



RV Cast and Welded Equalizers and Bushings

Installation Manual

(For Aftermarket Applications)

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Introduction

Additional information about this product can be obtained from [lci1.com/support](https://support.lci1.com) or by using the LippertNOW app. Replacement kits can be ordered from <https://store.lci1.com/> or by using the LippertNOW app.

The LippertNOW app is available for free on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.

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For additional support on this product, scan this QR code or go to: <https://support.lci1.com/suspension-parts>



Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels. This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

⚠ WARNING

THE “WARNING” SYMBOL ABOVE IS A SIGN THAT A PROCEDURE HAS A SAFETY RISK INVOLVED AND MAY CAUSE DEATH OR SERIOUS PERSONAL INJURY IF NOT PERFORMED SAFELY AND WITHIN THE PARAMETERS SET FORTH IN THIS MANUAL.

⚠ WARNING

FAILURE TO FOLLOW INSTRUCTIONS PROVIDED IN THIS MANUAL MAY RESULT IN DEATH, SERIOUS PERSONAL INJURY AND/OR SEVERE PRODUCT AND PROPERTY DAMAGE, INCLUDING VOIDING OF THE COMPONENT WARRANTY.

⚠ CAUTION

THE “CAUTION” SYMBOL ABOVE IS A SIGN THAT A SAFETY RISK IS INVOLVED AND MAY CAUSE PERSONAL INJURY AND/OR PRODUCT OR PROPERTY DAMAGE IF NOT SAFELY ADHERED TO AND WITHIN THE PARAMETERS SET FORTH IN THIS MANUAL.

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Resources Required

- 1 to 2 people, depending on task
- Pneumatic impact wrench
- Torque wrench (ft-lb)
- Cordless or electric drill or screw gun
- Appropriate drive bits
- 1¹/₁₆" deep well socket
- 3³/₄" deep well socket
- 1³/₁₆" deep well socket
- Grease gun
- Steel tube to install bolts with grease fittings
- Multi-purpose grease marked with a NLGI code of GC-LB
- Appropriately-sized and rated bolts and fasteners
- Floor jacks
- Floor jack stands
- Pry bar (optional)
- Hammer

Prior to Installation

⚠ WARNING

MAKE SURE THAT ANY POINTS OF CONTACT FOR THE JACK STANDS DO NOT RESULT IN DAMAGE TO ANY PANELS OR LINES UNDER THE RV. IMPROPER RAISING OR LOWERING OF THE RV COULD RESULT IN DEATH, SERIOUS PERSONAL INJURY OR SEVERE PRODUCT OR PROPERTY DAMAGE.

1. Park the RV on a level surface.
2. With the RV still connected to the tow vehicle, lower the front landing gear or the tongue jack until contact with the ground is made.
3. Disconnect all internal and external power supplies.
4. Using the properly-rated floor jacks, lift the RV according to the manufacturer's recommendation until the wheels are no longer in contact with the ground (Fig.1)

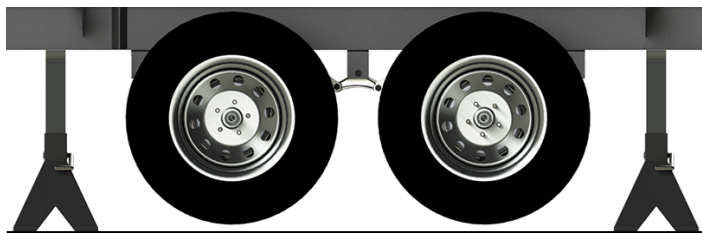


Fig.1

5. Support framework in accordance with the manufacturer's recommendations.

6. Remove the wheels and set aside wheels and lug nuts.
7. Using a floor jack, lift the axles slightly and place the additional properly-rated jack stands under the axles (Fig.2) so that the shackle bolts can be driven out with a hammer.

NOTE: Allowing the axles to drop could result in damage to the wiring for the electric brakes.

