
Installation Instructions

Installation of Lovells caravan suspension

40-TEC-300 REV G

1. **Springs & Shocks**
2. **Bush & Cam Bolt Kits**
3. **Handbrake**



Collection Form

Identification

Technician _____ Date _____

Make _____

Model _____

Build Date _____

VIN _____

As per VIN Plate

ATM (Kg) _____

GTM (Kg) _____

Recorded Measurements

ATM (Kg) _____

GTM (Kg) _____

TBM (Kg) _____

Towball Height (mm) _____

Single Shear ☐ Double Shear ☐

Driver Side Axle One

Weight (Kg) _____

CWG (mm) _____

Driver Side Axle Two

Weight (Kg) _____

CWG (mm) _____

Pass. Side Axle One

Weight (Kg) _____

CWG (mm) _____

Pass. Side Axle Two

Weight (Kg) _____

CWG (mm) _____

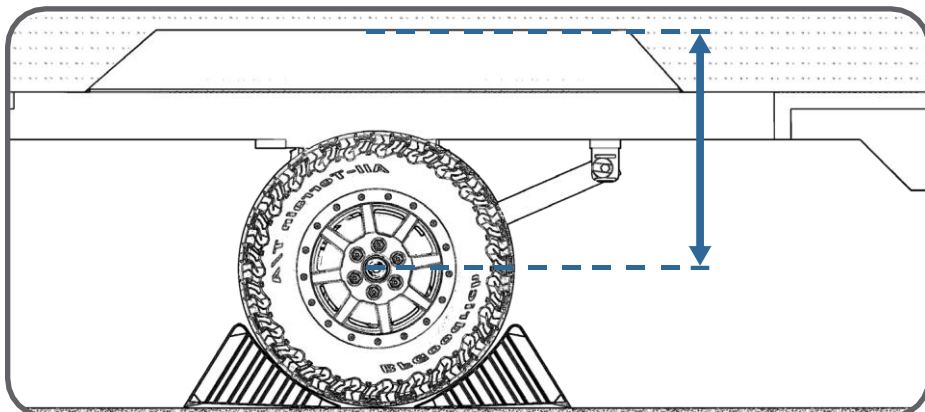
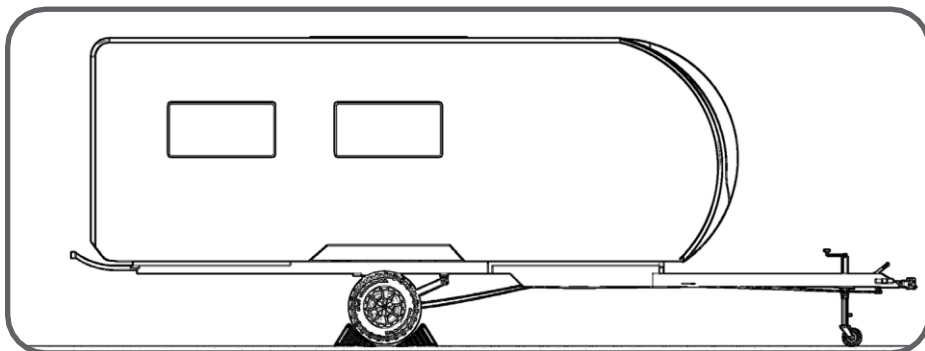
1. Spring & Shock Fitting Instructions

These installations should be carried out one wheel at a time.

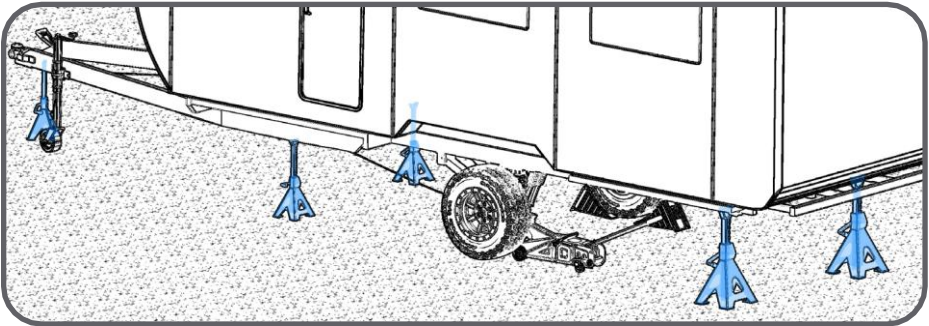
1.1 Measure and record the caravan's height and weight before starting work by measuring from the centre of the wheel to the underside of the fender/guard. This is commonly abbreviated to CWG or EBH (Eye brow height).

NOTE:

It is advised to load the caravan as you would for a trip when measuring heights. Unequal load distribution may affect the measurements. Lovells recommend having your weight distribution on each wheel checked using wheel scales.

