

**"DOCUMENT UNCONTROLLED IF PRINTED"**

| DOC #        | PROCESS NAME   | PAGE          | REVISION | STATION | BY     | DATE     |
|--------------|--|---------------|----------|---------|--------|----------|
| <b>AR861</b> | <b>Upper Shock/Track Bar Mount Inspection and Repair</b> | <b>1 OF 3</b> | -        | SER-E   | C.WARD | 8/2/2018 |

Read process before beginning. If you do not understand any part please contact: Chris Ward, VP of Parts and Warranty at 1-866-953-5555 or by E-mail @ cward@ARBOCSV.com.

Good Mechanics safety practice must be followed on any repairs.

Safety practices should include but not be limited to properly supporting the chassis, axles, blocking tires, and a work area free of clutter.

**Complaint:** Upper Plates previously installed in AR839 are cracking or pulling away from frame

**Cause:** Insufficient/Bad Welds not holding under loads

**Correction:** Inspect/Correct welds including drilling 1/8" Stop Holes into Frame at the end of cracks and weld per procedure

**Vehicles Affected:** All Spirit of Mobility (SOM) Units with Reyco Granning Rear Suspension where AR839 has already been completed.

**ARBOC Work Orders Provided for Affected Units**

**Parts Returned:** No

**Tools Required**

Hoist (ability to raise and support the unit)

**Parts Required**

**Inspection Procedure:**

Step 1: Pull unit onto hoist, chock front tires to prevent bus from rolling forward or backwards.

Step 2: Raise unit to a comfortable working height.

Step 3: Using attached Retrofit Document, inspect welds on both Upper Shock Mount Plate (Curb and Road Side) for inferior or incomplete welds. Examples below:



Poor Weld: Not completely filling slot



Good Weld: Completely filling slot

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| <b>AR861</b> | <b>Upper Shock/Track Bar Mount Inspection and Repair</b> | <b>2 OF 3</b> | -        | SER-E   | C.WARD | 8/2/2018 |

**REPAIR INSTRUCTION - POOR WELDS WITHOUT FAILURE**

Labor Operation Code: 0116501

**Tools Required**

Hoist (ability to raise and support the unit)  
 Drill with 1/8" Drill Bit  
 Welder  
 Flame/Spark Resistant Tarp (use to protect interior harness, fuel lines, brake lines, etc.)

**Parts Required**

NAPA Rubberized Undercoating (not supplied)

**Repair Instructions:**

- Step 1: Disconnect positive (red lead) battery cable from the chassis and auxiliary battery.
- Step 2: Using Wire Brush, remove any loose welding slag, dirt, or debris.
- Step 3: Loosen/remove rubber isolators from exhaust hangers to allow movement in the exhaust for the curbside brackets.
- Step 4: If unit is currently experiencing cracking, drill 1/8" hole at the ends of the existing cracks ( photo below) and grind v-groove between points



- Step 5: Weld any existing cracks and grind surface clean.
- Step 6: Following the attached weld guidelines, repair all insufficient welds to roadside (1310475) and curbside (1310474)
- Step 7: Using a high quality Rubberized Undercoat, paint repaired area. NAPA Rubberized Undercoating or Mac's 8400 Rubberized undercoat (not supplied).
- Step 8: Re-install rubber isolators to exhaust hangers.
- Step 9: Lower unit and connect positive (red lead) battery cable to the chassis and auxilliary battery.
- Step 10: Remove from hoist

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|--------------|---|--------|----------|---------|--------|----------|
| <b>AR861</b> | Upper Shock/Track Bar Mount Inspection and Repair | 3 OF 3 | -        | SER-E   | C.WARD | 8/2/2018 |

**REPAIR INSTRUCTION - POOR WELDS RESULTING IN FAILURE**

Labor Operation Code: 0116501

**Tools Required**

Hoist (ability to raise and support the unit)  
 Drill with 1/8" Drill Bit  
 Welder  
 Flame/Spark Resistant Tarp (use to protect interior harness, fuel lines, brake lines, etc.)