8. With an impact wrench or an appropriate wrench, loosen the nuts of the leaf spring hanger bolts (Fig.2A), the nuts on the shackle bolts (Fig.2B), and the nuts on the equalizer bolts (Fig.2C).

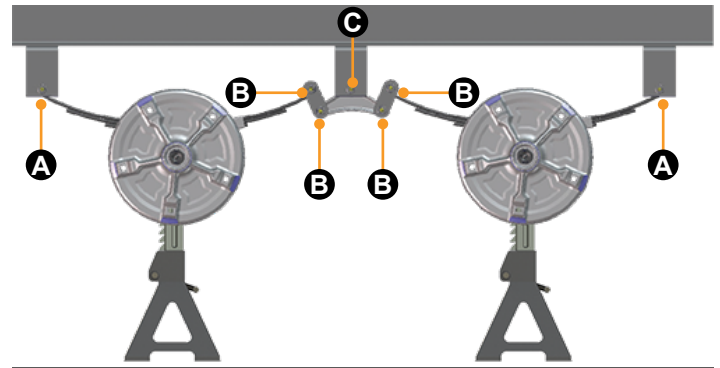


Fig.2

NOTE: Hold the head of the bolts with a wrench.

9. Drive out the leaf spring hanger bolts (Fig.2A) and equalizer bolt (Fig.3A) with a hammer, so that the bolts unseat from the hanger. Remove the bolts.

NOTE: Pry bar may be used to remove the equalizer bolt. The equalizer should hang freely from the shackle links.

10. The shackle link assembly (Fig.3C) with the shackle bolts (Fig.3B) should be removed from the leaf spring eyelets (Fig.3D).

11. RV is ready for installation of the new equalizers and bushings.

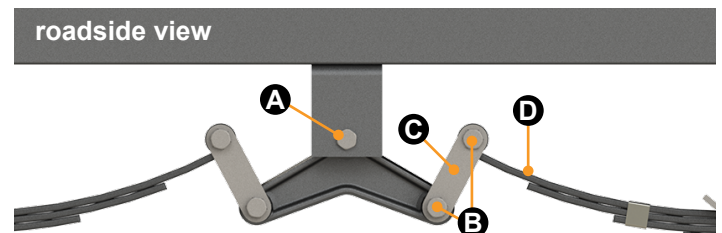


Fig.3

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Installation

A/P Kit Tandem or Triple Installation Tips

It is important that the components are attached to the vehicle frame in the proper manner. Here are some guidelines:

- The nuts should not be used to “pull” the shackle bolt into the hanger. Instead, the bolt should be driven into the hanger using a hammer. This will fully seat the serrations of the bolt into the hanger hole and provide maximum resistance to rotation during service.
- Shackle bolts that are free to rotate will drastically limit the service life of the hangers.
- Over tightening the nuts can lead to fastener failure. The torque specification for the $\frac{7}{16}$ " - 20 hex locknut used on the shouldered shackle bolts is 30-50 ft-lbs (40-68 Nm).
- If non-shouldered shackle bolts are being used, tighten the $\frac{9}{16}$ " - 18 hex locknut only snug against the hanger surface. The axle spring eye must be free to rotate on the bolt for proper suspension articulation and performance.
- Using an impact wrench without holding the other side of the shackle bolt with a wrench can damage the serrations of the shackle bolt.

Tandem and Triple Axle A/P Kits

1. Install the equalizer bolt (Fig.4A) through the equalizer hanger outside plate (Fig.4B), the top most bronze equalizer bushing (Fig.4C), and through the equalizer hanger inside plate (Fig.4D).

2. Use a hammer or a piece of steel tube (for bolts with a grease fitting) and drive the bolt into the equalizer hanger outside plate, until the bolt head (Fig.4A) is seated against the hanger outer plate surface (Fig.4B).

