CUSH GENERAL INSTALLATION NOTES, SEE CUSH SERVICE/INSTALLATION MANUAL 1) Measure trailing arm centers and track to verify your requirements. **INSTALLATION DISCLAIMER NOTES:**

1) It is important that the proper Cush suspension is chosen for the trailer application. The following criteria Undercoating will effect clamp load of the pivot connection fastener and can damage the 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.

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:

so can result in loss of warranty.

1) *DUAL RATE PIVOT BUSHING JOINT SNUG FROM FACTORY. CUSTOMER TO TORQUE THIS JOINT TO SPECIFICATION AFTER AXLE ALIGNMENT.

2) 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

3) Torque values given are specified for the fasteners in the condition supplied by Cush Corporation. DO NOT APPLY ANY ADDITIONAL LUBRICANTS.

4) CAUTION: Fasteners should never be reused if removed or loss of clamp load occurs. For proper joint clamping contact Cush for replacement fasteners.

5) CAUTION: Over-torquing fasteners could result in material failure.

MODEL: CP25C				(Ft*Lbs)		(Nm)	
Fastener Torque Specs	Size	Thread	Grade	Min.	Max.	Min	Мах.
Air Spring Tower Mount Nut	3/8	16-UNC	5/B	30	45	41	61
Air Spring Bottom Mount TopLock Nut	1/2	13-UNC	5/B	25	35	34	47
Air Spring Top Mount Nut	3/4	16-UNF	5/B	40	50	54	68
Shock Mount Nut/Bolt	3/4	10-UNC	5/B	210	235	285	319
Slot-Align Pivot Bolt & Nut	7/8	9-UNC	8/C	550	600	746	813

INSTALLATION OF "SLOT-ALIGN" NOTES:

OVERVIEW: The "SLOT-Align" pivot joint features outside eccentric cam gear washer that cover the alignment slo and gives the user a economical way to get axle alignment feature. CAUTION: DO NOT APPLY undercoating to the area until after alignment and torque of the pivot bolt.

- With the pivot bolt loose.
- For adjustment, use a breaker bar or other to move the axle forward/rearward.
- The Slot gives you 3/8" pivot movement fore and aft per hanger side. You can use Cush tool W1235 for adjusting pivot gear on one side or both.
- To align the axle, move one side of the suspension to get the axle aligned. If needed, go to the other side of the suspension and move in the opposite direction to fully align the axle.
- After alignment, clamp the joint per Cush torque specifications. After alignment, the suspension installer can weld the outside washer to the hanger Top & Bottom of the gear with 1/2" welds to prevent tampering & for off-road applications. Do not weld on the sides of the gear.

INSTALLATION NOTES:

2) DO NOT APPLY undercoating to the suspension until after completing the alignment. hardware.

3) Mount hangers onto trailer frame per suspension drawing sheets.

4) Place plastic washers on both sides of bush inner metal and insert spacer collars into bush inner sleeve. 5) Measure for fitup then mount Cushride trailing arm/axle assembly into suspension hangers.

NOTE: If the assembly fits tightly, it may be necessary to spread the mounting. DO NOT 3) Required cross member locations maybe shown. Actual size and shape may vary per trailer design. It is GRIND material from suspension components.

6) Place"-Align" gear washer, with indicator in neutral position, and insert pivot bolt/washer

7) Mount pivot washer/nut and torque joint for a snug fit.

8) Adjust "-Align" for proper axle track alignment. 9) Torque bushing pivot bolts per Cush torque instructions.

NOTE: Failure to follow the procedures in the Cush Service and Installation manual and/or properly torque the pivot fasteners at this time can result in a failed pivot connection and a loss of warranty coverage!

10) Install air springs and shocks per suspension installation manual and drawing sheets.

