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Scope:

This service bulletin provides instructions for modifying the axle by cutting out and re-welding the bottom welds connecting the end housings to the channel beam. This service bulletin also provides instructions for adding a gusset between the driver side trailing arm and the axle body.

Effectivity:

This service bulletin is applicable to 2008 through 2010 Dodge Grand Caravan, Chrysler Town & Country and Volkswagen Routan which were converted to wheelchair accessible vehicles by The Liberty Motor Company. It is only applicable to those vehicles with fibreglass lowered floors and lowered rear suspension. This is not applicable to Liberty "Caravan Advantage" conversions which used modified stock vehicle axles with modified track bar attachments.

Time to Complete:

This service bulletin can be completed with 2 labor hour(s). Contact the Savaria Vehicle Group (at 800-561-9600) if issues arise causing the allotted time to be exceeded.


Parts List:

ITEM	QTY	UNITS	PART NUMBER	DESCRIPTION
1	1	EA	10543-22	Gusset, Caravan Axle

Tools and Materials:

- MIG Welder with ER70S-6 wire
- Angle grinder
- Die grinder
- Hand grinder with cut-off wheel and wire brush
- Rust Converter
- Corrosion inhibiting paint (black) and primer

READ THE ENTIRE PROCEDURE BEFORE BEGINNING

Prepared by:	Paul Collett	Issue Date:	30-Jan-14	Revision: /
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- 1 The following instructions provide procedures for modifying the axle. Cracks may also be repaired with this procedure depending on the extent of damage provided that a Crack Inspection Report, per SB-101, has been completed and submitted to Freedom Motors and Freedom Motors has approved the repair. The purpose of the modification is to remove any weld which might have sustained any hidden damage and also prevent future damage by reinforcing the axle through the addition of a gusset and a new weld design which provides more weld area and reduced stress concentrations where cracks could initiate.

- 2 Complete all modifications and repair procedures on the axle while installed on the vehicle. It is not necessary to remove the axle from the vehicle to do this repair. Modify the axle according to the following steps. MIG weld all welds using filler metal ER70S-6.
 - a. Weld the 3/16 inch thick edge of the beam channel to the inside surface of the lower housing in 4 places as shown in Figure 1. Due to the difficult location, it is only possible to complete a short weld. Make the weld a minimum of 3/8 inch long, finishing at the edge of the housing.

 - b. After completing 4 welds, trace out triangular cut-outs on the bottom of the axle shown in Figure 2. Grind away 4 original welds from the bottom of the axle and make triangular cut-outs in the 1/8 in. housing material (minimize cut depth into 3/16 in. channels) according to the dimensions shown in Figure 3 using small cut-off grinding wheel.

 - c. Weld the bottom housings to the channel beams along the new edges of the triangular cut-outs as shown in Figure 4.

 - d. Prepare and clean contacting surfaces and then weld the gusset to the underside connection between the driver side trailing arm and the axle housing as shown in Figure 5.

