



## BPW TRANSPORT EFFICIENCY LTD

### DISC BRAKE

SKH... SH... AXLES

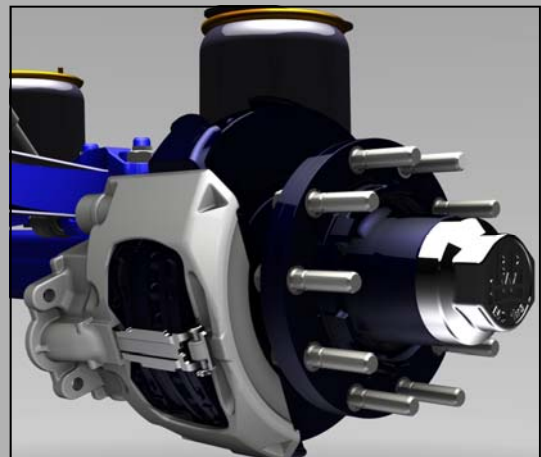
ECO & ECO<sup>Plus</sup>

SPARE PARTS CATALOGUE

FOR NEW ZEALAND DISC BRAKE AXLES



**TRANSPORT**  
EFFICIENCY





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This book is intended to assist with the identification of spare parts for New Zealand specification axles fitted with Disc Brakes only. It is not intended to give detailed technical service and/or maintenance information.

For technical service and/or maintenance information please refer to the BPW workshop manual or contact your nearest BPW parts and service provider listed on the back cover of this book.

# AXLE PART NUMBER LEGEND

## For BPW Axles



At time of assembly an identification **Type Label** is affixed to every BPW axle, usually along the axle centre line on the rear face of the axle beam. The characters that make up the axle type and code number gives important information about that axle which can assist in the correct identification of spare parts.

Riveted type plate up to year of manufacture 1999

**BPW BERGISCHE ACHSEN KG** D 51674 WIEHL GERMANY

30. 38. 743. 000 / 954951842

HSF 9010 ECO SN 4218

zul. Achslast kg STAT. 9000 v max. km/h  
 pem. axle capacity TECH. 9450 max. speed 105  
 charge adm. vitesse max.

TYP S 90 TDB 00 0X

Max. static axle load on ground  
 "Permissible techn. axle load"  
 = Test load of wheel brakes

Adhesive type plate from year of manufacture 2000

**BPW BERGISCHE ACHSEN KG** D-51674 Wiehl Germany

HSF 9010 ECO SN 4218

30.38.743.000 Bj. 993110227

TYP S 90 TDB 00 07

zul. Achslast pem. axle capacity charge adm. stat. 9000 kg 105 km/h

Type plate from year of manufacture 2006 (Adhesive type plate) with barcode

**BPW BERGISCHE ACHSEN KG** Made in Germany

HSF 9010 ECO-P SN 4218 073110227

S90TDB0007 / S100-1TDB0014 / H102TDB0752

27.58.743.000 zul. Achslast pem. axle capacity charge adm. stat. 9000 kg 105 km/h

BPW Code number designations			
Example			
30.	38.	552.	391
<b>Axle Configuration</b>			
24.			Axle without suspension ECO MAXX (since 1997)
25.			Axle without suspension (ECO <sup>PLUS</sup> )
26.			Steering axle (from 1997)
27.			Axle without suspension (ECO <sup>PLUS</sup> )
30.			Axle without suspension
34.			Swivel Axles without suspension
36.			Steering axle
<b>Axle load per axle</b>			
	10.		10000 – 12000 kg Conventional
	36.		6500 kg ECO
	38.		8000 – 9000 kg ECO
	40.		10000 – 12000 kg ECO
	48.		8000 – 9000 kg ECO <sup>PLUS</sup>
	50.		10000 – 12000 kg ECO <sup>PLUS</sup>
	58.		8000 – 9000 kg H../KH../SKH../NH.. ECO <sup>PLUS</sup> 2
	59.		8000 – 9000 kg H../KH../SKH../NH.. ECO <sup>PLUS</sup> 2
<b>Brakes</b>			
		502.	SN 3020 HWG 300 x 200 mm Drum Brake 95
		552.	SN 3620 HWG 360 x 200 mm Drum Brake 95
		585.	SN 3020 KWG 300 x 200 mm Drum Brake Shoes with closed eye 1978 - 1989
		610.	SB3745 Ø 370 mm Disc brake 1998 – Axial mount
		612.	SB3745 Ø 370 mm Disc brake 2003 – Tangential mount
		613.	SB4309 Ø 430 mm Disc brake 2003 – Tangential mount
		616.	TSB3709 (ECO Disc) Ø 370 mm
		743.	SN 4218 HWG 420 x 180 mm Brake 95 Eco Drum
		744.	SN 4220 420 x 180 mm Brake 95 Eco Drum
		000 to 999	Consecutive numbers which refer to track, ABS, wheel connection
HWG = Half-size camshaft   KWG = Short brake camshaft			

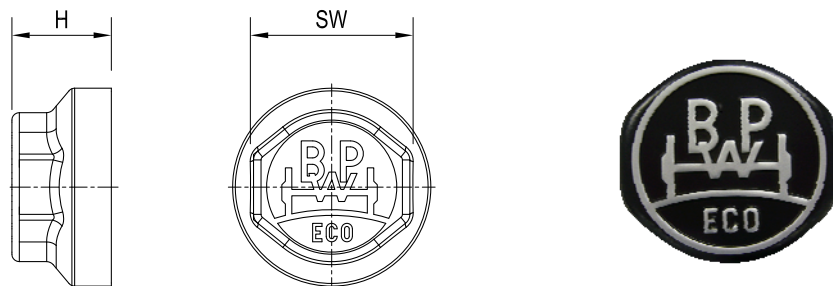
# AXLE HUB IDENTIFICATION

## For Disc brake axle

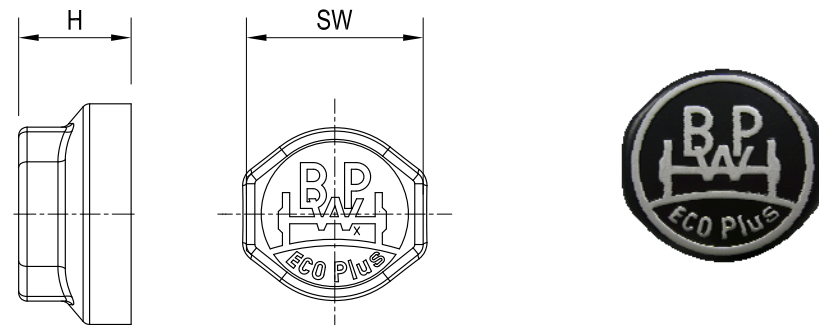


Fig.	Description	H	SW	Thread	E=External I=Internal B= Bayonet	From - to
1	Eco 9 tonne	61	110	M125 x 2	I	To 2004
2	ECOPlus	70	110	M136 x 2.5	I	From 2004
3	ECOPlus 2	56.3	120		B	From 2007