**Parts Required**

NAPA Rubberized Undercoating (not supplied)  
 1310474 Bracket, Shock Mount Reyco Retrofit Curbside  
 1310475 Bracket, Shock Mount Reyco Retrofit Roadside

**Repair Instructions:**

- Step 1: Disconnect positive (red lead) battery cable from the chassis and auxiliary battery.
- Step 2: Using Wire Brush, remove any loose welding slag, dirt, or debris.
- Step 3: Loosen/remove rubber isolators from exhaust hangers to allow movement in the exhaust for the curbside brackets.
- Step 4: If unit is currently experiencing cracking, drill 1/8" hole at the ends of the existing cracks ( photo below) and grind v-groove between points



- Step 5: Weld any existing cracks and grind surface clean.
- Step 6: Following the attached weld guidelines, repair all insufficient welds to roadside (1310475) and curbside (1310474)
- Step 7: Remove section of mounting plate which has experienced failure and grind smooth.



- Step 8: Cut section from new bracket needed to replace removed.
- Step 9: Weld new bracket section into place following attached guidelines.
- Step 10: Using a high quality Rubberized Undercoat, paint repaired area. NAPA Rubberized Undercoating or Mac's 8400 Rubberized undercoat (not supplied).
- Step 12: Re-install rubber isolators to exhaust hangers.
- Step 13: Lower unit and connect positive (red lead) battery cable to the chassis and auxiliary battery.
- Step 14: Remove from hoist

5

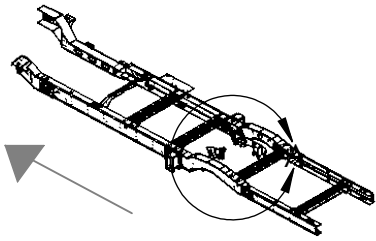
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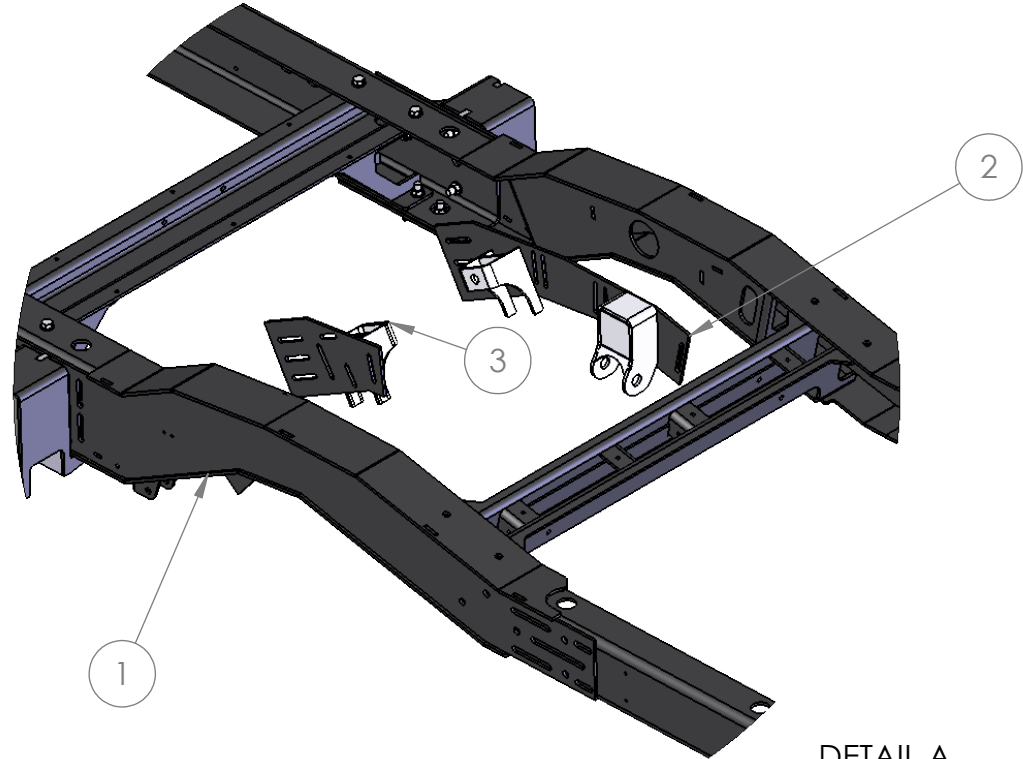
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1

|           |                  |   |                                   |          |
|-----------|------------------|---|-----------------------------------|----------|
| SIZE<br>A | SHEET:<br>1 OF 3 | UNCONTROLLED COPY, CURRENT WHEN PRINTED<br>MASTER IN FILE | DRAWING NUMBER:<br>ARBOC SOM ASSY | REV<br>B |
|-----------|------------------|---|-----------------------------------|----------|



