INSTALLATION, MAINTENANCE & SERVICE BULLETIN

KIS AXLE & AIR SUSPENSION MODULE

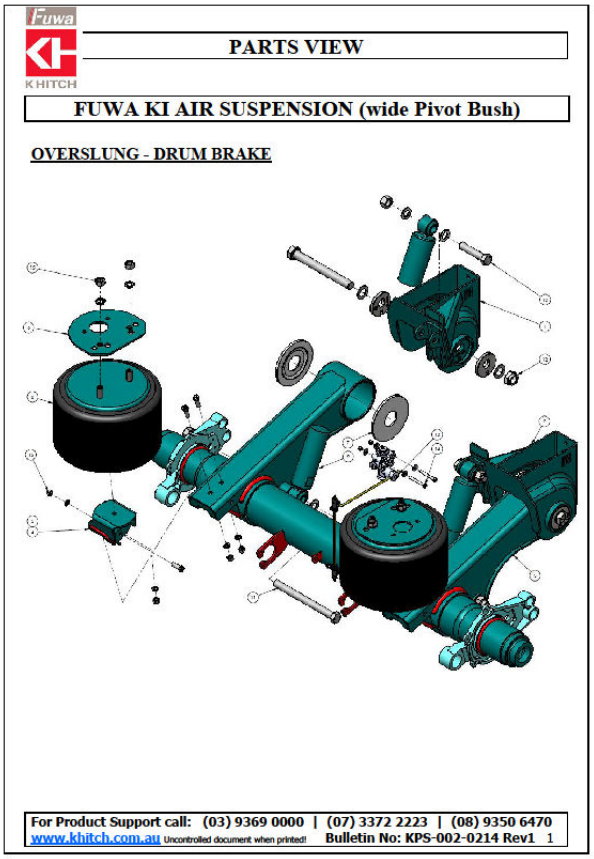
(wide Pivot Bush)

Contents

INSTALLATION, MAINTENANCE & SERVICE BULLETIN

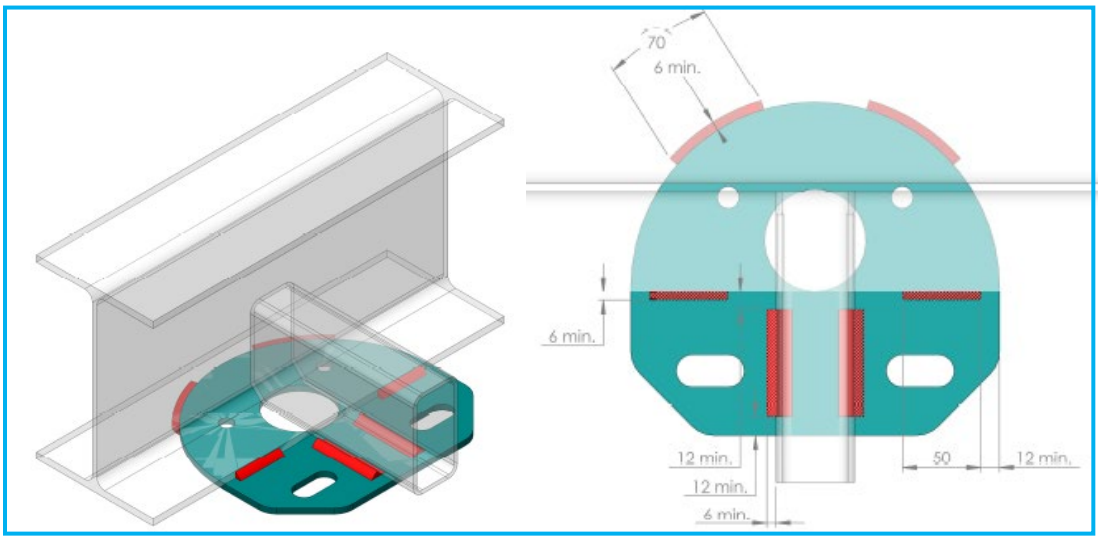
1. Pre-assembly Considerations

- **Check if the correct parts have been supplied**
- **Check the installation drawings match the parts supplied**
- **There is a difference in the requirement for the rod length on the brake chamber (booster) between the short and the long cam KI models, with the short cam model requiring a longer rod.**
- **Brake chambers should have the air connection ports at 90° (out the side, not on top).**
  When installing the brake chambers (boosters), check the bulletin FKH-INSTL-0007 for the correct booster rod length.
- **Ride height, hubs, wheel and tyre size need to suite the application**
- **Check that the correct tools and equipment are available to do the installation.**
- **For any parts identification and requirement, refer to the FKH PV: KPS-002-0214**
- **Only qualified personnel should be in charge of the installation.**

