ELGIN®

Subsidiary of Federal Signal Corporation

SERVICE BULLETIN
Safety Recall

SUBJECT: Suspension Inspection and Repair for Broom Bear Sweepers mounted on International 4300 Chassis	DATE: 08/02/2010 NUMBER: SB-0078

TO: All Dealer Principals, Service Managers, Parts Managers and Regional Managers

PURPOSE:

The rear axle suspension control arms and tower used on some International 4300 chassis may be improperly welded. All Broom Bear sweepers mounted on applicable International 4300 chassis must be inspected by a certified welder and repaired if found to be defective.

UNITS TO SERVICE:

H1908D-H2181D mounted on International 4300 chassis only (Freightliner and Acterra chassis are not affected)

WARRANTY COVERAGE: See Chart

SPECIAL TOOLS:

- Weld Spatter Protection Blankets (Similar to Grainger P/N 6NE14)
- Side Grinder for clean-up and preparation of previously welded components
- Welder capable of running E7018 rod in all positions
- Equipment for preparing repaired areas for re-painting
- Paint application equipment for spot painting of the repaired areas
- Usual hand tools for component removal and re-installation

IMPORTANT: Provide adequate protective covering (fire proof blankets, sheet metal, etc.) for the exposed chassis and sweeper components. Hot slag or grinding wheel discharge may damage surfaces.

Detailed repair instructions and a weld drawing are included in this bulletin.

PROCEDURE:

Customers with Broom Bear sweepers mounted on International 4300 chassis must contact their Elgin dealer to arrange for the inspection and possible repair. Dealers will provide a Welder Certified to AWS D1.1, Steel, Horizontal qualifications. Certified Welder will complete the weld inspection and the necessary labor to complete the repair. Dealer support functions may include providing suitable work area, removal of components, grinding or preparing of surfaces, etc.

NOTE: Inspection and subsequent welds (if required) must be made by a Certified Welder qualified to weld to CSA W59.1 and AWS standards.

Submit Welder Certification documents with the warranty claim:

- **ASW credential number and type (AWS D1.1 , Steel, Horizontal or better)**
- **ASW certification date**

INSPECTION

5 axle suspension locations must be inspected by a Certified Welder:

- Welds at four (4) lower control arm brackets located at the left and right axle housing. (FIGURE 2)
- Welds at the rear axle tower located on the top of the center axle housing (FIGURES 3 and 4)
- Welds must meet the criteria described in the attached Addendum.

If a crack or additional component damage is found during the inspection, contact Elgin Sweeper Service and your RSPM.

NOTE: Access to the rear axle tower bracket (FIGURE 3) may be gained by raising the hopper and installing the hopper stops.

If necessary, greater access to the lower suspension components (FIGURE 2) may be obtained by placing the sweeper on a suitable chassis lift or by removing the rear wheels.

If welds are found to be defective, the components must be re-welded as instructed in this bulletin.

Repair only the welds that have failed inspection.

Inspect the welds for weld shape, lack of penetration, and cracks. If necessary, use a wire brush to clean the weld to get a better visual.

1. Visually inspect the front and rear weld attachment of the left and right suspension control arm brackets to the axle housing. (FIGURE 2 (RH is shown, LH is similar)

