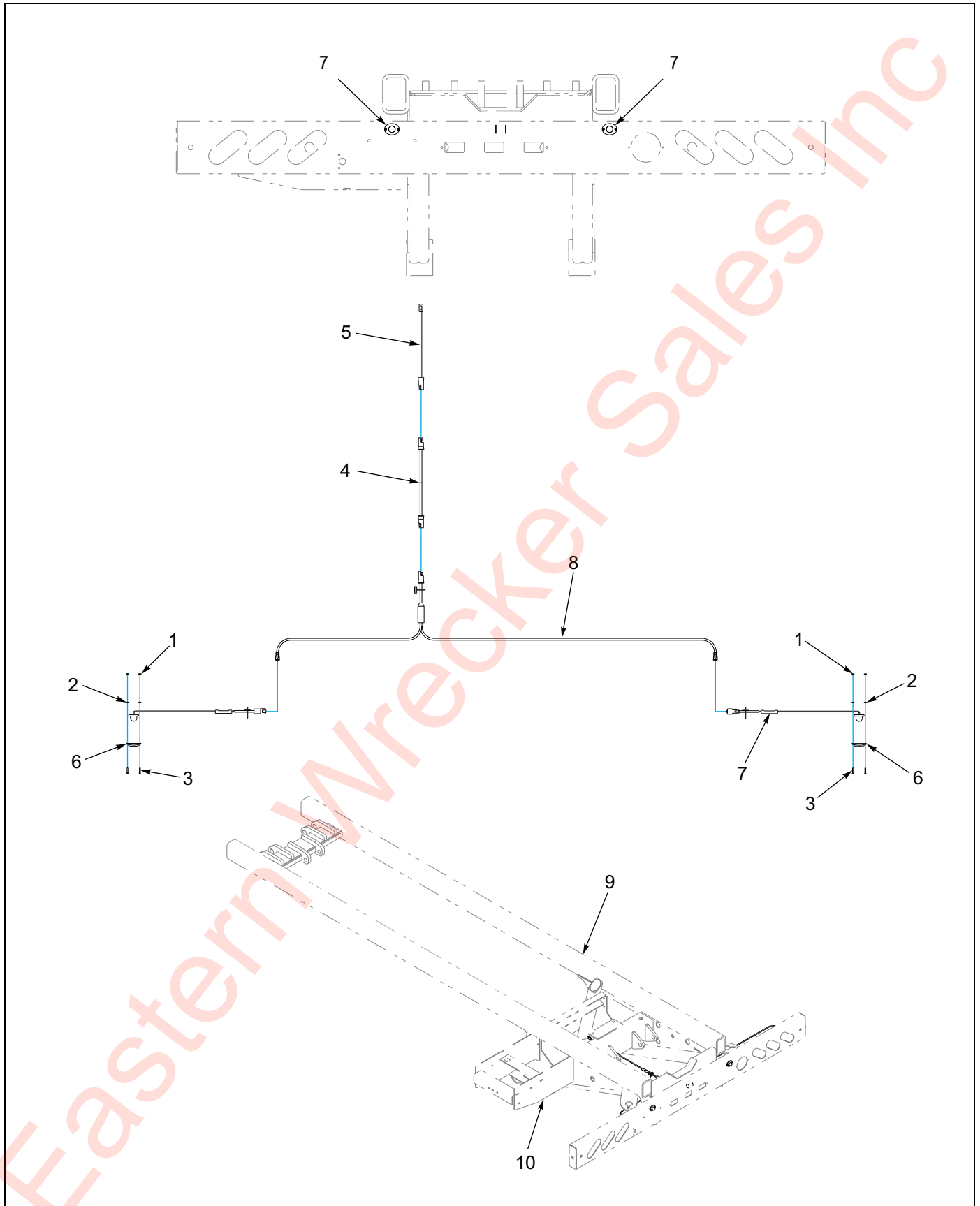


Figure 5-20: Strobe Light

Strobe Light

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-512-010003-02	NUT,HEX,SLFLKG W/NYL #6-32	4
2	1-861-010032-01	WASHER, FLAT,ZP /CD, #6	4
3	122187	SCREW,MACH,SLOT FILL,6-32 X 3/4	4
4	150111	HARNESS 300 IN MALE/FEMALE BULLET	1
5	190744	HARNESS 60" BRANCH WORK LIGHT	1
6	207291	BEZEL CHROME SURFACE MT VERTEX	2
7	207292	LIGHT ASSY STROBE/CONNECTOR	2
8	207293	HARNESS MOD. BUMPER STROBE (DEUTSCH)	1
9	208099	FRAME, SUB-TILT WLDMT	REF
10	208120	SUPPORT, VALVE WLDMT HDCL RMT	REF