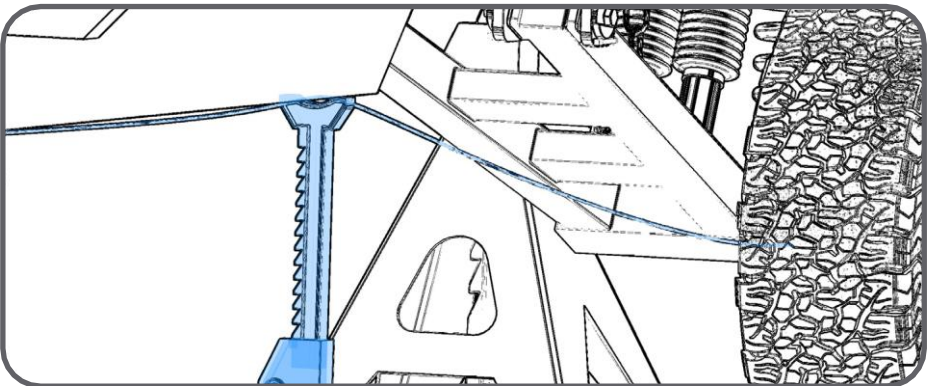


1.2 Secure the caravan on level ground with the handbrake engaged and opposite wheel chocked. Support the chassis with axle stands positioned in front and behind the wheels. A stand must also be placed at the front of the caravan to support the jockey wheel. You may lower the stabilising legs only after the caravan is fully supported by the axle stands, and use them as a secondary precaution, not a primary support.



CAUTION:

Proper lifting equipment must be used.



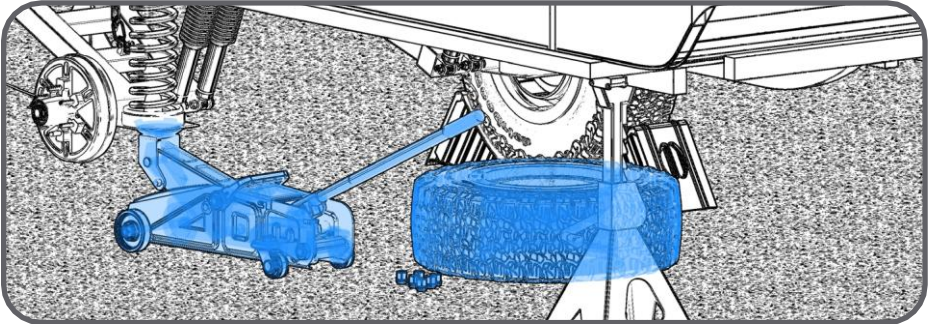
NOTE:

Ensure axle stands are positioned carefully, as to avoid crushing or fraying the handbrake cable. The handbrake may require adjustment after changing the springs and shocks, a guide is provided in section 3.

1.3 Loosen wheel nuts, then raise the swingarm using a jack and remove the wheel.

NOTE:

Wheel removal is optional, however it will improve access and visibility during installation.

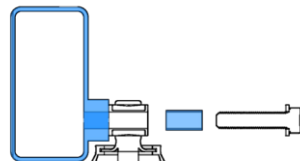
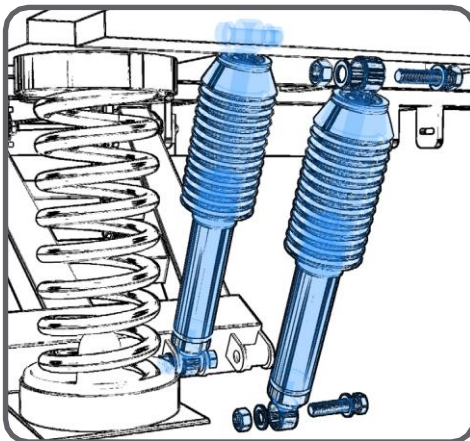


1.4 Remove the shocks, taking out the bottom bolt first. Removing the bottom bolt first allows room for the shock to extend.

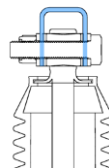
NOTE:

Single shear requires a sleeve, providing a shoulder for the bolt.

Double shear is fastened through a bracket. Bush width is critical.

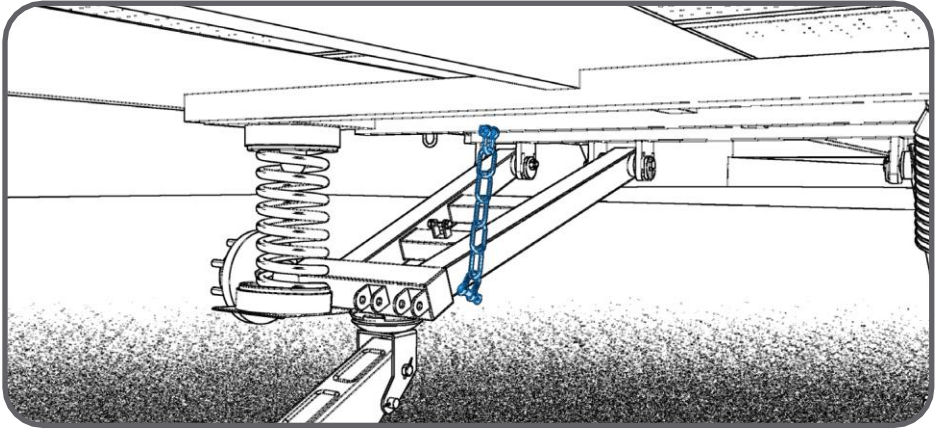


Single Shear.

