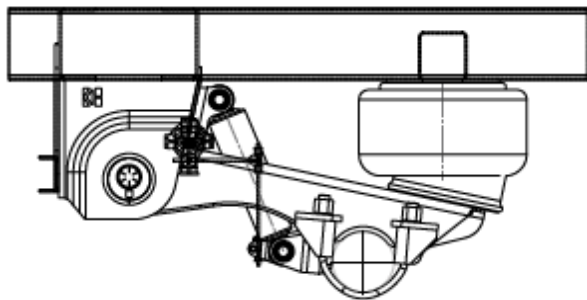
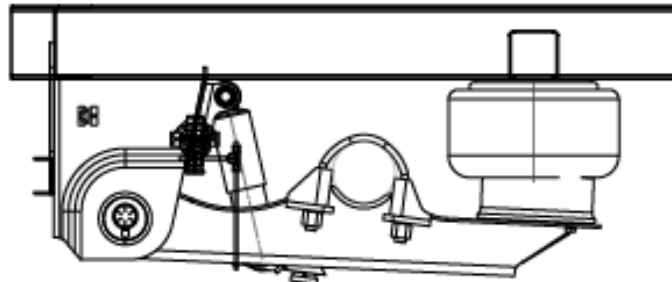


# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## KT AIR SUSPENSION (Engineering Lit. No. KL006)



**KT250 T  
KT300T**



**KT250U  
KT300U**

### Contents

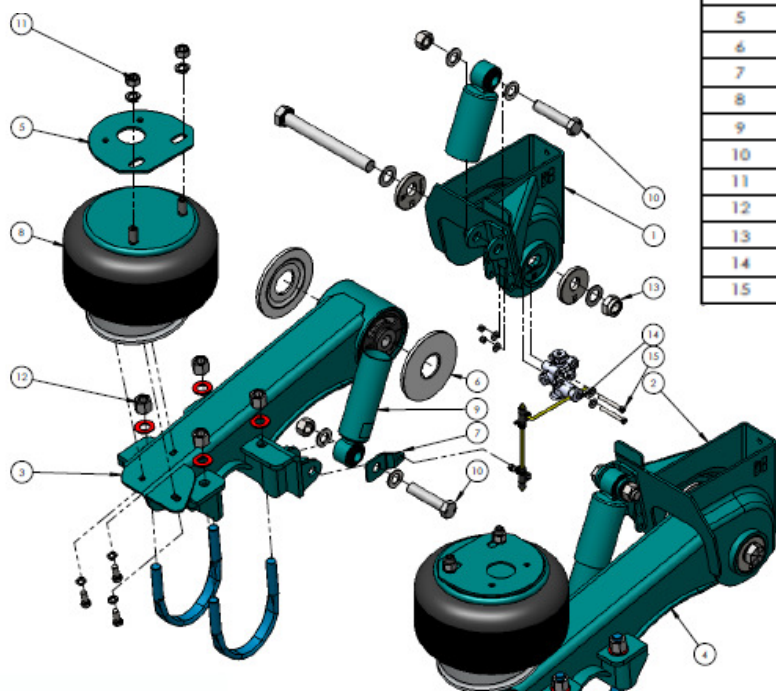
1. Preassembly Considerations
2. KT Welding Instruction – Axle Connection
  - Engineering LIT No: KL004
3. KT Welding Instruction – Suspension Mounting
  - Engineering LIT No: KL005
4. KT Tightening Instruction
  - Engineering LIT No: KL003
    - Fasteners sizes and torque settings
    - Pivot Alignment
    - Height Control Valve (HCV) setting
5. Axle Alignment
6. Torque Decal
7. Maintenance

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## 1. Preassembly Considerations

- Check if the correct parts have been supplied.
- Check if the installation drawings are available and match the parts.
- Check track size, axle positioning, brake booster orientation before welding.
- Ride height , hubs, wheels and tyre size need to agree with the application
- Are the correct equipment and tools available to do the installation?
- Only skilled personnel should be in charge of the installation.
- FKH KT suspension parts description:

ITEM NO.	DESCRIPTION	QTY.
1	HANGER ASSY-203mm Pivotal Height, 41.5mm Shock Height - LH	1
2	HANGER ASSY-203mm Pivotal Height, 41.5mm Shock Height - RH	1
3	TRAILING ARM ASSEMBLY C/W BUSH - 12 deg - LH	1
4	TRAILING ARM ASSEMBLY C/W BUSH - 12 deg - RH	1
5	PLATE, UPPER - AIRBAG	2
6	WEAR PAD - HANGER	4
7	BRACKET-LEVEL VALVE ROD CONNECTION	1
8	AIRSPRING	2
9	SHOCK ABSORBER	2
10	VERTICAL SHOCK HARDWARE PACK	4
11	AIRBAG FASTENER KIT (KT O/S)	2
12	AXLE U-BOLT ASSEMBLY KIT	4
13	PIVOT BOLT KIT	2
14	HEIGHT CONTROL VALVE KIT	1
15	HEIGHT CONTROL VALVE MOUNTING KIT	1



**NOTE:**  
 See the FKH Parts View  
**KPS-001-1112**  
 for all the part numbers.

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## 2. KT Welding Instruction – Axle Connection

### STEP 1

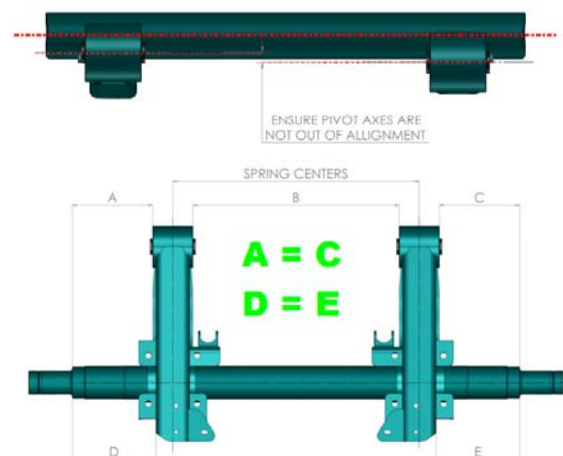
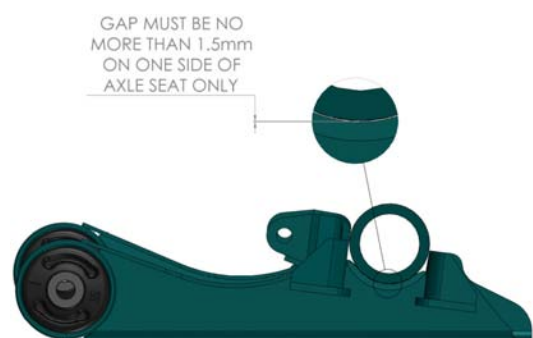
#### Weld Specification:

1. Preheat the axle connection at the axle and suspension seat if recommended.
2. Suspension welding surface must be free from grease, paint, moisture and dirt.
3. Welding parameters:
  - Standard electrode: AWS E-7018 (over dried)
  - Standard wire: AWS ER-70S-X
  - Volts: 26-30 DCRP
  - Current: 275-325 Amps
  - Gas: 86%Ar, 14% CO<sub>2</sub> at 30-35 CFH

### STEP 2

#### Pre-weld Setup and Measurement:

1. Place the suspension on a smooth level surface.
2. Place the axle in line with trailing arm seat and accurately centre axle relative to the arms.
3. Locate the camshafts in their proper positions.
4. The arms must remain vertically parallel to each other and square to the axle.
5. Clamp and secure the arm assembly to the axle.



