

AL Flatbed Repair Procedure

Great Dane Trailers

General Notes

Make sure trailer is level and properly supported before beginning work. Proper Personal Protective Equipment should be worn at all times.

Components (per trailer):

- (4) 40106506 wing plate reinforcement
- (4) 40106510 beveled extrusion reinforcement
- (4) 40411172 AL doubler plate with rounded edges
- (1) 40100735 AL horizontal web reinforcement FRONT
- (1) 40106536 AL horizontal web reinforcement REAR
- (2) 36700286 RR air bag support

Fasteners (per trailer):

- (200) 42200825, .38-16X1.50" (Torque to 40 ft-lbs)
- (16) 42200840, .38-16X2.00" (Torque to 40 ft-lbs)
- (432) 42201004, washers
- (216) 42200925, nuts
- (8) 42200852, .50-13X1.75" (Torque to 100 ft-lbs)
- (8) 42200981, nuts
- (16) 42201056, washers
- (12) 42200854, .63-11X2.75" (Torque to 200 ft-lbs)
 - Use installed nuts and washers

Misc:

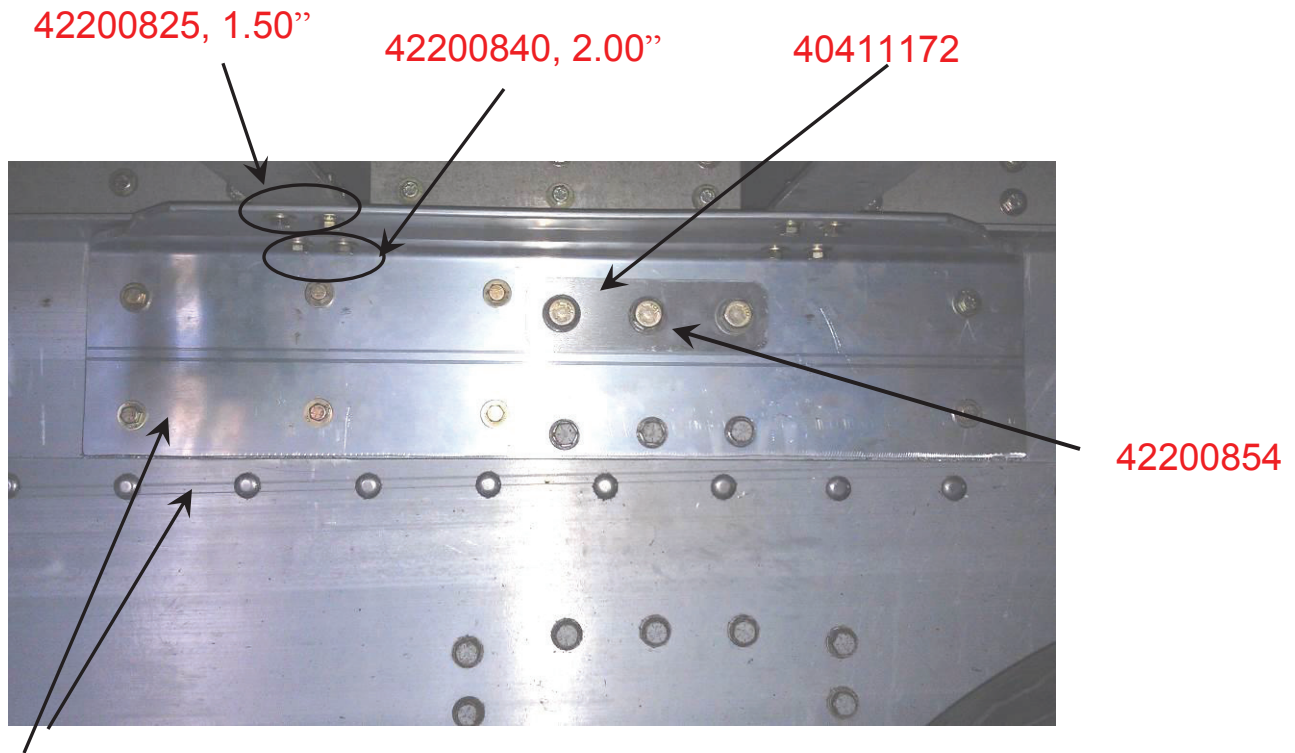
- Zip-ties
 - (6) 41902458 zip tie clips
 - (2) 41902550 3.5" rubber grommet
- (note: hose clips at cross-members should be re-used as necessary)

NOTE: Stop-drill all cracks with 0.25" hole where applicable. Do not drill into cross-member flanges at crack locations. Drill slightly beyond and through cracks as necessary to avoid flanges. In cases where the main beam cross-member shelf has been torn out, use a 0.25" thick by 1.1875" wide shim of appropriate length to replace missing material; ensure that the shim fills the gap under the cross-member flange bolts. If original main beam shelf material is still present, it may be used as the shim.