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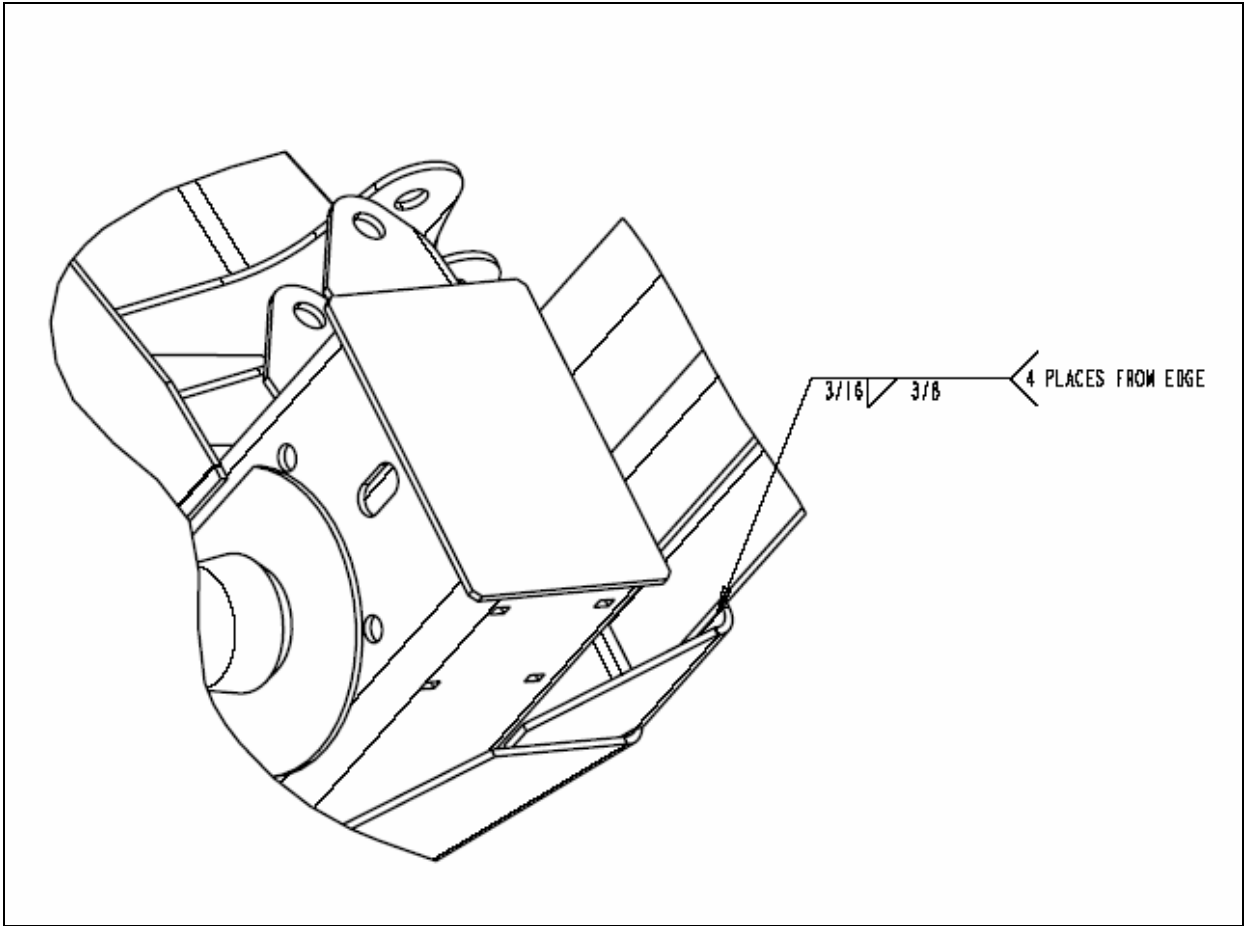



