

Repair Operation 11-038-R

The purpose of this recall is to remove the excessive paint from the hub/rotor of some DRV trailers with disc brakes. The excessive paint on the hub could exhibit lessening of the clamping pressure between the aluminum wheel and the axle hub assembly. This lessening of the clamping pressure can increase the risk of wheel separation and result in vehicle damage, crash or personal injury.

Read the complete instructions before starting the repair procedure.

Parts Required: This procedure should not require any replacement components. If any hub or wheel components are found damaged, contact DRV Customer Service for service authorization, replacement parts and/or instructions for repair.

Tools Required:

- *Torque wrench, ½" drive calibrated to 150# or higher
- * 13/16" deep socket, ½" drive for the 16" wheels
- * 1 1/16" deep socket, ½" drive for the 17.5" wheels
- *2" long socket extension, ½" drive
- *Tire air pressure gauge, 120psi capacity
- *Floor jack – sufficient for trailer weight
- *Jack stands – 2 minimum
- *Wheel Chocks
- *Water hose with spray nozzle
- *Wire Brush – 1" wide and ½" wide
- *Metal conduit – EMT – 3/4" x 3" for 16" wheels – 1" x 3" for 17.5" wheels
- *Grease pencil or tape

Materials Required:

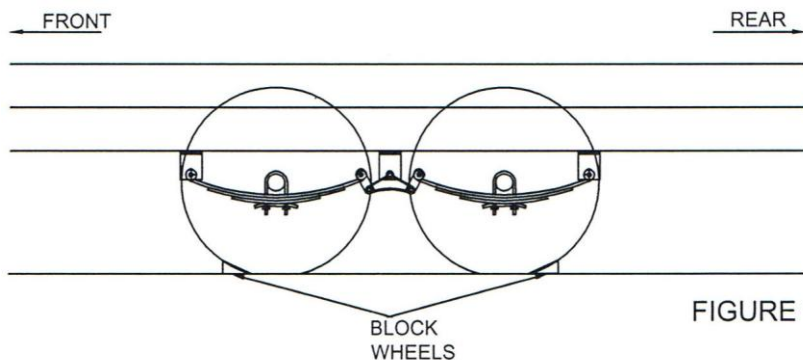
- *Paint remover – Klean-Strip Aircraft Paint Remover or Equivalent
- *Scouring Pads (very fine light duty)
- *Cleaning Rags
- *Lacquer thinner

Time authorized for repair operation is .75 hours per wheel

INSTRUCTIONS:

Step 1: Preparing the Trailer

1. Locate the trailer on a level, flat and hard surface. Chock all the wheels. (Figure 1)



2. Using a grease pencil or tape; mark the locations of the wheel to hub & studs for each wheel. To assure the best seat, the wheel will need to be reinstalled in the exact position from which it was removed.

3. Use a floor jack of sufficient capacity to raise one side of the trailer. Place the floor jack under the main frame behind the rear spring hanger, leaving enough room for the jack stand to position between the floor jack and spring hanger. Raise the frame just enough to take some of the weight off the wheel. **ONLY RAISE ONE SIDE OF THE TRAILER AT A TIME.** (Figure 2)

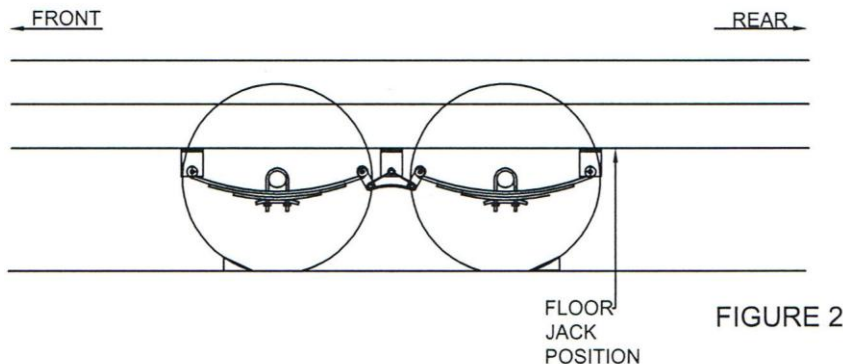


FIGURE 2

4. Loosen the lug nuts about $\frac{1}{2}$ turn. Do Not remove the lug nuts at this time.
5. Continue to raise the frame until the tire just clears the ground.
6. Install a jack stand support of sufficient capacity under the frame as close to the spring hanger as possible. (Figure 3)

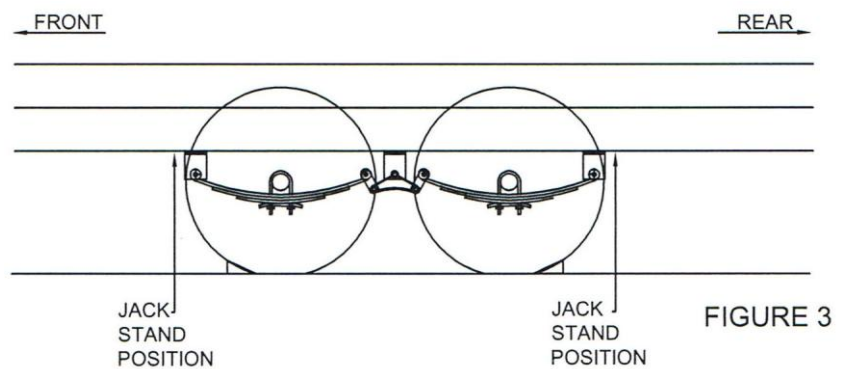


FIGURE 3

7. Install a second jack stand of sufficient capacity under the frame as close to the front spring hanger as possible. Slowly lower the floor jack down until all of the weight is resting on the jack stand supports.
8. With the tires slightly off the ground, remove the lug nuts and the wheels from the raised side of the trailer.

