



ROUTINE MAINTENANCE MANUAL



FLAT BALE TRAILERS

CATTLE CONTAINER

MOBILE SHEEP DIPPER (Agricultural)

WARRANTY

The Portequip range of trailers is supplied with a full year's warranty from the date of despatch from the factory. Any malfunctioning equipment, omissions, or deviations from the original specification, must be reported to Portequip Ltd within 10 days of delivery to the dealership. Any damage sustained in transport must be reported to the delivery driver, the Portequip team or the transport company.

Warranty procedure

If you have a claim under warranty, contact the manufacturer's agent, from whom you purchased the trailer, quoting the model and serial number. Do not delay, as you should realise that further or excessive damage caused by delaying the repair of an otherwise warrantable failure may mean the claim cannot be fully accepted. Our continuous improvement policy means that you should provide your dealer with as much information as possible relating to the failure, for example the length of haul, type of material, towing vehicle etc. as this will help to diagnose the cause of any failure.

Note: Normal maintenance and servicing routines are not covered by warranty. No warranty repairs are to be carried out without prior authorisation from Portequip Ltd. After the repairs are completed a warranty claim can be submitted to Portequip's warranty department for consideration. Any new parts supplied relevant to the claim will be invoiced at full retail value and then credited after the faulty material has been returned and the warranty claim approved.

NOTES

MAKE A NOTE OF THE TRAILER SERIAL NUMBER BELOW FOR A FUTURE REFERENCE

SERIAL NUMBER: _____



**THESE INSTRUCTIONS MUST BE READ IN FULL BEFORE OPERATING THE TRAILER
OR DIPPER.**

THIS MANUAL MUST ALWAYS REMAIN WITH THE TRAILER OR DIPPER

OPERATORS RESPONSIBILITY

It is the responsibility of the operator to read and understand the contents of this manual before operating the trailer for the first time. The operator's manual must accompany the trailer at all times. If the trailer is resold the operator's manual must be given with the trailer to the new owners.

MANUFACTURER:

Portequip Ltd
Penninghame Home Farm
Girvan Road
Newton Stewart
DG8 6RD
01671 402775
sales@portequip.co.uk
www.portequip.co.uk

Agent Details:



How to use this manual

Before use of the trailer familiarise yourself with the manual and its contents. The trailer may only be operated, serviced and repaired by persons who are familiar with the trailer and who have read and understood this manual, and are informed of the risks.

Modifications to the trailer (including the fitment of non original/non approved parts or attachments) without the specific approval of the manufacturer, exclude the manufacturer from any liability or damage resulting from the modifications. Failure to follow the procedures given in this manual could invalidate the warranty given.

!!! WARNING !!!

The operator and user must read this manual fully before commencing work with or transporting the trailer. If the operator or user does not understand any part of this manual further help and advice is available from the manufacturer or from the manufacturers agent shown above.

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MAINTENANCE INTRODUCTION

In the UK, by Law, every employer, must meets its obligations in relation to Health and Safety under the following pieces of legislation;

- **The Health & Safety at Work Act 1974**
- **The Provision and Use of Work Equipment Regulations 1998**

It is vitally important that all work equipment is maintained in an efficient state, is in an efficient working order and in a good state of repair. Therefore it is imperative that equipment is maintained so that it is in good mechanical condition.

Planned maintenance should be;

- *Thorough*
- *Regular*
- *Frequent*

Any item that is not functioning correctly should be replaced with genuine Portequip parts before the trailer is used.

The manufacturer will in no way be liable for damage or personal injury caused by failure to comply with this schedule or use parts not supplied by the manufacturer.

This manual is generic and covers a range of Portequip trailers. This manual should be used in conjunction with the manual supplied with this trailer.

TILLY PASS SCHEME

Agricultural Trailers are not registered for road use in the UK. Therefore, unlike a commercial Trailer they are not required to undertake an annual Ministry of Transport test.

"The absence of a Ministry of Transport Test can lead to trailers not being maintained in accordance with the requirements of the Provision and Use of Work Equipment

Regulations 1998 (PUWER) as recommended by Portequip in this manual, potentially leaving the trailer in a dangerous, unroadworthy condition."

This means that any equipment / machinery used for work purposes should be maintained in good condition and function as it was originally designed and manufactured.

Portequip encourage all UK customers to register their trailer with the Tilly Pass scheme. This is a voluntary scheme for trailers whereby authorised dealers carry out an annual maintenance inspection of the trailer, repair any issues and reinstate the trailer to a safe, functional state thereby ensuring the owner has met their obligations under PUWER.

After a year, the trailer needs to be rechecked, and a new certificate issued.

You can find more information including dealers that have subscribed to this scheme on the website www.tilypass.co.uk



MAINTENANCE & SERVICE SCHEDULES

The Warranty will be void if the maintenance schedule is not followed and genuine Portequip parts used.

Portequip cannot be held liable for damages caused by:

- Improper Product Use ✗
- Use by unqualified and/or unskilled personnel ✗
- Incorrect Installation (if made by the customer) ✗
- Inadequate product maintenance or cleaning ✗
- Unauthorised alterations or work ✗
- Incorrect manoeuvres ✗
- Use of non-original spare parts ✗
- Use of unforeseen accessories or not authorised in writing ✗
- Full or partial failure to follow the instructions ✗
- Exceptional Events ✗

As a memorandum for the user, Portequip Limited, guarantees the technical specifications and part quality in its products.

The Manufacturer's warranty *does not* cover parts whose repair or replacement is due to natural part wear or defects due to incorrect product use by the customer such as, for example, but not limited to:

- Unauthorised Alterations ✗
- Use other than that indicated by Portequip Limited ✗
- Product overloads beyond that indicated by Portequip ✗
- Negligent or poor product part maintenance ✗
- Work on products inconsistent with Portequip instructions ✗
- Failure to replace parts subject to wear, etc. ✗

Important Notices

- Trailers manufactured by Portequip Limited are designed to be operated in accordance with the maximum weight ratings set out in the Serial Plate attached to the trailer and at legal speeds as defined by the Highways Code (or as set out in law in the country of operation)
- Alterations to a Portequip trailer should not be made without first consulting Portequips Technical Engineers. Alterations could affect the structural integrity of the trailer and void the warranty.
- Welding or other alterations should never be made to any air / oil reservoir, wheel rim or spring.
- Portequip Trailers carry a 1 year warranty from date of delivery. Any defect that applies to Portequip Limited workmanship will be repaired under this warranty. If it is necessary for the trailer to be returned to the factory the transport costs will be charged to the customer.
- Parts that are not manufactured by Portequip Limited are covered by the manufacturers guarantee and are subject to their warranty.
- This Warranty excludes all wearing parts and paintwork
- Please remember that every alteration to the trailer voids the original approval.