Installation Procedure:

- Installing Outer aluminum (AL) extrusion reinforcement (40106510)

- Part 40106510 should be trimmed as directed to fit within main beam connection (front and rear & RS and CS trimmings vary, see included guidelines, pg 6, parts may need to be trimmed slightly more than shown)
- Remove six bolts securing forward suspension hanger to AL main beam web. Set AL doubler plate with sharp corners aside (this is now scrap). The top three fasteners will be replaced by 42200854 and 40411172 will replace the scrapped plate.
- Test-fit trimmed 40106510 to ensure that it fits with as little gap as possible against lower beam extrusion, see Figure 1 below. Reinforcement should be centered across the two cross-members above the front hanger of the suspension
- Drill hole pattern as shown. (FRONT & REAR, pg 7)
- 40106510 should be fastened to each cross-member (two) that it is centered across. Use 2.00" bolts at thicker connection near main beam and 1.50" bolts at the outboard cross-member fastening location. Nut to be installed on top side of cross-member flange. See Figure 1.



Minimize gap between components

Figure 1. 40106510 installation

- This process should be completed at all four locations, RS & CS for front and rear suspensions.
- Installing Inner AL wing plate (40106506)

- Part 40106506 should be centered across the three cross-members above the suspension, as shown in Figure 2.

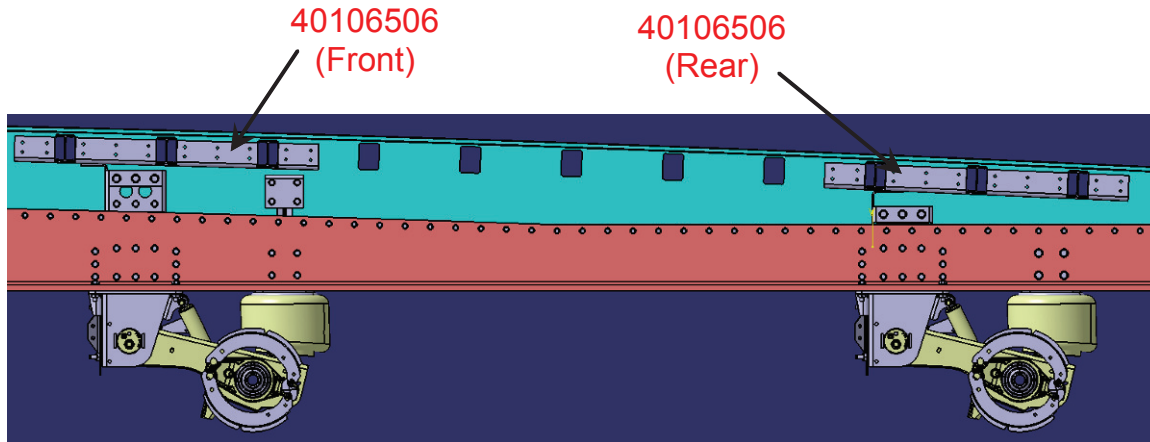


Figure 2. 40106506 installation

- Back-drill holes between cross-member locations per 40106506 hole pattern. Use 1.50" bolts with nut to the inside of trailer to secure reinforcement. It may be necessary to re-locate air hose/electrical clips to achieve enough slack for maneuvering parts.
- Reinforcement plates are to be fastened to each of the three cross-members that are spanned. Two 1.50" bolts per cross-member (6 per reinforcement plate), installed as shown in Figure 3.



Figure 3. 40106506 bolted at cross-members

- Installing horizontal web 40100735 (FRONT) and 40106536 (REAR)
 - Web should be installed on rear face of FORWARD suspension channel over both front and rear hanger reinforcements
 - Drill holes connecting web to suspension channel and secure with 1.50” bolts with nuts to the rear of the trailer. See pg 8 for fastener pattern.
 - Drill four holes each side for connection of web to 40106506 wing plate previously installed; secure with 1.50” bolts.
 - Front suspension installation should appear similar to Figure 5.
 - Air hose clips will need to be relocated to create enough slack for part placement and hose clearance over reinforcement

