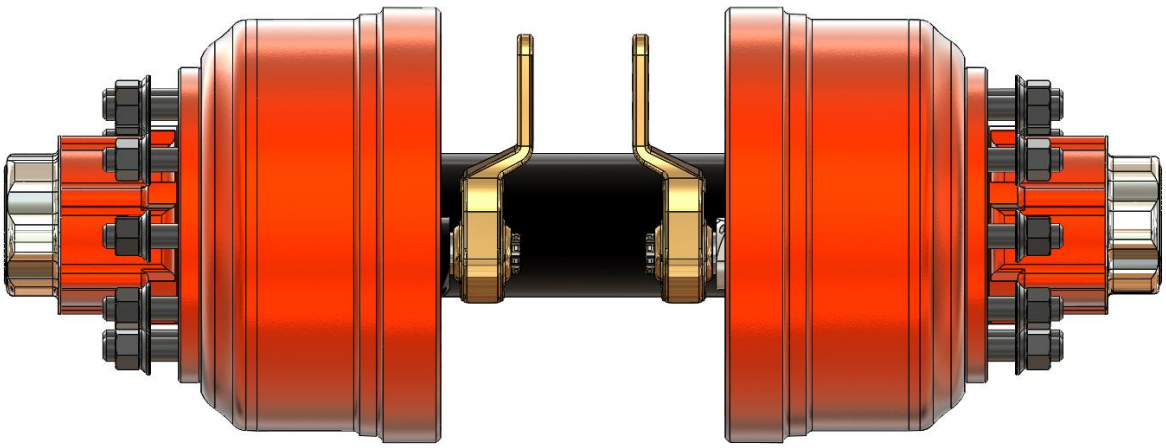
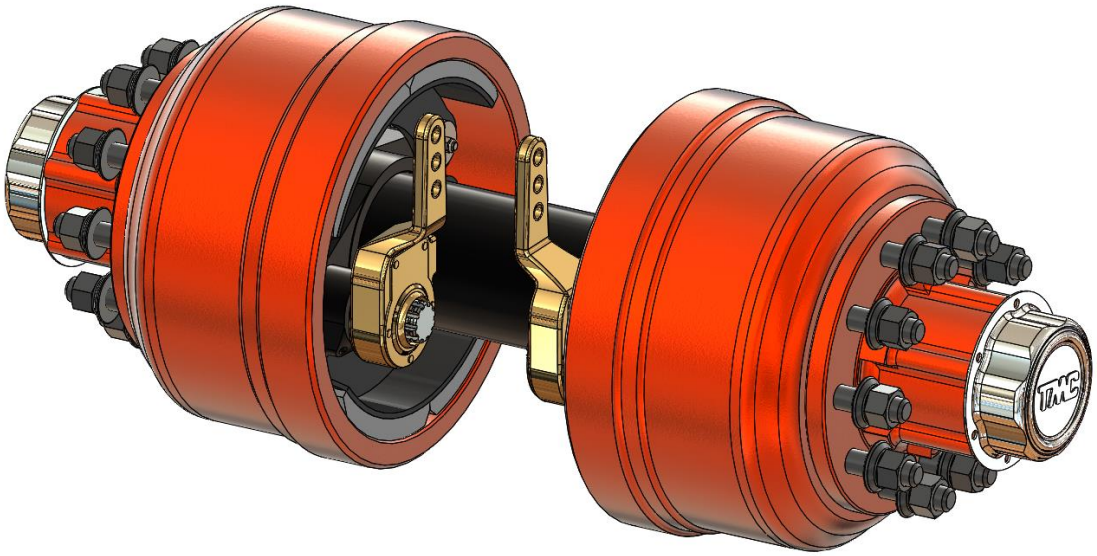
TMC TRAILER AXLE SERVICE MANUAL

10 Stud x 225 PCD Hub - 335 x 160 Brake





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We Engineer Quality and Performance

RECOMMENDED SERVICE SCHEDULE

First Service 500 km or on Delivery:

Check torque settings of all wheel nuts
- On delivery.
- After all wheel changes.