Pre-Maintenance Inspection Guide (DEALER / AGENT)

■ = Check / take action

	FLAT BALE TRAILER	CATTLE CONTAINER	SHEEP DIPPER	CHECK WITH INITIALS
Laying up protection				
Protect all electrical connections	■	■	■	
Clean down trailer	■	■	■	
Repaint any areas where paint has been removed	■	■	■	
Replace worn or damaged parts	■	■	■	
Replace missing or damaged decals	■	■	■	
Grease all parts notified on the trailer	■	■	■	
Cover ends of all quick release connectors	■	■	■	
Inspect for damage due to the load or loading trailer	■	■	■	
Check brake operation	■	■	■	
Check park brake operation	■	■	■	
Check condition of the slurry tank	n/a	■	n/a	
Check condition of the dip tank	n/a	n/a	■	
After use of sheep dipper ensure that the tank is empty and there is no dip solution left before moving the vehicle	n/a	n/a	■	
Pre Delivery Inspection (To be complete by the selling agent/dealer)				
Check lights	■	■	■	
Check wheel nut torque	■	■	■	
Check for oil leaks	■	■	■	
Grease rocking beam pivots (if fitted)	■	■	n/a	
Grease sprung drawbar (if fitted)	■	■	■	
Check side extension bolt security (if fitted)	■	■	■	
Check hydraulic hose condition	■	■	■	
Check air line condition (if fitted)	■	■	■	
Grease brake linkages	■	■	■	
Check connections to towing vehicle	■	■	■	
Check towing eye condition	■	■	■	
Check tyre pressures	■	■	■	
Check tyre condition	■	■	■	
Grease all nipples on running gear	■	■	■	
Inspect the trailer for loose nuts and bolts	■	■	■	
Check condition of the strap box	■	■	■	
Check Brake clearance & wear	■	■	■	
Adjust Brakes	■	■	■	
Check all screws and locknuts	■	■	■	
Check the axle hubcaps	■	■	■	
Check wheel bearing wear	■	■	■	
Tighten all suspension U-Bolts (if fitted)	■	■	■	
Tighten all spring drawbar U-Bolts (if fitted)	■	■	■	
Lubricate wheel bearings	■	■	■	
Check suspension	■	■	■	

■ = Check / take action

GENERAL MAINTENANCE GUIDE (CUSTOMER)

	FLAT BALE TRAILER	CATTLE CONTAINER	SHEEP DIPPER	CHECK WITH INITIALS
Daily				
Check operation of all lights	■	■	■	
Check tyre pressures	■	■	■	
Check tyre condition and tread	■	■	■	
Visually check wheel nuts are tight	■	■	■	
Check operation of brakes	■	■	■	
Check operation of handbrake / parking brake	■	■	■	
Check all hydraulic, air and electrical connections between the tractor and trailer	■	■	■	
Drain water from air tanks (air brakes only)	■	■	n/a	
Inspect trailer for damage	■	■	■	
Check all safety decals are clean and visible	■	■	■	
Check condition of the slurry tank	n/a	■	n/a	
Check condition of the dip tank	n/a	n/a	■	
After use of sheep dipper; ensure that the tank is empty and there is no dip solution left before moving the vehicle	n/a	n/a	■	
Weekly – In addition to daily checks				
Grease sprung drawbar (if fitted)	■	■	n/a	
Grease nipples on all running gear	■	■	■	
Grease bogie pivot pins (pre 2022 models only)	■	■	n/a	
Check towing eye for wear	■	■	■	
Check hydraulic hose condition	■	■	■	
Check wheel nut torque	■	■	■	
Grease brake cams	■	■	■	
Check for hydraulic oil leaks	■	■	■	
Check airline condition (if fitted)	■	■	n/a	
Check brake condition and wear	■	■	■	
Inspect the trailer for loose nuts and bolts	■	■	■	
Check side extension bolt security (if fitted)	■	■	■	
Check condition of strap box	■	■	n/a	
Every 3 Months – In addition to Weekly Checks				
Check brake clearance and wear	■	■	■	
Check slack adjuster setting (if fitted)	■	■	■	
Inspect parking brake and parking brake cable	■	■	■	
Test ABS (if fitted)	■	■	n/a	
Check All Screws and lock nuts	■	■	■	

■ = Check / take action

GENERAL MAINTENANCE GUIDE (CUSTOMER)

	FLAT BALE TRAILER	CATTLE CONTAINER	SHEEP DIPPER	CHECK WITH INITIALS
Every 6 Months – In addition to 3 monthly checks				
Check the axle bearing gap	■	■	■	
Torque suspension (Commercial axles only)	■	■	n/a	
Check sprung drawbar and springs	■	■	n/a	
Check the axle hub caps	■	■	■	
Tighten all suspension U-bolts (if fitted)	■	■	■	
Tighten all sprung drawbar U-bolts (if fitted)	■	■	n/a	
Annually – Every Year - In addition to 6 monthly checks				
Visually inspect the suspension components	■	■	■	
Bi-Annually – Every 2 years – In addition to annual checks				
Lubricate wheel bearings	■	■	■	
Laying up protection				
Protect all electrical connections	■	■	■	
Clean trailer down	■	■	■	
Repaint any areas where paint has been removed	■	■	■	
Replace any worn or damaged parts	■	■	■	
Replace missing or damaged decals	■	■	■	
Grease all parts notified on trailer	■	■	■	
Cover ends of all quick release connectors	■	■	■	

NOTES

CHANGING WHEELS ON A TRAILER WITH ROCKING BOGIE – (Pre 2002)



- **NEVER work under an unsupported trailer**
 - **NEVER remove more than one wheel at a time**
 - **ALWAYS stand clear of the trailer with the wheel removed**
- FAILURE TO FOLLOW THIS PROCEDURE COULD RESULT IN INJURY OR DEATH**

1. If loaded, empty the trailer.
2. Ensure trailer is parked on firm level ground.
3. Check trailer is securely hitched to the tractor, apply the tractor park brake, stop the engine and remove the key.
4. Ensure brakes are applied and wheels which are not being removed are chocked.
5. Slightly loosen the wheel nuts of the wheel to be removed.
6. Place jack below centre of bogie.

Minimum jack & axle stand ratings must be equal to or greater than axle weight (e.g. for 10 tonne axle weight jack must be minimum 10 tonne). The use of a bottle jack is not recommended

7. The bogie should be prevented from moving relative to the chassis for this operation.
8. Using the jack slowly raise the bogie enough for a fully inflated wheel to be refitted.
9. Position axle stand below both ends of the bogie, as close to the wheels as possible.
10. Slowly lower axle onto stands. Ensure the trailer is high enough for a fully inflated wheel to be refitted. If not repeat step 6-9.
11. Completely remove wheel nuts.
12. Remove wheel with additional help to remove large wheels. Never remove more than one wheel at a time.
13. To fit new wheel, place the wheel onto the axle hub using additional help.
14. Tighten all wheel nuts.
15. Raise machine from axle stands using the jack.
16. Remove the axle stands and lower the machine fully.
17. Tighten the wheel nuts to the prescribed tightening torque - see general tightening torque recommendations

CHANGING WHEELS ON A TRAILER WITH TANDEM SPRINGS



- **NEVER work under an unsupported trailer**
 - **NEVER remove more than one wheel at a time**
 - **ALWAYS stand clear of the trailer with the wheel removed**
- FAILURE TO FOLLOW THIS PROCEDURE COULD RESULT IN INJURY OR DEATH**

1. If loaded, empty the trailer.
2. Ensure trailer is parked on firm level ground.
3. Check trailer is securely hitched to the tractor, apply the tractor park brake, stop the engine and remove the key.
4. Ensure brakes are applied and wheels which are not being removed are chocked.
5. Slightly loosen the wheel nuts of the wheel to be removed.
6. Place jack below axle, as close to wheel as possible ensuring to leave room for an axle stand between the jack and the wheel.

Minimum jack & axle stand ratings must be equal to or greater than axle weight (e.g. for 10 tonne axle weight jack must be minimum 10 tonne). The use of a bottle jack is not recommended

7. Using the jack raise the wheel to be removed ensuring other wheels remain on the ground. Raise the trailer until high enough for a fully inflated wheel to be refitted.
8. Position axle stand below axle as close to wheel as possible.
9. Lower axle onto stand.
10. Completely remove wheel nuts.
11. Remove wheel with additional help to remove large wheels.
12. To fit new wheel, place the wheel onto the axle hub using additional help.
13. Tighten all wheel nuts.
14. Raise machine from axle stand using the jack.
15. Remove the axle stand and lower the machine fully.
16. Tighten the wheel nuts to the prescribed tightening torque - see general tightening torque recommendations

LIGHTS

Check the operation of all the lights on a **DAILY** basis. To do this you must conduct a physical test of the lights by activating each function in turn and getting out of the tractor to ensure the light is working. A second person can be used to assist by either operating the controls whilst you check the light functionality or vice versa. Damaged electrical wiring or components must be repaired or replaced before the trailer is used. Details of the electrical schematic and spare part numbers can be found in the operator's manual supplied with the trailer.

