



GROUNDHOG SERVICE BULLETIN MANDATORY

TITLE: TIGHTENING, LUBRICANT, BRAKES, AND MANDATORY CHECKING

Groundhog Models: All single and twin axle groundhogs

Service Intervals:

1. 500 miles or 3 months (Whatever comes first)
2. 5000 miles or 6 months (Whatever comes first)
3. Every 5000 miles or 6 months thereafter (Whatever comes first)

Reason for Issuance:

We at Groundhog feel that to achieve the maximum life expectancy and best performance our product. It should be serviced and inspected at regular intervals as mentioned above. The following paragraphs highlight the areas of importance for inspection and regular maintenance.

Serviceable Items:

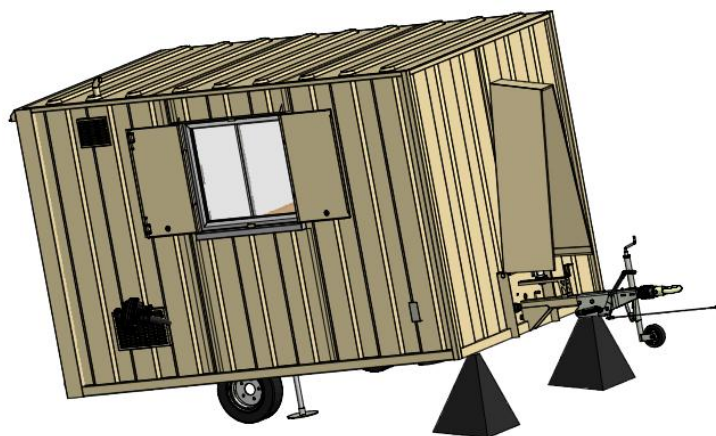
- Towing Coupling
- Coupling Safety Cable
- Jockey Wheel
- Hand Brake
- Wheel Hub Brakes
- Wheel Nuts and Tyres
- Pull Rod Mechanised Parts
- Axle Pins
- Leaf Springs and Shackles
- Leaf Spring U Bolt Assembly
- Hydraulic Rams

Safe Working Practice:

- When working on the under gear, ensure that the unit is supported with prop stands or other suitable supports
- **DO NOT** rely on the hydraulic legs
- Please see diagram showing suggestions

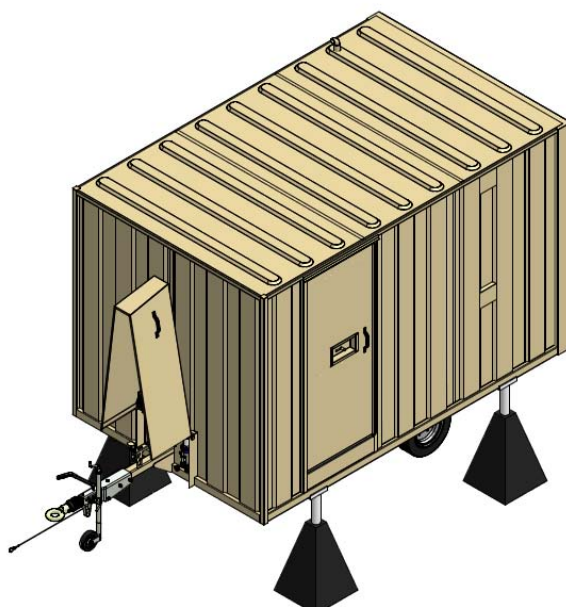
OPTION A

- Lift via hydraulic legs to acceptable height
- Ensure sufficient access for all servicing requirements
- Place additional supports (Axle Stands) beneath the unit whilst works are being carried out (Note: must be capable of supporting 1800KG)



