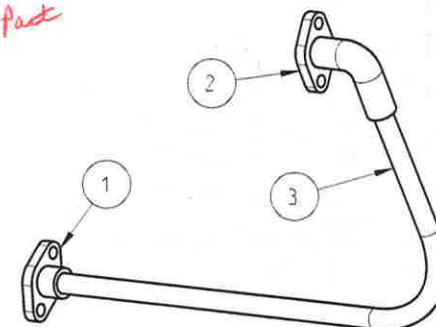
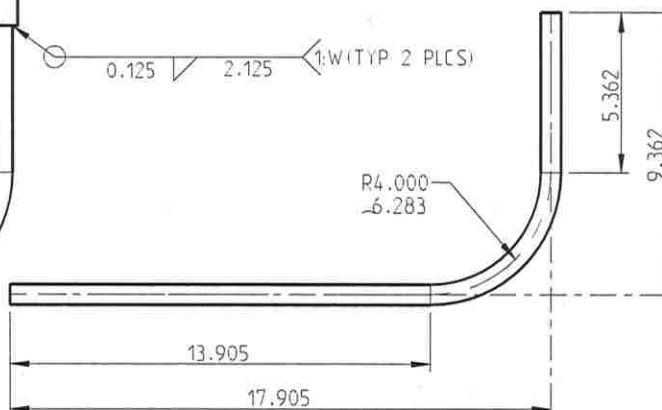
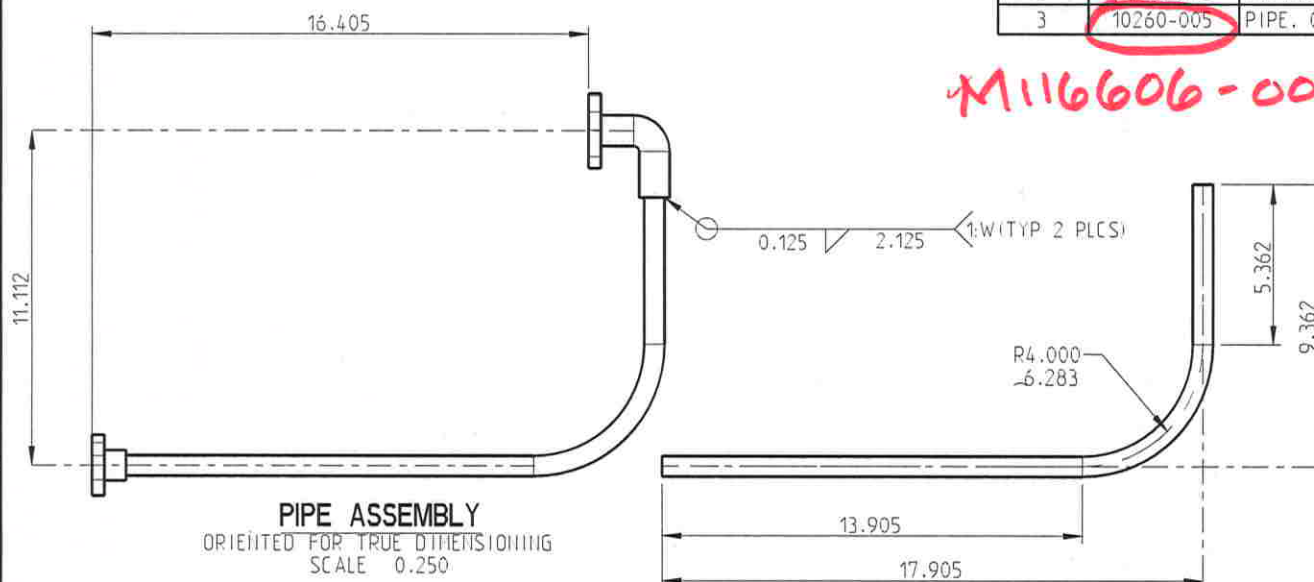


1/20/21
Rev: done ✓

BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-070	FITTING, 3/8" STRT SWV FLG SW, GG	1	
2	10240-072	FITTING, 3/8" SWV FLG 90 ELBOW SW, GG	1	
3	10260-005	PIPE, 0.375 Ø, EXTRA HEAVY	1	25.550

M116606-000 *Created Part*



Level	Date	Approved	Description
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REVISIONS

FreightCar America

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063	Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation	Angles ± 1°
Radii will be thickness of material	Tolerances are not accumulative

Made By: LHK	Date: 12-12-12	Ref Dwg: -
Approved: JWB/JWB	Do Not Scale Drawing	Est. Wt: 2.60 lbs

ASSEMBLY, E/L TO VOLUME RES PIPE

Size	Drawing / Part Number	Rev.
B	A108965-000	0

NOTE:

1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.

Eco CAS600067

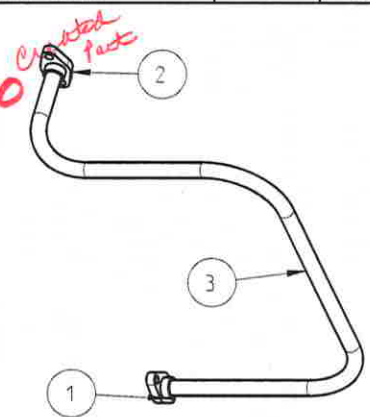
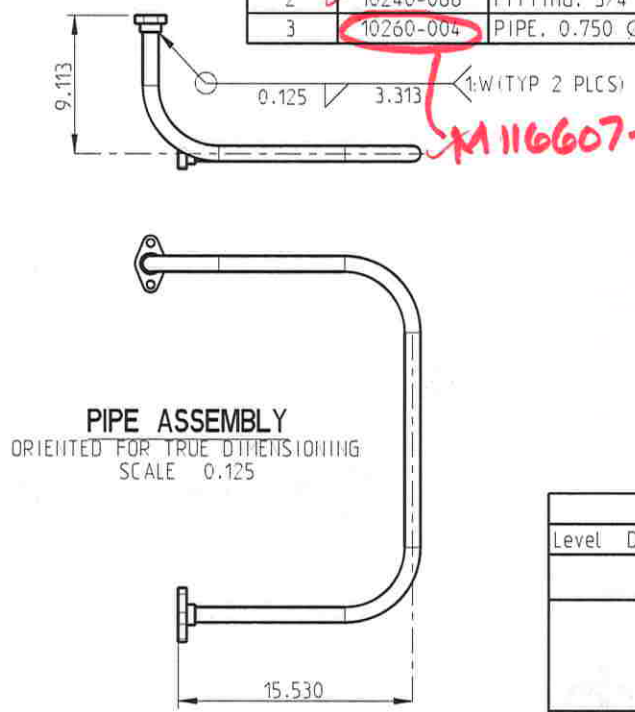
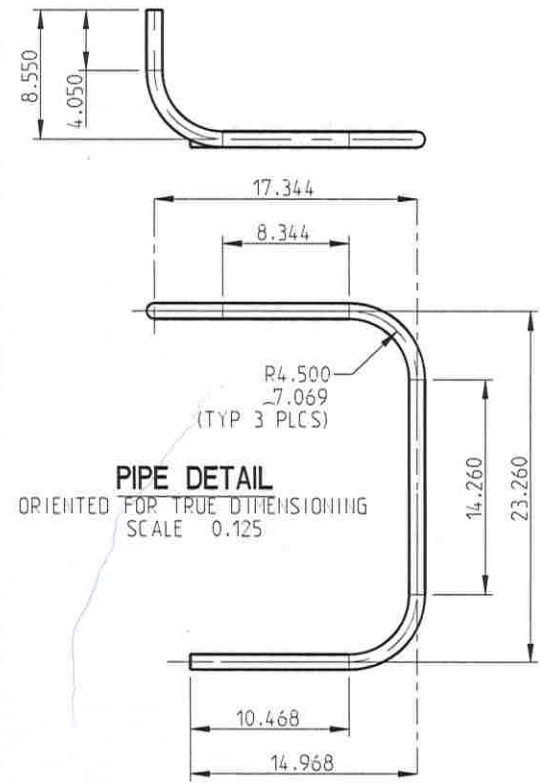
A ✓

1/22/01
Rev.
done

9 8 7 6 5 4 3 2 1

BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-067	FITTING, 3/4" STRT SWV FLG SW, GG	1	
2	10240-068	FITTING, 3/4" STRT SWV FLG SW	1	
3	10260-004	PIPE, 0.750 Ø. EXTPA HEAVY	1	58.327



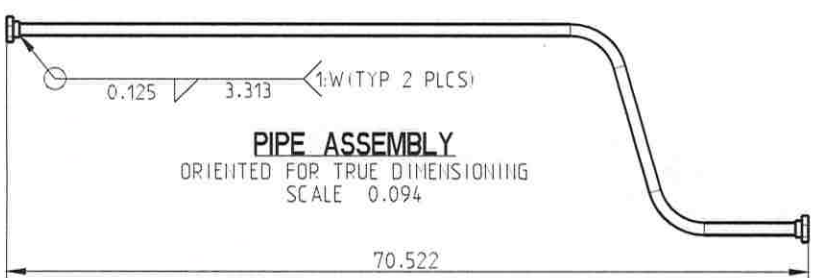
- NOTE:**
1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY, MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.

ECO CAS600067

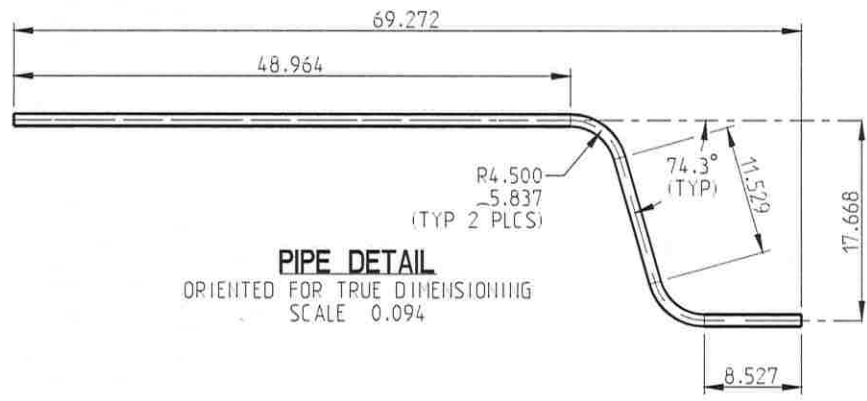
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063		Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation		Angles ± 1°	
Radii will be thickness of material Tolerances are not accumulative			
Made By: MHK	Date: 12-12-12	Ref Dwg: -	
Approved: JWB/TWB	Do Not Scale Drawing	Est. Wt: 8.71 lbs	
ASSEMBLY, CNTRL VALVE TO E/L PIPE			
Size	Drawing / Part Number		Rev.
B	A108966-000		-

A✓

11/28/21
Rev. done ✓



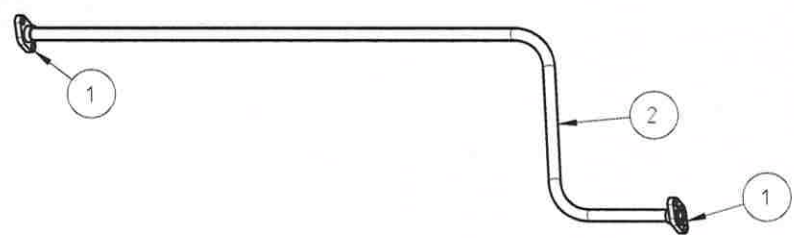
PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.094



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.094

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	10240-067	FITTING, 3/4" STRT SWV FLG SW, GG	2	
2	10260-004	PIPE, 0.750 O. EXTRA HEAVY	1	80.695

