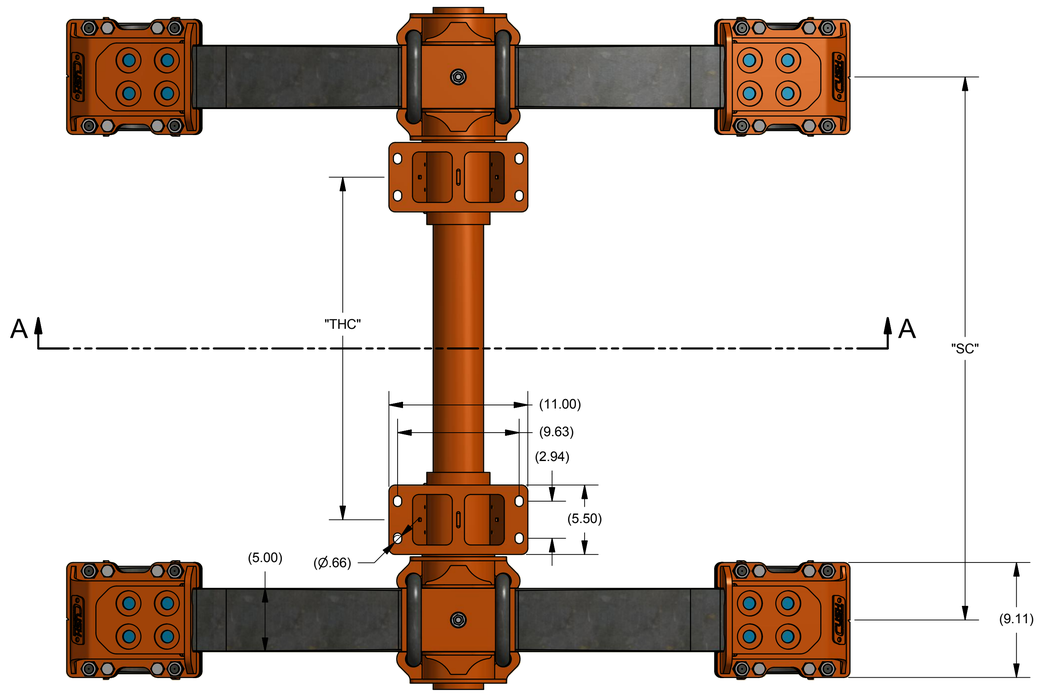
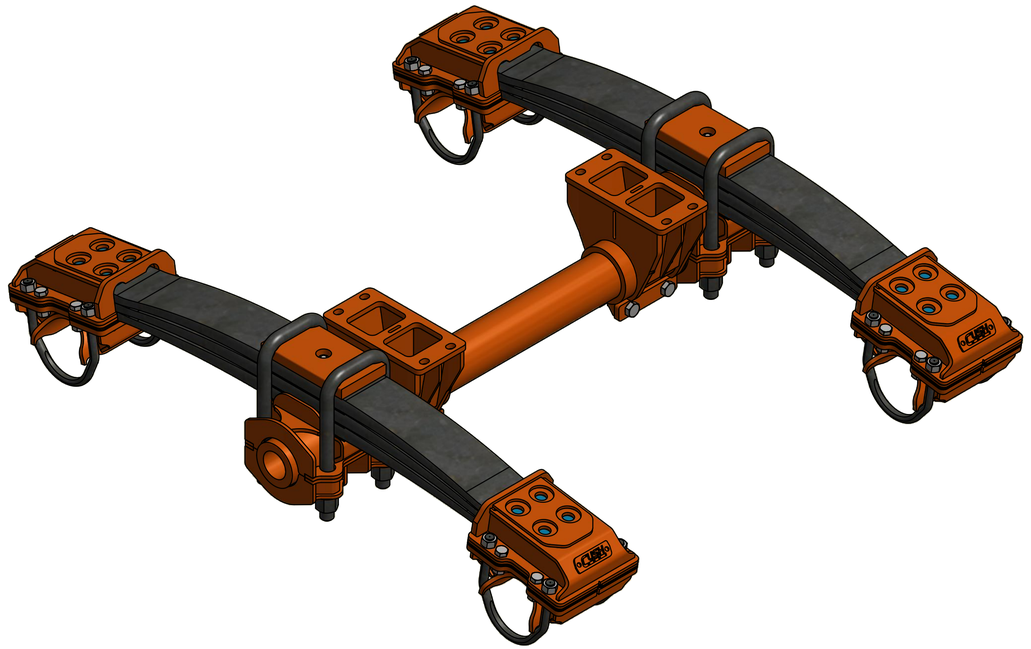
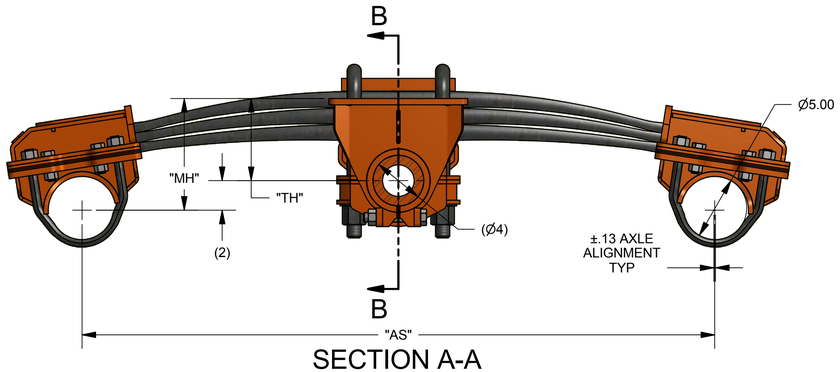
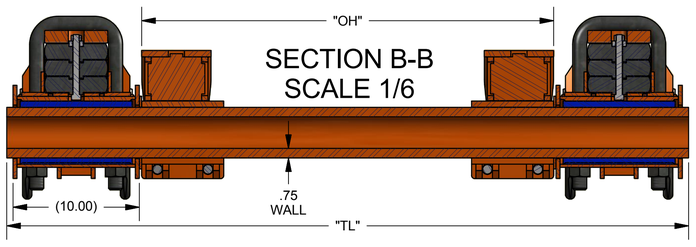