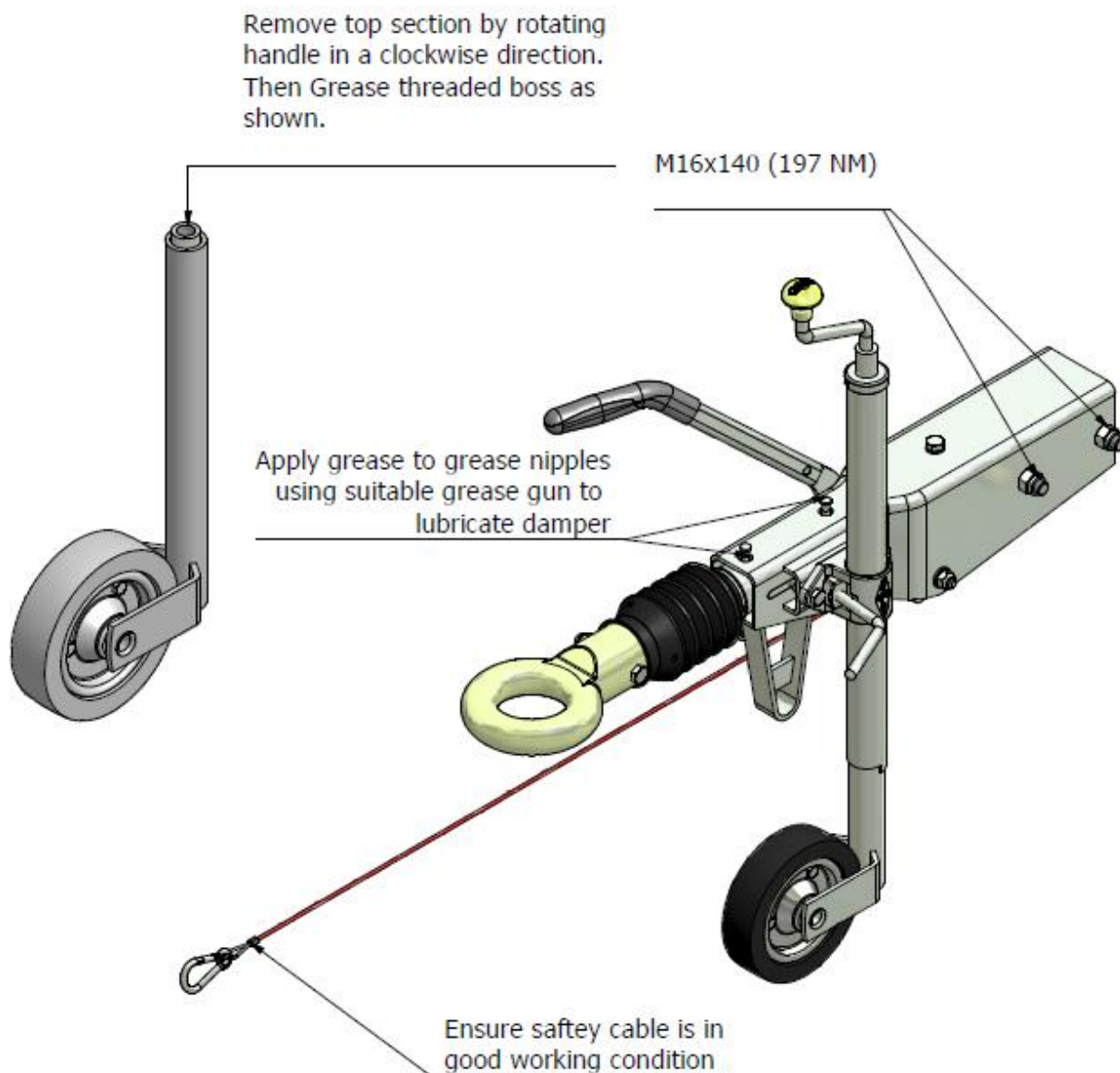
OPTION B

- Lift via forklift or similar lifting apparatus (Note: must be capable of supporting 1800KG)
- Place onto 4 axle stands (Note: must be capable of supporting 1800KG)
- Make a final check of all stands before proceeding with work beneath the Groundhog