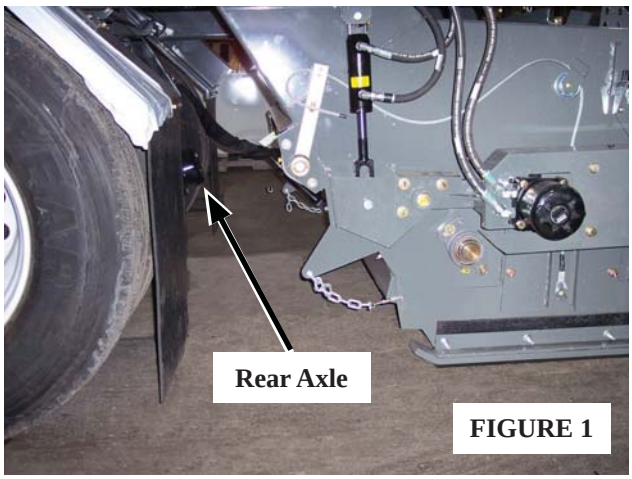

FIGURE 1

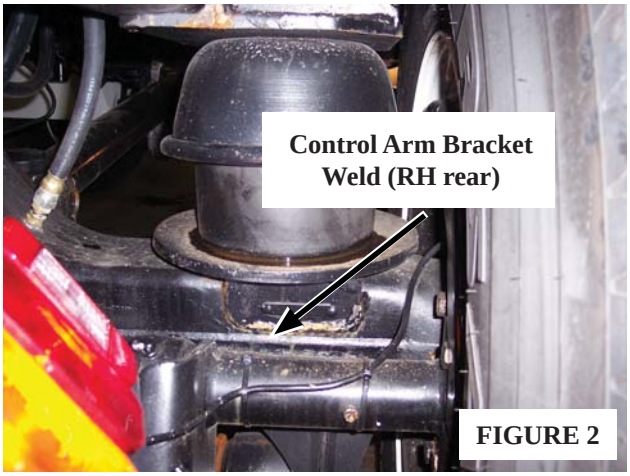

FIGURE 2

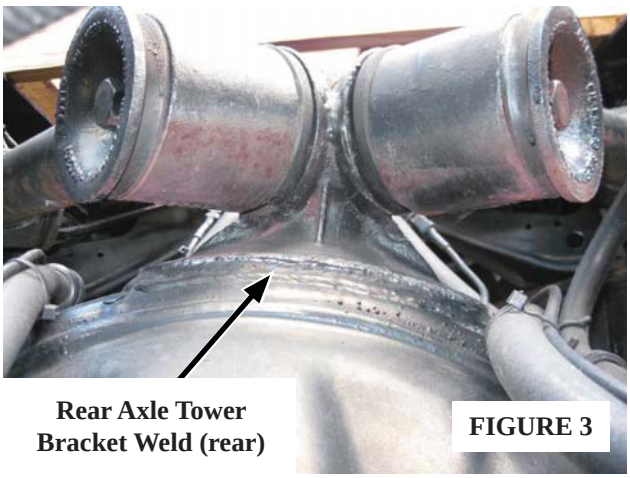

FIGURE 3

2. Visually inspect the front and rear weld attachment of the tower brackets to the center axle housing. (FIGURES 3 and 4)
3. Complete the checklist provided in the attached addendum.
4. Welds not meeting the inspection criteria must be repaired.

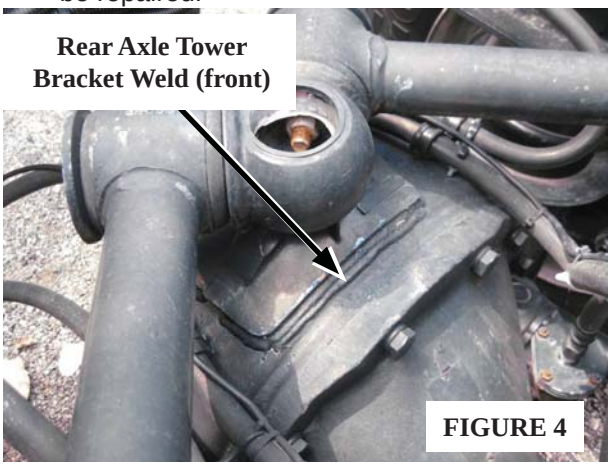

FIGURE 4

REPAIR

If welds are found to be defective during the inspection, the failed weld must be repaired as instructed in this bulletin.

NOTE: Access to the rear axle tower bracket (FIGURE 3) may be gained by raising the hopper and installing the hopper stops.

If necessary, greater access to the lower suspension components (FIGURE 2) may be obtained by placing the sweeper on a suitable chassis lift or by removing the rear wheels.

Repair must be completed in compliance with the drawing supplied in this bulletin.

