

Keystone RV Company

12/6/18

SAFETY ADVISORY # 18-336

Montana Disc Brakes

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 have fasteners used to install a disc brake assembly that may fail. Under certain conditions during travel, if the fasteners come loose the vehicle can lose all braking ability, leading to an increased risk of property damage and poor vehicle handling.

Models Included: 2019 Montana Fifth Wheels, Legacy Package

Serial Number Ranges: 2019 K4701412 - K4702140

Parts Required: 1 – KRV # 623191 - Axle - Hardware Kit - For Disc Brake Advisory - Kit
Includes: Bolts, Nuts, Seals, and Thread Lock For Wheel Ends - Recall
18V781

- Purchase Dexter approved bearing grease locally

Tools Required: See Dexter Axle instructions below.

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 remove the brake assembly, replace and properly torque the new mounting fasteners.

REPAIR INSTRUCTIONS FROM DEXTER FOLLOW

TITLE: 7K Disc Brake Caliper Mounting Bracket Fastener Inspection and Replacement Instructions		
AFFECTED SITE(s):		DEPARTMENT: Engineering
Written By: Rodney Peterson	Approved By: Tim Meckstroth	Revision Date: 10/31/2018

PURPOSE:

To guide you through identifying the fastener type that needs to be replaced, removal of wheel end components, replacing hardware and the re-assembly of the wheel end components.

Tools needed:

- (1) 1/2" Open/box end wrench
- (1) 9/16" Open end wrench
- (1) 9/16" Socket
- (1) 3"-4" Long socket extension
- (1) Socket wrench
- (1) Torque wrench capable of 40-45 ft-lbs torque
- (2) Flat blade screw drivers
- (2) Jack stands rated higher than the GVWR of the trailer
- (1) Floor/bottle jack rated higher than the GVWR of the trailer
- (1) Large pair of channel locks
- (1) Seal puller
- (1) Seal installation tool
- Wheel stud lug nut wrench
- Safety glasses

Safety Note:

Secure the trailer according to the trailer suppliers Maintenance/Repairs Manual.

Do not jack the trailer up on the axle tube or suspension system.

1. Identify fasteners to be replaced.
 - a. The bolt is grade 5 indicated with three radial lines from the center of the head.



- b. The nut is a grade B nut that has an integral star lock washer.



2. Raise and support the trailer
 - a. Lift one side of the trailer by the frame high enough to raise the tires off the ground and the tire spins freely.
 - b. **Never place jack/jack stands on any component of the axle or suspension.**
 - c. Place one jack stand under the frame on the front side of the suspension and one jack stand on the rear side of the suspension under the frame.
 - d. Lower jack until the jack stands are supporting the load of the trailer.
3. Remove lug nuts and tires and set aside.
4. Remove the brake caliper
 - a. Loosen the slider pin bolts until the caliper can move freely.
 - b. Raise the brake caliper high enough to clear the rotor and suspend with bungee cords or rope. Be careful of the brake line so as not to kink it. The brake line may be detached from the caliper however; you will need to bleed the brakes at the end of these steps.

Slider pin bolt



5. Remove the clear grease/oil cap

- a. Using a pair of large channel locks, carefully turn the grease/oil cap counter clockwise. Do not squeeze to hard as you may crack the cap.
- b. Set aside to re-use.

Clear grease /
oil cap



6. Remove spindle nut retainer.
 - a. Using two flat bladed screw drivers, carefully pry under the main body on each side until the retaining arms are free from the spindle nut.
 - b. Set aside for re-use.

Spindle nut
retainer



7. Remove the spindle nut.
 - a. Remove the spindle nut by turning it counter clockwise and set aside.

Spindle nut



8. Remove flat washer with "D" flat.
 - a. Remove washer and set aside to re-use.

Flat washer



9. Remove outer bearing cone.
 - a. Carefully wiggle the hub-rotor side to side to push the outer bearing cone out of the barrel of the hub-rotor. We suggest holding a cloth over the end of the spindle and catch the bearing cone and then wrap the cloth around it and set aside to re-use.