Figure 1: Weld channel edge to housing, 3/8 inch long weld from edge of housing

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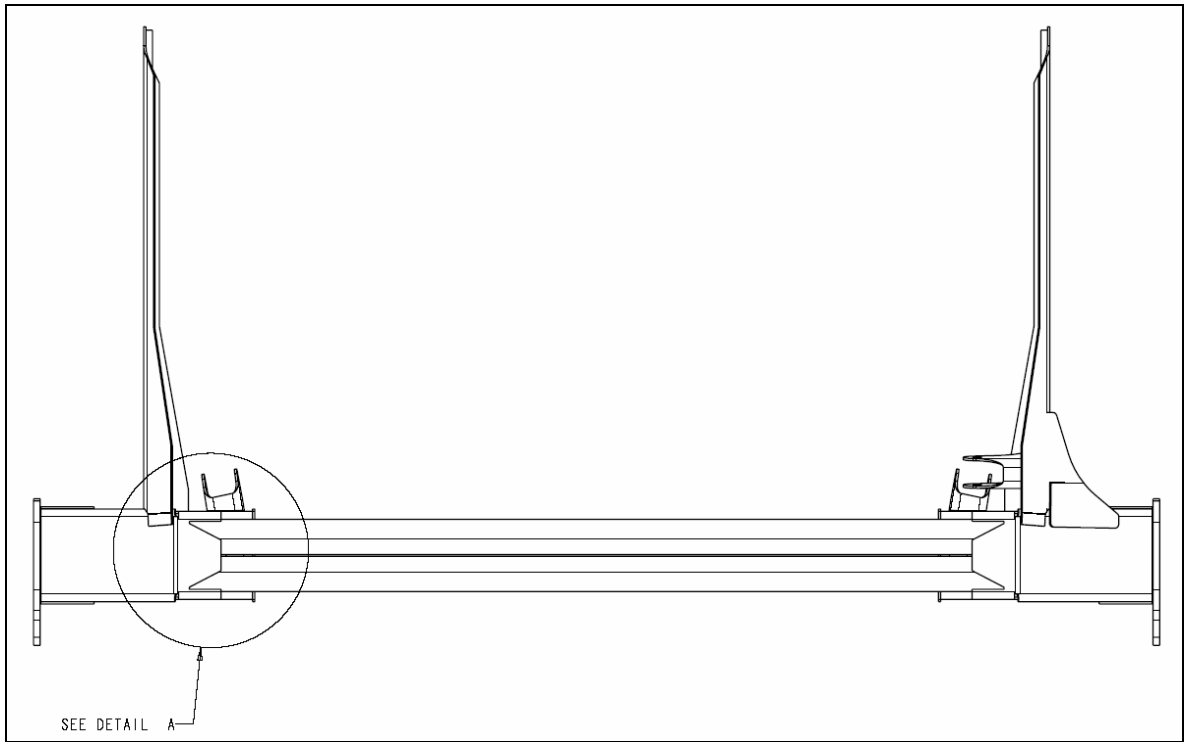