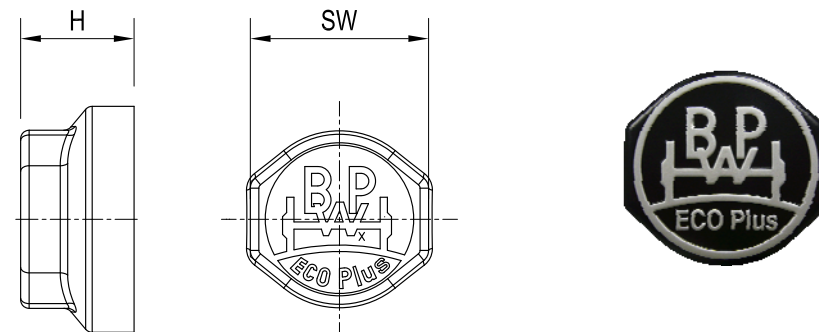
**Fig 1**  
ECO Hub  
Up to 2004



**Fig 2**  
ECO Plus Hub  
From 2004



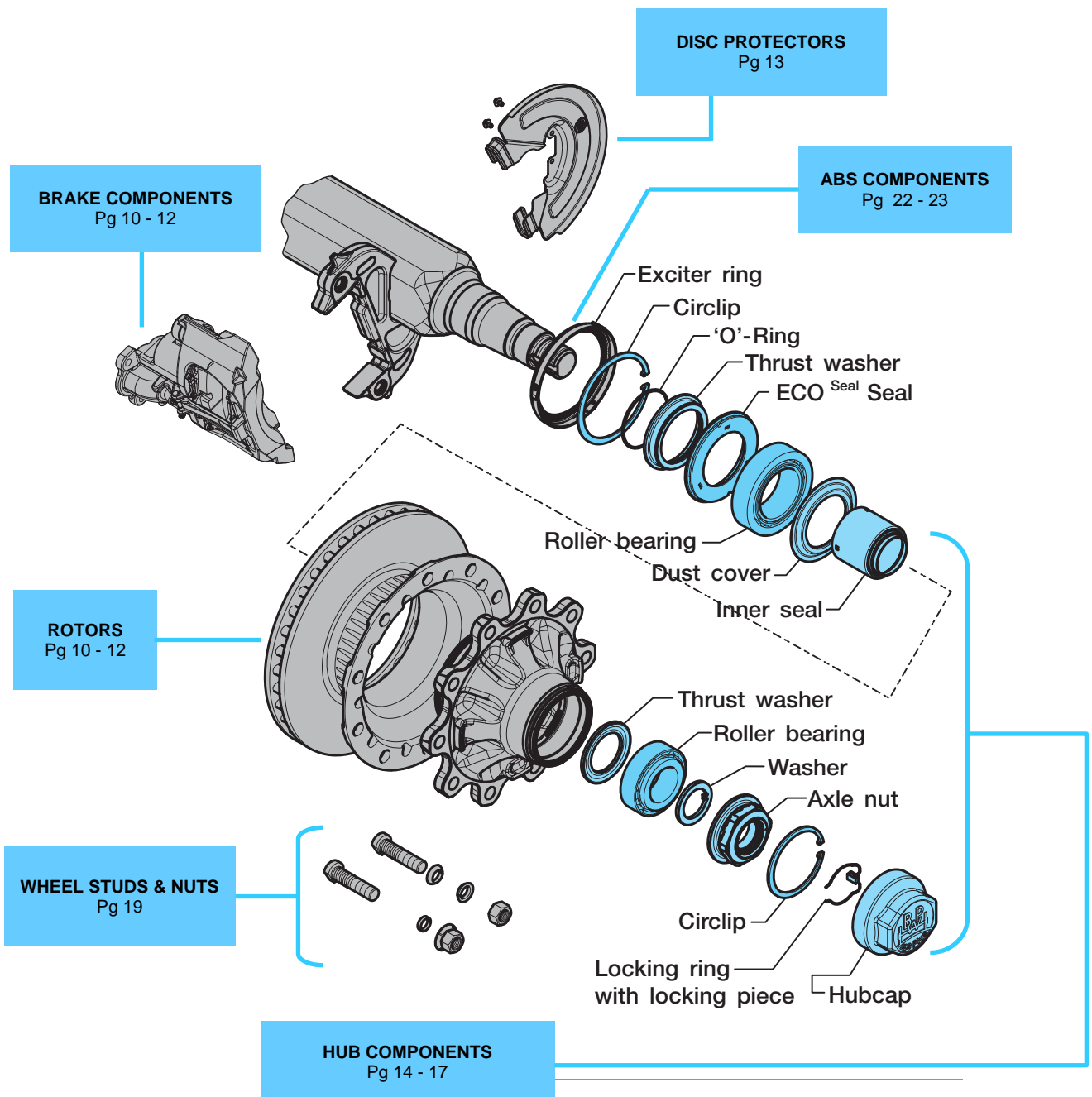
**Fig 3**  
ECO Plus 2 Hub  
From 2007



Date Range	Caliper type	Hub Type	Brake Size	Rotor size
Up to 2001*	Knorr	9 tonne ECO	SB4345	430
Up to Feb 2004	Knorr	9 tonne ECO	SB3745	370
From 2004	Knorr	9 Tonne ECO <sup>Plus</sup>	SB3745T	370
From 2007	Knorr	9 tonne ECO Plus 2	SB3745T	370
From 2010	BPW TSB	9 tonne ECO Plus 2	TSB 3709	370