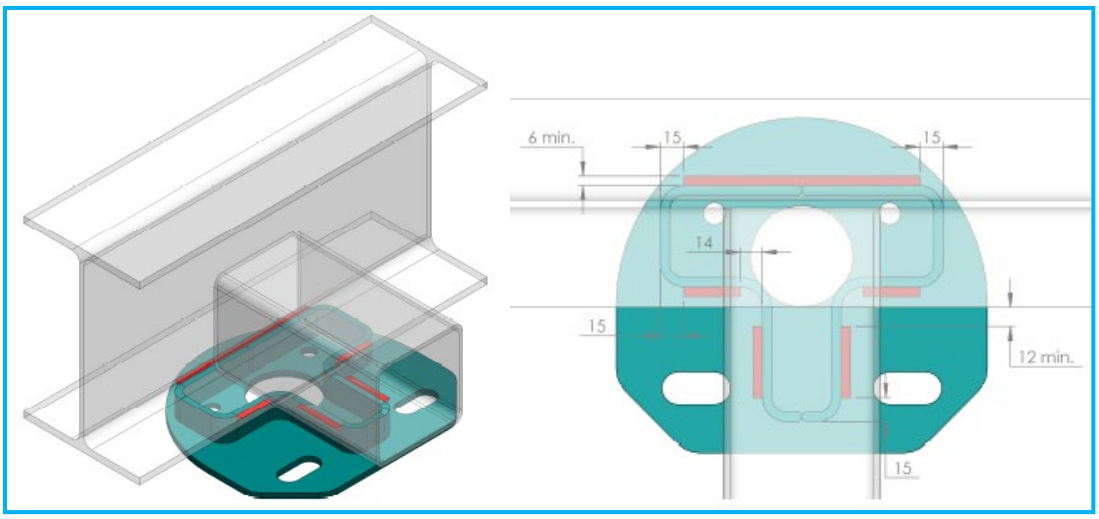


2. Welding Instruction – Chassis Connection

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 the 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.

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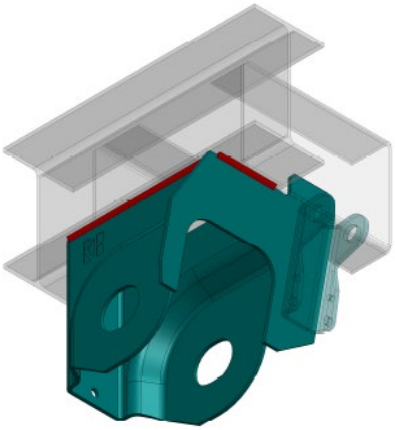
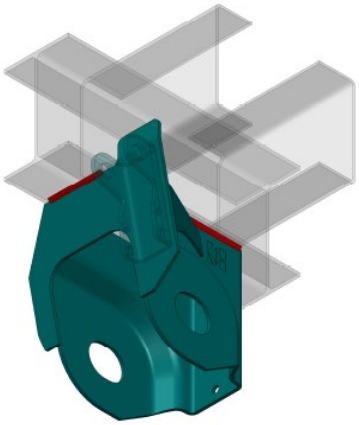
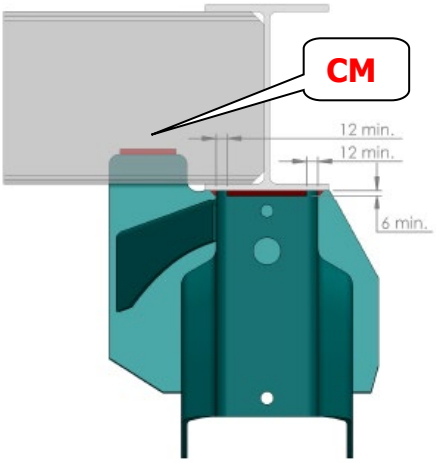
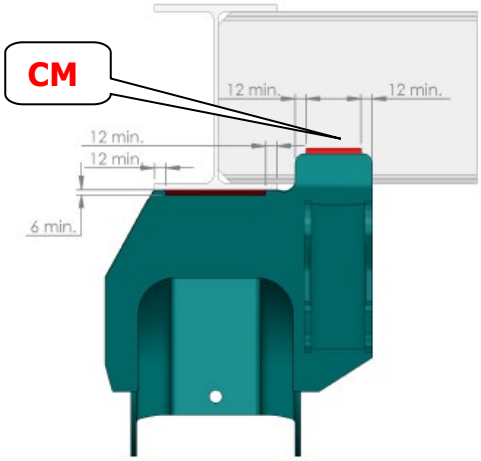
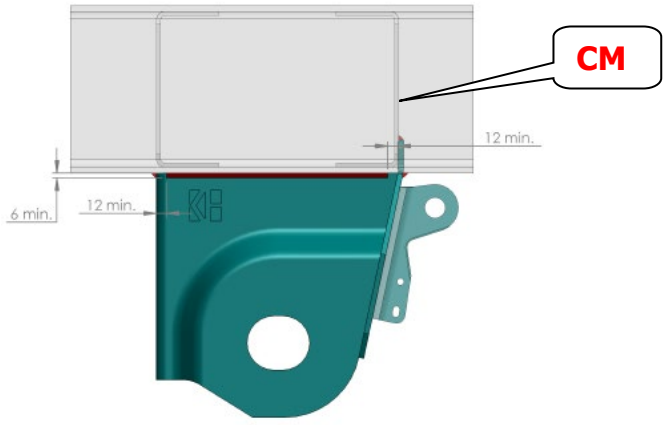
HANGER MOUNTING

