



A.R.M., INC
 1506 Fernwood Rd.
 Wintersville, OH 43953
 740.264.6599
 740.266.2953 Fax

Bulletin No: SB070113
Release Date: July 1, 2013
Effective Date: July 1, 2013
Supersedes: N/A
Completion Date: Aug 1, 2013
Page: 1 of 18

SERVICE BULLETIN

Manufacturer: A.R.M., Inc.
 Ride Name: Vertigo

Model(s): 100 / 200 / 300
 Affected Production Dates: July, 2009 - June, 2013

AFFECTED SERIAL NUMBERS

ABSTRACT OF ISSUE

A MANDATORY modification of existing sweep assemblies to provide a redundant support for the carriage swivel block in the unlikely event the primary hanger pin fails or is unintentionally dislodged during operation.

REASON FOR RELEASE

The Vertigo Sweep Modification was developed as a precautionary measure only. There are no known failures of a primary hanger pin and there have been no reported cases of the pin becoming dislodged. This mandatory modification addresses concerns expressed by owners and/or State jurisdictions and has been developed to avoid licensing issues in such jurisdictions.

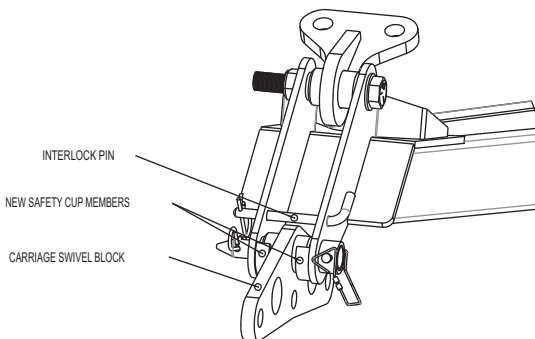
ACTION TO BE TAKEN

Installation of support members, or "cups", to each sweep as detailed in the attached installation instructions. All necessary components are included in A.R.M., Inc kits #VM0162, #VM0163, #VL0132 & #VL0133. The appropriate kit will be determined when ordering based on production number. All work to be completed by competent personnel capable of understanding the function of the modified components and the proper procedures for installation. Welding shall be in accordance with the appropriate American Welding Society or the American Society of Mechanical Engineers, or other equivalent standard, and be performed by an appropriately certified or qualified welder as required by the standard.

DETAIL OF ISSUE

This modification requires the addition of two **Safety Cups** to each Vertigo sweep to act as a redundant support for the **Carriage Swivel Block**.

An **Interlock Pin** is also added to ensure the **Swivel Block** remains seated.



100 SERIES
 VG101-07-01-09
 VG102-07-01-10
 VG103-05-21-11
 VG104-04-01-12
 VG105-08-01-12

200 SERIES
 VG201-01-30-10
 VG202-03-13-10
 VG203-05-01-10
 VG204-06-10-10
 VG205-08-15-10
 VG206-08-15-10
 VG207-01-29-11
 VG208-07-20-11
 VG209-01-05-12

300 SERIES
 VG301-03-05-11
 VG302-10-1-11
 VG303-01-05-12
 VG304
 VG305

NOTICE

ONLY COMPONENTS SPECIFIED, AUTHORIZED, OR PROVIDED BY A.R.M. (US), INC. SHALL BE USED
 A.R.M. (US) INC. SPECIFICALLY DISCLAIMS ANY LIABILITY ASSOCIATED WITH THE USE OF
 UNAUTHORIZED COMPONENTS OR MODIFICATIONS AND/OR ALTERATIONS OF AUTHORIZED COMPONENTS.

VERTIGO CARRIAGE SUPPORT REDUNDANCY KIT

For Kits #VM0162, #VM0163, #VL0132, & #VL0133

For Field Installation On All Vertigo 100, 200 & 300 Models
Produced Prior To June, 2013

All Work To Be Performed By Competent Personnel Capable Of Understanding
The Function Of The Modified Components And The Proper Procedures For Installation.
Welding To Be Performed By A Certified Welder.

Purpose:

This modification is designed to provide a redundancy for the passenger carriage attachment to the end of the sweep in the unlikely case of a **PRIMARY HANGER PIN** failure.

Should the **HANGER PIN** fail, the **CARRIAGE SWIVEL BLOCK** will drop approximately 1/8" and be retained by the cup and the **INTERLOCK PIN**.

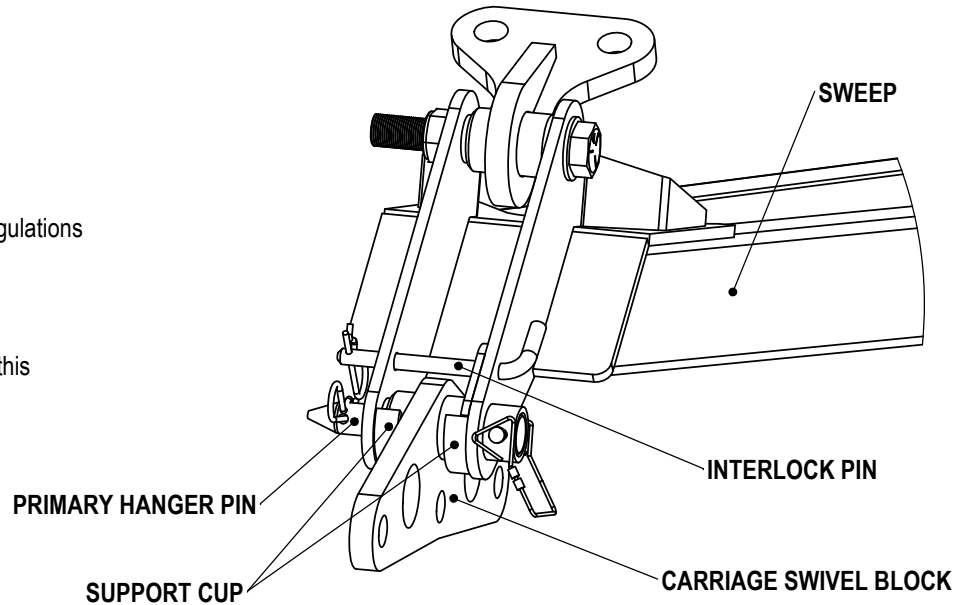
Compliance Date:

The manufacture date of of compliance is Aug 1, 2013. However, individual State regulations may require immediate installation prior to operation in such jurisdictions.