NOTE: - It is the driver's legal responsibility to check all lighting is functioning correctly.

TYRES

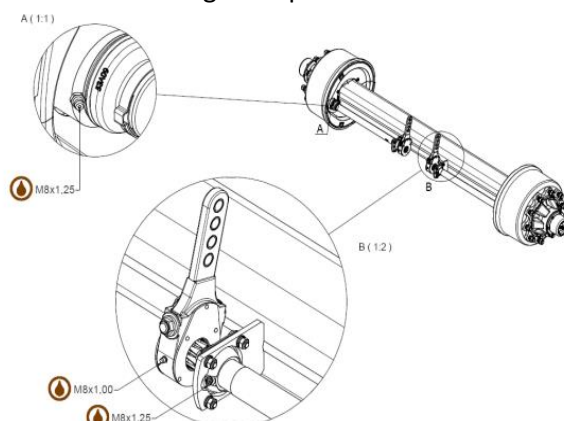
Always check tyre pressure before use. Actual pressures may be varied to suit journey lengths, ground conditions etc: -

TYRE SIZE	PRESSURE (bar)	MAX. LOAD @ 40Kph (Kg)	WIDTH (mm)	DIAMETER (mm)
12.5/80 R15.3	6.5	2650	308	965
385/65 R22.5	6.5	4500	385	1078
400/60 R15.5	6.2	3450	405	875
445/45 R19.5	9	5150	445	895
445/65 R22.5	7	5800	445	1150
560/45 R22.5	4	4830	560	1076
560/60 R26.5	4	6300	560	1244

Each tyre brand can have different ratings. Check the ratings on the tyre and never exceed the maximum pressure. For other wheel sizes refer to NC for advice. Daily check for cracks in the tyres as well as heavy wearing on one side of the tyre compared to the other

GREASING POINTS

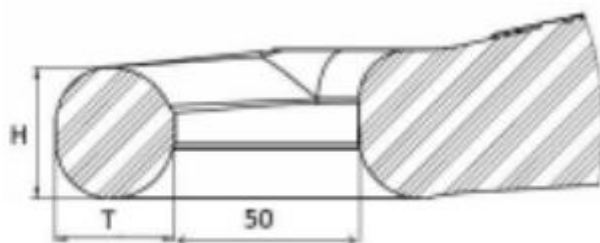
Bogie pivot pins (if applicable), sprung drawbar, brake linkages and all nipples on the running gear should be greased once a week. All grease points are illustrated below: -



Standard Axle

TOWING EYE

Weekly check the towing eye for wear and ensure it cannot escape from the tractor hitch as the drawbar may lift. The towing eye must be replaced by qualified welder/Technician if wear exceeds any of the following dimensions: -



Description	Nominal Dimension	Wear Dimension
Eye Diameter	50.4mm	52.5mm
Ring Height (H)	40.0mm	33.5mm
Web Front Width (T)	32.5mm	28.5mm

weight of the trailer. Torque bolts to 290 +/-20Nm and **check weekly**. If the bolts are damaged, they must be replaced by M20 x 70mm long Grade 10.9.

HYDRAULIC HOSES



- **DANGER** Hydraulic hose lines may only be replaced by qualified personnel
- **RISK** of skin and eye irritation through contact with hydraulic oil
- **DANGER** due to possible high temperatures of hydraulic oil
- **DANGER** risk of injury from hydraulic lines bursting
- **DANGER** of high-pressure injection due to hydraulic oil escaping at high pressure

Weekly check hydraulic hoses and fittings. Replace if any of the following defects are found:

- - Damage to the outer layer (chafing marks, cuts, cracks).
- - Embrittlement of the outer layer of the lines (cracking).
- - Deformations that do not correspond to the natural shape of the hose, both pressureless and pressurised. (Delamination, blistering, pinch points, kinks).
- - Leakage.
- - Damage (deformation) of the hose fitting (sealing function impaired).
- - Hose moving out of the fitting.
- - Corrosion of the fitting that reduces the function and strength.

See below table for working pressures, burst pressure and bend radius of hoses:

Size	Working Pressure		Burst Pressure		Bend Radius	
	Bar	PSI	Bar	PSI	mm	Inches
¼"	225	3265	900	13060	100	3.94
3/8"	180	2610	720	10440	130	5.12
½"	160	2320	640	9280	180	7.09
5/8"	130	1885	520	7540	200	7.87
¾"	105	1525	420	6100	240	9.45
1"	88	1275	352	5100	300	11.81
1 ¼"	63	915	252	3660	420	16.54
1 ½"	50	725	200	2900	500	19.69
2"	40	580	160	2320	630	24.80

AXLES

Portequip trailers are normally fitted with ADR axles as standard. Please check your trailer specification to see which axle you have been supplied.

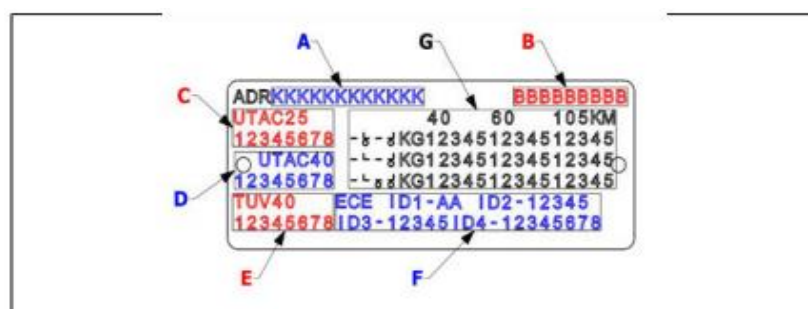
- It is imperative that the brakes are kept in proper working order. Therefore, regular servicing and adjustment should be carried out.
- The brakes should be tested before using for the first time and then again after the first laden journey.
- Thereafter check and test the brakes before use.

Axle Identification Plate

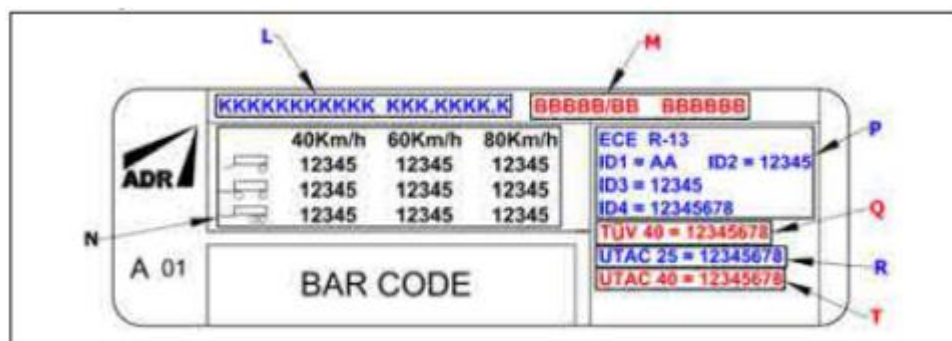
Each axle is fitted with an identification plate to enable replacement parts to be ordered. If you need to order axle spares you may be asked to quote this number.

