

## Standard Operating Procedure

### Installation Guide: Spare Winch Secondary Retention

E-00071

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Date: **Oct. 19, 23**

Approved by: **Name**

Date: **Mon. DD, YY**

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#### APPLICABLE AREAS

This document is intended to aid in the proper installation of the spare winch secondary retention device to safely secure an FMAX spare tire.

#### Contents

Applicable Areas .....	1
1. Assembly Overview .....	1
2. Parts Overview.....	2
3. Identifying Your Kit .....	4
4. Adjusting the assembly.....	5
5. Pre-Installation Inspection.....	6
6. Installation Procedure.....	7
7. Changing The Tire .....	8
8. Revisions Table.....	8

#### 1. ASSEMBLY OVERVIEW

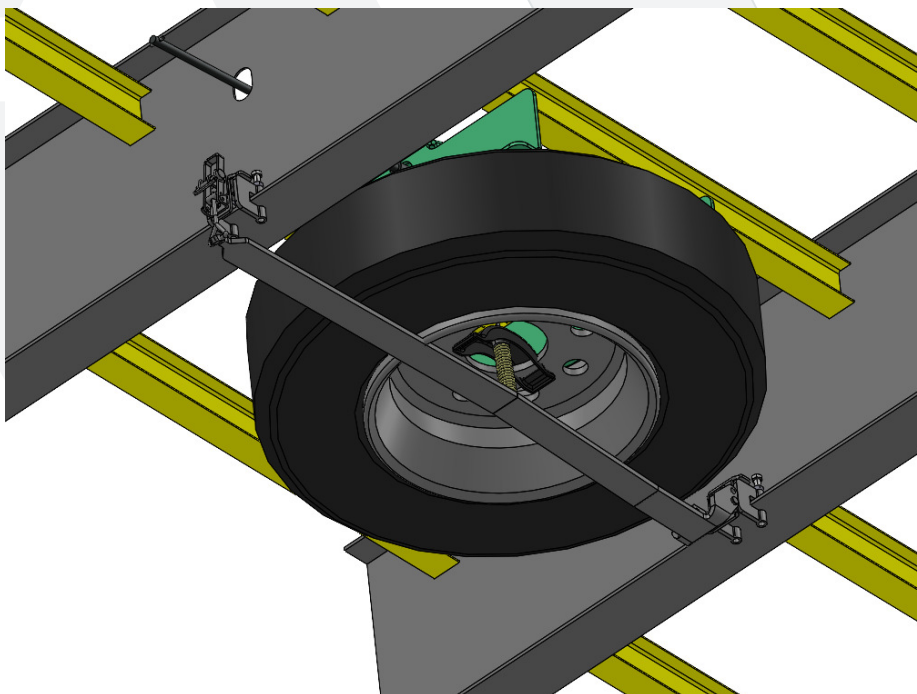
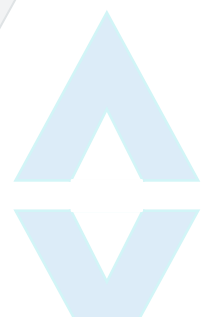
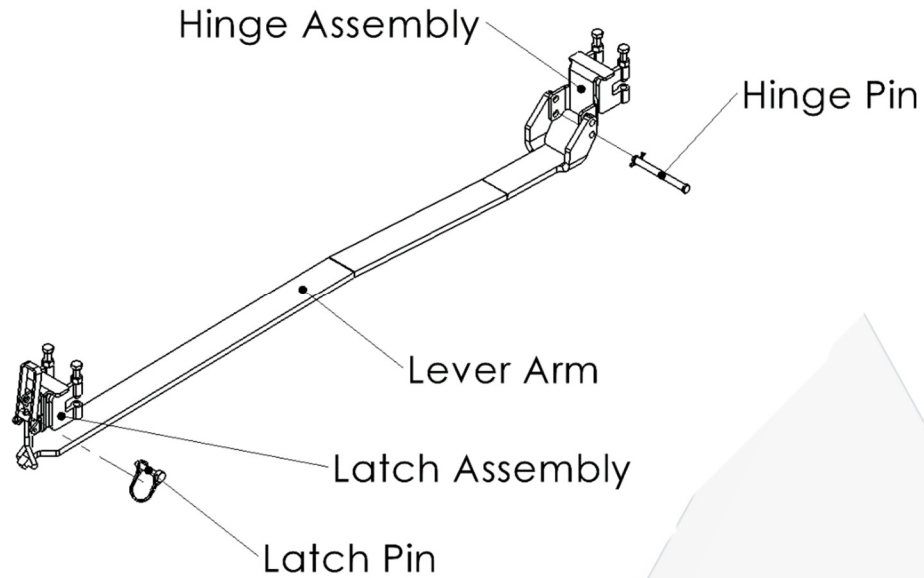