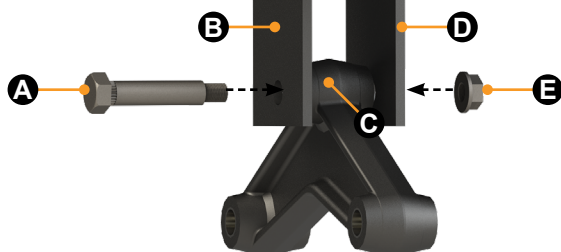


Fig.4

3. Both the shackle bolts and equalizer bolt must be installed from the outside-in towards the center of the RV chassis. This ensures that the bolt threads do not interfere with any other assemblies. This applies to bolts with or without grease fittings.

4. Thread a nut (Fig.4E) onto the exposed equalizer bolt thread until the nut seats against the hanger. Torque the nut until it bottoms out on the bolt shoulder at 30-50 ft-lbs (40-68 Nm).

5. Place the axles into the normal operating position.

6. Attach the new shackle link assemblies (Fig.5A), shackle links (Fig.5B) and mounting nuts (Fig.5C) to the equalizer (Fig.5D) and spring leaf (Fig.5E) on both sides of the equalizer (Fig.5F).

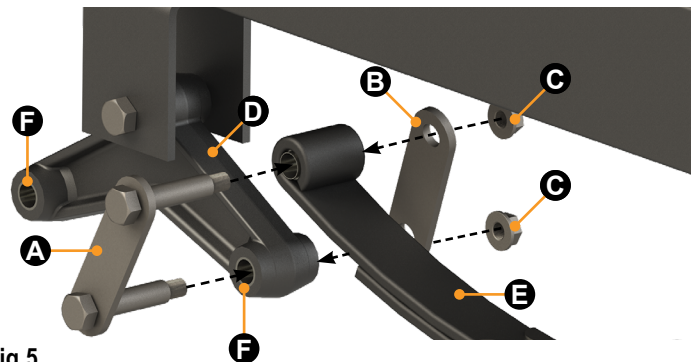


Fig.5

7. Torque the nuts until they bottom out on the bolt shoulder at 30-50 ft-lbs (40-68 Nm).

NOTE: Figure 6 shows a completed tandem axle.



Fig.6

8. If installing a Triple A/P Kit, repeat steps 1-7 for the third hanger (Fig.9B).

NOTE: If Installing a Triple Axle A/P kit, EQ-105 Assembly, this equalizer installs on the second hanger from the front of the RV (Fig.7B).

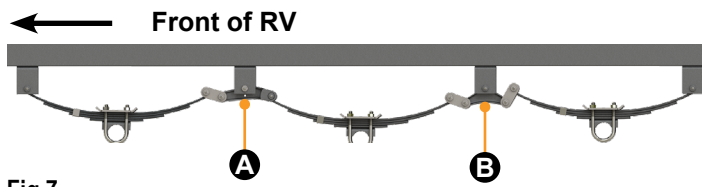


Fig.7

9. Repeat steps 1- 7 or 8 if the step is applicable, for the opposite side of the RV.

NOTE: If using the triple axle grease-able bolts with grease fittings, use any multi-purpose grease marked with the NLGI code of GC-LB.

10. Reconnect electric brakes, if applicable.

11. Remount wheels.

Maintenance

Every 12 months or 36,000 miles (57,936 km), which ever comes first, check the equalizers and wet bolts if applicable, to be sure they are free from debris and that the nuts are torqued at 30-50 ft-lbs (40-68 Nm).

If using the triple axle wet bolts with grease fittings, use any multi-purpose grease marked with the NLGI code of GC-LB.