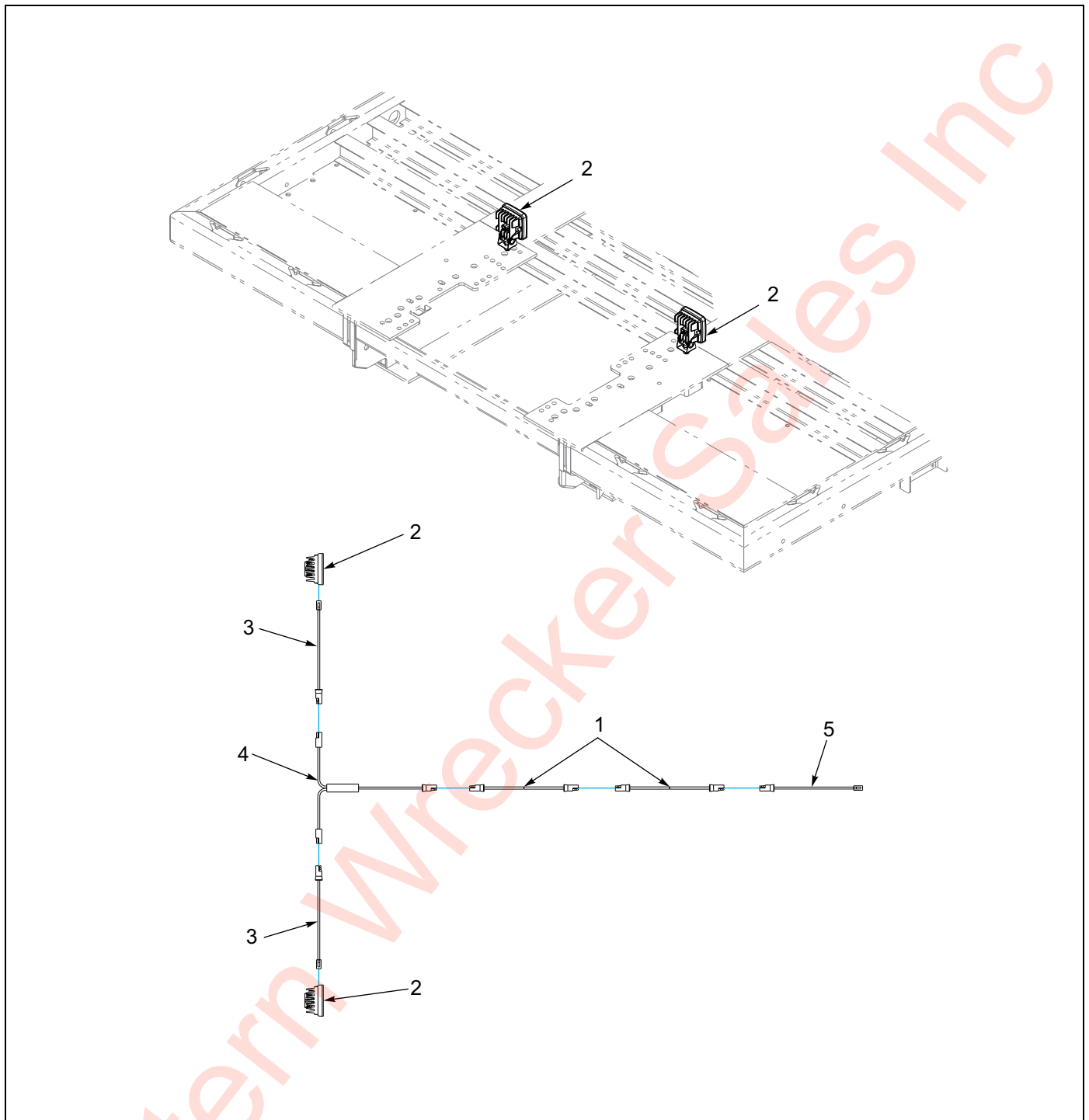


Figure 5-21: Work Light

### Work Light

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	150111	HARNESS 300 INCH MALE/FEMALE BULLET	2
2	163996	LIGHT LED WHITE FLOOD LAMP	2
3	164052	HARNESS 60" BRANCH WORK LIGHT	2
4	169853	HARNESS JUMPER T-POWER	1
5	190744	HARNESS 60" BRANCH WORK LIGHT	1