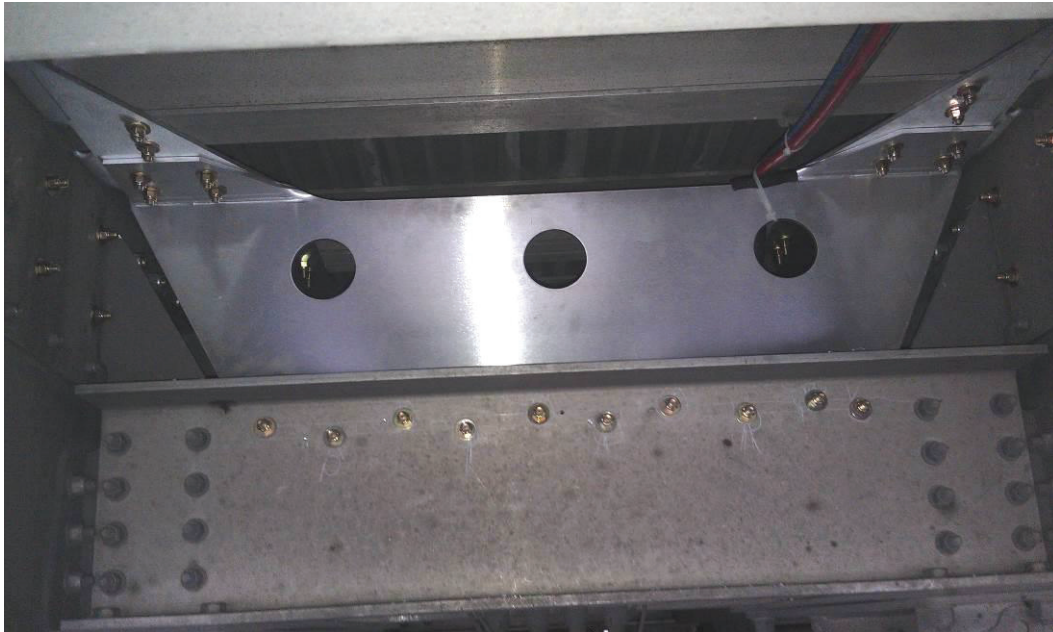


Figure 5. 40100735 installation

(Note: 40100735 has been modified since this image, there should be enough space for hoses to hang free from clips at cross-members)

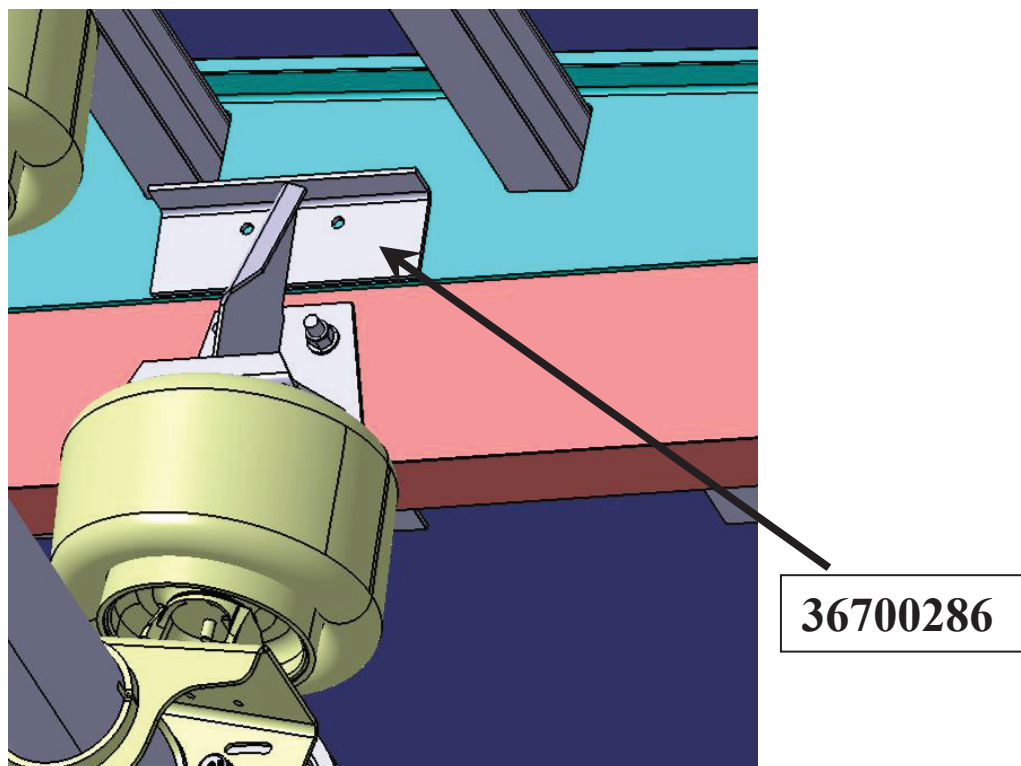
- Rear suspension installation should appear similar to Figure 7.

