Strick Trailers, LLC
NHTSA Campaign Number 12V-419
Inspection and Repair Procedures

1) Bushing Wear
2) Bogie Subframe Reinforcement & Fracture Repair
3) Bogie Squareness
4) Front Crossmember Fracture Repair
5) PSI Bracket Reinforcement & Fracture Repair

1) Bushing Wear Inspection and Repair

Bushing Inspection and Repair

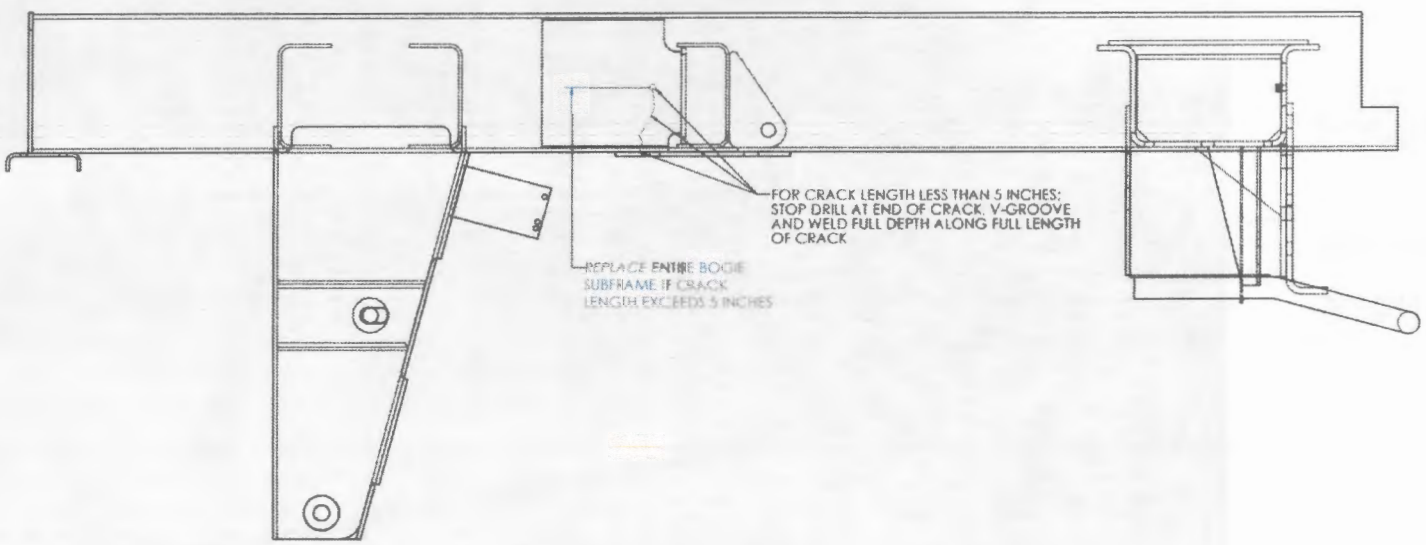
- Inspect upper control arm bushings in accordance Meritor's Maintenance Manual. Meritor's Maintenance Manual can be found on their website at:
  - http://www.meritor.com/customer/northamerica/lod/default.aspx
- If bushing wear is detected such that replacement is necessary the upper control arm assembly should be checked in accordance with Meritor's Maintenance Manual for wear.
  - To a lesser extent the lower control arm bushings may have to be checked as well. This is to be done in accordance with Meritor's Maintenance Manual.
  - As part of the inspection the frame brackets (hanger), axle seats and upper control arm bushing tubes should be checked for wear. Follow Meritor's Maintenance Manual for guidelines and instructions.
- Any and all replacements or repairs are to be done in accordance with Meritor's Maintenance Manual.

2) Bogie Subframe Inspection and Repair

Inspection

- Inspect the bogie subframe for fractures above the air bag plates on both the curbside and roadside.
- Use the sketch on page 6 as a guide for where to look.
- If there is a fracture and it is 5" in height or less the fracture can be repaired as described on page 8. The drawing on page 6 shows this for reference.
- If there is a fracture and it is greater than 5" in height the bogie subframe will need to be replaced.
- If there are unusual fractures, such as the one shown on page 7, the bogie subframe will most likely need to be replaced. Contact Strick with any unusual instances for disposition.

Bogie Subframe Fracture Identification



Unusual Fracture Example

For unusual fracturing conditions, please contact Strick for disposition.