SECTION A-A
SCALE 1/6

<<FORWARD<<



SECTION B-B
SCALE 1/6

-TRUNNION HANGER STYLE H
-FREE OSCILLATING WITH POLY-URETHANE ELASTOMERS
-LIMITED +/- 15DEG OSCILLATING WITH RUBBER ELASTOMERS
-SPRING OVER-SLUNG AXLES WITH SPRING OVER-SLUNG TRUNNION
-OPTIMIZED 3 LEAF 50K SPRING TRA-2750
-HEAVY-DUTY AXLE SEAT CONNECTION, WELDED & U-BOLTED
-AXLE ALIGNMENT AXLE SEAT
-READILY AVAILABLE INDUSTRY STANDARD SERVICE PARTS
-"OH" IS OUTSIDE OF HANGER OR INSIDE OF WASHER ON NONE HANGER UNITS

DCN#	REV	DESCRIPTION	DATE	BY	CHK	APP

DRAFTSMAN: DWalker 6/2/2015
CHECKED: CHK
RELEASED: APP
WEIGHT: N/A
MATERIAL:

TITLE:
FABFLEX
CUSH SINGLE POINT 50K, TRUNNION MOUNT HANGER, W/ SQ U-BOLTS X" SPRING CENTERS OVERSLUNG AXLE-OVERSLUNG TRUNNION P OR R BUSHINGS, 3/4" TUBE WALL

