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Trailer Preventative Maintenance & Repair

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-2026

Trailer Lights

- Two types of lights:
  - Conventional Bulbs
  - LEDs (more reliable)

- Common reasons for failure:
  - Corroded or dirty trailer plug
  - Broken or frayed wire
  - Pinched wire inside frame (hardest to detect)
  - Bad ground (most common)
  - Burned out bulb
  - Wrong bulb installed
  - Corrosion inside housing
  - Cracked lens letting in moisture
  - LED module failure

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Wiring & Corrosion Prevention

- Rinse wiring after launches
- Avoid submerging connectors when possible
- Use dielectric grease on all plug pins and grounds
- Use heat shrink connectors when making repairs
- Replace cracked lenses immediately
- Use split wire looms to prevent abrasion

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Types of Trailer Brakes

Electric

- Requires a controller installed in vehicle
- Controlled by same harness as lights (no extra wire)

Surge/Hydraulic

- Most common type at DMF
- Automatically activate during deceleration without an electronic controller

Drum

- Adjusted by star wheel (turn until slight drag is felt)
- Separate adjustment for each wheel

Inspecting Surge Brakes

Check actuator on tongue

- Slides smoothly
- Returns freely
- No binding or excessive play

Inspect hydraulic system

- Verify fluid level in master cylinder
- Look for leaks at brake lines, hoses & calipers

Test braking response: Drive slowly in a safe area:

- Brakes engage smoothly when slowing down
- Brakes release smoothly under acceleration

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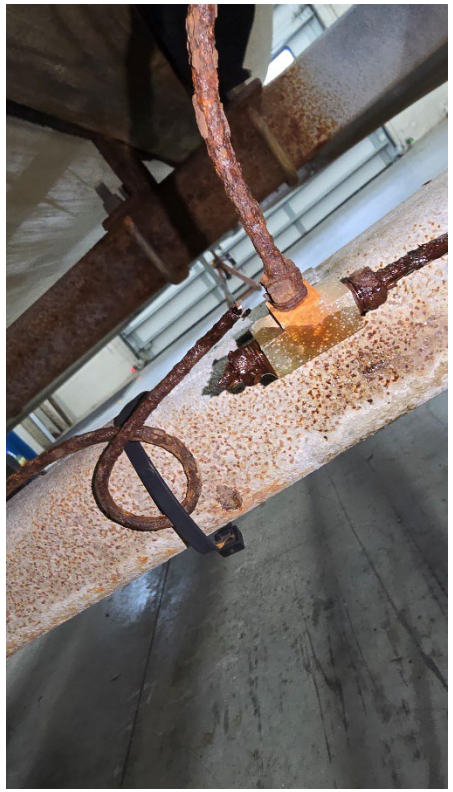
Rusted Brake Components



Rusted brake lines

Rusted brake rotor

Metal on Metal Damage

When brake pads are used too long the friction material wears away completely. The rivets and steel backing plate grind directly on the rotor causing:

- Ruined rotors
- Decreased braking power
- Catastrophic brake failure

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Trailer Tires

- Check tire pressure with cold tires. Inflate to PSI listed on sidewall
- Inspect tread depth and wear pattern for cupping and bald spots
- Examine sidewalls for cracks, dry rot, and bulges
- Verify load rating is adequate for trailer GVWR (GVWR/# tires with a safety margin)
- Check age and replace every 5-7 years based on DOT date code
- Inspect valve stems for cracks or leaks
- Check lug nut torque every 1,000 miles. Use lug striping paint.
- Spin tires and check for wobble
- Never exceed speed rating of tires

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Wheel Bearing Inspection

- Jack up trailer safely
- Spin wheel, listening for grinding, rumbling or roughness
- Grab tire at 6 and 12 o’clock. Rock it to check for excess movement
- Open cap. Grease should look fresh (not milky, burned and no metal flakes)
- Repack grease at least every year or 10,000 miles

Repacking or Replacing Bearings & Hub

Rinsing Trailers

- Rinse thoroughly with fresh water after exposure to salt or brackish water
- Spray inside cross members and under fenders
- Avoid high pressure spray on seals and bearings

Trailer Coupler Issues

- Check for loose or worn latch mechanism. Tighten or replace worn components
- Rust or corrosion an prevent smooth operation of latch
- Bent or cracked coupler body can cause misalignment with ball
- Make sure safety chains are secure and in good condition

Trailer Frame Inspection

- Visually inspect for bends or cracks in main rails, crossmembers and tongue
- Look for signs of stress or impact damage
- Look for rust or corrosion, especially at welds, joints and mounting points
- Look for broken or missing bolts, rivets, or separation at welding joints
- Be sure mounting points for leaf springs and couplers are secure and not distorted