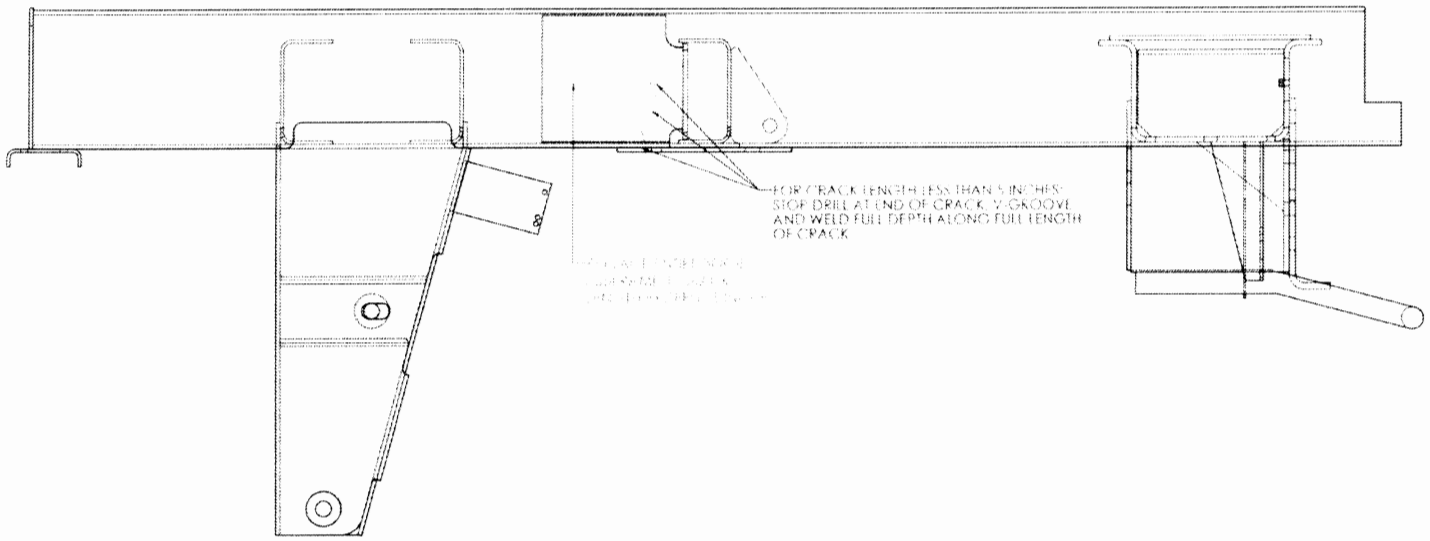
Bogie Subframe Repair Procedure

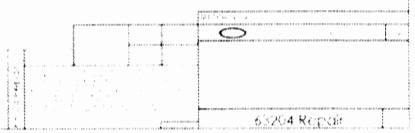
- Stop drill and weld any fractures in side rails. See drawing on page 9 for reference.
- Weld filler metal to be an E7018 stick electrode.
- Welds to be free of defects such as undercut, porosity and overlap.
- Add reinforcement gussets to both spring mounts. Reinforcement gussets are shown in photos for reference on page 10. Welding of the gussets is shown on page 11.
- Gussets to be free of dirt, oil or grease.
- Weld gussets to subframe as shown on following pages.
- After welds are cool, paint bare surfaces with undercoat or paint to prevent corrosion.

If fracture length is greater than 5" vertically the bogie subframe will need to be replaced. A new subframe will need to be ordered from Strick (at no cost) using the VIN of the unit. Unusual fractures need to be identified and communicated to Strick for disposition.