TOLERANCE UNLESS OTHERWISE STATED:
.XX = +/- .062 FRACTIONS = +/- 1/16
.XXX = +/- .031 ANGLES = +/- 1°

Nixa, MO. USA
PHONE: 417-724-1239
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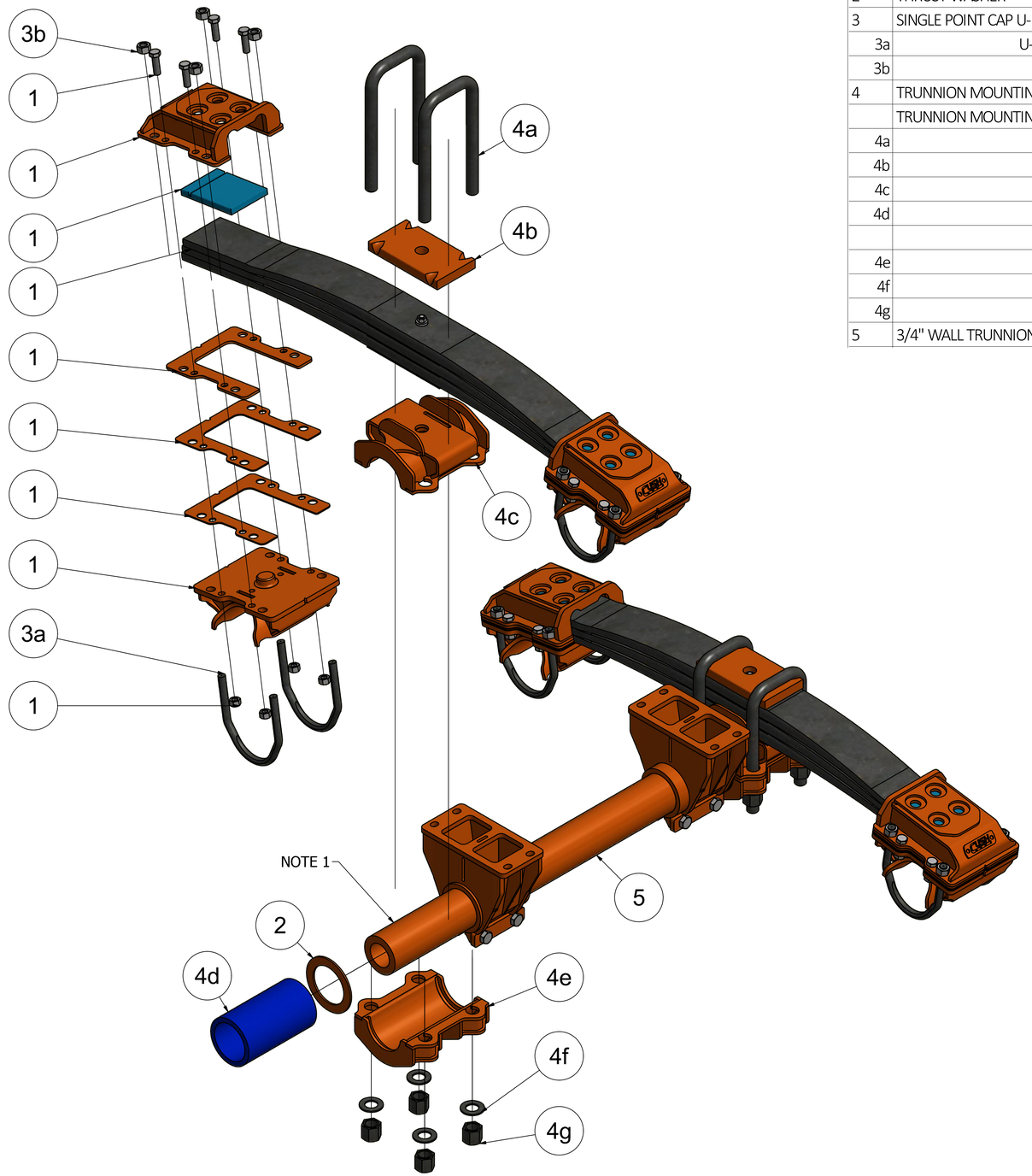
PROJECT NO:	SHEET:	SCALE:	REV:	PART/DRAWING NO:
16154	1 OF 4	A-SIZE: NTS B-SIZE: 1/X D-SIZE: 1/6	-	CSPF503Yx-x

PATENT PENDING

NOTES:
1. NO PAINT ON THIS AREA
2. IF POLYURETHANE LUBE THIS AREA W/ URETHANE LUBE, VES-9111115 AND ON INSIDE OF BUSHING, DO NOT LUBE OUTSIDE OF BUSHING
3. RUBBER GETS NO LUBE