					ıσρ	i idili 6 ci	INIZ	DCaill
Part No.	(In)	Bumper		UP	Spacer	Pivot	Pivot to	Tower
uspension	RIDE	Deflection					Axle	Height
lodel & RH	нт	JOUNCE	REB'D	CONTACT	"D" (In)	"P" (In)	"F" (In)	"TH" (In)
CP25C15	14.0"	3.0"	5.5	2.75	0.18	9	19.7"	1.5
	14.5"	3.5"	5	3.25	0.18	9	19.5	1.5
Shown-	*15.0"	4.0"	4.5	3.75	0.18	9	19.4"	1.5
	1 5.5°	4.5"	4	4.25	0.18	9	19.2"	1.5
	16.0"	5.0"	3.5	4.75	0.18	9	19.0"	1.5
	16.5"	5.5"	3	5.25	0.18	9	18.8"	1.5
CP25C16	15.0"	3.0"	5.5	2.75	0.18	10	19.7"	2.5
	15.5	3.5"	5	3.25	0.18	10	19.5	2.5
	16.0"	4.0"	4.5	3.75	0.18	10	19.4"	2.5
	16.5"	4.5"	4	4.25	0.18	10	19.2"	2.5
	17.0"	5.0"	3.5	4.75	0.18	10	19.0"	2.5
	17.5"	5.5"	3	5.25	0.18	10	18.8"	2.5
CP25C17	16.0°	3.0"	5.5	2.75	0.18	11	19.7"	3.5
	16.5"	3.5"	5	3.25	0.18	11	19.5"	3.5
US HO CP	pension del & RH 25C15 Shown- 25C16	pension RIDE del & RH HT 25C15 14.0" 14.5" Shown- *15.0" 16.0" 16.5" 25C16 15.0" 16.0" 16.5" 17.0" 17.5"	pension RIDE Deflection del & RH HT JOUNCE 25C15 14.0" 3.0" 14.5" 3.5" Shown- *15.0" 4.0" 15.5" 4.5" 16.0" 5.0" 15.5" 3.5" 25C16 15.0" 3.0" 15.5" 3.5" 16.0" 4.0" 16.5" 4.5" 17.0" 5.0" 17.5" 5.5"	pension RIDE Deflection Down del & RH HT JOUNCE REB'D 25C15 14.0° 3.0° 5.5 14.5° 3.5° 5 Shown- *15.0° 4.0° 4.5 15.5° 4.5° 4 16.0° 5.0° 3.5 25C16 15.0° 3.0° 5.5 15.5° 3.5° 5 16.0° 4.0° 4.5 16.5° 4.5° 4 17.0° 5.0° 3.5 17.5° 5.5° 3 25C17 16.0° 3.0° 5.5	pension RIDE Deflection Down BUMPER del & RH HT JOUNCE REB'D CONTACT 25C15 14.0" 3.0" 5.5 2.75 14.5" 3.5" 5 3.25 Shown- *15.0" 4.0" 4.5 3.75 15.5" 4.5" 4 4.25 16.0" 5.0" 3.5 4.75 25C16 15.0" 3.0" 5.5 2.75 15.5" 3.5" 5 3.25 16.0" 4.0" 4.5 3.75 16.0" 4.0" 4.5 3.75 16.5" 4.5" 4 4.25 17.0" 5.0" 3.5 4.75 17.0" 5.0" 3.5 4.75 17.5" 5.5" 3 5.25 25C17 16.0" 3.0" 5.5 2.75	pension RIDE Deflection Down BUMPER Height del & RH HT JOUNCE REB'D CONTACT "D" (m) 25C15 14.0" 3.0" 5.5 2.75 0.18 14.5" 3.5" 5 3.25 0.18 Shown *15.0" 4.0" 4.5 3.75 0.18 15.5" 4.5" 4 4.25 0.18 16.0" 5.0" 3.5 4.75 0.18 25C16 15.0" 3.0" 5.5 2.75 0.18 25C16 15.0" 3.0" 5.5 2.75 0.18 15.5" 3.5" 5 3.25 0.18 25C16 15.0" 3.0" 5.5 2.75 0.18 16.0" 4.0" 4.5 3.75 0.18 16.5" 4.5" 4 4.25 0.18 17.0" 5.0" 3.5 4.75 0.18 17.5" 5.5"	pension RIDE Deflection Down BUMPER Height Height del & RH HT JOUNCE REB'D CONTACT "D" (m) "P" (m) 25C15 14.0" 3.0" 5.5 2.75 0.18 9 14.5" 3.5" 5 3.25 0.18 9 Shown- *15.0" 4.0" 4.5 3.75 0.18 9 15.5" 4.5" 4 4.25 0.18 9 16.0" 5.0" 3.5 4.75 0.18 9 25C16 15.0" 3.0" 5.5 2.75 0.18 10 15.5" 3.5" 5 3.25 0.18 10 25C16 15.0" 3.0" 5.5 2.75 0.18 10 16.0" 4.0" 4.5 3.75 0.18 10 16.5" 4.5" 4 4.25 0.18 10 17.0" 5.0" 3.5 4.75	pension RIDE Deflection Down BUMPER Height Height Axle del & RH HT JOUNCE REB'D CONTACT "D" (m) "P" (m) "F" (m) 25C15 14.0" 3.0" 5.5 2.75 0.18 9 19.7" 14.5" 3.5" 5 3.25 0.18 9 19.5" Shown *15.0" 4.0" 4.5 3.75 0.18 9 19.4" 15.5" 4.5" 4 4.25 0.18 9 19.2" 16.0" 5.0" 3.5 4.75 0.18 9 19.0" 25C16 15.0" 3.0" 5.5 2.75 0.18 10 19.7" 16.5" 3.5" 5 3.25 0.18 10 19.5" 16.0" 4.0" 4.5 3.75 0.18 10 19.4" 16.5" 4.5" 4 4.25 0.18 10 19.2"