#### IMPORTANT:

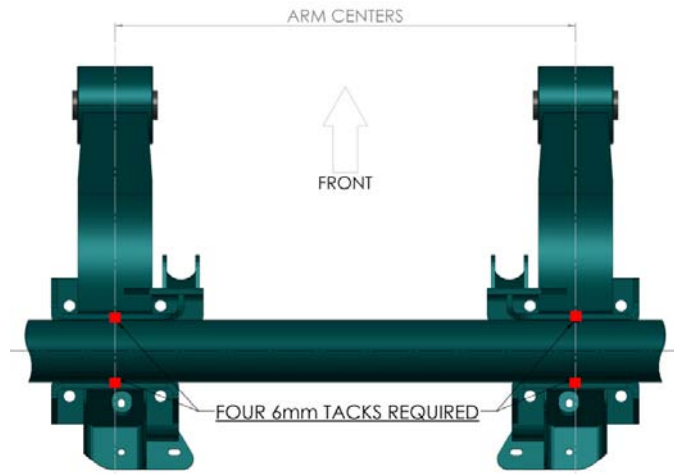
- Consult axle manufacturer for preheating specifications and do not concentrate the heat in one area.
- Do not over tighten clamps. The arm pivots must remain parallel.
- At least one side arm must seat on the axle firmly, but non-seated side gap must be no more than 1.5mm.
- U-bolts should be installed after completion of welding (allow a sufficient cool down period).

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## STEP 3

### Tacking Length and Placement:

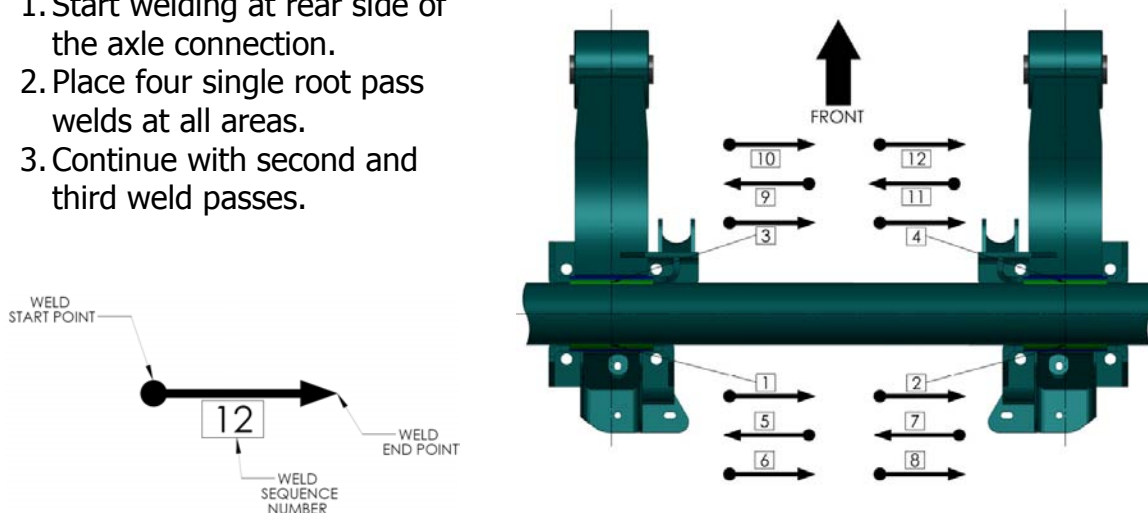
1. Tack the axle to the arm near the centre, as shown.
2. Double check measurement before commencing welding.



## STEP 4

### Welding Direction and Sequence:

1. Start welding at rear side of the axle connection.
2. Place four single root pass welds at all areas.
3. Continue with second and third weld passes.



### IMPORTANT:

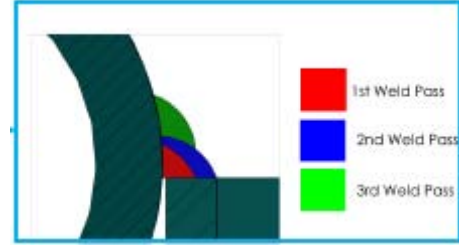
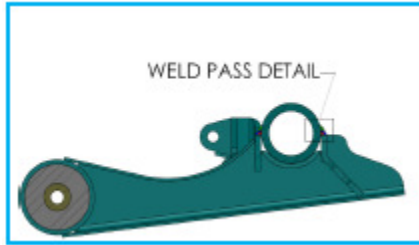
- Make sure tacks are near the seat centre.
- Make sure all 4 root pass welds are completed before proceeding to next weld pass stage.

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## STEP 5

### Welding Size and Location:

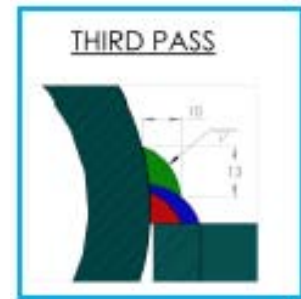
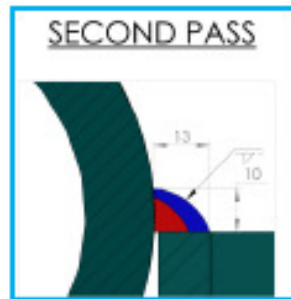
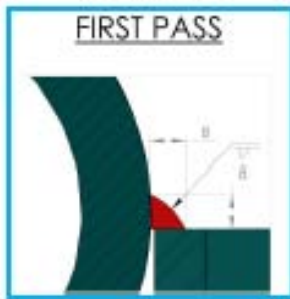
1. Perform three weld passes as shown



