Insufficient grease on bearings may cause failure

Recall : 18V-851 2018-686

Job Code: 9901422

Series: RC024 1 hour per axle Remove & Inspect bearing grease packing

RC025 1.25 hour additional if inspection reveals axle must be replaced.

Photo of each axle serial number tag is required (2 per unit)

Publication Date: December 2018

Make: Jayco

Model: Jay Feather
Jay Flight
White Hawk

Model Year: 2019

INCIDENT	The inner wheel hub bearings may not be sufficiently greased. The lack of grease can cause the bearings to overheat and fail.
AFFECTED UNITS	**2019 White Hawk: K1410095-0098** **K1430123-0146** **K1440171-0194** **2019 Jay Flight SLX: K14J0111-0130** **K17W0268-0287, 0339-0359** **K17Y0423 – 0437** **2019 Jay Feather: K1J90269-0278, 0303-0308** **K1JA0205-0224**
PARTS	**Please contact Dexter Axle (574-295-7888) for parts required. The axle serial number must be provided when ordering parts/axle. Dexter will ship parts at No Charge. Shipment of replacement axles will occur approximately 3-4 working days from date order is placed.**
MISC. TOOLS & SUPPLIES	**Please review Dexter tool list on page 2**

TITLE: Bearing Inspection and Replacement or Repacking
Revision Date: 10/31/2018

PURPOSE: To remove, inspect and replace or re-pack bearings.

MATERIALS:

1) Torque wrench
2) Socket wrench
3) Sockets
4) Impact gun or breaker bar
5) Hammer or mallet
6) Flat head screwdriver
7) Towel
8) Lithium-based grease (See Appendix A)
9) Appropriate replacement seal (See Appendix B)
10) Safety equipment including (but not limited to): Safety glasses, and steel toed shoes

Bearing Inspection and Replacement or Repacking	
Safety Note: Secure the trailer/axle according to the Dexter Light Duty 600-8K Complete Service Manual (LIT-001-00) instructions. **Do not jack the trailer up on the axle tube.**	
1. Identify unit(s) needing to be inspected based on production dates provided by Dexter.	No photo
2. Raise and support the trailer (or loose axle). NOTE: Elevate and support the trailer unit per manufacturers' instructions.	No photo
3. Remove the wheel nuts with an impact gun or breaker bar and socket, and remove the tire and wheel.	 

4. Remove the grease cap using a cap remover or a hammer with a flat head screwdriver.	
5. Remove the hub (or hub & drum) from the spindle by hand. (i) Remove spindle nut retainer. (ii) Unscrew spindle nut counterclockwise. (iii) Remove spindle washer. (iv) Remove hub from spindle being careful not to drop outer bearing cone NOTE: It may be helpful to use the cap to catch the bearings as they come off the spindle.	
6. Inspect spindle for damage. (i) Clean the spindle with a towel. (ii) Feel for any spindle or seal journal damage by hand. NOTE: If the seal journal or spindle is damaged, the axle must be replaced.	(i)  (ii)  

7. Remove the seal from the drum using a seal puller. Ensure seal journal is not damaged during seal removal and discard the seal	
8. Remove and inspect bearing grease packing. Adequate grease: A. Grease must be between rollers B. A 1/4" bead of grease must be visible opposite the filling side C. Exterior of rollers coated with grease If bearing is less than adequately greased, proceed to step 9. If bearing is adequately greased, skip step 9 and move to step 10.	Adequate Grease 

9. Inspect bearings for damage or discoloration.

(i) Clean bearing cone and the inside of the hub and drum with a towel and suitable solvent.

NOTE: Bearing should be as clean as possible to prevent contaminating new grease.

(ii) Inspect both bearing cups and cones for any damage such as pitting, spalling, or corrosion (see Appendix C for example photos).

NOTE: If damage is observed, contact Dexter Service and Warranty for replacement hub and bearing cones. Please have axle serial number available during communication.

574-295-7888
Ask to speak with Recall Assistance.

(iii) Repack the bearing cone with appropriate grease (Appendix A) using one of the following methods:

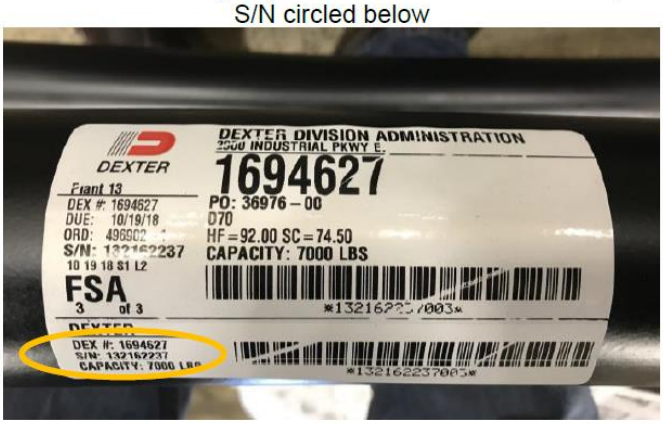
- By hand (Appendix D)
- Using a bearing packer (see packer manufacturer instructions).

