Keystone RV Company

7/15/2016

SERVICE ADVISORY # 16-257

Oregon Springdale Tank Clearance

It has been determined that on certain Oregon-manufactured Springdale model 220BHWE travel trailers, there is insufficient clearance between the axle beam and holding tank that is located above the axle. The lack of clearance may cause damage to the tank allowing its contents to leak out. The following procedure describes how to correct the issue.

Models Included:

2016 – 2017 Oregon Springdale 220BHWE

Serial Number Range:

2016 - GG102632 – GG104577

2017 - HG100133 – HG101047

Parts Required per Unit:

2 – KRV # 499341- Axle - Beam Only - 3500# - Straight - Overslung

2 – KRV # 514343 - Axle - Fastener Kit - For 3500# Axle

Wire connecters to be purchased locally

Tools Required:

-Impact Wrench - ½" drive (removal of wheels only)

-Torque Wrench – ½" drive

-Deep Socket 11/16"x ½" drive

-Minimum 2" long socket extension, ½" drive

-Floor Jack – adequate to trailer weight

-Wire cutters/crimpers

-Deep Socket 13/16"x ½" drive

-Box end wrench 11/16"

-Wheel chocks

-Jack Stands – adequate to trailer weight

GENERAL INFORMATION

- Read the entire repair procedure prior to the repair.
- Stock units must be remedied before selling.
- **This Service Advisory requires Pre-Authorization.**

REPAIR INSTRUCTIONS

ONE: PREPARING THE TRAILER

Step 1 Locate the trailer on a level, flat, hard surface. Chock the wheels.

Step 2 Remove battery positive wire.

Step 3 Loosen the lug nuts on the rear wheel about a half turn. DO NOT remove lug nuts at this time.

Step 4 Jack up the frame until the rear tire just clears the shop floor.

Step 5 Install a jack stand of sufficient capacity directly behind the rear spring hanger.

Step 6 Relocate floor jack to an area just forward of the front spring hanger, leaving enough room to install a jack stand immediately in front of the spring hanger.

Step 7 Loosen the lug nuts on the forward wheel about a half turn. DO NOT remove lug nuts at this time.

Step 8 Elevate the frame just enough to take some of the weight off the wheel.

Step 9 Raise the frame until the forward tire just clears the shop floor.

Step 10 Install a jack stand of sufficient capacity just forward of the front spring hanger.

Step 11 With both tires now slightly off the ground finish removing the lug nuts and the two wheels from the trailer.

Step 12 Repeat Steps 2 – 11 for the other side of the trailer.

TWO: AXLE BEAM REPLACEMENT

Step 1 Follow Lippert Technical Information Sheet 136, next page, for guidelines to replace both axle beams per axle manufacture's specs.

AXLE BEAM REPLACEMENT

TI-136

AXLES AND SUSPENSIONS

NOTE: See TI Sheet 073 for proper axle orientation.

1. Safely jack up the trailer using a lift for the entire coach or follow the frame jacking procedure found in TI Sheet 083.
2. Remove lug nuts from wheels on the axle receiving the new beam.
3. Remove the spindle nuts and other hardware on the spindle holding the hub on the spindle.
4. Remove hub from spindle.
5. Remove backing plate with brake assembly from spindle.
6. Remove nuts from u-bolts and remove u-bolts from axle beam.
7. Remove axle beam from under the coach.
8. Install new axle beam under the coach.

NOTE: Be sure axle info tag and brake wires are facing the rear of the coach.

9. Install new u-bolts (mandatory) and tie plates (if necessary).

NOTE: Be sure springs are centered on spring perches on the new axle beam. Spring clips on front of spring unless 2 clips are used.

10. Torque u-bolt nuts per guide below:

Torque Guide	
2K Axle	25 ft.lb.
3.5K Axle with ½" U-Bolt	50 ft.lb
5.2K Axle	65 ft.lb.
6-8K Axle	90 ft.lb.

11. Install backing plate with brake assembly on spindle. Torque specs: 35-55 ft.lb.
12. Install hub on spindle.
13. Install hardware and spindle nut in the proper sequence on the spindle.
14. Spindle nut should be torqued to 50 ft.-lb. Hub will rotate during this process.
15. Loosen castle nut to back off the torque.
16. Tighten castle nut finger tight until snug.
17. Insert cotter pin. If cotter pin does not line up with hole, back castle nut up slightly until pin can be inserted.
18. Bend cotter pin over to lock nut in place. Nut should be free to move with only the cotter pin keeping it in place.
19. Mount Wheel and lug nuts and tighten to proper torque guidelines. Check with coach manufacturer for lug nut torque specs.

THREE: **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 Place wheel on hub and 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 1.

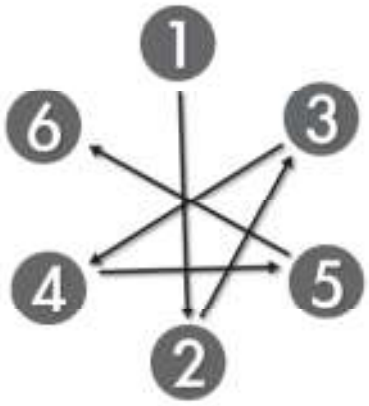

Figure 1

Step 4 Using the star pattern outlined in Figure 1, tighten the lug nuts until the 1st stage torque (20-25 ft-lbs) outlined in Figure 2 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

Figure 2

Step 5 Using the star pattern outlined in Figure 1, tighten the lug nuts until the 2nd stage torque (55-60 ft-lbs) outlined in Figure 2 is achieved.

Step 6 Lower the trailer to the ground.

Step 7 Using the star pattern outlined in Figure 1, tighten the lug nuts until the 3rd and final stage (110-120 ft-lbs) is achieved. See Figure 2.

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.

FOUR: **WARRANTY REIMBURSEMENT**

Submit the claim on Key Express with **Service Advisory # 16-257** noted in the customer complaint section of the form using **Flat Rate Code # 7125742B**. The amount of time authorized for this repair is 3.5 hours.

FIVE: **PART RETURN**

No part return required.

If you have any further questions please contact us through normal channels at 866-273-1452.