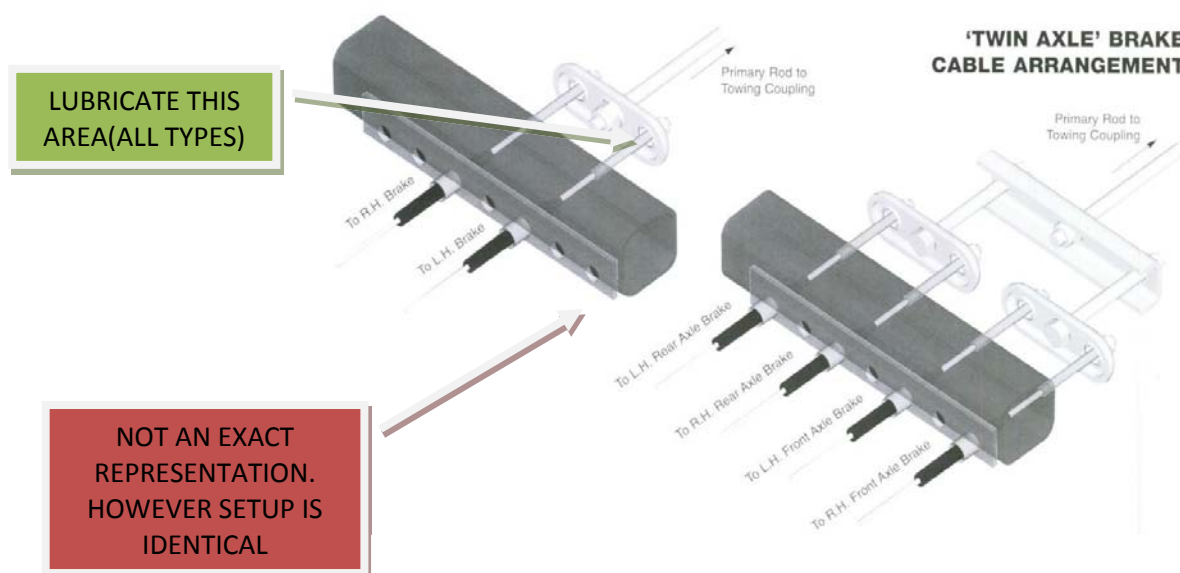
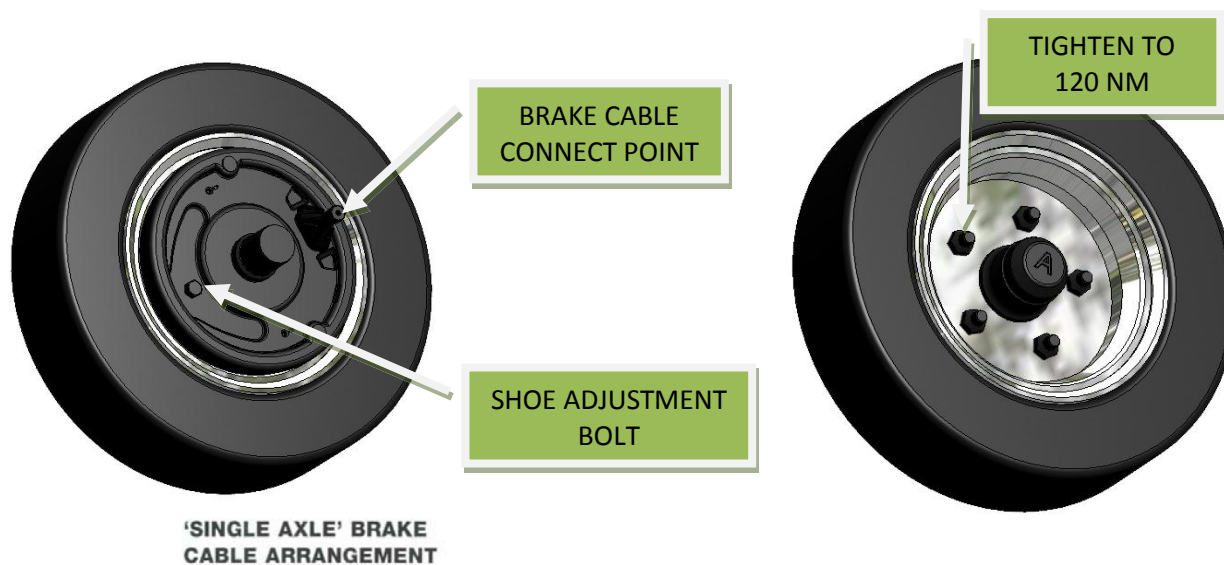
Service Detail:**1. Towing Coupling, Safety Cable, and Jockey Wheel**

- Ensure that the safety cable is present and in good working condition
- Apply grease to grease nipples lubricating the coupling damper
- Tighten M16x140MM class 8.8 bolts to 197 NM (Newton Meters)
- Remove jockey wheel (Hold wheel and rotate handle to remove) and grease threaded boss



