

Main Reservoir Failures on General Electric Locomotives



Motive Power and Equipment Div.

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MR Failures on GE Locomotives

- GE Rail issued a letter on December 16, 2004 reporting four main reservoir failures due to splitting along the longitudinal weld.
- The reservoirs were among 5,826 reservoirs manufactured for GE between 1988 and 1995 by R&R Metal Fabricators, Inc.
- Although none of the failures resulted in any injury, GE warned that the rapid deformation had the potential to cause serious injuries or death.

MR Failures on GE Locomotives

- GE identified 2700 locomotives that have likely been equipped with the suspect reservoirs.
- Other GE locomotives may have been equipped with these MRs during maintenance and repair.
- Installation on an EMD locomotive would require major modifications, and is considered unlikely.
- All R&R main reservoirs are identified by a name plate on the skin of the tank.

MR Failures on GE Locomotives

Figure 1. Main air reservoir from CSXT 7714 showing weld joint separation and black residue on interior wall. File 01.055

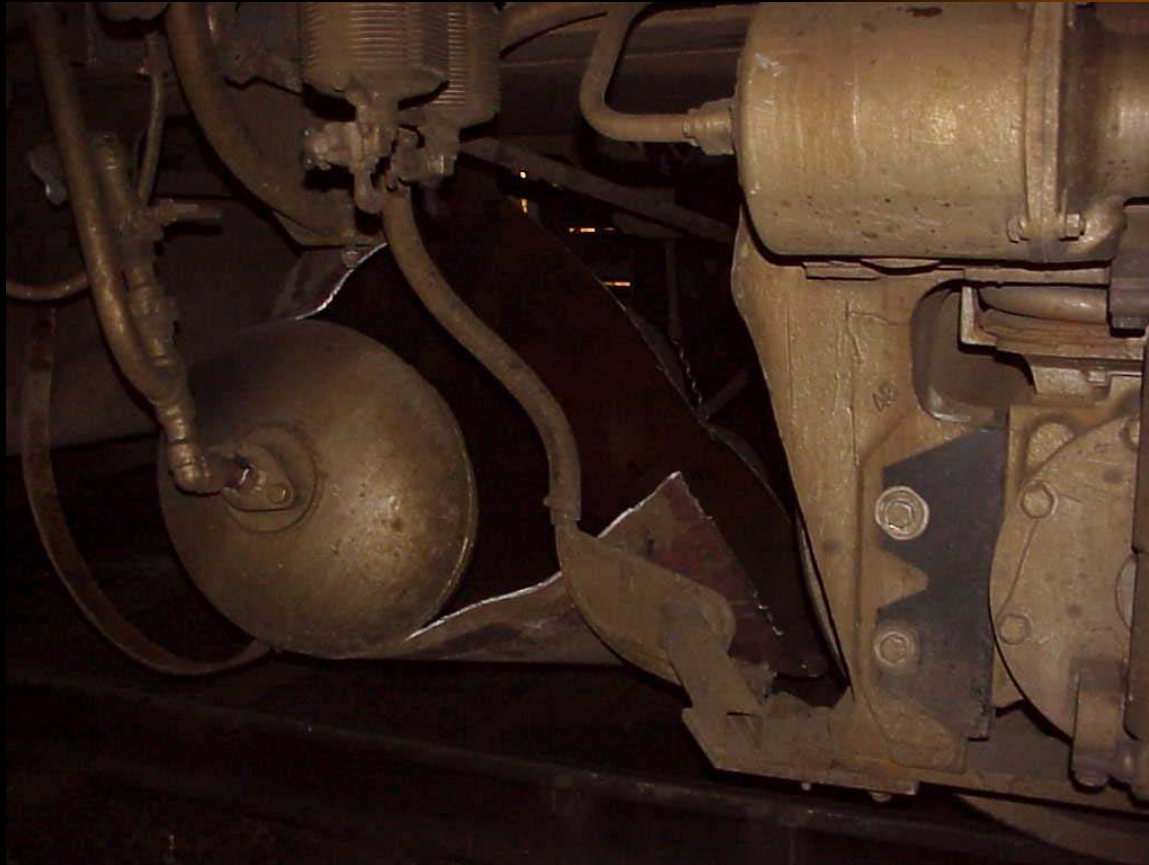


MR Failures on GE Locomotives



Figure 2. Cracked seam driven ten inches into main air reservoir end cap. File 01.055