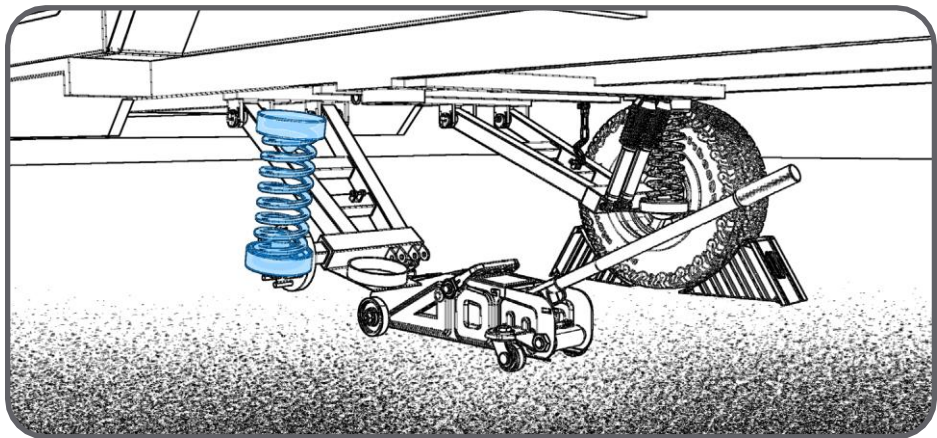


Double Shear.

1.5 Cut or remove the limiting strap or chain, ensuring not to cut the link fixed to the chassis and swingarm.

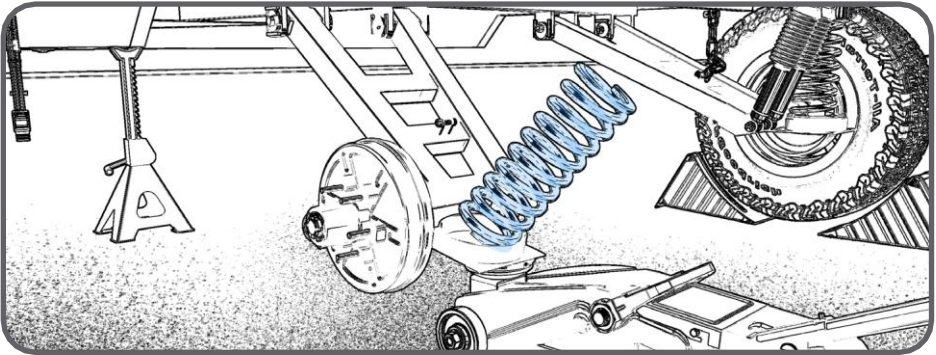


1.6 Lower the jack under the swingarm and remove the spring.



If you are installing a swingarm bush & cam bolt kit, go to section (2.2) before continuing.

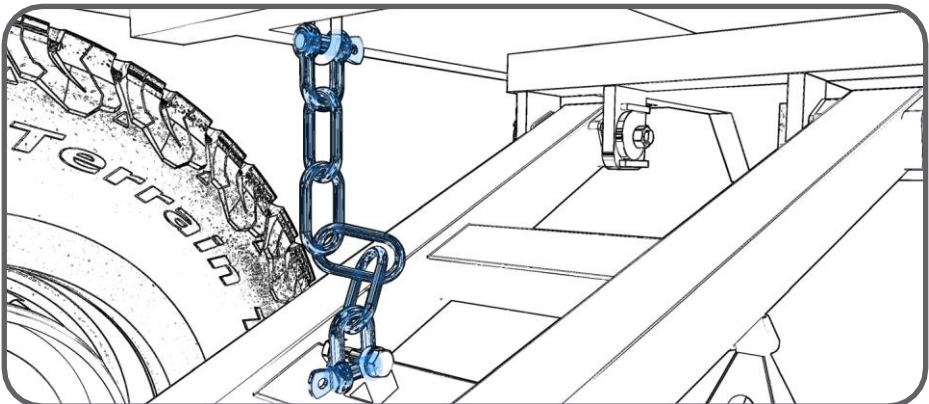
1.7 Insert the new spring; old damaged rubber spring isolators can typically be left out. Raise the swingarm until the spring is seated.



NOTE:

The wheel may need to be removed for this step if not already, in order to provide enough clearance for the spring, depending on how high the caravan is raised.