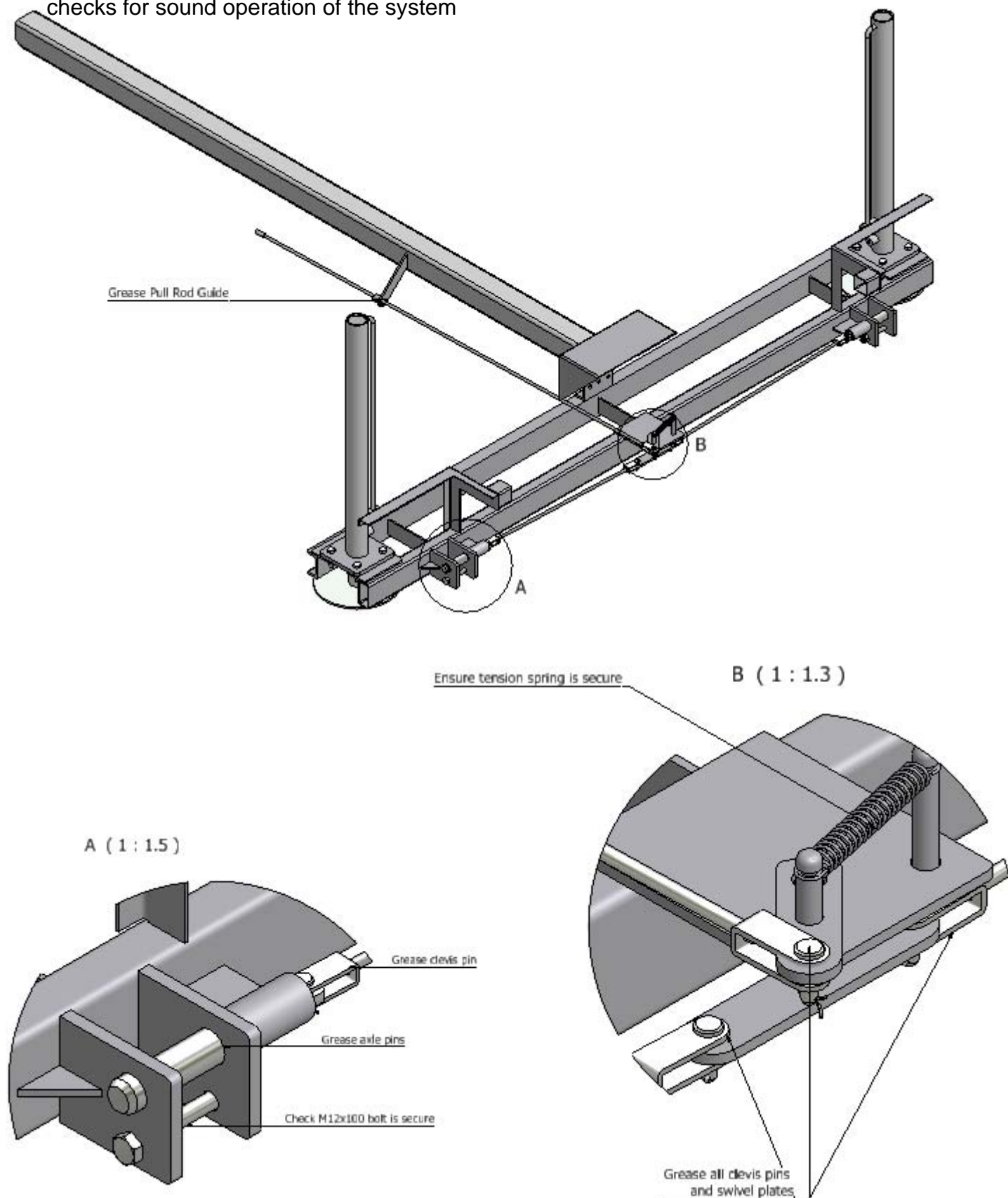
2. Brakes, Wheels, and Tyres

- Adjustments to the handbrake should be carried out after you have checked and made any adjustments to the brake shoes
- To adjust the brake shoes, jack the wheels clear of the ground and support the unit with a suitable support, see option A or B
- Turn the wheel in a forward direction, while turning the brake adjusting bolt clockwise, until the wheel locks
- While still turning the wheel in a forward direction turn the brake adjusting bolt anticlockwise until the wheel turns freely without binding
- If adjustment cannot be achieved or the brake shoes make a grinding noise. Further inspection and possible replacement may be necessary
- Check tension and condition of the hand brake cable from start to finish. Adjust Cable plate if tightening is required. Apply grease or copper grease where shown below
- Ensure wheel nuts are tightened to 120 NM and that tyre pressure is 96PSI
- Check tyre tread to road legal regulations, condition of brake cable at connect point