ORIGINAL-INSTALLATION INSPECTION NOTES, verify that: 1) The installation clearance requirements have been met.

4) All suspension bolt torques are to Cush specifications.

adequate component clearances have been provided.

3) The suspension frame bracketry and air spring plate welds have been

6) The suspension can articulate freely through its entire travel and

INSPECTION: 30-DAY, 90-DAY, & at every brake lining change.

2) Check for any signs of wear or component interferences.

4) Check that all bolts are in place and securely torqued.

3) Check suspension attachment welds for signs of problems.

5) Check pivot bushings & clamping connections for problems.

Too Hanger Horz Beam

11

11

11

11

19.4"

19.2"

19.0"

18.8"

0.18

0.18

0.18

0.18

3.5

3.5

3.5

3.5

7) Check tire wear that might indicate an alignment problem.

2) The axles have been aligned properly.

5) The suspension ride height is set properly.

1) Check installation clearance requirements.

properly completed per specifications.

6) Check that the trailer is level.

17.0°

17.5"

18.0"

18.5"

4.0"

4.5

5.0"

5.5

4.5

4

3.5

3

3.75

4.25

4.75

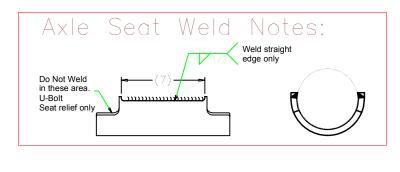
5.25

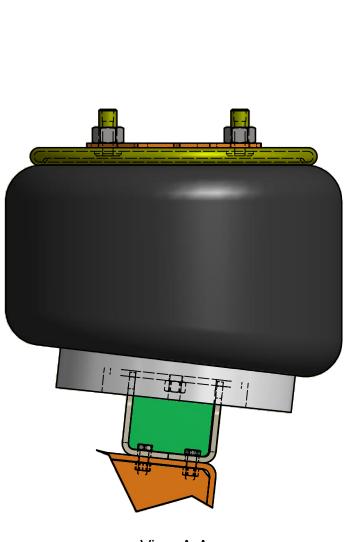
2) For the best axle to beam weld joint use the following wire. Axle Weld Wire: AWS ER70S-6