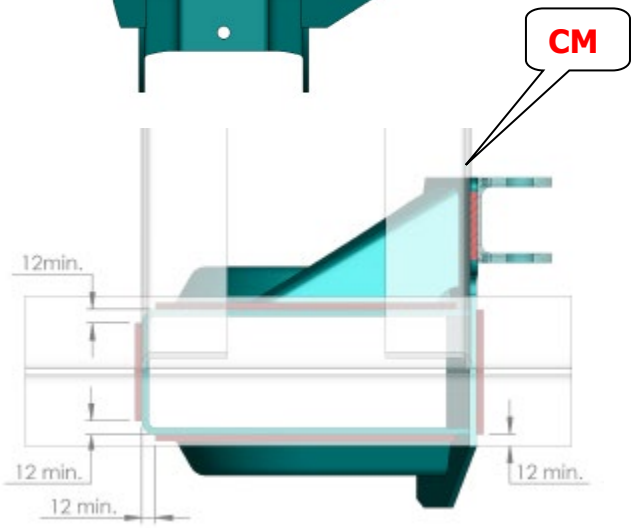










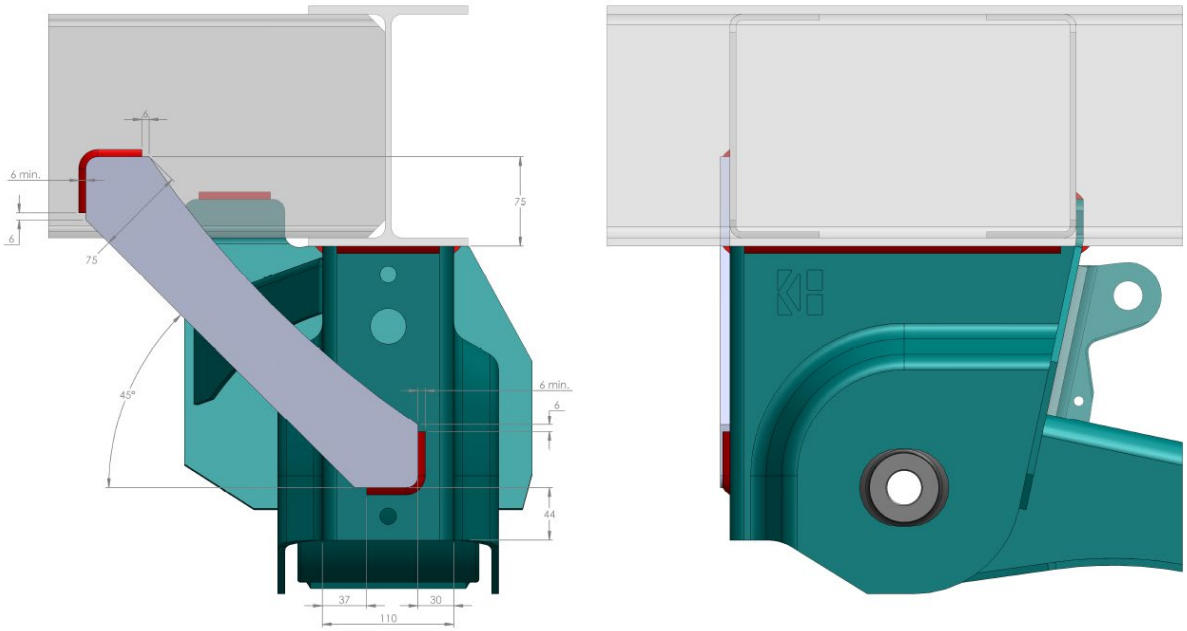


IMPORTANT:

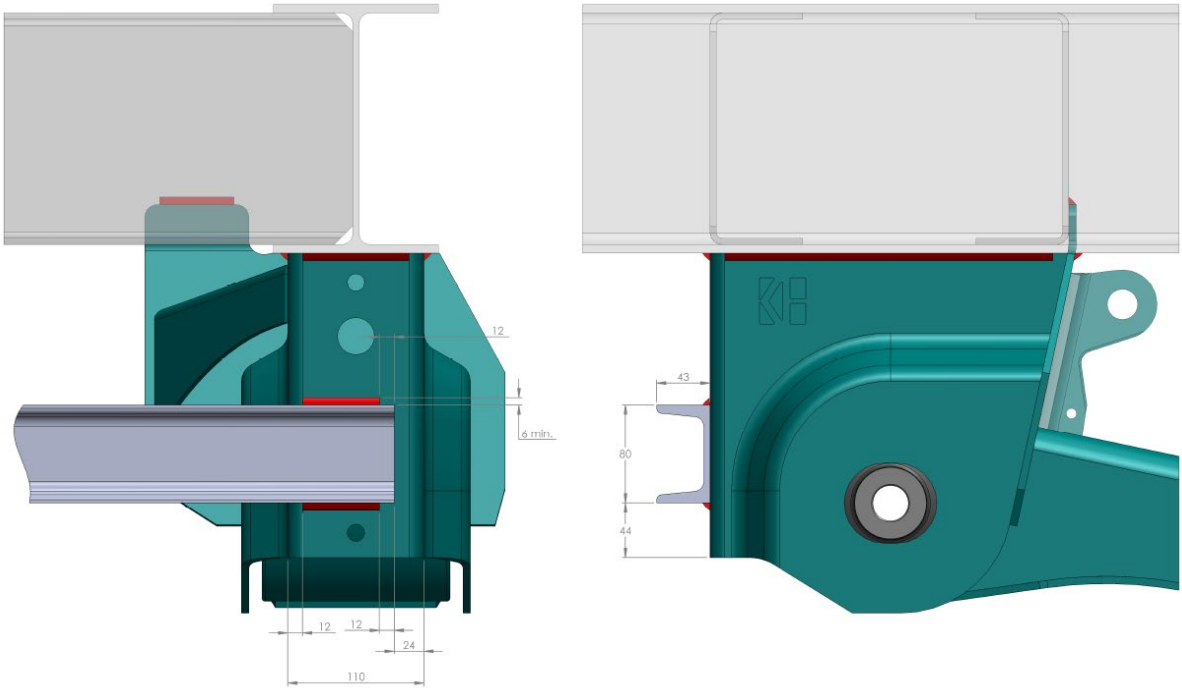
- Do not weld within 12mm between mating edge of the suspension component and trailer frame.
- Insure that the left and the right hangers are welded on the same perpendicular line to the chassis. (Axle alignment)

- Insure the shocker bracket tab is welded and supported against a cross member. (**CM**)