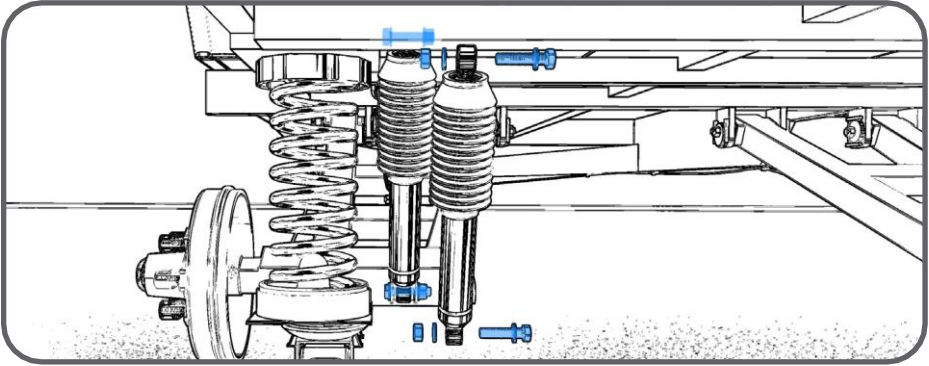
1.8 Attach the limit chains or straps. The length may have to be extended if taller suspension is fitted.



NOTE:

Limiting device must be long enough so that suspension travel is not impeded, and short enough to retain the spring and protect shock absorbers from full extension.

1.9 Raise the swingarm and reattach the shocks, starting with the top ends. Ensure the dust boots face up and the logos face rearward. Bolt heads go outward, nuts inward, as shown below. Use silicone lubricant if bolts are hard to insert.

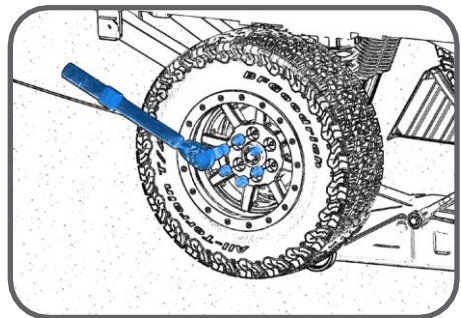
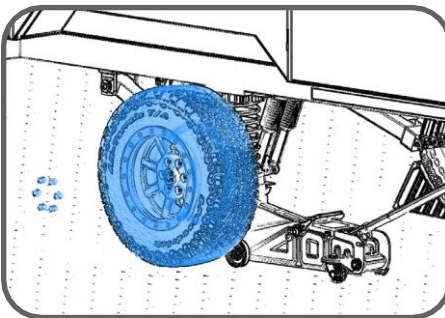


CAUTION:

Double Shear: Ensure shock bolts are tight with thread visible past the nyloc for proper engagement.

Single Shear: Ensure bushing sleeve is used correctly matched in the application. Threadlocker is recommended.

1.10 Reattach the wheel then lower the caravan to the ground and torque the wheel nuts to the manufacturer's specification.



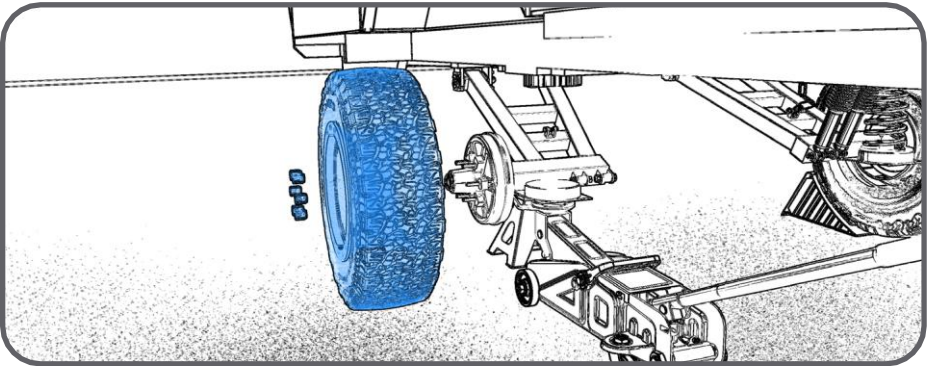
NOTE:

Repeat on the other side. Once complete, a wheel alignment is necessary.

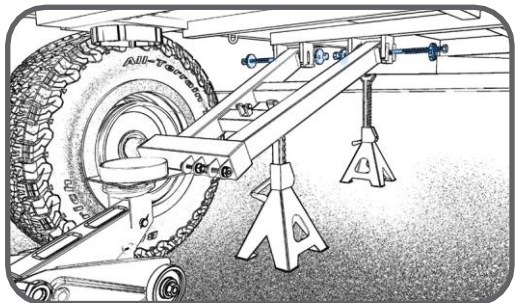
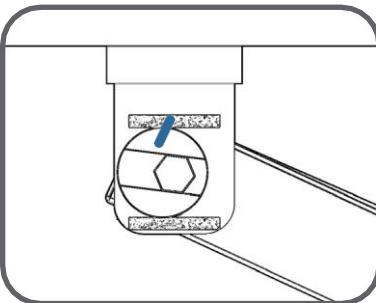
2. Swingarm Bush & Cam Bolt Fitting instructions

Steps 2.1 - 2.6 must be completed prior to bush & cam bolt kit installation. If you have not completed these, do so before continuing.

21 Raise the swingarm with the jack and fit the wheel, torque to manufacturer specifications then lower it until the wheel touches the ground.