Certification Of Compliance:

Upon completion, please complete the Certification Of Compliance below and remit this page to A.R.M., Inc. via postal mail, fax or e-mail.

ARM, Inc.
1506 Fernwood Rd.
Wintersville, OH 43953
740.266.2953 FAX
mike@armrides.com



CERTIFICATION OF COMPLIANCE

The Vertigo Seat Carriage Support Redundancy Kit Described Herein Has Been Installed Per The Included Instructions. All Welding And Inspection Has Been Performed By A Certified Welder.

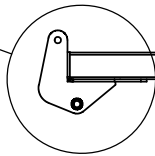
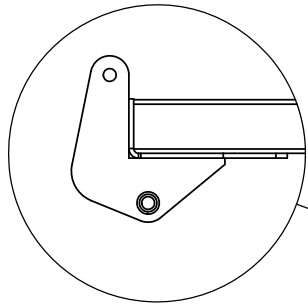
Ride Serial #:	
Compliance Date:	
Signature:	
Printed Name:	

	NAME	DATE	ARM MFG., INC. 1506 FERNWOOD RD. WINTERSVILLE, OH 43953 PROPRIETARY AND CONFIDENTIAL		
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APPROVED					
Print Date: Tuesday, July 02, 2013					
MATERIAL	SIZE	Part No.	REV		
	A	Install Sweep Weldment			

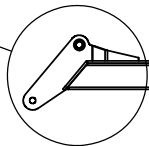
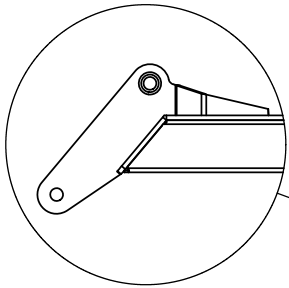
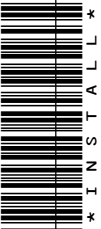
DO NOT SCALE DRAWING

BEFORE PROCEEDING

Immediately Identify The Type Of Sweep To Be Modified.
And Discard Unrelated Instruction Pages



SWEEP STYLE "A"
PART #VM0018



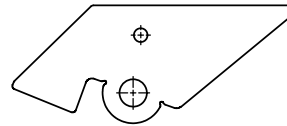
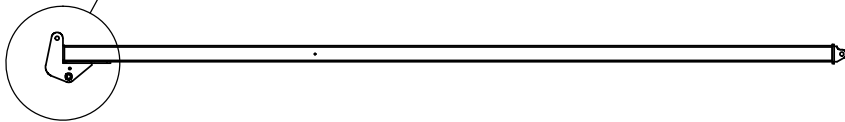
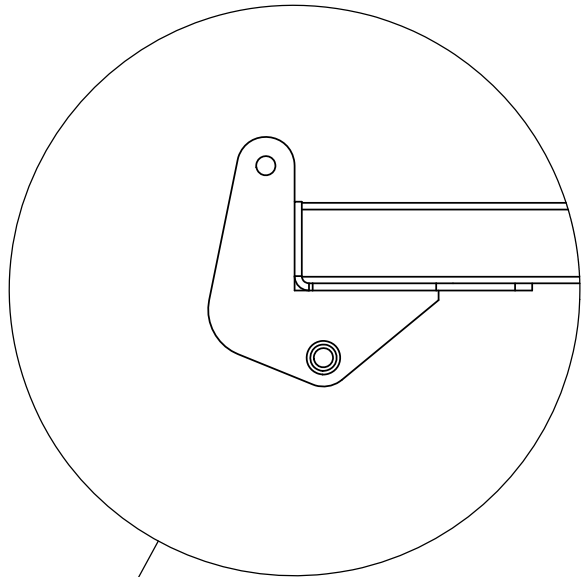
SWEEP STYLE "B"
PART #VL0095

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MATERIAL			SIZE	Part No.	REV
			A	Install	

THIS PAGE FOR SWEEP STYLE A ONLY

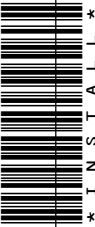
**Sweep Style
A**



**104266
Style A
Cup/Hole Template**



**104261
Cup**

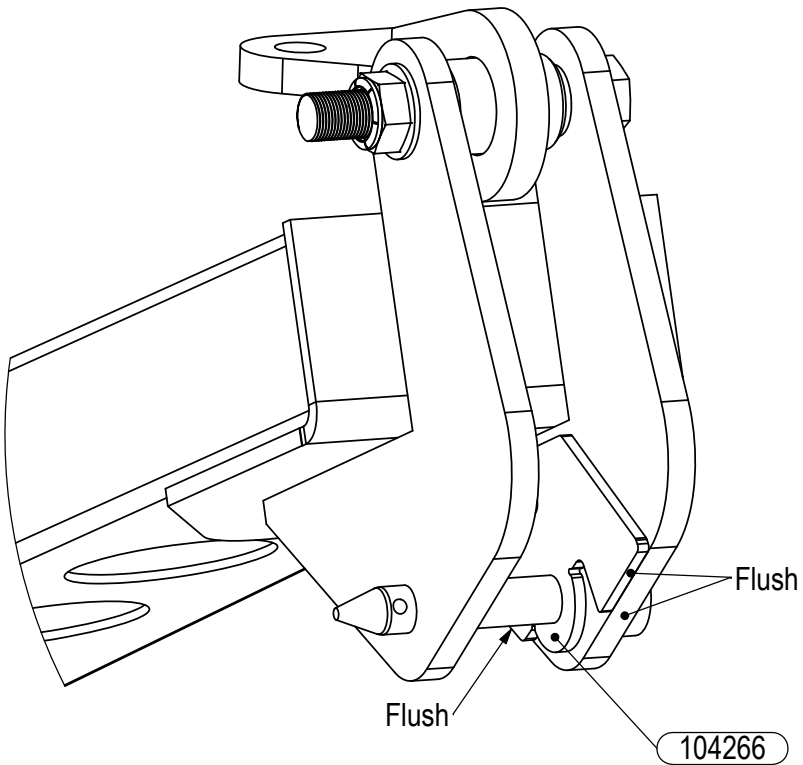


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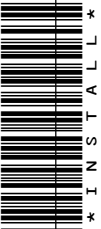
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APPROVED		DMM				
Print Date: Tuesday, July 02, 2013						
MATERIAL				SIZE	Part No.	REV
				A	Install	

THIS PAGE FOR SWEEP STYLE A ONLY

- Place Cup/Hole Template As Illustrated. Ensure Indicated Faces Are Flush.
Use Seat Hanger Pin And Clamps To Keep Template In Position
- Remove paint and debris from area to welded. Clean and prep for proper weld.



