



Title: Axle Repair with Neway Suspension

Date: March 31, 2021

Vehicles: Vehicles part of KME Recall 21V097

Issue: The Upper Axle Adapter welds and both Bottom Axle adapters welds may Fail.

Corrective Action: Inspect the Upper Axle Adapter and both Bottom Axle Adapters. Repair welds, as needed.

Work Instructions: See Attachment.

- Tools Required:**
- Personal Protective Equipment (Protective Glasses, Gloves, Face Shield, etc.)
 - Creeper or Hydraulic Truck Lift.
 - Welding Equipment.

KME Parts Required: None

KME CONTACT: Dennis Wittig, Technical Support

TELEPHONE: 570-233-1891

EMAIL: dwittig@kmeffire.com

MAILING ADDRESS: KME Fire Apparatus
Plant #8
One Industrial Complex
Nesquehoning, PA 18240

ATTENTION: Mr. Dennis Wittig

WORK INSTRUCTIONS

1. Read and study the attached three pages from Neway before performing the inspection.
2. During the visual inspection, refer to sheet 1 of the attachment for welding specifications.
3. Visually inspect the Left and Right Side, Bottom Axle Adapters.
 - Figure 3 on sheet 1 of the attachment shows the bottom axle adapters.
 - Check 3 passes for welds. Figures 1 and 5
 - Check for flat or slightly convex contour on front and rear. A concave contour is not allowed. Reference Figure 6 on sheet 1.
 - Check the integrity of each weld, quality of the weld, and that sizes are correct as per instructions on attachment.

LEFT BOTTOM AXLE ADAPTER	PASS	FAIL
1. Left Bottom Axle Front Adapter is attached to axle.		
2. Left Bottom Axle Front Adapter Front Welds are not cracked.		
3. Left Bottom Axle Front Adapter Front Welds Condition: See bullets Above.		
4. Left Bottom Axle Rear Adapter is attached to axle.		
5. Left Bottom Axle Rear Adapter Front Welds are not cracked.		
6. Left Bottom Axle Rear Adapter Front Welds Condition: See Bullets Above.		
RIGHT BOTTOM AXLE ADAPTER		
1. Right Bottom Axle Front Adapter is attached to axle.		
2. Right Bottom Axle Front Adapter Front Welds are not cracked.		
3. Right Bottom Axle Front Adapter Front Welds Condition: See bullets Above.		
4. Right Bottom Axle Rear Adapter is attached to axle.		
5. Right Bottom Axle Rear Adapter Front Welds are not cracked.		
6. Right Bottom Axle Rear Adapter Front Welds Condition: See Bullets Above.		

WORK INSTRUCTIONS

(Continued)

4. Insect the Upper Axle Adapter.

- The Upper Axle Adapter is located above the round pumpkin on the top of the axle.
- Reference the top view for welding sequence and figure to far right on Sheet 1 of 3.
- Check for flat or slightly convex contour around the Upper Axle Adapter. A concave contour is not allowed. Reference Figure 6 on sheet 1.
- Check the integrity of each weld, quality of the weld, and that sizes are correct as per instructions on attachment.

UPPER AXLE ADAPTER	PASS	FAIL
1. Upper Axle Adapter is attached to the top of the axle.		
2. Upper Axle Adapter Welds are not cracked. See Top View for Weld Sequences.		
3. Upper Axle Adapter Welds Condition: See bullets Above.		

5. If all inspection points pass, then no repair required. See first page of this bulletin for contact information and inform KME that the inspection was completed, and the vehicle passed.
6. Any failures during visual inspection will require repair at a certified weld shop, preferably one that has experience with heavy duty truck suspensions.
 - a. Inform the KME Contact that the inspection failed before scheduling repairs.
 - b. After contacting KME, schedule repair.