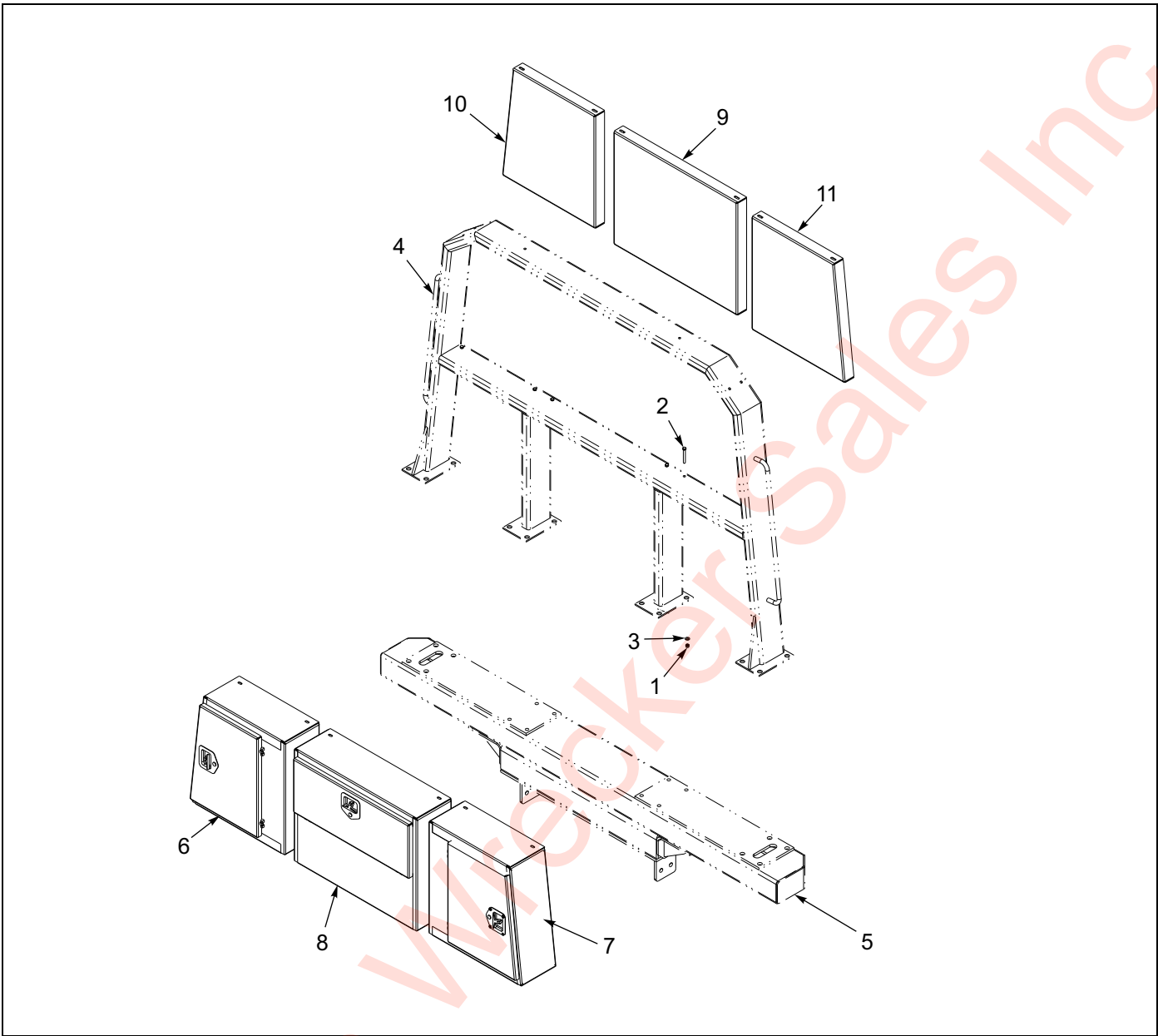


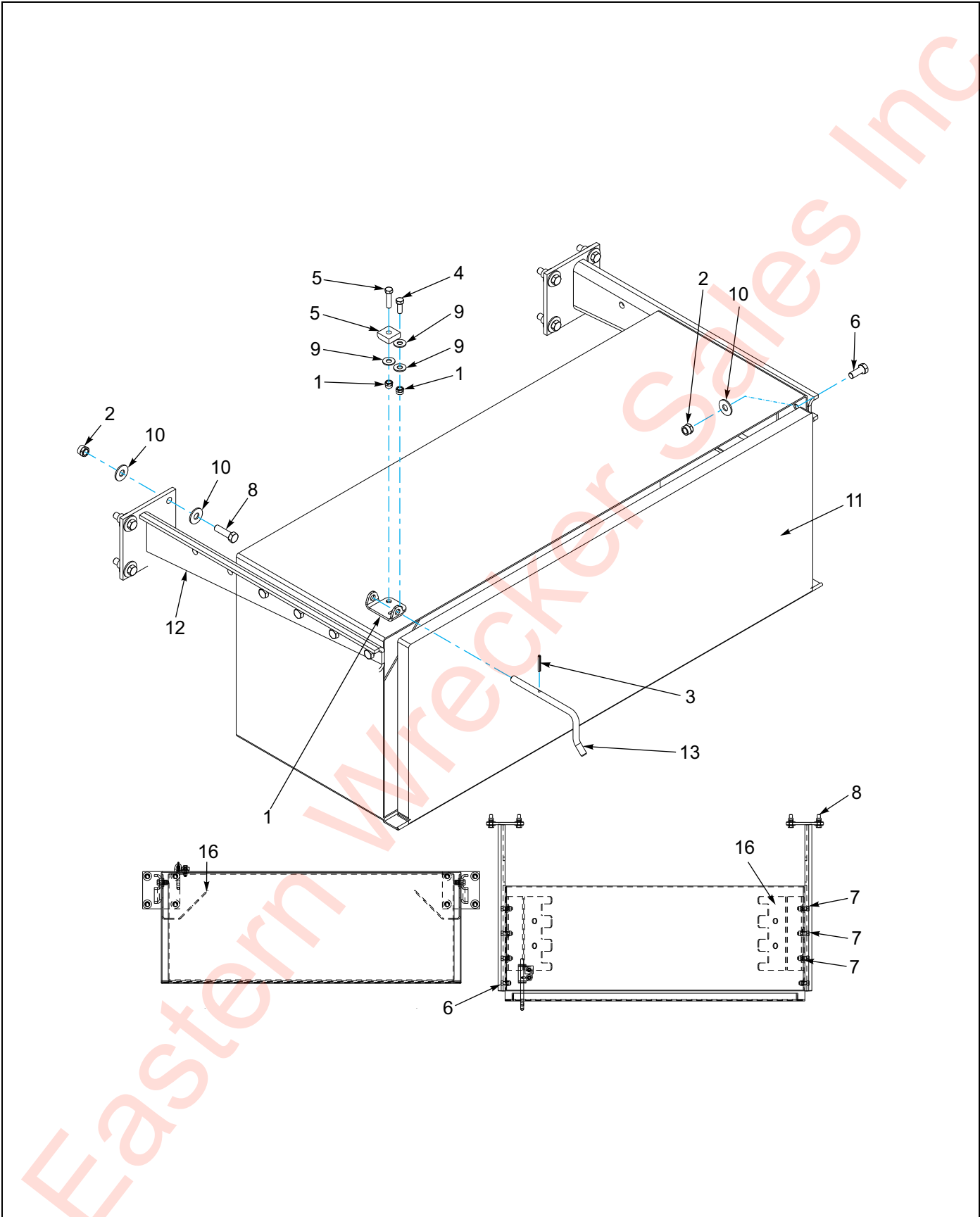
Figure 5-22: Bulkhead Tool Boxes

Bulkhead Tool Boxes

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-512-010005-05	NUT,HEX,SLFLKG,3/8-16 UNC,GRB	6
2	1-654-010051-13	SCREW, HEX, 3/8-16UNCX3 GR5	6
3	1-861-010032-10	WASHER, FLAT, ZP/CD, 3/8N	6
4	208918	WLDMT, BULKHEAD	1
5	208919	BULKHEAD BASE WLDMT, FRAME	1
6	208934	TOOLBOX ASSY LH 25X21X9	1
7	208941	TOOLBOX ASSY RH 25X21X9	1
8	208950	TOOLBOX ASSY CTR 31 X25X9	1
9	208984	PLATE, BULKHEAD BACK CENTER	1
10	208985	PLATE, BULKHEAD BACK LEFT	1
11	209105	PLATE, BULKHEAD BACK RIGHT	1

Table provided for general use.