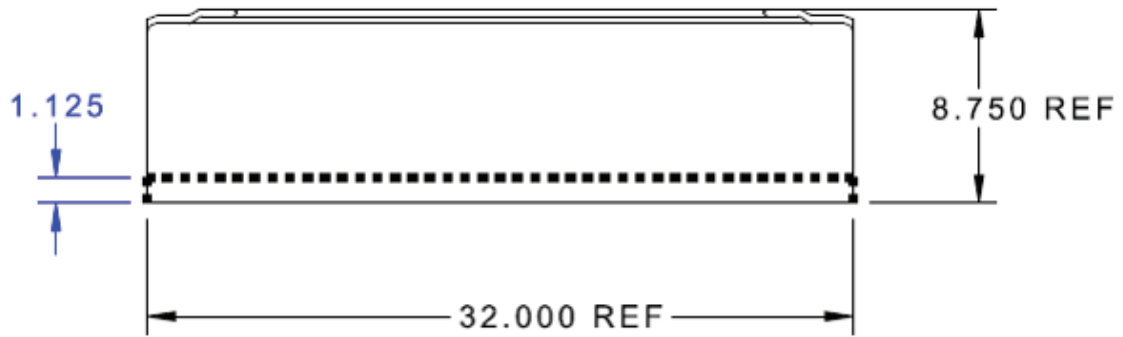


Figure 7. 40106536 installation

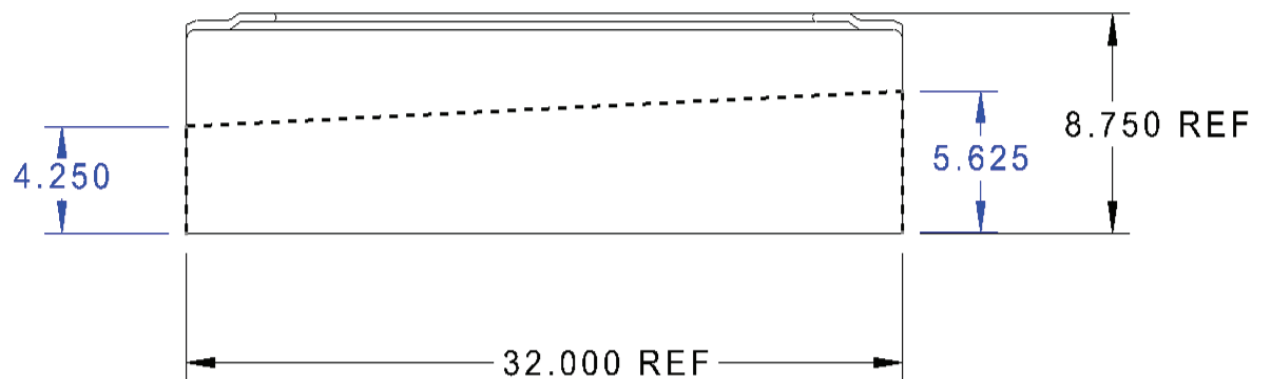
(note: 40106536 has been modified since this image; air hoses should pass through grommets. Electrical lines should have enough clearance to pass over reinforcement and clip to cross-members)

- Adjust clip locations as necessary to allow for slack and electrical line clearance
- Subassembly 36700286 should replace existing rear air bag support. Assembly should be fastened with 5 bolts; two 42200852 at the top and three 42200825 at the bottom. The lower row of fasteners should use existing holes.