M 116608-000 Created Part



A 10-31-17 JAG JAG		ADDED NOTE #4 AND UPDATED	
PIPE TO MEET AAR SPECIFICATION.			
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
<small>THIS DRAWING IS THE EXCLUSIVE PROPERTY OF FREIGHTCAR AMERICA AND CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION. BY ACCEPTING THIS DRAWING, THE RECIPIENT AGREES (A) TO USE THIS DRAWING ONLY FOR THOSE PURPOSES APPROVED IN WRITING BY FREIGHTCAR AMERICA, (B) NOT TO REPRODUCE OR MODIFY THIS DRAWING, IN WHOLE OR IN PART, AND (C) NOT TO DISCLOSE THIS DRAWING TO ANY PERSON OR ENTITY, NOR USE THE DRAWING FOR THE DESIGN OR MANUFACTURE OF ANY ITEM, PART, OBJECT OR APPARATUS THEREOF, EXCEPT UPON THE PRIOR WRITTEN PERMISSION OF FREIGHTCAR AMERICA.</small>			
Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063	Hole Diameters ± 0.031		
Diagonals 0.125 Max. Variation	Angles ± 1°		
Radii will be thickness of material		Tolerances are not accumulative	
Made By: HHK	Date: 12-12-12	Ref Dwg: -	
Approved: JWB	Do Not Scale Drawing	Est. Wt: 11.41 lbs	
ASSEMBLY, CNTRL VALVE TO E/L PIPE			
Size	Drawing / Part Number		Rev.
B	A108967-000		A

NOTE:

1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY, MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

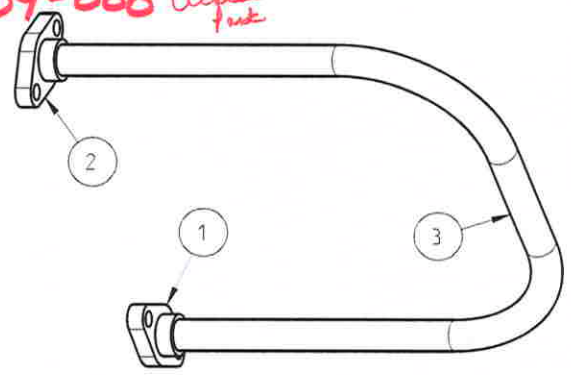
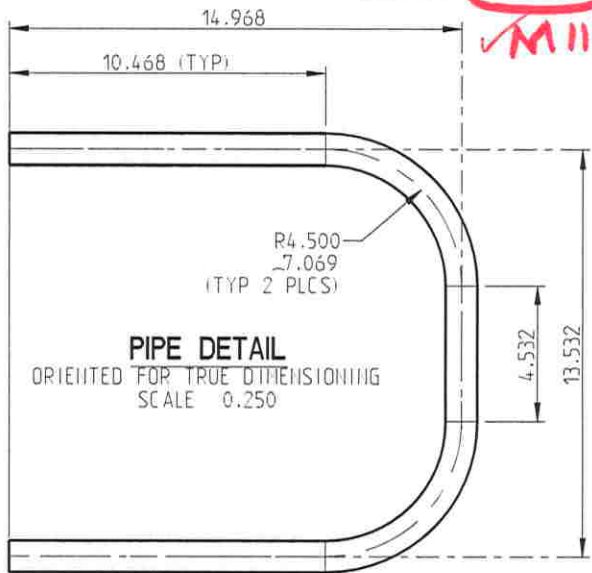
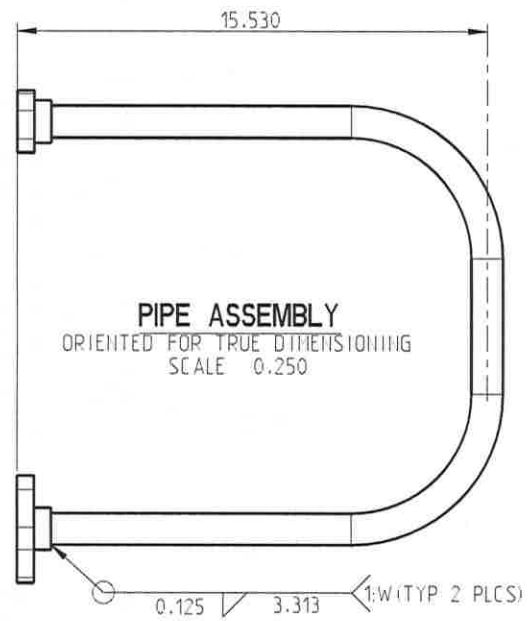
Eco CAS600067

B ✓

1/22/01
Rev.
done

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	✓ 10240-067	FITTING, 3/4" STRT SWV FLG SW, GG	1	
2	✓ 10240-068	FITTING, 3/4" STRT SWV FLG SW	1	
3	✓ 10260-004	PIPE, 0.750 Ø, EXTRA HEAVY	1	39.604

✓ M116609-000 *Crested Fork*



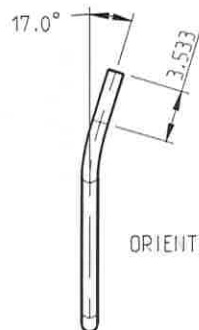
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063		Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation		Angles $\pm 1^{\circ}$	
Radii will be thickness of material		Tolerances are not accumulative	
Made By: MHK	Date: 12-12-12	Ref Dwg: -	
Approved: JWB <i>JWB</i>	Do Not Scale Drawing	Est. Wt: 6.41 lbs	
ASSEMBLY, E/L TO CYLINDER PIPE			
Size	Drawing / Part Number		Rev.
B	A108968-000		-

- NOTE:**
1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS, WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY, MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.

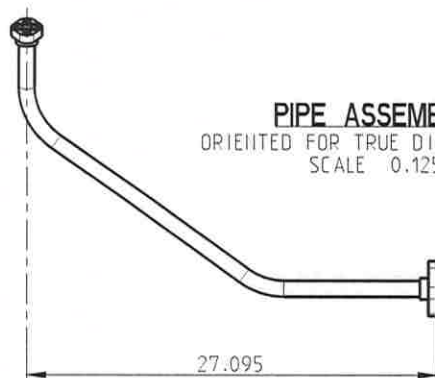
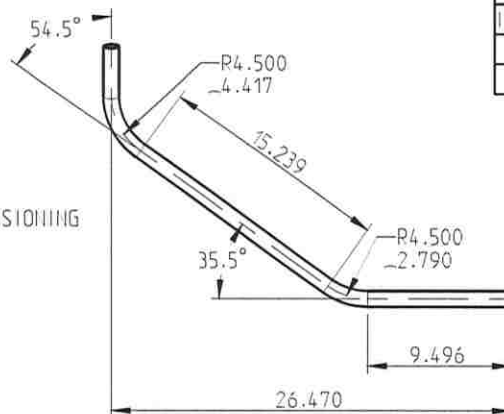
ECO CAS600067

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A

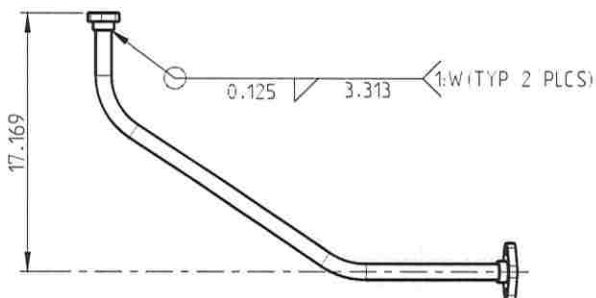
11/22/21
Rev.
done



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.125



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.125



ECO CAS600067

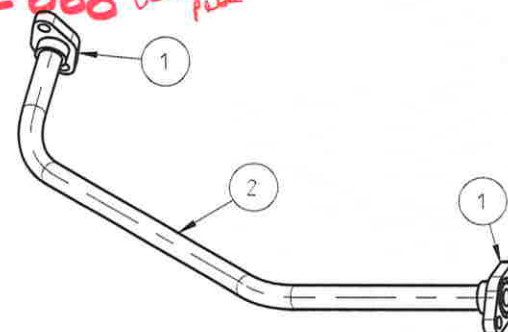
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3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.

BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-067	FITTING, 3/4" STRT SWV FLG SW, GG	2	
2	10260-004	PIPE, 0.750 Ø, EXTRA HEAVY	1	35.475

M116610-000 *Changed part*



B 11-01-17 JAG *JAG* ADDED NOTE #4 AND UPDATED PIPE TO MEET AAR SPECIFICATION

A 12-16-15 JAG UPDATED PIPE ASSEMBLY TO MATCH CYLINDER DIMENSIONS

Level Date Approved Description

REVISIONS

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Standard Tolerances (Unless Noted)

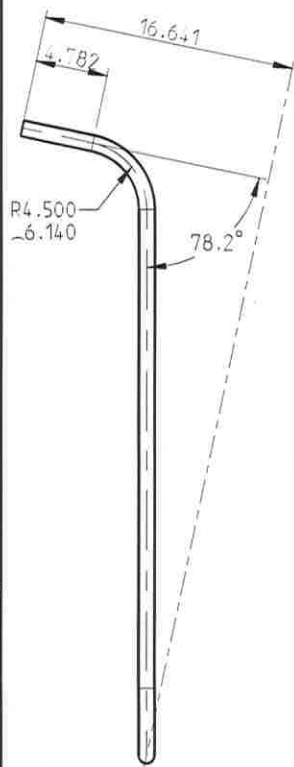
Decimal Dimensions ± 0.063 Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation Angles $\pm 1^\circ$
Radii will be thickness of material Tolerances are not accumulative

Made By: MHK Date: 12-12-12 Ref Dwg: -
Approved: JWB Do Not Scale Drawing Est. Wt: 5.87 lbs

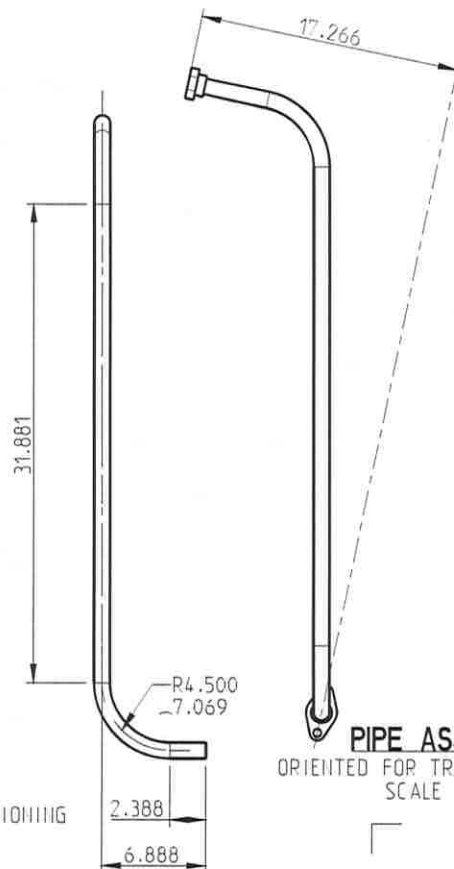
ASSEMBLY, E/L TO CYLINDER PIPE

Size Drawing / Part Number Rev.
B A108969-000 B

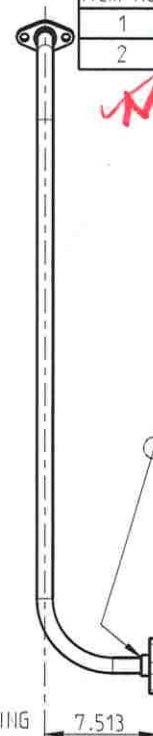
11/22/21
Rev.
done



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.125

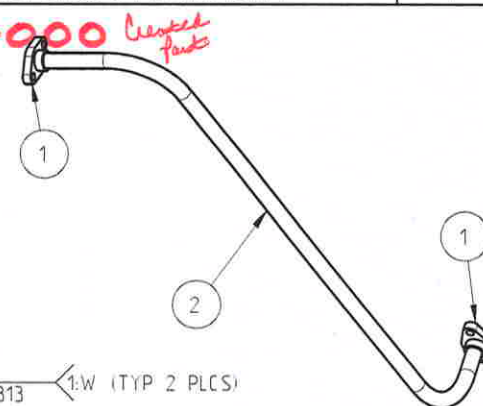


PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.125



BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	10240-067	FITTING, 3/4" STRT SWV FLG SW, GG	2	
2	10260-004	PIPE, 0.750 Ø, EXTRA HEAVY	1	52.260

M116611 -000 *Created parts*



A 10-31-17 JAG JAG ADDED NOTE #4 AND UPDATED
PIPE TO MEET AAR SPECIFICATION.