INSTALLATION INSTRUCTIONS

- 1) LOCATE THE AXLE ADAPTERS ON PROPER BEAM CENTERS. SEE BEAM CENTER CHART AND FIGURE 1
- 2) CLAMP BOTH AXLE ADAPTERS TIGHT TO THE AXLE HOUSING. BOTH ADAPTERS MUST BE TIGHT AGAINST THE BOTTOM AND THE FRONT OF THE AXLE HOUSING. IF THERE IS A GAP ON REAR SIDE THAT IS .04 [1.0] OR GREATER, FILL WITH SHIM (90036267) BEFORE WELDING. MORE THAN ONE SHIM MAY BE NECESSARY. CHECK TO ENSURE THAT THE AXLE ADAPTERS ARE LEVEL TO EACH OTHER. SEE FIGURE 2.
- 3) TACK WELD (4) PLACES ON BOTH AXLE ADAPTERS AS SHOWN IN FIGURE 3.
- 4) AFTER TACKING ADAPTERS TO AXLE HOUSING, RECHECK ALL DIMENSIONS. ADAPTERS TO BE PARALLEL TO EACH OTHER. IF THIS IS NOT MAINTAINED THE AXLE ALIGNMENT AND PINION ANGLE CAN BE AFFECTED.
- 5) IF CORRECT, WELD PER WELDING SPECIFICATIONS SHOWN.
- 6) REFER TO ES-AWS D1.1 STRUCTURAL WELD CODE AND ES-AWS B1.11 GUIDE FOR VISUAL INSPECTION OF WELDS.

WELDING SPECIFICATIONS

- 1) THE AXLE BRACKET SHOULD BE CLAMPED SECURELY IN THE PROPER LOCATION SEE FIGURES 1 AND 2
- 2) ROTATE AXLE SO THAT FRONT AND REAR FACES ARE AT 45° WHEN WELDING AS SHOWN IN FIGURE 4 (NOTE: ROTATE TO OTHER SIDE WHEN WELDING THE REAR)
- 3) THE AXLE HOUSING AND AXLE ADAPTER MUST BE 70°F MINIMUM, DRY AND FREE OF MOISTURE AND BE FREE OF DIRT, SCALE, GREASE OR ANY OTHER FOREIGN MATERIAL THAT WOULD NEGATIVELY AFFECT WELD QUALITY.
- 4) THE ELECTRODE OR WIRE SELECTED MUST CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS:

A) ELECTRODE	AWS E-7018 (OVEN DRIED)	3/16 DIA	130-220 AMPS D.C.+
		3/16 DIA	200-300 AMPS D.C.+
B) WIRE	AWS ER-70S-3	C-10	25-30
		C-10	26-29
		C-10	350-400
		.045	.052
			.062 FLUX CORED

OR FOLLOW THE OEM WELD SPECIFICATION THAT MOST CLOSELY MATCHES THE ABOVE. FOR KENWORTH REFER TO R026-198-2. FOR MERITOR REFER TO 5-38246 REV AL, VIEW D.
- 5) APPLY WELDS IN THE SIZES AND SEQUENCE SHOWN IN FIGURES 1 AND 5. BACK STEP START OF WELDS AT LEAST 1/2" TO PREVENT LACK OF FUSION. BACK FILL END OF WELDS AT LEAST 1/2" OR SUFFICIENT AMOUNT TO PREVENT CRATERS BEING FORMED AT END OF WELD. ALLOW WELD SUFFICIENT TIME TO COOL BETWEEN PASSES. WELDS ARE TO BE COMPLETELY CONSUMED BY THE 1ST PASS.
- 6) TACK WELDS AND WELD PASSES MUST BE CLEANED BEFORE NEXT WELD PASS IS DONE.
- 7) EACH AXLE ADAPTER WELD MUST HAVE A FLAT OR SLIGHTLY CONVEX CONTOUR ON FRONT AND REAR. A CONCAVE CONTOUR IS NOT ALLOWED BECAUSE IT REDUCES THE THROAT DIMENSION OF THE WELD. SEE FIGURE 6.
- 8) ALLOW THE AXLE HOUSING AND ADAPTERS TO COOL UNTIL THEY REACH ROOM TEMPERATURE. DO NOT USE ANY OTHER COOLING METHOD. OTHER COOLING METHODS CAN CAUSE THE AXLE HOUSING, ADAPTER AND WELDS TO CRACK OR BECOME WEAKENED.