22 Mark the cam bolts orientation to assist re-installation, then remove the cam bolts.

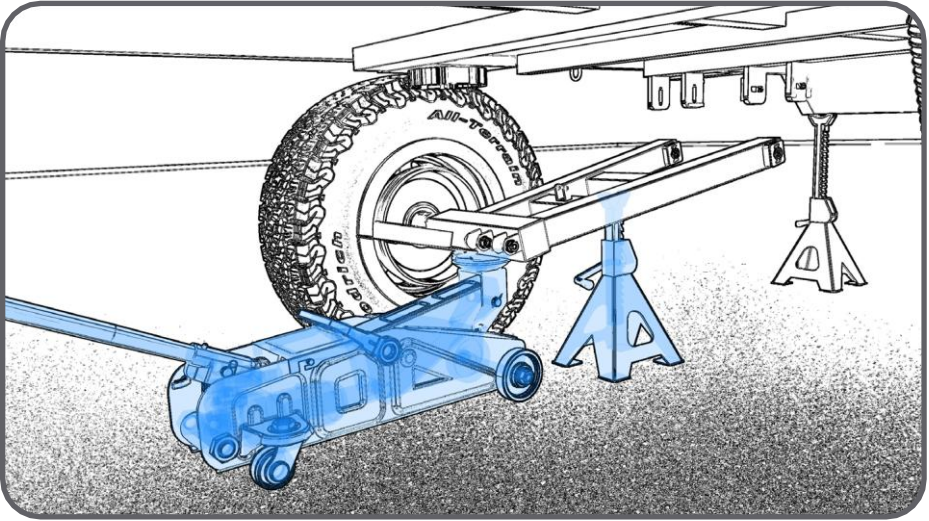


CAUTION:

Ensure to support swingarm.

The swingarm is heavy and will fall when cam bolts are removed.

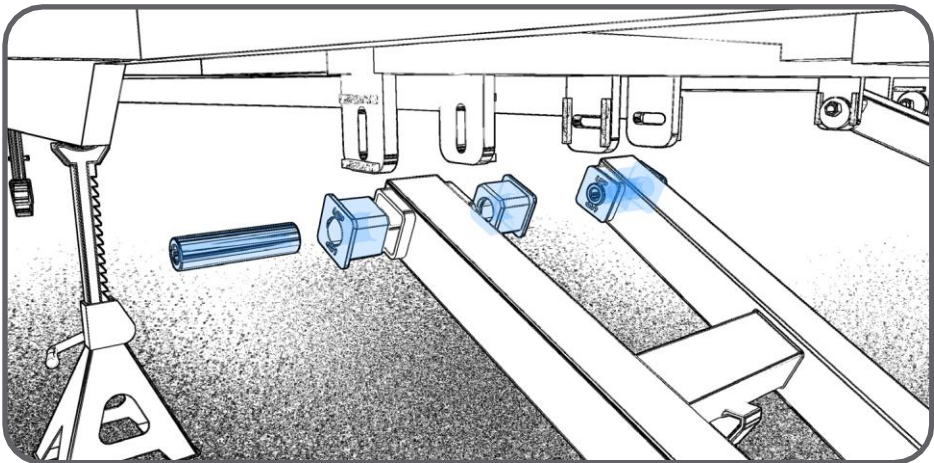
23 Lower the swingarm, resting the cross brace onto a stand.



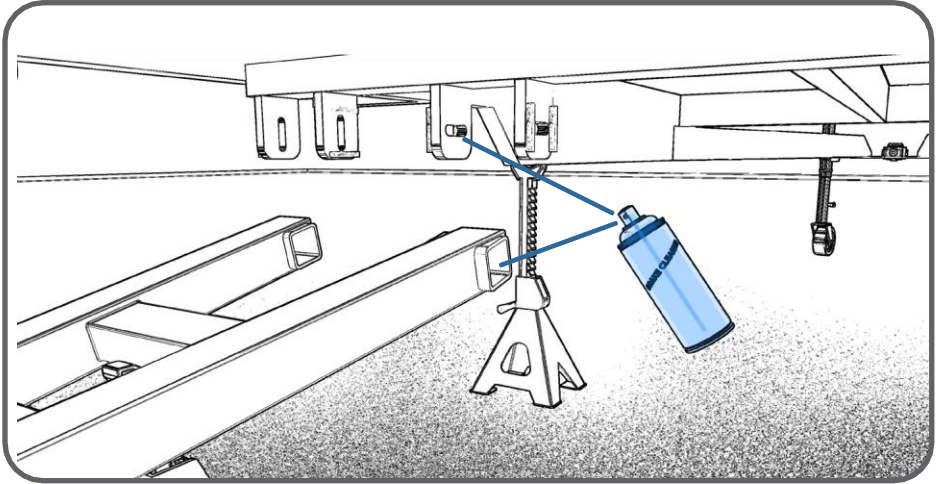
CAUTION:

Ensure the swingarm is stable.

