

# Keystone RV Company

4/11/19

## SAFETY ADVISORY # 19-349

### Kodiak Tire Clearance

Keystone is conducting a voluntary RECALL notification campaign in accordance with the National Highway Transportation and Safety Act. It has been decided that the vehicles in the recall population may not have sufficient tire clearance to the floor. Under certain loading and road conditions during travel, the tire may come in contact with the underside of the floor causing damage to the floor covering. Over time this condition can lead to a tire failure resulting in an increased risk of property damage and poor vehicle handling.

**Models Included:** 2018 – 2019 Kodiak Travel Trailers: Models 255BHSL, 283BHSL

**Serial Number Ranges:** 2018 JJ971503 - JJ973935  
2019 KJ970266 - KJ971851

**Parts Required:** 6 – KRV # 238533 - Axle - AP Kit - 7/16-20 - Flange Nut (*This part may be ordered in bulk without a VIN*) **No Canadian Sales**  
2 – KRV # 505103 - Axle - Equalizer Only - EQ310 - w/Nylon Bushings (*This part may be ordered in bulk without a VIN*)

**Tools Required:** - 11/16" Deep Well Socket - 3/4" Deep Well Socket - Ratcheting Wrench

**Note – Check serial number on Key Express to verify the campaign is open. Some vehicles were repaired before they left Keystone.**

**When performing warranty or recall service, please make certain that appropriate Personal Protective Equipment (PPE) is used.**

The remedy is to increase clearance between the tire and the floor by replacing the existing center equalizer with a taller equalizer, KRV # 505103 - Axle - Equalizer Only - EQ310 - w/Nylon Bushings. The flange nuts cannot be re-used.

### **REPAIR INSTRUCTIONS**

#### **ONE: PREPARE THE UNIT**

- Step 1 Park the trailer on a level surface area.
- Step 2 Disconnect all internal and external power supplies.
- Step 3 Locate the equalizers (Figure 1A) and clean all debris from them.

#### **TWO: REMOVE THE EQUALIZER**

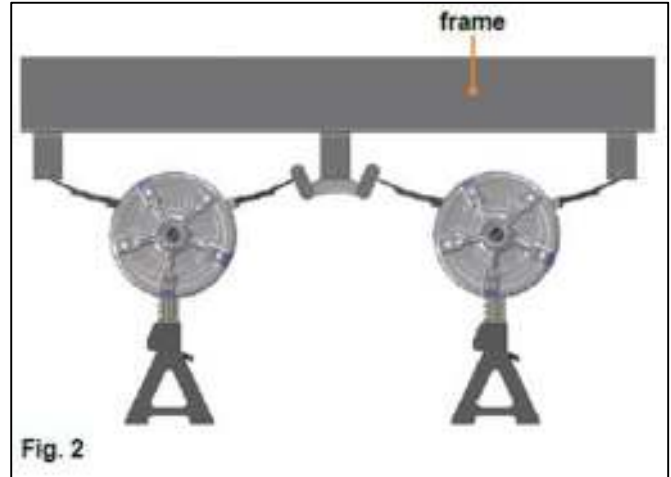
**NOTE:** Do not lift the trailer by the axles. The axles were not designed as a viable lift point.

- Step 1 Using the properly-rated floor jack, lift the trailer in front of and behind the axles at the frame until the wheels are no longer in contact with the ground.



Fig. 1

- Step 2 Support framework using jack stands.
- Step 3 Remove the wheels and set aside wheels and lug nuts.
- Step 4 Using a floor jack, lift the axles slightly and place the additional properly-rated jack stands under the axles (Figure 2) so that the shackle bolts can be driven out with a hammer.
- Step 5 With an impact gun or an appropriate wrench, loosen both the nut on the equalizer bolt and the nuts on the shackle bolts (Figure 3).



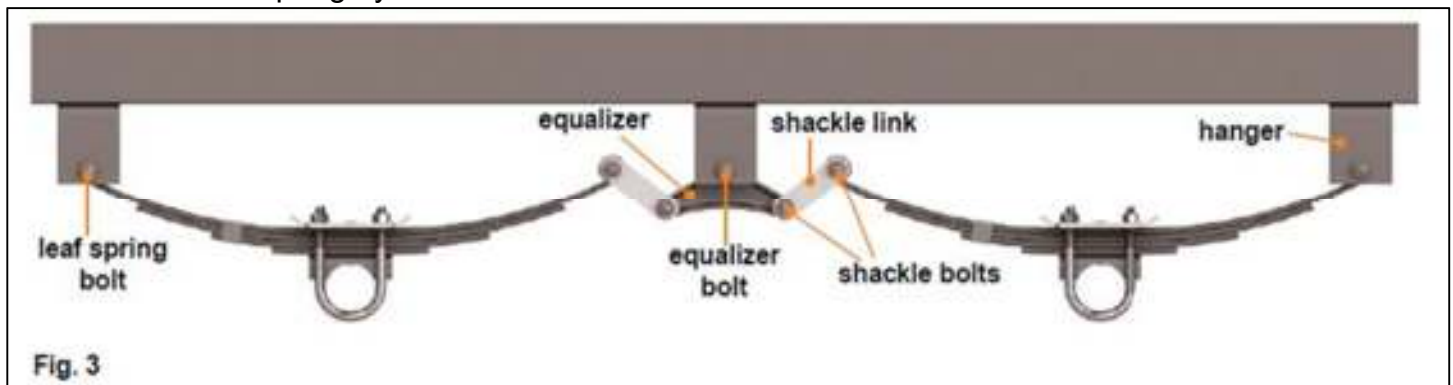
NOTE: Hold the head of the bolts with a wrench.