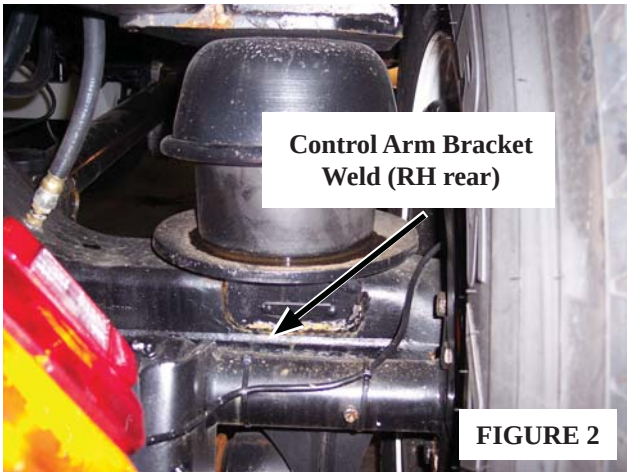

FIGURE 2

For each weld joint found to be defective perform the following:

1. Grind out the old weld deposit before re-welding. Care should be taken to not grind too much from the surface of the axle housing, which could leave a thin wall for the re-weld.
2. Using a E7018 welding rod, re-weld the joint to the specifications shown in the attached “Chalmers Suspensions” drawing.
3. Clean and re-paint the weld area with suitable medium gloss black paint (obtain locally).

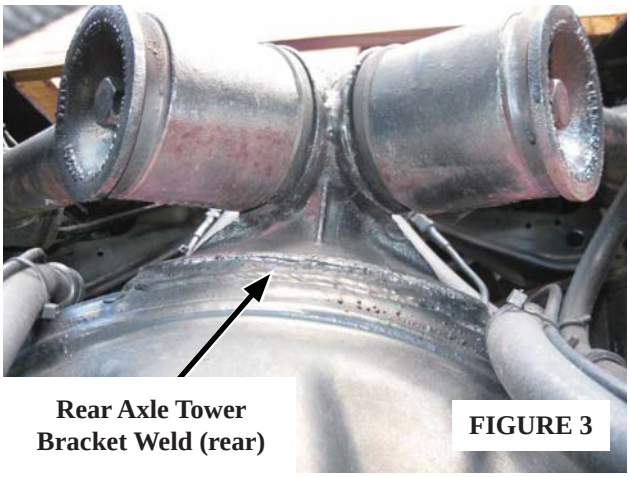
Rear Axle Tower Bracket Weld (rear)