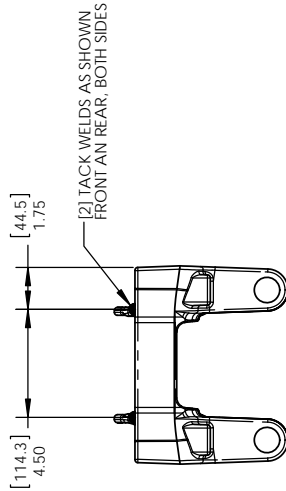


FIGURE 3

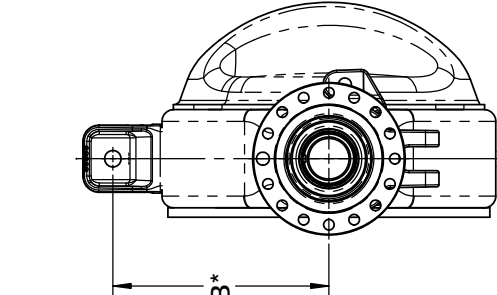


FIGURE 1

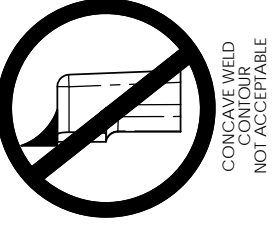


FIGURE 5
SCALE 2:1

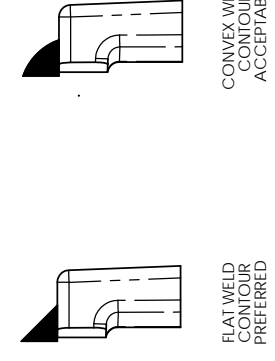


FIGURE 6

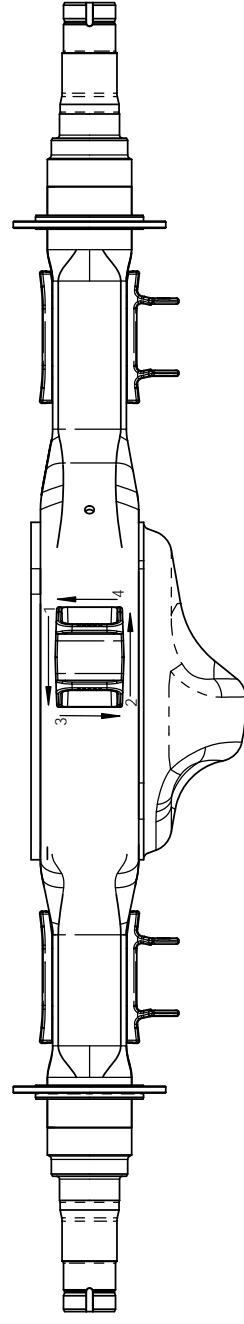


FIGURE 4

IF GAP IS .04 [1.0] OR GREATER USE ONE OR MORE SHIMS TO FILL PRIOR TO WELDING. SEE NOTE 2 INSTALLATION INSTRUCTIONS FOR SHIM PART NUMBERS