\* For further information call BPW Transport Efficiency Ltd - 0800 427 956

## EXPLODED VIEW OF A DISC BRAKE AXLE





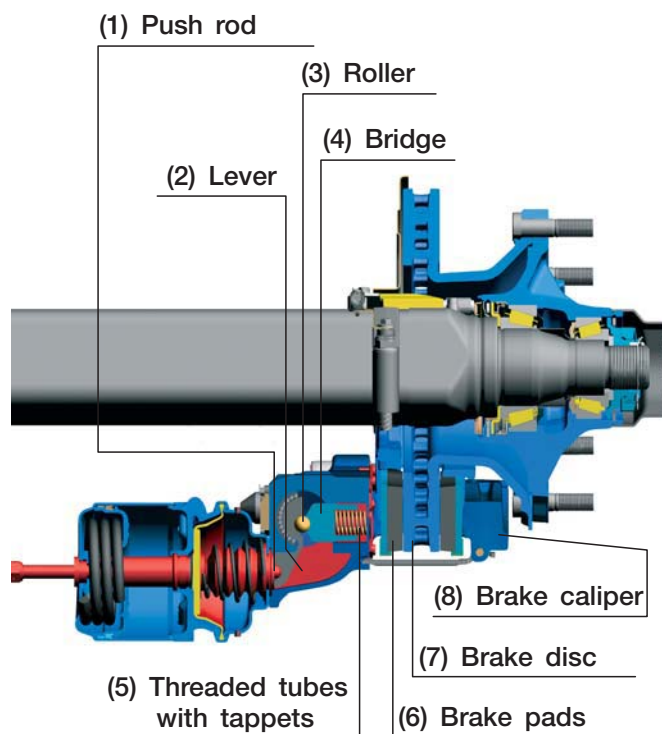
## KNORR DISC BRAKES

When the brake pedal is pressed, the push rod (1) of the brake cylinder presses against the lever (2) of the brake caliper.

The roller (3) mounted eccentrically in the brake transfers the force onto the bridge (4). The clamping force acts on the internal brake pad (6) via the threaded tubes and the tappets (5). As a result, the brake pad (6) is forced against the brake disc (7).

The reaction force which now arises on the caliper (8) is transferred to the opposite brake pad by means of the sliding caliper, so that the opposite pad (6) is also pressed against the brake disc with the same force.

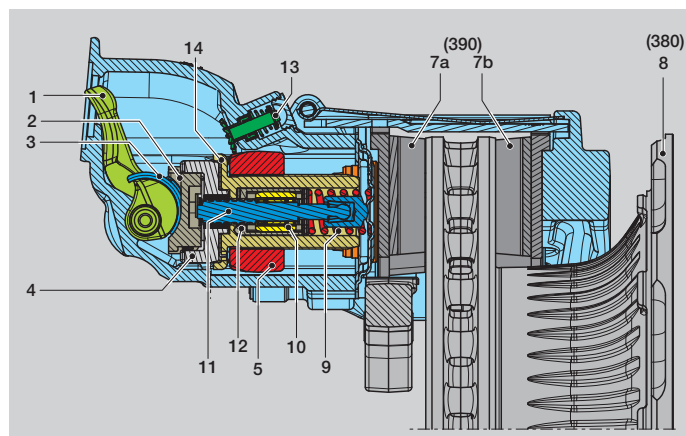
When the brake pressure is reduced, the spring force returns the bridge (4), the threaded tubes (5) and lever (2) to their original position.



## BPW (TSB) DISC BRAKES

During braking, the cylinder pushrod of the spring brake or diaphragm cylinder presses onto the brake lever (1). The offset position of the brake lever amplifies the force created by the brake cylinder and allows it to be transferred to the intermediate plate (2) with minimal loss via a needle bearing. Mounted in the pressure plate (4), the intermediate plate counteracts the vertical movement of the lever and ensures optimal transfer to the cross support. The clamping force acts on the inner brake pad (7a) via the cross support (5) and the pressure plates (6). Once the play between the inner brake pad and the brake disc (8) has been overcome, the reaction force is transferred to the outer brake pad (7b) via the brake caliper.

When the brake pressure rises, the pressure spring (9) moves the actuating unit back to its initial position.



Important note:

To correctly identify spare parts for BPW Disc Brake Axles you will require the answers to the following questions:

1. Does the disc brake axle have Knorr Bremse or BPW TSB caliper fitted?
2. Is the rotor 370mm in diameter or 430mm in diameter?
3. Is the Knorr disc brake caliper type A, B or C?
4. Is the disc brake caliper left handed or right handed? Is the suspension underslung or overslung?
5. Is the caliper mounted axially or tangentially?

Pages 6 to 8 in this catalogue gives all of the information relevant to the questions above.

Please read these pages carefully before attempting to identify spare parts.

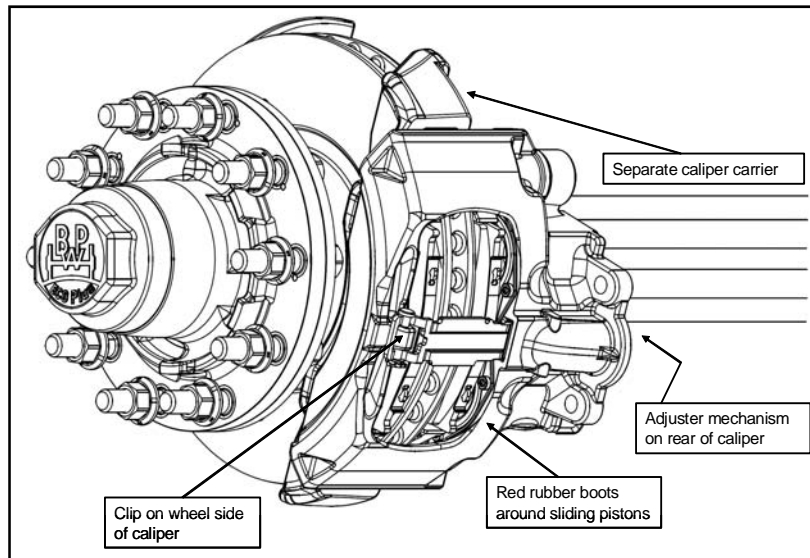
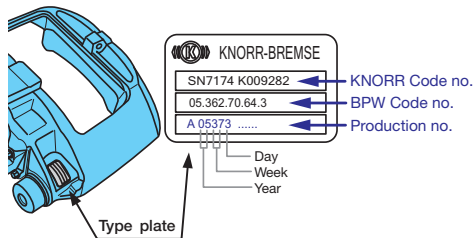
## KNORR BREMSE AND BPW TSB DISC BRAKE CALIPERS

Prior to May 2010 all New Zealand BPW disc brake axles were fitted with SB type disc brake caliper (Manufacturer - Knorr Bremse).