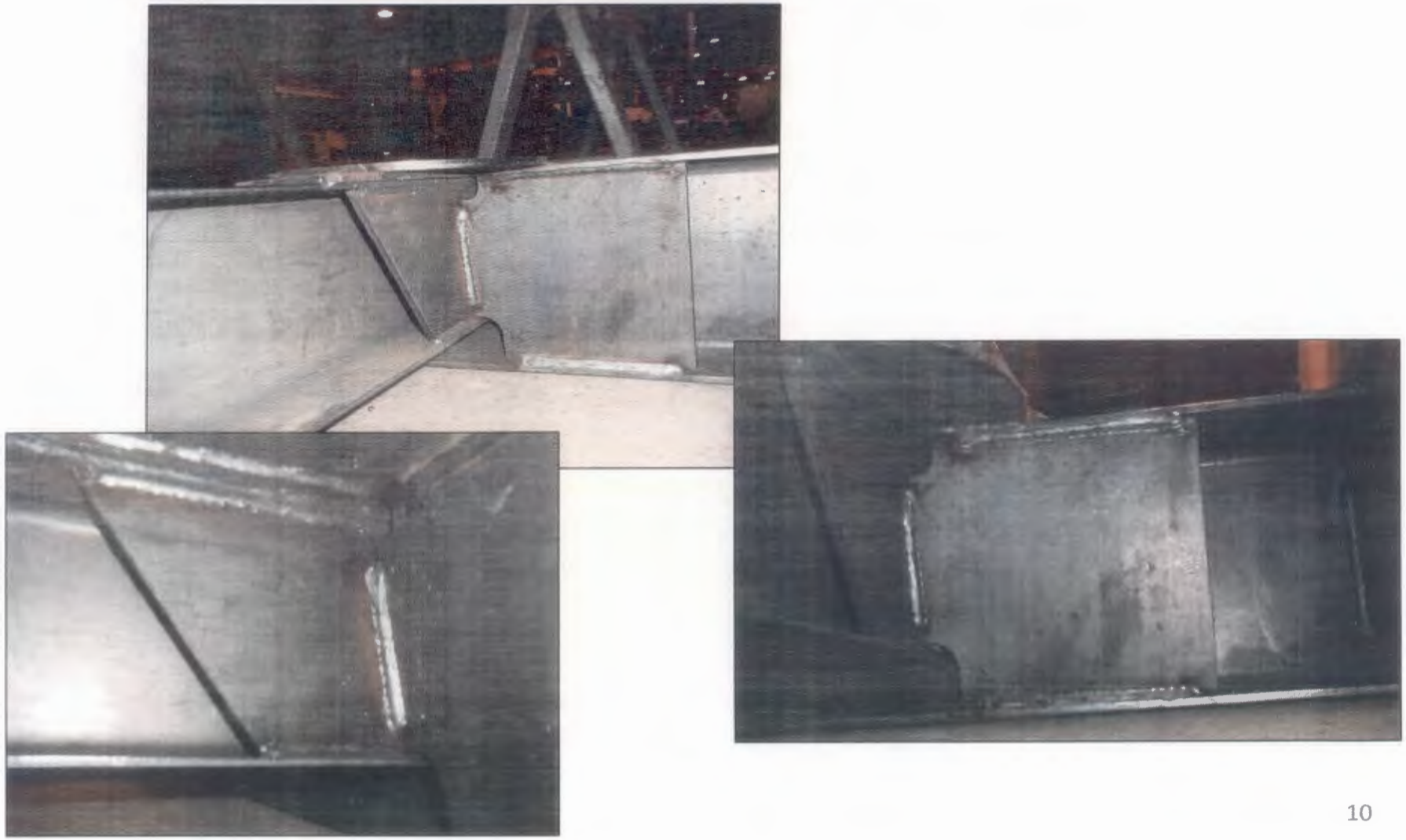
- Replacement will require:
  - Acquiring a new subframe.
  - Removing the out of square subframe.
  - Installing the new subframe.
  - Transferring the existing air tank and valving and plumbing the new bogie.
  - Undercoating the bogie.
- Installation drawings to be provided to the customer or designated repair facility along with the new bogie subframe.