3) Create the root pass to connect the axle

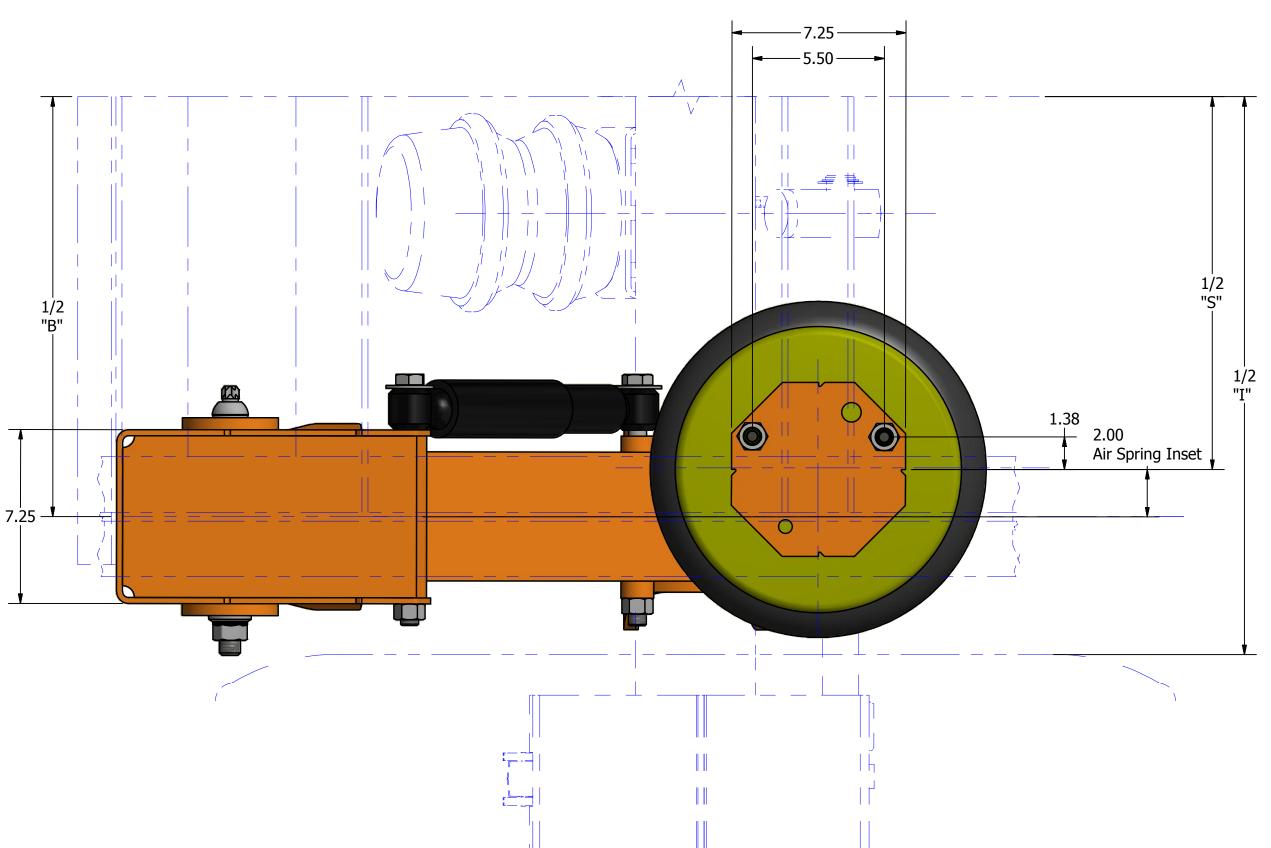
to the trailing arm beam on the straight edge weld. Hit the axle seat tabs down to the axle to give you parent metal for pass 2

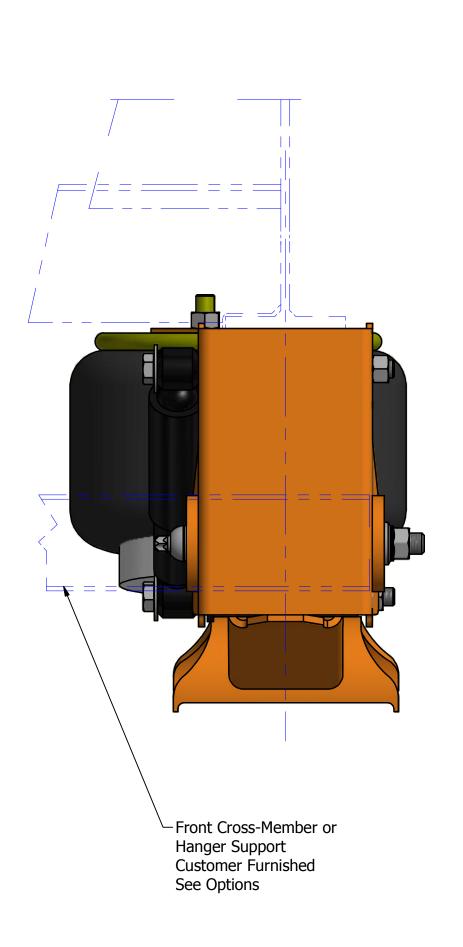
and 3. Finnished axle weld should be a multi-pass 1/2" weld.

