



<b>DART Field Inspection and Repair: Bracket MDA-1300100</b>		
<b>Work Instructions</b>	<b>Revision:</b>	<b>Doc#:</b>
<b>Revised: 11/25/2013</b>	<b>3</b>	<b>112013</b>

## **1.0 PURPOSE**

The purpose of this document is to provide instructions for field inspection and field replacement, as required, for eight lower member frame brackets on the DART 40' and DART 31' frame assembly. If the brackets were to fail in service, the lower members of the frame could potentially abrade the CNG tanks over a period of time. The bracket poses neither immediate safety concerns nor requires suspension of service of the affected vehicles.

## **2.0 SCOPE**

- 2.1 This work instruction applies to the DART 40' and DART 31' installation effort.
- 2.2 Perform visual inspection of bracket MDA-1300100 for structural and weld integrity.
- 2.3 Mandatory installation of inspection certified replacement brackets at (2) specific locations and for other brackets that fail the field inspection.

## **3.0 ASSOCIATED DOCUMENTS**

Reference Agility installation drawings MDA-1100157\_REV\_A , MDA-1300100

## **4.0 TOOLS, GAUGES, FIXTURES**


- 4.1 9/16" socket wrench/ratchet, 9/16" combination wrench, torque wrench, machinist square, Torque Seal (pink)

## **5.0 SAFETY REQUIREMENTS**


- 5.1 Safety glasses
- 5.2 Clear of all ignition sources (no smoking, open flame or other ignition source in vicinity)

## **6.0 GENERAL INSTRUCTIONS**

DART Field Inspection and Repair: Bracket MDA-1300100		
Work Instructions	Revision:	Doc#:
Revised: 11/25/2013	3	112013

	<p>6.1 <b>Observe bracket MDA-1300100 (8 locations)</b></p>
<p><b>BRACKET INSPECTION:</b></p> <ul style="list-style-type: none"> <li>• Perform visual inspection on the 8 brackets using inspection mirror as required.</li> <li>• VISUAL INSPECTION CRITERIA (WELDS): See attachment to this work instruction.</li> <li>• “Inspection / Tracking” Matrix: See attachment to this work instruction</li> </ul> <p><b>TANK INSPECTION:</b></p> <ul style="list-style-type: none"> <li>• Perform visual inspection on tanks that are directly adjacent to any broken brackets.</li> </ul> <p><b>ANTI-RATTLE PADS (Rubber pads):</b></p> <ul style="list-style-type: none"> <li>• Perform visual inspection for loose or missing pads</li> </ul>	<p>6.2 <b>Perform Visual Inspections</b></p>

DART Field Inspection and Repair: Bracket MDA-1300100		
Work Instructions	Revision:	Doc#:
Revised: 11/25/2013	3	112013

<p><b>BRACKET REPLACEMENT:</b></p> <ul style="list-style-type: none"> <li>For all buses, a mandatory replacement of (2) brackets will be performed. <ul style="list-style-type: none"> <li>These (2) brackets are located on the “2 tank side” of the system and are attached to the center tank support beam</li> </ul> </li> <li>For all buses, if any of the other remaining (6) brackets are cracked, broken or fail the visual inspection, those brackets will also be replaced.</li> </ul> <p><b>RUBBER PAD REPLACEMENT:</b></p> <ul style="list-style-type: none"> <li>For all buses, if any pads are loose or missing, replacement of the pads will be performed.</li> </ul>	<p><b>6.3 Replacement of components</b></p>
	<p><b>6.4 Where brackets are replaced, install new lock nuts (4 lock nuts per bracket).</b></p>

**DART Field Inspection and Repair:  
Bracket MDA-1300100**

<b>Work Instructions</b>	<b>Revision:</b>	<b>Doc#:</b>
Revised: 11/25/2013	3	112013



6.5 Where replacement of brackets is performed, install inspection approved MDA-1300100 brackets



6.6 Torque 3/8" lock nuts to 37 ft -lbs  
6.7 Mark both bolt head and lock nut with pink torque seal



<b>DART Field Inspection and Repair: Bracket MDA-1300100</b>		
<b>Work Instructions</b>	<b>Revision:</b>	<b>Doc#:</b>
<b>Revised: 11/25/2013</b>	<b>3</b>	<b>112013</b>

Agility technicians will complete and maintain inspection records for each bus with signoff. Records will be provided daily to NABI.