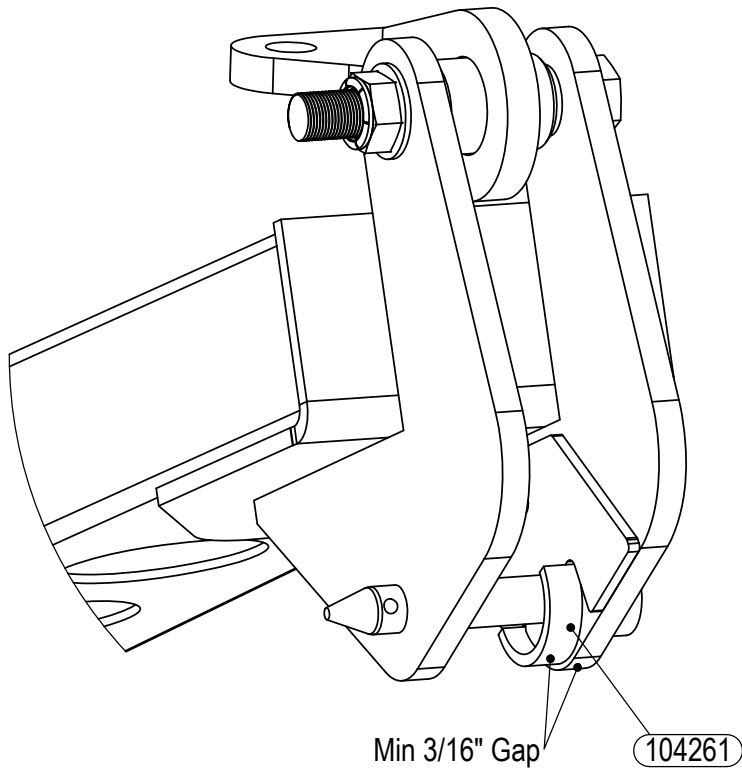
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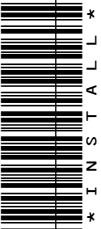
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Print Date: Tuesday, July 02, 2013					
MATERIAL			SIZE	Part No.	REV
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THIS PAGE FOR SWEEP STYLE A ONLY

- Place Cup Material As Illustrated Using The Template To Determine Position.
- Tack Weld Cup In Position



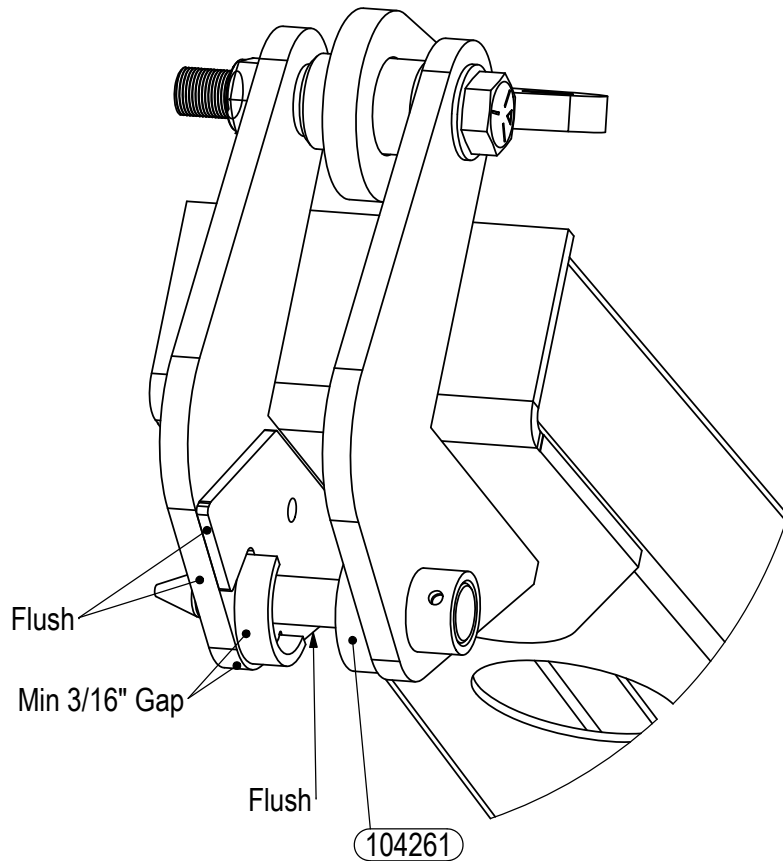
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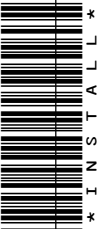
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APPROVED					
Print Date: Tuesday, July 02, 2013					
MATERIAL	SIZE	Part No.	REV		
	A	Install			

THIS PAGE FOR SWEEP STYLE A ONLY

☐ Move Template To Opposite Plate And Repeat Procedure To Position And Tack Cup



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Print Date: Tuesday, July 02, 2013					
MATERIAL		SIZE	Part No.	REV	
		A	Install		

\\ DESIGN\IN Data\ Solid\ Vertigo 200\ Seat Safety Back-Up\

DO NOT SCALE DRAWING

5

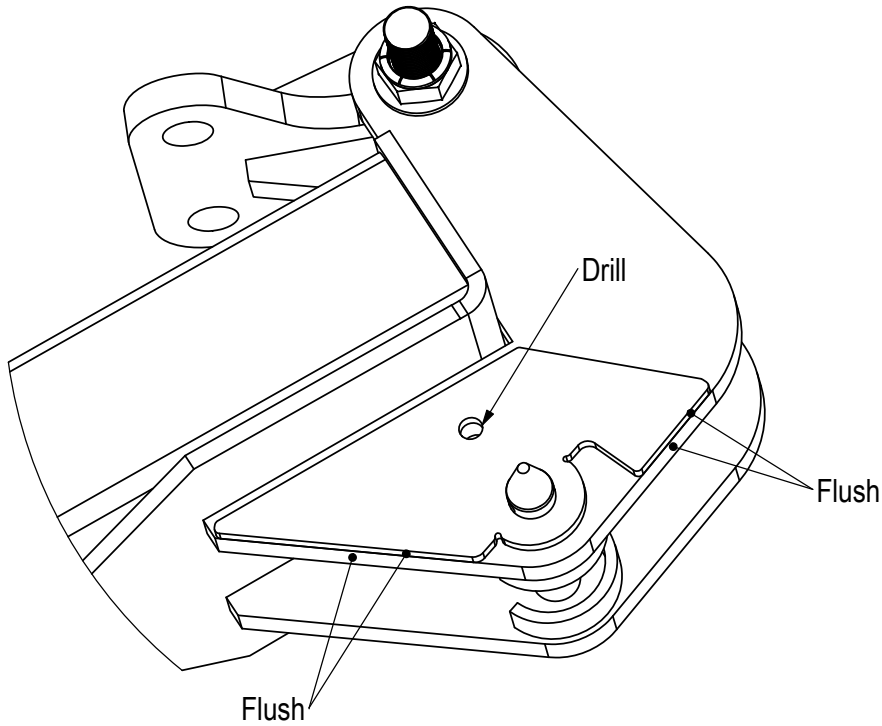
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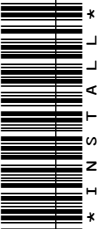
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THIS PAGE FOR SWEEP STYLE A ONLY