Metallic ID Plate

- A Axle Identification Code
- B Order Identification Code
- C UTAC Approval Report Identification Code at 25 kph
- D UTAC Approval Report Identification Code at 40 kph
- E stVZO Approval Report Identification Code at 40 kph
- F ECE-R13 Approval Identification Data
- G Maximum Axle Capacity data referencing the application and speed






















Adhesive ID Plate

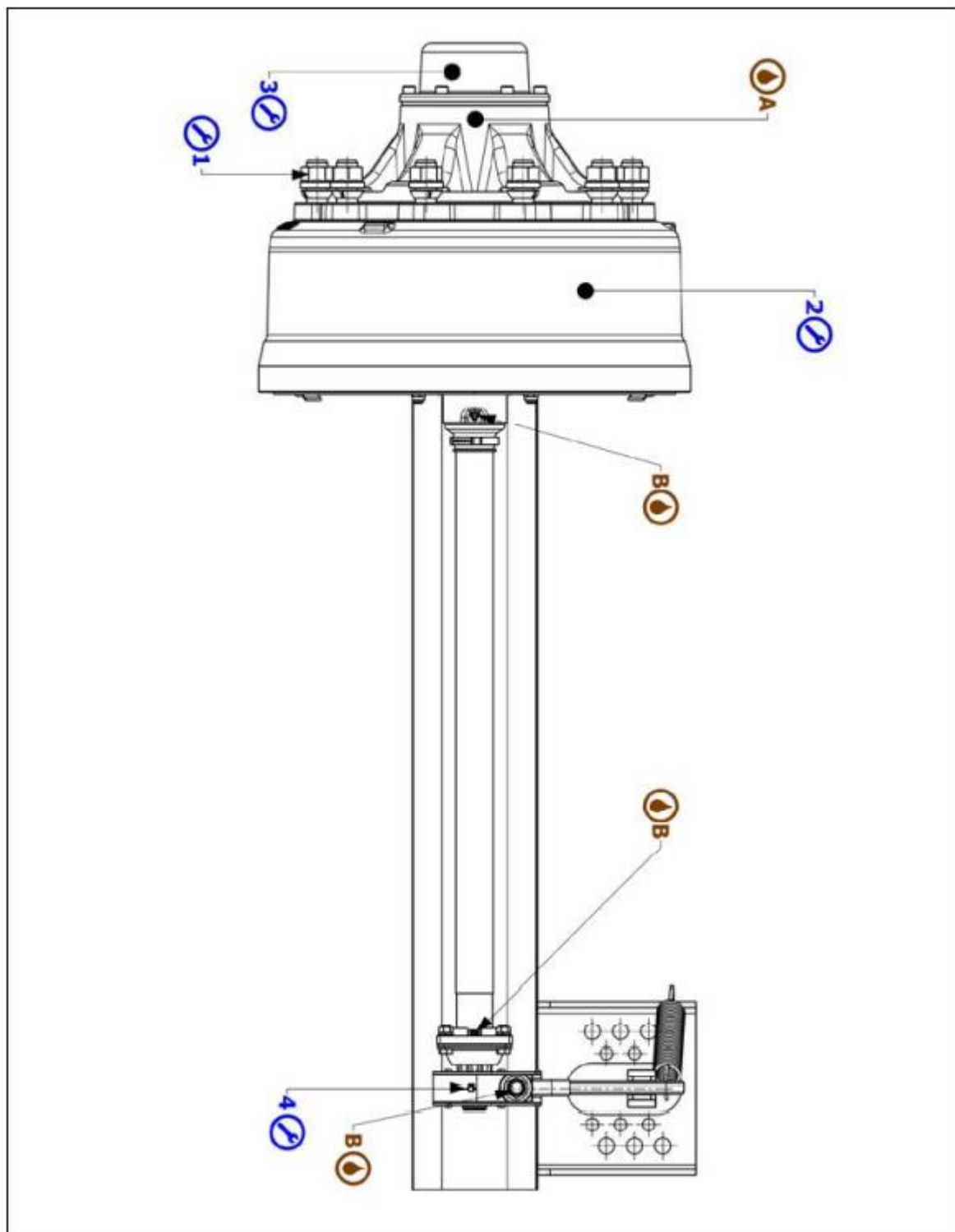


- L Axle Code
- M Customer Code
- N Carrying Capacity of the Axle
- P ECE-R13 Test Report Data or EU 2015/68 Test Report Data
- Q StVZO at 40 kph Test Report Data
- R UTAC at 25 kph Test Report Data
- T UTAC at 40 kph Test Report Data

ADR FIXED AXLE MAINTENANCE WORK SUMMARY

Rigid and steering axle lubrication and maintenance table  Lubrication  Maintenance	After the first 10 km of use at full load.	After the first 200 working hours or first 300 km travelled.	Every 500 working hours or every 8500 km travelled. ¹	Every 1500 working hours or every 25000 km travelled. ¹	Every 3000 working hours or every 50000 km travelled. ¹
Lubrication with special ADR Lithogrease 3 grease					
A – grease change in hub bearings					
B – brake cam supports					
C – brake levers					
D – steering rod joints					
E – steering hinges					
Maintenance					
1 – Wheel nut torque check					
2 – brake gasket check					
3 – bearing gap check and any adjustments					
4 – brake lever stroke check and any adjustments					
5 – steering hinge gap check and any adjustments					
6 – shock absorber end screw torque check					
7 – steering control cylinder fastening screw torque check					
8 – steering rod end screw torque check and steering angle adjustment					
9 – brake cylinder support screw torque check					

ADR FIXED AXLE LUBRICATION & MAINTENANCE POINTS



WHEEL NUT TORQUE

- **NEVER** use impact wrenches to tighten the wheel nuts as the impact torque may be excessive.
- Wheel nuts should be tightened in the following sequence, using a torque wrench.
- If a torque wrench is not available, use a wrench with an extension.



10-Stud Wheel



8-Stud Wheel

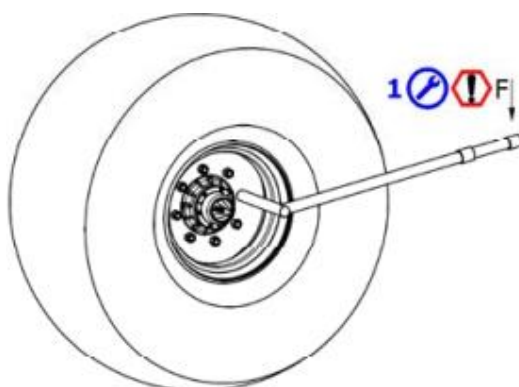


6-Stud Wheel

- Torque wheel nuts upon delivery and every load for the first ten loads.
- Thereafter wheels nuts should be visually **checked daily** and **torqued weekly**.
- Repeat every time the wheels are changed or removed.
- Wheel nuts are normally nut and washer, if any other type is fitted e.g. wheel nut with collar contact Portequip for torque setting.

Standard torque settings: -

Axle	No. Of Studs	Bolt Size (mm)	Torque (Nm)	Lever (mm)	Applied Force (F) (kg)
ADR or Granning	8	18	270	450	60
HOS	8	18	290	480	60
ADR	8	20	350	600	60
Granning or HOS	8	20	380	650	60
ADR	10	22	450	800	60
HOS	10	22	510	850	60
Granning	10	22	650	1080	60