Figure 1: Secondary Retention Assembly





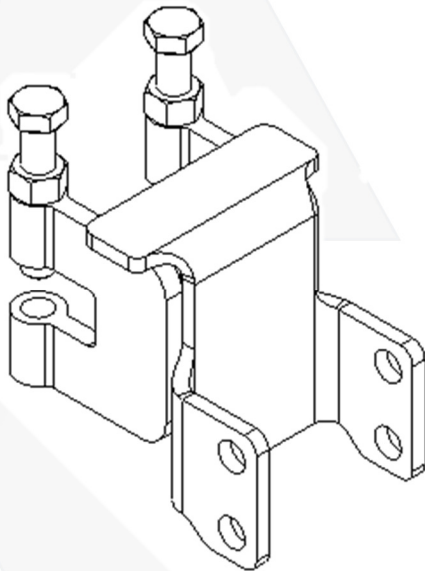
Each Secondary Retention Kit will contain 5 parts that fit together to create the assembly. The size and appearance of these 5 parts will vary slightly depending on which FMAX configuration they are intended for.



## 2. PARTS OVERVIEW

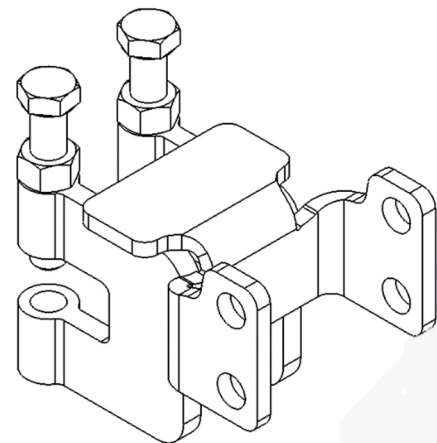
The following section will allow you to identify the parts in your kit and ensure they are correct for the trailer configuration used.

### a. Hinge Assembly



Part Number: R-02424-000

Trailers Used With:  
14" Beam Single Wheel  
16" Beam Dual Wheel

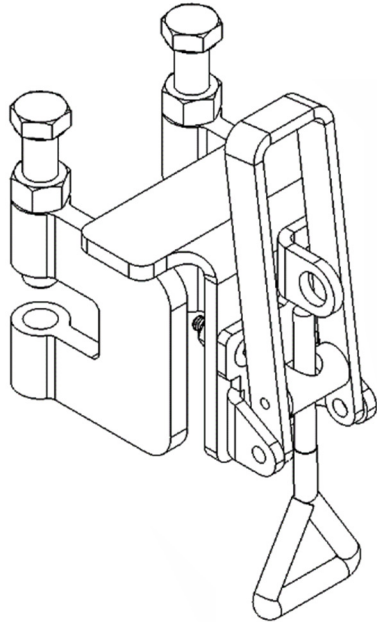


Part Number: R-02425-000

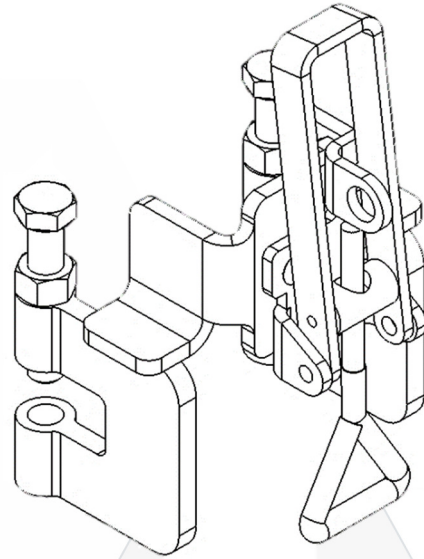
Trailers Used With:  
16" Beam Single Wheel  
18" Beam Dual Wheel