- Reposition Template To Outside Of The Side Plate As Illustrated.
- Drill 5/16" Hole Through Side Plate Using Template To Locate Position.
- Remove Template And Redrill Hole To 9/16"



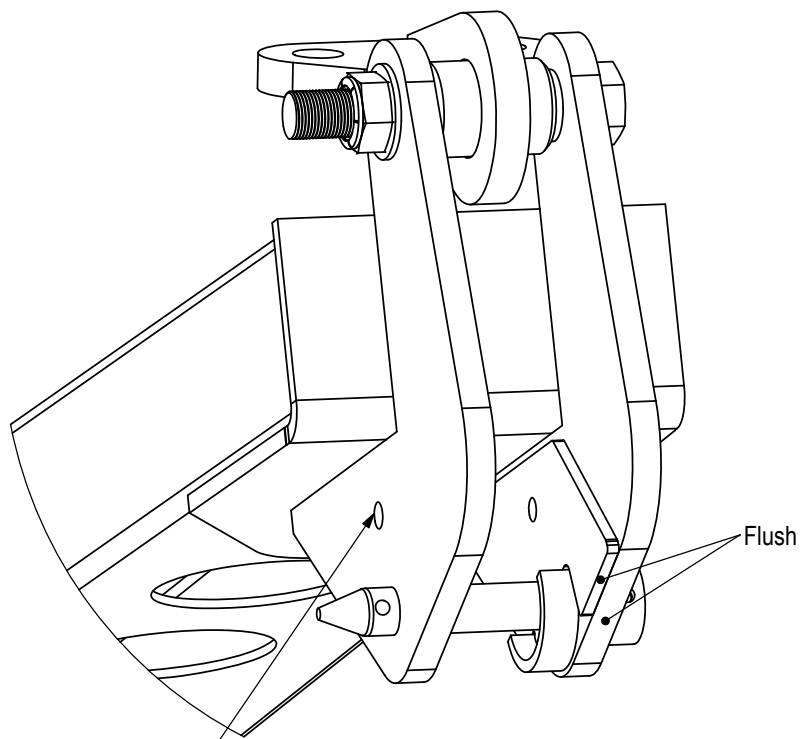
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MATERIAL			SIZE	Part No.	REV
			A	Install	

THIS PAGE FOR SWEEP STYLE A ONLY

- Reposition Template To Inside Of The Opposite Plate As Illustrated.
- Drill 5/16" Hole Through Side Plate Using Template To Locate Position.
- Remove Template And Redrill Hole To 9/16"



Carefully place bit through first hole to reach opposite plate.