Level Date Approved Description

REVISIONS

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063 Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation Angles $\pm 1^\circ$
Radii will be thickness of material Tolerances are not accumulative

Made By: HHK Date: 12-12-12 Ref Dwg: -
Approved: JWB Do Not Scale Drawing Est. Wt: 7.92 lbs

ASSEMBLY, EMER RES TO CNTRL VALVE

Size Drawing / Part Number Rev.
B A108970-000 A

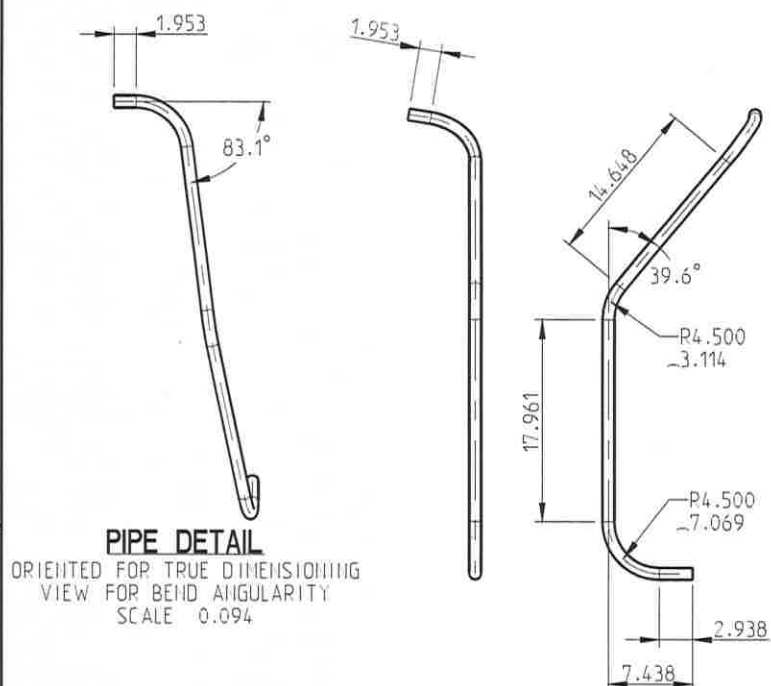
NOTE:

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2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

ECO CAS600067

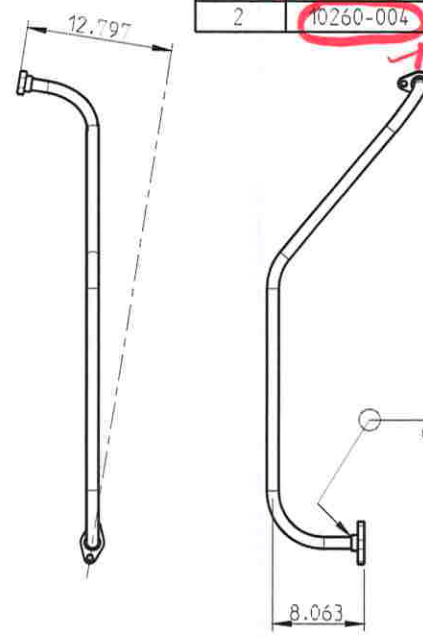
B✓

1/22/21
Rev ✓
done



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING
VIEW FOR BEND ANGULARITY
SCALE 0.094

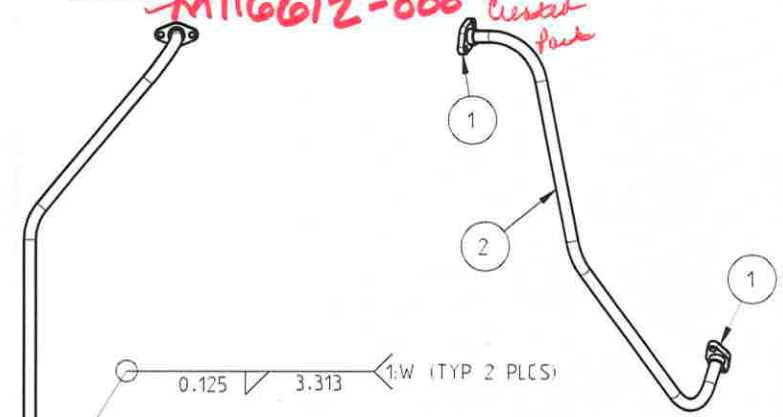
PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.094



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.094

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	10240-067	FITTING, 3/4" STRT SWV FLG SW. GG	2	
2	10260-004	PIPE, 0.750 O. EXTRA HEAVY	1	54.205

M116612-000 Crested Fork



A 10-31-17 JAG JAG	ADDED NOTE #4 AND UPDATED
PIPE TO MEET AAR SPECIFICATION	
Level	Date
Approved	Description

REVISIONS

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063	Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation	Angles ± 1°
Radial will be thickness of material	Tolerances are not accumulative
Made By: MHK	Date: 12-12-12
Approved: JWB	Do Not Scale Drawing
Ref Dwg: -	Est. Wt: 8.16 lbs

ASSEMBLY, AUX RES TO CNTRL VALVE

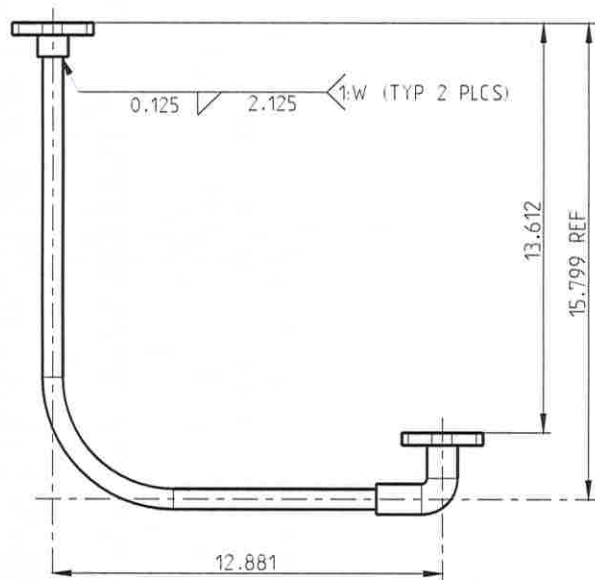
Size	Drawing / Part Number	Rev.
B	A108971-000	A

- NOTE:**
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 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY, MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

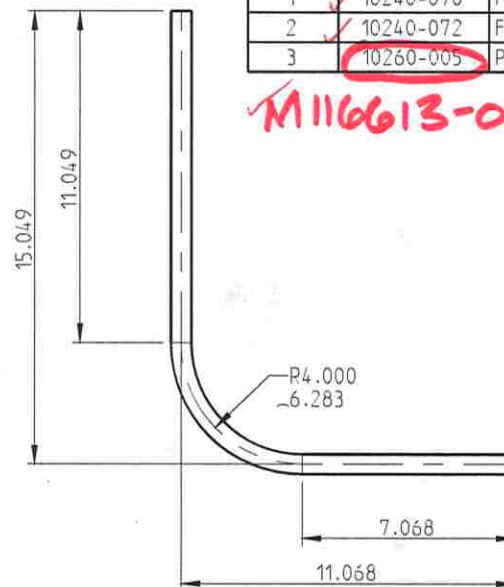
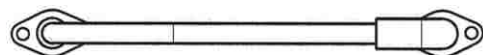
Eco CAS600067

B

1/22/01
Rev.
done



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.250

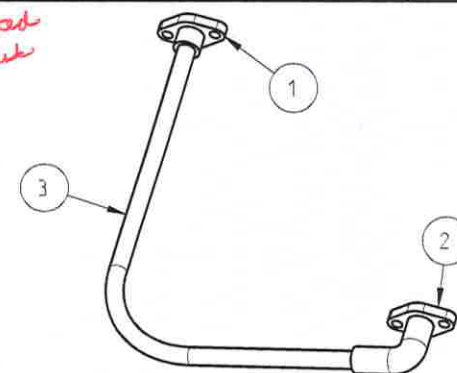


PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.250



BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	10240-070	FITTING, 3/8" STRT SWV FLG SW, GG	1	
2	10240-072	FITTING, 3/8" SWV FLG 90 ELBOW SW, GG	1	
3	10260-005	PIPE, 0.375 Ø, EXTRA HEAVY	1	24.400

M116613-000 Created Part



A 10-31-17 JAG JAG ADDED NOTE #4 AND UPDATED
PIPE TO MEET AAR SPECIFICATION

Level Date Approved Description

REVISIONS

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063 Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation Angles $\pm 1^\circ$
Radii will be thickness of material Tolerances are not accumulative

Made By: MHK Date: 12-12-12 Ref Dwg: -

Approved: JWB Do Not Scale Drawing Est. Wt: 2.54 lbs

ASSEMBLY, CNTRL VALVE TO RET VALVE

Size Drawing / Part Number Rev.
B A108972-000 A

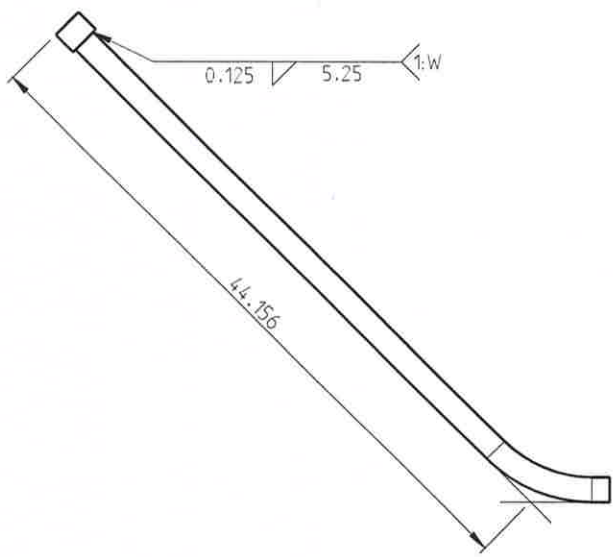
NOTE:

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4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