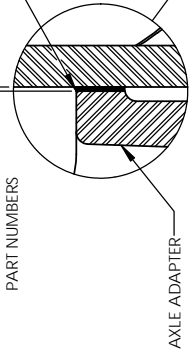
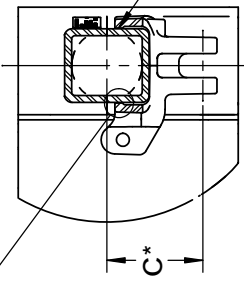
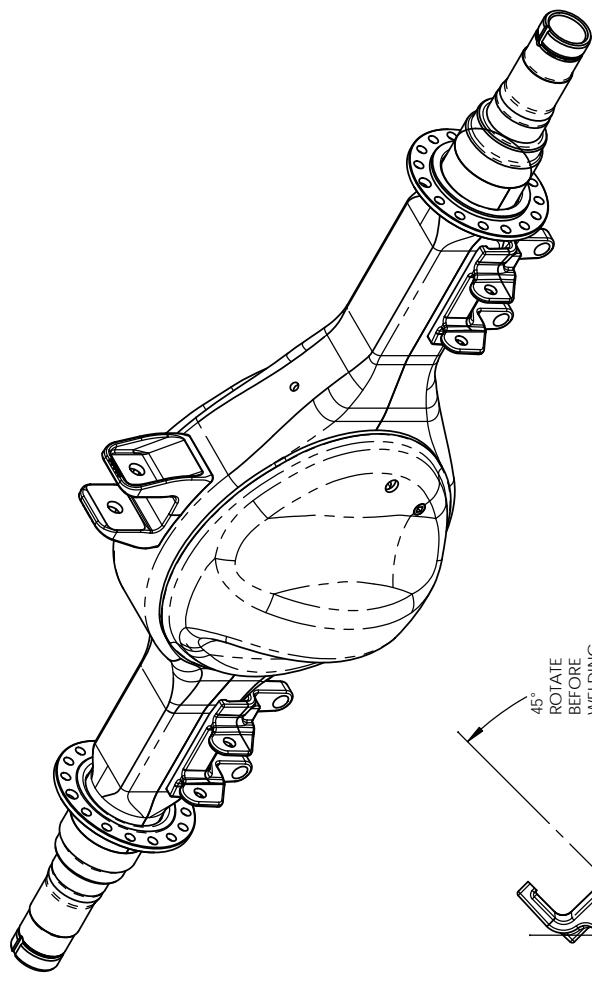


FIGURE 2
SCALE 1:1



SECTION A-A

CHANGE RECORD

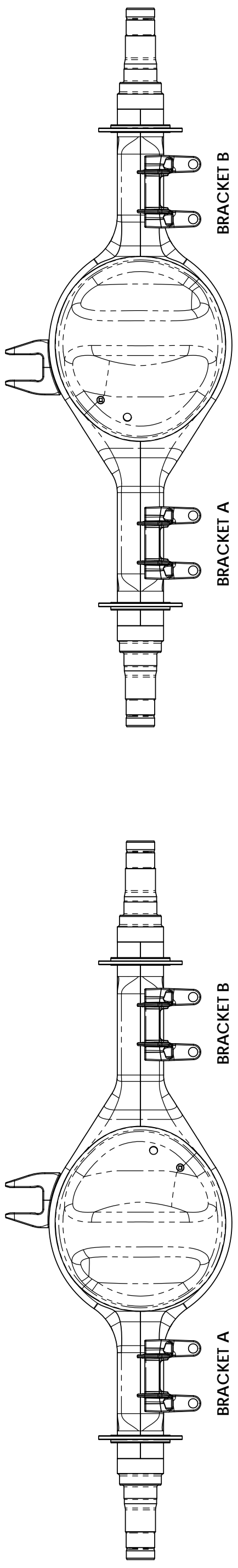
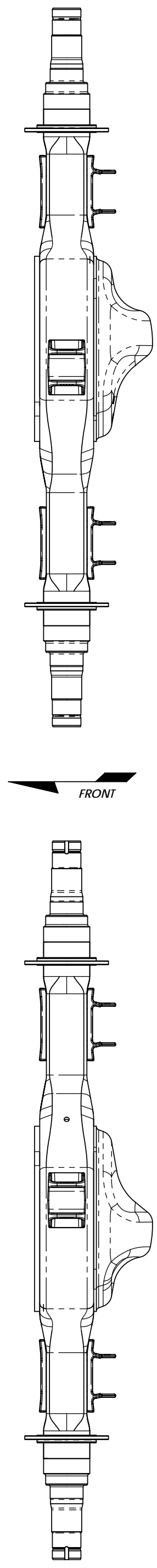
LTR.	CREATED	BY	E.C.N.	DATE
A		MRJ	40475	31MART10
G	1) ADDED SHEET 3; SHT 1; 2) MOVED AXLE ADAPTER CHART TO SHEET 3; 3) ADDED NOTE; SHT 2; 4) ADDED "DIM C" COLUMN TO CHART; SHT 3; 5) 90001748/797/750/799/752/801/754/803/756/805 WAS 900001394; 6) 90001722/771/724/7719/726/781/728/783/730/785 WAS 900001402; 7) 90001735/787/737/789/791/741/793/743/795 WAS 900001400; 8) ADDED COLUMNS "FINISH", "BOWL OFFSET LEFT...", "BOWL OFFSET RIGHT...", 9) REMOVED "DIM C" COLUMN	JJF	301263	2014-11-10
H	UPDATED MERITOR RS-23-186 UPPER ADAPTER CHART INFO ON SHEET 3	JMG	302869	2015-05-05