b. Latch Assembly

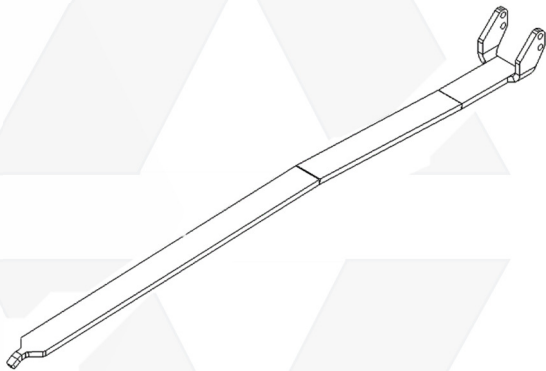


Part Number: R-02426-000  
Trailers Used With:  
14" Beam Single Wheel  
16" Beam Dual Wheel

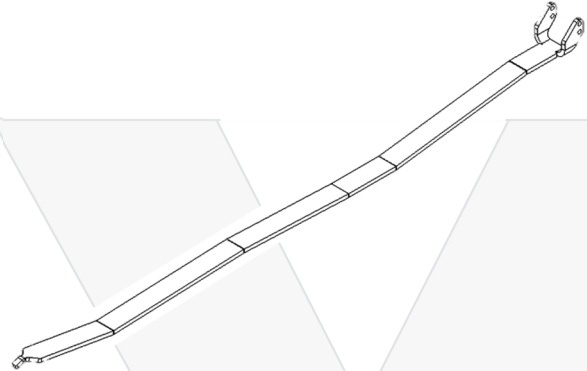


Part Number: R-02427-000  
Trailers Used With:  
16" Beam Single Wheel  
18" Beam Dual Wheel

c. Lever Arm



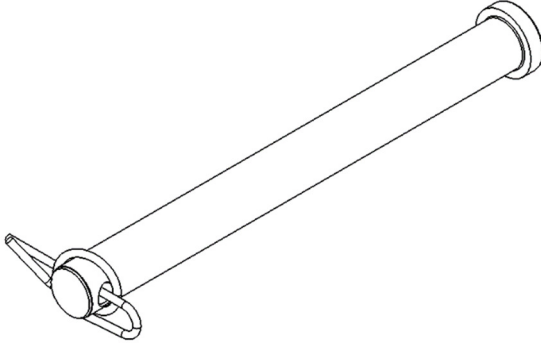
Part Number: R-02200-000  
Trailers Used With:  
Dual Wheel



Part Number: R-02199-000  
Trailers Used With:  
Single Wheel

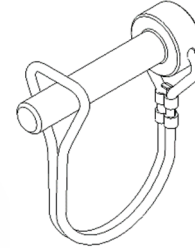


d. Universal Hardware



Hinge Pin

Part Number: R-02217-000



Latch Pin

Part Number: R-02219-000

3. IDENTIFYING YOUR KIT

The spare winch Secondary Retention kits are distinguished based on two variables. The first is whether the trailer has a single wheel vs. dual wheel suspension. The second is the height of the trailer’s engineered beams, which can be 14” or 16” for single wheel trailers and can be 16” or 18” for dual wheel trailers.

You can use the tables below and the visual aids found in Section 2 “Parts Overview” to validate you have the correct kit for your trailer.