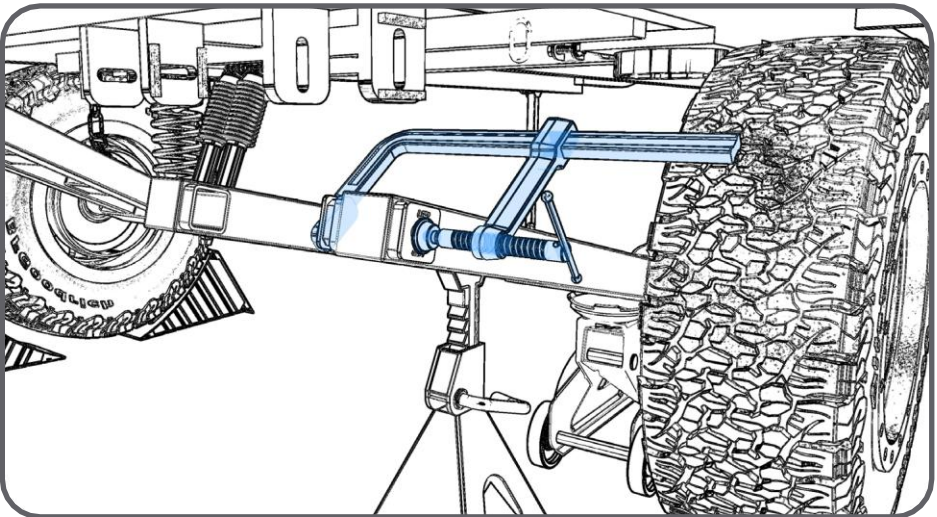
24 Remove the inner sleeves and bushes using a drift or punch if necessary.



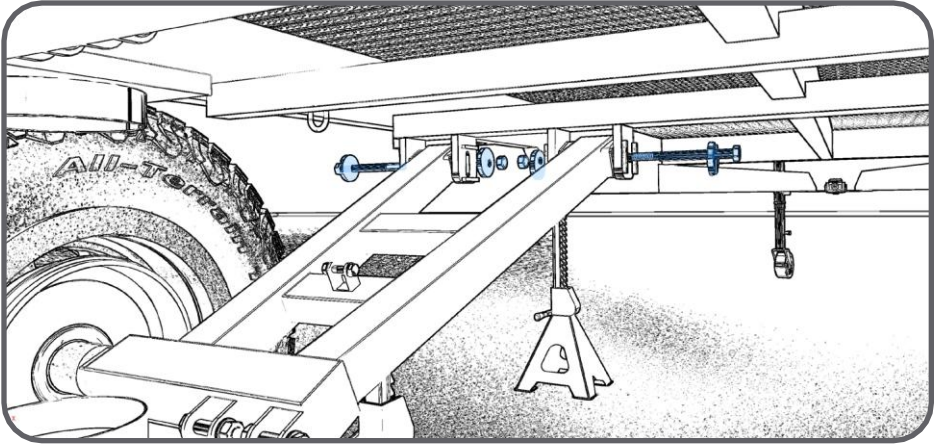
25 Clean the bush housing and swingarm mounts with brake cleaner or degreaser. If using degreaser, ensure it is completely clean and dry before continuing.



26 Unbox the bush kit and grease the outside of the bushes and inside of the sleeves. Use one supplied packet of grease per swingarm. Install the bushes and sleeves using a clamp if needed to press them in.



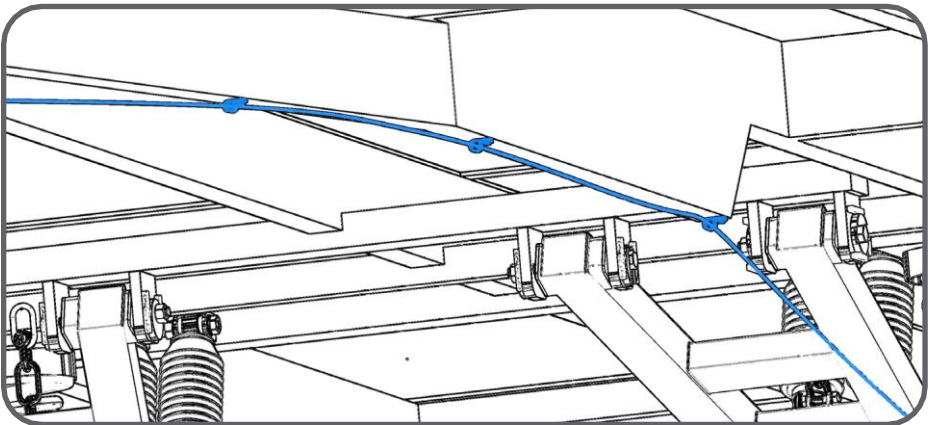
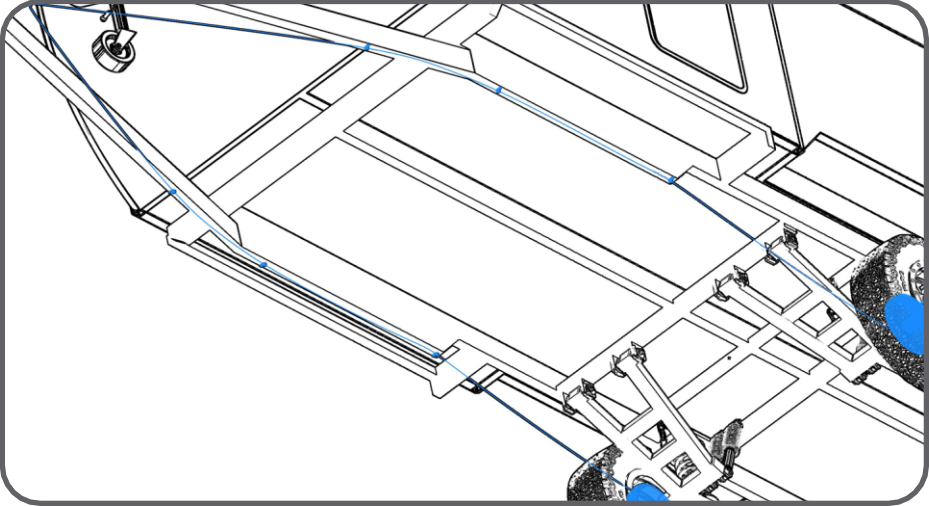
27 Raise the swingarm and re-install the cam bolts in the marked orientation from step 2.2.