EST. WEIGHT:	SCALE:	1:6
TITLE: ADZ AXLE ASSY - WELDED		
MATERIAL: XX(X) - ± 0.060(1.52)		
MATERIAL: XX(X) - ± 0.000(0.76)		
MATERIAL: XX(X) - ± 0.010(0.25)		
PART NUMBER:	32000579	
THRO ANGLE PROJECTION:	ANGLES ± 1°	

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CHANGE RECORD	
LTR.	DESCRIPTION OF CHANGE
BY	E.C.N.
DATE	
SEE SHEET 1 FOR REVISION HISTORY	



AXLE MODEL		LOWER AXLE ADAPTER												DIM C						
AXLE MANF	AXLE DESCRIPTION	HOUSING NUMBER	BOWL OFFSET TO LEFT						BOWL OFFSET TO RIGHT											
			BRACKET A 0° TO 4°	BRACKET B 5° TO 9°	BRACKET B 10° TO 14°	BRACKET A 0° TO 4°	BRACKET B 5° TO 9°	BRACKET B 10° TO 14°	BRACKET A 0° TO 4°	BRACKET B 5° TO 9°	BRACKET B 10° TO 14°									
	DSP40/DSH40	HSGBARE-001	90001498	90001500	90001502	90001492	90001494	90001496	90001498	90001500	90001502	90001492	90001494	90001496	90001498	90001500	90001502	90001492	90001494	90001496
	D1463-P	HSGBARE-005	90001468	90001470	90001472	90001492	90001494	90001496	90001498	90001500	90001502	90001474	90001476	90001478	90001478	90001478	90001478	90001474	90001476	90001478
	S23-170																			6.00[152.4]
	D46-170																			
DANA	T69-170	HSGBARE-023	90001468	90001470	90001472	90001492	90001494	90001496	90001498	90001500	90001502	90001474	90001476	90001478	90001478	90001478	90001474	90001476	90001478	
	S23-190																			
	S26-190																			
	D46-590HP																			
	D52-190																			
	D52-590	HSGBARE-039	90001510	90001512	90001514	90001504	90001506	90001508	90001504	90001506	90001508	90001516	90001518	90001520	90001520	90001520	90001516	90001518	90001520	6.25[158.8]
	T78-190																			
	RT40/41-145		90001456	90001458	90001460	90001450	90001452	90001454	90001450	90001452	90001454	90001462	90001464	90001466	90001466	90001462	90001464	90001466		
	RS-23-160																			
	RT-46-160																			
	RT-46-160P																			
	RT-46-160A																			
	RS-23-161																			
	RT-46-164P		90001456	90001458	90001460	90001450	90001452	90001454	90001450	90001452	90001454	90001462	90001464	90001466	90001466	90001462	90001464	90001466	6.00[152.4]	
MERITOR	RT-46-164EH																			
	RZ-XX-166																			
	RS-23-186		90001480	90001482	90001484	90001498	90001500	90001502	90001492	90001494	90001496	90001486	90001488	90001490	90001490	90001486	90001488	90001490		
	RS-26-185																			
	RT-52-185		90001534	90001536	90001538	90001522	90001524	90001526	90001528	90001530	90001532	90001540	90001542	90001544	90001544	90001540	90001542	90001544	6.25[158.8]	
	RT-52-380																			