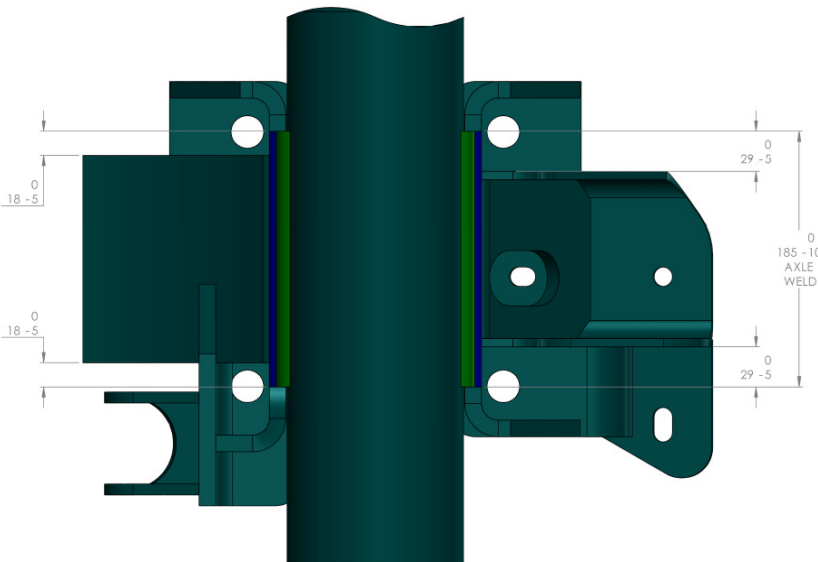
1<sup>st</sup>

2<sup>nd</sup>

3<sup>rd</sup>



1. Accurately perform weld passes to specified length



### IMPORTANT:

- All axle seat connections require three weld passes.
- Do not wrap welds around axle seat corners.

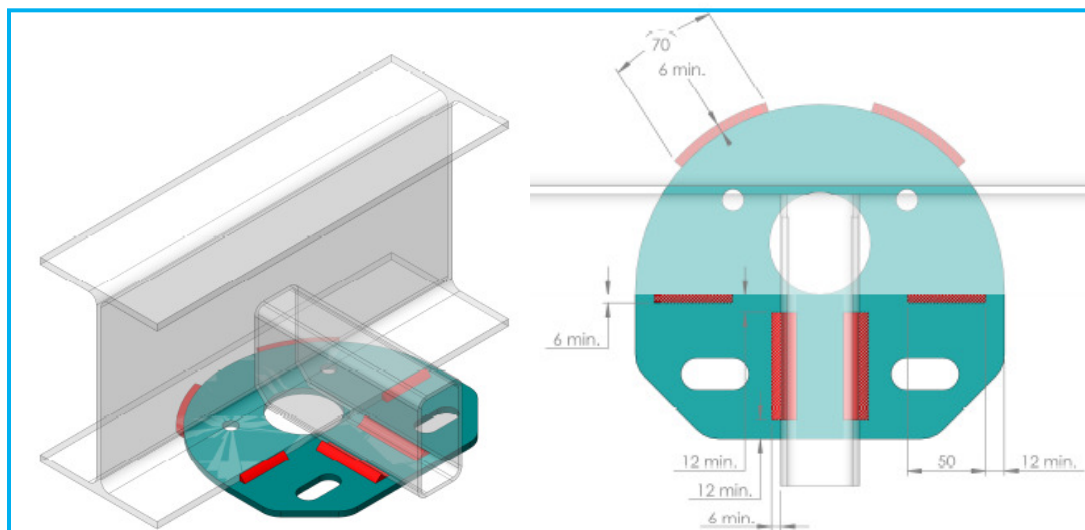


### CAUTION:

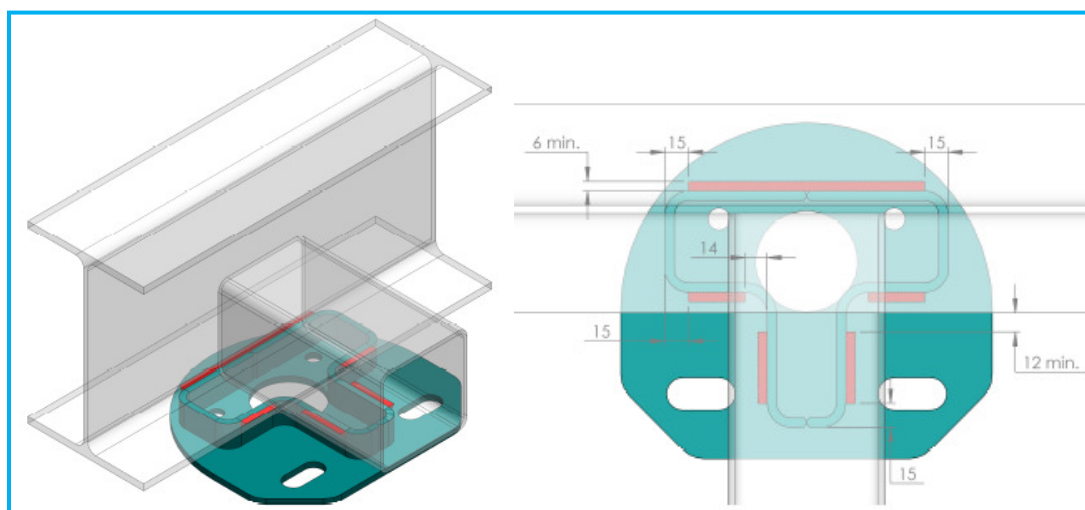
- Avoid all cold laps and undercuts. Fill all craters. Clean weld between each pass.
- Failure to follow properly procedures can result in loss warranty coverage.