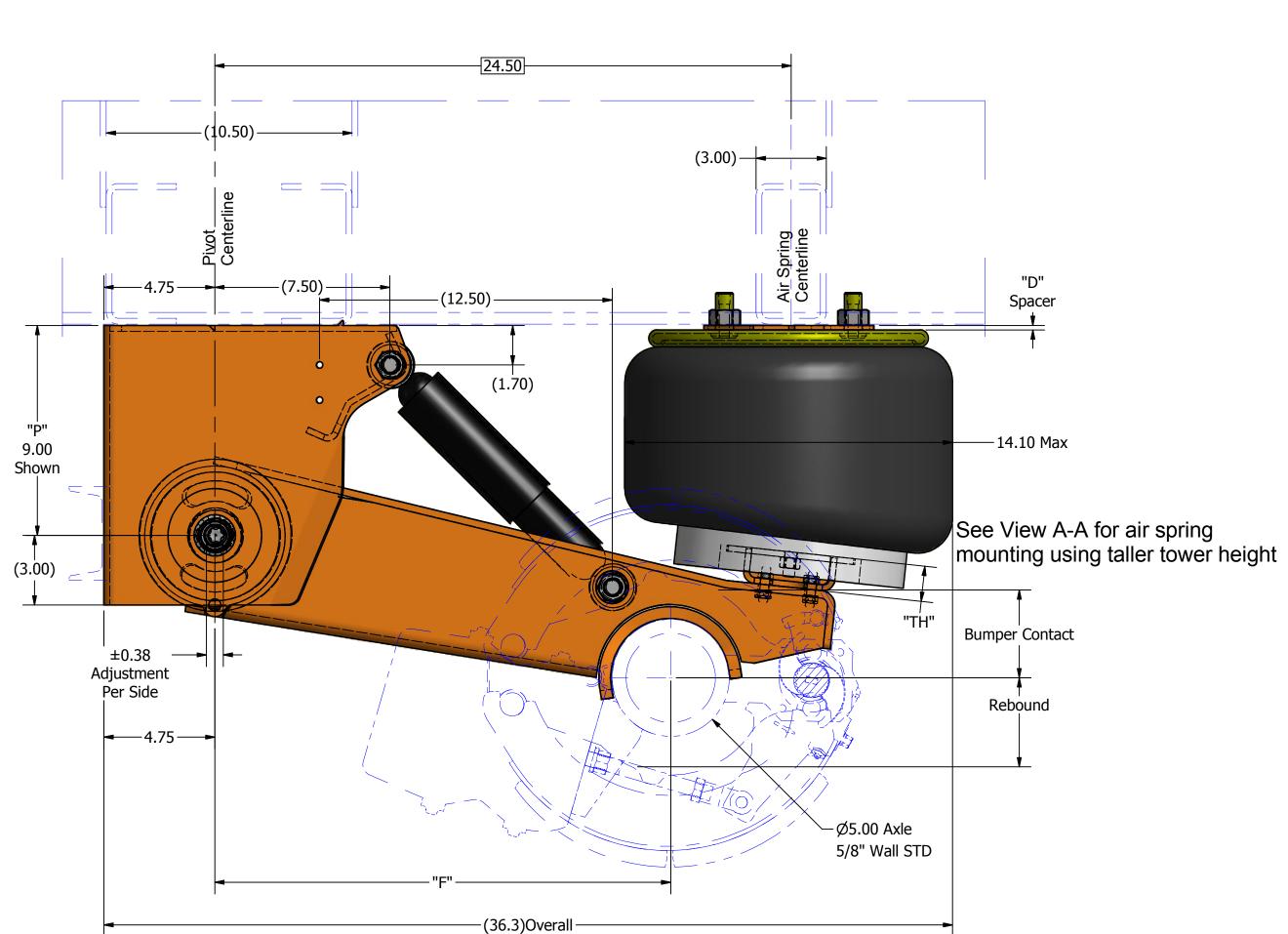




View A-A SCALE 1/4 Air Spring Lower Tower Height "TH" = 3.5" Shown for T17 16"/18" Ride Heights

