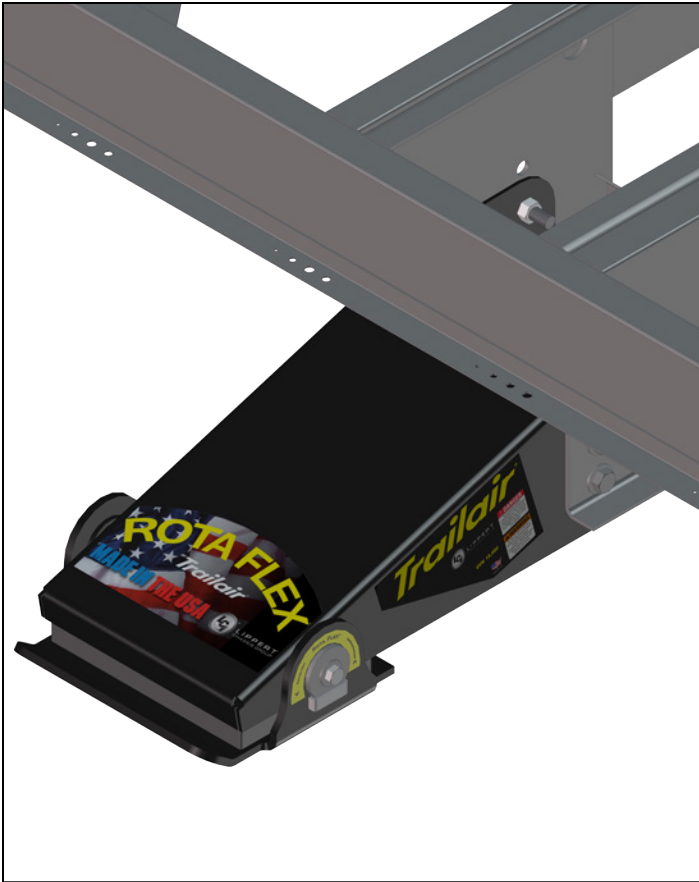




LIPPERT
COMPONENTS®

Rota-Flex® Pin Box

Aftermarket Manual



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Introduction

The Rota-Flex® Pin Box system redefines the experience of towing a 5th wheel. This system will help eliminate excessive wear and tear on the truck and coach. The Rota-Flex® Pin Box significantly reduces fore-to-aft coach movement and reduces vibration more than 2X the competition. The rubberized torsion compound absorbs motion and vibration caused by road shock. It gives a cushioned sensation over uneven road conditions and jerk-free starts and stops. Enjoy a smoother, more comfortable in-cab ride.

Now with a powder-coated lower jaw, the Rota-Flex® Pin Box System has been carefully engineered to match the existing pin box that it replaces. The system is fully adjustable in most cases and maintains the king pin location established by the original trailer manufacturer. By maintaining the static king pin location, stress and strain subjected to the trailer frame structure is consistent with the original king pin location.

This manual will outline installation, preventative maintenance and basic troubleshooting procedures associated with this system.

Preparation

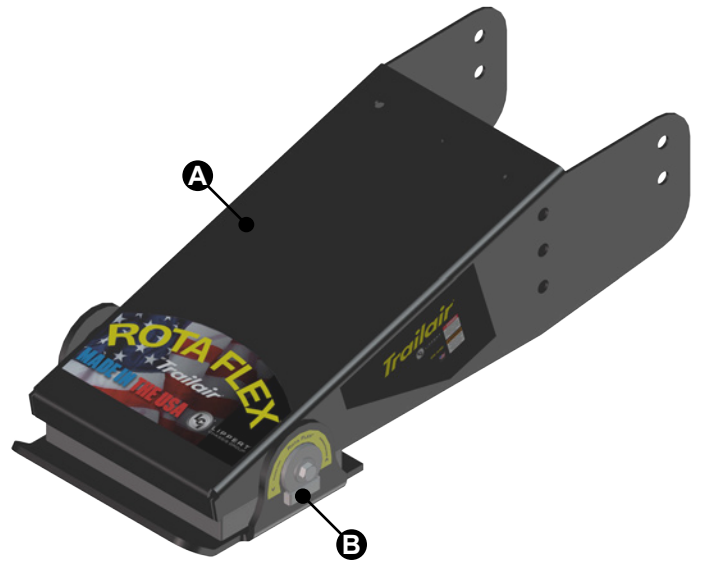
Components Required:

- Tape measure
- Impact wrench or ratchet
- Sockets
- Torque wrench capable of 300 ft. lbs.
- Screw gun and appropriate bits (to remove any components attached to the pin box)
- Drift/centering pin

Optional:

- Hammer
- 2nd Drift/centering pin

Parts List



Letter	Part#	Description
A	328327	Rota-Flex Main Body
B	328328	Rota-Flex Main Jaw



Installation

⚠ CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

⚠ WARNING

Pin boxes are heavy and difficult for one person to handle alone. It is highly recommended that at least 2 people install this system.

1. Measure the distance from the bottom of the factory king pin plate to a flat surface directly below (Fig. 1).
2. Make note of the bolt hole locations of the factory pin box. The Rota-Flex pin box system will be remounted in the same hole settings (Fig. 2).

Note: Some telescoping pin boxes require 1 to 2 holes to be re-drilled.

3. Remove any items attached to the factory pin box (i.e. power cord box, breakaway switch, exterior light, lube plate, etc.)
4. Remove all but 2 of the bolts securing the pin box to the 5th wheel frame. Leave one bolt in place on the road side at the rear (Fig. 3) and one bolt on the curb side at the front (Fig.4).

⚠ WARNING

Do not remove the last 2 bolts until the next step.

5. Back a tow vehicle up to the 5th wheel and hook the trailer to the truck hitch.
6. Remove the remaining two bolts
7. Using the landing gear on the 5th wheel, raise the trailer two (2) to three (3) inches.
8. Pull the truck forward until the pin box clears the trailer. (The rear of the pin box will fall to the bed of the truck. A piece of wood can be placed across the bed for protection).

Fig. 1

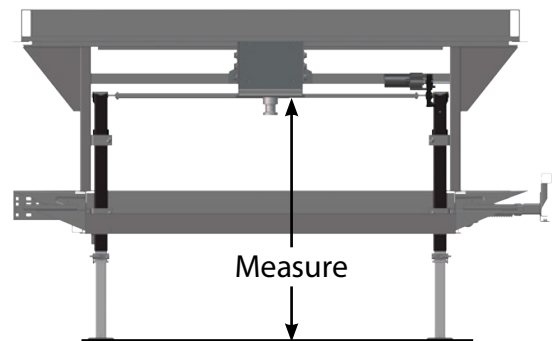


Fig. 2

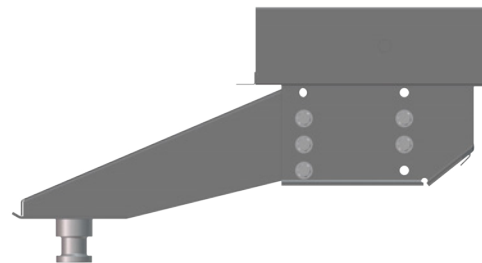


Fig. 3

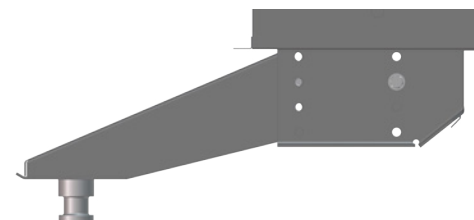
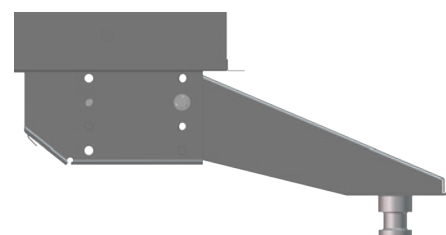


Fig. 4





- Remove the factory pin box from the truck hitch (Fig. 5) and replace it with the Rota-Flex pin box (Fig. 6).