ADZ AXLE ASSEMBLY - WELDED

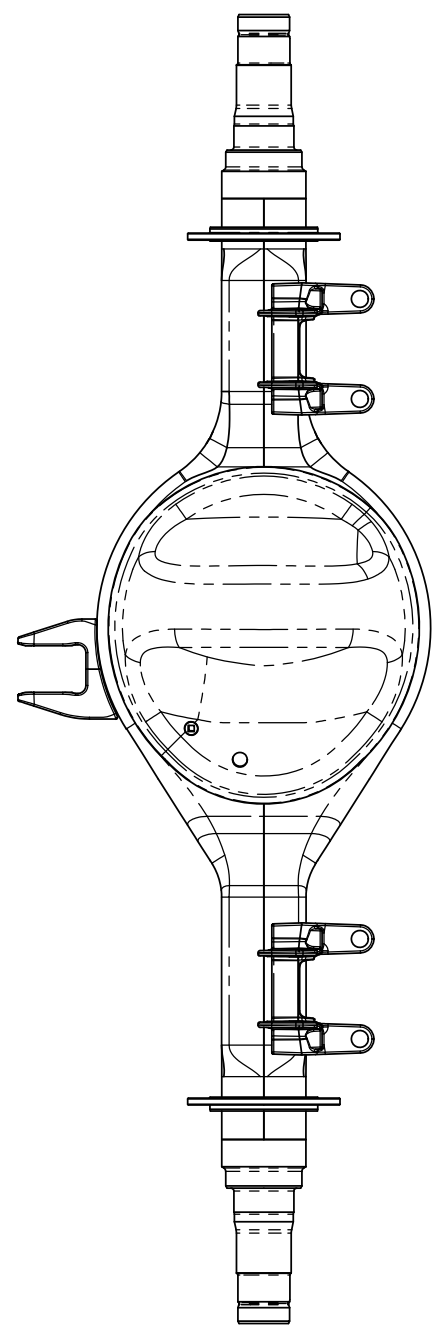
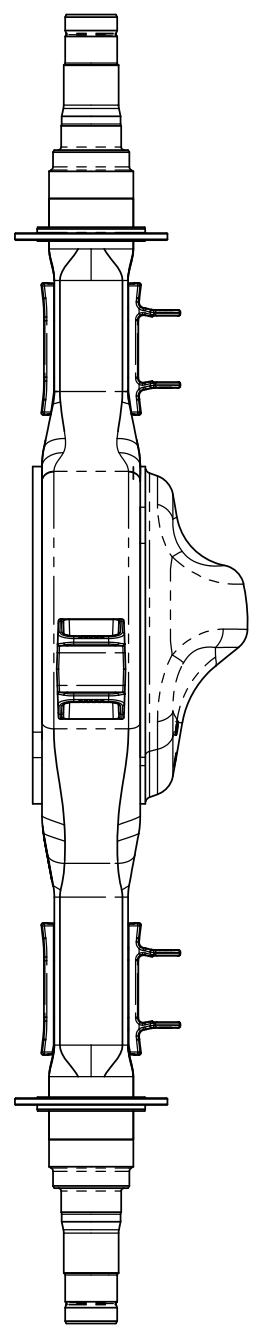
PER DETAILS