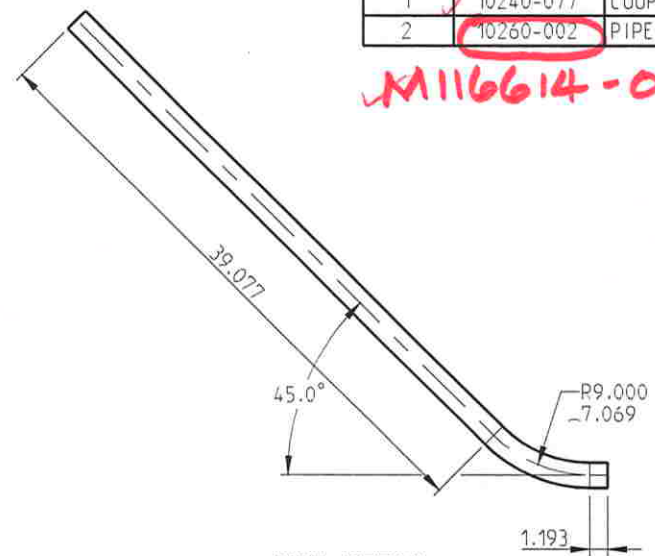
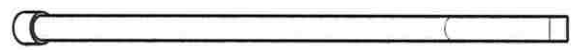
ECO CAS600067

B✓

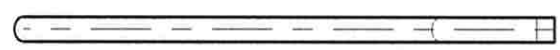
11/22/21
Rev. ✓
done



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.125

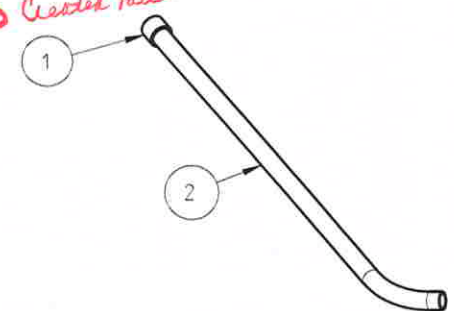


PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING
SCALE 0.125



BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	✓ 10240-077	COUPLING, 1 1/4" SW X SW	1	
2	10260-002	PIPE, 1.250 Ø, EXTRA HEAVY	1	47.339

M116614-000 *Created Part*



B 11-01-17	JAG	ADDED NOTE #4 AND UPDATED PIPE TO MEET AAR SPECIFICATION	
A 01-02-13	JWB	ECO D11100146: DIM 1.193 WAS 2.193. UPDATED PIPE LENGTH ACCORDINGLY.	
Level	Date	Approved	Description

REVISIONS

FreightCar America

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063	Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation	Angles $\pm 1^\circ$	
Radii will be thickness of material	Tolerances are not accumulative	
Made By: MHK	Date: 12-12-12	Ref Dwg: N/A
Approved: JWB	Do Not Scale Drawing	Est. Wt: 12.50 lbs

ASSEMBLY, TRAINLINE PIPE @ B-END

Size	Drawing / Part Number	Rev
B	A108973-000	B

- NOTE:**
1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

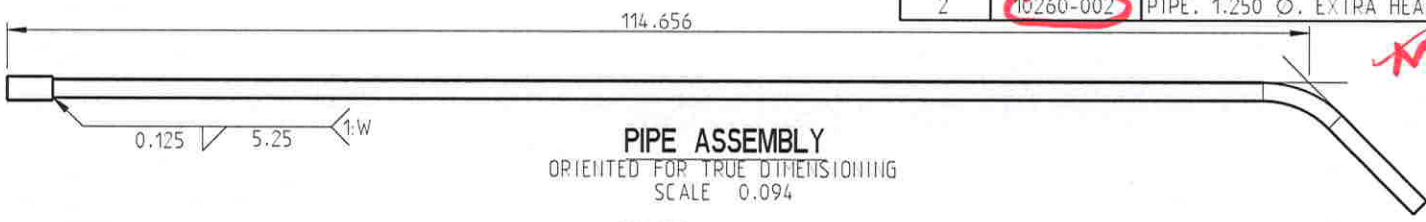
Eco GAS600067

1/22/21
Rev. done ✓

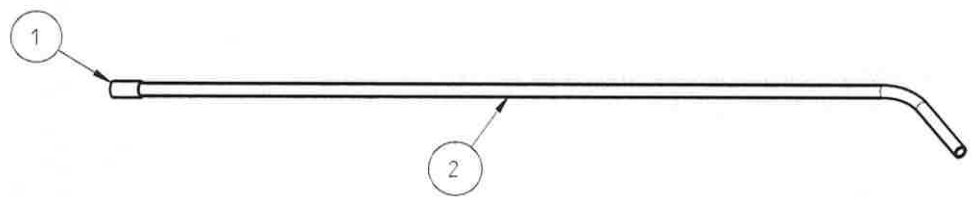
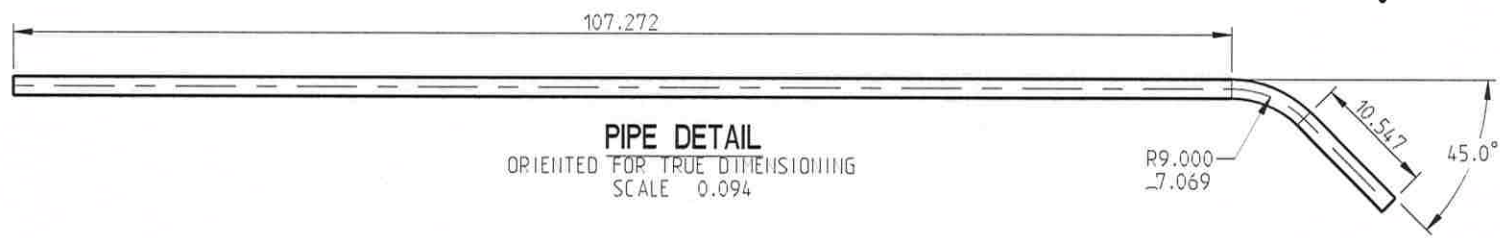
9 8 7 6 5 4 3 2 1

BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-145	COUPLING, 1 1/4" SW X SW DEEP	1	
2	10260-002	PIPE, 1.250 O, EXTRA HEAVY	1	124.887



M116615-000
Created Parts



Eco CAS600067

NOTE:

1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.

A 01-02-13 JWB/TWB ECO D4H100146: DIM 114.656 WAS 113.656. UPDATED PIPE LENGTH ACCORDINGLY.
Level Date Approved Description

REVISIONS

FreightCar America

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Standard Tolerances (Unless Noted)

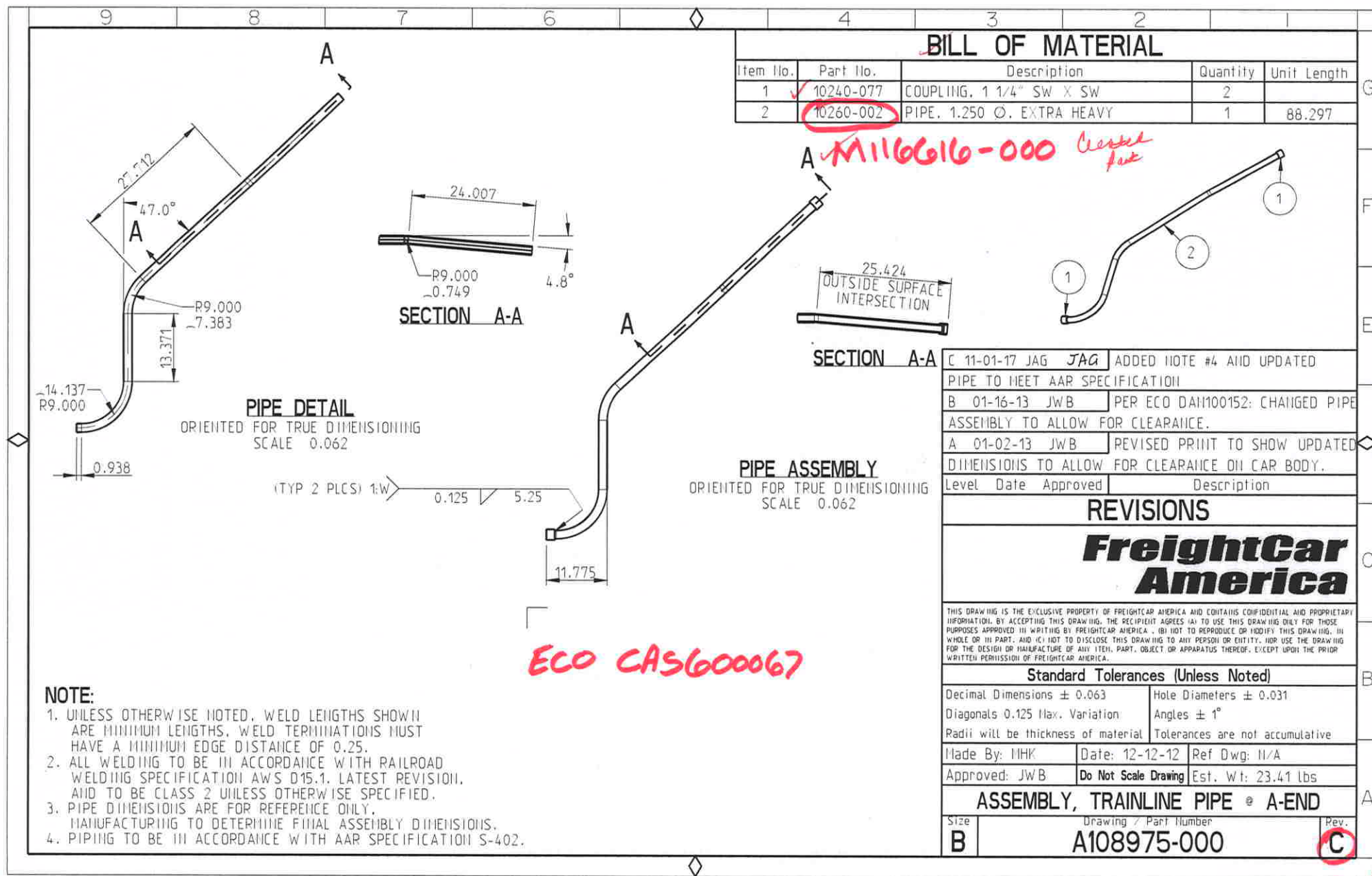
Decimal Dimensions ± 0.063	Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation	Angles ± 1°
Radii will be thickness of material	Tolerances are not accumulative
Made By: MHK	Date: 12-12-12 Ref Dwg: H/A
Approved: JWB	Do Not Scale Drawing Est. Wt: 32.75 lbs

ASSEMBLY, TRAINLINE PIPE - B-END ON SIDE SILL

Size	Drawing / Part Number	Rev.
B	A108974-000	A

B ✓

1/22/21
Rev.
done



BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	✓ 10240-077	COUPLING, 1 1/4" SW X SW	2	
2	10260-002	PIPE, 1.250 Ø, EXTRA HEAVY	1	88.297

M116616-000 Cashed part

C 11-01-17	JAG	JAG	ADDED NOTE #4 AND UPDATED PIPE TO MEET AAR SPECIFICATION
B 01-16-13	JWB		PER ECO DAI100152: CHANGED PIPE ASSEMBLY TO ALLOW FOR CLEARANCE.
A 01-02-13	JWB		REVISED PRINT TO SHOW UPDATED DIMENSIONS TO ALLOW FOR CLEARANCE ON CAR BODY.
Level	Date	Approved	Description

REVISIONS

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Standard Tolerances (Unless Noted)		
Decimal Dimensions ± 0.063	Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation	Angles ± 1°	
Radii will be thickness of material	Tolerances are not accumulative	
Made By: MHK	Date: 12-12-12	Ref Dwg: N/A
Approved: JWB	Do Not Scale Drawing	Est. Wt: 23.41 lbs