FIGURE 3

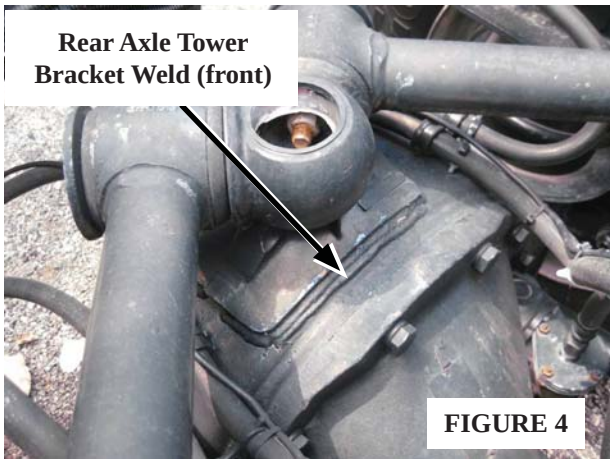

FIGURE 4

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ADDENDUM

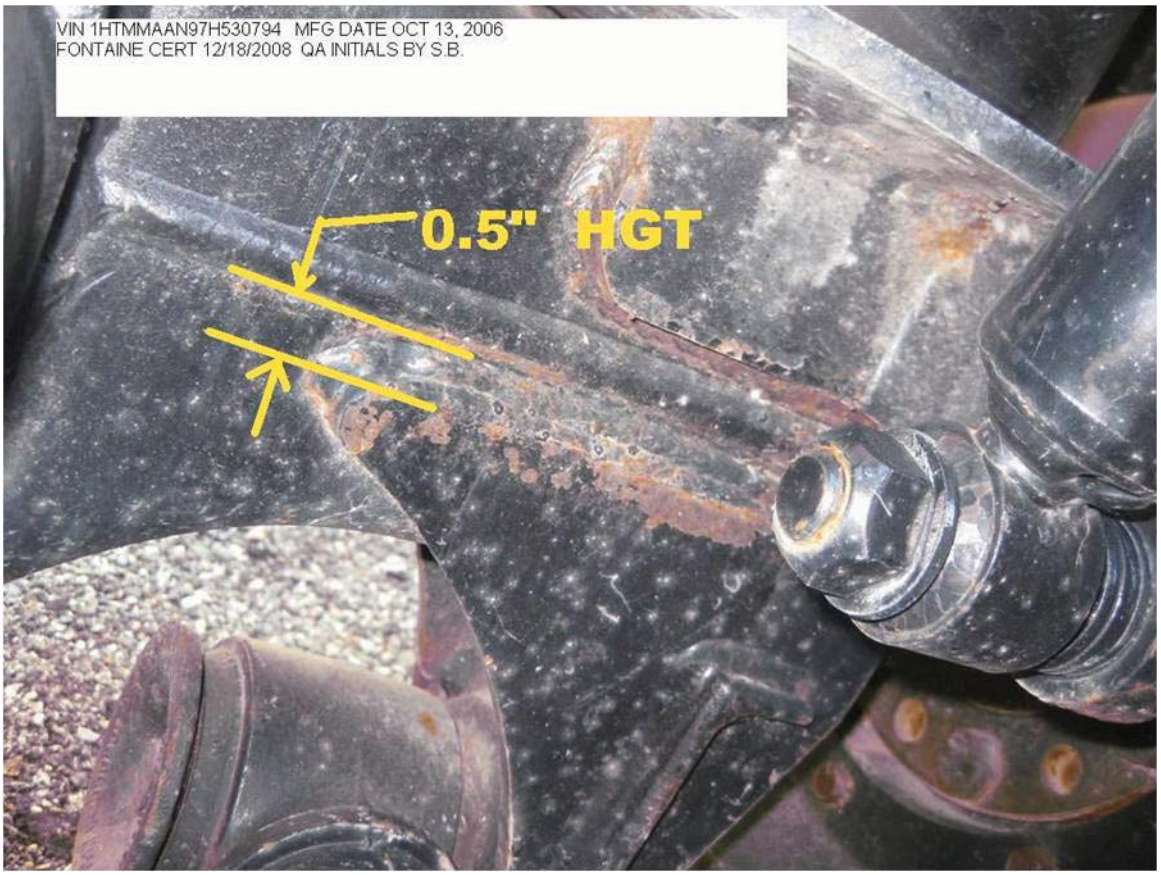
Weld Inspection and Repair

Chalmers Weld Analysis
Fontaine Modification

5 locations to be inspected by a **Certified Welder (AWS D1.1 , Steel, Horizontal):**

Welds at the 4 **lower control arm brackets** will need to be inspected.

Welds at the **tower** on top of the axle will need to be inspected.