ITEM	DESCRIPTION	PART NO	CSPF503YP-X	CSPF503YR-X
1	SPRING WITH AXLE CONNECTIONS MOUNTED - TOPMOUNT -POLYURETHANE	K0894-P	1	
	SPRING WITH AXLE CONNECTIONS MOUNTED - TOPMOUNT -RUBBER	K0894-R		1
2	THRUST WASHER	F1301	2	2
3	SINGLE POINT CAP U-BOLT KIT	K0795	1	1
3a	U-BOLT, TAPPERED, 5" ROUND, 3/4"-10 UNC X 8" LONG, PLAIN, GRADE 8	HU122	8	8
3b	L'NUT, TOPLOCK, 3/4"-10 UNC, ZINC PLATED, GRADE C	H1201	16	16
4	TRUNNION MOUNTING KIT, SQUARE U-BOLTS ON TOP, NON-SPLIT URETHANE	K0892-NU	2	
	TRUNNION MOUNTING KIT, SQUARE U-BOLTS ON TOP, NON-SPLIT RUBBER	K0892-HR		2
4a	U-BOLT, 5.13" SQ, 1 1/8"-12 UNF X 12.63" LONG, PLAIN GRADE 8	HU303	2	2
4b	MACHINED TOP CAP PLATE FOR SQUARE U-BOLTS	VH-9640-C	1	1
4c	SPRING SEAT CAP	W1514-SC	1	1
4d	NO SPLIT POYLURETHANE BUSHING (BLUE)	C0405-NU	1	
	NO SPLIT RUBBER BUSHING (BLACK)	C0405-HR		1
4e	SPRING CAP WITH RAISED NUT MOUNT - SQUARE U-BOLT	W1514-2	1	1
4f	WASHER, 1 1/8" SAE, ZINC PLATED, THRU-HARD	H2102	4	4
4g	NUT, 1.5" TALL, 1 1/8"-12 UNF, FACTORY WAX, GRADE C	H1131	4	4
5	3/4" WALL TRUNNION TUBE ASSEMBLY (SEE CHART ON PART NO. SHEET)	SEE CHART	1	1

PATENT PENDING

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PROJECT NO:	SHEET:	SCALE:	REV:	PART/DRAWING NO:
16154	2 OF 4	A-SIZE: NTS B-SIZE: 1/X D-SIZE: 1/6	-	CSPF503Yx-x

CUSH GENERAL INSTALLATION NOTES, SEE CUSH SERVICE/INSTALLATION MANUAL

INSTALLATION DISCLAIMER NOTES:

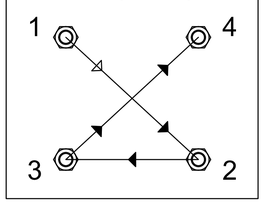
1) IT IS IMPORTANT THAT THE PROPER CUSH SUSPENSION IS CHOSEN FOR THE TRAILER APPLICATION. THE FOLLOWING CRITERIA MUST BE CONSIDERED WHEN SELECTING A SUSPENSION: REQUIRED SUSPENSION CAPACITY, LOADED FRAME-TO-GROUND MEASUREMENT, RIDE HEIGHT, AXLE TRAVEL, AXLE SPACING, AND AXLE GAWR.
2) IT IS THE RESPONSIBILITY OF THE INSTALLER TO DETERMINE THE CORRECT LOCATION OF THE SUSPENSION IN ORDER TO PROVIDE THE PROPER TRAILER LOAD DISTRIBUTION. THE GROSS AXLE WEIGHT RATING (GAWR) OF EACH AXLE MUST NOT EXCEED THE RATED CAPACITY OF ANY OF THE COMPONENTS INVOLVED. THE SUSPENSION CAPACITY RATINGS ARE FOR SUSPENSION COMPONENTS AND AXLE BEAM ONLY.
3) REQUIRED CROSS MEMBER LOCATIONS MAYBE SHOWN. ACTUAL SIZE AND SHAPE MAY VARY PER TRAILER DESIGN. IT IS THE RESPONSIBILITY OF THE SUSPENSION INSTALLER TO ENSURE STRUCTURAL ADEQUACY OF THE TRAILER FRAME AND RELATED CROSS MEMBERS. VERIFY THAT THE ACTUAL TRAILER CROSS MEMBER LOCATIONS CORRESPOND WITH THOSE SPECIFIED ON THE SUSPENSION DRAWING.
4) IT IS THE RESPONSIBILITY OF THE SUSPENSION INSTALLER TO READ THE INSTRUCTIONS ON ALL THE DRAWING SHEETS THOROUGHLY BEFORE PROCEEDING WITH A SUSPENSION INSTALLATION.