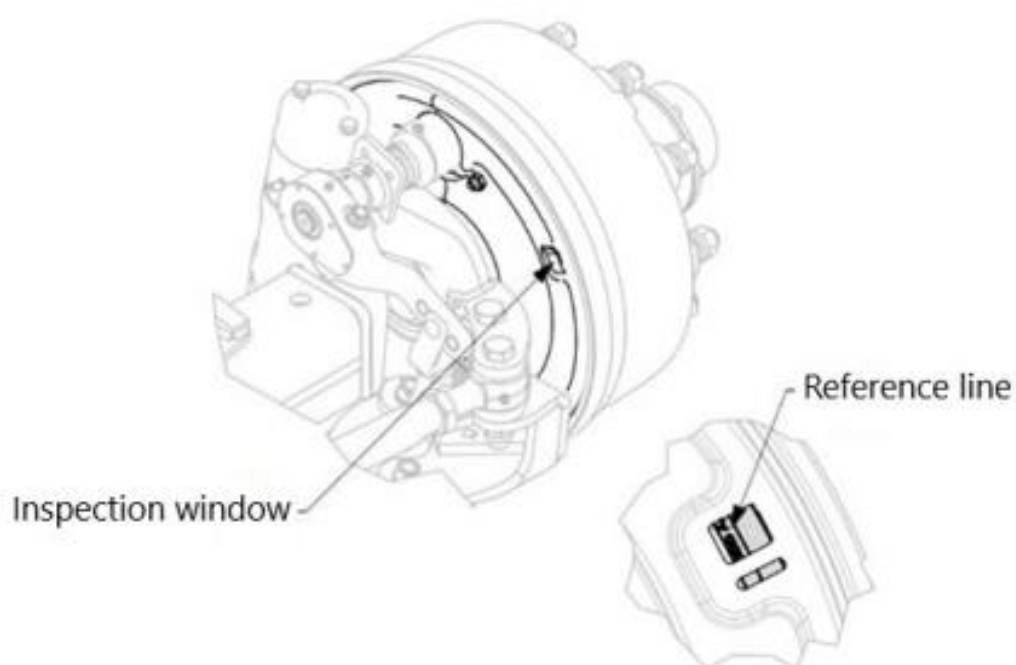


BRAKE CLEARANCE & WEAR

Every 3 months check brake wear.

To Check:

- open both inspection windows on the rear of the brake and check friction material thickness outside the reference line.
- The reference line should always be clearly visible, and, for safety it is recommended to replace the brake friction material when material thickness outside the line is reduced to 2mm.
- *Always* use original parts as the same type as those to be replaced.



BEARING GAP CHECK (flanged Hubcap Version)

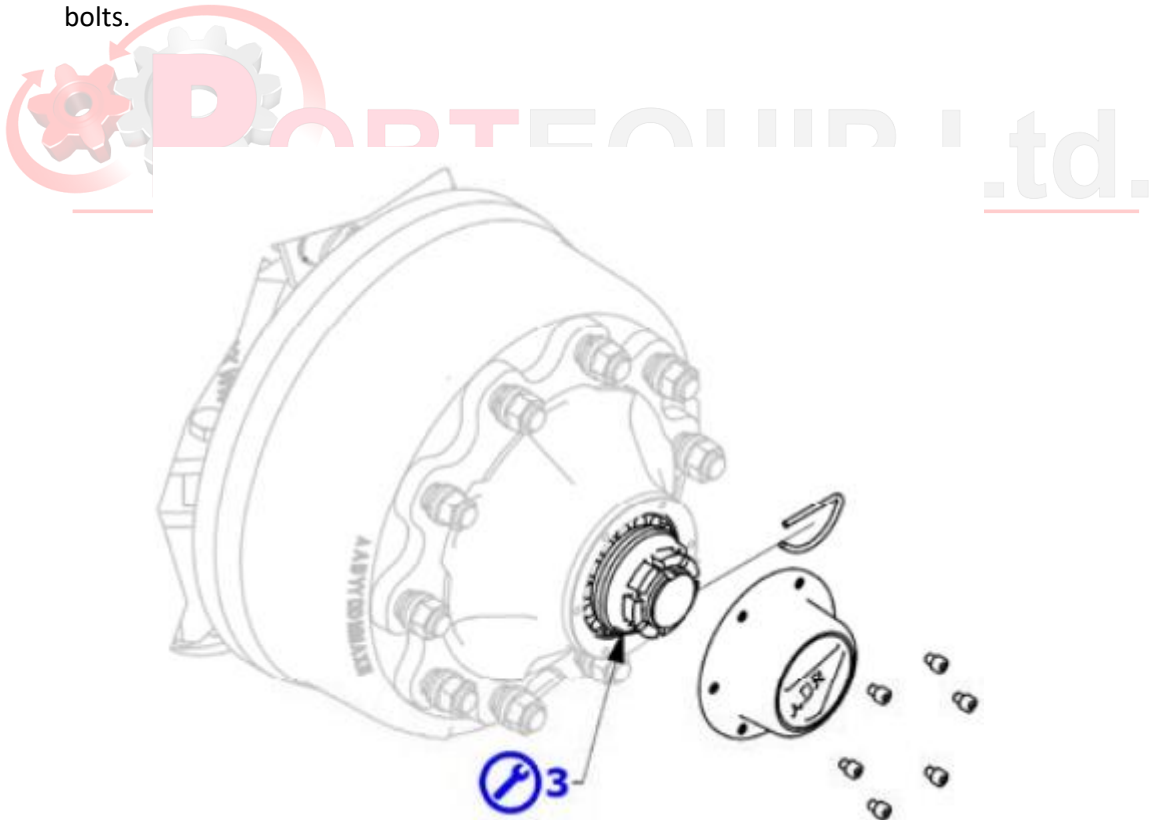
Check the bearings after the first 200 working hours and then annually ensure the wheel bearings do not rock or knock.

To check

- lift the axle with a jack until the wheel is off the ground and rotates freely.
- Refer to Changing the Wheels section for how to safely jack the trailer.
- Insert a lever between the ground and tyres and force the wheel up to find any gaps.

To adjust: -

1. Remove the flanged hub cap by removing the 6 bolts.
2. Remove the pin from the nut.
3. Tighten the nut while simultaneously rotating the wheel until the hub is slightly braked.
4. Rotate the nut until a slot with the hole on the spindle is found and insert the pin.
5. Ensure the hub rotates manually with slight resistance.
6. Top up grease on the visible part of the bearing, reassemble the hub cap and tighten the 6 bolts.



- Missing or damaged hubcaps must be replaced **IMMEDIATELY** to prevent dirt penetrating the hub

BEARING GAP CHECK

(Teknoax screw in Hubcap Version)

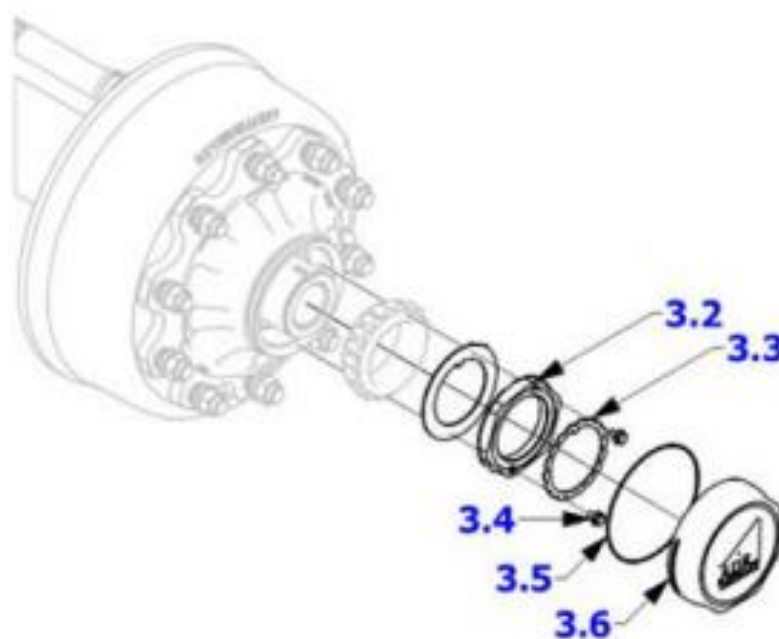
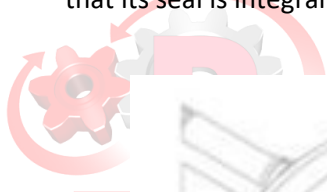
Check the bearings after the first 200 working hours and then annually ensure the wheel bearings do not rock or knock.