**6.8 Inspection documentation**



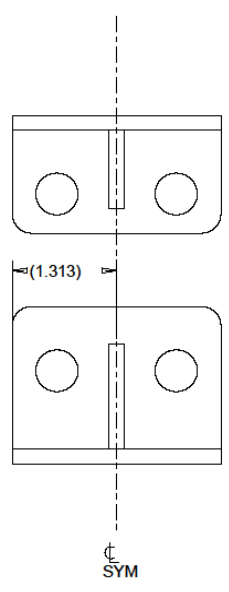


<b>DART Field Inspection and Repair: Bracket MDA-1300100</b>		
<b>Work Instructions</b>	<b>Revision:</b>	<b>Doc#:</b>
<b>Revised: 11/25/2013</b>	3	<b>112013</b>

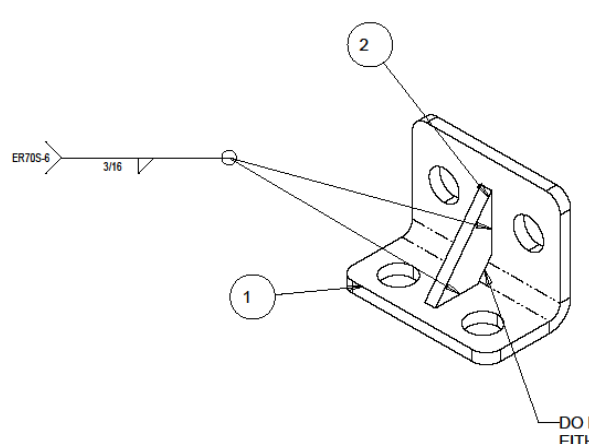
MDA-1300100

BILL OF MATERIALS				
ITEM	QTY	PART NUMBER	DESCRIPTION	REV
1	1	MDP-1100494	ANGLE BRACKET	
2	1	MDP-1300106	GUSSET	




SYM



DO NOT WELD CORNER  
EITHER SIDE

**NOTE:**  
REMOVE WELD SPATTER  
MATERIAL:  
N/A  
FINISH:  
POWDER COAT GRAY ZINC

PART NO. MDA-1300100		
ASSEMBLY		
DESCRIPTION		BRACKET ASSEMBLY
DATE: 08-01-13		DATE: 08-01-13
DRAWN: CHRIS CANNON		1,000
CHECKED:		1 of 1
APPROVED:		MDA-1300100



DART Field Inspection and Repair: Bracket MDA-1300100		
Work Instructions	Revision:	Doc#:
Revised: 11/25/2013	3	112013

VISUAL INSPECTION CRITERIA

	WELD CHARACTERISTIC / DEFECT	DEFECT LIMIT
1	Cracks-- Longitudinal, transverse, crater, radiating, weld toe, etc.	Not Allowed
2	Surface Porosity	Not Allowed
3	Clustered Porosity	Not Allowed
4	Craters	Craters are not allowed. Weld starts/stops should be completely filled and blended.

5	Lack Of Fusion(visual)	Not Allowed
6	Incomplete Joint Penetration / Lack of Penetration	10% of nominal, not to exceed 1mm(.039")
7	Undercut	1/32" maximum entire length of weld
8	Weld Size	<b>Minimum</b> weld size is considered the size of weld specified on the engineering drawing
		<b>Maximum</b> acceptable weld size is specified weld size plus 25%
9	Insufficient Weld Throat	Undersized welds are not allowed. Weld throat must meet minimum weld size as specified on engineering drawing.
10	Insufficient Leg Length	Undersized welds are not allowed. Weld leg must meet minimum weld size as specified on engineering drawing.
11	Underfill / Incompletely Filled Groove Weld	Not Allowed. Fillet welds must be filled flush at a minimum. See REINFORCEMENT for maximum fill.



DART Field Inspection and Repair: Bracket MDA-1300100		
Work Instructions	Revision:	Doc#:
Revised: 11/25/2013	3	112013

INSPECTION / TRACKING MATRIX

Bus number	Inspection complete: Yes / No	Bracket Location	Condition / action taken	Removed Bracket Tagged	Corrosion/ Rust: Yes / No	Corrosion Location				
xxxxx										
		4TKCSF					4TKCSF = 4 Tank Curb Side Front			
		4TKSSF					4TKSSF = 4 Tank Street Side Front			
		4TKCSR					4TKCSR = 4 Tank Curb Side Rear			
		4TKSSR					4TKSSR = 4 Tank Street Side Rear			
		2TKCSF					2TKCSF = 2 Tank Curb Side Front			
		2TKSSF					2TKSSF = 2 Tank Street Side Front			
		2TKCSR					2TKCSR = 2 Tank Curb Side Rear			
		2TKSSR					2TKSSR = 2 Tank Street Side Rear			
xxxxx										
		4TKCSF								
		4TKSSF								
		4TKCSR								
		4TKSSR								
		2TKCSF								
		2TKSSF								
		2TKCSR								
		2TKSSR								