Outer bearing
cone



10. Remove the hub-rotor.
 - a. Carefully pull the hub-rotor straight out being careful to not drag the inner seal so as to not damage the sealing surface of the rubber ring.
 - b. Set aside on a clean surface to re-use later.
 - c. Place a clean rag over the spindle to prevent damage to bearing and seal journals.



11. Replace current bolt and flange nuts.

- a. Remove current hardware and discard.
- b. Insert new 3/8-24 x 1-1/4" grade 8 hex bolt from the inboard side of the brake flange and through the brake flange and caliper bracket.



- c. Thread 3/8-24 grade C hex flange lock nut by finger.



12. Torque new hex bolts and flanged lock nuts.

- a. Using a 9/16" open end wrench and torque wrench with a 9/16" socket set at 40-45 ft-lbs torque hex bolts and nuts in a crisscross pattern.
- b. **Do not over tighten as the threads will stretch and fail.**

13. Install new grease seal.

- a. Pry the seal out of the hub with a seal removal tool or a screwdriver. Never drive the seal out with the inner bearing as you may damage the bearing.
- b. Apply a sealant similar to PERMATEX® High-Temp Red RTV Silicone Gasket to the outside of the seal. Use only enough to provide a thin coat to prevent any excess from contaminating the rubber lip(s) of the seal. It is okay to apply a slight amount of lube to the inner rubber lip(s) to aid with installing onto the spindle.

Note: No sealant should be used if the outside of the seal is rubber coated. For these type of seals it is recommended to apply a thin coat of oil to the outside rubber.

- c. Clean the seal journal of the spindle to inspect for nicks or roughness. Use a file to remove any burrs from the leading edge or shoulder area. Clean the journal area with very fine emery cloth. Any presence of deep gouges or scratches in this area may cause seal failure allowing lubricant to leak out of the hub.
- d. Clean the seal bore in the hub and inspect for any nicks, gouges, or scratches that may prevent the seal from retaining the bearing lubricant inside the hub.
- e. Orient the seal properly. Many oil bath seals will be marked AIR SIDE on the side of the seal to facing out of the hub after installation.
- f. Install new seal into place using a seal driver or seal installation tool of proper size. It is important that any seal installation tool contact the outer ring of the seal casing. If no seal driver is available, use a clean block of wood. It is critical that the seal be driven in evenly and straight. NEVER hammer directly on the seal.
- g. The seals will be pressed flush to the back surface of the hub in the 600-8,000 lbs. capacity product line. It is NEVER necessary to bottom out the seal for proper installation. Driving the seal in too deep may damage the seal and may come in contact with the inner bearing preventing it from rotating freely.
- h. Proper installation will maintain the seal flatness in the hub within .010". A seal that is cocked too much inside the hub will be more likely to leak.

14. Repacking bearing cones with grease.

- a. Place a quantity of grease into the palm of your hand. Press a section of the widest end of the bearing into the outer edge of the grease pile closest to the thumb forcing grease into the interior of the bearing.
- b. Repeat this while rotating the bearing from roller to roller.
- c. Continue this process until you have the entire bearing completely filled with grease.
- d. Before reinstalling, apply a light coat of grease on the bearing cup.



Adequate Grease

CAUTION

**Never spin the bearing with compressed air.
THIS CAN DAMAGE THE BEARING.**

CAUTION

Do not mix Lithium, calcium, sodium or barium complex greases due to possible compatibility problems. When changing from one type of grease to another, it is necessary to ensure all the old grease has been removed.