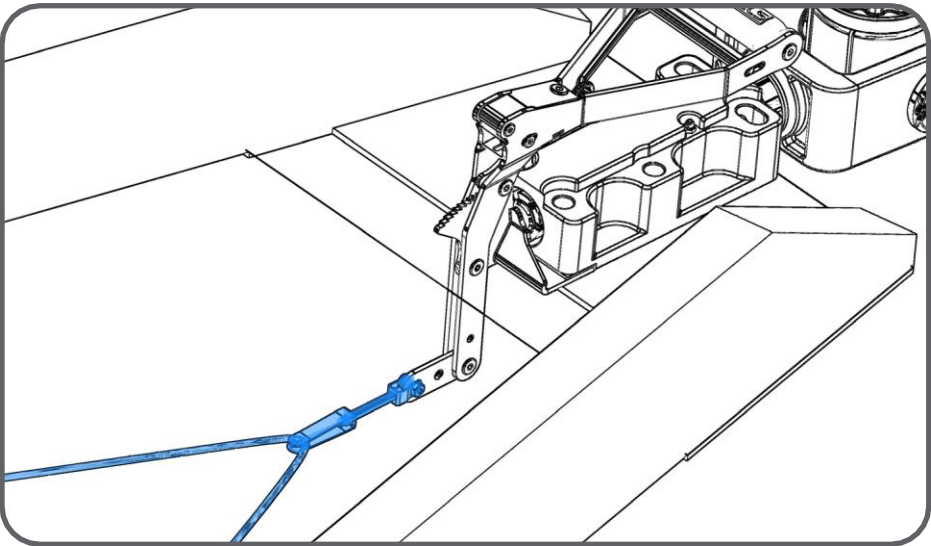
Complete steps 1.7 - 1.10 to complete your installation.

3. Handbrake Fitting instructions

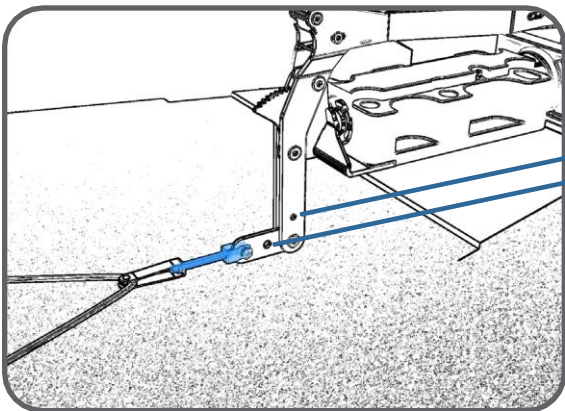
3.1. Check handbrake cable for damage. Typical points which cause fraying are often at the cable guides.



3.2 The engagement on this typical style of handbrake can be tightened or loosened via the hex nuts on the adjuster that connects the cable to the handbrake.