After first 5000 Km:

Check and adjust all wheel bearings.

Every 5,000 km:

Check and adjust the brakes, check brake linings for wear.

Every 25,000 km:

Lubricate slack adjusters and camshaft bushings using an EP2 type grease or equivalent.
With the axle end lifted rotate the wheels and determine if the wheel bearing's need adjustment.
Re adjust the wheel bearings as necessary.

Every 100,000 km:

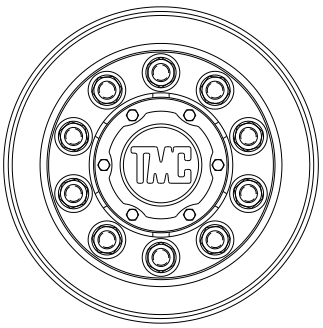
Remove the hubcaps and inspect the wheel bearings and lubricant.
Replace the lubricant if it appears badly contaminated.
Re adjust the wheel bearings and re torque the axle lock nut.
Replace the hubcaps and ensure the correct amount of lubricant is in the hub end.
Check that the hubcap gasket is not damaged. Replace as necessary.
Check the axle for brake wear, check the rest of the axle components for wear or damage. Repair, adjust or replace as necessary.

Every 300,000 km:

Remove wash and inspect the wheel bearings, replace as necessary.
When re assembling the wheel bearings ensure they are correctly lubricated and adjusted.
See TMC Australia's recommended wheel bearing adjustment procedures.

Note:

These are the minimum recommended service requirements, dependant on service conditions more frequent service and maintenance schedules may be required for correct operation of the trailer axle.



10 Stud x 225 pcd Hub
335 x 160 Brake

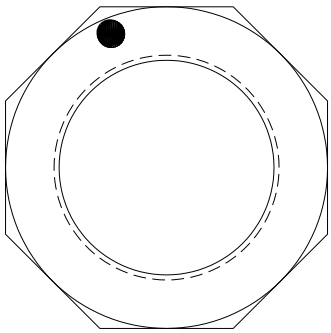
TMC Australia Pty Ltd policy is one of continuous development we therefore reserve the right to change or modify the specifications without notification.

WHEEL BEARING ADJUSTMENT PROCEDURE
Double Axle Lock Nuts and Lock Washer – TN Wheel Bearings.

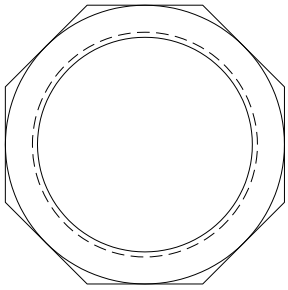
It is recommended that the wheel bearing in new axles (or whenever the wheel bearings are replaced in service) are adjusted after the first 5000 km. The wheel bearings should then be adjusted at 100,000 km intervals for the axle's service life. These are the minimum recommended service requirements, dependent on service conditions more frequent service and maintenance schedules may be required for correct operation of the trailer axle.

Recommended wheel bearing adjustment procedure:

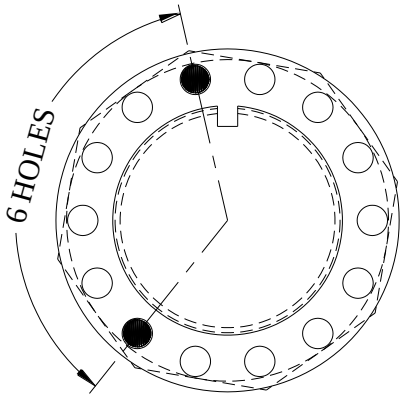
1. Ensure that the hub rotates freely in both directions. If any brake drag (binding) is felt temporally back off the brake adjustment to ensure free rotation of the hub.
2. Rotate the hub in both directions and at the same time tighten the wheel bearing adjusting nut until a torque setting of 150/180 Nm is reached.
3. Then back off the adjusting nut six (6) holes, use the axle lock washer as a guide. Refit the axle lock washer, taking care that the wheel bearing adjustment is not disturbed. Fit the axle locknut and tighten to a torque of 350/400 Nm.
   Check the bearing end float is 0.08mm to 0.20mm. Finally check that the hub rotates freely. If it does not rotate freely it may be necessary to redo the wheel bearing adjustment procedure. If Necessary, now re adjust the brakes.