## 3. KT Welding Instruction – Suspension Mounting

### AIR SPRING MOUNTING



Mounting Plate without Spacer



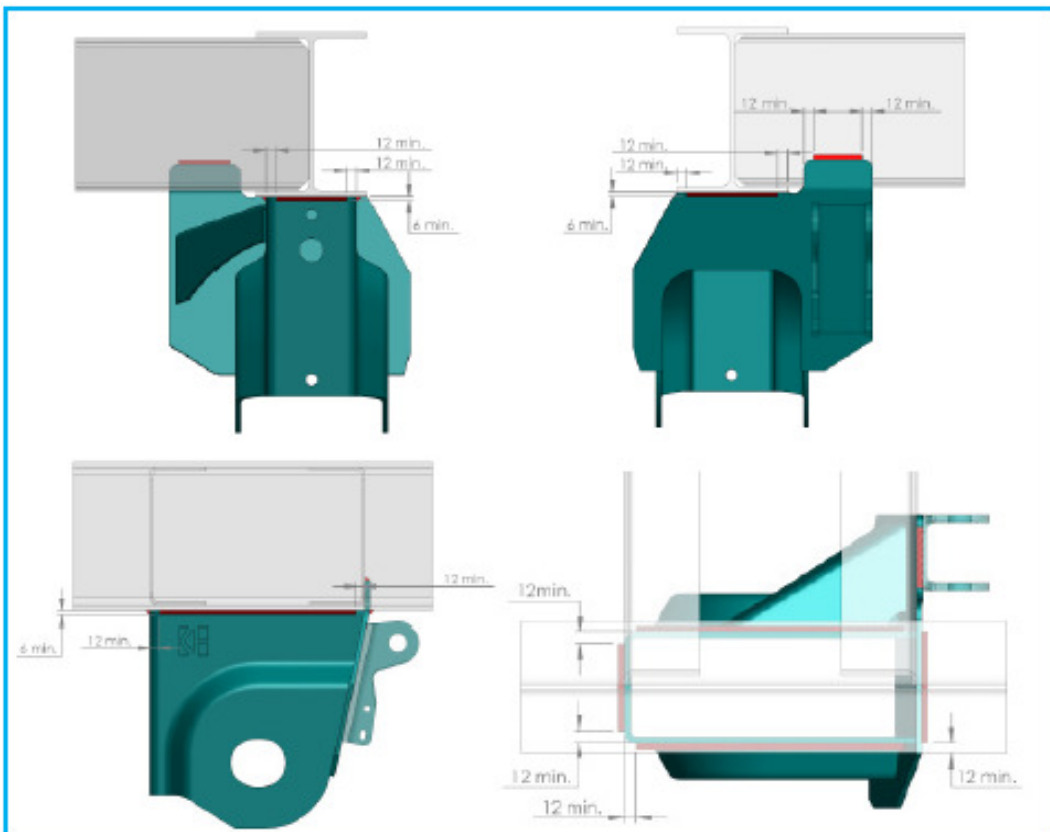
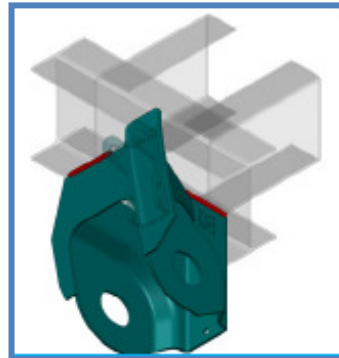
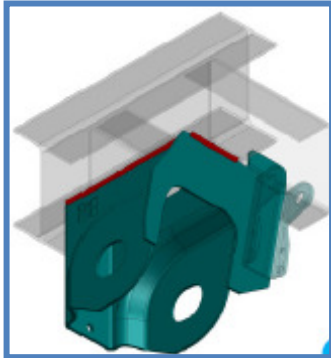
Mounting Plate with Spacer

**! IMPORTANT:**

- Do not weld within 12mm between mating edge of the suspension component and trailer frame.
- It is responsibility of the suspension installer to provide both proper welding parameters and adequate attachment for the suspension.
- Do not attach air spring direct to trailer frame.