[illegible]



**Tool Box Assembly 48 x 18 x 18**

ITEM	PART NUMBER	DESCRIPTION	QTY.
	125063	TOOLBOX ASSY 48 X 18 X 18 SS DR	
1	1-512-010005-05	NUT,HEX,SLFLKG,3/8-16 UNC,GRB	2
2	1-512-010005-09	NUT,HEX,SLFLKG,1/2-13 UNC,GRB	16
3	1-647-010004177	ROLL PIN,SLTD,3/16 X 1-1/2	1
4	1-654-010051-05	SCREW, HEX, 3/8-16UNC X 1GR5	1
5	1-654-010051-07	SCREW, HEX, 3/8-16UNC X 1-1/2 GR5	1
6	1-654-010055-02	SCREW, HEX, 1/2-13UNC X 1-1/ 4 GR5	2
7	1-654-010055-03	SCREW, HEX, 1/2-13UNC X 1-1/2 GR5	6
8	1-654-010055-04	SCREW, HEX, 1/2-13UNC X 1-3/4 GR5	8
9	1-861-010032-11	WASHER,FLAT,ZP/CD,3/8W	3
10	1-861-010032-15	WASHER,FLAT,ZP/CD, 1/2W	24
11	123730	TOOL BOX 48", SS DOOR	1
12	173411	BRACKETS, TOOLBOX ONE PAIR	1
13	190728	PIN DOOR STOP	1
14	190729	BRACKET DOOR STOP	1
15	192038	SPACER TOOLBOX	1
16	192041	TOOLBOX SUPPORT PANEL SHT	2