The diagrams above show the basic differences between the SB and the TSB type disc brake calipers. These diagrams may assist in the correct identification of disc brake calipers.

### SB Type Caliper (Knorr Bremse)

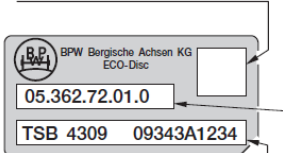
Fitted up to May 2010



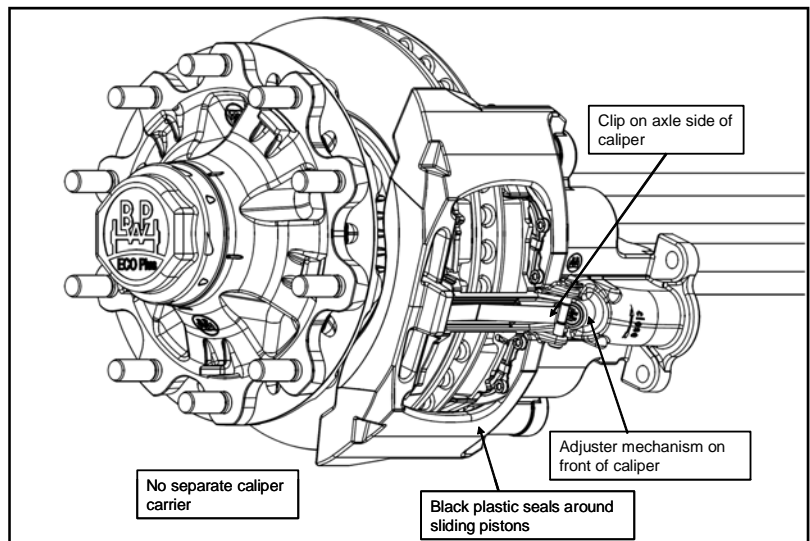
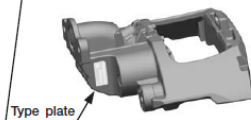
### TSB Type Caliper (BPW)

Fitted from May 2010

Data-Matrix-Code  
BPW Brake code number



BPW Brake type and serial number of the brake  
BPW Brake code number



## BRAKE SIZES

### SB3745

SB = Knorr Disc Brake  
 37 = Disc Ø 370 mm  
 45 = Disc thickness 45 mm  
 = Axially mounted caliper

### SB3745T

SB = Knorr Disc Brake  
 37 = Disc Ø 370 mm  
 45 = Disc thickness 45 mm  
 T = Tangentially mounted caliper

### TSB3709

TSB = BPW Disc Brake  
 37 = Ø 370 mm  
 09 = Standard axle load 9t  
 = Tangentially mounted caliper

## KNORR CALIPER TYPE (A, B AND C)

There have been changes to Knorr disc brake calipers since being introduced in 2000. Some of the service components are different between the different models. We classify these different models as Type A, Type B and Type C.

Following is how to identify these models:

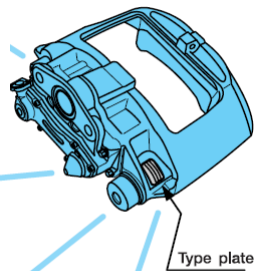
### IDENTIFYING FEATURES OF CALIPER TYPES A AND B:

#### Type A & B

**Type A** - 8mm hex adjustment screw with flat plastic cover.  
**Type B** - 10mm hex sacrificial adjuster screw with domed rubber cover.

Steel cap with o ring from mid 2000.  
 Bellow with hose clip up to mid 2000.

Two part housing



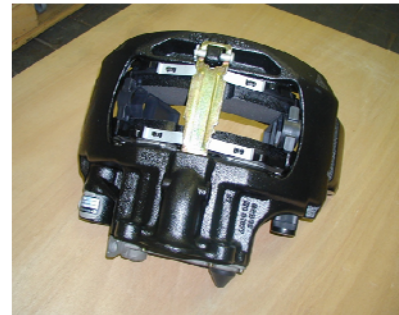
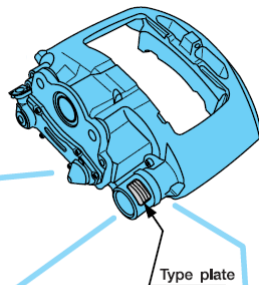
Domed rubber adjuster screw cover  
 Divided housing

### IDENTIFYING FEATURES OF CALIPER TYPE C :

10 mm hex sacrificial adjuster screw with domed rubber cover

Flat steel cover

One part housing



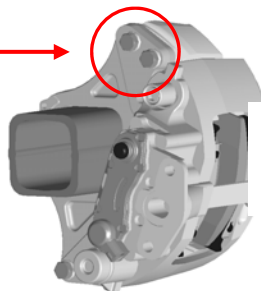
Domed rubber adjuster screw cover  
 One part (monoblock) housing

## KNORR CALIPER MOUNTING

### Axially Mounted Caliper:

#### Brake Type SB 3745

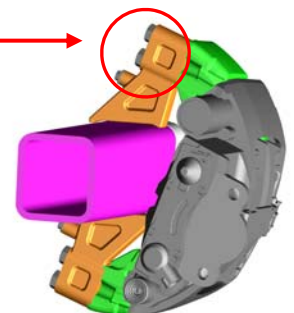
Caliper bolts are bolted in line with the axle beam.



### Tangentially Mounted Caliper:

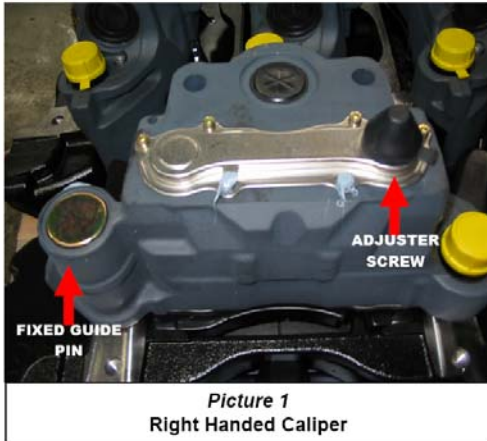
#### Brake Type SB 3745T

Tangential Mounting:  
 Caliper bolts are bolted at an angle to the axle beam.