IMPORTANT **HANGER CROSS BRACING** **IMPORTANT**

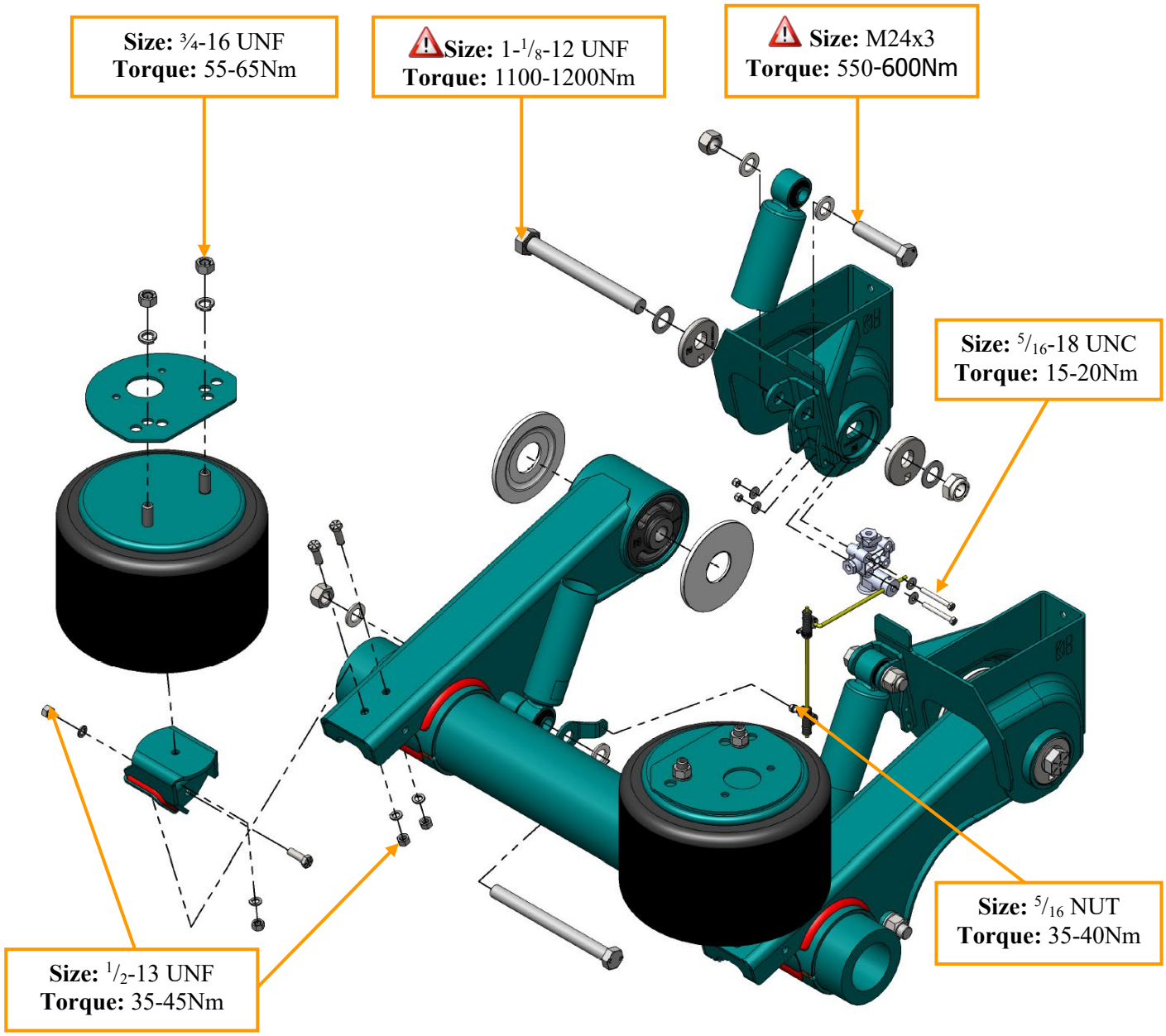


Knee Bracket from Hanger to Cross Member



C-Channel from Hanger to Hanger

3. Tightening Instruction



IMPORTANT:

- Shock absorber & hanger pivot bolts must be tightened at ride height.

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CAUTION:

- Over torque could result in fastener failure.
- Failure to follow properly torque can result in loss warranty coverage.