ASSEMBLY, TRAINLINE PIPE @ A-END

Size	Drawing / Part Number	Rev.
B	A108975-000	C

ECO CAS600067

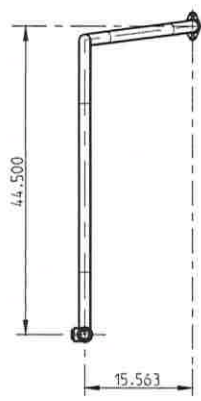
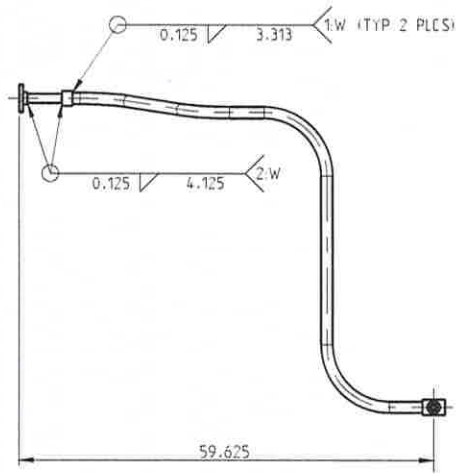
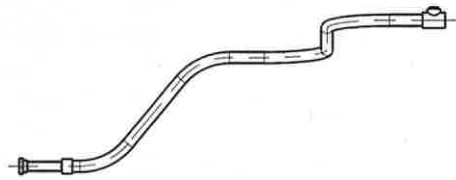
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11/24/17 JAG

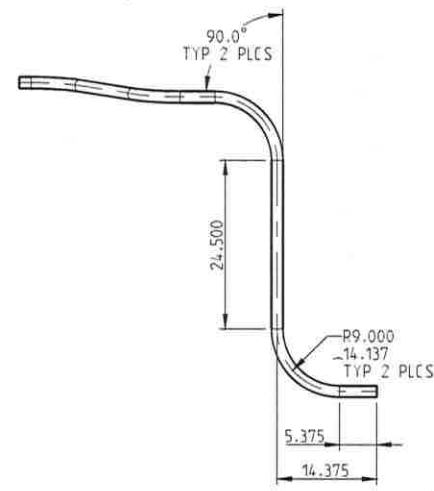
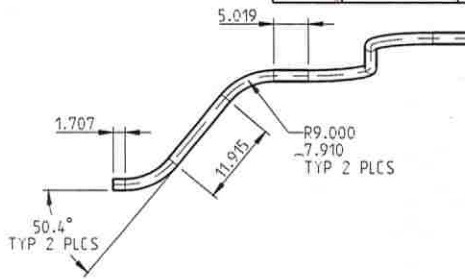
BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-065	FITTING, 1" STRT SW V FLG SW, GG	1	
2	10240-130	COUPLING, 1 1/4" SW X 1" SW	1	
3	10240-149	REDUCER INSERT, 1" TO 3/4"	1	
4	10240-333	NIPPLE, 1" X 6 1/4" KH PLAIN ENDS	1	
5	10260-002	PIPE, 1.250, EXTRA HEAVY	1	92.610
6	10293-001	BRANCH TEE, REDUCING, 3000#	1	

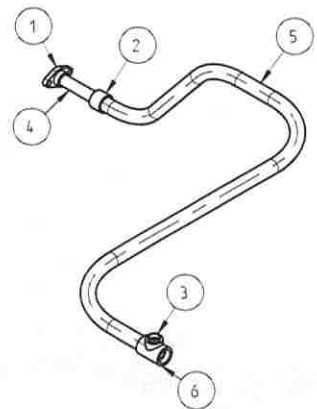
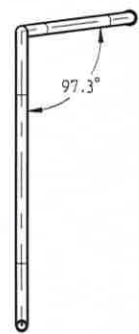
KA116617-000 Created Part



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONS



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONS



- NOTE:
1. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
 2. UNLESS OTHERWISE NOTED, ALL WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS FOR FILLET WELDS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

Eco CAS600067

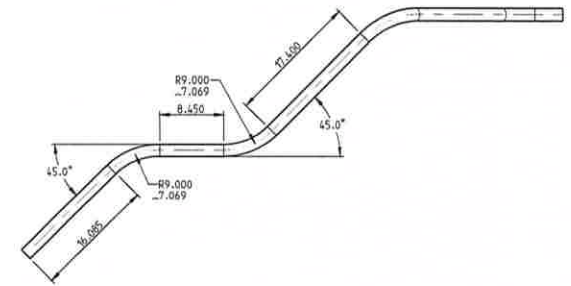
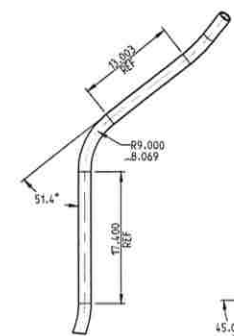
A 11-01-17 JAG JAG		ADDED NOTE #4 AND UPDATED	
PIPE TO MEET AAR SPECIFICATION			
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063	Hole Diameters ± 0.031		
Diagonals 0.125 Max. Variation	Angles ± 1°		
Radii will be thickness of material		Tolerances are not accumulative	
Made By: STS	Date: 12-17-12	Ref Dwg: -	
Approved: JWB	Do Not Scale Drawing	Est. Wt: 28.41 lbs	
ASSEMBLY, A-END DOOR LINE PIPE			
Size	Drawing / Part Number		Rev.
C	A108976-000		A

R✓

1/22/01
Rev.
done

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	AS240-065	FITTING, 1" STRT SW V FLG SW, GG	1	
2	AS240-077	COUPLING, 1 1/4" SW X SW	1	
3	AS240-130	COUPLING, 1 1/4" SW X 1" SW	1	
4	AS240-333	NIPPLE, 1" X 6 1/4" XM PLAIN ENDS	1	
5	AS240-009	PIPE, 1.250, EXTRA HEAVY	1	85.235

M116618-000 *Cracked Part*



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONS

PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONS

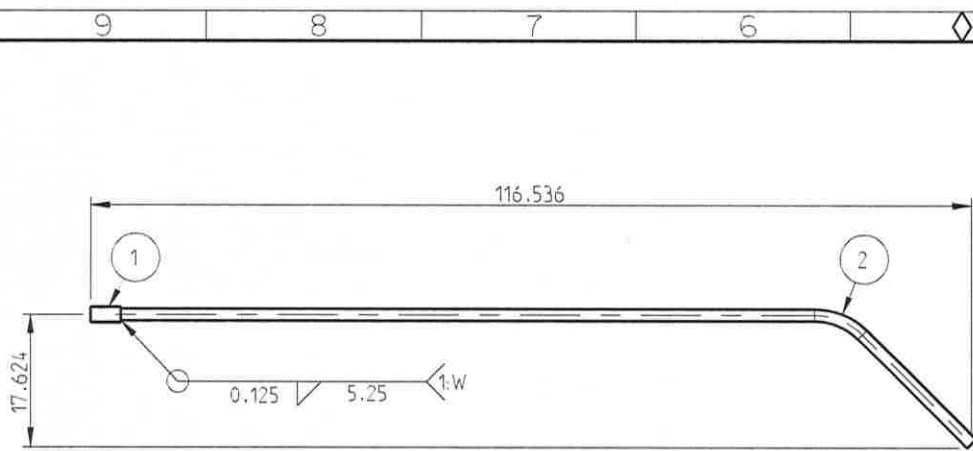
- NOTE:
1. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
 2. UNLESS OTHERWISE NOTED, ALL WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS FOR FILLET WELDS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

A 11-01-17 JAG JAG		ADDED NOTE #4 AND UPDATED	
PIPE TO MEET AAR SPECIFICATION			
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.003		Pipe Diameters ± 0.031	
Diagonals 0.025 Max. Variation		Angles ± 1°	
Radii will be thickness of material		Tolerances are not accumulative	
Made By: STS	Date: 12-17-12	Ref Dwg: -	
Approved: JWB	Do Not Scale Drawing	Est. Wt: 24.77 lbs	
ASSEMBLY, B-END DOOR LINE PIPE			
STEP	Drawing / Part Number		Rev.
D	A108977-000		A

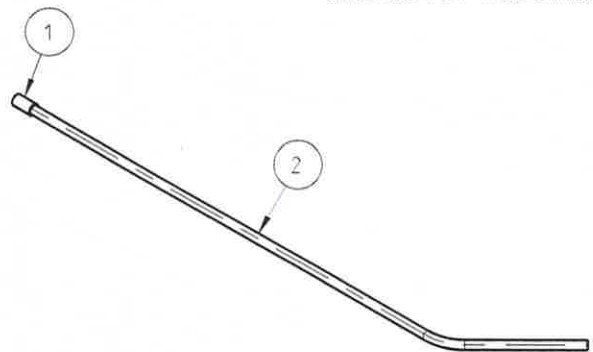
Eco CHS600067

B

1/28/21
Rev.
done



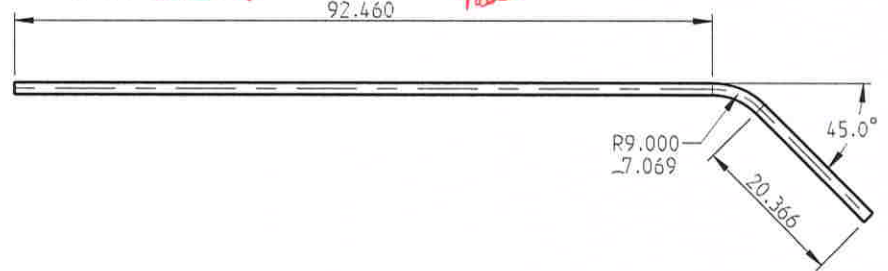
PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONS



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONS

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	10240-145	COUPLING, 1 1/4" SW X SW DEEP	1	
2	10260-002	PIPE, 1.25 O. EXTRA HEAVY	1	119.894

M116619-000 Welded
92.460 Part



- NOTE:**
1. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
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Eco CAS600067

Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063		Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation		Angles $\pm 1^{\circ}$	
Radii will be thickness of material		Tolerances are not accumulative	
Made By: STS	Date: 12-17-12	Ref Dwg: -	
Approved: JW <i>B/WB</i>	Do Not Scale Drawing	Est. Wt: 31.50 lbs	
ASSEMBLY, B-END DOORLINE PIPE			
Size	Drawing / Part Number		Rev.
B	A108978-000		-

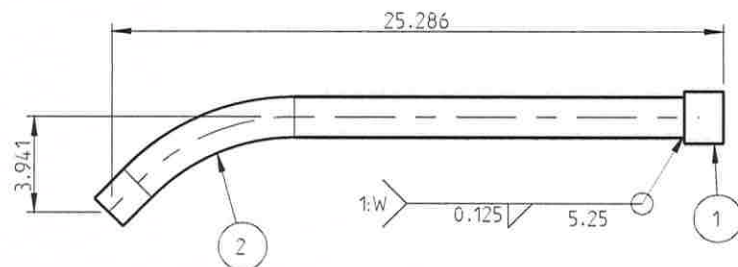
A✓

1/22/21
Rev. done ✓

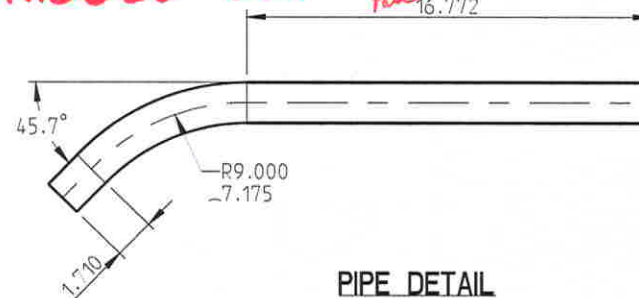
BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	✓ 10240-077	COUPLING, 1 1/4" SW X SW	1	
2	✓ 10260-002	PIPE, 1.25 Ø EXTRA HEAVY	1	25.657