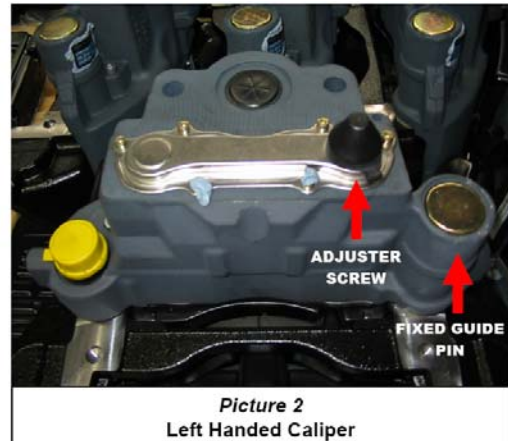




## LEFT AND RIGHT HANDED CALIPERS



Right Hand Caliper = Adjuster screw is on the opposite side of the caliper from the fixed guide pin.



Left Hand Caliper = Adjuster screw is adjacent to the fixed guide pin.

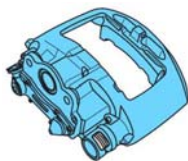
### Please Note:

For underslung suspensions the right hand caliper is used on the left hand side of the axle and the left hand caliper is used on the right hand side of the axle. When identifying right or left handed calipers you must know whether the suspension is underslung or overslung.

Overslung = suspension springs over axle

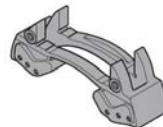
Underslung = suspension springs under axle

### RATIONALISED CALIPERS NOT INCLUDING CALIPER CARRIERS

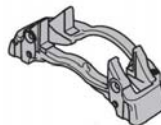


To suit SB3745 & SB3745T Disc Brake  
(Ø 370 mm Rotor)  
Caliper part numbers:  
0536270371R - Right Hand Caliper  
0536270361R - Left Hand Caliper

### CALIPER CARRIERS



Axially mounted caliper carrier  
Suits SB3745 Disc Brake (Ø 370 mm Rotor)  
Part number: 0203130900

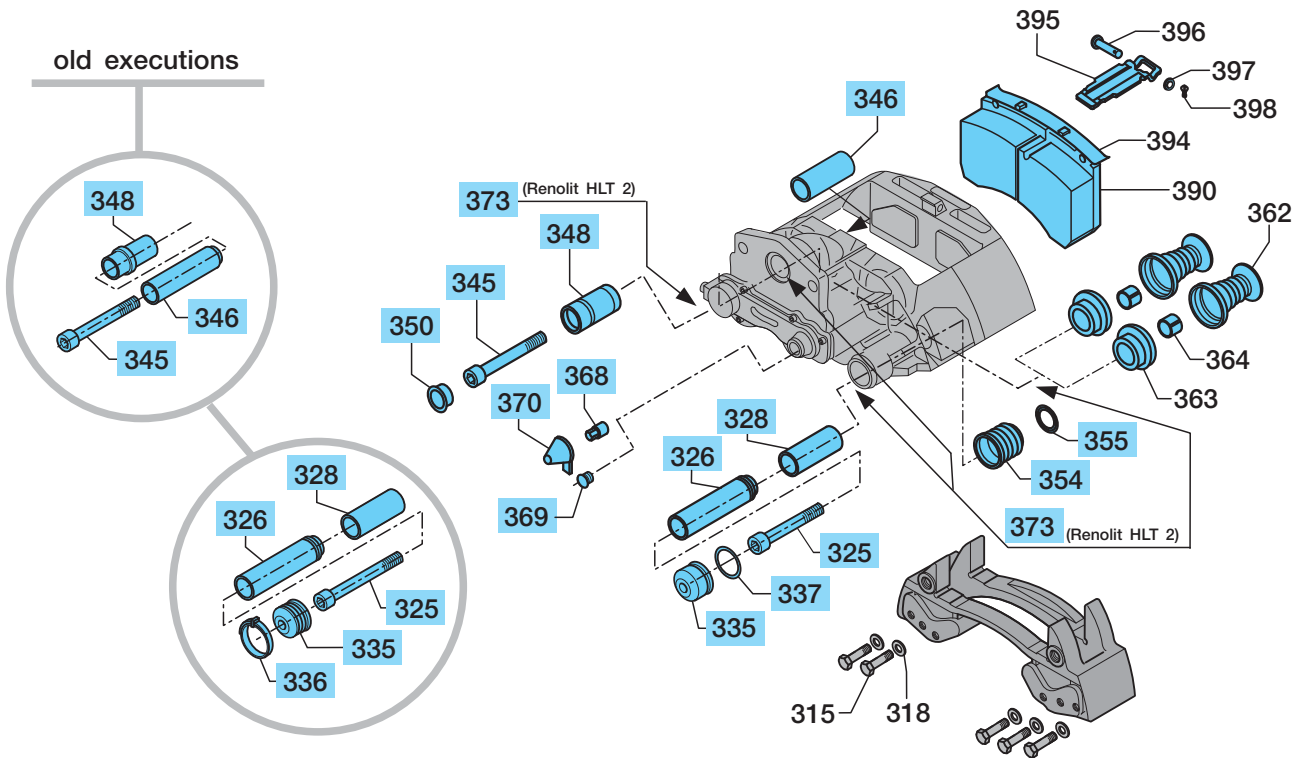


Tangentially mounted caliper carrier  
Part numbers:  
0330388550  
Suits SB3745T Disc Brake (Ø 370 mm Rotor)

### Important note:

Rationalised calipers can be fitted to existing caliper carriers provided that these are not worn or broken.