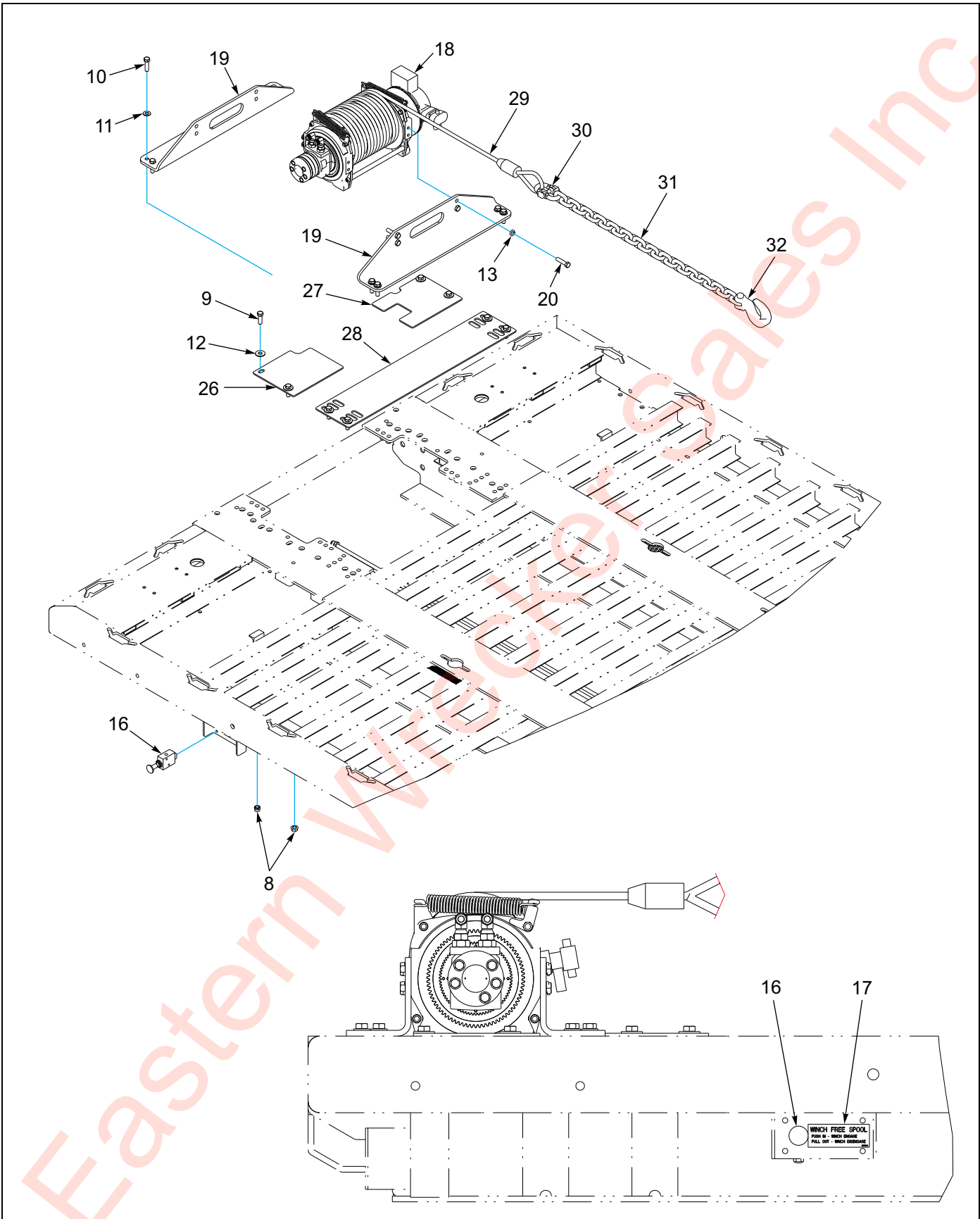


Figure 5-24: Winch 12K, Warn, 1 of 2

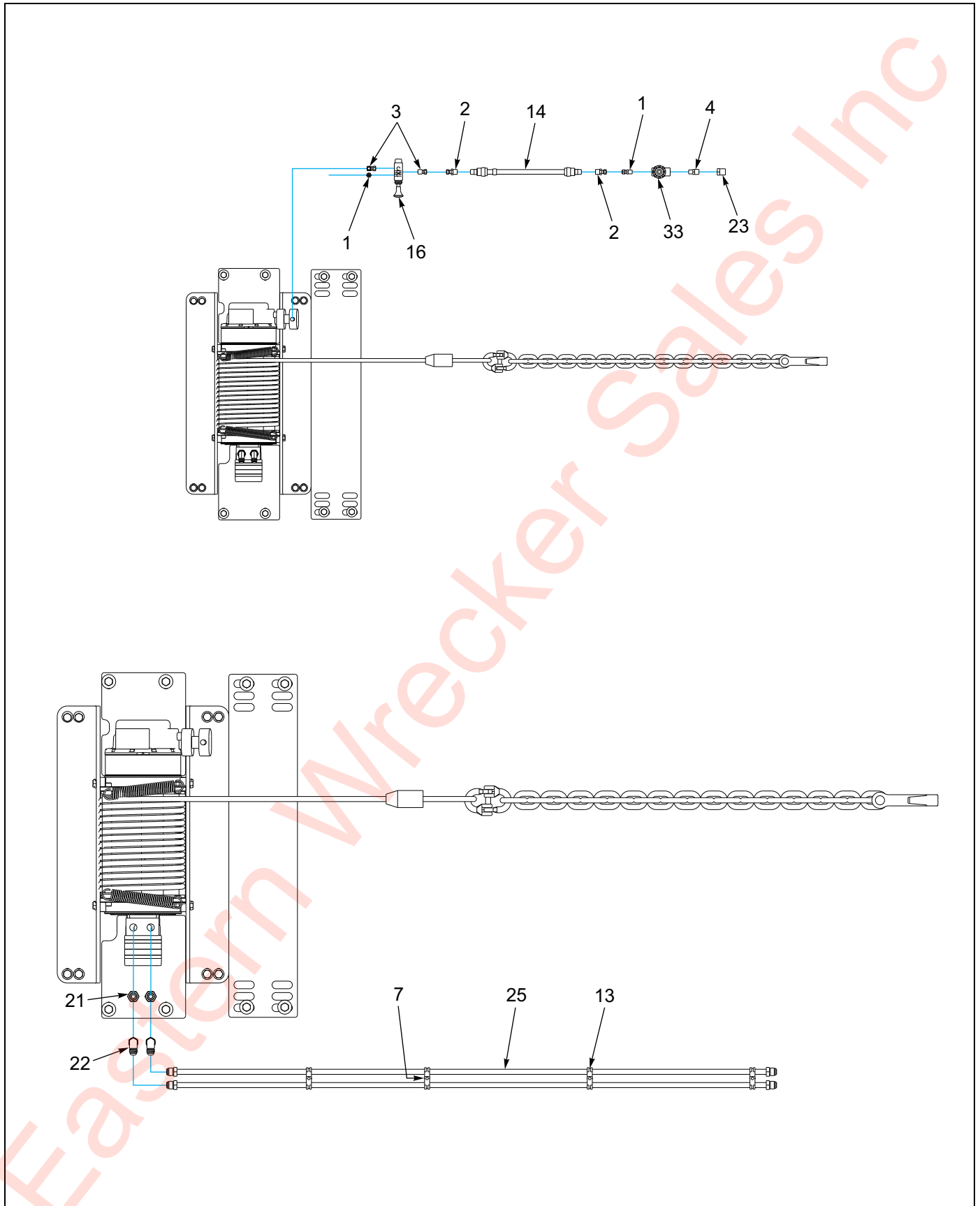


Figure 5-25: Winch 12K, Warn, 2 of 2

## ILLUSTRATED PARTS LIST

### Winch 12K, Warn

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	1-297-00007-05	FITTING, AIR 1/4 TUBE X 1/4 NPT	2
2	1-297-00007-06	FITTING, AIR, 1/4 TUBE TO 3/8 NPT	2
3	1-297-00008-07	FITTING, AIR, 90 1/4 TUBE X 1/4 NPT	2
4	1-297-00019-05	FITTING, BRS PIPE, HEX 3/8 X 1/4	1
5	1-397-00301024	HOSE ASSY, 1/2 X 24 SAE37 STR-STR	2
6	1-510-00003-09	NUT, FLG HD, SERR, 1/2-13 UNC	8
7	1-512-00005-03	NUT, HEX, SLFLKG, 5/16-18 UNC, GRB	4
8	1-512-00005-09	NUT, HEX, SLFLKG, 1/2-13 UNC, GRB	8
9	1-654-00055-03	SCREW, HEX, 1/2-13 UNC X 1-1/2 GR5	8
10	1-654-00055-04	SCREW, HEX, 1/2-13 UNC X 1-3/4 GR5	8
11	1-861-00032-14	WASHER, FLAT, ZP/CD, 1/2N	8
12	1-861-00032-15	WASHER, FLAT, ZP/CD, 1/2W	8
13	1-861-00032-13	WASHER, LKG, HLCL SPR, 1/2	8
14	103738	HOSE AIR 3/8 X 100 W/ 3/8 ENDS	1
15	125893	CLAMP, CABLE 1/2 SST	8