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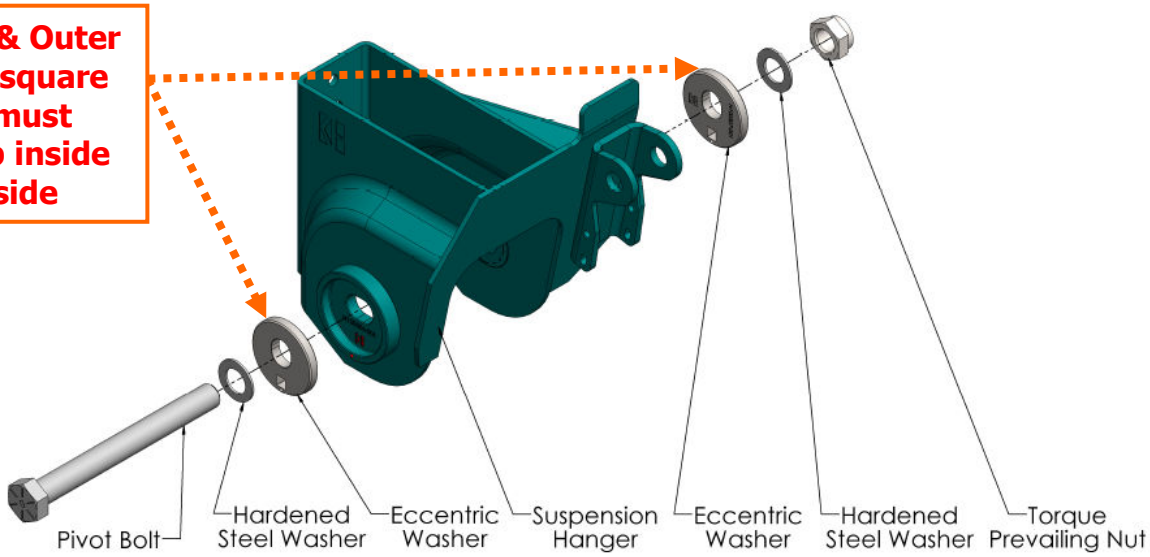
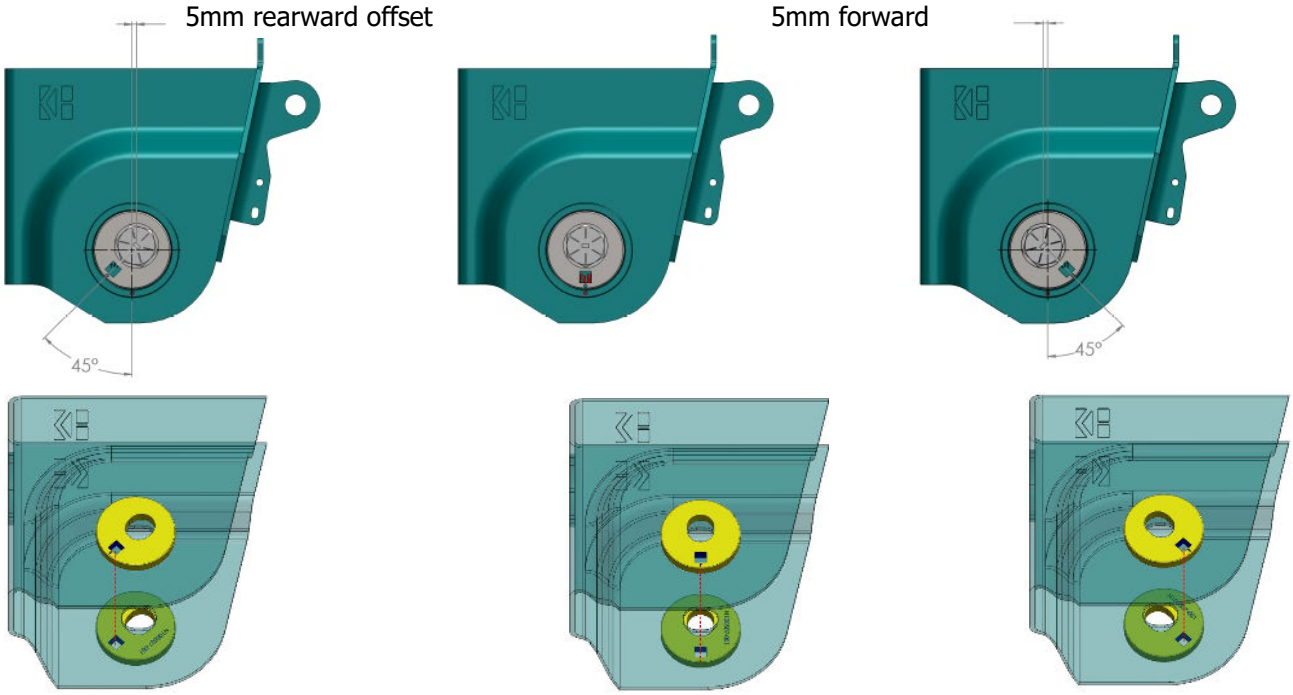
Pivot Alignment

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





IMPORTANT:

- Do not fully torque up pivot bolt until suspension is 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 suspension alignment

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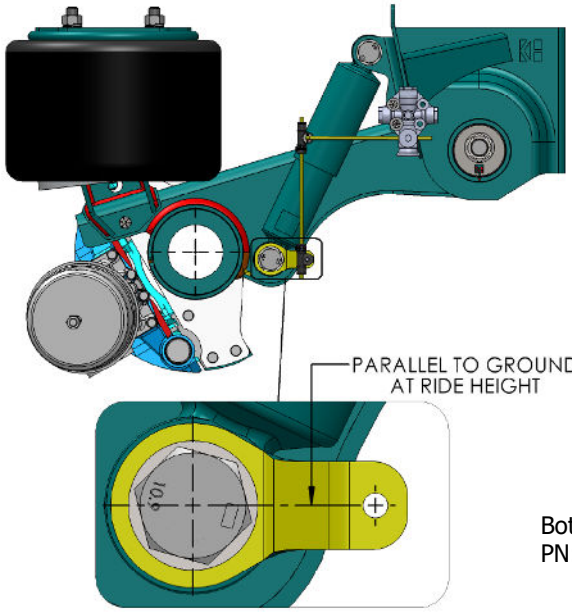
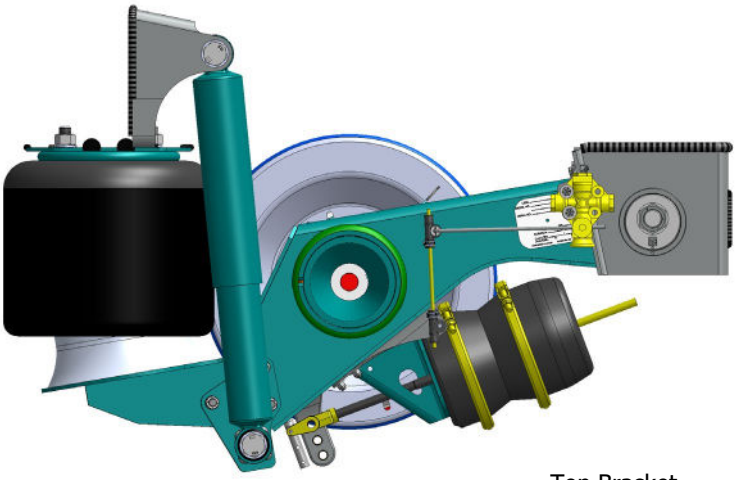
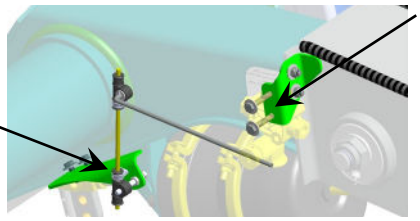
HCV Setting