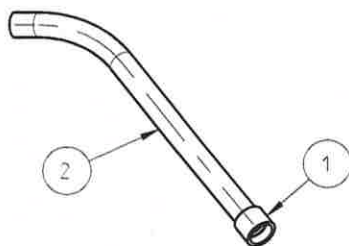
✓ M116620-000 *Updated Part* 16.772



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONS



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONS



NOTE:

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4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

Eco CAS600067

A 11-01-17 JAG JAG ADDED NOTE #4 AND UPDATED PIPE TO MEET AAR SPECIFICATION

Level Date Approved Description

REVISIONS

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063 Hole Diameters ± 0.031
 Diagonals 0.125 Max. Variation Angles $\pm 1^\circ$
 Radii will be thickness of material Tolerances are not accumulative

Made By: STS Date: 12-17-12 Ref Dwg: -
 Approved: JWB Do Not Scale Drawing Est. Wt: 7.08 lbs

ASSEMBLY, A-END DOORLINE TO TEE PIPE

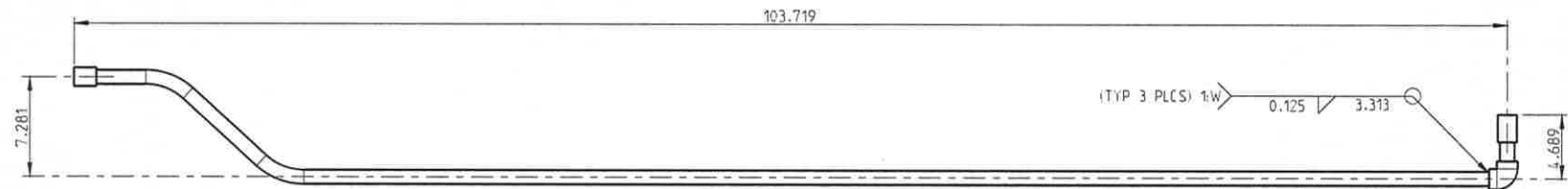
Size Drawing / Part Number Rev.
 B A108979-000 A

B ✓

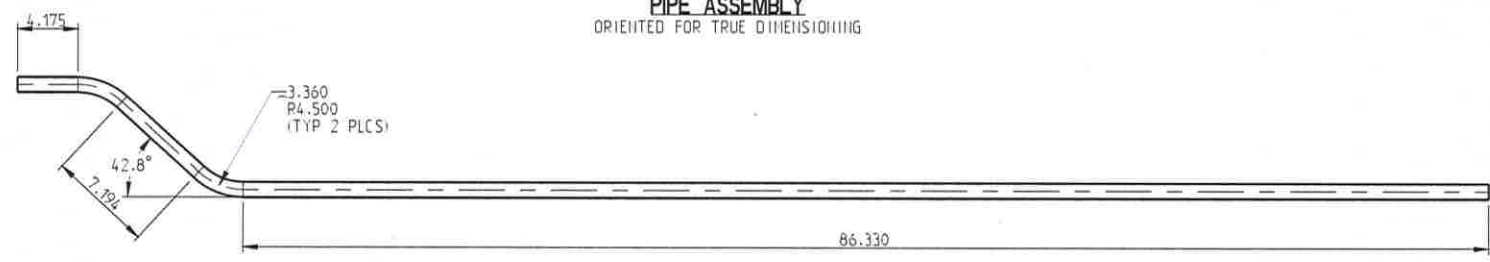
1/20/21 Rev. done

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	10240-018	FITTING, ELBOW, 3/4" X 90 SOCKET WELD	1	
2	10240-124	COUPLING, 3/4" TAPPED X 3/4" SW	1	
3	10240-296	WIPPLE, 3/4" X 2 1/2" XH THREADED ONE END	1	
4	10240-346	COUPLING, 3/4" THREADED, 3000 LB. FORGED	1	
5	10260-004	PIPE, 0.75 Ø, EXTRA HEAVY	1	104.419

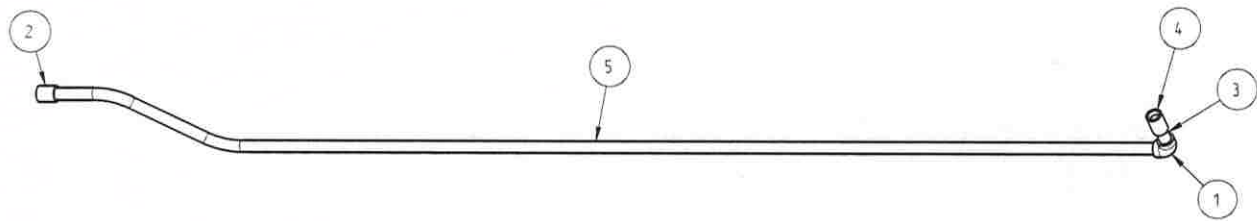
M110628-000 Crested Park



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING



- NOTE:
1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
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 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

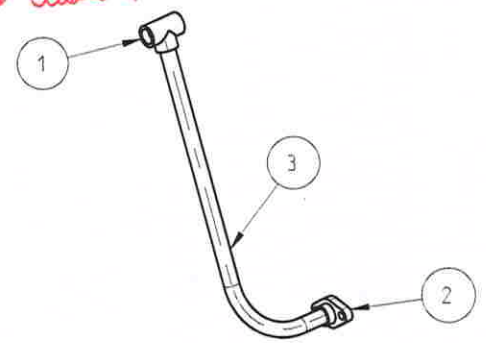
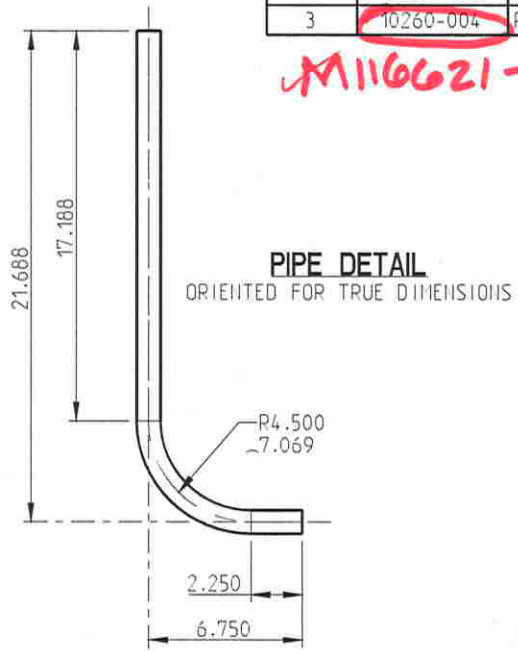
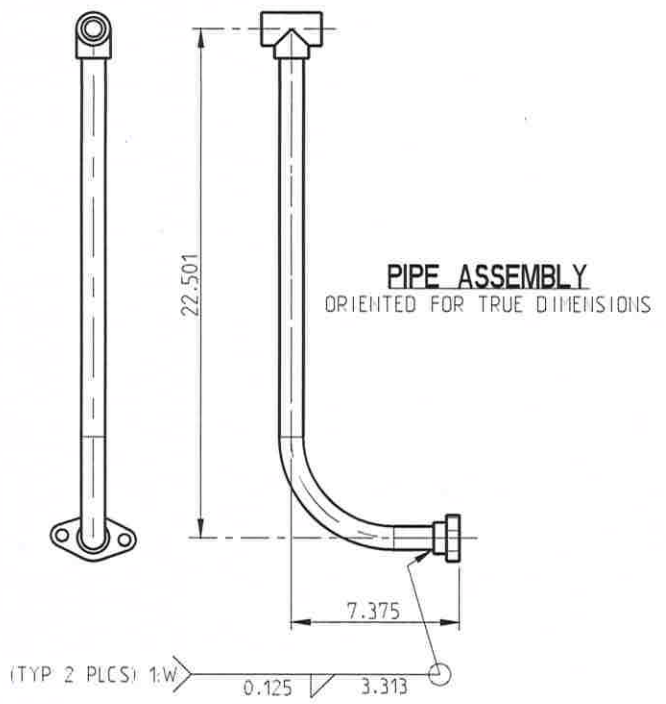
Eco CAS600067

A 11-02-17 JAG JAG ADDED NOTE #4 AND UPDATED			
PIPE TO MEET AAR SPECIFICATION			
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063	Hole Diameters ± 0.031		
Diagonals 0.125 Max. Variation	Angles ± 1°		
Radii will be thickness of material		Tolerances are not accumulative	
Made By: JAG/PLL	Date: 09-16-16	Ref Dwg: A109884-002	
Approved: GJF	Do Not Scale Drawing	Est. Wt: 14.50 lbs	
ASSEMBLY, SPOOL VALVE PIPE			
Size C	Drawing / Part Number A113322-000		Rev. A

1/22/01
Rev. done ✓

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	✓ 10240-026	TEE, 3/4" SOCKET WELD	1	
2	✓ 10240-068	FITTING, 3/4" STRT SWV FLG SW	1	
3	✓ 10260-004	PIPE, 0.75Ø, EXTRA HEAVY	1	26.507

M116621-000 *Existed Part*



A 11-02-17 JAG JAG				ADDED NOTE #4 AND UPDATED			
PIPE TO MEET AAR SPECIFICATION							
Level Date Approved				Description			
REVISIONS							
FreightCar America							
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Standard Tolerances (Unless Noted)							
Decimal Dimensions ± 0.063				Hole Diameters ± 0.031			
Diagonals 0.125 Max. Variation				Angles $\pm 1^{\circ}$			
Radii will be thickness of material				Tolerances are not accumulative			
Made By: CSW			Date: 12-17-12		Ref Dwg: -		
Approved: JWB			Do Not Scale Drawing		Est. Wt: 5.04 lbs		
ASSEMBLY, DOOR VALVE TO TEE PIPE							
Size		Drawing / Part Number					Rev.
B		A108980-000					A

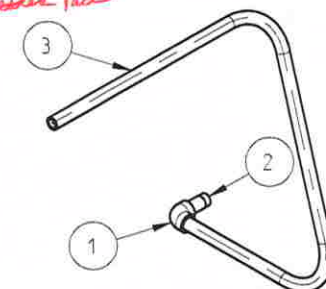
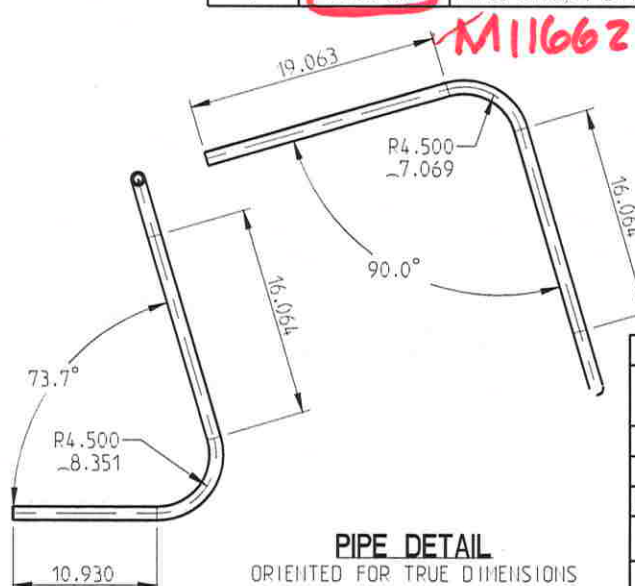
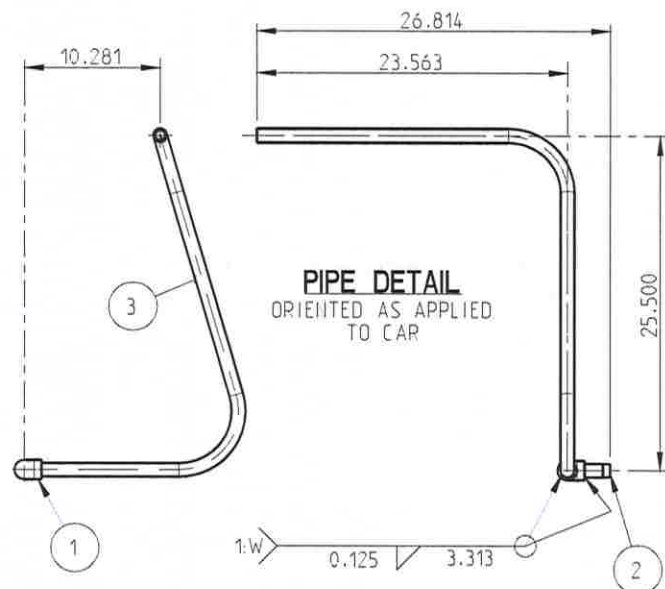
- NOTE:**
1. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
 2. UNLESS OTHERWISE NOTED, ALL WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS FOR FILLET WELDS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