Wheel Torque Requirements

Wheel Torque Requirements Chart				
Wheel Size	Stud Size	Torque Sequence		
		1st Stage	2nd Stage	3rd Stage
14"	1/2"	20-25 ft-lbs (27-34 Nm)	50-60 ft-lbs (68-81 Nm)	90-120 ft-lbs (122-163 Nm)
15"	1/2"	20-25 ft-lbs (27-34 Nm)	50-60 ft-lbs (68-81 Nm)	90-120 ft-lbs (122-163 Nm)
16"	1/2"	20-25 ft-lbs (27-34 Nm)	50-60 ft-lbs (68-81 Nm)	90-120 ft-lbs (122-163 Nm)
16.5"	1/2"	20-25 ft-lbs (27-34 Nm)	50-60 ft-lbs (68-81 Nm)	90-120 ft-lbs (122-163 Nm)
14.5" Demount	1/2"	Tighten sequentially to 85-95 ft-lbs (115-129 Nm)		
16"	9/16"	20-25 ft-lbs (27-34 Nm)	60-70 ft-lbs (81-95 Nm)	120-140 ft-lbs (163-190 Nm)
16.5"	9/16"	20-25 ft-lbs (27-34 Nm)	60-70 ft-lbs (81-95 Nm)	120-140 ft-lbs (163-190 Nm)
16" Dual and 17.5" 2 pc. Swivel Flange Nut	5/8"	30-40 ft-lbs (41-54 Nm)	80-90 ft-lbs (109-122 Nm)	150-175 ft-lbs (203-237 Nm)
16" Dual and 17.5" Flange Nut	5/8"	50-60 ft-lbs (68-81 Nm)	150-200 ft-lbs (203-271 Nm)	275-325 ft-lbs (373-441 Nm)
17.5" Dual Flange Nut	M22	50-100 ft-lbs (68-136 Nm)	250-300 ft-lbs (339-407 Nm)	450-500 ft-lbs (610-678 Nm)

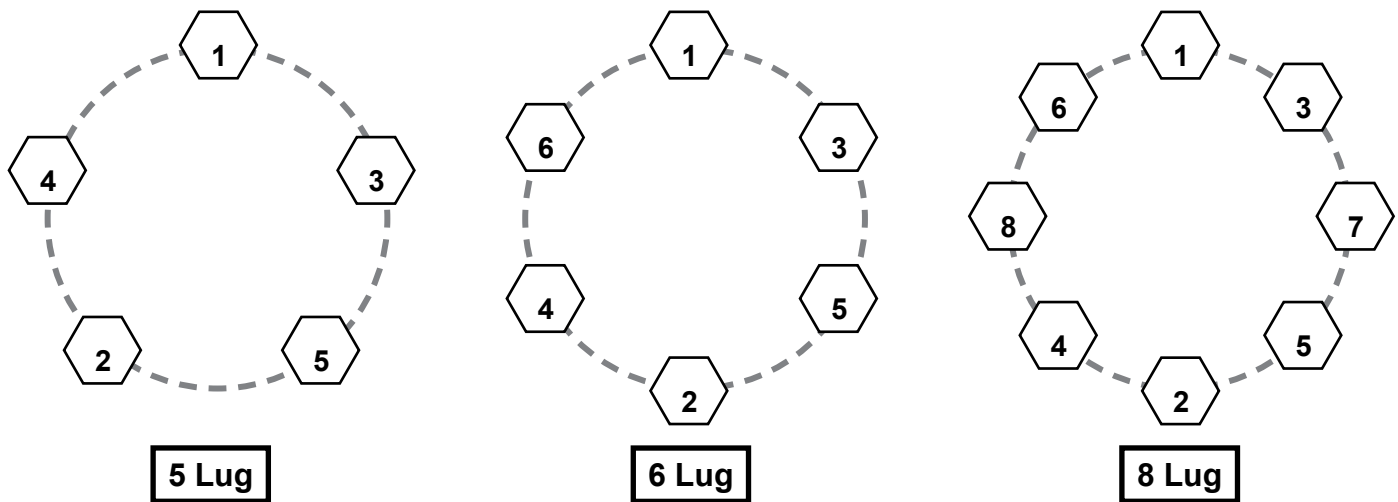


Fig.8