FRONT OF BUS

DETAIL A  
SCALE 1 : 14

| ITEM NO. | PART NUMBER         | DESCRIPTION                                  | QTY. |
|----------|---------------------|--|------|
| 1        | ARBOC CHASSIS FRAME | ASSEMBLY, FRAME, 191 WB, SOM                 | 1    |
| 2        | 1310474             | SUSPENSION RETROFIT, REYCO GRANNING, SOM, CS | 1    |
| 3        | 1310475             | SUSPENSION RETROFIT, REYCO GRANNING, SOM, RS | 1    |

MATERIAL: **SEE BOM**ALLOY: **SEE BOM**

BLANK SIZE:

FINISH WEIGHT:

DENSITY:

FINISH:

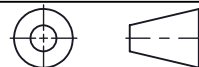
SURFACE AREA:

ALLOCATION MATL' SIZE:

ALLOCATION MATL' WEIGHT:

**TOLERANCES:**

FLOOR PLAN DIMS:  $\pm 1/4"$   
 FRACTIONAL DIMS:  $\pm 1/8"$   
 2 PLACE DECIMAL DIMS:  $\pm .06$   
 3 PLACE DECIMAL DIMS:  $\pm .015$

**THIRD ANGLE PROJECTION**

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DOC. # AME-008A  
LAST REVISED: 10-18-2016

SIGNATURES/DATES

DRAWN: DH 6/8/2017

CHECKED:

# ARBOC Specialty Vehicles

DESCRIPTION:

ASSEMBLY, FRAME, 191 WB, SOM SUSP REINF

DRAWING  
SIZE: ADRAWING  
NUMBER: ARBOC SOM ASSYPART REV  
B

SCALE: 1:100

NEXT ASSY: -

SHEET: 1 OF 3

5

4

3

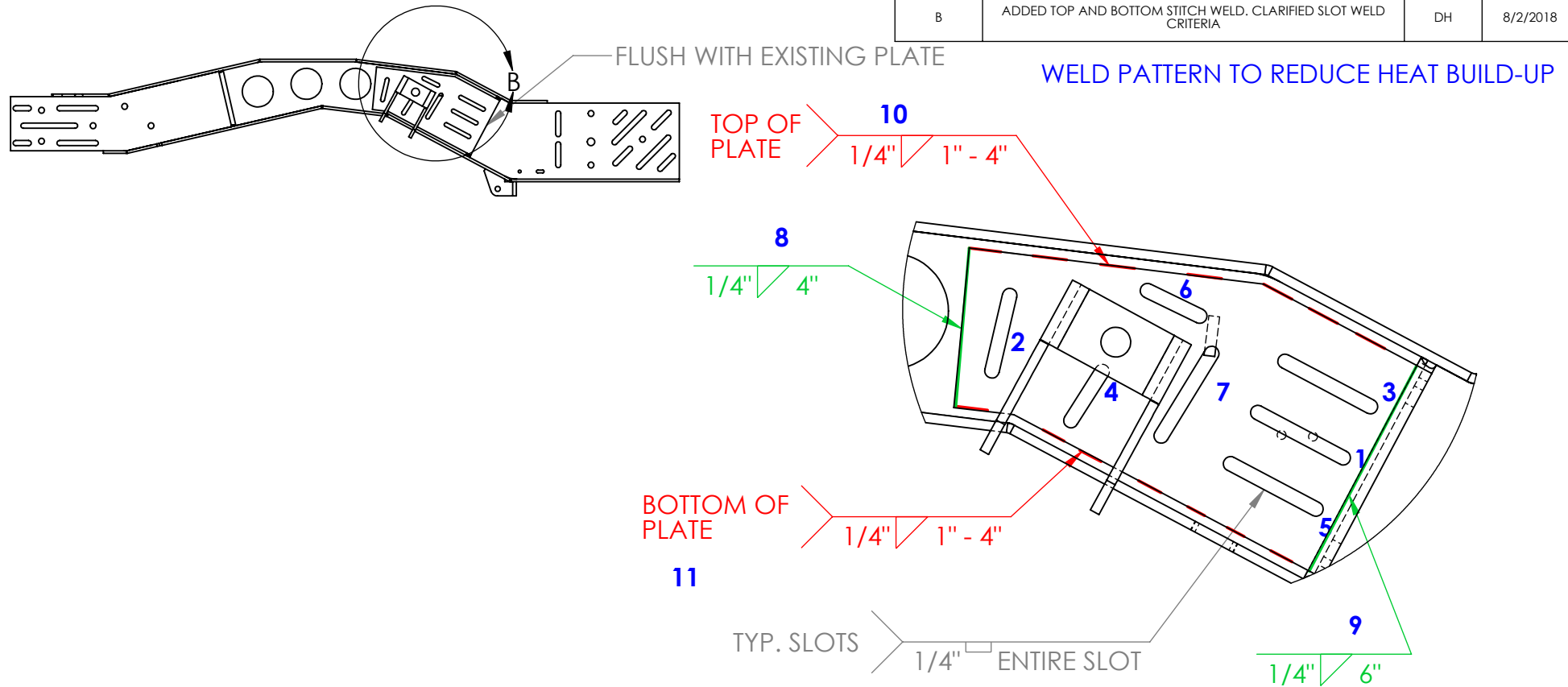
2

1

# RS RETROFIT INSTALLATION

• 1310475

|           |   |   |  |                    |
|-----------|---|---|--|--------------------|
| SIZE<br>A | SHEET:<br>2 OF 3  | UNCONTROLLED COPY, CURRENT WHEN PRINTED<br>MASTER IN FILE | DRAWING NUMBER:<br><b>ARBOC SOM ASSY</b> | REV<br>B           |
| REV<br>A  | DESCRIPTION OF CHANGE<br>UPDATED WELD PATTERN   |   | BY<br>DH                                 | DATE<br>12/12/2017 |
| REV<br>B  | DESCRIPTION OF CHANGE<br>ADDED TOP AND BOTTOM STITCH WELD. CLARIFIED SLOT WELD CRITERIA |   | BY<br>DH                                 | DATE<br>8/2/2018   |



**FIGURE 1: WELD PATTERN**

## INSTALLATION PROCEDURE

- REMOVE ALL EXISTING BRACKETS
- DRILL STOP ANY FRAME CRACKS AND FILL WITH WELD. GRIND SURFACE SMOOTH
- PLACE RS RETROFIT BRACKET, AS SHOWN. THERE SHOULD BE A 1/4" SPACE ABOVE AND BELOW FOR CLEARANCE AROUND EXISTING WELD BEADS
- WITH BRACKET FLAT AGAINST FRAME, CLAMP AND WELD AS SHOWN IN FIGURE 1.
- SLOTS MUST BE FILLED COMPLETELY

|                          |
|--------------------------|
| MATERIAL: <b>SEE BOM</b> |
| ALLOY: <b>SEE BOM</b>    |
| BLANK SIZE:              |
| FINISH WEIGHT:           |
| DENSITY:                 |
| FINISH:                  |
| SURFACE AREA:            |
| ALLOCATION MATL' SIZE:   |
| ALLOCATION MATL' WEIGHT: |

|                                  |
|----------------------------------|
| <b>TOLERANCES:</b>               |
| FLOOR PLAN DIMS: $\pm 1/8"$      |
| FRACTIONAL DIMS: $\pm 1/16"$     |
| 2 PLACE DECIMAL DIMS: $\pm .01$  |
| 3 PLACE DECIMAL DIMS: $\pm .005$ |
| <b>THIRD ANGLE PROJECTION</b>    |
|                                  |