Figure 2: New triangular weld area

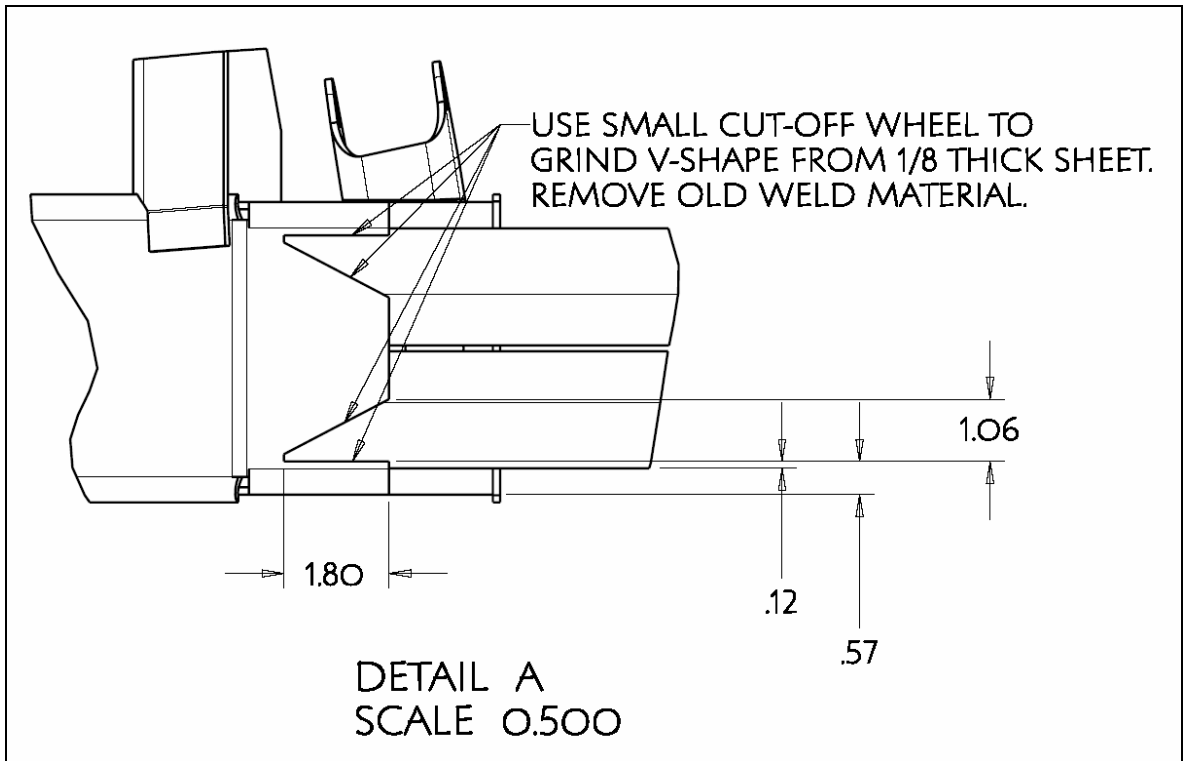



Figure 3: Triangular Cut-out Dimensions

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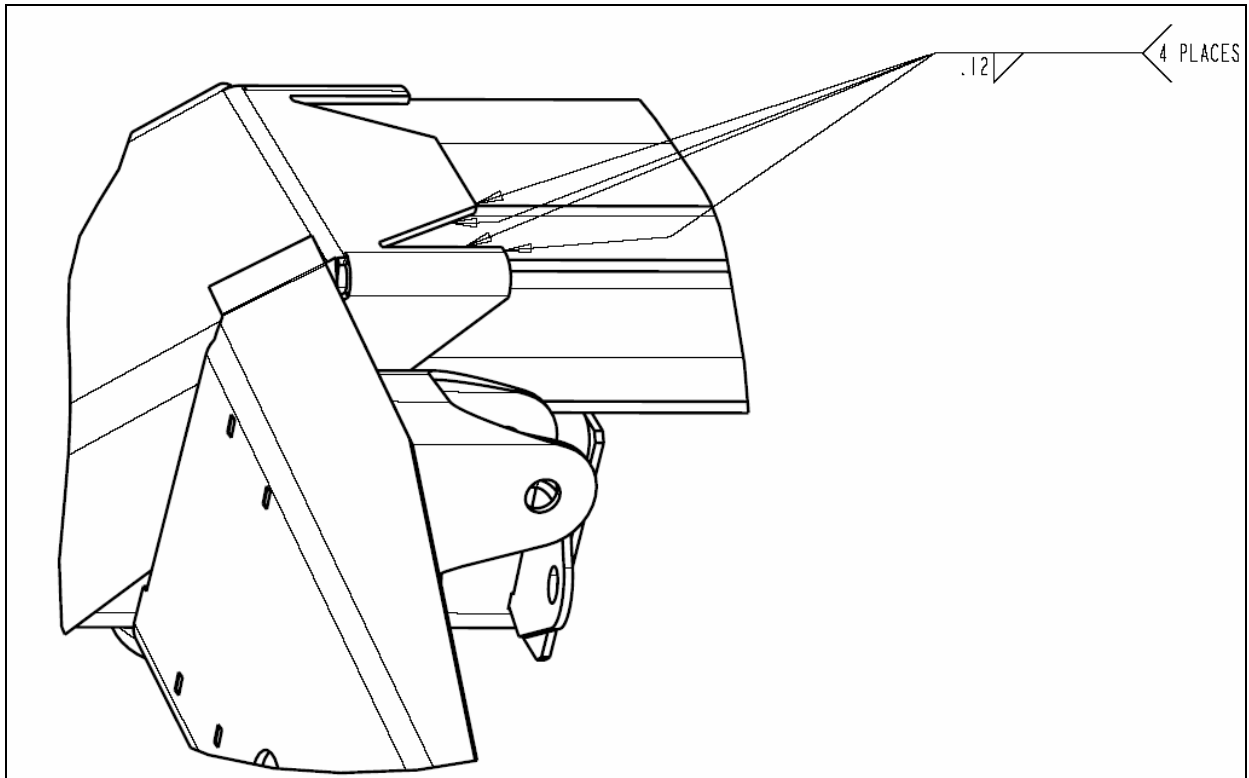