CUSTOMER TORQUE INSTRUCTIONS:

1) IT IS THE CUSTOMER'S RESPONSIBILITY TO CHECK AND TIGHTEN FASTENERS TO SPECIFIED TORQUE AT INSTALLATION, AFTER THE SUSPENSION HAS BEEN IN OPERATION FOR 3000 MILES, AND AT SUSPENSION INSPECTION CYCLES. FAILURE TO DO SO CAN RESULT IN LOSS OF WARRANTY.
2) TORQUE VALUES GIVEN ARE SPECIFIED FOR THE FASTENERS IN THE CONDITION SUPPLIED BY CUSH CORPORATION.
3) CAUTION: FASTENERS SHOULD NEVER BE REUSED IF REMOVED OR LOSS OF CLAMP LOAD OCCURS. FOR PROPER JOINT CLAMPING CONTACT CUSH FOR REPLACEMENT FASTENERS.
4) CAUTION: OVER-TORQUEING FASTENERS COULD RESULT IN MATERIAL FAILURE.

Torque Specs			Lubed (Ft-Lbs) (Anti Sieze)		Dry (Ft-Lbs)	
Description	Size	Grade	Min	Max	Min	Max
U-Bolt, Trunnion Tube	1 1/8"	8/C	670	750	-	-
Cap Bolts	5/8"	8/C	-	-	230	285
U-Bolt, Cap	3/4"	8/C	-	-	330	380

U-Bolt Torque Sequence



ORIGINAL-INSTALLATION INSPECTION NOTES, VERIFY THAT:

1) THE INSTALLATION CLEARANCE REQUIREMENTS HAVE BEEN MET.
2) THE AXLES HAVE BEEN ALIGNED PROPERLY.
3) THE SUSPENSION WELDS HAVE BEEN PROPERLY COMPLETED PER SPECIFICATIONS.
4) ALL SUSPENSION BOLT TORQUES ARE TO CUSH SPECIFICATIONS.
5) THE SUSPENSION CAN ARTICULATE FREELY THROUGH ITS ENTIRE TRAVEL AND ADEQUATE COMPONENT CLEARANCES HAVE BEEN PROVIDED.

INSPECTION: 30-DAY, 90-DAY, & AT EVERY BRAKE LINING CHANGE.

1) CHECK INSTALLATION CLEARANCE REQUIREMENTS.
2) CHECK FOR ANY SIGNS OF WEAR OR COMPONENT INTERFERENCES.
3) CHECK SUSPENSION ATTACHMENT WELDS FOR SIGNS OF PROBLEMS.
4) CHECK THAT ALL BOLTS ARE IN PLACE AND SECURELY TORQUED.
5) CHECK PIVOT BUSHINGS & CLAMPING CONNECTIONS FOR PROBLEMS.
6) CHECK THAT THE TRAILER IS LEVEL.
7) CHECK TIRE WEAR THAT MIGHT INDICATE AN ALIGNMENT PROBLEM.

