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DEXTER AXLE K71-510-00

Dexter Brake & Hub-Drum Kit User Manual

Brand: DEXTER AXLE

Model: K71-510-00

1. Introduction and Product Overview

This manual provides detailed instructions for the installation, operation, and maintenance of the Dexter Brake & Hub-Drum Kit. This kit is designed to replace worn-out brakes and drums for one wheel on 3.5K axles or to convert an idler axle to electric brakes. It includes a left-hand 10" x 2-1/4" electric brake assembly and a hub-drum kit with a 5-4.50 bolt circle.

Key features of this kit include:

- Fits 3.5K Axles equipped with electric brakes or idler hubs.
- Includes Dexter 023-026-00 left-hand electric brake, manual-adjust.
- Brake size: 10" x 2-1/4".
- Includes Dexter E-Z lube Hub-Drum kit K08-247-94.
- Bolt circle: 5-4.50".
- Services 1 wheel.



Figure 1.1: Overview of the Dexter Brake and Hub-Drum Kit, showing the electric brake assembly, hub-drum, and various components including bearings, seal, cap, and lug nuts.

2. What's Included

The Dexter Brake & Hub-Drum Kit (Model K71-510-00) contains the following components:

- 023-026-00 Electric Brake Assembly (Left-Hand, 10" x 2-1/4", manual-adjust)
- K08-247-94 Hub-Drum Kit, including:
    - Hub-Drum (5-4.50 Bolt Circle, 1/2" studs)
    - Inner Bearing
    - Outer Bearing
    - Grease Seal
    - Dust Cap
    - Lug Nuts



Figure 2.1: Detailed view of the Dexter Hub-Drum kit components, including the hub-drum, inner and outer bearings, grease seal, dust cap, and lug nuts.



Figure 2.2: Close-up of the Dexter 023-026-00 Left-Hand Electric Brake Assembly, showing the brake shoes, magnet, and adjustment mechanism.

3. Safety Information

Always prioritize safety when working with vehicle components. Improper installation or maintenance can lead to serious injury or property damage. If you are unsure about any step, consult a qualified professional.

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the vehicle or trailer is securely supported on jack stands before beginning any work. Never rely solely on a jack.
- Disconnect the trailer from the tow vehicle and ensure the trailer battery (if applicable) is disconnected before working on electrical components.
- Use proper tools for each task.
- Keep children and pets away from the work area.
- Dispose of old parts and hazardous materials responsibly.

- Brake dust may contain asbestos or other harmful materials. Avoid inhaling dust and use appropriate respiratory protection if necessary.

4. Setup and Installation

This section outlines the steps for installing the Dexter Brake & Hub-Drum Kit. It is recommended to perform this installation on a clean, level surface.

4.1. Preparing the Hub-Drum Assembly

1. **Clean Components:** Thoroughly clean the inner and outer bearings and the hub-drum interior.
2. **Pack Bearings:** Pack both the inner and outer bearings with high-temperature wheel bearing grease. Ensure grease is forced through all roller and cage surfaces.
3. **Install Inner Bearing and Seal:** Place the packed inner bearing into the larger bore of the hub-drum. Carefully tap the new grease seal into place behind the inner bearing until it is seated flush with the hub.
4. **Prepare Spindle:** Clean the axle spindle thoroughly. Apply a thin layer of grease to the spindle surfaces where the bearings will ride.

4.2. Installing the Electric Brake Assembly

1. **Remove Old Brake (if applicable):** If replacing an existing brake, remove the old brake assembly from the axle flange. Disconnect any wiring.
2. **Mount New Brake:** Position the new Dexter 023-026-00 electric brake assembly onto the axle mounting flange. Ensure the brake is oriented correctly (left-hand side). Secure it with the appropriate bolts and nuts. Torque bolts to manufacturer specifications (typically 45-75 ft-lbs for 3.5K axles, refer to axle manufacturer's manual for precise values).
3. **Wire Connection:** Connect the two wires from the electric brake assembly to the trailer's brake wiring harness. Typically, one wire connects to the brake feed wire from the trailer's junction box, and the other connects to the ground. Ensure secure, insulated connections (e.g., using heat shrink connectors or solder and heat shrink).