(iv) Verify the area between rollers is completely full of grease and the entire outside of the bearing is covered with grease.

NOTE: See step 8 for adequate bearing grease packing.

(i) (ii)

Serial Number (S/N) found on center of axle beam, S/N circled below



WARNING: If a bearing shows wear/damage, the hub assembly and bearing cones must be replaced.

10. Clean the brake drum using brake cleaner and a towel.

Caution: The brake cleaner may be highly flammable. Take necessary precautions.

11. Re-install inner bearing. NOTE: Ensure outer bearing is adequately greased per step 8.	
12. Install a new seal using a hammer and a block of wood or flat piece of steel set on top of the seal. (installation instructions in Appendix E)	 
13. Carefully remount the hub (or hub & drum) onto the spindle by hand. Caution: Do not force the hub or hub and drum onto the spindle. When hub and drum are properly aligned with spindle, it will install with minimal resistance.	
14. Install greased outer bearing cone. NOTE: Ensure outer bearing is adequately greased per step 8.	

15. Install the D-washer and spindle nut.	
16. Slowly turn the hub on the spindle while tightening the spindle nut to 50 ft-lbs with a torque wrench. NOTE: Spinning the hub will seat and properly align the bearing cups.	
17. Loosen the spindle nut and then finger tighten until snug to prevent pre-load on the bearing.	No photo
18. Align the retainer to the machined flat on the spindle, and press retainer onto nut. NOTE: If retainer does not align properly, back the nut of approximately 1/12 of a turn and reinstall the retainer.	No photo
19. Check the grease cap for damage or foreign objects. Replace the cap if necessary.	No photo

20. Install the grease cap using a cap driver and a hammer or mallet.	
22. Pull and push the hub assembly towards and away from you to check for excessive end play. NOTE: Slight wheel end play is acceptable. Any Excessive end play may be corrected by Re-torqueing the spindle nut (steps 16-18).	
22. Rotate hub slowly forwards and backwards. The Wheel assembly should turn freely and smoothly. NOTE: Readjusting the brake may correct any dragging.	

23. Remount the tire and wheel by tightening the wheel nuts with a torque wrench and socket to Jayco torque specifications. (Refer to Appendix F for lug torque specs)	
24. Remove the jacks, lower the trailer to the ground, and re-torque wheel fasteners.	No photo

Level	Date	Reason for change		
A	10/31/18	New Issue		

APPENDIX A: **Approved Grease**

Recommended Wheel Bearing Lubrication Specifications

Grease

Thickener Type	Lithium Complex
Dropping Point	215°C (419°F) Minimum
Consistency	NLGI No. 2
Additives	EP, Corrosion & Oxidation Inhibitors
Viscosity Index	80 Minimum

Approved Grease Sources

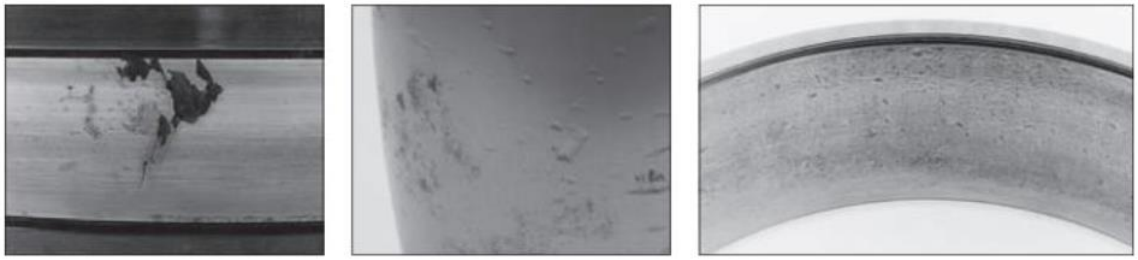
Chem Arrow	Arrow 2282
Chevron Texaco	Chevron Ulti-Plex Grease EP #2 Texaco Starplex Moly MPGM #2
Citgo	Lithoplex MP #2 Lithoplex CM #2 Mystik JT-6 Hi-Temp Grease #2
ConocoPhillips/ 76 Lubricants/Kendall	Multiplex RED #2 L427 Super Blu Grease
Dexter Company	Lithoplex Red MP #2
Exxon/Mobil Company	Ronex, MP Mobilith AW 2 Mobil I Synthetic Grease
Fuchs	Renolit Uniwrl 2
Great Plains Lubricants	Lithium Complex EP #2
Oil Center Research of Oklahoma	Liquid-O-Ring No, 167L
Pennzoil-Quaker State Company	Synthetic Red Grease
Royal Mfg. Company	Royal 98 Lithium Complex EP #2
Shell	Gadus S3 V220C Gadus S5 V220 Rotella Heavy Duty Lithium Complex #2
Valvoline	Valvoline Multi-Purpose GM Valvoline DuraBlend