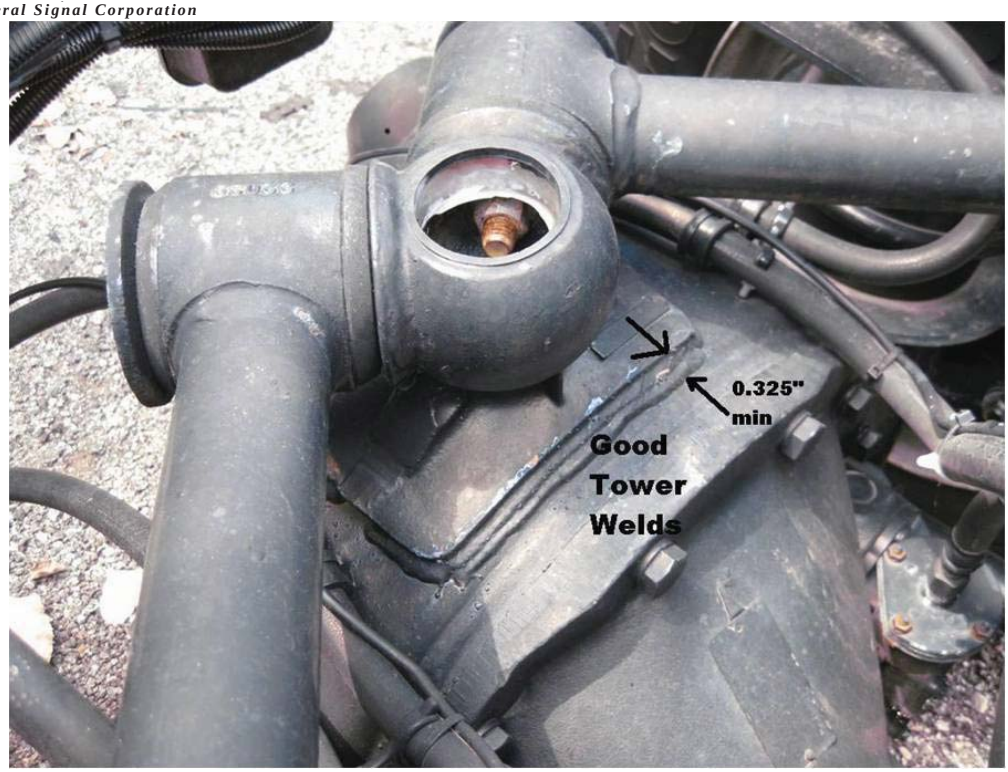
Ensure weld height is 0.450” minimum

Per the Chalmers print

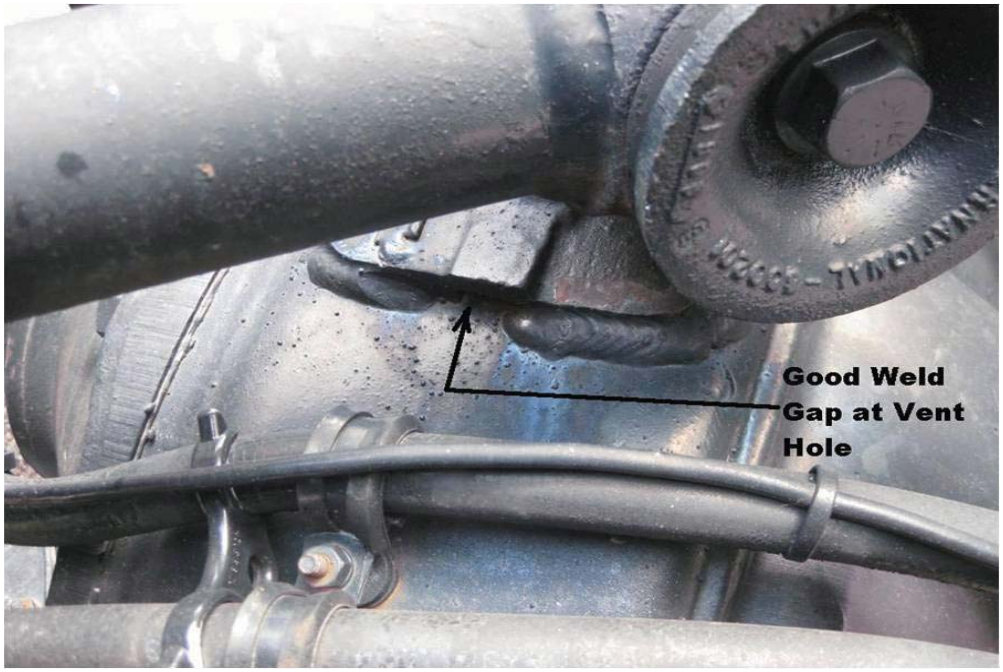
Ensure 3 weld passes are visible

Per the Chalmers print