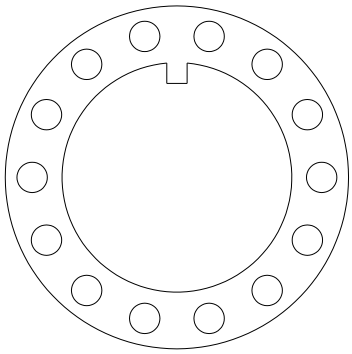
SPINDLE ADJUSTING NUT



SPINDLE LOCK NUT



USE THE LOCK WASHER AS A GUIDE, SLACKEN BACK BY 6 HOLES



LOCK WASHER

CHECK WHEEL BEARING END FLOAT IS 0.08mm TO 0.20mm.
RE ADJUST IF NECESSARY.

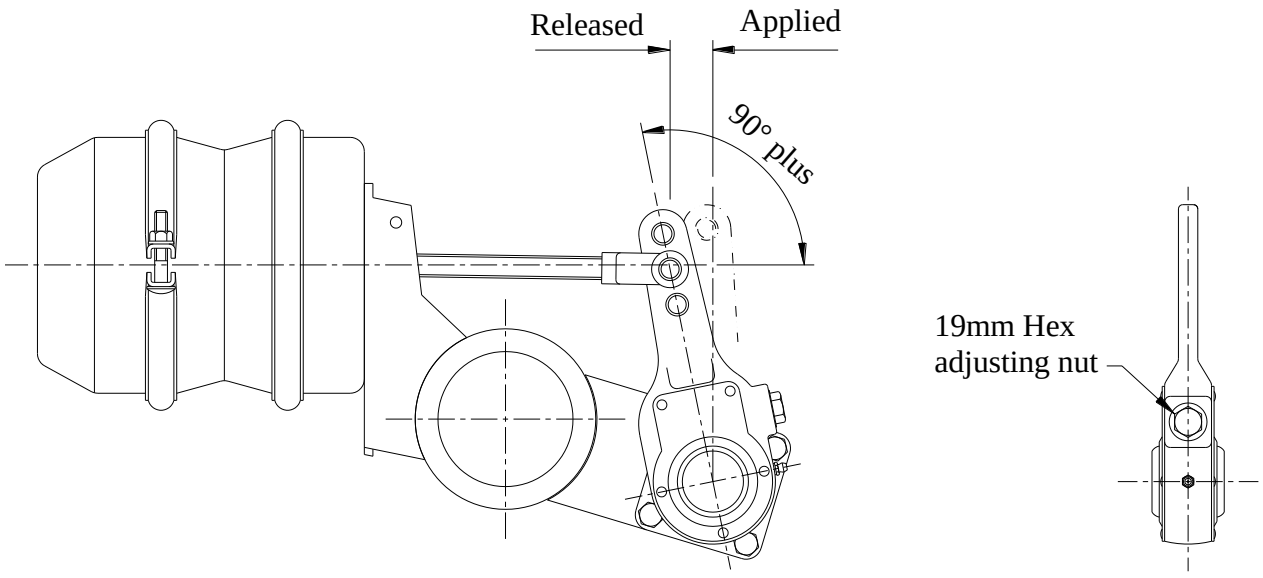
BRAKE ADJUSTMENT – MANUAL SLACK ADJUSTERS

'S' Cam brakes are adjusted by the manual slack adjusters fitted to the camshafts on the axle.

1. With the brakes released, adjust the slack adjuster until the brake linings contact the brake drum. This is done by rotating the 19mm hexagonal nut clockwise.

2. Adjust the 19mm hexagonal nut back one half turn or until the hub rotates freely with no brake drag evident.

3. Finally check that with the brakes released and applied that the angle between the brake chamber push rod and slack adjuster is greater that 90 degrees. The angle can be adjusted by screwing the push rod clevis backwards or forwards along the push rod thread to achieve the correct angle. When finished always check that the push rod clevises lock nut is tightened.