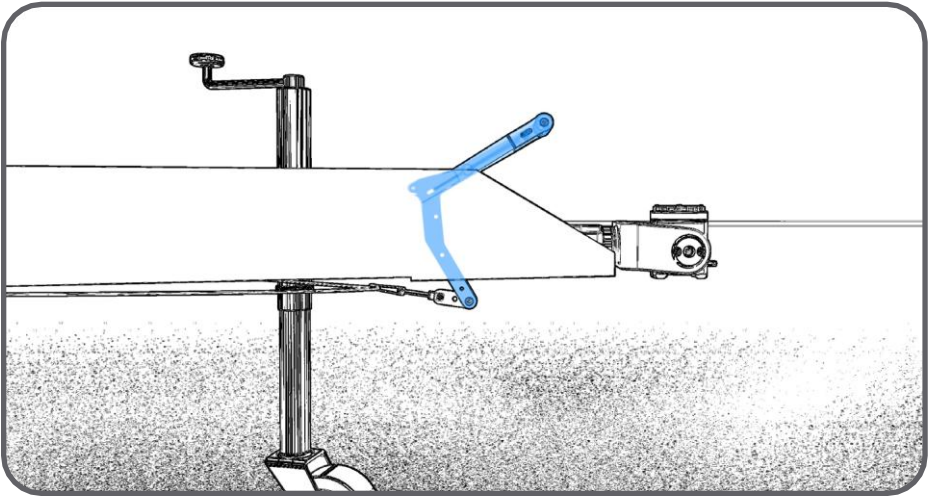


The Lovells Aero Handbrake offers further adjustment, with two leverage options and two extender fastening lengths.



Leverage adjustment positions.

3.3. Ensure the brakes aren't dragging when the handbrake is in the neutral position, while maintaining proper cable tension for a responsive stroke and sufficient engagement when the handbrake is activated.

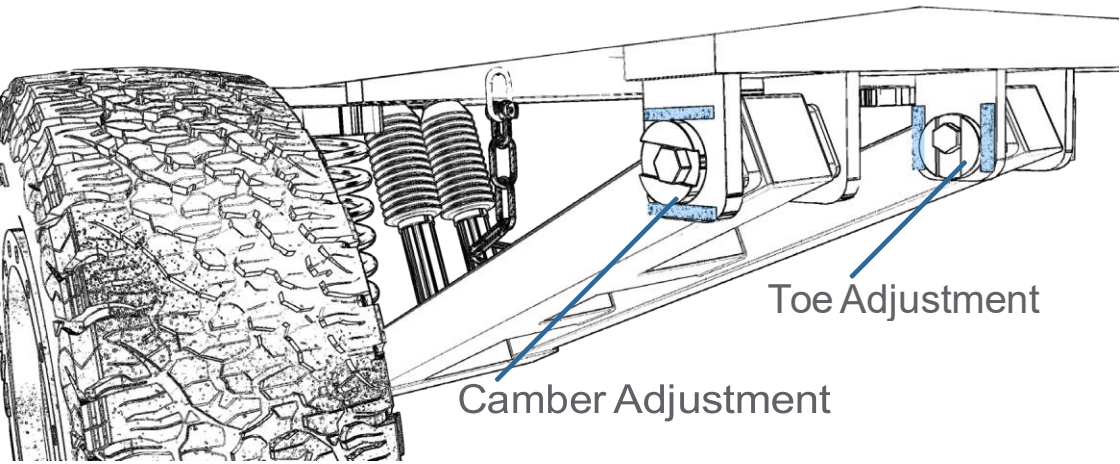


Wheel Bearings

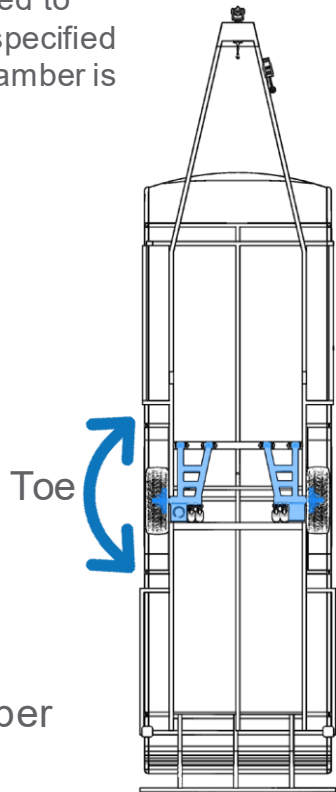
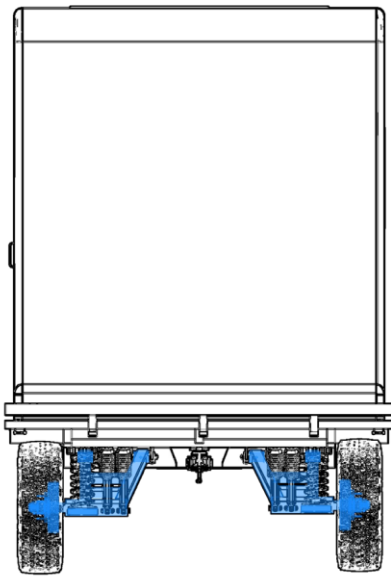
Lovells does not provide specific wheel bearing guidelines. Wheel bearings should only be serviced by trained professionals, following OEM specifications. Always use quality replacement brake and bearing parts. Lovells offers reputable brand name kits for servicing.

Visit **lovellsauto.com.au** to purchase our kits.

Toe & Camber



Cam bolts can be pre-installed in their original positions, but should always be adjusted to achieve the correct alignment. Unless specified from the manufacturer, 0.0° toe - 0.0° camber is the target.



**LEFT INTENTIONALLY
BLANK**

**LEFT INTENTIONALLY
BLANK**

**LEFT INTENTIONALLY
BLANK**



**For the ride
of your life**