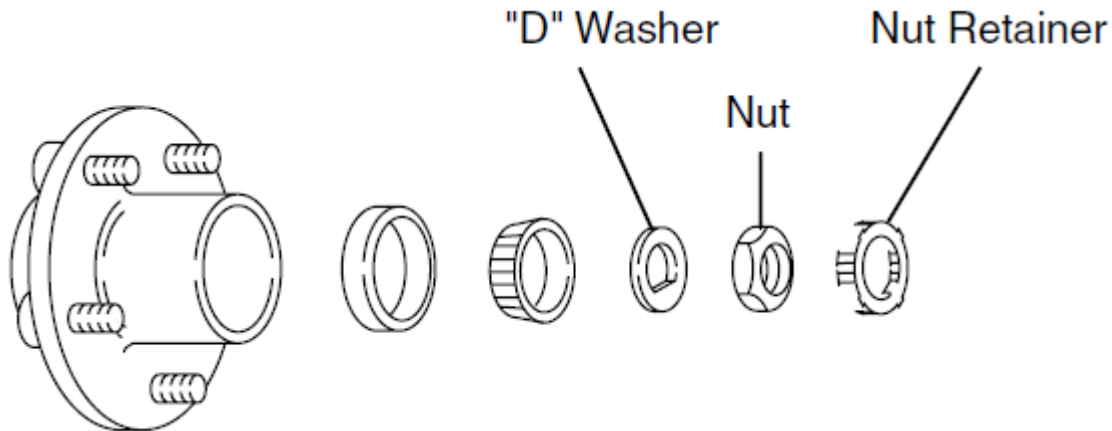
15. Re-assemble components in reverse order as disassembled.

16. Disc brake slider pin bolt installation.

- a. Apply a couple drops of thread locker to the threads of the slider pin.
- b. Insert slider pin bolt through bushing in disc brake caliper and tighten to 25 lbs-ft.

17. Install spindle nut.

- a. While rotating hub, torque spindle nut to 50 ft-lbs.
- b. Loosen the spindle nut to remove the torque. Do not rotate the hub.
- c. Finger tighten the nut until just snug, align the retainer to the machined flat on the spindle and press the retainer on ton the nut. The retainer should snap into place. Once in place, the retainer/nut assembly should be free to move slightly.
- d. If the nut is too tight, remove the retainer and back the nut off approximately one twelfth of a turn and reinstall the retainer. The nut should not be free to move slightly.
- e. Reinstall the clear grease/oil cap.

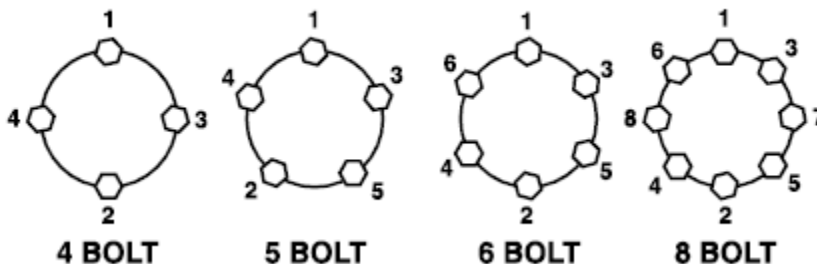


18. Install the wheel and lug nuts and torque as follows:

Wheel Torque Requirements

Wheel Installation Torque Sequence (FT. lbs)

Wheel Size	Stud Size	1st Stage	2nd Stage	Final Torque	Cone Nut Degree
16" - 655 BC	1/2" - 20	20 - 25	50 - 60	100 - 120	60° Cone Nut
16" - 865 BC	9/16" - 18	20 - 25	50 - 60	140 - 170	60° Cone Nut



Maximum Wheel Fastener Torque

The wheel mounting studs used on Dexter axles conform to the SAE standards for grade 8. The maximum torque level that can be safely applied to these studs is listed in the following chart:

Stud Size	Maxium Torque
1/2" - 20 UNF, class 2A	120 Ft. Lbs.
9/16" - 18 UNF, class 2A	170 Ft. Lbs.

CAUTION

Exceeding the above listed torque limits can damage studs and/or nuts and lead to eventual fractures and dangerous wheel separation.

Revision History:

Level	Date	Reason for change	Writer	Approval
A	10/31/2018	New Issue	RLP	TAM

WARRANTY REIMBURSEMENT

REPAIR

Submit a claim on Key Express using **Flat Rate Code # 7133642A**

In the Complaint section note: Safety Advisory # 18-336

In the Cause section note: Safety Advisory # 18-336

In the Correction section note: Replace and properly torque the new mounting fasteners

The amount of time authorized for this repair is **3.5 hour**.

PARTS DISPOSITION

No part return.

Please call Keystone RV Customer Service at **(866) 273-1450** if you have any questions.