BRAKE ADJUSTMENT - MANUAL SLACK ADJUSTER.

BRAKE ADJUSTMENT – AUTOMATIC SLACK ADJUSTERS

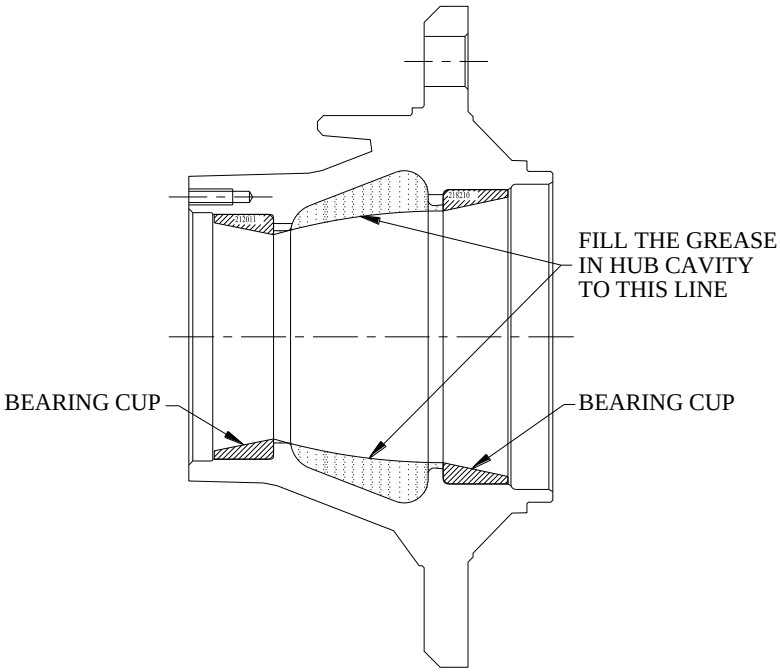
'S' cam brakes fitted with automatic slack adjusters should require no manual adjustment after the initial installation on the axle or initial re adjustment of the brakes after brake relines. All automatic slack adjusters have a specific set up and installation procedure as specified by the automatic slack adjuster manufacturer. This procedure must be adhered to. If in doubt contact the manufacturer of the automatic slack adjusters or the manufacturer's agent for these specific procedures.
Generally, automatic slack adjusters must be re adjusted similarly to the manual slack adjusters on initial installation or after brake relines.

Caution: Please refer to the manufacturer's recommendations.

AXLE HUB LUBRICATION

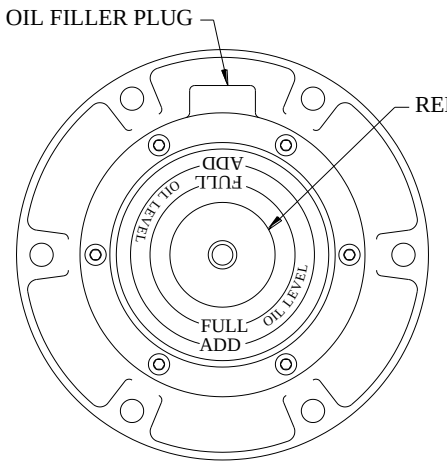
Grease Filled Hubs:

1. The wheel bearings must be fully packed with grease, it is recommended that a wheel bearing packer or suitable equipment is used to correctly pack the wheel bearings with grease.
2. Fill the hub cavity with grease as shown. The cavity is to be filled to a line running from inner bearing cup inner diameter to outer bearing cup inner diameter.
   Caution: Do not overfill the hub cavity.
3. After the final assembly of the hub onto the axle end, a smear of grease should be applied to the inside of the hubcap and over the axle spindle nut/s and lock washer.