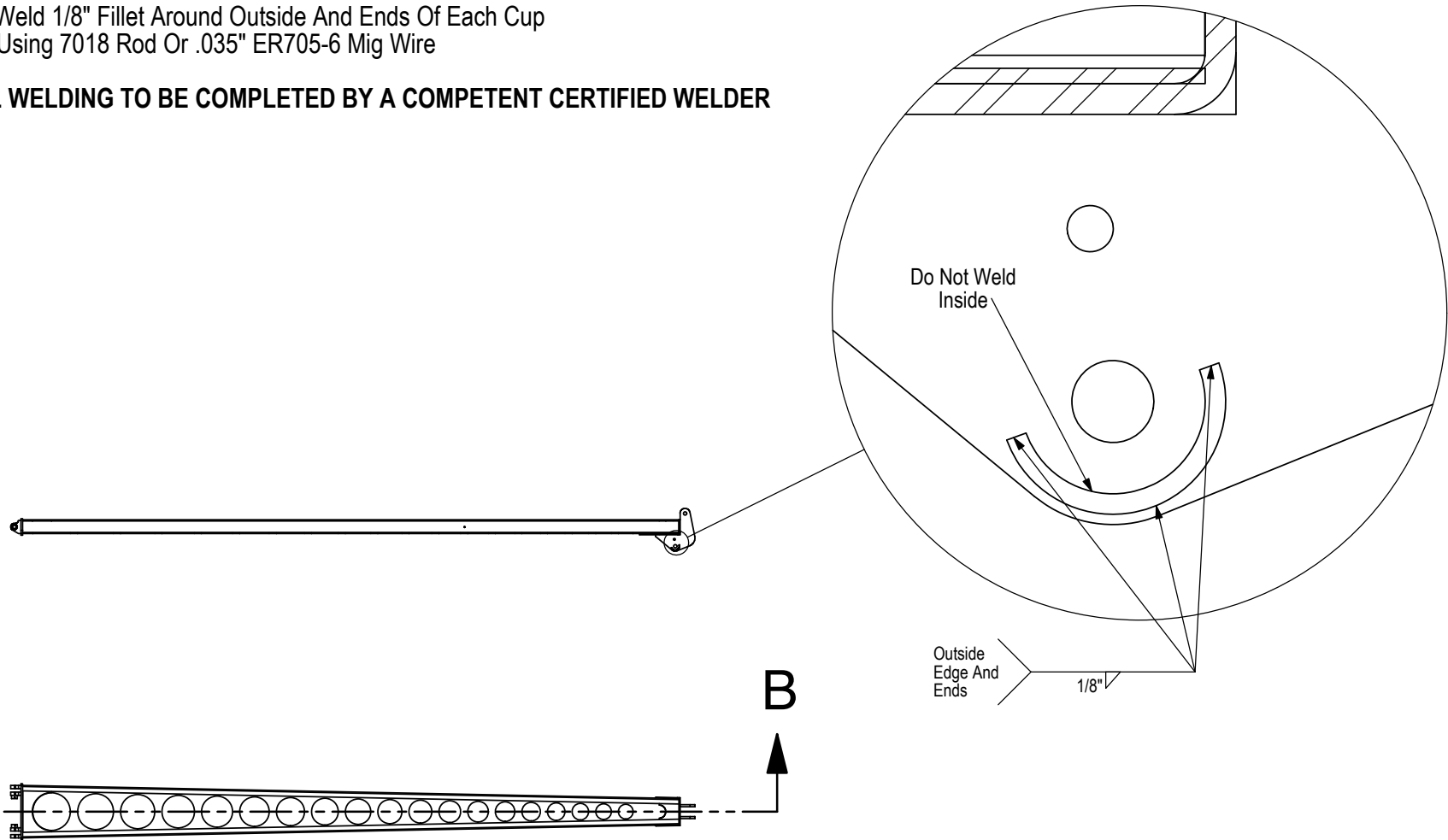


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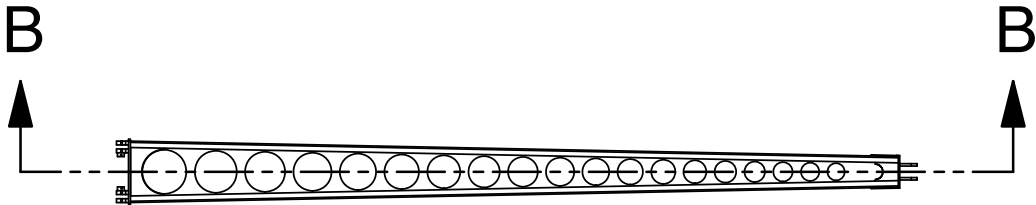
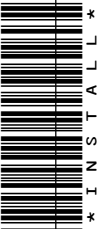
THIS PAGE FOR SWEEP STYLE A ONLY

- Weld 1/8" Fillet Around Outside And Ends Of Each Cup
Using 7018 Rod Or .035" ER705-6 Mig Wire

ALL WELDING TO BE COMPLETED BY A COMPETENT CERTIFIED WELDER



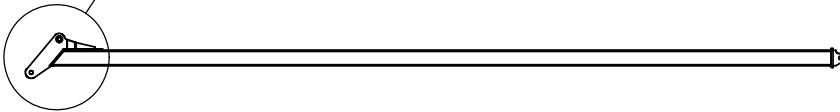
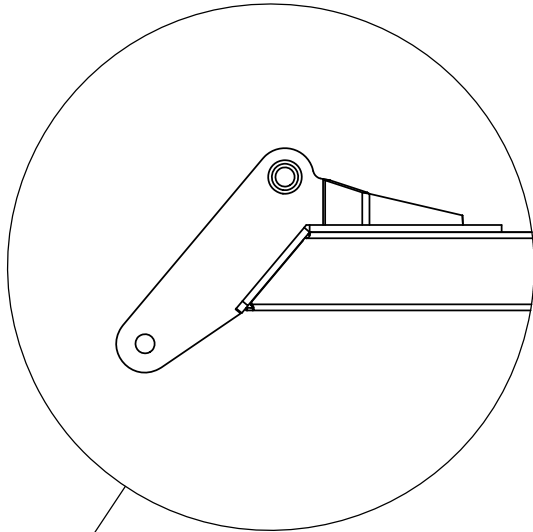
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MATERIAL			SIZE	Part No.	REV
			A	Install	

THIS PAGE FOR SWEEP STYLE B ONLY

**Sweep Style
B**



**104263
Style B
Cup/Hole Template**



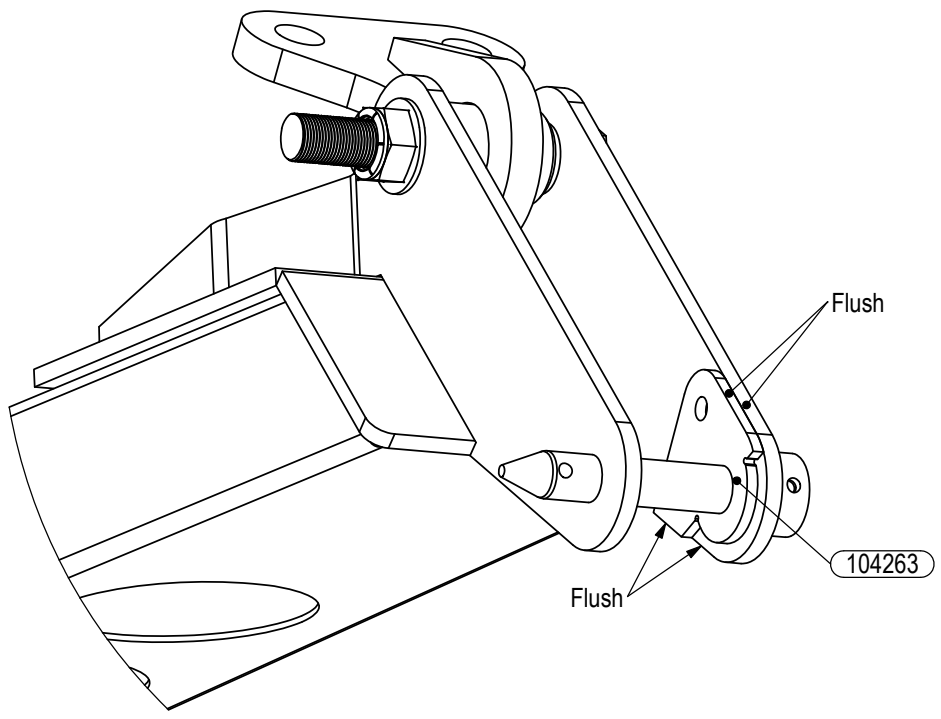
**104261
Cup**



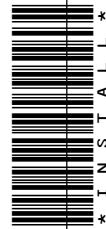
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APPROVED					
Print Date: Tuesday, July 02, 2013					
MATERIAL			SIZE	Part No.	REV
			A	Install Sweep Weldment	

THIS PAGE FOR SWEEP STYLE B ONLY

- Place Cup/Hole Template As Illustrated. Ensure Indicated Faces Are Flush Use Seat Hanger Pin And Clamps To Keep Template In Position.
- Remove paint and debris from area to welded. Clean and prep for proper weld.