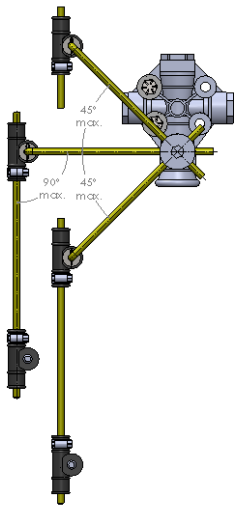




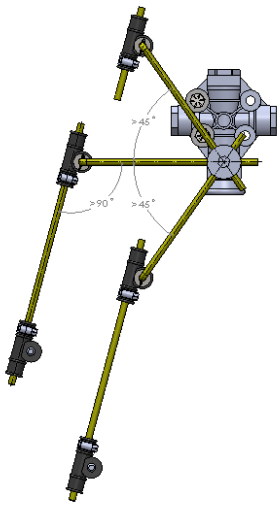


OVERSLUNG –DISC (RIDE HEIGHT)

UNDERSLUNG – DRUM (RIDE HEIGHT)



CORRECT SETUP

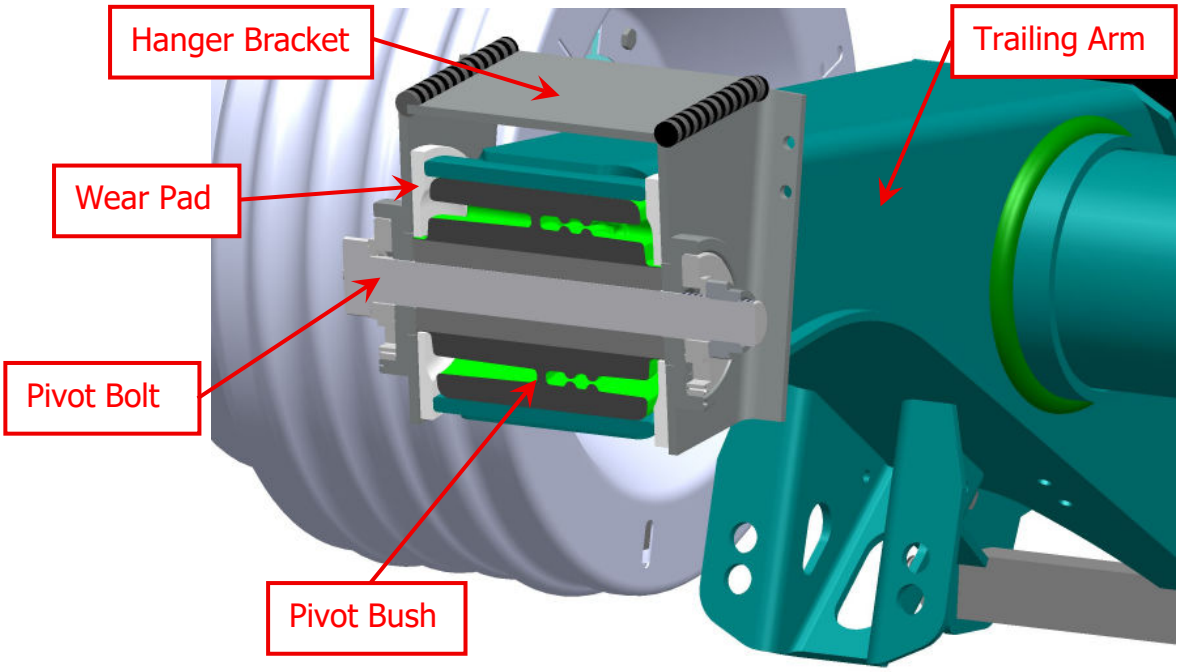


INCORRECT SETUP

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.**
- **DO NOT use a pipe compound or teflon tape. They may contaminate the air system.**
- **Do not weld HCV brackets directly to the axle tube.**

Pivot Bolt and Trailing Arm Bush

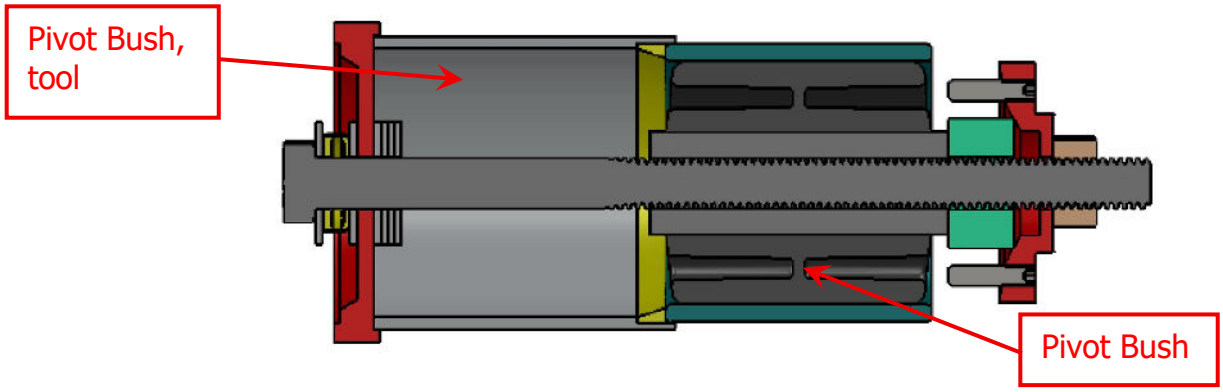


The Ø 1⅛" UNF bolt should be fitted dry and torqued to the recommended 1100 to 1200 Nm when the trailer is at ride height.

