

Keystone RV Company

SERVICE ADVISORY # 16-245

Wheel Separation Repair Process

This process describes the safe and proper procedure to process and repair any unit which has experienced a wheel separation. **Note: Separation due to axle bearing failure may require additional tools, parts and steps.**

- Models Included:** Any unit which experiences a wheel separation.
- Serial Number Range:** All units.
- Parts Required per Unit:** Will vary with each occurrence; however, minimum requirements outlined below.
- Tools Required:** Minimum listed here (does not include tools needed to repair any damage caused by wheel loss):

Wheel chocks	Torque Wrench	Wire Brush	Dykes
Floor Jack	Impact (for removing only)	Grease Pencil	Channel Locks
Jack Stands	Bearing Grease	Alcohol	Clean rag (s)

Step 1. Notify Keystone Customer Service Team immediately of all wheel separations whether it appears to qualify for Warranty consideration or not.

Step 2. Assess & document the unit to determine parts needed. Supply photos of all damage which appears to have been caused by the separation. The minimum repair requirements are outlined below:

- Hub, wheel, lug nuts & center cap from wheel that separated must be replaced with new parts and the old components returned to Keystone RV, if available. **DO NOT PRESS IN NEW WHEEL STUDS.**
- Tire & wheel, lug nuts & center cap for the other wheel on the “same side” as the separated wheel must be replaced with new parts (this precaution is taken because the “same side” wheel has been exposed to higher-than-expected and potentially damaging loads as a result of the separation). Return the tire & wheel, center cap & lug nuts to Keystone RV.

Notes: Mark with a grease pencil:

-To identify which nuts and center caps are associated with each wheel.

- Parts to be ordered by dealer through Keystone RV Parts Department.

3. Proceed with the replacement of the wheel which separated. The following installation process must be utilized:

CAUTION: FAILURE TO FOLLOW THESE STEPS COULD LEAD TO ADDITIONAL WHEEL SEPARATION IN THE FUTURE!

- Using wheel chocks, jack (s) and jack stands, secure the unit so no movement can occur.
- Remove the hub from the separated wheel location, re-pack the wheel bearings & install the new hub.
- Using a wire brush (Do Not use any abrasive or grind), carefully remove the paint from the hub face until it looks like the photograph in **Figure 1**. Be sure not to gouge the hub face or damage the stud threads. Clean the mating surfaces of the hub face and wheel as well as the wheel studs of all dirt, grease, paint or any other contamination present. Using alcohol and a clean rag, wipe the hub and wheel mating surfaces and the wheel nut bores of each wheel.

Example of what the hub face should look like after wire brushed and the surface wiped down with alcohol prior to wheel installation.