AXLE INSTALLATION NOTES

1) LOCATE AND MARK THE CENTER OF THE AXLE. MARK FROM THE CENTER OF THE AXLE THE LOCATIONS OF THE SPRING CENTERS (SC). IF YOU HAVE CAMBERED AXLES THEN YOU SHOULD MARK AXLE TOP AND ACCOMMODATE THE CAMBER.
2) MOUNT THE AXLES TO THE SUSPENSION OR IF YOU HAVE A CUSH TANDEM AXLE FIXTURE, MOUNT THE AXLES INTO THE FIXTURE AND SQUARE THEM AND THEN MOUNT THE SUSPENSION TO THE AXLES. CENTER THE AXLE MOUNTINGS ON THE AXLE AND CHECK THE DISTANCE TO EACH BRAKE FLANGE SPIDER FOR QC.
3) CAUTION: DO NOT ATTACH WELDING GROUND TO U-BOLTS, SPRINGS, OR ENDS OF AXLES THAT MAY DAMAGE BEARING RACE OR SEALS.
4) CLAMP THE AXLE INTO THE AXLE SEAT AND CHECK AXLE ALIGNMENT +/- 1/16" SIDE TO SIDE & AXLE TO AXLE. IF OUT OF ALIGNMENT, ADJUST ONE AXLE IN THE AXLE SEAT TO GET INTO ALIGNMENT & RECHECK BEFORE TACKING IN PLACE. CHECK THAT YOU HAVE PROPER TIRE CLEARANCE.
5) TACK WELD EACH AXLE SEAT WITH A ½" WELD ON BOTH SIDES AT THE CENTER OF THE AXLE SEAT. RECHECK ALIGNMENT AND THEN WELD AXLE SEATS WITH ½" WELD PER INSTRUCTIONS FOR HALF-SEAT, FULL WRAP CUSHMATE CAP, OR U-BOLTED & WELDED SEAT.

AXLE WELDING NOTES, SEE CUSH PROCEDURE A0001:

WARNING: REVIEW CUSH RECOMMENDED STEEL WELDING PROCEDURES
1) SUSPENSION COMPONENTS AND THEIR MATING PARTS MUST BE AT A MINIMUM TEMPERATURE OF 60°F (15.5°C) AND FREE FROM MOISTURE, DIRT, SCALE, PAINT, GREASE, AND OTHER CONTAMINATES.
2) FOR THE BEST AXLE TO BEAM WELD JOINT USE THE FOLLOWING WIRE.
AXLE WELD WIRE: AWS ER70S-6
3) CREATE THE ROOT PASS TO CONNECT THE AXLE TO THE TRAILING ARM BEAM. HIT THE AXLE SEAT TABS DOWN TO THE AXLE TO GIVE YOU PARENT METAL FOR PASS 2 AND
4) FINISHED AXLE WELD SHOULD BE A MULTI-PASS 1/2" WELD.

U-BOLT INSTALLATION NOTES:

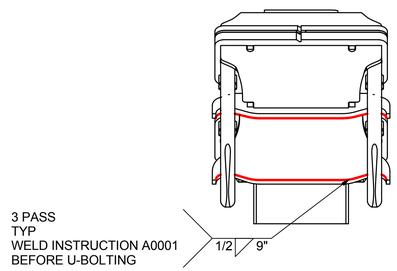
WARNING: DO NOT APPLY ANY LUBRICANTS TO THE U-BOLTS
1) U-BOLTS SHOULD ONLY BE INSTALLED AND TORQUED AFTER COMPLETION OF AXLE WELDING. ALLOW SUFFICIENT AXLE COOLING TIME BEFORE APPLYING TORQUE TO U-BOLTS.
2) SNUG U-BOLTS EVENLY BEFORE APPLYING TORQUE. CHECK THAT U-BOLTS ARE PARALLEL AND SQUARE TO AXLE.
3) TORQUE U-BOLTS IN A THREE STEP PROCESS TO AVOID AN IMPROPERLY CLAMPED AXLE AND RESULTING DAMAGE. THIS ALLOWS THE U-BOLT TO STRETCH/RELAX AND HOLD TORQUE. PROPER TIGHTENING WILL ALLOW EQUAL AMOUNT OF TREAD ABOVE EACH NUT.
FIRST STEP-1/3 OF FINAL TORQUE
SECOND STEP-2/3 OF FINAL TORQUE
THIRD STEP-FINAL TORQUE

SUSPENSION BUMP-OUTS (R STYLE, RUBBER BUSHED)