Figure 4: Weld to bottom of channels

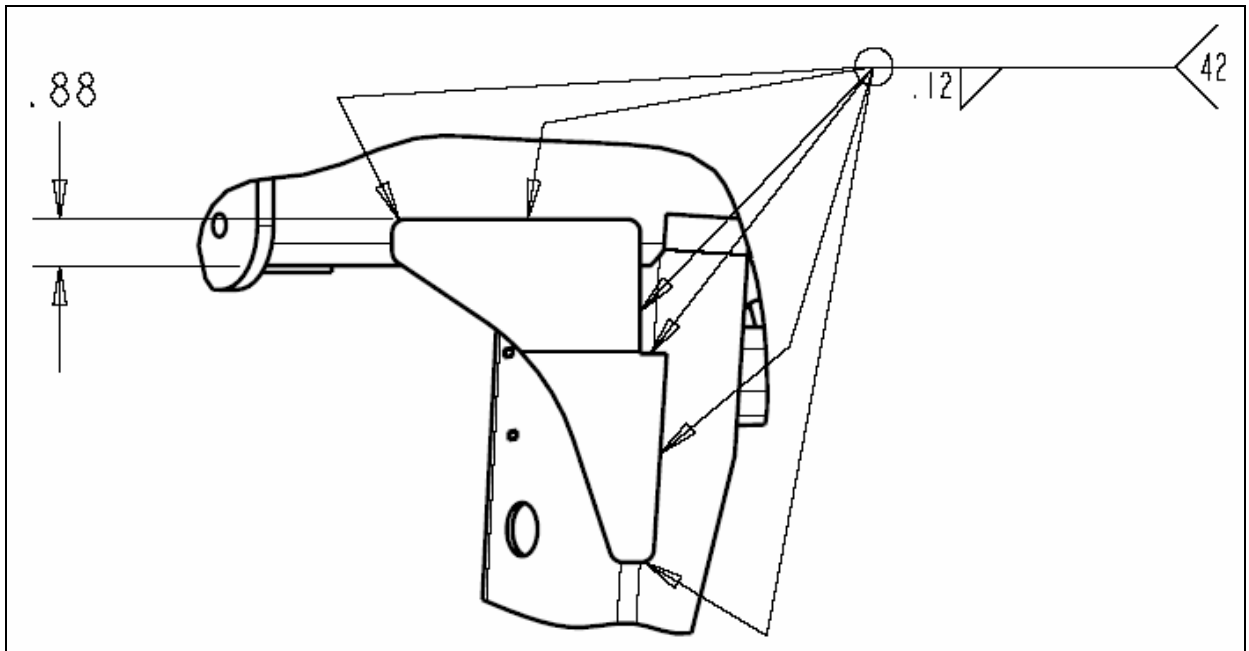


Figure 5: Weld gusset 10543-22 to the bottom of the driver side trailing arm and lower housing

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- 3 Wire brush reworked and repaired areas of axle and then apply Rust Converter to the exposed metal. Allow rust converter to dry and then prime and paint repaired areas with corrosion inhibiting primer and top-coat.

REVISION LOG

ISSUE NO.	ISSUE DATE	DESCRIPTION OF CHANGE
/	30-Jan-14	First Release

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