32000579

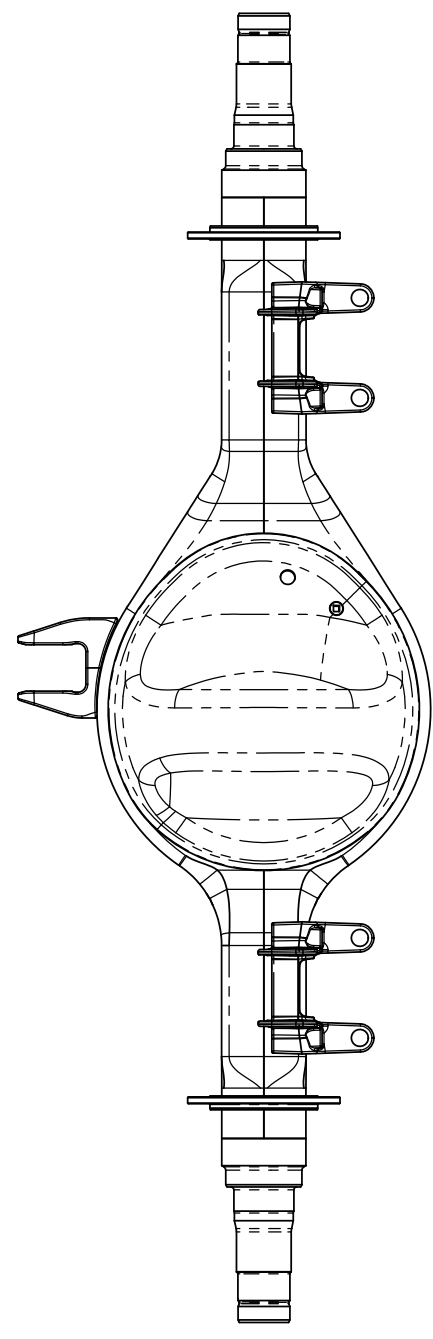
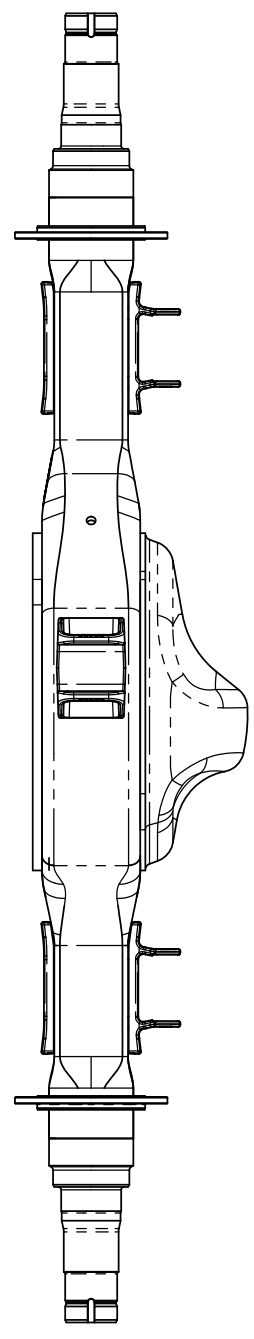
UNSPECIFIED TOLERANCES/GEOMETRIC DIMENSIONS
 ALL DIMS SHOWN ARE IN INCHES
 MILLIMETERS SHOWN IN BRACKETS ()
 XX(X) ± 0.001(0.025)
 XX(X) ± 0.0005(0.0127)
 XX(X) ± 0.001(0.025)
 ANGLES ± 1°
 THROUGH ANGLE PROJECTION

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CHANGE RECORD	
LTR.	DESCRIPTION OF CHANGE
BY	E.C.N.
SEE SHEET 1 FOR REVISION HISTORY	
DATE	



BOWL OFFSET RIGHT



BOWL OFFSET LEFT

DESCRIPTION	HOUSING NUMBER	UPPER AXLE ADAPTER				DIM B
		PART NUMBER	FINISH	BOWL OFFSET LEFT PINION ANGLE	BOWL OFFSET RIGHT PINION ANGLE	
21-145	RT40/41-145	90001748	PAINTED	4° 9' 14"	0° 5' 10"	13.08[332.2]
		90001797	COATED			
		90001750	PAINTED	3° 8' 13"	1° 6' 11"	
		90001799	COATED			
		90001752	PAINTED	2° 7' 12"	2° 7' 12"	
		90001801	COATED			
		90001754	PAINTED	1° 6' 11"	3° 8' 13"	
		90001803	COATED			
		90001756	PAINTED	0° 5' 10"	4° 9' 14"	
		90001805	COATED			
23-160 23-161 23-164 23-166	RS-23-160 RT-46-160 RS23-161 RT-46-161 RT-46-164 RZ-46-166	90001722	PAINTED	4° 9' 14"	0° 5' 10"	13.39[340.1]
		90001777	COATED			
		90001724	PAINTED	3° 8' 13"	1° 6' 11"	
		90001779	COATED			
		90001726	PAINTED	2° 7' 12"	2° 7' 12"	
		90001781	COATED			
		90001728	PAINTED	1° 6' 11"	3° 8' 13"	
		90001783	COATED			
		90001730	PAINTED	0° 5' 10"	4° 9' 14"	
		90001785	COATED			
23-186	RS-23-186	90001841	PAINTED	4° 9' 14"	0° 5' 10"	14.25[362.0]
		90001843	COATED			
		90001838	PAINTED	3° 8' 13"	1° 6' 11"	
		90001840	COATED			
		90001835	PAINTED	2° 7' 12"	2° 7' 12"	
		90001837	COATED			
		90001832	PAINTED	1° 6' 11"	3° 8' 13"	
		90001834	COATED			
		90001829	PAINTED	0° 5' 10"	4° 9' 14"	
		90001831	COATED			
26-185	RS-26-185 RT-52-185 RT-52-380	90001735	PAINTED	4° 9' 14"	0° 5' 10"	14.06[357.2]
		90001787	COATED			
		90001737	PAINTED	3° 8' 13"	1° 6' 11"	
		90001789	COATED			
		90001739	PAINTED	2° 7' 12"	2° 7' 12"	
		90001791	COATED			
		90001741	PAINTED	1° 6' 11"	3° 8' 13"	
		90001793	COATED			
		90001743	PAINTED	0° 5' 10"	4° 9' 14"	
		90001795	COATED			