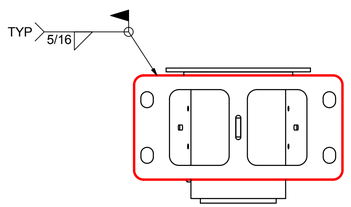
RUBBER TRUNNION BUSHINGS ARE DESIGNED SO THAT THE TRAILER OSCILLATION SHOULD NOT EXCEED +/- 15 DEGREES OF ARTICULATION FROM LEVEL. THE SPRING END CAP BOXES CAN ACCEPT A FLAT BUMP OUT STOP. THESE END STOPS ARE PROVIDED BY THE INSTALLER TO LIMIT OSCILLATION, ASSURE TIRE CLEARANCE, AND ASSURE TRAILER OR PEDESTAL CLEARANCE.

TRUNNION HANGER MOUNTING TO ASSEMBLY

1) CUSTOMER IS RESPONSIBLE FOR PROPER HANGER SUPPORT STRUCTURE TO ATTACH TO TRAILER FRAME.
2) CUSTOMER TO MOUNT THE TRUNNION HANGER TO TRAILER FRAME PEDESTAL WITH LOOSE BOLTS.
3) CHECK THAT TOPS OF TRUNNION HANGERS ARE SQUARE TO EACH OTHER AND THEN CUSTOMER/INSTALLER TO TIGHTEN THE ¾" TRUNNION HANGER TUBE CLAMP BOLTS TO SPECIFICATION OR CHECK THAT THEY ARE TORQUED PROPERLY IF TIGHT FROM CUSH AND ARE FLAT AND CENTERED PROPERLY TO FIT TRAILER FRAME MOUNTING.
4) ALIGN THE FRONT AXLE TO THE KINGPIN FRAME AND TIGHTEN THE, CUSTOMER SUPPLIED GRADE 5 OR BETTER, 5/8" TRUNNION HANGER FASTENERS TO PROPER SPEC, RECHECK ALIGNMENT TO FRONT/REAR AXLE FROM KINGPIN.
5) WELD THE TRUNNION HANGER BASE TO THE TRAILER FRAME ALL AROUND WITH A 5/16" WELD. NOTE, IF THE INSTALLER IS USING A SINGLE SPACER IT IS TO BE WELDED ALL AROUND TO BOTH THE TRAILER FRAME AND THE TRUNNION HANGER BASE.



AXLE SEAT WELDING



BOLT TRUNNION HANGER TO TRAILER FRAME AND THEN WELD PER WELD CALLOUT

PATENT PENDING

DCN#	REV	DESCRIPTION	DATE	BY	CHK	APP

DRAFTSMAN: DWalker 6/2/2015
CHECKED: CHK
RELEASED: APP
WEIGHT: N/A
MATERIAL:

TITLE:
FABFLEX
CUSH SINGLE POINT 50K, TRUNNION MOUNT HANGER, W/ SQ U-BOLTS X" SPRING CENTERS OVERSLUNG AXLE-OVERSLUNG TRUNNION P OR R BUSHINGS, 3/4" TUBE WALL

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PROJECT NO:	SHEET:	SCALE:	REV:	PART/DRAWING NO:
16154	3 OF 4	A-SIZE: NTS B-SIZE: 1/X D-SIZE: 1/6	-	CSPF503Yx-x