Bogie Fracture Repair

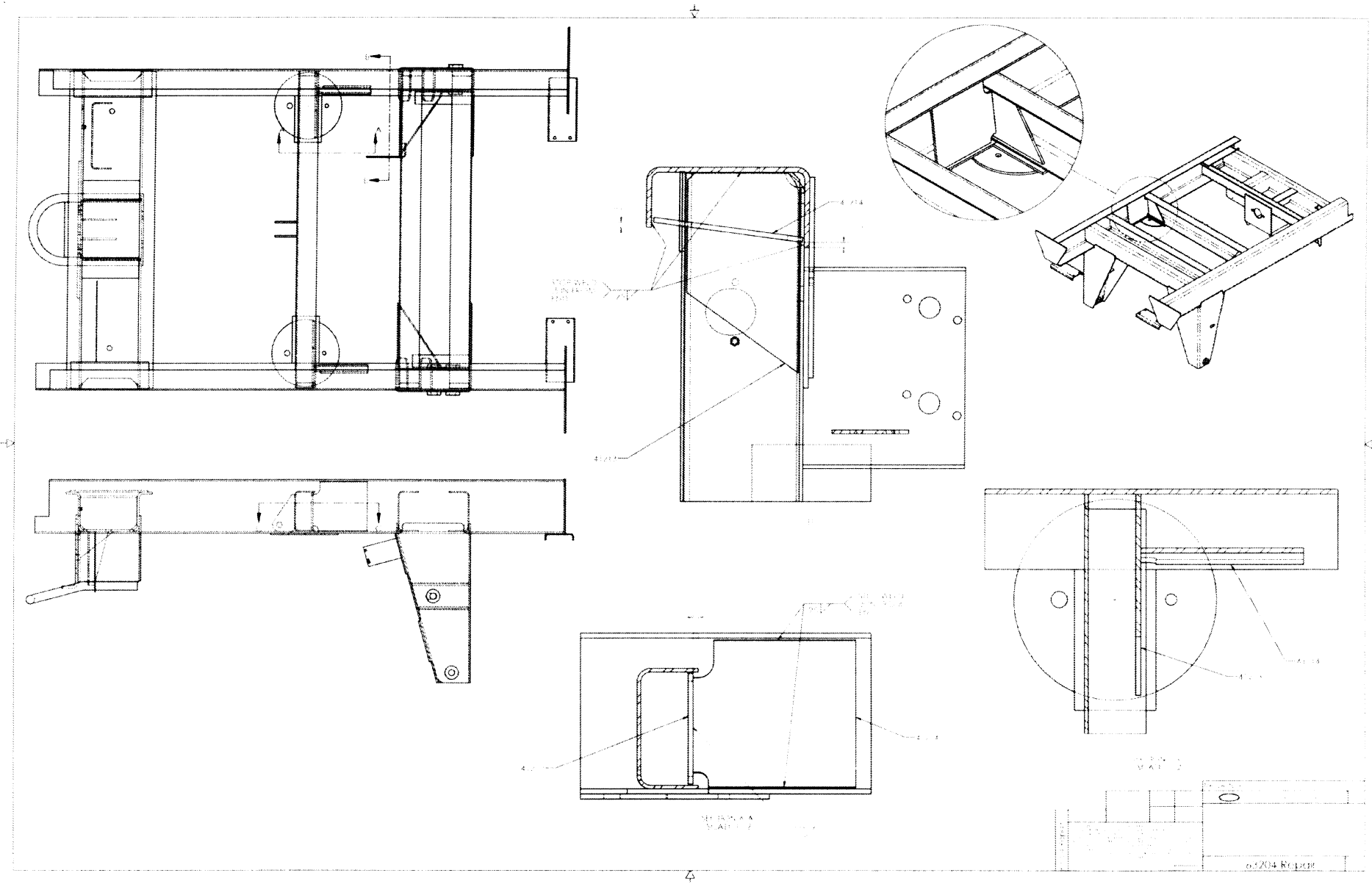




Completed Subframe with Gussets

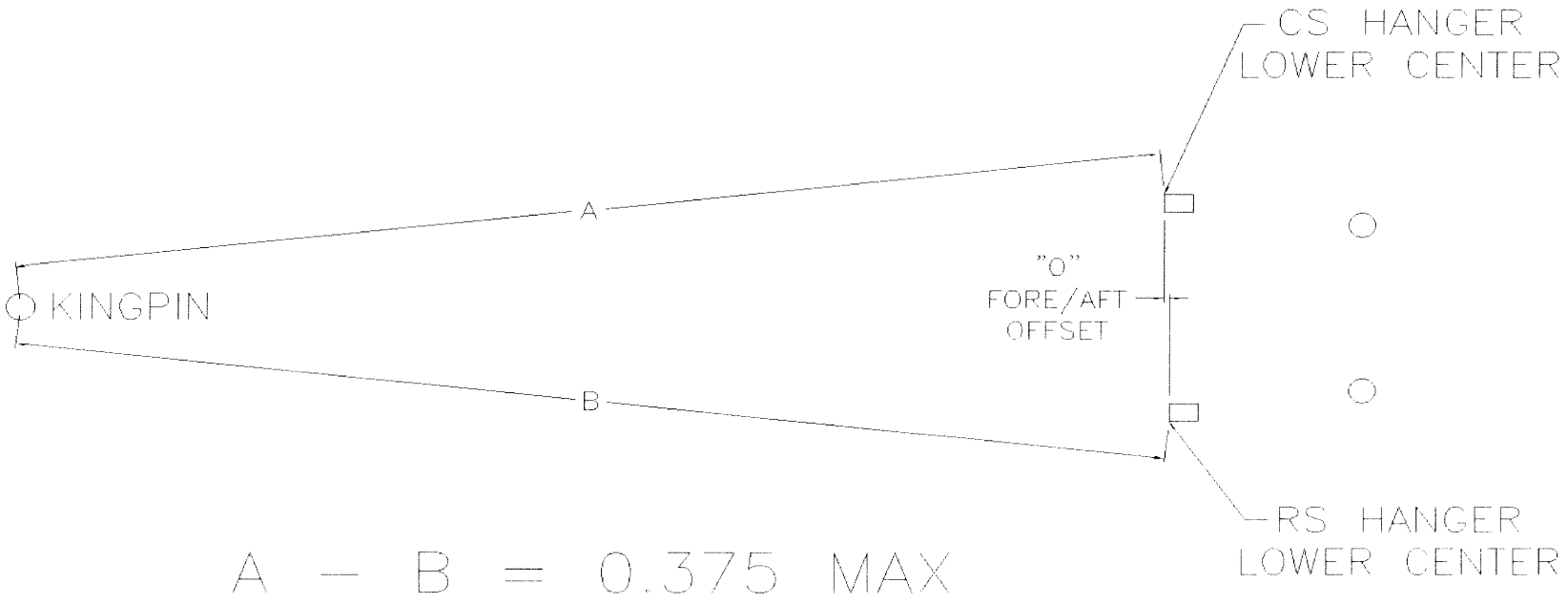


Gusset Welding Drawing



3) Squareness Check & Repair

Squareness Measurements



Repair for Out of Square

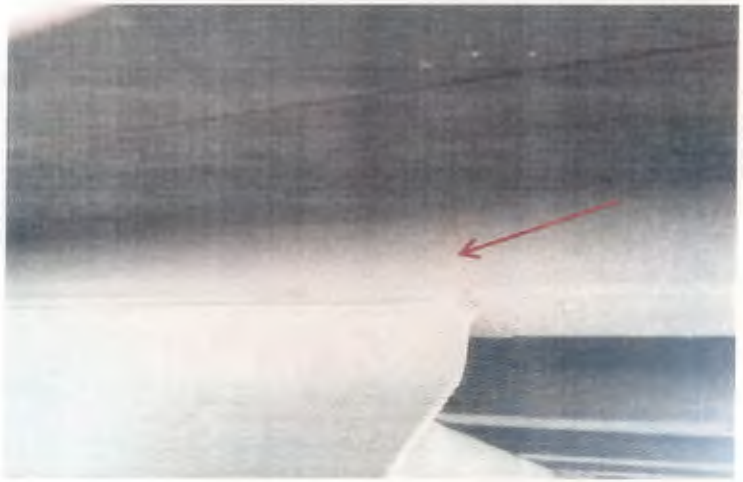
- Measure diagonals as shown on page 13. If there is interference with the tape from the battery box or other obstruction a “pogo” stick may be used but the trailer must be placed on level ground. The tape can be hooked to the pogo stick and the measurement taken as shown.
- If measurements off the king pin are over .375” as shown the bogie subframe must be replaced.
- Replacement will require:
  - Acquiring a new subframe.
  - Removing the out of square subframe.