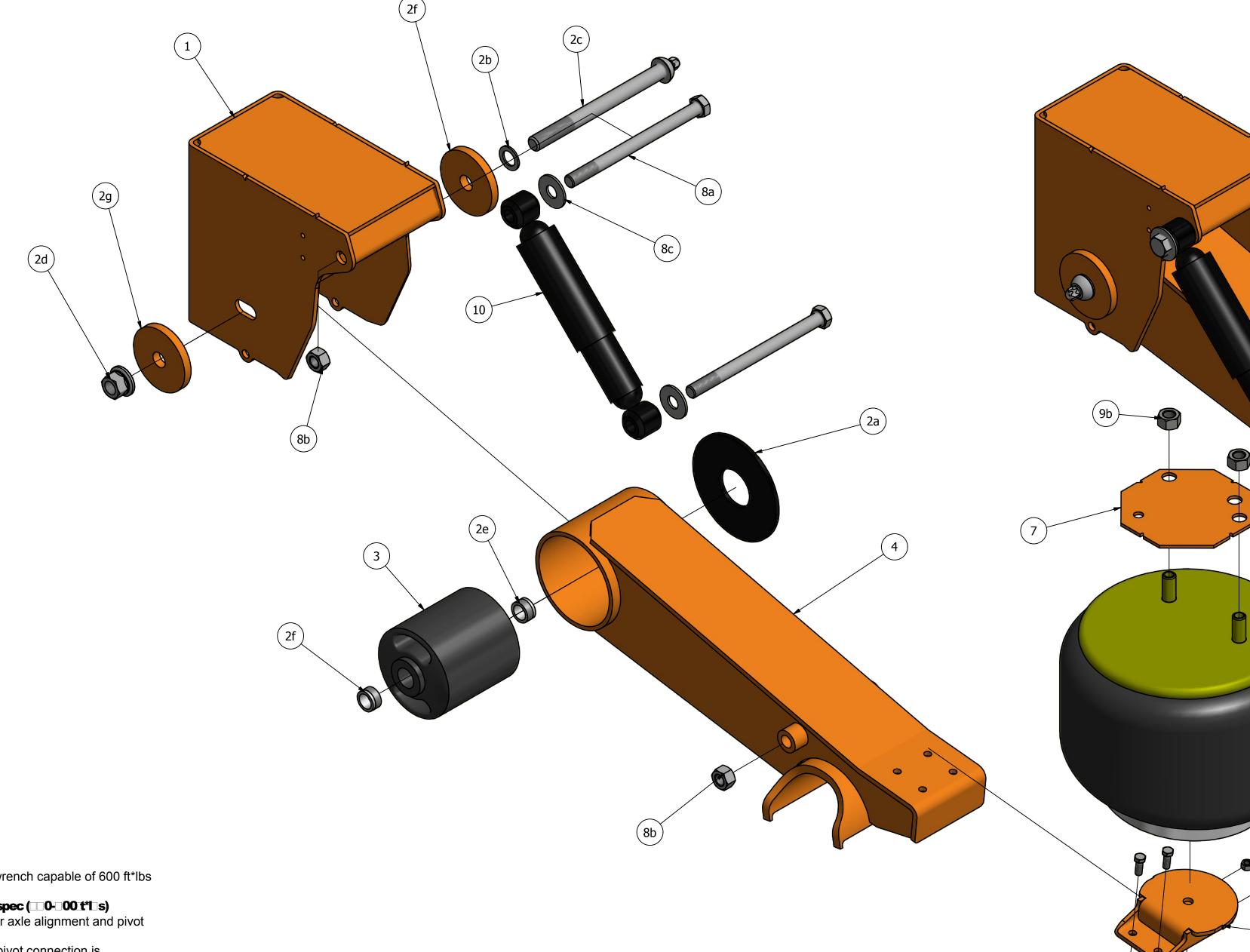


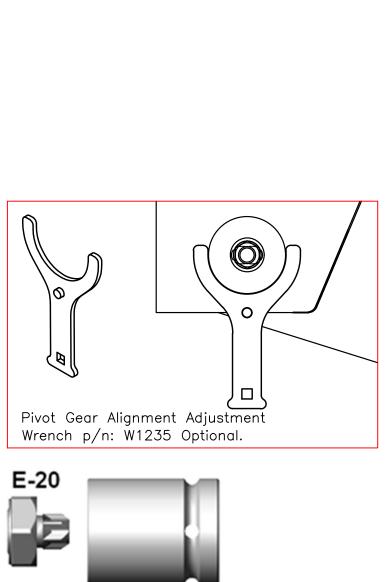


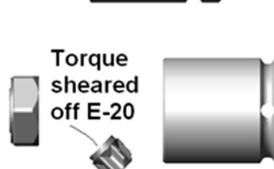


eral	l					-					
	DCN#	В		Fixe	ed Pivot k	Kit and Gears	3/18/15	DJW	СНК	APP	
	DCN#	Α		Upo	dated Lay	out to color	1/9/15	DJW	CHK	APP	
	DRAFTSMAN: DJW CHECKED: CHK RELEASED: APP)14	Part List Installation Sheet Cush Performance Top Mount Half Wrap 25000 Gross Suspension Weight Rating							
	WEIGHT: N/A MATERIAL:		14"/16" Ride Height Weld-On Wingless Hanger Mount Suspensions							15	
	All of the Information shown herein is the intellectual property of Cush Corp and is submitted only on a			TOLER. .XX .XX)	Nixa, MO. USA PHONE: 417-724-1239 www.cushcorp.com						
	confidential basis. The recipient agrees that no disclosure of this information will be made to a third party without written consent of Cush Corp.		PROJECT NO: 14208	SHEET: 1 OF 2	A-SIZE: NTS B-SIZE: 1/X D-SIZE: 1/4	REV:		PART/DRAWING NO: CP25C(15/16/17)			

				(Ft*Lbs)		(Nm)	
Fastener Torque Specs	Size	Thread	Grade	Min.	Max.	Min	Мах.
Air Spring Tower Mount Nut	3/8	16-UNC	5/B	30	45	41	61
Air Spring Bottom Mount TopLock Nut	1/2	13-UNC	5/B	25	35	34	47
Air Spring Top Mount Nut	3/4	16-UNF	5/B	40	50	54	68
Shock Mount Nut/Bolt	3/4	10-UNC	5/B	210	235	285	319
Slot-Align Pivot Bolt & Nut	7/8	9-UNC	8/C	550	600	746	813







Performance Features
Non-Captured axle

7 Shear pivot bolt head for easy install
Industry standard bushings & shocks
Slot-Align axle adjustment of +/-.38" at hangers
(Optional Alignment Wrench Tool, W1235)