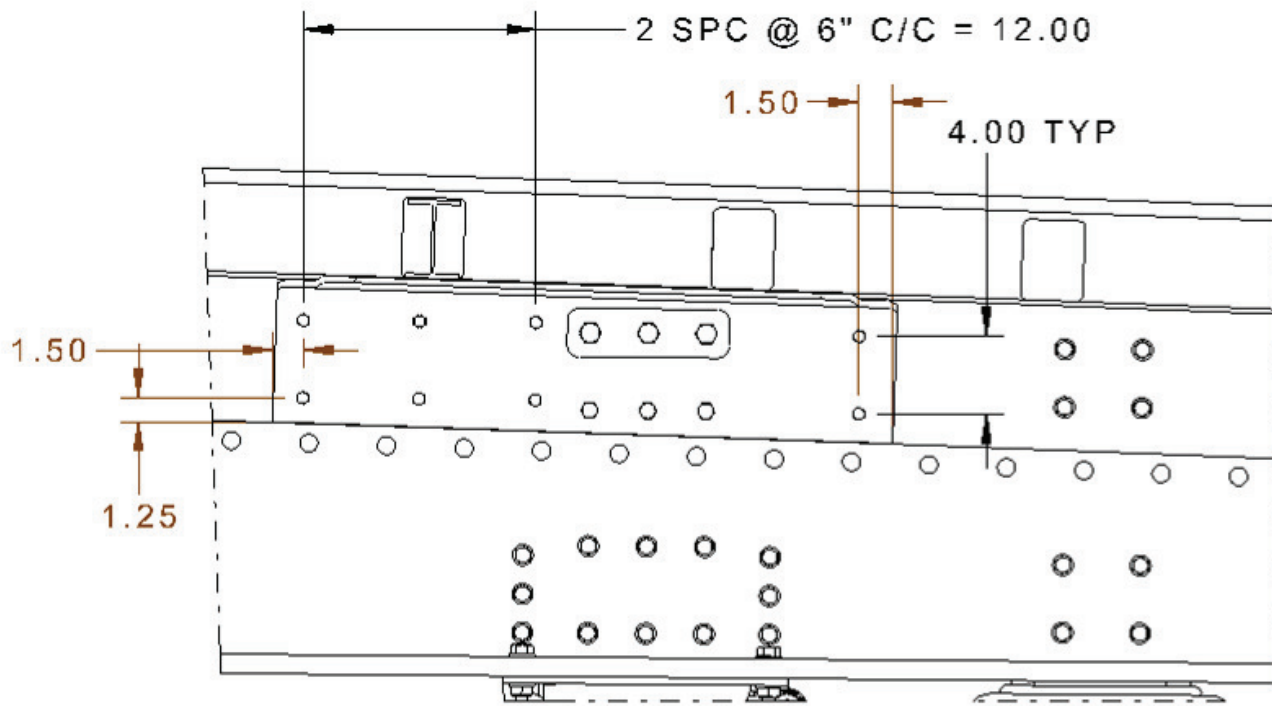




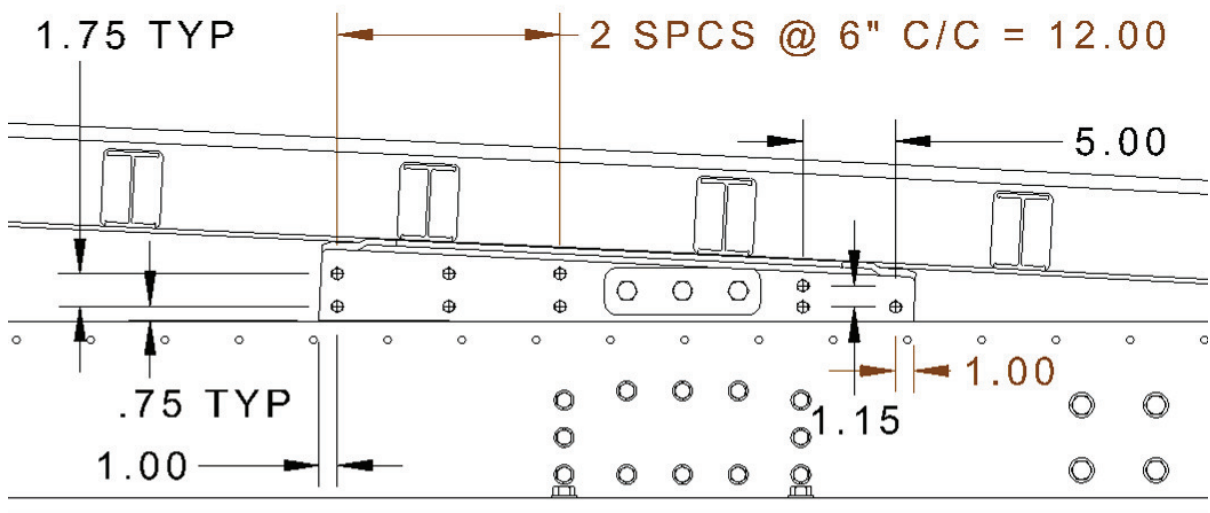
40106510 Front suspension
(RS and CS same)



40106510 RS Rear shown
(Trim CS component opposite)



FRONT SUSPENSION



REAR SUSPENSION