  - Installing the new subframe.
  - Transferring the existing air tank and valving and plumbing the new bogie.
  - Undercoating the bogie.
- Installation drawings to be provided to the customer or designated repair facility along with the new bogie subframe.

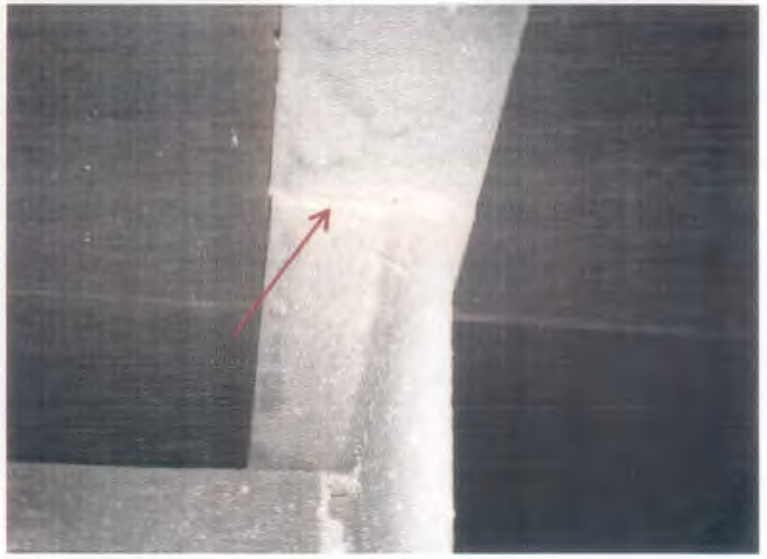
4) Front Crossmember Fracture Repair

Inspection for Fractured Crossmember

- Inspect the front I-beam crossmember above the bogie subframe for fractures.
- Usually the fractures, if present, will be at or near the outboard end or ends of the gusset at the front of the bogie main beams. See page 17 for photographs showing representative fractures.
- The crossmember needs to be replaced if there is any evidence of fracturing.