Integrated HCV mountings for ACK-0206

Available Options

*AudiTorx (E-20) Installation & Inspection Notes:

- Required Materials: E-20 Torx socket, 1-5/16" nut wrench, Air Impact wrench capable of 600 ft*lbs
- (813 N*m) Minimum, alignment tools.

 Ia Torx E-20 soc et is not a aila le, tor ue oft nut per / "Grade spec (00-001*l s)
- DO NOT APPLY undercoating to the suspension hanger area until after axle alignment and pivot
- bolt torque has been applied.Cush does not recommend reuse of pivot fastener hardware once the pivot connection is
- disassembled, use a new bolt and nut.
- Check for proper tire clearance with fastener hardware. The AudiTorx bolt should be installed from the inboard side of the frame hanger to allow access with an air impact when tires are on, if tire clearance is an issue with fastener hardware, then the shear-type bolt head should be installed from the outboard side.
- NOTE: Check for any flashing or obstructions to cause the bearing washers to be raised and not
- allow flush mounting against the hanger sides (gear or eccentric type).Check proper axle alignment, see installation manual for instructions on alignment.
- Snug the pivot fasteners so that the alignment washers do not move while applying initial torque, recheck alignment.
- Torque the shear-type pivot bolt with the E-20 Torx drive socket tool until the bolt's Torx head shears off.
 The E-20 Torx drive socket should fully engage the Torx shear head before and while applying
- torque.Apply paint to the sheared away Torx area as a rust preventative.