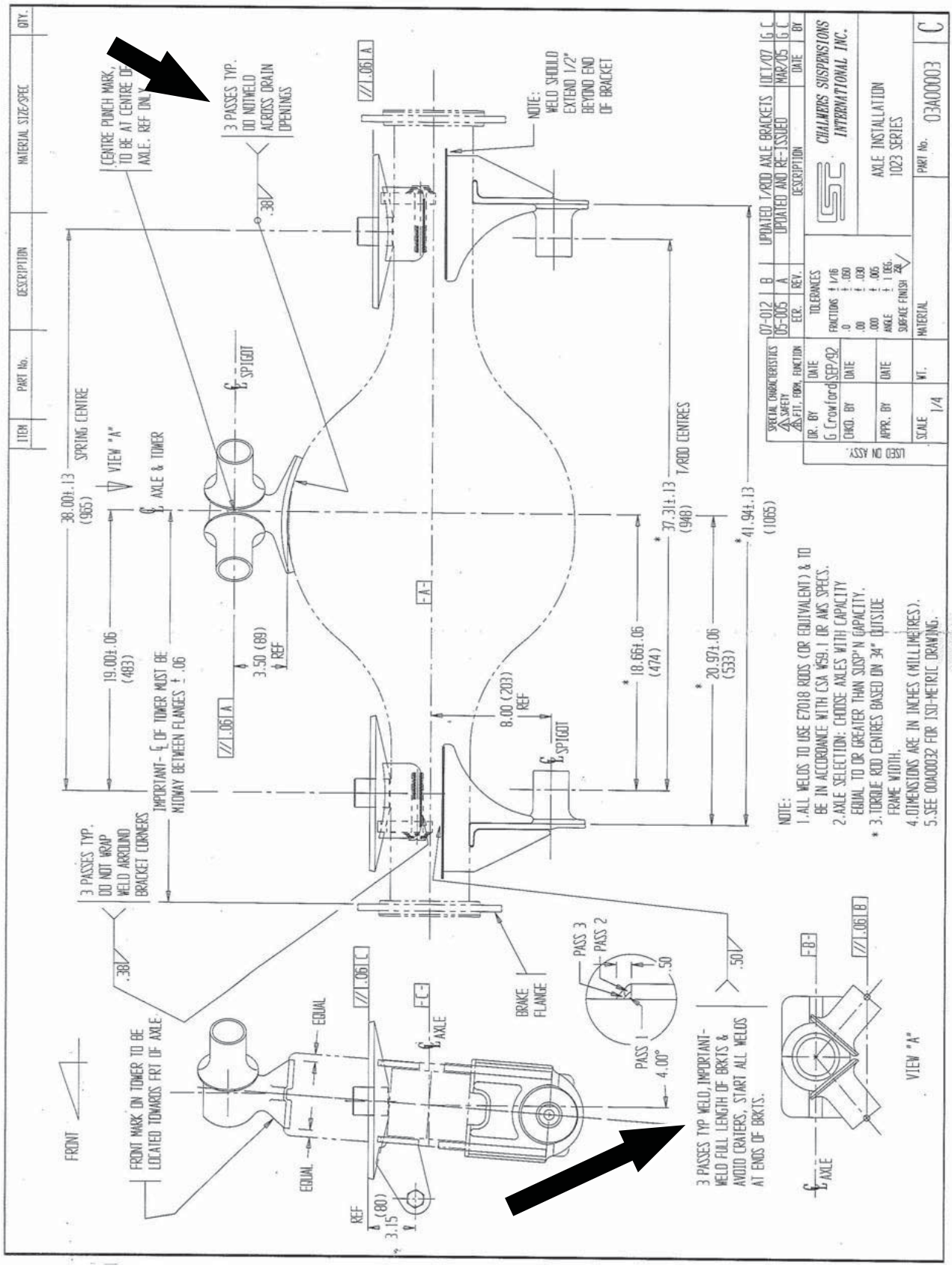
Flat weld shape is desirable. Slight convex is acceptable. Concave is not good and indicates there may not be enough weld film thickness.