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## HANGER MOUNTING

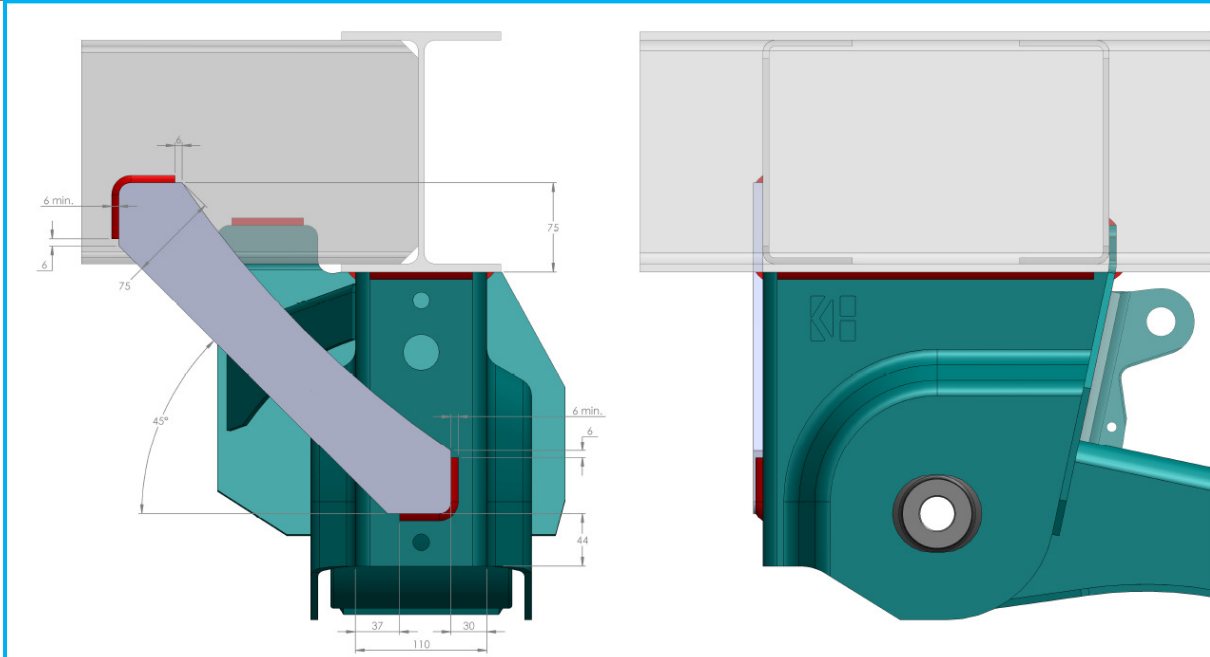


### IMPORTANT:

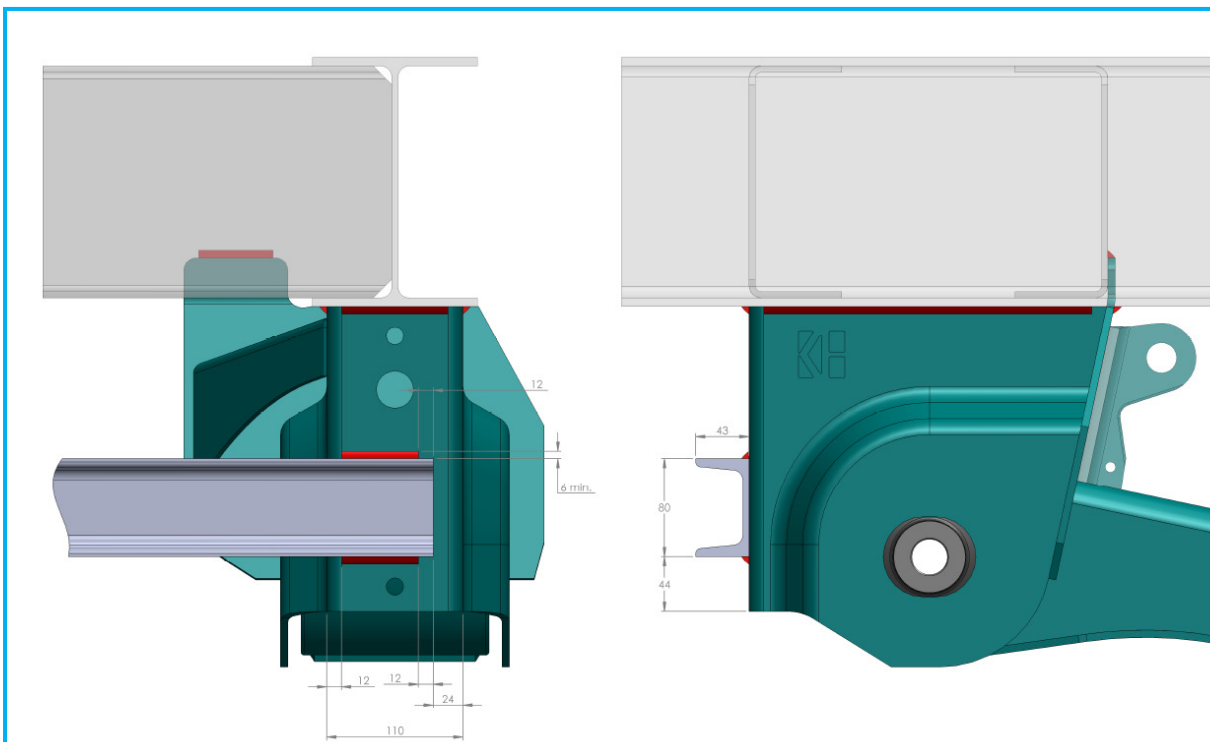
- Do not weld within 12mm between mating edge of the suspension component and trailer frame.
- Insure that the left and right hangers are welded on the same perpendicular line to the chassis. (Axle alignment)

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## CROSS MEMBER MOUNTING



Knee Bracket



C - Channel Bracket

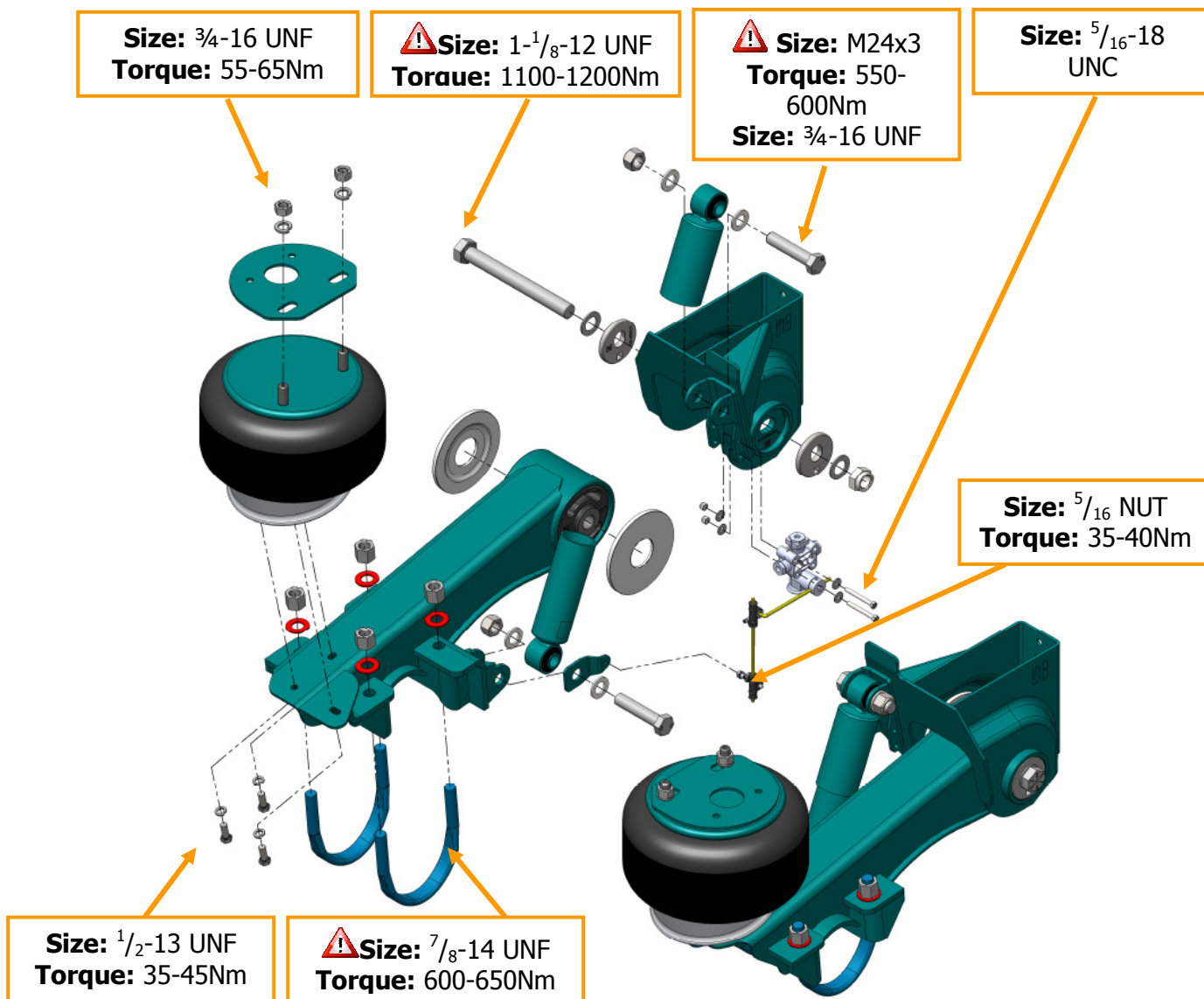
**! IMPORTANT:**

- The above methods are common practices, but individual installations may vary.



# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## 4. KT Tightening Instruction



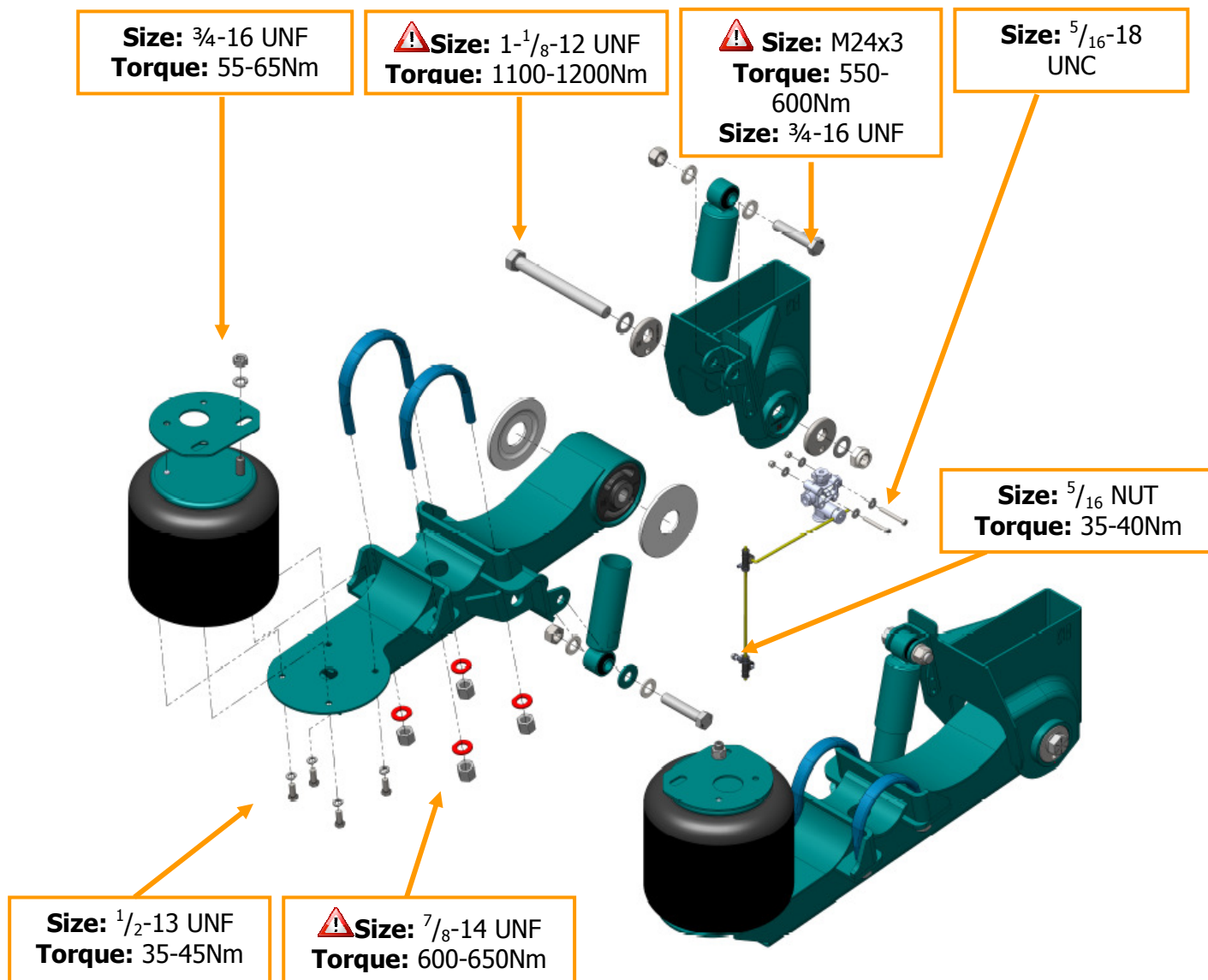
**⚠️ IMPORTANT:**

- Shock absorber fasteners must be tightened at ride height.
- U-bolts must be tightened and torqued using a cross pattern sequence. Ensure equal amounts of thread protrude above U-bolt nut.

**⚠️ CAUTION:**

- Over torque could result in fastener failure.
- Do not apply any additional lubricants.
- Failure to follow properly torque can result in loss warranty coverage.

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN



 **IMPORTANT:**

- Shock absorber fasteners must be tightened at ride height.
- U-bolts must be tightened and torqued using a cross pattern sequence. Ensure equal amounts of thread protrude above U-bolt nut.

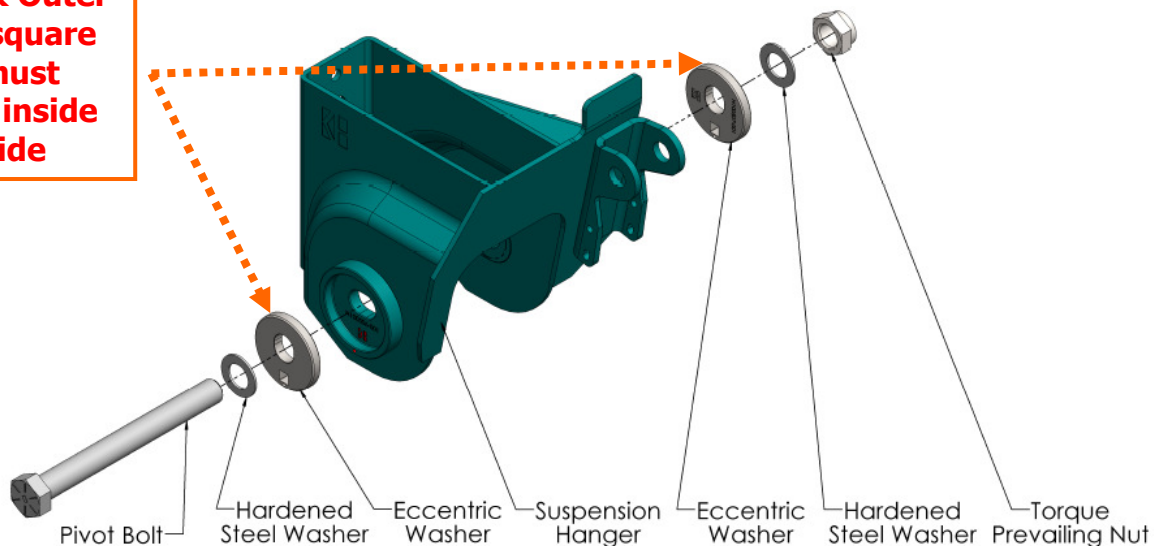
 **CAUTION:**

- Over torque could result in fastener failure.
- Do not apply any additional lubricants.
- Failure to follow properly torque can result in loss warranty coverage.