If used in off road application anit-sieze paste can be used on the pivot bolt shank, to reduce the likelihood of the fasteners corroding and making removal difficult.

The bush (and the connected trailing arm) is securely locked in to position after the hanger pivot bolt is tightened to the required torque.

Replacing the pivot bush can be achieved with the removal/installation tool shown below. Instructions are provided in the document KPM-001-0314 Rev2 - KT & KI PIVOT BUSH REPLACEMENT TOOL INSTRUCTIONS.



4. Axle Alignment

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

- The trailer must be in straight line and on smooth level surface.
- Release the brakes.
- Check that the tyres are the same size and have equal inflation pressure.
- Set the suspension to the correct ride height.
- Align all axles within the tolerances shown in Fig. A.
- Torque the hanger pivot bolt to 1100-1200Nm.
- Re-check the alignment at the 1st Service (5000-10000Km or 2-4 weeks)

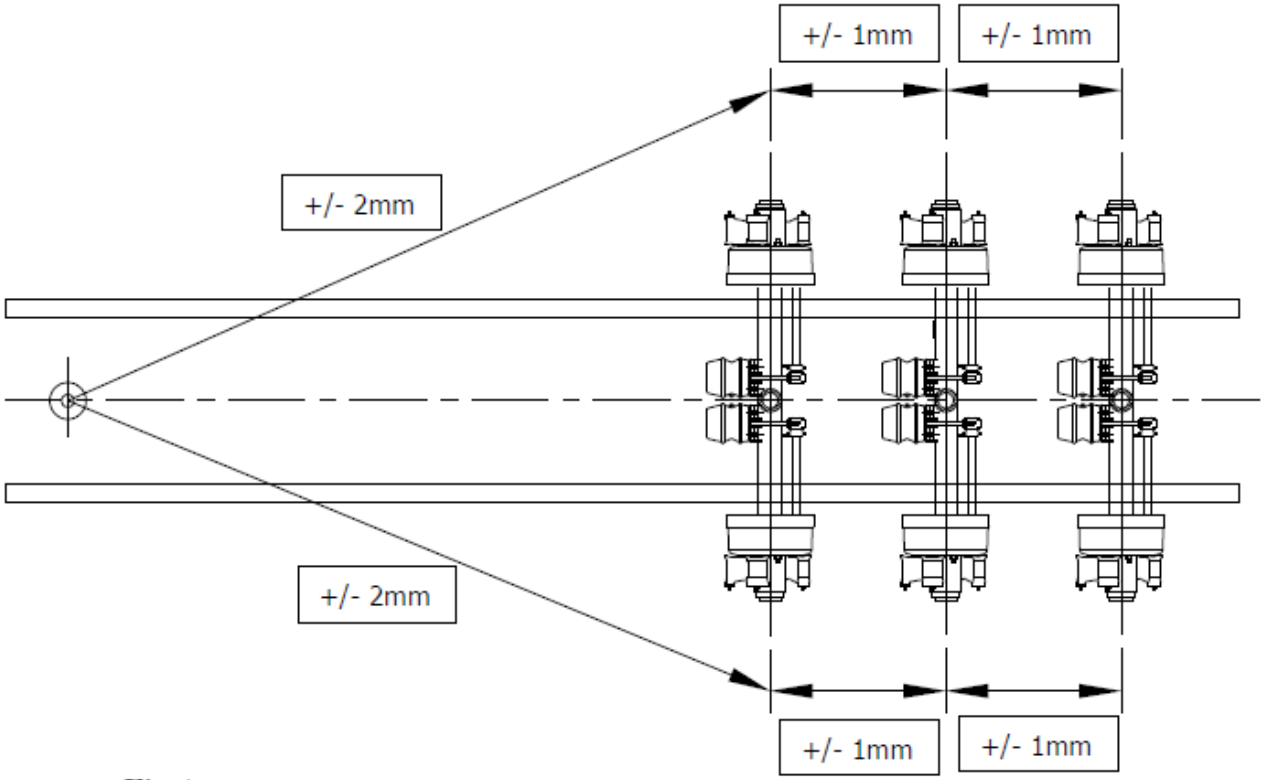


Fig A

5. Maintenance

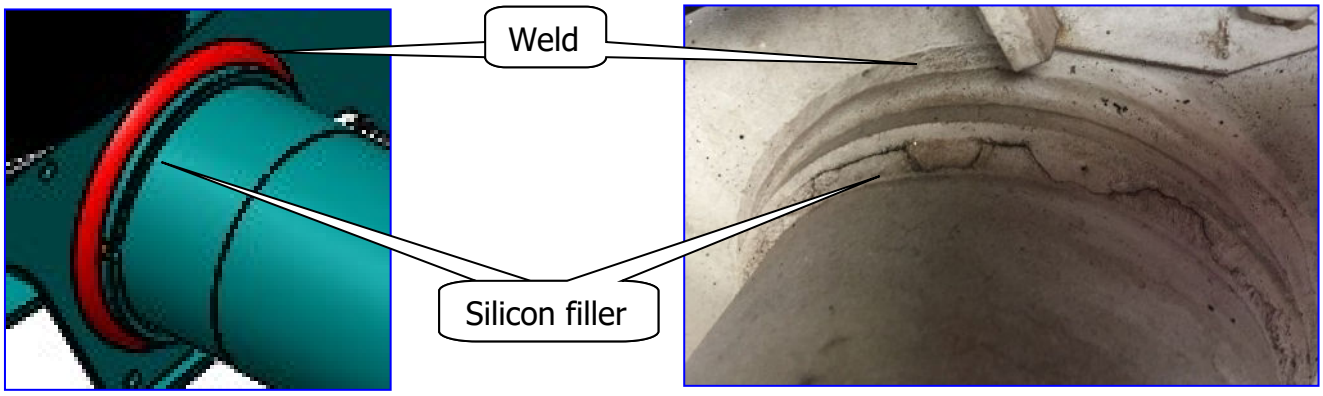
The maintenance frequency may need to be changed subject to the application and vehicle operating conditions.
Any instructions from the vehicle OEM must be considered first.

For the suspension part of the module:

1.	Check all the fasteners	PD	1st Service	½ yearly
2.	Check shock absorbers* and shocker bushes		1st Service	Annually
3.	Check HCV for leaks and correct adjustment		1st Service	Annually
4.	Check hanger pivot bolt, pivot bush and hanger wear pads for wear and excess movement.			Annually
5.	Check air springs for leaks or damage.		1st Service	Annually

Note: The above recommendations are for "On HWY only" applications.

Note: Weld vs Silicon filler



Do not confuse the silicon filler on the edge of the axle sleeve with an actual weld on the trailing arm to the sleeve.

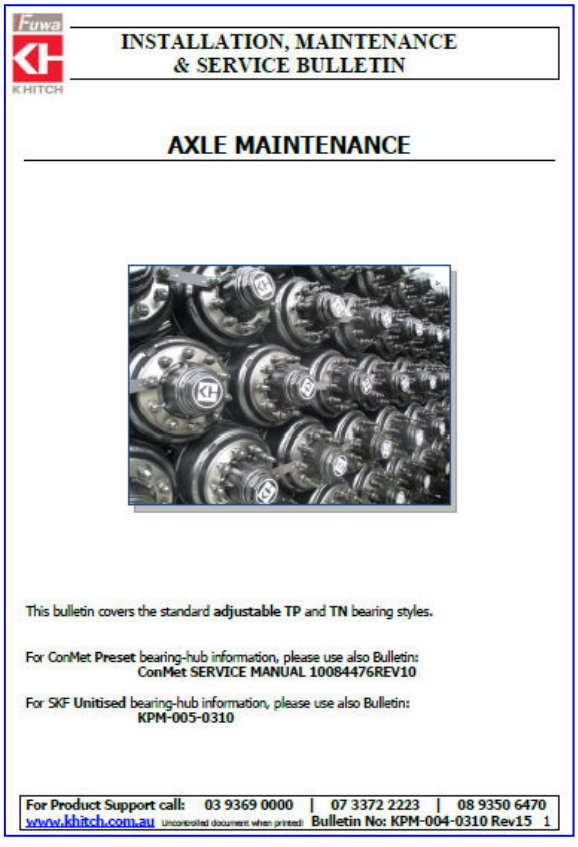
That silicon filler may dry out over time and cracks may appear. There is need for concern.

Note: * In regards to shock absorbers "leaking". Do not

confuse “misting” and “sweating” with leaking.
