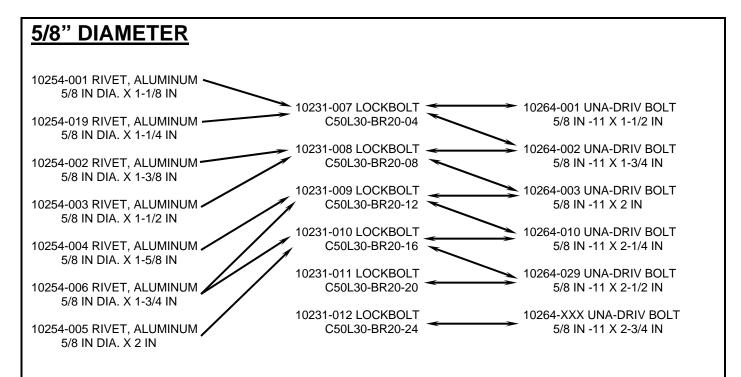


STANDARD REPAIR PROCEDURE All Cars
Fastener Cross Reference
Issued 16 May 2001 rev 1/25/02

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This Procedure was developed as a general guide and may not be applicable to all cars. Please consult your original drawings or contact FreightCar America, Inc for details.

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## Notes:

- 1. Rivets are to be pressed per AAR Manual of Standards & Recommended Practices
- 2. Lockbolts
  - A. "Stick out" (the relationship between the pin at the break off point and the collar top edge) must be from 1/16" below to 3/8" above the collar top.
  - B. When using flanged collars, .156"should be subtracted from the lockbolt's recommended grip range.
- 3. Una-Driv bolts (5/8" dia.) must have a min 2.4 (.218") & max. 9.3 (.845") threads showing beyond the top of the lock nut. Use .688" for the flanged nut thickness when determining required bolt length.

  Bolt length = Grip length (material thickness) + .688" (nut thickness) + .218" min stick out **ROUNDED UP**TO NEXT .250" INCREMENT.