- SB3745, SB3745T Disc Brake (Ø 370mm Rotor)
- In axles assembled up to February 2004
- 9 tonne ECO, ECO<sup>Plus</sup>



### REPLACEMENT CALIPERS (Refer page 9)

Part No	Description	Caliper carrier Axial	Caliper carrier Tangential
0536270371R	Rationalised Caliper Right Hand SB3745	0203130900	0330388550
0536270361R	Rationalised Caliper Left Hand SB3745		

### ROTORS

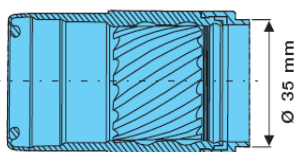
Part No	Description	Qty Per Axle
0308834047	Rotor 10 stud 335mm PCD Axial mounting	2
0308834137	Rotor 10 stud 335mm PCD Tangential mounting	2
0308834167	Rotor 8 stud 275mm PCD	2

CALIPER CARRIER ATTACHING PARTS				
Item No	Part No	Description	Dimension	Qty Per Axle
310A	0316434020TS	Caliper Spacer **		4
315	0334012260	Bolt (Tangential mount)	M 16x1.5x97 -12.9	8
	0250298720	Bolt (Axial mount) Torque 280-330Nm	M 16x1.5x60	10
	0250298521	Bolt (Axial mount) Torque 280-3300Nm	M 16x1.5x65	10
318	0254011608	Washer	Ø 17	10
** Caliper spacer item number 310A used on 10 stud 335 PCD and 8 stud 275 PCD models				

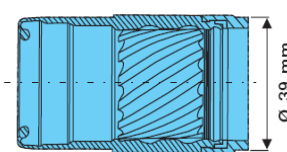
BRAKE PARTS				
Item No	Part No	Description	Dimension	Qty Per Axle
Kits	0980106310	Guide pins and seal kit suits Caliper type A * <b>See note below</b> (Includes items 325 - 328, 335, 36, 345 - 348, 354, 355, 373)		2
	0980106240	Guide pins and seal kit suits Caliper type B * <b>See note below</b> (Includes items 325 - 328, 335, 336, 345 - 348, 354, 355, 373)		2
	0980106330	Guide pins and seal kit suits Caliper type C (Includes items 325 - 328, 345 - 348, 350, 352, 373)		2
	0980106110	Guide pin only kit suits Caliper type A and B (Includes items 335, 337, 354, 355, 369)		2
	0980106340	Guide pin only kit suits Caliper type A and B (Includes items 335, 354, 355)		2
	0980102630	Thrust pad and boot kit suits Caliper type A and B (Includes items 362 - 364)		2
	0980106320	Thrust pad and boot kit suits Caliper type C (Includes items 362 - 364)		2
	0980106250	Adjuster adaptor and cap kit (Includes items 368 and 370) ** <b>See note below</b>		2
	0980108150	Brake Pad Kit *** <b>See note below</b> (Includes items 369, 390, 394, 396, 397, 398)		1
335	0218270600	Steel cap guide pin A & B		2
	0206011900	Cover plate guide pin Monoblock		2
348	0314102200	Guide sleeve Ø 35mm stop A		2
	0214102100	Guide sleeve Ø 39mm stop B		2
350	0218270700	Cap - guide sleeve		2
369	0218270400	Cap, adjuster adaptor suits Caliper type A		2

\* Repair Kits differ in the design of the guide sleeve:

Guide sleeve for Caliper Type A  
Stop Ring Ø = 35 mm



Guide sleeve for Caliper Type B & C  
Stop Ring Ø = 39 mm

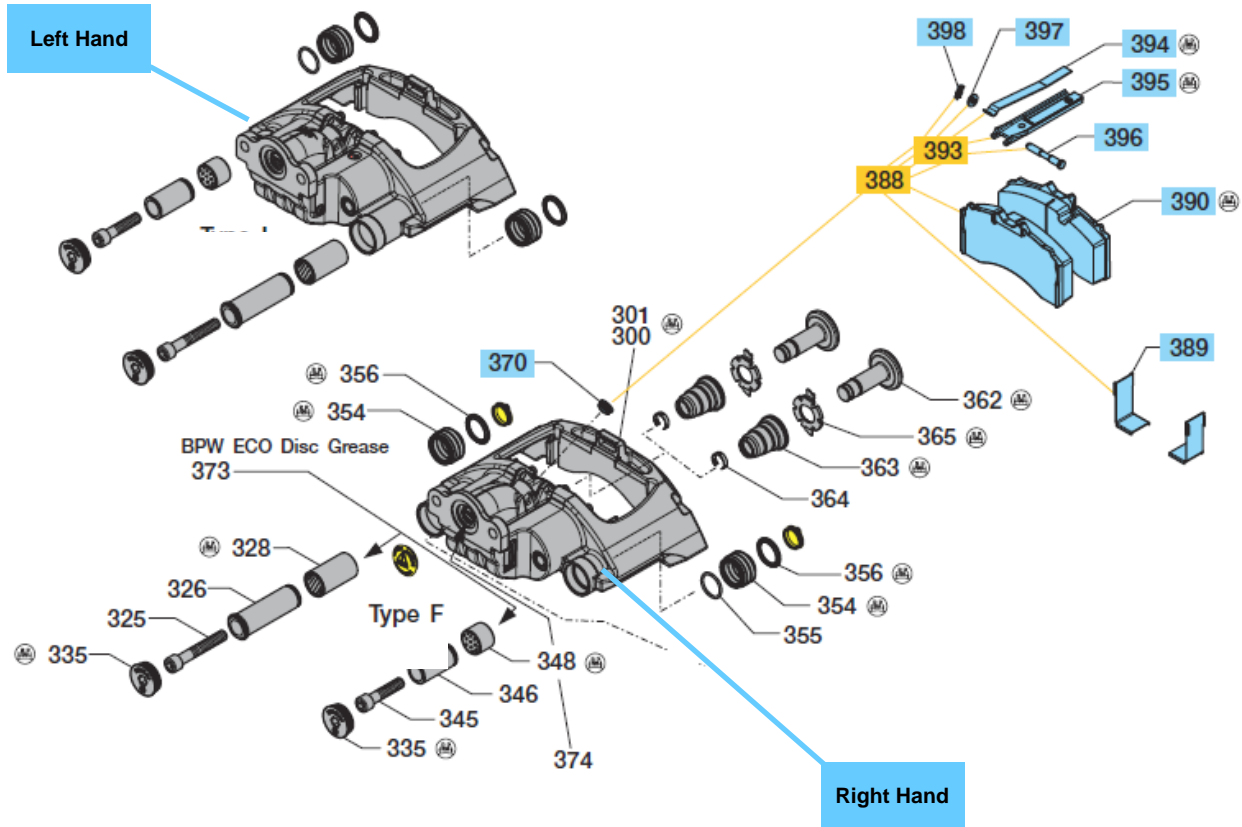


\*\* 0980106250 Adjuster adaptor and cap kit includes:

- 1 x item 370 rubber cap with 35mm diameter
- 1 x item 370 rubber cap with 38mm diameter
- 1 x item 368 adjuster adaptor

\*\*\* Disc Brake Pads:

Are not available individually and can only be supplied in a kit which repairs one axle.  
The part number for the individual pads are found on the brake pad backing plate.