14” Beam Single Wheel Trailer Kit Part Number: R-02213-000	
A-02424-000	Hinge Assembly – 14SW 16DW
A-02426-000	Latch Assembly – 14SW 16DW
A-02199-000	Lever Arm – Single Wheel
A-02217-000	Hinge Pin
A-02219-000	Latch Pin

16” Beam Single Wheel Trailer Kit Part Number: R-02214-000	
A-02425-000	Hinge Assembly – 16SW 18DW
A-02427-000	Latch Assembly – 16SW 18DW
A-02199-000	Lever Arm – Single Wheel
A-02217-000	Hinge Pin
A-02219-000	Latch Pin



16" Beam Dual Wheel Trailer Kit Part Number: R-02215-000	
A-02424-000	Hinge Assembly – 14SW 16DW
A-02426-000	Latch Assembly – 14SW 16DW
A-02200-000	Lever Arm – Dual Wheel
A-02217-000	Hinge Pin
A-02219-000	Latch Pin

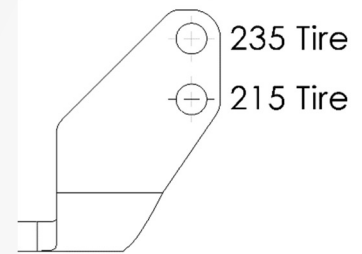
18" Beam Dual Wheel Trailer Kit Part Number: R-02216-000	
A-02425-000	Hinge Assembly – 16SW 18DW
A-02427-000	Latch Assembly – 16SW 18DW
A-02200-000	Lever Arm – Dual Wheel
A-02217-000	Hinge Pin
A-02219-000	Latch Pin

#### 4. ADJUSTING THE ASSEMBLY

The Secondary Retention device is designed to be compatible with many different varieties wheels and accommodates for this with built in adjustability.

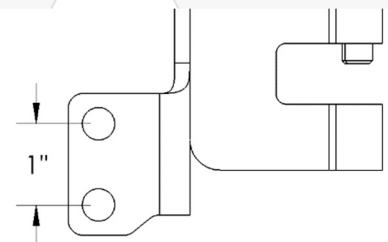
##### Adjusting the Lever Arm Hinge Point

The two holes on the tabs of the Lever Arm are spaced 20mm apart to account for 215 or 235 tires. Check the side of your spare to identify which kind of spare tire you have.



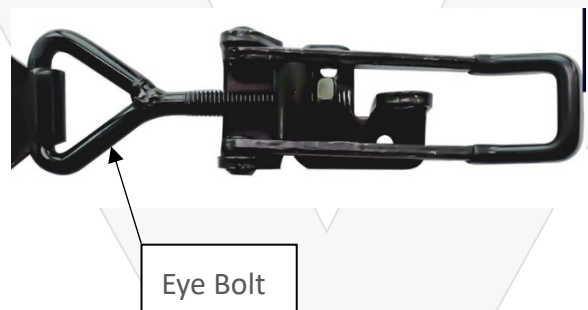
##### Adjusting the Hinge Assembly Hinge Point

The Hinge assembly holes are spaced 1 inch apart to compensate for your tire's hub. Typically, a dually tire will use the lower hole and a single wheel tire will use the higher.



##### Adjusting the Latch

Adjusting the height of the threaded eye bolt will be one of the last steps in installing the retention device.



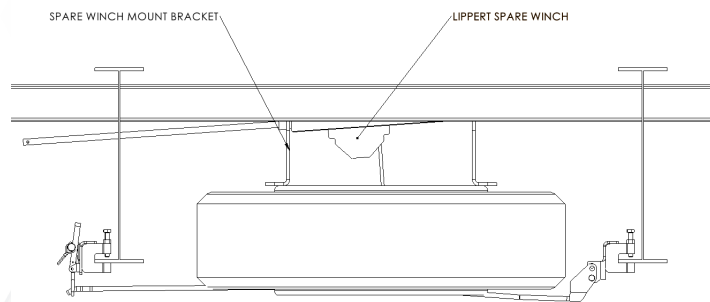


## 5. PRE-INSTALLATION INSPECTION

Before installation of the Secondary Retention assembly can begin, take the time to inspect the condition of the Lippert spare winch and spare winch mount bracket.

The spare winch should operate smoothly in both directions using the handle provided in the neck box of the trailer. Inspect the cable to ensure there is no visible damage, and check that the crimp & saddle at the end of the cable are in good condition.

Inspect the spare winch mount bracket to ensure there is no visible deformation or damage.



To complete this inspection, the tire will need to be lowered and then re-seated. To do this properly, follow the Lippert Manual Tire Winch Operation specifications found at the link below. It can also be found using the QR code provided on the spare winch decal.