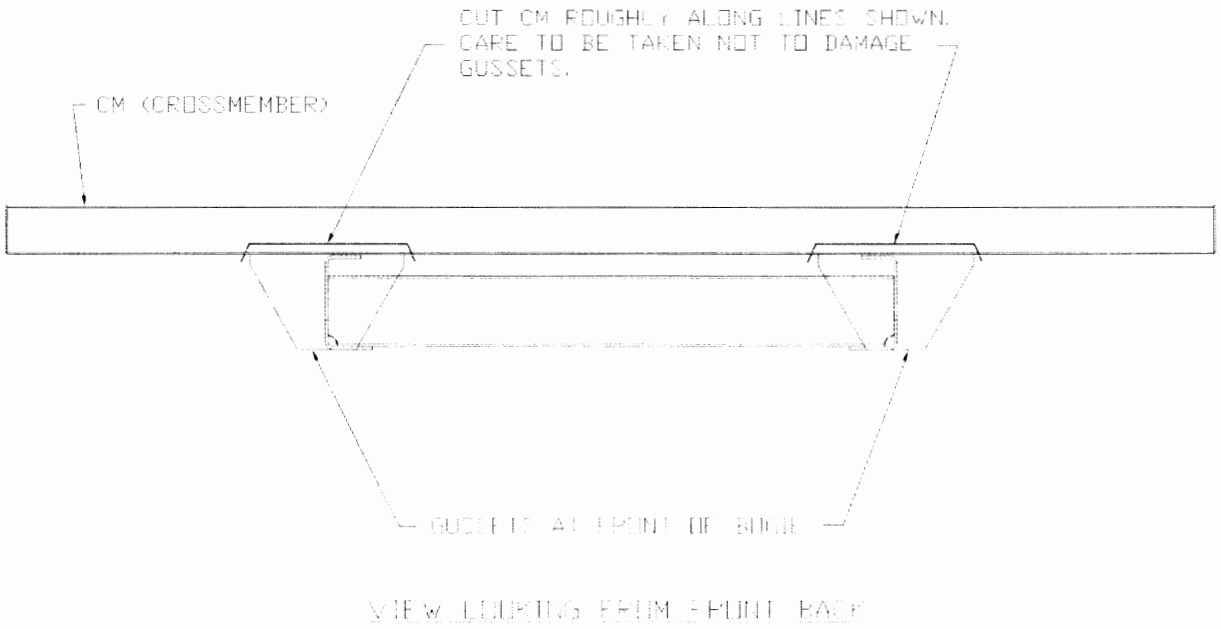
Fractured Crossmember at Front of Bogie





Fractured Crossmember at Front of Bogie

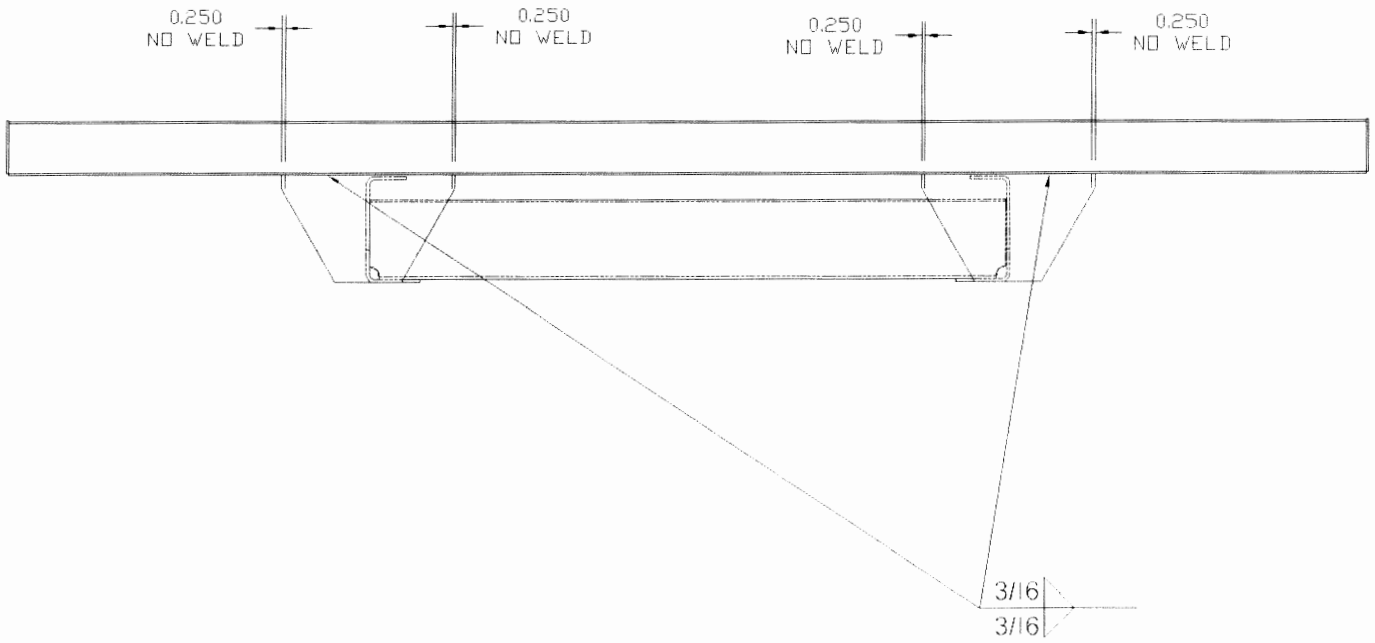
- Crossmember to be replaced.
- Block trailer, floor, bottom rails, etc. as needed to perform removal of crossmember safely.
- Remove bottom rail rivets and floor screws from the fractured crossmember.
- Cut crossmember as shown.