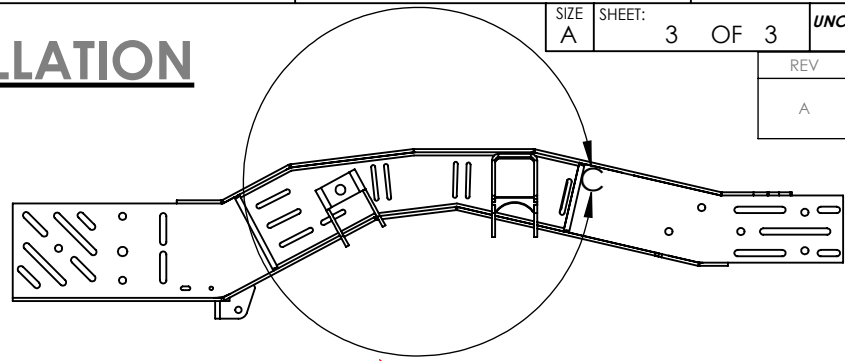
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| SIGNATURES/DATES   |          |
| DRAWN: DH  | 6/8/2017 |
| CHECKED:   |          |

|   |                                |               |  |
|---|--------------------------------|---------------|--|
|   |                                |               |  |
| DESCRIPTION:<br>ASSEMBLY, FRAME, 191 WB, SOM SUSP REINF |                                |               |  |
| DRAWING SIZE: A   | DRAWING NUMBER: ARBOC SOM ASSY | PART REV B    |  |
| SCALE: 1:20   | NEXT ASSY: -                   | SHEET: 2 OF 3 |  |

# CS RETROFIT INSTALLATION

• 1310474

|           |   |   |  |                    |
|-----------|---|---|--|--------------------|
| SIZE<br>A | SHEET:<br>3 OF 3                              | UNCONTROLLED COPY, CURRENT WHEN PRINTED<br>MASTER IN FILE | DRAWING NUMBER:<br><b>ARBOC SOM ASSY</b> | REV<br>B           |
| REV<br>A  | DESCRIPTION OF CHANGE<br>UPDATED WELD PATTERN |   | BY<br>DH                                 | DATE<br>12/12/2017 |



WELD PATTERN TO REDUCE HEAT BUILD-UP

12 TOP OF PLATE  
1/4" 1" - 4"

TYP. SLOTS

1/4" ENTIRE SLOT

11  
1/4" 6"

13 BOTTOM OF PLATE  
1/4" 1" - 4"

10  
1/4" 5"

FIGURE 2: WELD PATTERN  
SCALE 1 : 4

## INSTALLATION PROCEDURE

- REMOVE ALL EXISTING BRACKETS
- DRILL STOP ANY CRACKS AND FILL WITH WELD. GRIND SURFACE SMOOTH
- PLACE CS RETROFIT BRACKET, AS SHOWN. THERE SHOULD BE A 1/4" SPACE ABOVE AND BELOW FOR CLEARANCE AROUND EXISTING WELD BEADS
- WITH BRACKET FLAT AGAINST FRAME, CLAMP AND WELD AS SHOWN IN FIGURE 2. SLOTS MUST BE COMPLETELY FILLED.

|                          |
|--------------------------|
| MATERIAL: <b>SEE BOM</b> |
| ALLOY: <b>SEE BOM</b>    |
| BLANK SIZE:              |
| FINISH WEIGHT:           |
| DENSITY:                 |
| FINISH:                  |
| SURFACE AREA:            |
| ALLOCATION MATL' SIZE:   |
| ALLOCATION MATL' WEIGHT: |

|                               |
|-------------------------------|
| <b>TOLERANCES:</b>            |
| FLOOR PLAN DIMS: ±1/8"        |
| FRACTIONAL DIMS: ±1/16"       |
| 2 PLACE DECIMAL DIMS: ±.01    |
| 3 PLACE DECIMAL DIMS: ±.005   |
| <b>THIRD ANGLE PROJECTION</b> |
|                               |

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|                  |          |
|------------------|----------|
| SIGNATURES/DATES |          |
| DRAWN: DH        | 6/8/2017 |
| CHECKED:         |          |

|   |                                |
|---|--------------------------------|
| DESCRIPTION:<br>ASSEMBLY, FRAME, 191 WB, SOM SUSP REINF |                                |
| DRAWING SIZE: A   | DRAWING NUMBER: ARBOC SOM ASSY |
| PART REV B  |                                |
| SCALE: 1:24   | NEXT ASSY: -                   |
| SHEET: 3  | OF 3                           |