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

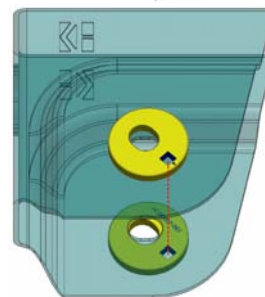
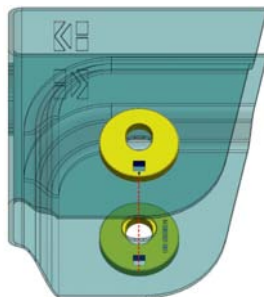
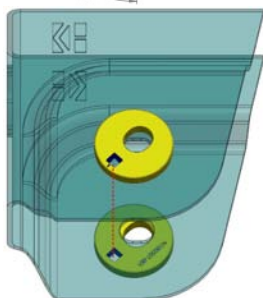
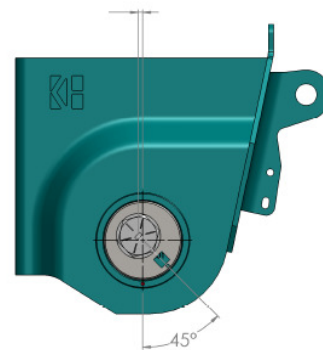
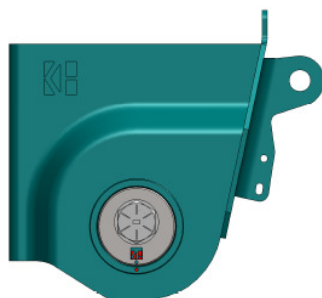
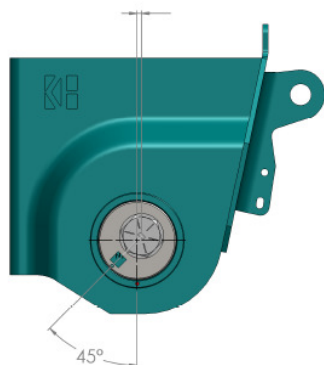
## Pivot Alignment

**Inner & Outer Collar square holes must line up inside to outside**



5mm rearward offset

5mm forward offset

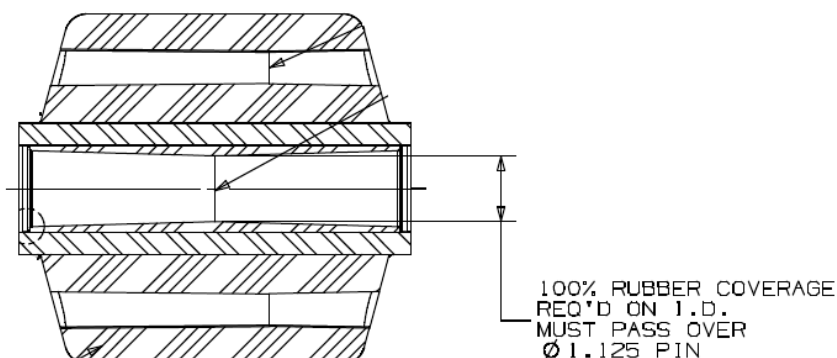


**⚠ IMPORTANT:**

- Do not fully torque up pivot bolt until Axles are fully aligned. Before alignment, tighten up pivot bolt to a point where hardened washers can still rotate freely.
- Adjust all four eccentric collars to achieve Axles alignment

## INSTALLATION, MAINTENANCE & SERVICE BULLETIN

### Pivot Bolt and Trailing Arm Bush



**The Ø 1-1/8" bolt should be tight in the centre of the sleeve and have a gap at each end of the sleeve.**

**The reason for that is that the rubber coating on the inside of the sleeve tapers from the middle at Ø 1-1/8" out to approximately Ø 1-5/16" at each end.**

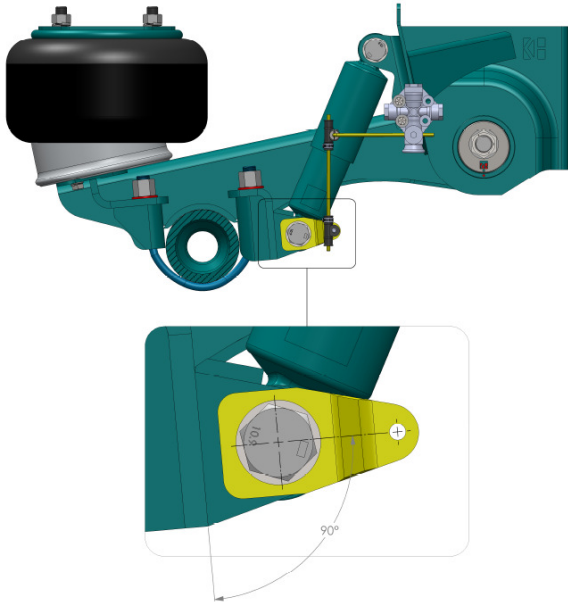
**The purpose of the tapered inside rubber coating, is to prevent the steel bush rusting to the pivot bolt.**

**The bush (and the trailing arm) is securely locked in to position due to clamping force of the pivot bolt after it is torqued to 1100-1200Nm.**

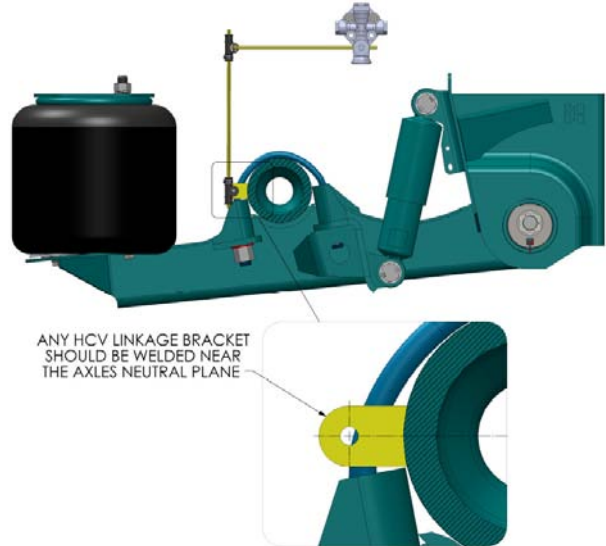
Note: There are other trailing arm bushes, which do not have the internal rubber in the steel bush. (W&C, Hendrickson, Aftermarket)