16	134657	VALVE AIR 3WAY/2POS 1/4 NPT	1
17	135184	DECAL, WINCH FREE SPOOL	1
18	166421	WINCH 12M WARN W/LW&RMTC	1
19	196818	BRACKET FRONT 12K WARN	2
20	198996	SCREW, M12- 1.75 X 50 HCS 8.8 ZP FULL	8
21	202702-10-8S	ADAPTER, #10 O-RING #8 TUBE	2
22	2071-8-8S	ADAPTER90 #8 FLR SWIVEL #8JIC	2
23	2081-8-6S	REDUCER 1/2 NPT X 3/8 NPT	1
24	208100	BED WLDMT, LOADOLL 3 22'	REF
25	210369	TUBE ASSY 1/2" X 60" #8 MJIC ENDS	2
26	210386	PLATE WINCH COVER STREETSIDE	1
27	210387	PLATE WINCH COVER CURBSIDE	1
28	210441	PLATE WINCH TRIM LOADOLL	1
29	3-155-010017-4	CABLE ASSY 1/2 X 85' LENGTH	1
30	3-174-010038	CHAIN LINK CONNECTING 1/2	1
31	3-174-010039036	CHAIN 1/2 X 36" GRD7	1
32	7HCGHT500	HOOK CLEVIS GRAB 1/2"	1
33	905-54-107	BRAKE PROTECTION VALVE	1



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NOTES:

**Document Control Revision Log:**

Date	Revision	Improvement(s) Description and Comments
04/2018	0418	Initial Release

Eastern Wrecker Sales Inc



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