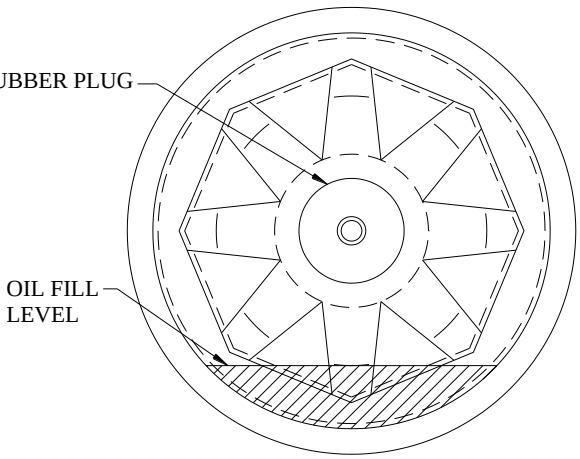


Oil Filled Hubs:

1. Remove the rubber plug or screwed plug from the hubcap so that the oil can be added to the hub.
2. Fill the hub with oil to the full level on the sight glass in the hubcap window.
3. Allow time for the oil to flow through the wheel bearings. Top up the hub with oil to the full mark. **Caution: Do not overfill the hub.**
4. Refit the rubber plug or screwed plug back into the hubcap. Check that the plug seals.



OIL HUBCAP - 6 BOLT TYPE



OIL HUBCAP - SCREW IN TYPE

WHEEL BEARING LUBRICANTS

Grease: **Mobil HP or an approved equivalent grease.**
Oil: **Mobil 85W/140 or an approved equivalent oil.**

WELDING TO TMC AXLE BEAMS

Recommended welding procedures:

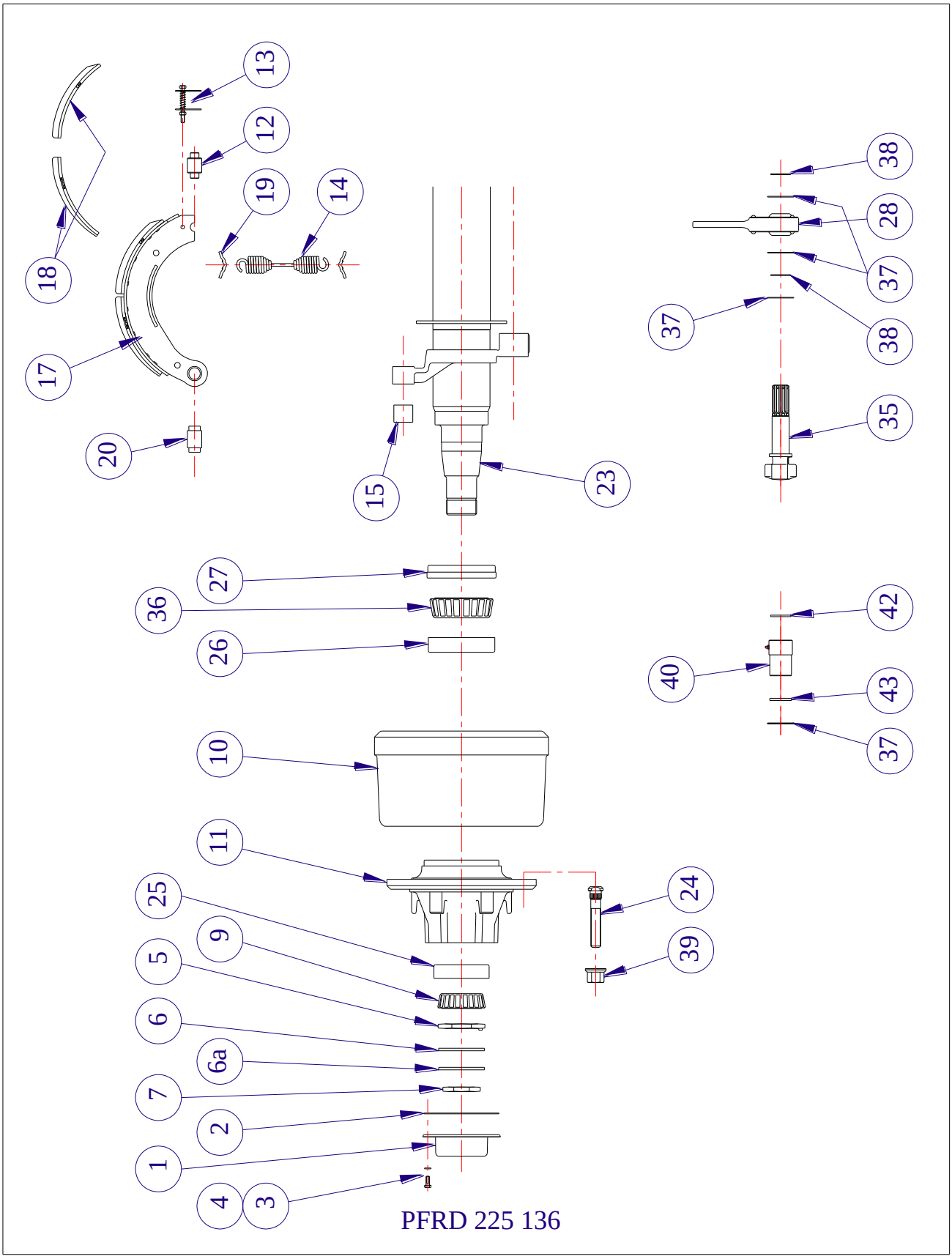
1. Before any welding is conducted on the axle tube, the axle tube must be pre heated to 100 – 150^{0}C locally at the area to which the welding is to be done.
   Caution: Do not apply excessive heat to the axle tube.
2. All welding is to be applied to the axle tube as near as possible to the axle's neutral axis. Do not weld circumferentially around the axle tube.
3. It is recommended that all welds are applied using small multiple fillet weld runs to achieve the desired finished weld fillet size.
4. All welds must be conducted using low hydrogen rods or an approved equivalent MIG process.