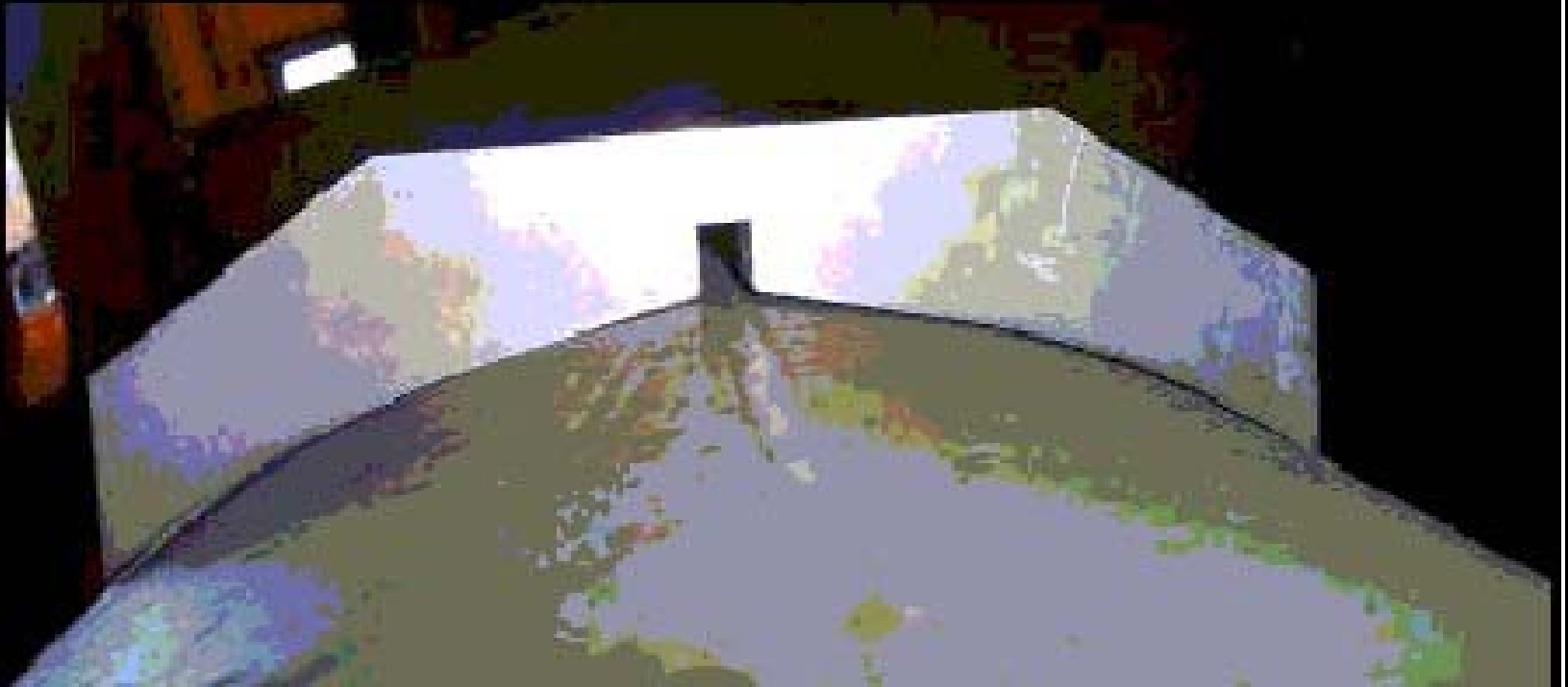
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- GE has concluded that an out of round condition is sufficient to identify reservoirs which are at risk of failure.
- GE has provided a gauge and Field Maintenance Instruction FMI-24-15309 to the railroads to locate suspect reservoirs.
- Replacement reservoirs are being provided for those that fail the gauge test.
- GE recommended a 120 day cycle for gauging of all MRs, and replacement of those failing.

GE MR Out-of-Round Gauge



MR Failures on GE Locomotives

- BNSF inspected 468 reservoirs from the suspect group and found 65 which failed the gauge test.
- UP has expressed a desire to replace all R&R reservoirs in its fleet.
- CSXT did a laboratory analysis of a failed MR and found the proper base metal, but an inferior weld that lacked full penetration and fusion.

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- CSXT also found three reservoirs leaking from the longitudinal seam. Radiographic analysis showed porosity, lack of fusion and lack of penetration in the welds.
- Hydrostatic test of these reservoirs to 5x working pressure (750 PSI) led to failure of one at 206 psi and additional leakage and deformation in the other two.
- BNSF has also experienced GE MR Failures.

MR Failures on GE Locomotives

- FRA issued a Notice of Safety Advisory, April 20, 2005, concerning the subject reservoirs.
- Contact person FRA, Mr. George Scerbo at (202) 493-6249
- Contact person GETS, Mr. Len Varan at (814) 875-2769