To check

- lift the axle with a jack until the wheel is off the ground and rotates freely.
- Refer to Changing the Wheels section for how to safely jack the trailer.
- Insert a lever between the ground and tyres and force the wheel up to find any gaps.

To adjust: -

1. Remove the hub cap (3.6) and gasket (3.5).
2. Remove the screws (3.4) and rack (3.3)
3. Tighten the nut (3.2) while simultaneously rotating the wheel until the hub is slightly braked.
4. Reposition the rack (3.3) and secure it to the nut (3.2) with the screws (3.4).
5. Ensure the hub rotates manually with slight resistance.
6. Top up grease on the visible part of the bearing, reassemble the hub cap (3.6) being careful that its seal is integral.



td.



- Missing or damaged hubcaps must be replaced **IMMEDIATELY** to prevent dirt penetrating the hub

BRAKE CLEARANCE & WEAR

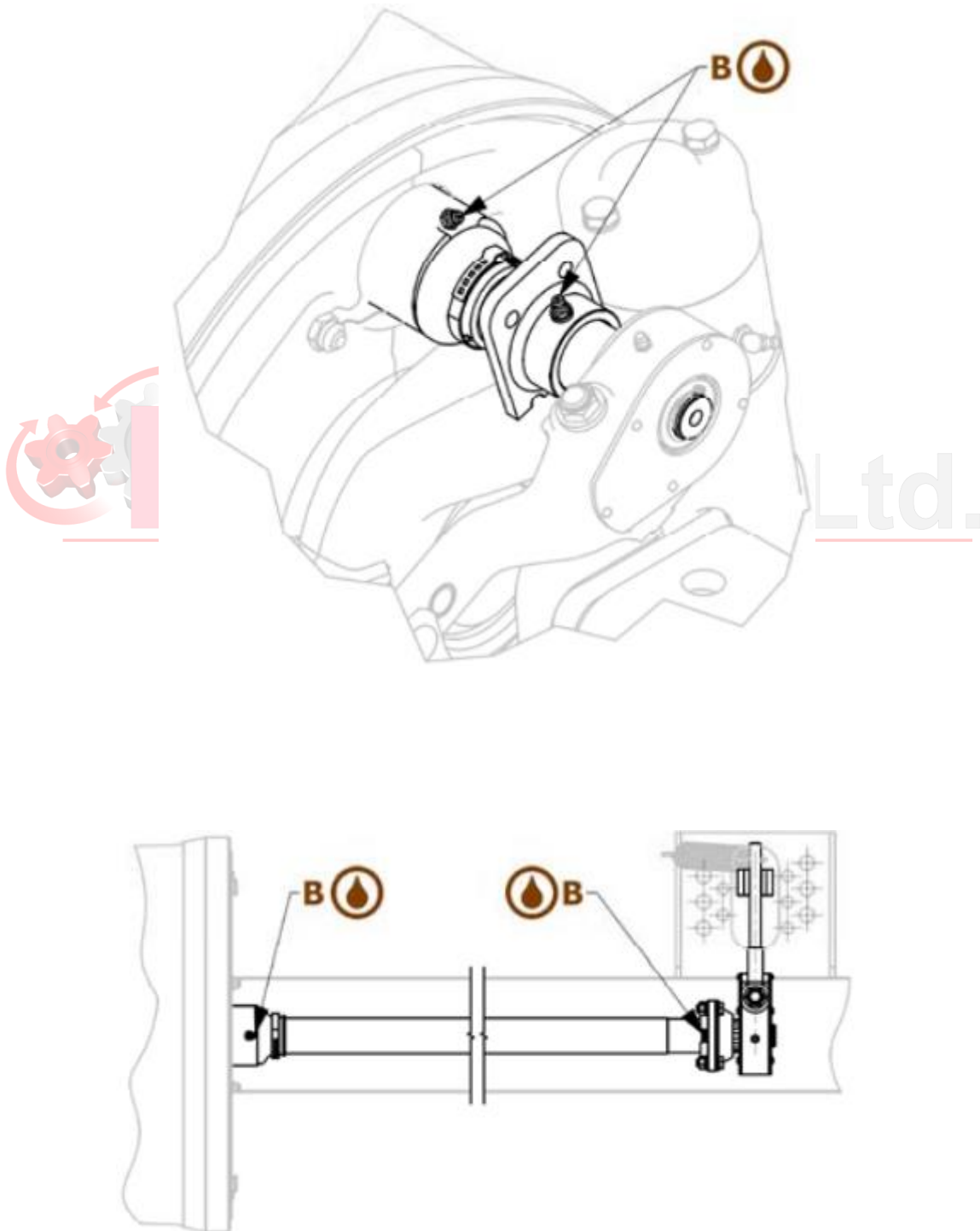
Every 2 years, as with the bearing gap check, lift the axle with a jack until the wheel rotates freely, then: -

1. For flanged hub cap remove the hub cap, pin in the nut and nut. For Teknoax version remove the hub cap and gasket, remove the screws, rack, and nut.
2. Remove the hub complete with drum and bearings from the spindle.
3. Perform this operation on one wheel at a time to avoid mixing components and for the safety of the Maintenance staff.
4. Clean the brake, check general conditions and wear. Replace any worn or damaged parts. Remove any lubricant residue that could affect good braking.
5. Remove all used grease residue, clean the bearings and gaskets. Replace any damaged parts.
6. Grease the housing and bearing rollers (point A in illustration). Each bearing requires about 150g.
7. Reassemble all parts as indicated in the illustration with the help of bushings to avoid alignment errors that could damage the bearings.
8. Before reassembling the nut apply a layer of grease on the bearing, reassemble and adjust the nut as per the Bearing Cap Check section.



BRAKE CLEARANCE & WEAR

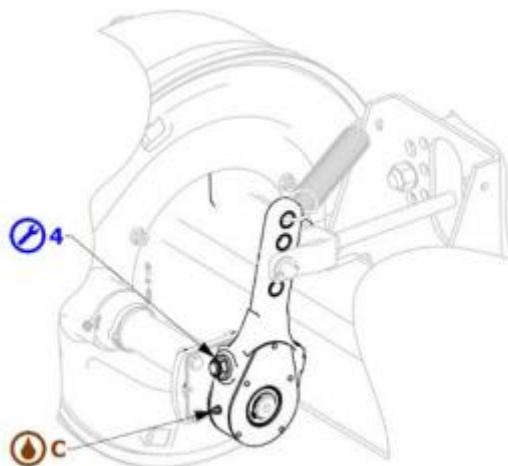
- Weekly grease the points (B) on the brake cam illustrated below so that new grease leaks from the housings.
- Grease penetration of the brakes is not admitted.
- Repeat this lubrication after each wash with a high-pressure hose



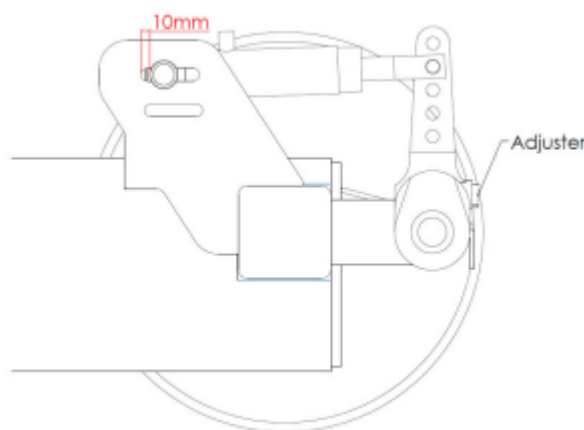
BRAKE SLACK ADJUSTERS

Every 3 months

- Ensure the brake cylinders rod movement does not exceed 40-45mm at full braking.
- To tighten the brakes, turn the nut (4) on the front of the slack adjuster clockwise.
- To slacken the brakes, turn the nut in the opposite direction.