Eco CAS600067

B ✓

11/22/21
Rev. done ✓

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	✓ 10240-018	FITTING, ELBOW, 3/4" X 90 SOCKET WELD	1	
2	✓ 10240-296	NIIPPLE, 3/4" X 2 1/2" XH THREADED ONE END	1	
3	10260-004	PIPE, 0.750, EXTRA HEAVY	1	61.476



B 11-27-17 MCH **MCH** DUE TO MOVING PIPE CLAMP TO INBOARD SIDE OF BOLSTER WEB FOR FIT-UP 10.930 DIM WAS 7.357

A 11-02-17 JAG ADDED NOTE #4 AND UPDATED PIPE TO MEET AAR SPECIFICATION

Level	Date	Approved	Description

REVISIONS

FreightCar America

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063	Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation	Angles $\pm 1^\circ$
Radii will be thickness of material	Tolerances are not accumulative

Made By: STS	Date: 12-17-12	Ref Dwg: -
Approved: JWB	Do Not Scale Drawing	Est. Wt: 8.03 lbs

ASSEMBLY, "AR" WAYSIDE AIR PIPE

Size B	Drawing / Part Number A108995-000	Rev. B
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NOTE:

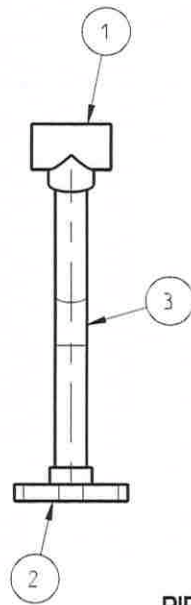
1. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
2. UNLESS OTHERWISE NOTED, ALL WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS FOR FILLET WELDS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

ECO CAS600067

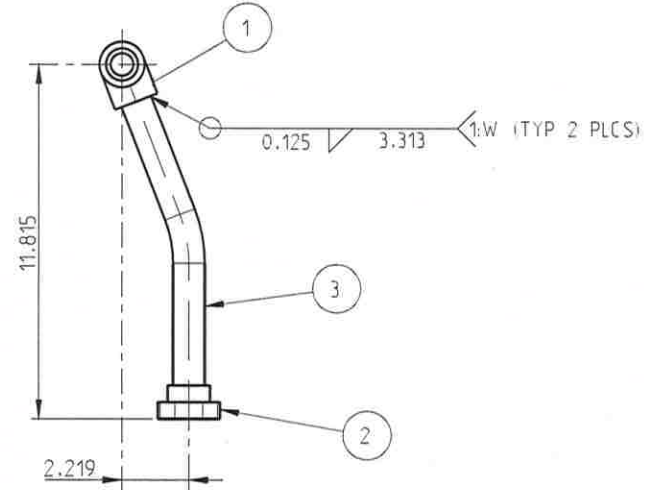
11/22/21
Rev.
done ✓

BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	✓ 10240-026	TEE, 3/4" SOCKET WELD	1	
2	✓ 10240-068	FITTING, 3/4" STRT SWV FLG SW	1	
3	10260-004	PIPE, 0.75Ø, EXTRA HEAVY	1	10.770

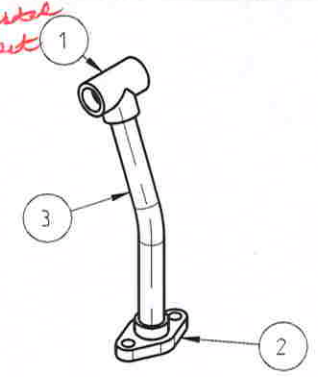
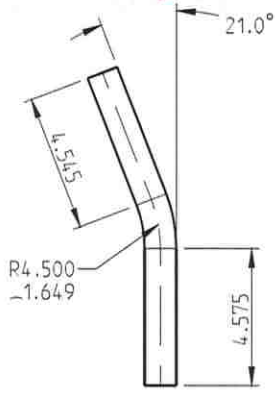
✓ M116623-000 *Change Part*



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONS



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONS



A 11-02-17 JAG JAG		ADDED NOTE #4 AND UPDATED	
PIPE TO MEET AAR SPECIFICATION			
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063		Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation		Angles ± 1°	
Radii will be thickness of material		Tolerances are not accumulative	
Made By: STS	Date: 12-17-12	Ref Dwg: -	
Approved: JWB	Do Not Scale Drawing	Est. Wt: 3.12 lbs	
ASS'Y, A-END CHECK VALVE TO TEE PIPE			
Size	Drawing / Part Number		Rev.
B	A108996-000		A

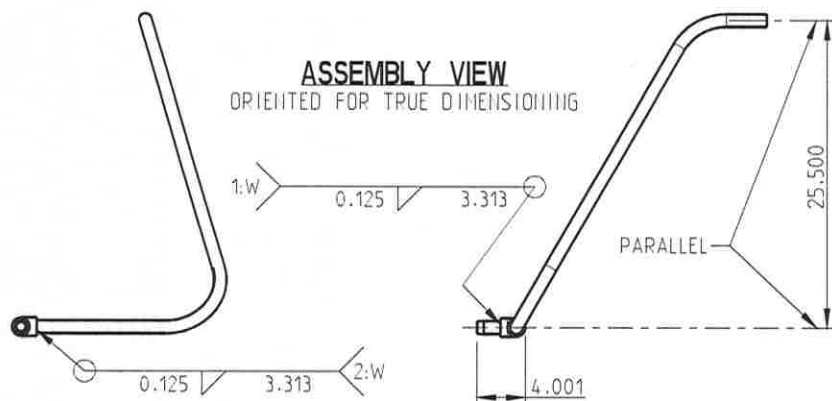
- NOTE:**
1. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
 2. UNLESS OTHERWISE NOTED, ALL WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS FOR FILLET WELDS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

ECO CAS600067

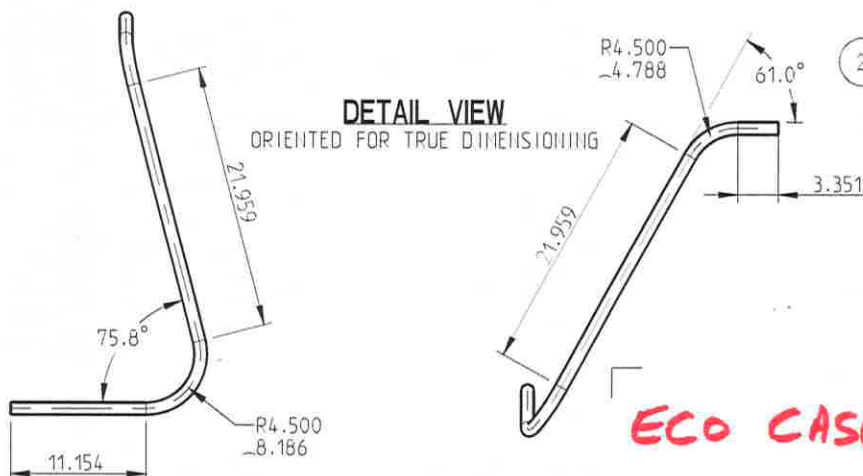
B ✓

11/22/21
for
dms

ASSEMBLY VIEW
ORIENTED FOR TRUE DIMENSIONING



DETAIL VIEW
ORIENTED FOR TRUE DIMENSIONING



NOTE:

1. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
2. UNLESS OTHERWISE NOTED, ALL WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS FOR FILLET WELDS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-018	FITTING, ELBOW, 3/4" X 90 SOCKET WELD	1	
2	10240-296	HIPPLE, 3/4" X 2 1/2" XH THREADED ONE END	1	
3	10260-004	PIPE, 0.750, EXTRA HEAVY	1	49.438

M116624-000 Created Part

B 11-27-17 HCH MCH DUE TO MOVING PIPE CLAMP TO INBOARD SIDE OF BLOSTER WEB FOR FIT-UP 11.154 DIM WAS 7.435

A 11-02-17 JAG ADDED NOTE #4 AND UPDATED PIPE TO MEET AAR SPECIFICATION

Level Date Approved Description

REVISIONS

FreightCar America

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Standard Tolerances (Unless Noted)

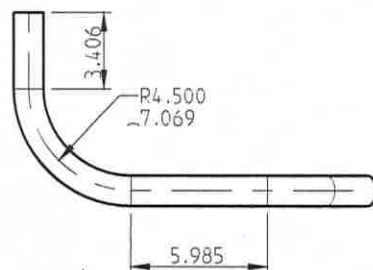
Decimal Dimensions ± 0.063 Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation Angles $\pm 1^\circ$
Radii will be thickness of material Tolerances are not accumulative

Made By: STS Date: 12-18-12 Ref Dwg: -
Approved: JWB Do Not Scale Drawing Est. Wt: 6.55 lbs

ASSEMBLY, DOOR LINE TO QUICK DISCON. PIPE

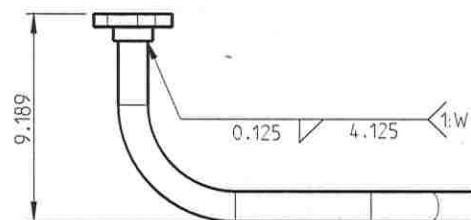
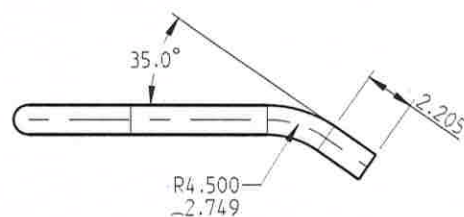
Size B Drawing / Part Number A108997-000 Rev. B

1122121
Rev.
done



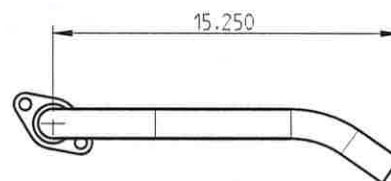
PIPE DETAIL

ORIENTED FOR TRUE DIMENSIONING
SCALE 0.188



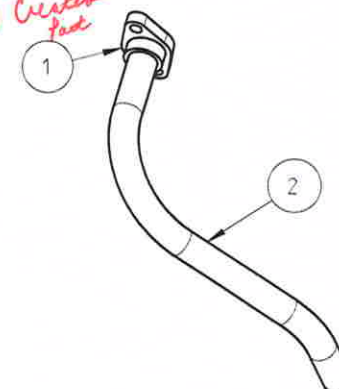
PIPE ASSEMBLY

ORIENTED FOR TRUE DIMENSIONING
SCALE 0.188



BILL OF MATERIAL				
Item No.	Part No.	Description	Quantity	Unit Length
1	10240-065	FITTING, 1" STRT SWV FLG SW, GG.	1	
2	10260-003	PIPE, 1.000 Ø, EXTRA HEAVY	1	21.414