APPENDIX B: Seal Replacement Reference

Brake Size	Hub Size	Seal Part No. Standard	Seal Part No. E-Z Lube®	Seal Part No. Oil
7" x 1 1/4"	4 or 5 Bolt	K71-301-00	K71-301-00	N/A
10" x 1 1/2"	5 Bolt	K71-302-00	K71-302-00	N/A
10" x 2 1/4"	4, 5 or 6 Bolt	K71-303-00	K71-303-00	N/A

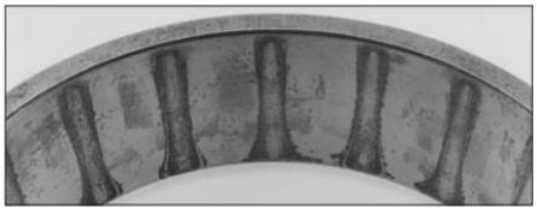
APPENDIX C: Bearing Damage Example Photos

Pitting:

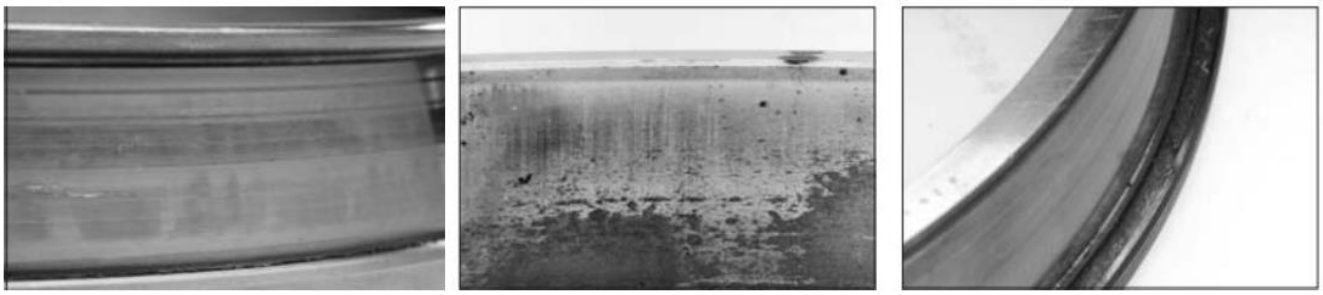


Spalling:

Corrosion:



Scoring/Peeling:



NOTE: Bearing damage pictures taken from Timken Bearing Damage Analysis Reference Guide online 10/31/2018.

APPENDIX D: **Dexter's Service Manual Bearing Lubrication - Grease By Hand**

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.

Along with bearing adjustment, proper lubrication is essential to the proper function and reliability of your trailer axle. Bearings should be lubricated every 12 months or 12,000 miles. The method to repack bearing cones is as follows:

1. Place a quantity of grease into the palm of your hand.
2. 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.
3. Repeat this while rotating the bearing from roller to roller.
4. Continue this process until you have the entire bearing completely filled with grease.

APPENDIX E: Seal Replacement

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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.

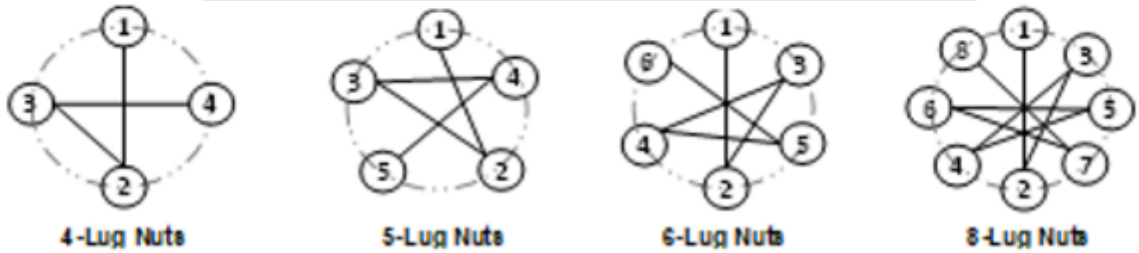
APPENDIX F: Jayco Lug Nut Torque Specifications

Quality Instructions/Standards

Item:	⚠ Wheel Torque Procedures ⚠	**Document No:**	QAS - 009
Department:	Engineering/Manufacturing/Transportation	**Implementation:**	May 2018
Issued By:	Corporate Engineering	**Revision Implementation:**	Oct 1, 2018

Assembly of Wheels on Trailers - NFPA1192; 8.6.1 & TSIC-1(R2013)
Procedure Instructions & Transportation Requirements

Wheel Lug Nut Diagrams: ⚠ **CRITICAL PROCESS CONTROL** ⚠



Criss-cross "star" patterns, as shown, must be followed during the tightening sequence.