4.3. Installing the Hub-Drum

1. **Slide Hub-Drum:** Carefully slide the prepared hub-drum assembly onto the axle spindle, ensuring the inner bearing seats correctly.
2. **Install Outer Bearing:** Insert the packed outer bearing into the hub-drum.
3. **Install Washer and Nut:** Place the spindle washer over the spindle, followed by the spindle nut.
4. **Adjust Bearing Play:**
    - While rotating the hub-drum, tighten the spindle nut to approximately 50 ft-lbs to seat the bearings.
    - Loosen the spindle nut until it is finger-tight.
    - Re-tighten the spindle nut to approximately 10-15 ft-lbs.
    - Back off the nut one castellation (or 1/6 to 1/4 turn) to align with the cotter pin hole.
    - Insert a new cotter pin and bend its ends to secure the nut.
    - Check for proper bearing play: there should be a slight amount of end play (0.001" to 0.005") but no noticeable wobble.
5. **Install Dust Cap:** Tap the dust cap into the center of the hub-drum. For E-Z Lube axles, ensure the grease zerk is accessible.
6. **Install Wheel and Lug Nuts:** Mount the wheel onto the hub-drum studs. Install and torque the lug nuts to the vehicle or trailer manufacturer's specifications, typically in a star pattern.

5. Operating Instructions

5.1. Initial Brake Adjustment

The Dexter 023-026-00 electric brake is a manual-adjust type. Proper initial adjustment is critical for safe and effective braking.

1. **Locate Adjustment Hole:** Find the adjustment hole on the bottom of the brake backing plate.
2. **Adjust Star Wheel:** Using a brake spoon or flat-head screwdriver, turn the star wheel through the adjustment hole. Turn the star wheel until a slight drag is felt when rotating the wheel by hand.
3. **Back Off Adjustment:** Back off the star wheel 10-12 clicks until the wheel rotates freely without drag.
4. **Repeat for All Wheels:** Repeat this process for all wheels equipped with electric brakes.

5.2. Break-In Procedure

After installation, perform a break-in procedure to properly seat the brake shoes to the drum surface. This improves braking performance and longevity.

- Drive the trailer at approximately 40 mph on a safe, open road.
- Apply the trailer brakes using the manual override on your brake controller (do not use the tow vehicle's foot pedal) to slow down to 20 mph.
- Repeat this process approximately 20 times, allowing for a few minutes between applications for the brakes to cool.
- Avoid hard stops during this period.

6. Maintenance

Regular maintenance ensures the longevity and safe operation of your Dexter brake and hub-drum kit.

- **Annual Inspection:** Inspect brakes and bearings annually or every 12,000 miles, whichever comes first.
- **Brake Adjustment:** Re-adjust brakes every 3,000 miles or as needed to maintain proper braking performance.
- **Bearing Lubrication:** For E-Z Lube axles, grease bearings every 12 months or 12,000 miles using a high-quality, high-temperature wheel bearing grease. Follow Dexter's E-Z Lube instructions carefully to avoid over-greasing.
- **Check for Wear:** Inspect brake shoes for wear, cracks, or contamination. Check the drum for scoring, cracks, or excessive wear. Replace components as necessary.
- **Wiring Inspection:** Check all electrical connections for corrosion, fraying, or loose connections.

7. Troubleshooting

Problem	Possible Cause	Solution
No Trailer Brakes	• No power to brake controller • Loose or corroded wiring • Faulty brake magnet • Improperly adjusted brakes	• Check tow vehicle fuse • Inspect and repair wiring connections • Test magnet for continuity and resistance; replace if faulty • Adjust brakes as per Section 5.1

Problem	Possible Cause	Solution
Weak Braking	• Brakes out of adjustment • Worn brake shoes • Contaminated brake shoes/drum • Improper brake controller setting	• Adjust brakes • Inspect and replace worn shoes • Clean or replace contaminated components • Adjust brake controller gain setting
Brake Noise (Squealing/Grinding)	• Worn brake shoes • Scored or warped drum • Contamination	• Inspect and replace brake shoes • Inspect drum; machine or replace if necessary • Clean or replace contaminated components
Wheel Overheating	• Over-adjusted brakes • Worn or improperly lubricated bearings • Dragging brake shoes	• Re-adjust brakes • Inspect, clean, re-pack, or replace bearings • Check for proper brake shoe retraction

8. Specifications

Feature	Detail
Product Model Number	K71-510-00
Brake Type	Electric, Manual-Adjust
Brake Size	10" x 2-1/4"
Brake Part Number	023-026-00 (Left-Hand)
Axle Capacity Compatibility	3.5K (3,500 lbs)
Hub-Drum Kit Part Number	K08-247-94
Hub-Drum Bolt Circle	5-4.50"
Stud Size	1/2"
Item Weight	Approximately 45 pounds
Product Dimensions	Approximately 10 x 10 x 10 inches (packaged)

9. Warranty and Support

For warranty information, technical support, or replacement parts, please contact Dexter Axle directly or refer to their official website. Keep your purchase receipt and product model number (K71-510-00) handy when contacting support.

Manufacturer: Dexter Axle

Website: www.dexteraxle.com

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