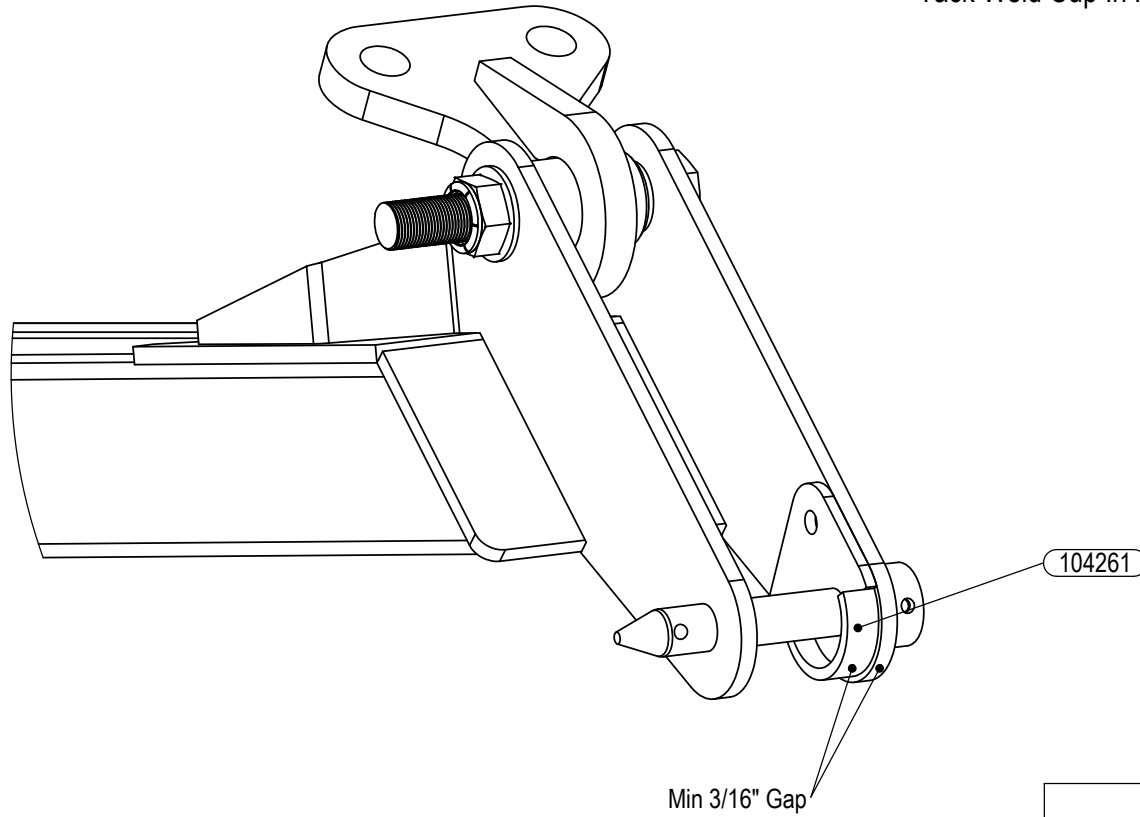
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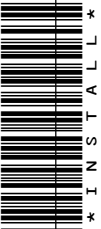
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THIS PAGE FOR SWEEP STYLE B ONLY

- Place Cup Material As Illustrated Using The Template To Determine Position.
- Tack Weld Cup In Position



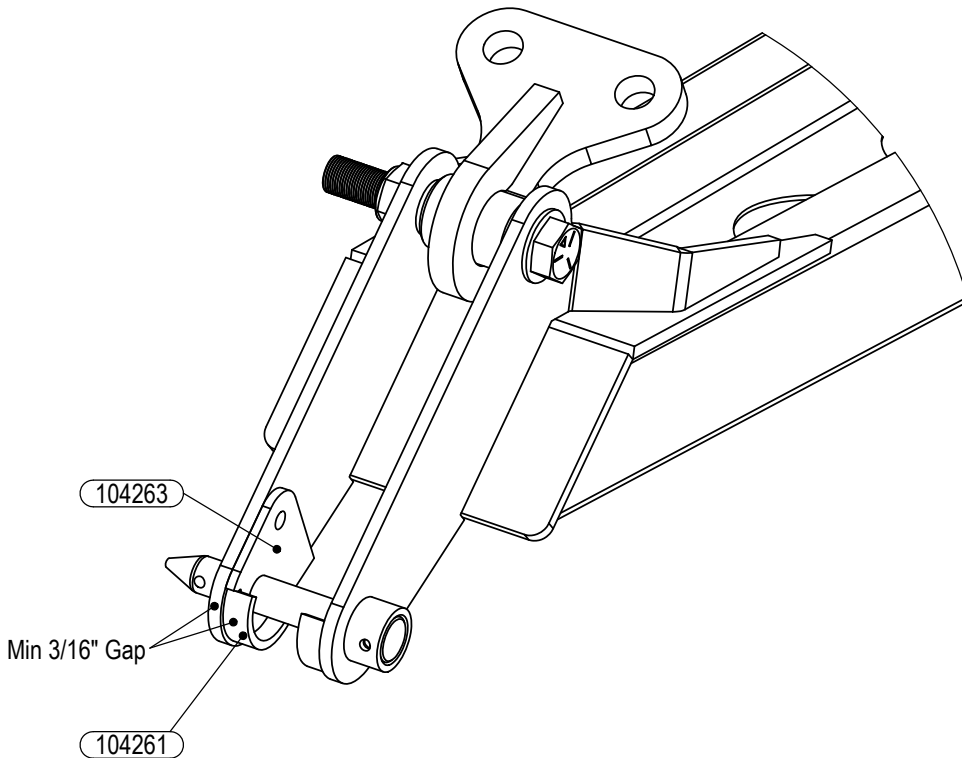
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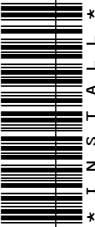
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☐ Move Template To Opposite Plate And Repeat Procedure To Position And Tack Cup