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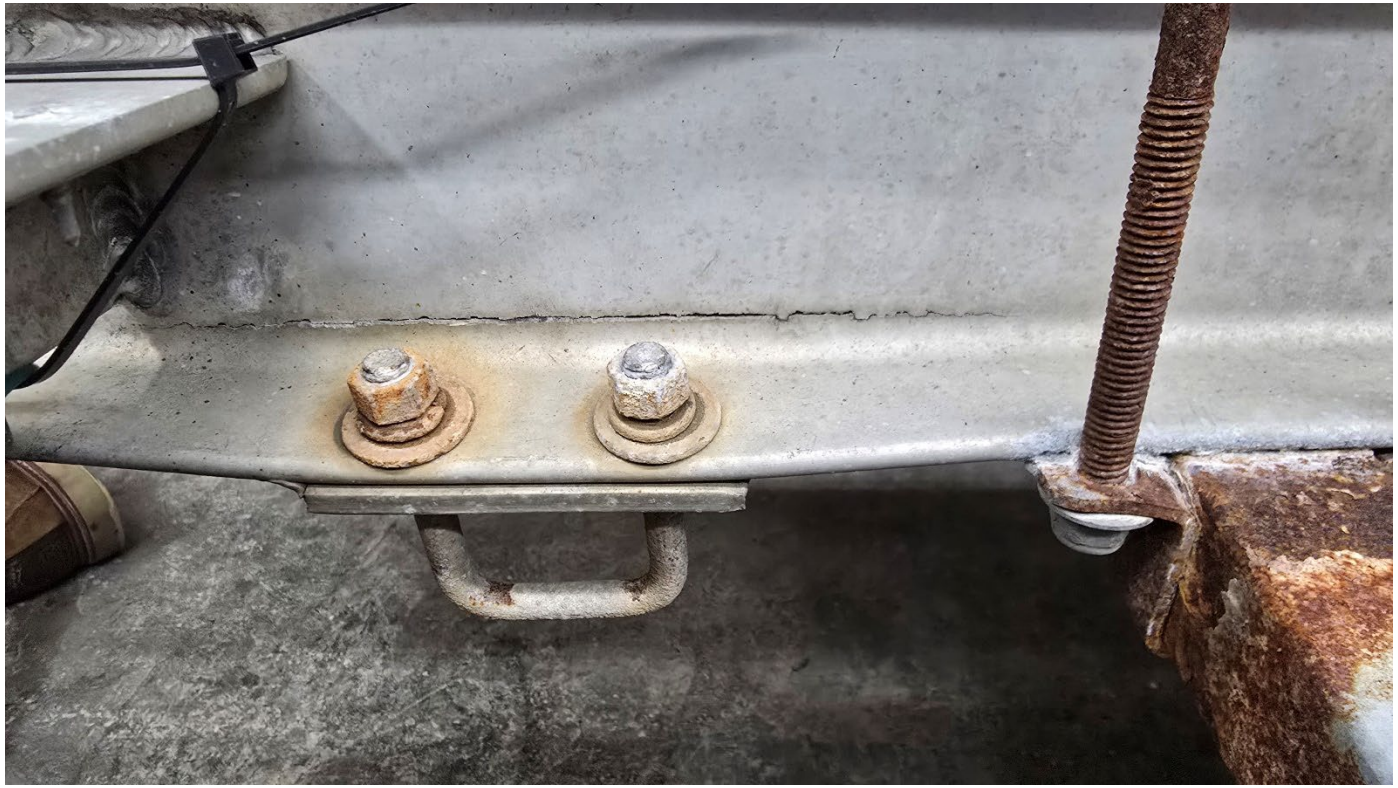
Trailer Frame Inspection

Cracks along main trailer frame

Bolts separating due to cracked frame

Trailer Frame Inspection



Cracked main frame

Trailer Frame Inspection

Cracked main frame due to corrosion

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Trailer Frame Corrosion

Corrosion around fender brackets

Corrosion inside main frame where cross members meet

Corrosion inside main frame where cross members meet

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Working Safely on the Roadside

- Location
  - Pull as far off the road as possible
  - With dual axle trailer, consider driving a short distance at a low speed if you are in an unsafe location
- Visibility
  - Turn on hazard lights
  - Use reflective triangles or flares (night-time flares only and consider fire risks)
  - Wear a high visibility clothing (vest)
- Stability
  - Use chocks, jack stands, ramps, etc.
  - Never crawl under a trailer or vehicle only supported by a jack
- Efficiency
  - Have the tools to work quickly and efficiently
  - Have the knowledge to work quickly and efficiently

DOT Hazard Warning Guidelines

- Place first flare or reflective triangle 10 feet behind vehicle
- Place second device 100 feet behind vehicle
- Optional: place third device 200-300 feet behind vehicle
- Location: place devices in your lane or just slightly off the shoulder
- If using flares keep them off well shoulder for fire prevention
- In two lane areas place one device ahead of your vehicle if you have more than two
- Markers behind your vehicle are most critical
- Most night-time flares only last 10-15 minutes, so consider reflective triangles

Tools & Parts to Consider Carrying

- Ramps
- Wheel chocks
- Piece of wood for soft ground
- Jack stands
- Flashlights
- Extra hub and bearing assembly
- Impact Wrench & batteries (keep charged)
- Proper size lug socket
- Reflective triangles and/or night-time flares
- High visibility vest
- Basic socket tool set
- Spare tire in good repair