TORQUE SETTINGS CHART

Wheel nuts:
M22 ISO wheel studs **- 550/600 Nm.**

Hub Cap Bolts:
M8 studs **- 20/25 Nm.**

SPARE PARTS - AXLE MODEL PFRD-225-136



SPARE PARTS - AXLE MODEL PFRD-225-136

Item	Model PFRD-225-136 Part Number	Description
1	810146/01	Hub cap – grease
	810176	Hub cap – oil
2	810147	Hub cap gasket
3	9HBM08125020	Hub cap stud M8 x 20 long
4	9SWM08	Spring washer
5	810124	Axle spindle adjusting nut
6	810123	Axle spindle lock washer
7	810125	Axle spindle lock nut
8	810284	Lock tab washer
9	81HM212049	Outer bearing cone
10	813115	Brake drum – 10 stud x 225 pcd 335x160
11	810187	Hub assembly – 10 x 225 ISO steel
12	810094	Cam roller
13	810093	Cam roller retainer – bolt on
14	810101	Brake return spring
15	800002	Anchor pin bush
17	813126	Brake shoe lined – P brake 335x160
18	813110-07/08	Brake lining set
19	800013	Brake return spring retainer pin
20	810092/01	Anchor pin – P brake bolt on
23	813100/contact TMC	Axle beam assembly
24	810144	Wheel stud – M22 ISO x 100mm (short)
	810148	Wheel stud – M22 ISO x 124mm (long)
25	81HM212011	Outer bearing cup
26	81HM218210	Inner bearing cup
27	810135/02	Hub seal
28	810120	Slack adjuster – manual straight
	810231LH/RH	Slack adjuster – manual 38mm offset
	8180769	Slack adjuster – auto straight
	810372	38mm offset block – suits auto slack
35	813103/152L	Camshaft 10 spline – 152 long left hand
	813103/152R	Camshaft 10 spline – 152 long right hand
36	81HM218248	Inner bearing cone
37	810122	Camshaft washer 1 ½”
38	810121	Camshaft circlip 1 ¼”
39	810145	Wheel nut – M22 ISO
40	813104-152	Enclosed cam tube assembly
42	810081	Enclosed cam tube seal – inner
43	810082	Enclosed cam tube seal – outer
		Optional
	810300/80	ABS axle kit – 80 tooth
	810169-80	ABS pole wheel – 80 tooth