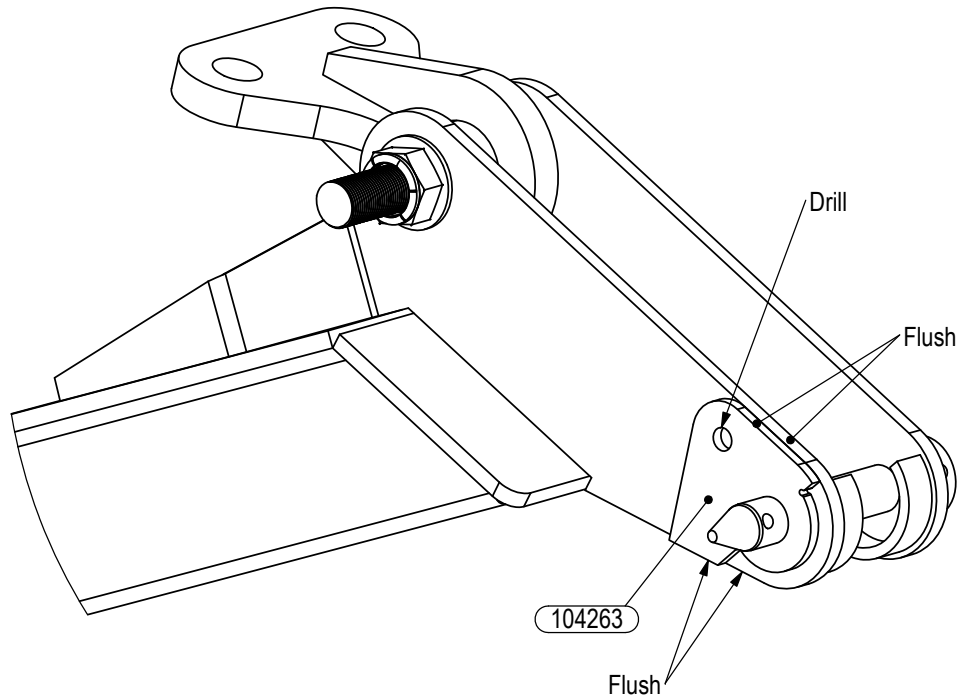
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THIS PAGE FOR SWEEP STYLE B ONLY

- Reposition Template To Outside Of The Side Plate As Illustrated.
- Drill 5/16" Hole Through Side Plate Using Template To Locate Position.
- Remove Template And Redrill Hole To 9/16"



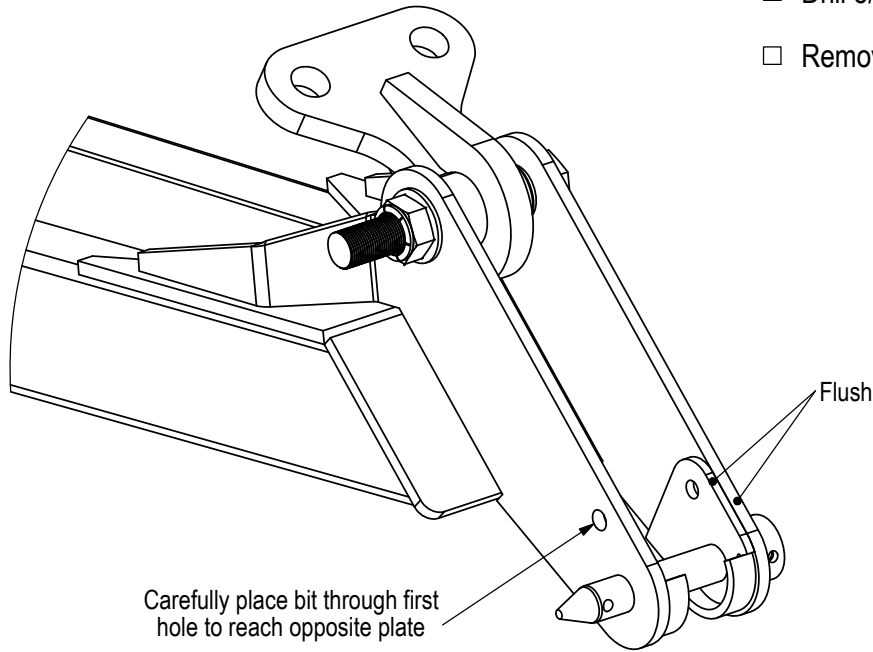
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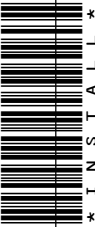
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- Reposition Template To Inside Of The Opposite Plate As Illustrated.
- Drill 5/16" Hole Through Side Plate Using Template To Locate Position.
- Remove Template And Redrill Hole To 9/16"



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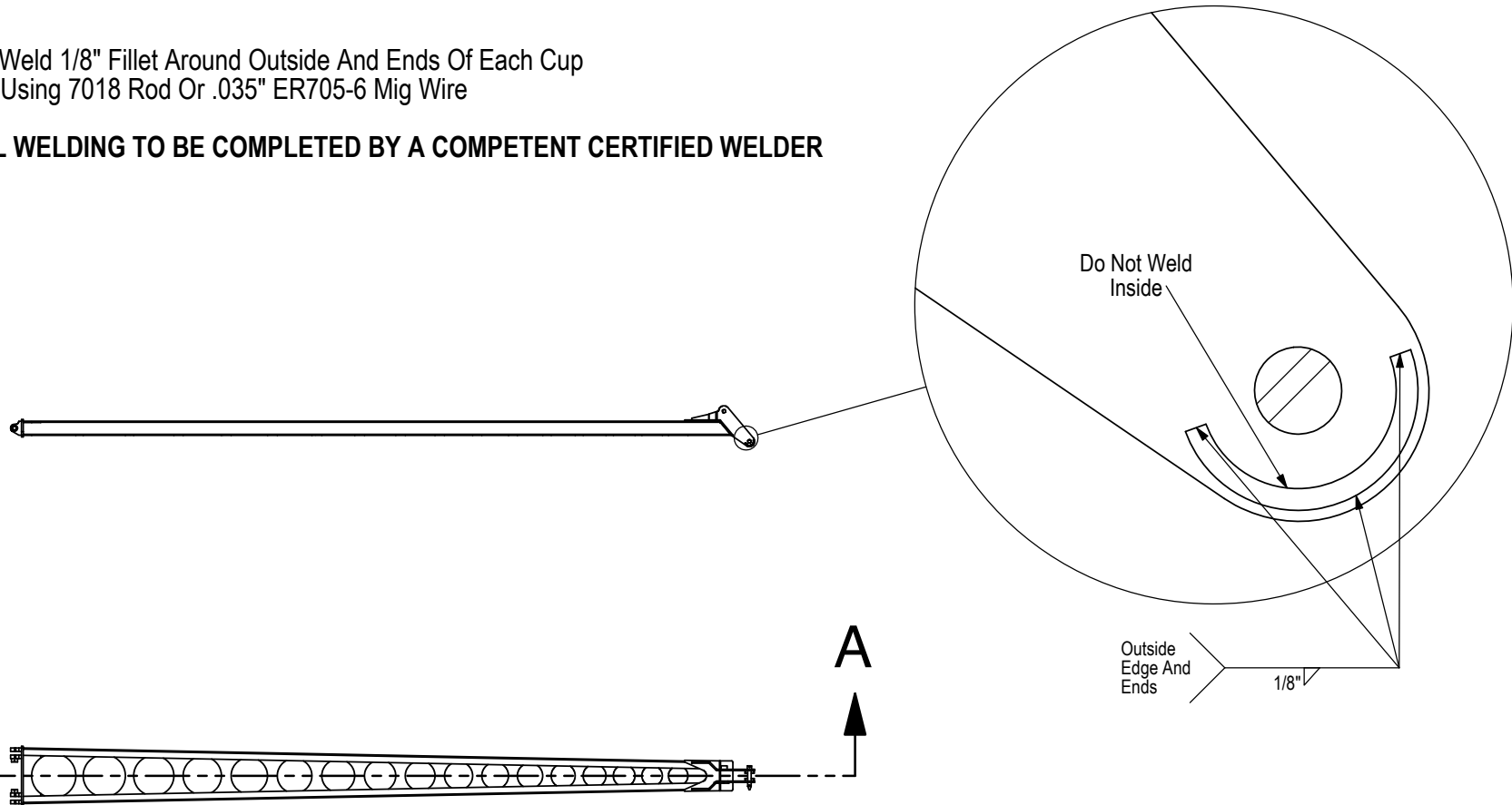