3. Pull Rod Mechanised Parts and Axle Pins

- Lubricate all parts of the mechanised system which includes both Axle Pins, All Clevis Pins, Pull Rod Guide, Tension Spring, and Swivel Plates
- Ensure M12x100 Leaf Spring resting bolt is secure
- Involve an additional operative to engage and disengage the mechanism whilst the other checks for sound operation of the system



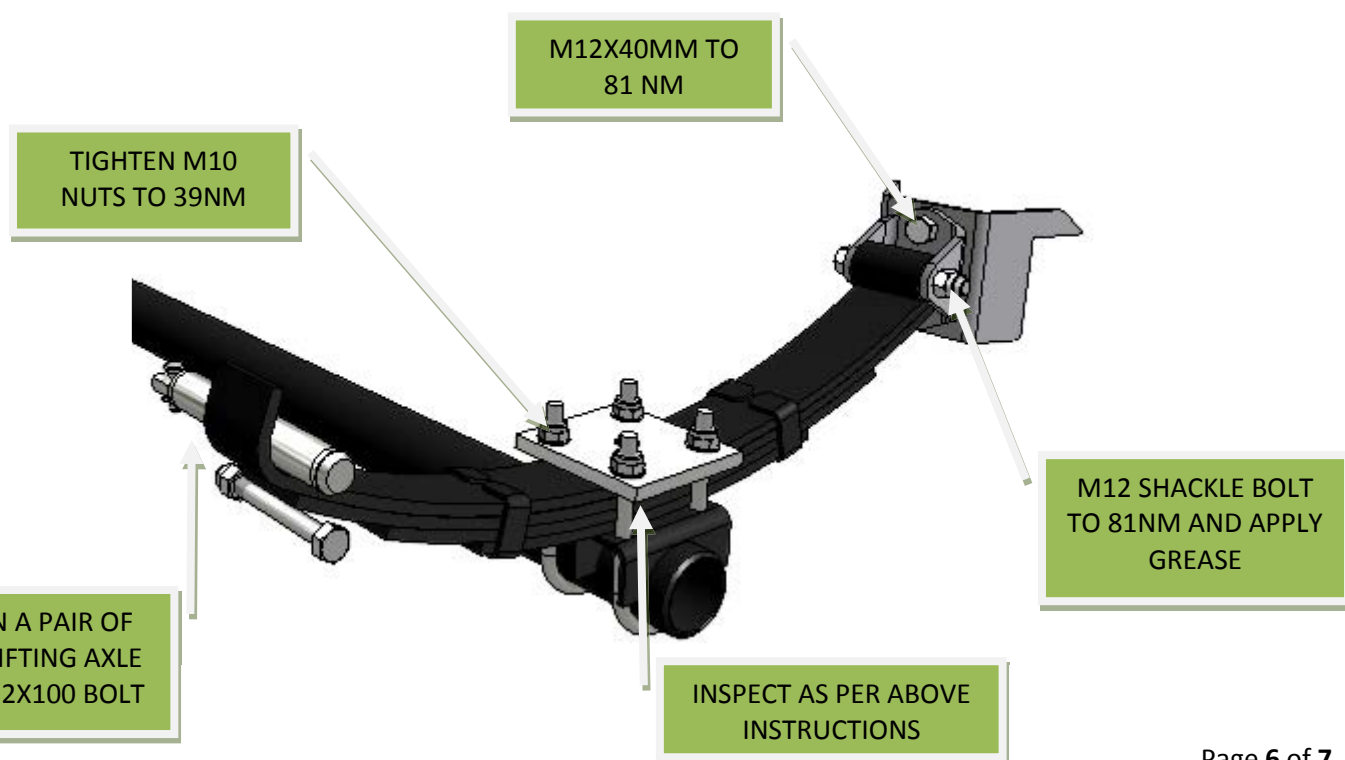
4. Leaf Springs, Shackles, and U Bolt Assembly