- When adjusting, some free play should be left on the lever to allow the brake shoes to fully retract.
- To achieve this, manually pull the adjuster tight.
- There should be 10mm (3/8") left between the ram bolt and the rear of the slot as shown below.
- If this measurement is more, or less than 10mm adjust accordingly.



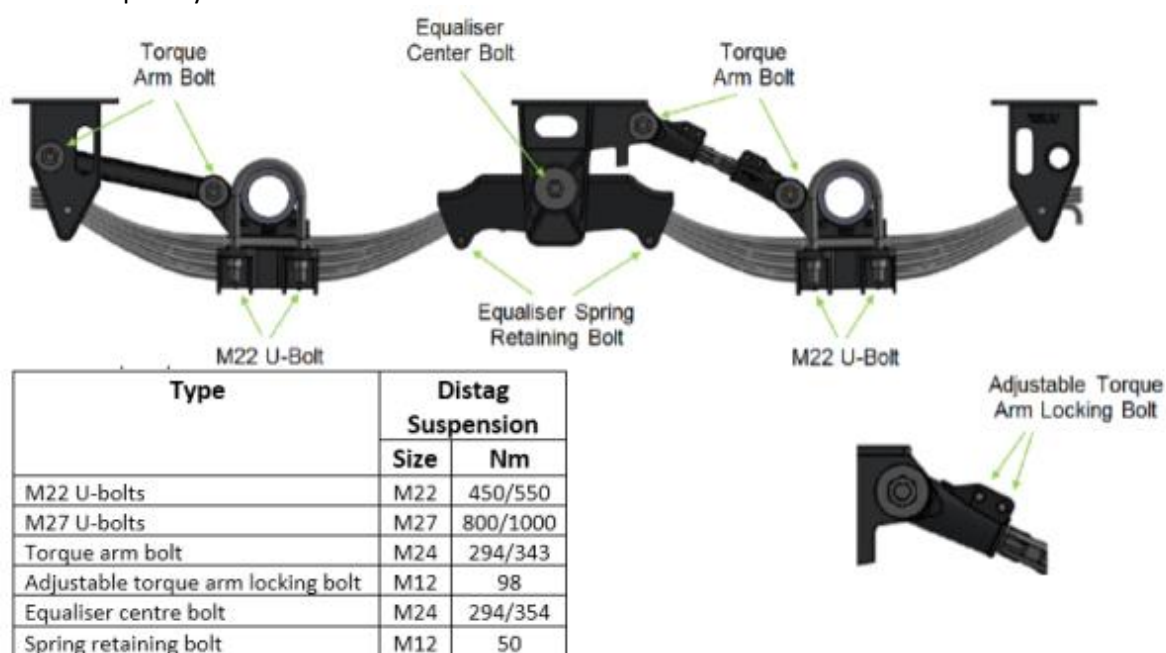
Weekly

- grease the Slack adjusters through point C.
- Repeat this lubrication after each wash with a high-pressure hose.

SUSPENSION (If Fitted)

Each part of the suspension must be torqued as stipulated below: -

1. Service and maintenance should be carried out after the first laden journey, and thereafter **every 6 months**.
2. All bolts should be tightened to the recommended torque setting in the table.
3. When tightening torque arm and centre hanger bolts with taper bushes, ensure the torque arm or equaliser is centrally located and not contacting the hanger. Check clearance and wear of taper bushes in centre hanger and torque arm assemblies.
4. **Yearly visual inspection** of spring, hangers, Saddles and clamp plates; thoroughly clean and inspect for cracks and deformation.
5. Under harsh or intensive operating conditions, maintenance should be carried out more frequently.



IMPORTANT NOTE – Suspension fitted may vary from illustration

















Type	ADR SUSPENSION	
	Size	Nm
M22 U-Bolts	M22	450/500
M27 U-Bolts	M27	600/720
Equaliser Centre Bolt	M27	270/300
Torque Arm Bolt	M24	100/120
End Terminal Bolt	M12	80/100
Equaliser Spring Retaining Bolt	M12	80/100



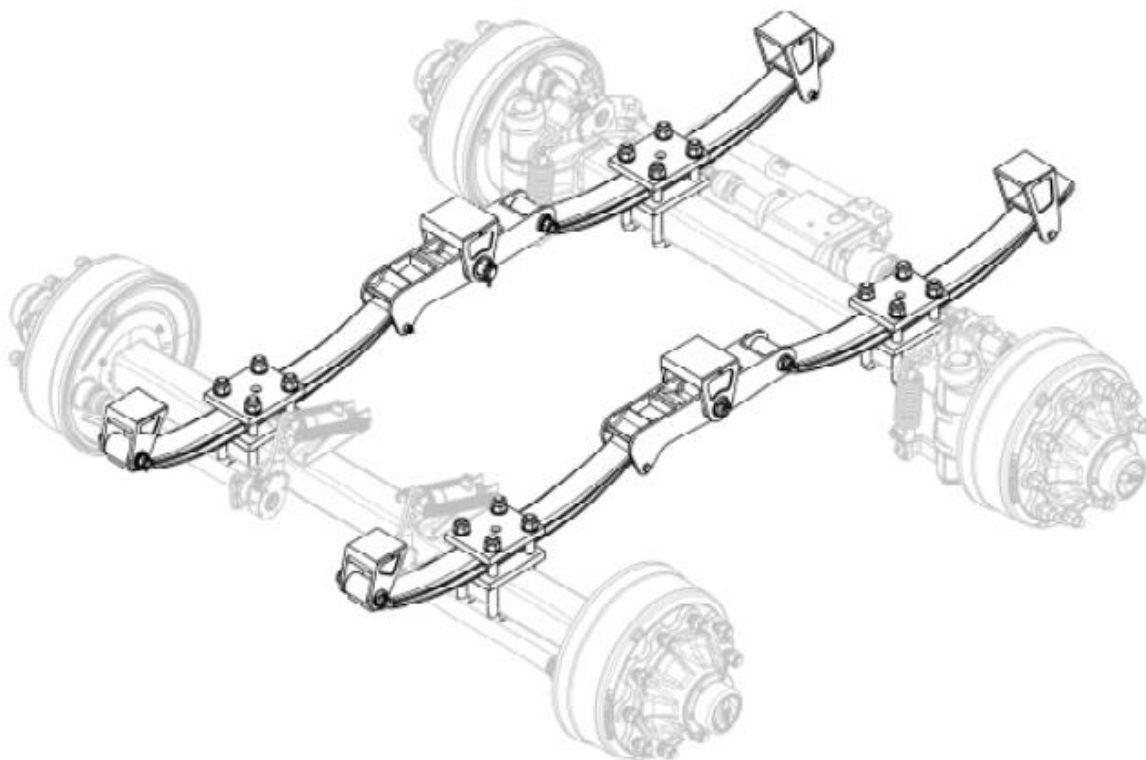
Failure to torque or inspect the suspension could lead to axle misalignment and tyre wear. If this happens contact your local Portequip Trailer dealer to arrange for realignment.