Note: Place a spacer block under the rear portion of the pin box so that it can be positioned for installation.

- Back the truck under the trailer. Use a helper to line the pin box up to the mounting plate. Move the truck back and forth to line the holes front to rear. Use the landing gear for up and down adjustment.
- Using a drift/centering pin (or screwdriver), center the holes and install at least one bolt on the road side and one on the curb side in different locations (Fig. 7). Unlock the truck hitch and pull the truck forward.
- Verify the pin height is within 1/2" (+ or -) of the factory setting, (Fig. 8) then install the remaining bolts and nuts.
- Using the torque wrench, check all the bolts to ensure they are tightened to specifications as listed on the Torque Chart below.

Torque Foot lbs		
Bolt Size	Grade 5 Zinc	Grade 8 Flange
1/2 - 13	65	80
5/8 - 11	135	170
3/4 - 10	220	280

Preventative Maintenance

- Inspect king pin for excessive wear (annually).
- Inspect the skid pad to ensure a neutral (centered) position. When the trailer is disconnected from the tow vehicle, an equal gap of approximately 1- 1/4" should be observed between the lip of the skid pad and the rubber compression bumpers. It is normal to be able to slightly move and twist the skid pad assembly with hand force.
- Inspect the retainment rods for excessive wear. The retainment rods may show surface scratch marks as an indication of occasional contact, but the scratches, if present, should be minimal.

Fig. 5

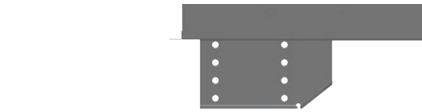


Fig. 6

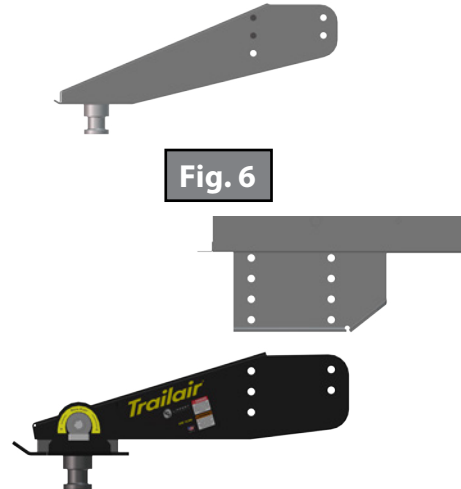
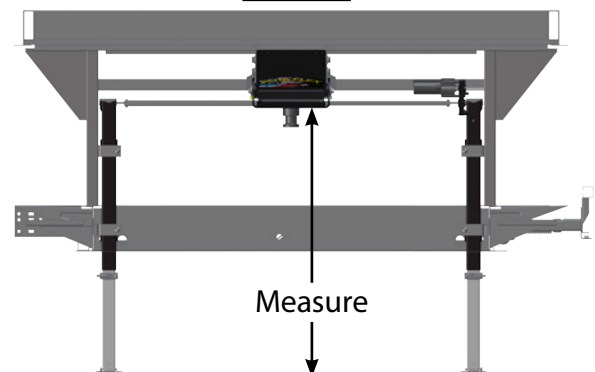


Fig. 7



Fig. 8





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- Inspect the plastic glide pads for excessive wear. The glide pad thickness should be no less than 3/4".
- Periodically check the torque values of all bolts.

Basic Troubleshooting

Problem	Remedy
Trailer not level.	Adjust pin box or hitch accordingly.
Excessive bottoming of skid pad assembly. Jerky ride in tow vehicle.	Inspect the rubber compression bumpers to ensure they are in place. Check trailer brakes for proper operation. If above is satisfactory, it may be necessary to install a shear spring with a different spring rate.
Skid pad assembly does not return to neutral position when disconnected from tow vehicle.	Check for loose or torn rubber shear spring.
Excessive noise from pin box area.	Verify that the pin box is securely attached to the 5th wheel. If the king pin is excessively worn, the skid pad will need to be replaced. Hitch mechanisms can also cause noise. Verify that unwanted noise is not coming from the hitch. The hitch manufacturer can provide guidelines for this check.