- Firstly, it is good practice to ensure that at all times the 'U' bolt is suitably tightened to 39 NM. Check that the leafs are not free to move and securely clamped by the 'U' bolt and tensioning plate
- When the leaf springs are due for inspection. Elevate to option 'B' as shown in page 2. Place 2 additional stands beneath axle raising it from the M12x100 bolts. The stands should be rated for at least 250KG per pair allowing for a small factor of safety. The M12X100 bolts will still be in place for additional safety

- **Perform one at a time:**

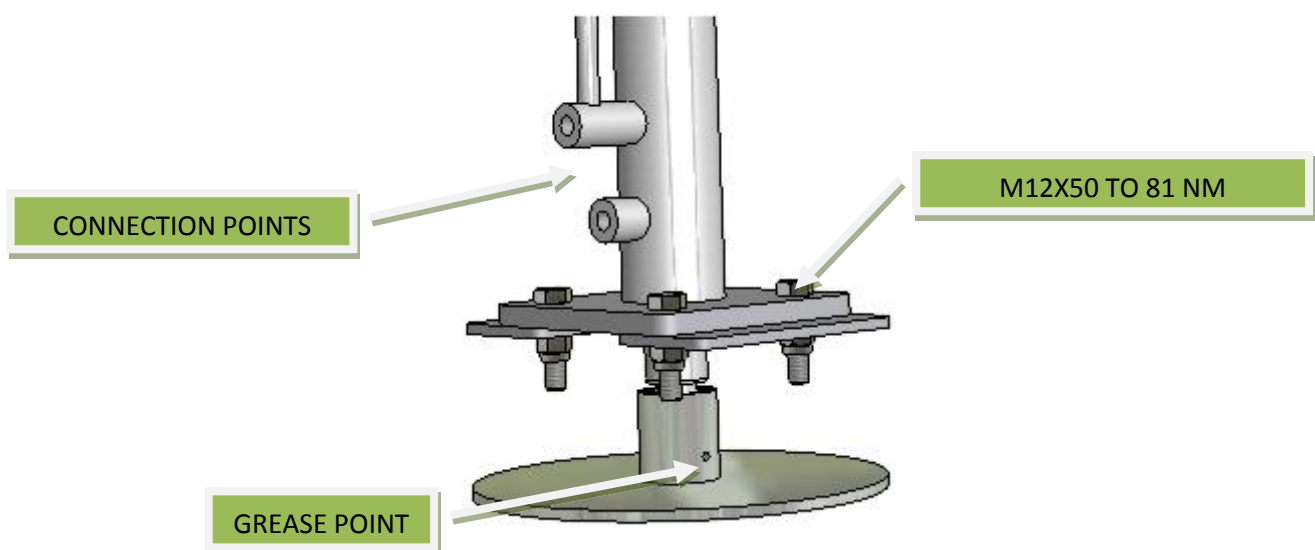
Loosen the M10 Nyloc nuts enough to lift the tensioning plate so that the leafs of the spring are visible for inspection. Do so in a diagonal pattern so as not to disturb the parallel alignment of the spring in the direction of the unit

- Check condition of 'U' bolts for any signs of severe elongation or deformation. Replace if required
- Check leaf spring for any signs of fatigue and or creep fracture. If this exists replace springs immediately. If ok, tighten springs in a reverse pattern to ensure even tightening and parallel alignment. It is good practice to pack the spring centrally between the front axle pin plates to ensure good parallel alignment after tightening.
- Additional paint could also be applied to the springs if required to preventing rusting. A zinc enriched primer could also be utilized to enhance rust protection
- Check M12 Shackle bracket is tightened to 81 NM and apply grease to grease nipple supplied
- Tighten M12x40MM class 8.8 bolts to 81 NM and check their condition



4. Hydraulic Rams

- Tighten M12x50MM class 8.8 bolts to 81 NM and check their condition
- Check Ram condition
- Check for any hydraulic fluid leaks in the line and at all connection points
- Apply grease to grease nipple as shown below
- Check hydraulic oil fill level in reservoir is correct to level indicator. Groundhog recommends HY32 as the preferred brand of hydraulic oil



Summary:

It is imperative that your groundhog products are serviced at regular intervals as mentioned in this document. Ensuring 100% quality on all serviceable parts provides peace of mind that your groundhog product will keep providing you, with quality service throughout its working life.