Only a leaking shock absorber (oil running down the length of the shocker body) needs to be replaced.
If in doubt, clean the shock absorber and check it again after a few days.
Shock absorbers are a wearing item and they will need replacing eventually.

For the axle part of the module:

Follow the information contained in Bulletin: **KPM-004-0310**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AXLE MAINTENANCE

This bulletin covers the standard **adjustable** TP and TN bearing styles.

For ConMet **Preset** bearing-hub information, please use also Bulletin:
ConMet SERVICE MANUAL 10084476REV10

For SKF **Unitised** bearing-hub information, please use also Bulletin:
KPM-005-0310

For Product Support call: 03 9369 0000 | 07 3372 2223 | 08 9350 6470
www.khitch.com.au Uncontrolled document when printed! Bulletin No: KPM-004-0310 Rev15 1

If you need any further information, please call FKH or go to:
www.khitch.com.au

6. Air Spring, Load Chart

The following two tables show the required air spring pressure to support the axle load shown. FUWA K-Hitch Engineering can provide an equation if required.

Table 1: KI23 Air Spring, Load Chart

Fuwa
KHITCH

PSI/LOAD SCALE

KIL23 & KIS23 Suspension

Overslung / Underslung

www.khitch.com.au FHDA-106-Rev 1

Required PSI*	Load per Axle (lbs)	(kg)
16	5,000	2,268
37	10,000	4,536
59	15,000	6,804
79	20,000	9,072
84	21,000	9,525
92	23,000	10,433

*Values are approximations for standard suspensions at ride height. Values vary when run at different ride heights to which suspension is designed for. Suspension must be calibrated on a scale to determine correct pressures.

Table 2: KI25 Air Spring, Load Chart

PSI/LOAD SCALE

KIS25 Suspension

Overslung / Underslung

www.khitch.com.au FHDA-101-Rev 1

Required PSI*	Load per Axle (lbs)	(kg)
13	5,000	2,268
33	10,000	4,536
52	15,000	6,804
71	20,000	9,072
75	21,000	9,525
83	23,000	10,433
91	25,000	11,340

*Values are approximations for standard suspensions at ride height. Values vary when run at different ride heights to which suspension is designed for. Suspension must be calibrated on a scale to determine correct pressures.