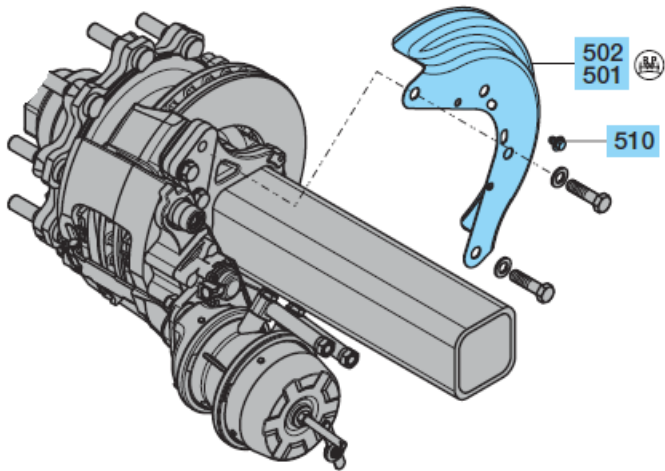


BRAKE COMPONENTS		
Part No	Description	Qty per Axle
0936272141	Caliper Right Hand TSB3709	1
0936272131	Caliper Left Hand TSB3709	1
0308834147	Rotor 10 stud 335mm PCD	2
0308834167	Rotor 8 stud 275mm PCD	2

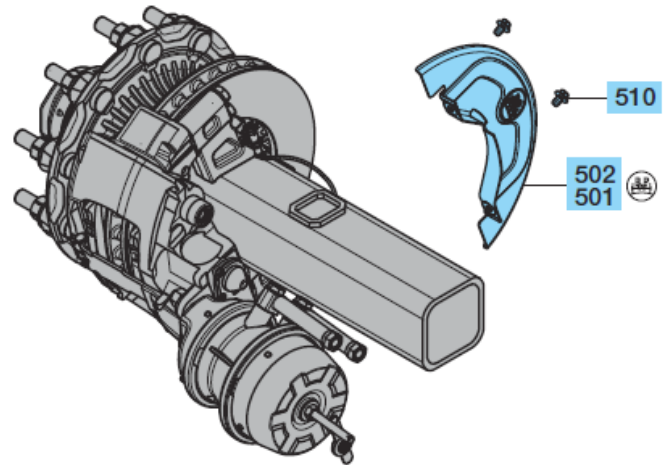
BRAKE PARTS			
Item No	Part No	Description	Qty Per Axle
Kits	0980107610	Guide pins (Includes items 325, 326, 328, 345, 346, 348, 373)	2
	0980107620	Cap & bellow (Includes items 335, 354, 355, 356, 370, 373)	2
	0980107631	Tappets & bellows (Includes items 362 - 365)	2
335	0500100450	Sealing Cap	4
370	0237046900	Plug Ø 24 x 9	2
388	0980107940	388 Brake Pad Kit *** See note below (Includes items 370, 389, 390, 394, 396, 397, 398)	1
393	0980107681	393 Brake retainer (Includes items 394 - 398)	2

\*\*\* Disc Brake Pads are not available individually and can only be supplied in a kit which repairs one axle.