Chart (-X)	Unloaded		Loaded (1.5" Spring Deflection)									
Overslung Axles-OSA Overslung Trunnion-OST Hanger Model No. H	Mounting Height "MH"	Axle Spacing "AS"	Mounting Height "MHL"	Axle Spacing (+/- 0.13) "ASL"	Trunnion Height "TH"	Trunnion Hgr Centers "THC"	50K 3/4"W Tube Length "TL"	Spring Centers "SC"	Outside Hanger "OH"	Axle Track "T"	Item #5 P/N	Qty
CSPF503Y(P/R)-37UH2.5	4.5	50.0	3.0	51.0	2.5	21.13	48	37	26.63	71.5	AW1326-37CH2.5	1
CSPF503Y(P/R)-37UH4.5	6.5	50.0	5.0	51.0	4.5	21.13	48	37	26.63	71.5	AW1326-37CH4.5	1
CSPF503Y(P/R)-37UH6.5	8.5	50.0	7.0	51.0	6.5	21.13	48	37	26.63	71.5	AW1326-37CH6.5	1
CSPF503Y(P/R)-37UH8.5	10.5	50.0	9.0	51.0	8.5	21.13	48	37	26.63	71.5	AW1326-37CH8.5	1
CSPF503Y(P/R)-37UH		50.0		51.0			48	37	26.63	71.5	T0242-48	1
CSPF503Y(P/R)-38UH2.5	4.5	50.0	3.0	51.0	2.5	22.13	49	38	27.63	71.5	AW1326-38CH2.5	1
CSPF503Y(P/R)-38UH4.5	6.5	50.0	5.0	51.0	4.5	22.13	49	38	27.63	71.5	AW1326-38CH4.5	1
CSPF503Y(P/R)-38UH6.5	8.5	50.0	7.0	51.0	6.5	22.13	49	38	27.63	71.5	AW1326-38CH6.5	1
CSPF503Y(P/R)-38UH8.5	10.5	50.0	9.0	51.0	8.5	22.13	49	38	27.63	71.5	AW1326-38CH8.5	1
CSPF503Y(P/R)-38UH		50.0		51.0			49	38	27.63	71.5	T0242-49	1
CSPF503Y(P/R)-43UH2.5	4.5	50.0	3.0	51.0	2.5	27.13	54	43	32.63	77.5	AW1326-43CH2.5	1
CSPF503Y(P/R)-43UH4.5	6.5	50.0	5.0	51.0	4.5	27.13	54	43	32.63	77.5	AW1326-43CH4.5	1
CSPF503Y(P/R)-43UH6.5	8.5	50.0	7.0	51.0	6.5	27.13	54	43	32.63	77.5	AW1326-43CH6.5	1
CSPF503Y(P/R)-43UH8.5	10.5	50.0	9.0	51.0	8.5	27.13	54	43	32.63	77.5	AW1326-43CH8.5	1
CSPF503Y(P/R)-43UH		50.0		51.0			54	43	32.63	77.5	T0242-54	1
CSPF503Y(P/R)-44UH2.5	4.5	50.0	3.0	51.0	2.5	28.13	55	44	33.63	77.5	AW1326-44CH2.5	1
CSPF503Y(P/R)-44UH4.5	6.5	50.0	5.0	51.0	4.5	28.13	55	44	33.63	77.5	AW1326-44CH4.5	1
CSPF503Y(P/R)-44UH6.5	8.5	50.0	7.0	51.0	6.5	28.13	55	44	33.63	77.5	AW1326-44CH6.5	1
CSPF503Y(P/R)-44UH8.5	10.5	50.0	9.0	51.0	8.5	28.13	55	44	33.63	77.5	AW1326-44CH8.5	1
CSPF503Y(P/R)-44UH		50.0		51.0			55	44	33.63	77.5	T0242-55	1

Model Definition				Unit configuration				If Cush Integrated Axles	
Model	Model Type	Bushing Style		Spring Centers	Hanger Style	Hanger Height		Chamber & Axle Combo	Front/Rear NonABS or ABS (track)
CSPF503	Y	R	(-)	37U	H	Blank=none	(-)	TT5	C05N/C05A (71.5")
CSPF505	F	P		38U	S	2.5		TU5	C05N/C01A (71.5")
CSPF443	Z			43U	W	45		TT4	C04N/C04A (77.5")
	D			44U		6.5		TU4	C04N/C02A (77.5")
	L			XXU		8.5		DB1	D01A/D01A (71.5")
	T					12		DB2	D02A/D02A (77.5")
	U					13.5			
	N					15			
	H					17			
						19			
			(-)				(-)		
			(-)				(-)		

PATENT PENDING

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PROJECT NO: 16154
SHEET: 4 OF 4
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REV: -
PART/DRAWING NO: CSPF503Yx-x