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## HCV Setting

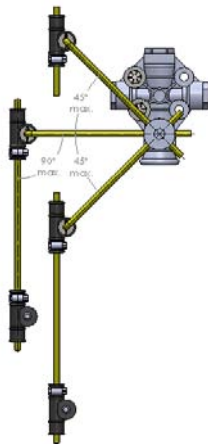


**Overslung** at ride height.

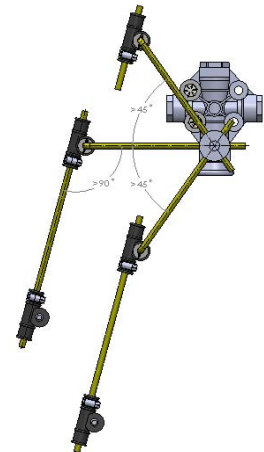


**Underslung** at ride height.

Correct setup



Incorrect setup



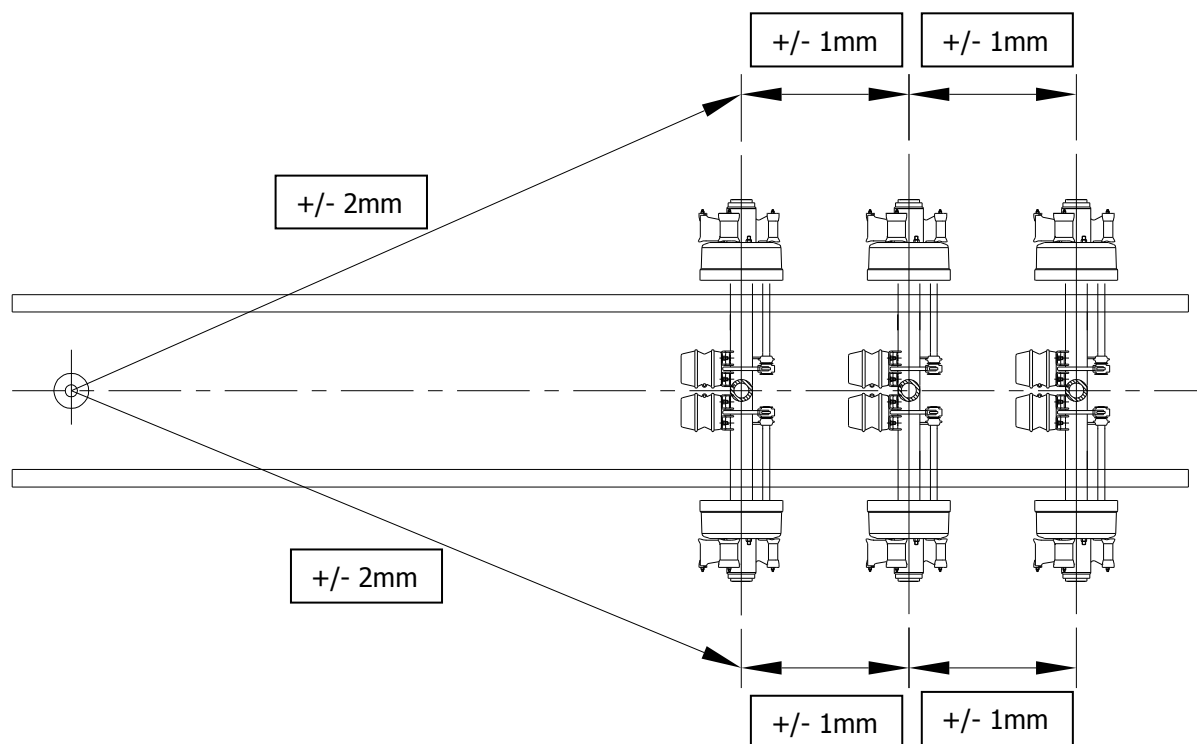
 **IMPORTANT:**

- HCV can be used in right-hand or left-hand.
- Unless approved by Fuwa K Hitch, DO NOT use more than one HCV per trailer.
- When assembling air fittings, be mindful that excess pipe compound or teflon tape may contaminate the air system.

## 5. Axle Alignment

The following steps are to ensure that proper axle and suspension alignment is achieved.






- Brakes must be released, pull the trailer in a straight line on a level smooth surface.
- Check that the tyres are the same size and have equal inflation pressure.
- Set the suspension to correct ride height.
- Align all three axles within the tolerances (Fig A).
- Torque pivot bolt to 1100-1200Nm
- Re-check the Alignment at the 1<sup>st</sup> Service (5000-10000km or 2-4weeks)



**Fig A**

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## 6. Torque Decal

	<b>TORQUE REQUIREMENTS</b>	
	Hanger Pivot Bolt	1-1/8"-12 UNF 1100-1200Nm
	Shock Bolt (upper & lower)	M24x3 550-600Nm
	U-Bolt	7/8"-14 UNF 600-650Nm
	Air Spring Nut (upper)	3/4"-16 UNF 55-65Nm
Air Spring Nut (lower)	1/2"-13 UNF 35-45Nm	
<p>U-Bolts must be tightened &amp; torqued using a cross pattern sequence: 1-4-2-3</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">1 </div> <div style="text-align: center;">2 </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;">3 </div> <div style="text-align: center;">4 </div> </div>		<p style="text-align: center;"><b>Service Intervals</b></p> <p style="text-align: center;">1st Service: 5000-10000kms or 2-4 weeks there after Every 100,000kms or every 50,000kms for heavy duty applications</p> <p style="text-align: center;">www.khitch.com.au    FHDT-001-Rev 1</p>

The above Torque Decal (sticker) should be attached to the trailer chassis after it has been painted, close to the Chassis VIN Number Decal clearly accessible and visible.

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## 7. Maintenance

The maintenance frequency may need to be changed subject to application and vehicle operating conditions.

Any instructions from the vehicle OEM must be considered first.

1. Check all fasteners	PD	1 <sup>st</sup> Service	½ yearly
2. Check U-Bolts	PD	1 <sup>st</sup> Service	Annually
3. Check shock absorbers for leaks* and bush wear		1 <sup>st</sup> Service	Annually
4. Check HCV for leaks and correct adjustment		1 <sup>st</sup> Service	Annually
5. Check pivot bolt, TF bush and hanger wear pad for wear and excess movement			Annually
6. Check air spring for leaks or damage		1 <sup>st</sup> Service	Annually

*The above recommendations are for “On Highway only” applications.*

**Note:** \* Do not confuse “misting” and “sweating” with a leaking shock absorber. Only a leaking shock absorber needs to be replaced.

On a leaking shock absorber the oil runs all the way down the shock absorber body. If in doubt, clean the shock absorber and check it again after a couple of days.



**If you need any further information please call the relevant numbers below or go to the FKH web site.**