- Step 6 Drive out the equalizer bolt with a hammer, so the equalizer bolt unseats from the hanger.

NOTE: A pry bar may be used to remove the equalizer bolt.

NOTE: The equalizer should hang freely from the shackle links.

- Step 7 The shackle link assembly with the shackle bolts (Figure 3) should be removed from the leaf spring eyelets.



- Step 8 The trailer is ready for the installation of the new equalizer 1 – KRV # 505103 - Axle - Equalizer Only - EQ310 - w/Nylon Bushings (This part may be ordered in bulk without a VIN).

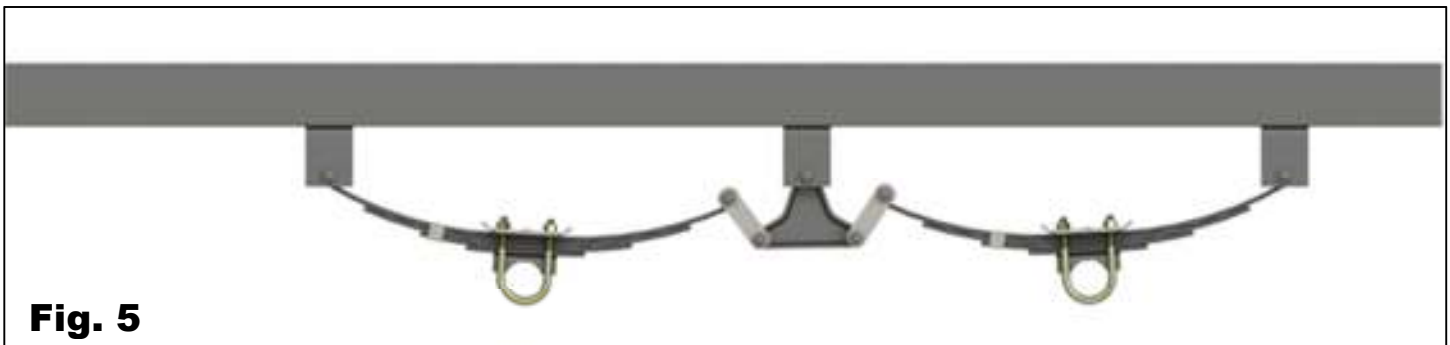
### **THREE: INSTALL THE NEW EQUALIZER**

- Step 1 Install the new equalizer (KRV # 505103 - Axle - Equalizer Only - EQ310 - w/Nylon Bushings) into the hanger.



- Step 2 Install the equalizer bolt (Figure 4) through the first bracket of the hanger, then through the topmost Nylon bushing of the equalizer and, finally, through the second bracket of the hanger.

- Step 3 Use a hammer and drive the equalizer bolt into the hanger. This will seat the serrations of the bolt against the hanger surface and provide resistance to rotation when tightening.
- NOTE: The equalizer bolt must be installed from the outside in toward the center of the trailer chassis. This ensures the bolt threads do not interfere with any other assemblies.
- Step 4 Install the nut onto the equalizer bolt until the nut seats against the shoulder bolt. Torque nut to 30-50 ft-lbs.
- NOTE: When installing the nuts, be sure to use a wrench to hold the bolt heads.
- Step 5 Utilizing the floor jacks, lift the axles into the normal operating positions.
- Step 6 Using shackle bolts and nuts, attach the shackle links (Figure 4) to the equalizer pivot arm bushings and the leaf springs.
- Step 7 Tighten all nuts until they bottom out on the shoulder bolts at 30-50 ft-lbs.
- Step 8 Repeat Steps 1 through 8 under the Removal section for the opposite side of the trailer.
- Step 9 Repeat Steps 1 through 7 under the Installation section for the opposite side of the trailer.
- NOTE: Check bolts at hangers (Figure 5) for wear and damage and replace as needed.