[https://support.lci1.com/documents/ti-097-manual-tire-winch-operation?utm\\_campaign=chassis&utm\\_medium=qr\\_code&utm\\_medium=qr\\_code&utm\\_source=decal&utm\\_content=installation\\_instructions](https://support.lci1.com/documents/ti-097-manual-tire-winch-operation?utm_campaign=chassis&utm_medium=qr_code&utm_medium=qr_code&utm_source=decal&utm_content=installation_instructions)



## 6. INSTALLATION PROCEDURE

- i. Ensure that your trailer's spare tire is properly stowed and secure in its mounting position.
- ii. Mount the Hinge Assembly to the driver side main beam of the trailer, on the inside flange. Secure the Hinge by tightening the clamp bolts to thumb tight.
  - a. The inside face of the beam clamp should be roughly flush with the edge of the flange, as shown in Fig. 2.
  - b. The hinge should be aligned with the center of the spare tire. For clarity on alignment, refer to Fig. 1 in the 'ASSEMBLY OVERVIEW' section of this document.
- iii. Attach the Lever Arm to the Hinge Assembly using the Hinge Pin.
  - a. To determine which holes to use as the hinge point, refer to the 'ADJUSTING THE ASSEMBLY' section of this document.
  - b. The Lever Arm should be centered under the spare tire. When lifted and pressed against the spare tire at this step, the Lever Arm should be roughly level with the ground plane if in the correct position.
- iv. Mount the Latch Assembly to the passenger side main beam of the trailer, on the outside flange. Secure the assembly by tightening the clamp bolts to thumb tight.
  - a. Align the Latch Assembly to the center of the tire. The inside face of the clamps should be flush with the clamps, as shown in Fig. 2.
- v. Adjust the Lever Arm using the eye bolt on the Latch Assembly
  - a. Fitment test the secondary retention device by lifting the Lever Arm and passing the end through the eye bolt of the latch, as shown in Fig. 3. You may have to exert some upward force to the end of the Arm to get it level with the eye, this is normal and a design feature.
  - b. When closing the latch with the arm in place, the Lever Arm should flex upwards into the spare tire. The Lever Arm should be contacting the spare tire on both sides, exerting upward pressure, and helping keep the spare tire secured.
- vi. Firmly tighten the clamps down using the square bolts and a wrench. Then tighten the lock nuts to prevent loosening from vibration. Do this for both the Hinge Assembly and the Latch Assembly.
  - a. When fastening a clamp - tighten the right bolt first, then the left, then tighten the right again. This will ensure the assemblies are tight and do not twist.
- vii. Secure the arm in place using the latch. Use the Latch Pin to lock the latch in the up position.

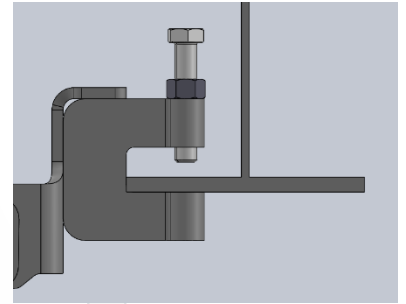


Figure 2: Clamp Placement

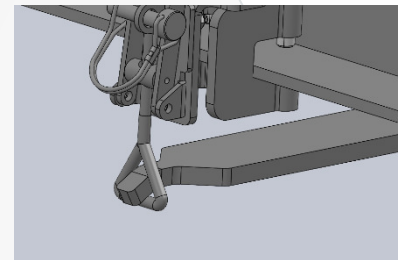


Figure 3: Lever Arm-Eye Bolt Connection



## 7. CHANGING THE TIRE

Use caution when unlatching the Secondary Retention device, as there may be pressure on the lever arm caused by the weight of the tire in the event of winch failure. It is recommended to completely remove the Lever Arm using the quick release Hinge Pin when changing the spare tire in roadside conditions so that the spare tire can be raised and lowered freely.

## 8. REVISIONS TABLE

Revision	Prepared by	Approved by	Note
000	EB	Name	Initial release
001	ZZ	Name	Update Part Numbers