Wheel Torque Instructions:

All torque wrenches must have settings visible to ensure correct torque and must be within calibration.

1. **Start** lug nuts with fingers on studs to avoid cross threading.
2. **Stage 1, Torque**: Impact lug nuts in a *star pattern** until snug to rim w/ appropriate torque stick. -- See *Wheel Lug Nut Diagram*
3. **Stage 2, Torque:** Use calibrated torque wrench to torque each lug nut, in a star pattern, to the values indicated. Wheels must remain stationary during torqueing process for control purposes. --See *Wheel Lug Nut Torque Chart* and *Wheel Lug Nut Diagram*
4. **Stage 3 & 4, Torque**: Use calibrated torque wrench to torque each lug nut, in a star pattern, to the values indicated. Wheels must remain stationary during torqueing process for control purposes. --See *Wheel Lug Nut Torque Chart* and *Wheel Lug Nut Diagram*
5. **Confirmation Torque Audit**: Every 10th unit produced must be verified for torque using a calibrated torque wrench.

Wheel Lug Nut Torque Chart:

Lug Nuts	Stud Size Grade 8	Rim	Type	Stage 1 PRE Assembly Impact torque Stick To allow for 45 to 90 Degrees rotation to click. At wheel install (Floor Dept.)	Stage 2 FINAL Assembly Torque Wrench Approx. 45 to 90 degrees of rotation Tires on Floor (Floor Dept.)	Stages 3 & 4 Intermediate/Final Set Torque Wrench Tires on Floor (Midline & End of Line)	Acceptable Torque Audit Range ft.-lbs.
4-Lug	½"-20	12"	Steel /Alum	45 ft.-lbs. Torque Stick	70 ft.-lbs.	70 ft.-lbs.	65 - 85
5-Lug	½"-20	12"	Steel / Alum	45 ft.-lbs. Torque Stick	70 ft.-lbs.	70 ft.-lbs.	65 - 85
5-Lug	½"-20	13"	Steel/Alum	45 ft.-lbs. Torque Stick	70 ft.-lbs.	70 ft.-lbs.	65 - 85
5-Lug	½"-20	14"	Steel / Alum	65 ft.-lbs. Torque Stick	120 ft.-lbs.	120 ft.-lbs.	100 - 150
5-Lug	½"-20	15"	Steel / Alum	65 ft.-lbs. Torque Stick	120 ft.-lbs.	120 ft.-lbs.	100 - 150
6-Lug	½"-20	15"	Steel / Alum	65 ft.-lbs. Torque Stick	120 ft.-lbs.	120 ft.-lbs.	100 - 150
6-Lug	½"-20	16"	Steel / Alum	65 ft.-lbs. Torque Stick	120 ft.-lbs.	120 ft.-lbs.	100 - 150
8-Lug	½"-20	16"	Steel / Alum	65 ft.-lbs. Torque Stick	120 ft.-lbs.	120 ft.-lbs.	100 - 150
8-Lug	9/16"-18	16"	Steel / Alum	65 ft.-lbs. Torque Stick	120 ft.-lbs.	120 ft.-lbs.	100 - 150

Transportation Instructions:

****Digital or Dial Torque Wrenches are recommended. Also applies to any service involving wheel or lug removal, during the life of the recreational vehicle.***

1. Prior to travel and after excessive braking, all wheel lug nuts must be checked for torque. Torque readings must fall within the Acceptable Torque Range. --See *Wheel Lug Nut Torque Chart*
2. Torque specifications, must be checked by using a torque wrench.
3. If Torque falls below the "Torque Audit Range", additional torque is required. -- See *Wheel Torque Instructions* and *Wheel Lug Nut Diagram for* the correct pattern and recommended final torque value. Repeat torque one more time.
4. During travel, wheel lug nuts must be checked and re-torqued, as required, after the first, 10 miles, 25 miles, 50 miles, then periodically during travel (16 kilometers, 40 kilometers, 80 kilometers, then periodically during travel).-- See *Wheel Torque Instructions* and *Wheel Lug Nut Diagram* for the correct pattern and recommended final torque value.

Failure to follow these instructions may result in wheel loss, an accident, or loss of control, resulting in death or serious injury.

Description of Change:	Issued By:
New QAS document to replace WAC-0018-5 document.	Corporate Engineering
10/1/18 Add 5-lug 12" rim	Corporate Engineering

Jayco, Inc. **Quality Assurance**