Step 2: Wheel and Lug Nut Inspection

1. Inspect the stud holes for wear, elongation or damage. Stud holes in the wheel should be smooth and round with no deformities.
2. Lug nuts should not exhibit any wear or damage and be free running after torque is removed.
3. If any rims or lug nuts show signs of damage, contact DRV Customer Service for authorization and replacement. All damaged parts must be returned to DRV. Replacement instructions will come with the parts.

Step 3: Wheel Stud Inspection

1. Inspect the thread area on all studs for any sign of damage. Any stud that has come in contact with the wheel will show significant damage to the threads. Inspect for aluminum embedded in the threads of the studs.
2. Lug nuts should not exhibit any wear or damage and be free running after torque is removed. Inspect studs for aluminum embedded on the threads.
3. If any studs show signs of damage, contact DRV Customer Service for authorization and replacement of the hub/rotor. All damaged parts must be returned to DRV. **Do not press in new studs.** Replacement instructions will come with the parts.

Step 4: Wheel Paint removal

1. The black paint that has transferred from the hub face to the mounting surface must be fully removed. (Figure 4)



Figure 4

2. Apply lacquer thinner to the back side (hub mating surface) 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. (Figure 5)



Figure 5

Do not allow lacquer thinner to make contact with the tire. Do not use liquid paint remover on the wheel as this will pit and damage the aluminum wheel. Do not use a wire brush to remove the paint from the wheel as this will also damage the wheel.

Step 5: Hub/Rotor Paint Removal

1. The black surface coating on the wheel mounting surface of the hub will not need to be removed provide there is no evidence of paint transfer to the mounting face of the wheel and there is no evidence of displaced or excessively thick paint on the wheel mounting surface of the hub. Figure 6 shows excessive paint that will need to be removed. If in doubt apply a small amount of liquid paint remover to the hub face area. If the coating is not easily removed skip to step 6, installation of wheel assembly
2. Use liquid paint remover to the wheel-mating surface of the hub. Use a wire brush to clean all the black paint from the mating surface (Figure 6). That is all the area of the hub that makes contact to the wheel. Use metal conduit tubing 3" long over the studs to protect the threads. Avoid

damaging the hub face and studs with this process. After the paint is removed, wash off the area with water to remove any remaining residue. Dry the surface completely. (Figure 7)



Figure 6



Figure 7

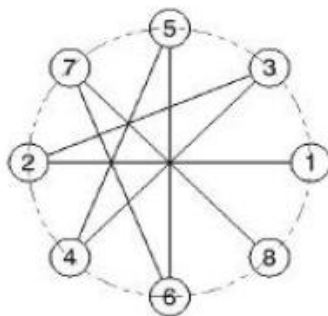
3. Make a final inspection of these surfaces before mounting the wheels. If any grease is present, use a brake cleaner or degreaser. Rinse any cleaned areas with water to remove residue. Dry the hub and wheel mating surfaces completely.

Warning: When using chemicals (liquid paint remover, brake cleaner/degreaser or lacquer thinner be sure to utilize the "Personal Protection Equipment" (PPE) recommended by the manufacturer through the Materials Safety Data Sheet (MSDS) and dispose in accordance with all Federal, State and Local Laws.

Warning: When cleaning the hub face with the wire brush, AVOID CONTACT with the studs. CONTACT could damage the threads on the studs.

Step 6: Wheel Assembly Installation

1. Using a clean rag, wipe down all lug nuts and tapered nut seats on the wheel to remove any remaining residue.
2. Mount each wheel to the axle as it was removed from the trailer. Position the wheel using the marks made earlier so that the wheel is installed with the orientation to the studs as it was built. This helps in reseating the wheel to the hub.
3. Start the lug nuts on each stud by hand.
4. 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 torque and clamp loads. (Figure 8)



8 LUG BOLT
PATTERN

Figure 8

5. Using the star pattern outlined in Figure 8, tighten the lug nuts until the 1st stage torque (20-25 ft-lbs) outlined in Figure 8 is achieved. Verify the lug nuts are properly positioned in the tapered seats of the wheel.
6. Using the star pattern outlined in Figure 8, tighten the lug nuts until the 2nd stage torque (80-90 ft-lbs) is achieved.
7. Lower the trailer to the ground.
8. Using the star pattern outlined in Figure 8 and a calibrated torque wrench, tighten the lug nuts until the 3rd and final stage (140 ft-lbs for the 16" wheels or 150 ft-lbs for the 17.5" wheels) Figure 9

Wheel Torque Requirements

Wheel Size	1st Stage	2nd Stage	3rd Stage
16 inch	20-25 ft-lb	80-90 ft-lb	140 ft-lb
17.5 inch	20-25 ft-lb	80-90 ft-lb	150 ft-lb

Figure 9

Repeat Steps one through 6 on the other side of the trailer.

Verify the torque with a calibrated torque wrench when the unit is returned to the customer. It would be good to do this procedure with the owner of the unit present. They can see the procedure and learn the proper technique for wheel torque.

After all steps are complete, install the WARNING label that was sent to the customer in the notification letter. (Figure 10)

WARNING

Check Wheel Lug Nuts

- Prior to each trip
- Anytime wheels are removed for service
- Following excessive braking

Use calibrated torque wrench

Torque Specifications:

16" Rims	140 ft. lbs.
17.5" Rims	150 ft. lbs.

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

Form # _____

Figure 10

NOTICE: After this repair, tighten wheel lugs at the start and at 10, 25, and 50 miles, and until no torque loss occurs and full torque is maintained. Tighten to the torque specifications in this procedure with a certified torque wrench. (Figure 10)