DESCRIPTION	HOUSING NUMBER	UPPER AXLE ADAPTER				DIM B
		PART NUMBER	FINISH	BOWL OFFSET LEFT PINION ANGLE	BOWL OFFSET RIGHT PINION ANGLE	
HSGBARE-001	DSP40/DSH40	90001748	PAINTED	4° 9' 14"	0° 5' 10"	12.99[330.1]
		90001797	COATED			
		90001750	PAINTED	3° 8' 13"	1° 6' 11"	
		90001799	COATED			
		90001752	PAINTED	2° 7' 12"	2° 7' 12"	
		90001801	COATED			
		90001754	PAINTED	1° 6' 11"	3° 8' 13"	
		90001803	COATED			
		90001756	PAINTED	0° 5' 10"	4° 9' 14"	
		90001805	COATED			
HSGBARE-005 HSGBARE-006	DT463-P 23082T	90001722	PAINTED	4° 9' 14"	0° 5' 10"	13.30[337.8]
		90001777	COATED			
		90001724	PAINTED	3° 8' 13"	1° 6' 11"	
		90001779	COATED			
		90001726	PAINTED	2° 7' 12"	2° 7' 12"	
		90001781	COATED			
		90001728	PAINTED	1° 6' 11"	3° 8' 13"	
		90001783	COATED			
		90001730	PAINTED	0° 5' 10"	4° 9' 14"	
		90001785	COATED			
HSGBARE-023	R170	90001777	COATED	4° 9' 14"	0° 5' 10"	13.50[342.9]
		90001724	PAINTED	3° 8' 13"	1° 6' 11"	
		90001779	COATED			
		90001726	PAINTED	2° 7' 12"	2° 7' 12"	
		90001781	COATED			
		90001728	PAINTED	1° 6' 11"	3° 8' 13"	
		90001783	COATED			
		90001730	PAINTED	0° 5' 10"	4° 9' 14"	
		90001785	COATED			
		90001735	PAINTED	4° 9' 14"	0° 5' 10"	
HSGBARE-039	R190	90001787	COATED	3° 8' 13"	1° 6' 11"	13.83[351.2]
		90001737	PAINTED			
		90001789	COATED			
		90001739	PAINTED	2° 7' 12"	2° 7' 12"	
		90001791	COATED			
		90001741	PAINTED	1° 6' 11"	3° 8' 13"	
		90001793	COATED			
		90001743	PAINTED	0° 5' 10"	4° 9' 14"	
		90001795	COATED			



EST. WEIGHT:	1.6
SCALE:	1:6
TITLE:	ADZ AXLE ASSY - WELDED
MATERIAL:	XX(X) ± 0.000(0.6) XX(X)XX ± 0.010(0.25)
PART NUMBER:	32000579
REVISION:	H

UNSPECIFIED TOLERANCES:
DIMENSIONS
ALL DIMS SHOWN ARE IN INCHES
MILLIMETERS SHOWN IN BRACKETS ()
XX(X) ± 0.000(0.6)
XX(X)XX ± 0.010(0.25)
ANGLES ± 1°
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