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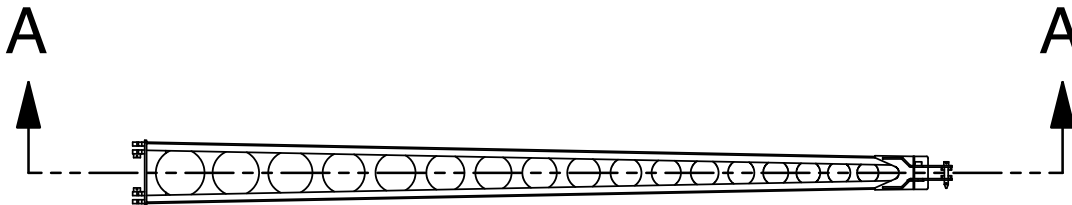
THIS PAGE FOR SWEEP STYLE B ONLY

- Weld 1/8" Fillet Around Outside And Ends Of Each Cup
Using 7018 Rod Or .035" ER705-6 Mig Wire

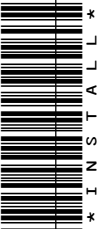
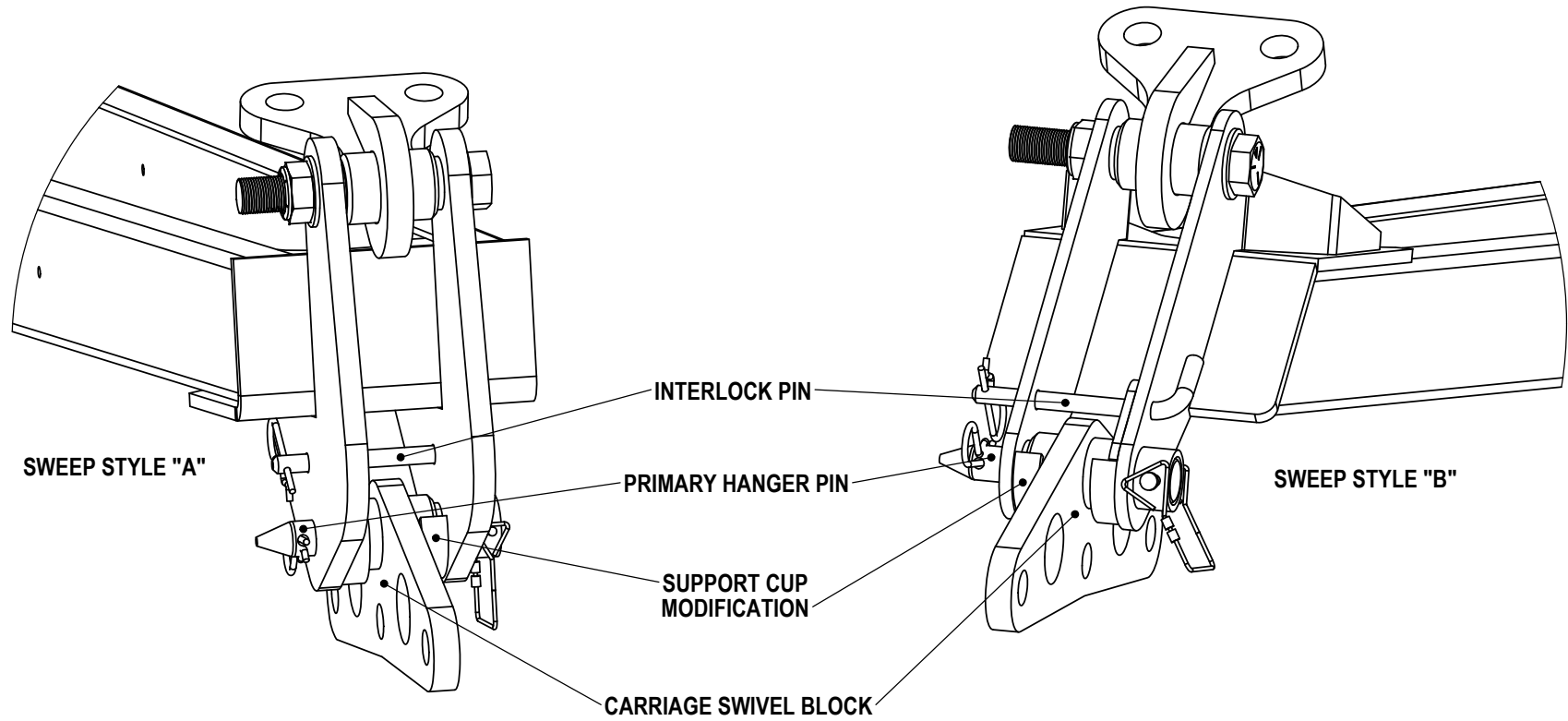
ALL WELDING TO BE COMPLETED BY A COMPETENT CERTIFIED WELDER



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