**Fig. 5**

- Step 10 Install wheels and apply lug nuts using the following process:

**FOUR: WHEEL INSTALLATION**

**WHEEL & HUB PAINT MUST BE REMOVED PRIOR TO WHEEL REINSTALLATION**

- Step 1 The black paint that has transferred from the hub face to the mounting surface of the wheel must be fully removed.
- Step 2 For the wheel, apply lacquer thinner to the back side (hub-mating surface) side of the wheel with a shop rag to soften the black paint. Rub the area with a type "A" very fine Scotch-Brite® pad until clean. Dry the surface completely. See Figures 5 & 6.

**Warning:** Do not allow solvent or equivalent to make contact with the tire. Do not use liquid paint remover as this will pit and damage the aluminum wheel. Do not use a wire wheel (brush) or grinder to remove the paint from the wheel as this will also damage the wheel.



Fig. 5 Before Cleaning



Fig. 6 After Cleaning

**Step 3** For the hub face, apply liquid paint remover or equivalent to the wheel-mating surface of the hub. Use a wire wheel (brush) to clean all black paint from the wheel-mating surface, that is, all areas of the hub face that come in direct contact with the wheel. Avoid damaging the hub face with this process! After the paint is removed, wash off the area with water to remove any remaining residue. Dry the surface completely. See Figures 7 & 8.

**Step 4** Make a final inspection of these surfaces before mounting the wheels. If any grease is present use a brake cleaner or degreaser. Rinse any cleaned areas with water to remove residue. Dry the surface completely. See Figure 8.

**Warning:** When using chemicals (paint remover, brake cleaner/degreaser) be sure to utilize the “Personal Protective Equipment” (PPE) recommended by the manufacturer through the Safety Data Sheet (SDS) and dispose in accordance with all Federal, State and Local Laws.

**Warning:** When cleaning the hub face with the wire wheel brush avoid excessive pressure on the studs. Applying too much force here could damage the threads on the studs.



Fig. 7 Before Cleaning



Fig. 8 After Cleaning

## **FIVE:** WHEEL ASSEMBLY INSTALLATION

**Step 1** Using a clean rag, wipe down all lug nuts and tapered nut seats on wheel to remove any foreign debris.

**Step 2** Start the lug nuts on each stud by hand.

- Step 3** You must use the star pattern and torque wrench when tightening the lug nuts to the wheel. This sequencing pattern shows how to progressively tighten the lug nuts to best achieve the proper torques and clamp load. See Figure 9.

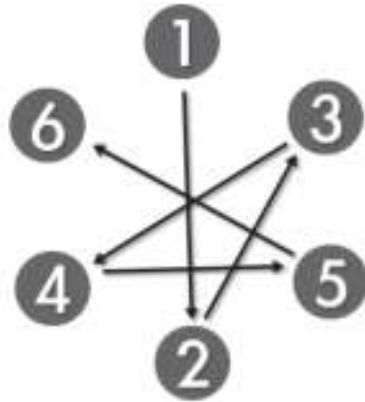


Fig. 9

- Step 4** Using the star pattern outlined in Figure 9, tighten the lug nuts until the 1<sup>st</sup> stage torque (20-25 ft-lbs ) outlined in Figure 10 is achieved. Verify the lug nuts are properly positioned in the tapered seats of the wheel.

Wheel Torque Requirements			
Wheel Size	1st Stage	2nd Stage	3rd Stage
15"	20-25 ft-lbs	55-60 ft-lbs	110-120 ft-lbs

Fig. 10

- Step 5** Using the star pattern outlined in Figure 9, tighten the lug nuts until the 2<sup>nd</sup> stage torque (55-60 ft-lbs) outlined in Figure 10 is achieved.
- Step 6** Lower the trailer to the ground.
- Step 7** Using the star pattern outlined in Figure 9, tighten the lug nuts until the 3<sup>rd</sup> and final stage (110-120 ft-lbs) is achieved. See Figure 10.
- Step 8** Use a dial or digital torque wrench to verify that the proper amount of torque has been applied.
- NOTE:** Reminder – Follow-Up re-torque required at 10, 25, and 50 miles.
- Step 9** Remove the jack stands and lower the trailer evenly to the ground. Make sure the shackle links are upright and located approximately in the 10 o'clock and 2 o'clock positions.
- NOTE:** To ensure that the shackle links do not flip either up or down, lowering of the trailer must be with even distribution and without jarring movement. The trailer **MUST** not be dropped to the ground.

Proceed to warranty reimbursement.

**WARRANTY REIMBURSEMENT**

**REPAIR**

Submit the claim on Key Express using **Flat Rate Code # 7134942B**

In the Complaint section note:      Safety Advisory # 19-349

In the Cause section note:              Safety Advisory # 19-349

In the Correction section note:      Replaced equalizer and flange nuts

The amount of time authorized for this repair is **2.0 hours**.

**PARTS DISPOSITION**

No part return.

Please call Keystone RV Customer Service at **855-382-4100** if you have any questions.