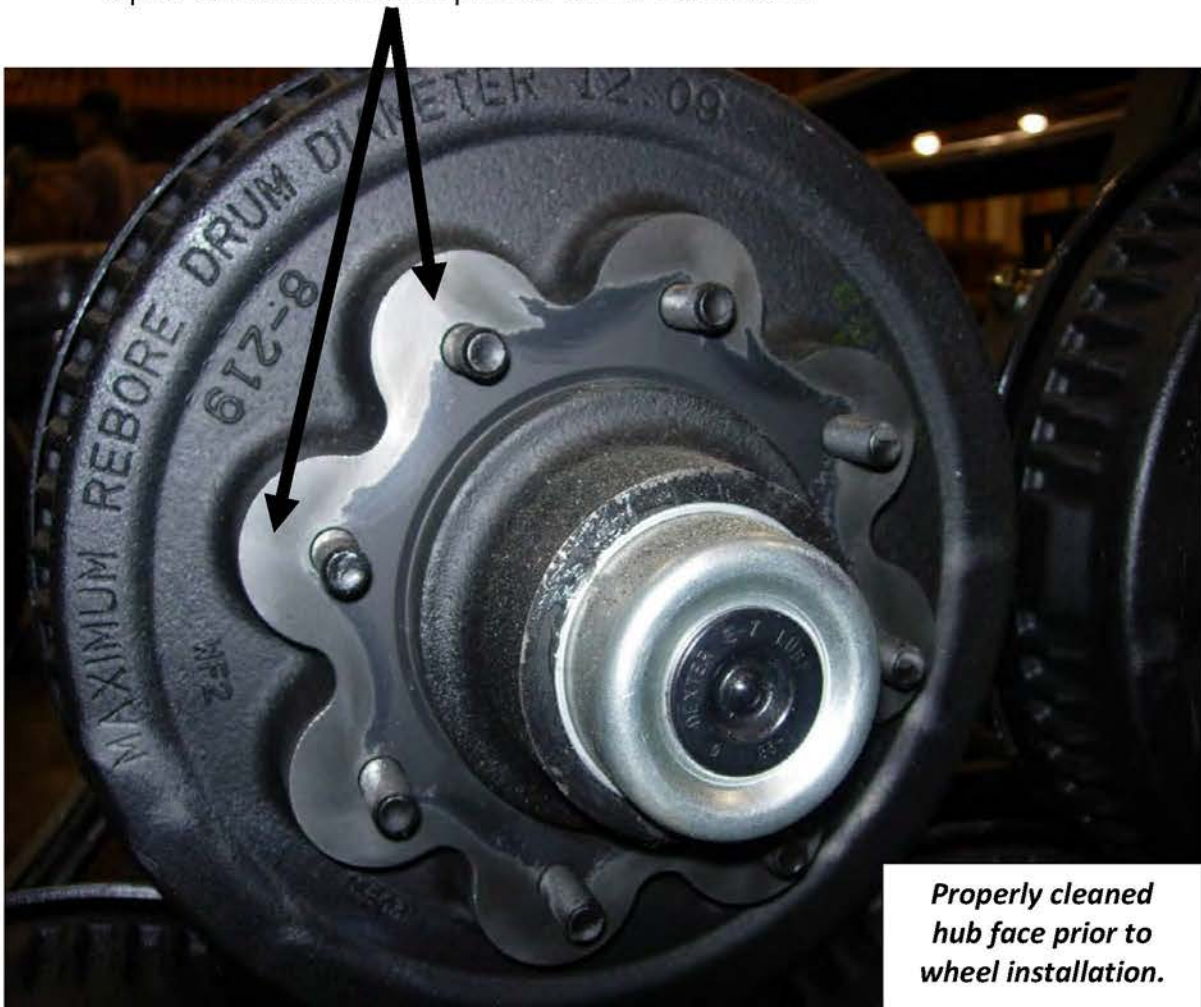
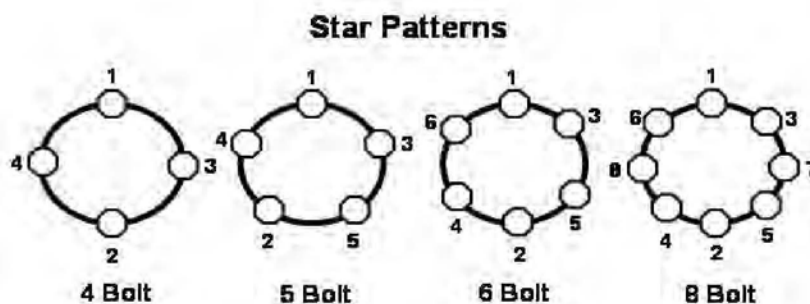


Figure 1

- Place the new center cap into the wheel and carefully set the wheel in place on the hub. Note: only steel-tabbed hub covers may be used on steel wheels.
- Start the lug nuts by hand. No impact wrenches may be used in the installation process. Using a Torque wrench, tighten the wheel lug nuts using the sequence shown and stages identified below:

Stage 1	20-25 ft/lbs
Stage 2	55-60 ft/lbs
Stage 3 (Twice)	110-120 ft/lbs

NOTE: During the stage 3 tightening sequence, it is not unusual for wheel lug nuts 1-3 appear to loosen because of the centering process. We recommend following the star pattern below a minimum of 2 times to assure we attain 110-120 ft/lbs on all wheel lug nuts.



Step 4. Proceed with replacing the tire & wheel, lug nuts & center cap on the “same side” as the original wheel separation following the protocols outlined in step 3. This precaution is taken because the “same side” wheel has been exposed to higher-than-expected and potentially damaging loads as a result of the separation.

Step 5. Verify correct wheel torque on wheels on other side (opposite side of separated wheel) of the trailer.

Step 6. Educate the customer of the requirement to re-torque each wheel to the proper torque requirement after the first 10 miles, 25 miles and again at 50 miles. (This is applicable anytime a wheel is removed for any reason). Verify they own a torque wrench, know how to use it and are willing to check the wheel nut torques. If the consumer is unable to comply with these requirements for any reason, the consumer should be informed of the dealerships willingness to assist them with the following requirements:

Step 7. Part Return requirements will be determined within 48 hours of claim submission. Remember to mark which parts are associated with each wheel.

If approved, submit labor expense on a Keystone Warranty claim form with Service Advisory # 16-245 and Flat Rate Code #7124542A noted in the customer complaint section of the form. Submission of a warranty claim will require Pre-Authorization as the amount of time authorized will vary with each case.

Please direct all inquires to your Keystone Customer Service Teams.