Fractured Crossmember at Front of Bogie

- After crossmember is removed use grinder to remove small portion of crossmember and welds from gussets.
  - CARE should be taken NOT to damage gussets during this process.
- Install new crossmember by bolting or riveting to bottom rails.
- Floor screws can be replaced before or after welding of gussets to crossmember. Make sure crossmember is straight and lines up properly with gussets.
- Gussets to be free of dirt, oil or grease.
- Weld filler metal to be an E7018 stick electrode.
- Welds to be free of defects such as undercut, porosity and overlap.
- Weld gussets to crossmember as shown on next page. Welds should stop ¼" from the end of the gussets as shown.
- After welds are cool paint bare surfaces with undercoat or paint to prevent corrosion.

Fractured Crossmember at Front of Bogie



5) PSI Bracket Repair

PSI Bracket Inspection

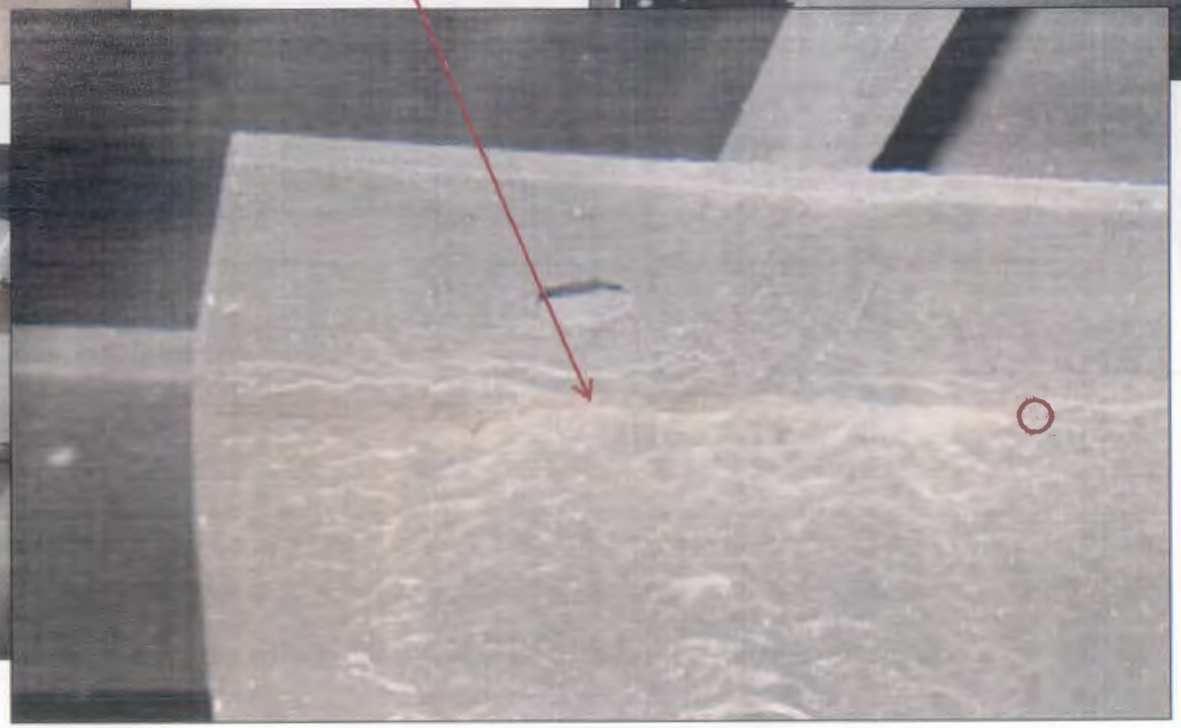
- Inspect the PSI control box bracket for fractures. See page 24 for photographs showing representative fractures.
- Predominantly all of the brackets that are fractured are welded directly to the air tank brackets without a plate installed in between. However, **ALL** PSI control box brackets on **ALL** trailers need to be inspected if the trailers are equipped with PSI (not all trailers have PSI).
- If fractures are found the bracket must be repaired and reinforced.
- In the event that a fracture is found in the PSI bracket that is not described here please contact Strick for disposition.