M116625-000 Created Part



A 10-31-17 JAG JAG ADDED NOTE #4 AND UPDATED

PIPE TO MEET AAR SPECIFICATION

Level Date Approved Description

REVISIONS

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America**

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Standard Tolerances (Unless Noted)

Decimal Dimensions ± 0.063
Hole Diameters ± 0.031
Diagonals 0.125 Max. Variation
Angles $\pm 1^\circ$
Radii will be thickness of material
Tolerances are not accumulative

Made By: JWB/MHK Date: 12-12-12 Ref Dwg: N/A

Approved: JWB Do Not Scale Drawing Est. Wt: 4.77 lbs

ASSEMBLY, BRANCH PIPE

Size Drawing / Part Number Rev.
B A109012-000 A

NOTE:

1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
3. PIPE DIMENSIONS ARE FOR REFERENCE ONLY. MANUFACTURING TO DETERMINE FINAL ASSEMBLY DIMENSIONS.
4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

ECO CAS600067

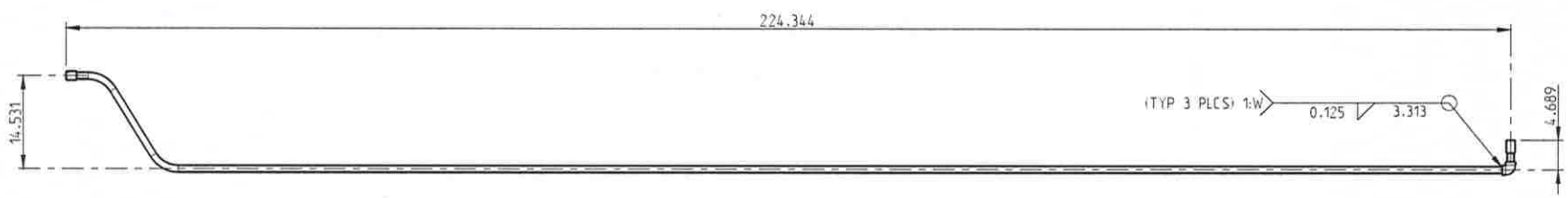
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11-2-18 Rev. 1
done

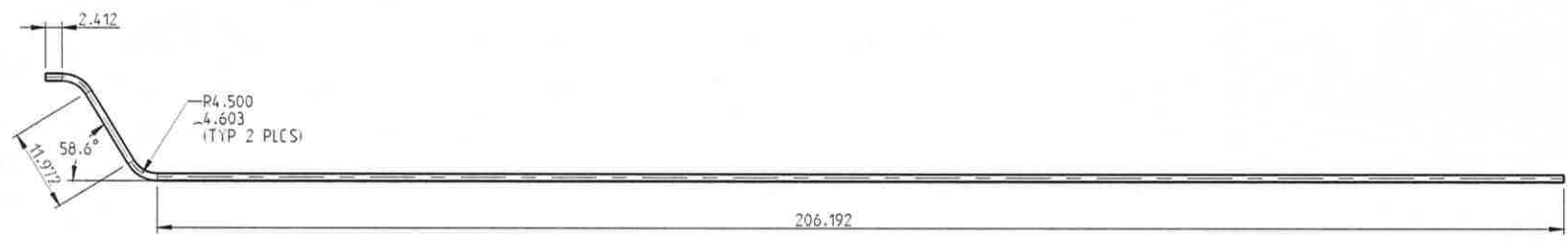
BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-018	FITTING, ELBOW, 3/4" X 90 SOCKET WELD	1	
2	10240-124	COUPLING, 3/4" TAPPED X 3/4" SW	1	
3	10240-296	WIPPLE, 3/4" X 2 1/2" XH THREADED ONE END	1	
4	10240-346	COUPLING, 3/4" THREADED, 3000 LB. FORGED	1	
5	10260-004	PIPE, 0.75 Ø, EXTRA HEAVY	1	229.782

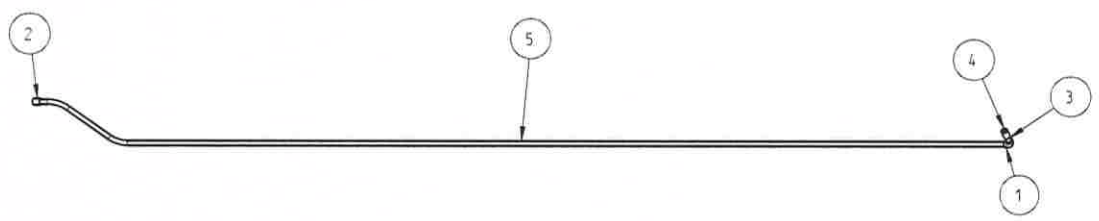
M116626-000 *least part*



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING



- NOTE:
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 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

ECO CAS600067

A 11-02-17 JAG JAG		ADDED NOTE #4 AND UPDATED	
PIPE TO MEET AAR SPECIFICATION			
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
<small>THIS DRAWING IS THE EXCLUSIVE PROPERTY OF FREIGHTCAR AMERICA AND CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION. BY ACCEPTING THIS DRAWING, THE RECIPIENT AGREES TO USE THIS DRAWING ONLY FOR THOSE PURPOSES APPROVED IN WRITING BY FREIGHTCAR AMERICA. (b) NOT TO REPRODUCE OR MODIFY THIS DRAWING, IN WHOLE OR IN PART, AND (c) NOT TO DISCLOSE THIS DRAWING TO ANY PERSON OR ENTITY, NOR USE THE DRAWING FOR THE DESIGN OR MANUFACTURE OF ANY ITEM, PART, OR APPARATUS THEREOF, EXCEPT UPON THE PRIOR WRITTEN PERMISSION OF FREIGHTCAR AMERICA.</small>			
Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063		Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation		Angles ± 1°	
Radii will be thickness of material		Tolerances are not accumulative	
Made By: JAG/PLL	Date: 09-16-16	Ref Dwg: A108994-001	
Approved: GJF	Do Not Scale Drawing	Est. Wt: 29.85 lbs	
ASSEMBLY, SPOOL VALVE PIPE			
Size	Drawing / Part Number		Rev.
C	A113320-000		A

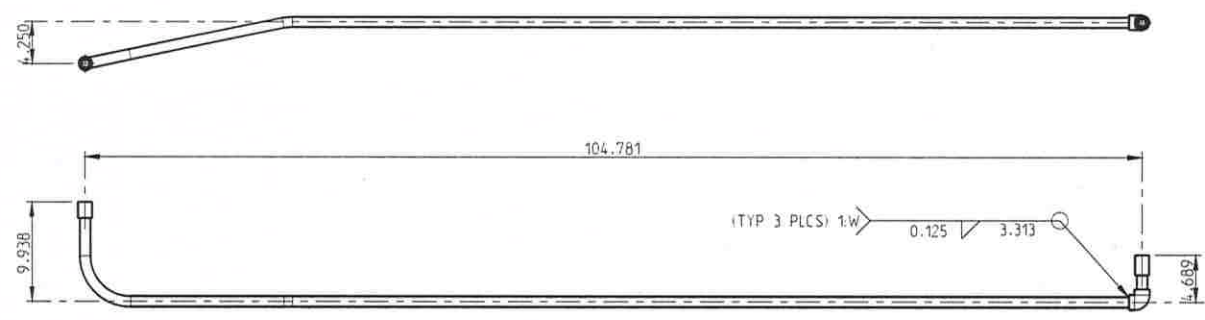
R

110213, pen, done

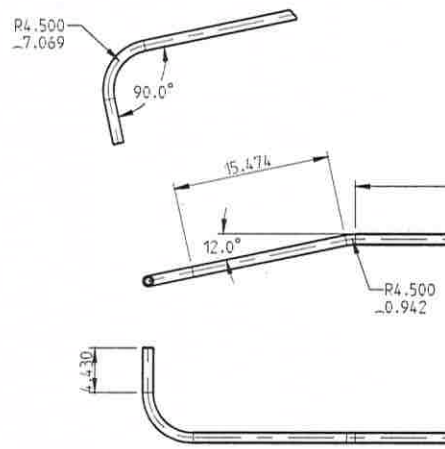
BILL OF MATERIAL

Item No.	Part No.	Description	Quantity	Unit Length
1	10240-018	FITTING, ELBOW, 3/4" X 90° SOCKET WELD	1	
2	10240-124	COUPLING, 3/4" TAPPED X 3/4" SW	1	
3	10240-296	WIPPLE, 3/4" X 2 1/2" XH THREADED ONE END	1	
4	10240-346	COUPLING, 3/4" THREADED, 3000 LB. FORGED	1	
5	10260-004	PIPE, 0.75 Ø, EXTRA HEAVY	1	111.409

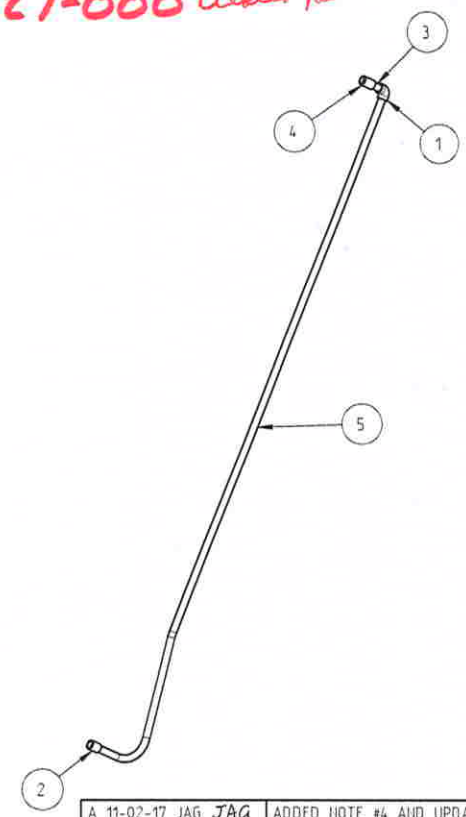
M110627-000 Check Part



PIPE ASSEMBLY
ORIENTED FOR TRUE DIMENSIONING



PIPE DETAIL
ORIENTED FOR TRUE DIMENSIONING



A 11-02-17 JAG JAG		ADDED NOTE #4 AND UPDATED	
PIPE TO MEET AAR SPECIFICATION			
Level	Date	Approved	Description
REVISIONS			
FreightCar America			
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Standard Tolerances (Unless Noted)			
Decimal Dimensions ± 0.063		Hole Diameters ± 0.031	
Diagonals 0.125 Max. Variation		Angles ± 1°	
Radii will be thickness of material		Tolerances are not accumulative	
Made By: JAG/PLL	Date: 09-16-16	Ref Dwg: A108944-001	
Approved: GJF	Do Not Scale Drawing	Est. Wt: 15.35 lbs	
ASSEMBLY, SPOOL VALVE PIPE			
Size	Drawing / Part Number		Rev.
C	A113321-000		A

- NOTE:
1. UNLESS OTHERWISE NOTED, WELD LENGTHS SHOWN ARE MINIMUM LENGTHS. WELD TERMINATIONS MUST HAVE A MINIMUM EDGE DISTANCE OF 0.25.
 2. ALL WELDING TO BE IN ACCORDANCE WITH RAILROAD WELDING SPECIFICATION AWS D15.1, LATEST REVISION, AND TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED.
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 4. PIPING TO BE IN ACCORDANCE WITH AAR SPECIFICATION S-402.

Eco CAS600067

R