TANDEM SUSPENSION LAYOUTS

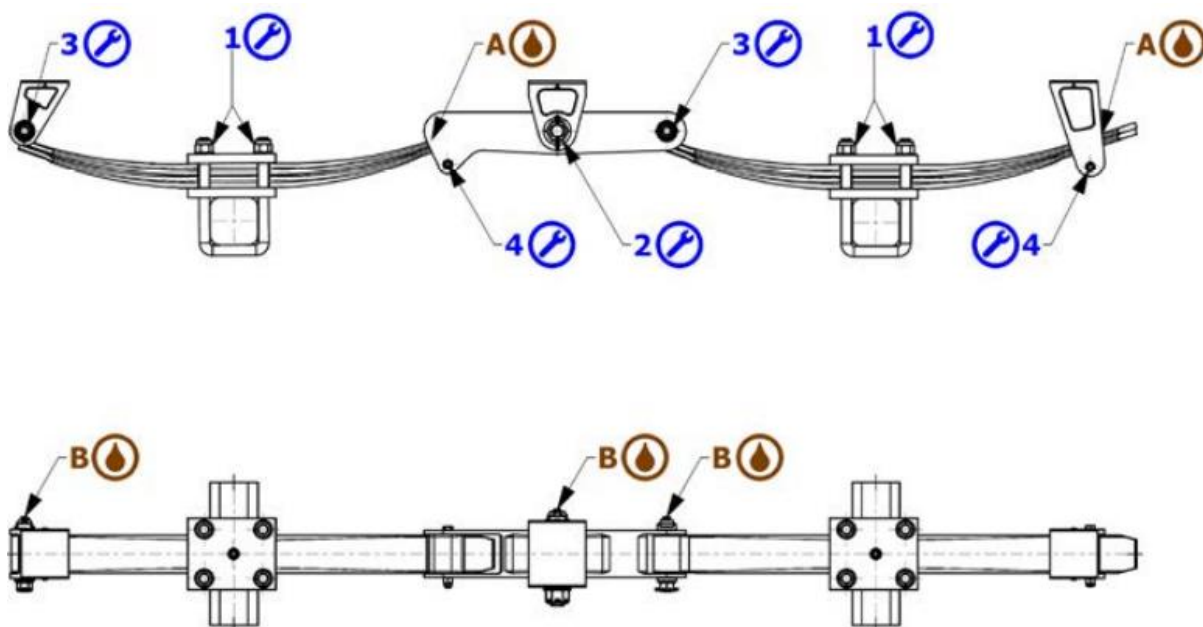
MAINTENANCE WORK SUMMARY

Tandem and Tridem series KC and KD mechanical suspension lubrication and maintenance table					
 Lubrication					
 Maintenance					
	After the first 10 km of use at full load.	After the first 500 working hours or first 8500 km travelled.	Every 500 working hours or every 8500 km travelled. ¹	Every 1500 working hours or every 25000 km travelled. ¹	
Lubrication with adhesive grease, water repellent and E.P. additive					
A – moderately grease the ends of the leaf springs and relevant sliding housings in the suspension frame (fixed supports and rocker arm)					
B – Grease rocker arm joint axles.					
Maintenance					
0 – visual inspection of the integrity of all components.					
1 – axle anchoring to leaf spring: check correct housing. Check torque with torque wrench					
2 – threaded pin torque check on rocker arm support.					
3 – check leaf spring anchor threaded pin torque.					
4 – non-slip screw torque check on leaf springs					

TANDEM SUSPENSION LAYOUT



LUBRICATION & MAINTENANCE



GENERAL MAINTENANCE

1. **Daily check** all safety decals are clean and legible. If a decal needs to be replaced, please contact our sales team for a replacement.
2. **Every 3 months** check function of the park brake and ensure cables are not frayed and that all cable grips are tight.
3. Never wash the trailer with a pressure washer as this may remove paint. Wash with a low-pressure hose and a brush. Paint will not achieve its maximum strength until approximately 2-4 weeks after application.

LAYING UP PROTECTION

If the trailer is to be parked up for a prolonged period: -

1. Apply a light coating of rust inhibitor to the 7-pin plug and any other electrical connections.
2. Wash the machine thoroughly.
3. Repaint any damaged areas to prevent rust.
4. Inspect the trailer and replace worn or damaged parts.
5. Replace missing or damaged decals. If a decal needs replaced, please speak to the sales team at Portequip.
6. Cover the ends of all quick release hydraulic and brake couplings.
7. Grease all nipples.

ADR-COLAERT MANUAL

Please refer to the ADR- Colaert manual for individual axle types and specific instructions on schedules. By kind permission, Portequip have reproduced the key areas, however, please refer to the ADR manual for more in depth technical detail.

MAINTENANCE MANUAL

ADR SYSTEM GROUP



BRAKES



Portequip Trailers are supplied as standard with hydraulic brakes which are limited to 40kph in the UK.

Daily check brake function and carry out maintenance tasks on the axles and slack adjusters as detailed in this manual.

AIR ONLY BRAKES

If Road Traffic legislation allows Trailers/Trailed Implements to be used at speeds above 40kph high speed axles must be fitted and most countries will require air brakes and possibly automatic slack adjusters & ABS.



Always check legislation in country of use before exceeding 40kph.

To operate the air brakes: -

- Connect the Trailer/Trailed Implement as per the guidance in the operator's manual.
- Connect both the red and yellow air lines to the tractor. Ensure both connections are secure and leak free.
- Allow the air tank to build up pressure and test the brakes by depressing the pedal before moving off. With single diaphragm chambers the brakes will not work until the minimum air pressure is achieved.



DANGER – ALWAYS ensure the air system is pressurised before operation

- Daily drain any water in the air tank daily by pushing the drain valve located on the side of the Trailer/Trailed Implement or by pulling the cable on the base of the air tank.
- The red line provides a constant air pressure to the Trailer/Trailed Implement. If for any reason the red line fails, the brakes will automatically be applied.
- If the Trailer/Trailed implement is to be moved with the red line disconnected the tank must be drained.



CAUTION: -

With the air drained the brakes DO NOT work so this should only take place with the Trailer/Trailed Implement unladen but securely connected via the towing eye to a suitable braked vehicle and only on a flat level surface.

DUAL AIR /HYDRAULIC BRAKES

With this system it is possible to operate the brakes via either air (see below) or hydraulics (see Operation section of manual). If both are fitted it is advised to use air when possible.

If using the air brakes, ensure the hydraulic pipes are not connected to the tractor and there is no pressure left in the system.

If the hydraulic brakes are to be used ensure both the red and yellow air lines are not connected to the tractor and the air tank is drained.

AIR /HYDRAULIC BRAKES LOAD SENSING

The system is pre-set in the factory and should not be adjusted without contacting Portequip as brakes are a safety critical component.

ABS

If a fault occurs the light will remain on after start-up or will come on during operation. If the light remains illuminated a Wabco or Haldex agent can connect to the diagnostic interface and diagnose the fault. Note that the most common failure is a damaged susie lead or plug.

ABS READY

A Trailer/Trailed Implement with suspension and air brakes may have been built for possible retrofit of ABS in the future. These Trailers/Trailed Implements will have all the ABS brackets fitted to the chassis and exciter rings, complete with sensors in an axle. To check if your Trailer/Trailed appliance is ABS ready look at the rear of the front hub on a tandem axle machine or centre axle on a tridem. If ABS ready a short cable will protrude from the rear of the hub and be cable tied to the axle. This is the lead for the ABS sensor and connects to the ABS unit which can be ordered from Portequip. Fitment can only take place via an approved agent or at Portequip.

HANDBRAKE

- To release the handbrake push it hard backward towards the body of the trailer this will disengage the latch.
- There must be enough free play in the cable to allow the suspension to move fully without applying the brakes. If the handbrake is released from being fully on there will usually be sufficient spring back in the cable. However, to ensure there is enough free play the lever should be left in the rearward position to allow more cable to unwind if necessary.
- Check all clips are tight & the cable is not frayed.
- Replace if necessary.

NOTES







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All references in this publication to operating weights, sizes, capacities and other performance measurements are provided for guidance only and may vary dependent upon the exact specification of the product. They should not therefore be relied upon in relation to suitability for a particular application. Guidance and advice should always be sought from your Portequip dealer. Portequip Limited reserves the right to change specifications without notice. Illustrations and specification shown may include optional equipment