PSI Bracket Repair Procedure

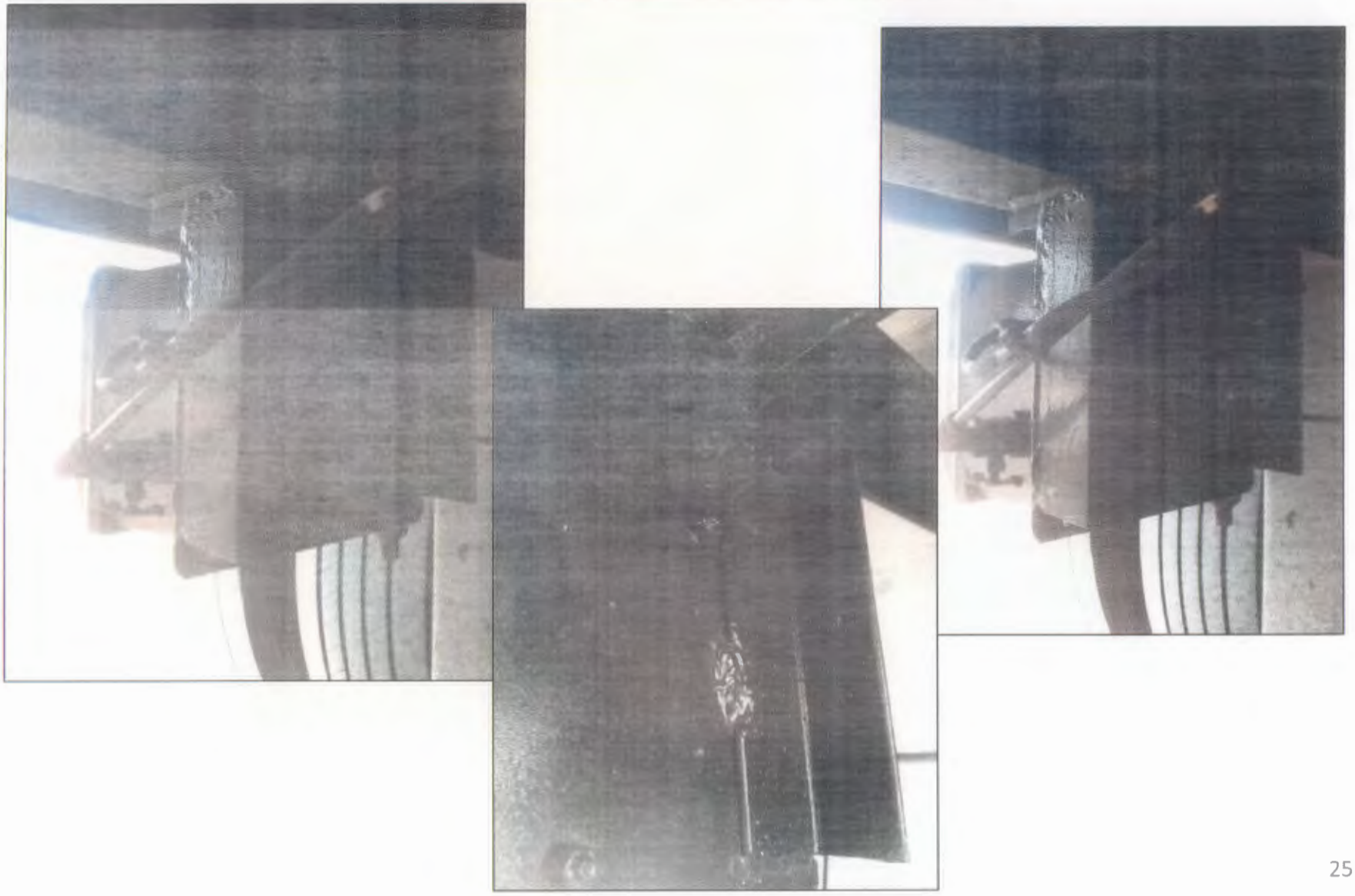
- Stop drill, V-groove and weld fractures in bracket as shown on page 24.
- Add angle iron gussets to bracket as shown on pages 25 and 26.
- Weld filler metal to be an E7018 stick electrode.
- Welds to be free of defects such as undercut, porosity and overlap.
- Bracket and gussets to be free of rust, dirt, oil or grease.
- Weld gussets to bracket as shown on following pages. Orient angle iron flange inboard as shown in drawing.
- After welds are cool paint bare surfaces with undercoat or paint to prevent corrosion.

Fractured PSI Bracket

Stop drill and V-groove.
Weld full depth along
full length of fracture.



PSI Bracket With Gussets



Gusset Welding Drawing