Shows acceptable 3/8” milti-pass weld



Tower Weld at Vent Hole


ITEM
PART No.
DESCRIPTION
MATERIAL SIZE/SPEC
QTY.
CENTRE PUNCH MARK, TO BE AT CENTRE OF AXLE. REF ONLY
3 PASSES TYP. DO NOTWELD ACROSS DRAIN OPENINGS
.38
NOTE: WELD SHOULD EXTEND 1/2" BEYOND END OF BRACKET
SPIGOT
SPRING CENTRE
VIEW "A"
38.00±.13 (965)
19.00±.06 (483)
IMPORTANT- ℄ OF TOWER MUST BE MIDWAY BETWEEN FLANGES ± .06
℄ AXLE & TOWER
3 PASSES TYP. DO NOT WRAP WELD AROUND BRACKET CORNERS
.38
FRONT MARK ON TOWER TO BE LOCATED TOWARDS FRT OF AXLE
FRONT
// .061 A
3.50 (89) REF
8.00 (203) REF
SPIGOT
-A-
37.31±.13 (948) T/ROD CENTRES
18.66±.06 (474)
20.97±.06 (533)
41.94±.13 (1065)
NOTE:
1. ALL WELDS TO USE E7018 RODS (OR EQUIVALENT) & TO BE IN ACCORDANCE WITH CSA W59.1 OR AWS SPECS.
2. AXLE SELECTION: CHOOSE AXLES WITH CAPACITY EQUAL TO OR GREATER THAN SUSP'N CAPACITY.
* 3. TORQUE ROD CENTRES BASED ON 34" OUTSIDE FRAME WIDTH.
4. DIMENSIONS ARE IN INCHES (MILLIMETRES).
5. SEE 00A00032 FOR ISO-METRIC DRAWING.
// .061 C
-C-
AXLE
EQUAL
EQUAL
REF 3.15 (80)
BRAKE FLANGE
PASS 3
PASS 2
PASS 1
.50
4.00"
3 PASSES TYP. WELD, IMPORTANT- WELD FULL LENGTH OF BRKTS & AVOID CRATERS, START ALL WELDS AT ENDS OF BRKTS.
-B-
// .061 B
AXLE
VIEW "A"
07-012 B UPDATED T/ROD AXLE BRACKETS OCT/07 G.C
05-005 A UPDATED AND RE-ISSUED MAR/05 G.C
ECR. REV. DESCRIPTION DATE BY
SPECIAL CHARACTERISTICS
SAFETY
FIT, FORM, FUNCTION
DR. BY
G Crawford
DATE SEP/92
CHKD. BY
DATE
APPR. BY
DATE
TOLERANCES
FRACTIONS ± 1/16
.0 ± .060
.00 ± .030
.000 ± .005
ANGLE ± 1 DEG.
SURFACE FINISH 250
CHALMERS SUSPENSIONS INTERNATIONAL INC.
AXLE INSTALLATION 1023 SERIES
SCALE 1/4
WT.
MATERIAL
PART No. 03A00003
C
USED ON ASSY.

Each weld should be inspected for:

1. **Size -** Control Rod brackets should have 0.45” minimum weld height (total). Tower weld is also a 3 pass weld and should be 0.325” mimimum.
2. **Appearance -** Inspect for weld shape, lack of penetration, and cracks. If necessary, use a wire brush to clean the weld to get a better visual.
3. If the weld is defective, all the old weld should be ground out prior to applying a new one. Care should be taken not to grind too much from the surface of the axle housing which could leave a thin wall for the re-weld.

CRITERIA

CHALMERS WELDS INSPECTION CHECK SHEET

SUSPENSION CRADLE WELDS	LH Rear - Front Side	LH Rear - Back Side	RH Rear - Front Side	RH Rear- Back Side
1 Does the weld height measure 0.45" minimum? (4 places)				
2 Are 3 weld passes evident? (yes / No)				
3 Is the weld shape flat or slightly Convex (outward bulge)? (Yes / No)				

SUSPENSION TOWER WELDS	Front of Tower	Rear of Tower
4 Visually inspect the tower welds. Is the shape Flat or slightly convex? (y/n)		
5 Does the weld length measure 0.325" minimum? (yes, no)		

Warranty Coverage and Claim Submittal

The ESG dealer should submit a claim for warranty. The claim must include:

- **All invoices for certified welder performing outside labor or inspection.**
- **ASW credential number and type (must be AWS D1.1 , Steel, Horizontal or better) and ASW certification date**
- **Clear photo of all rejected welds and clear photo of the repaired welds with appropriate location identification**
- **All additional time for repair in excess of the flate rates must be approved and appropriately documented (case) by the dealer RSPM.**

Use the following information when submitting a warranty claim:

CAUSAL PART: __ **Chassis** __
To create the FAULT CODE, click __ **Chassis** __, click __ **Suspension** __, and then click __ **SB-0078** __.
In the FAULT FOUND dropdown list, select __ **Cracked** __.
In the CAUSED BY dropdown list, select __ **Improper Weld** __.
To enter the Service procedures, perform the following:
For INSTALLED PART # __**N/A**__, select __ **Chassis** __, select __**Suspension** __, select __ **SB-0078** __, and then select __ **APPROPRIATE 3-digit CODE FROM CHART** __.
SRT of __ **MATCH HOURS TO CHART and TASK PERFORMED** __hrs is allowed.

Description	Labor Code	Flat Rate
Inspect Rear Axle Tower and Lower Bracket Welds	02-008-1036-074	1 hour
Grind and weld improperly welded Tower weld (if required)	02-008-1036-078	5 hours
Grind and weld improperly welded LH Lower Bracket (if required)	02-008-1036-076	5 hours
Grind and weld improperly welded RH Lower Bracket (if required)	02-008-1036-075	5 hours