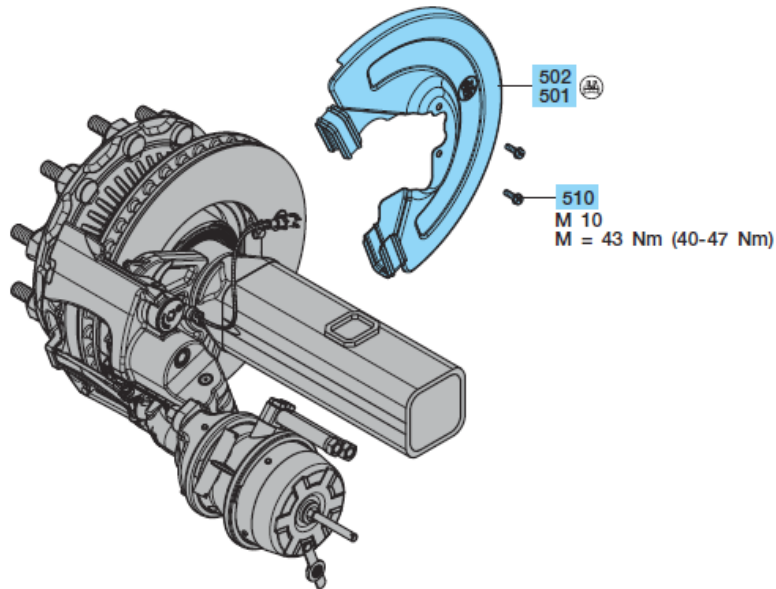
Knorr Axially mounted caliper



Knorr Tangentially mounted caliper



BPW TSB caliper



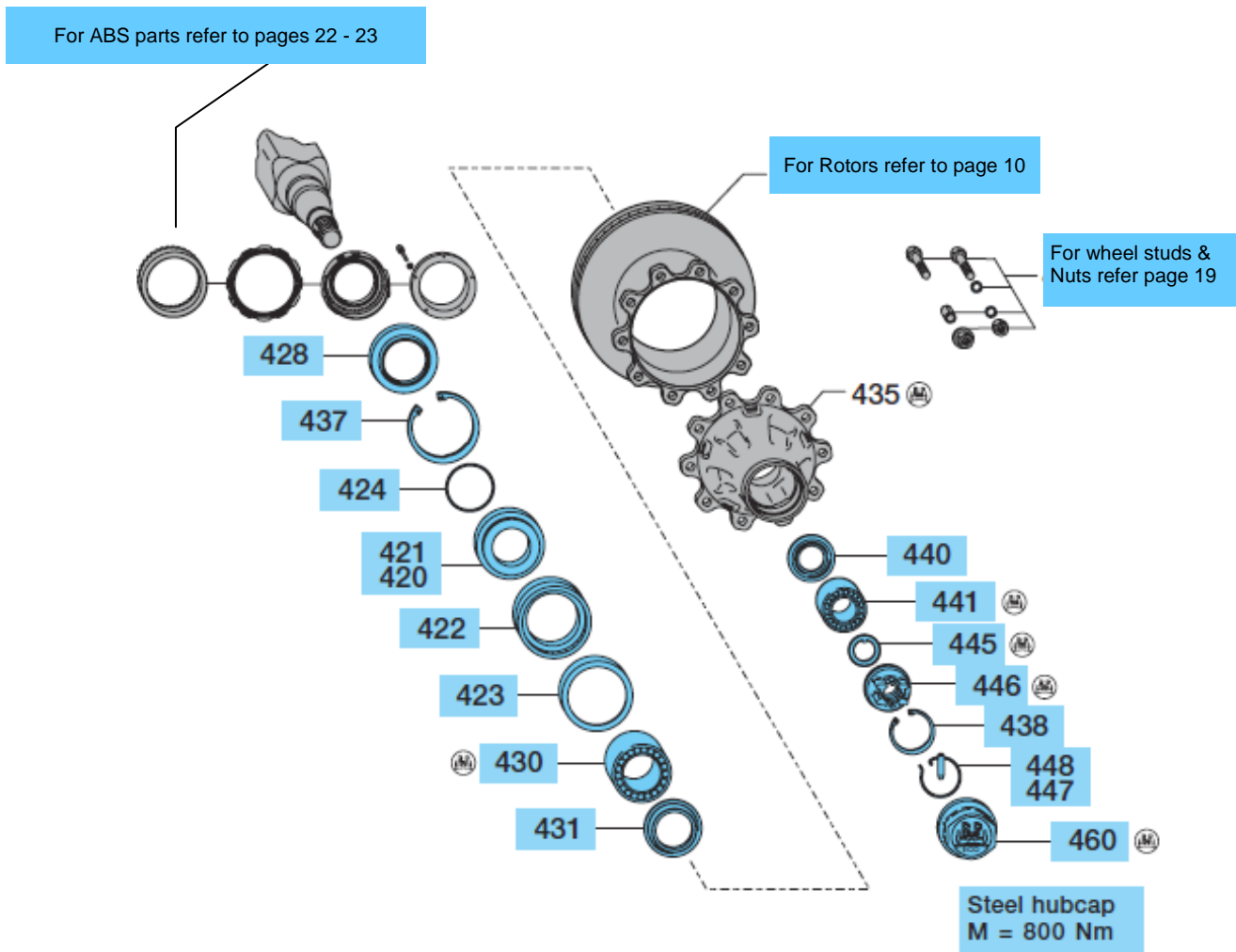
DISC COVERS AND BRAKE PAD PROTECTORS						
Item	Description	Dimensions	SB3745 (Axial)	SB3745T (Tangential)	TSB 3709	Qty Per Axle
501 502	Disc cover		0301091530	0301091740		2
501	Disc cover left hand				0301071590	1
502	Disc cover right hand				0301071600	1
510	Hex Bolt	M10 x 15	0250712200			2 for Axial 4 for Tangential



### ECO Hub

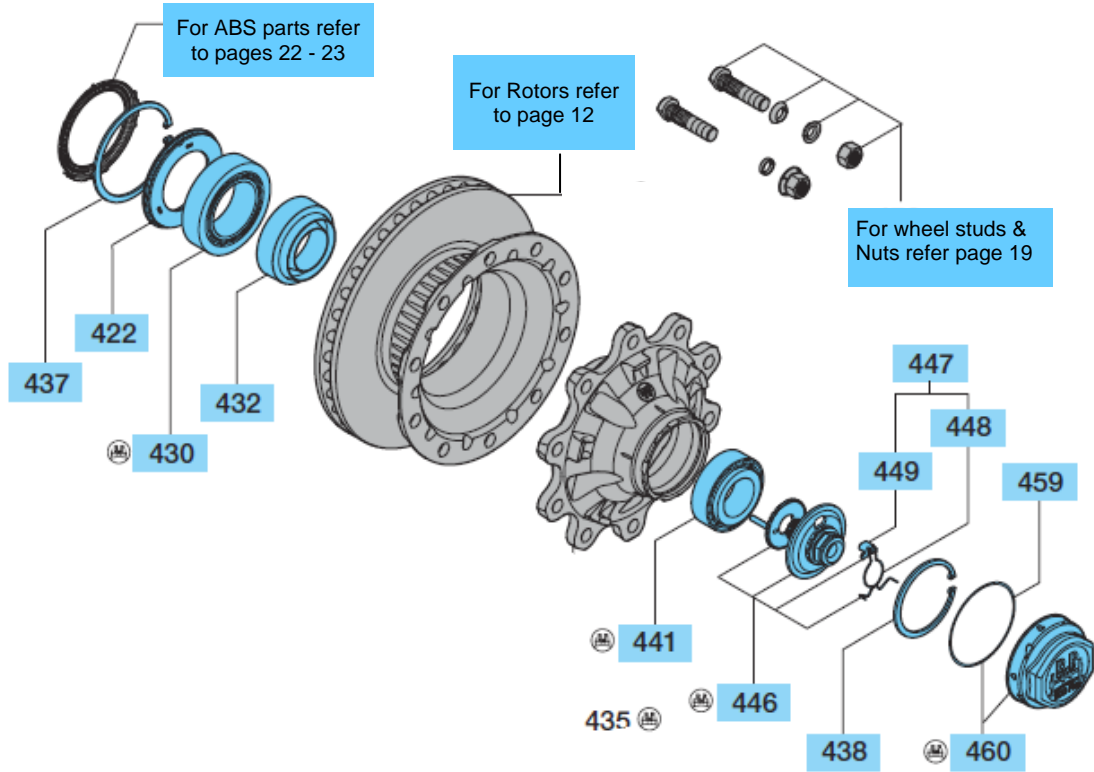
To 2004

- Oval hub cap
- Hub cap has inner thread
- Bearings, seal carrier and seals retained in hub by circlips

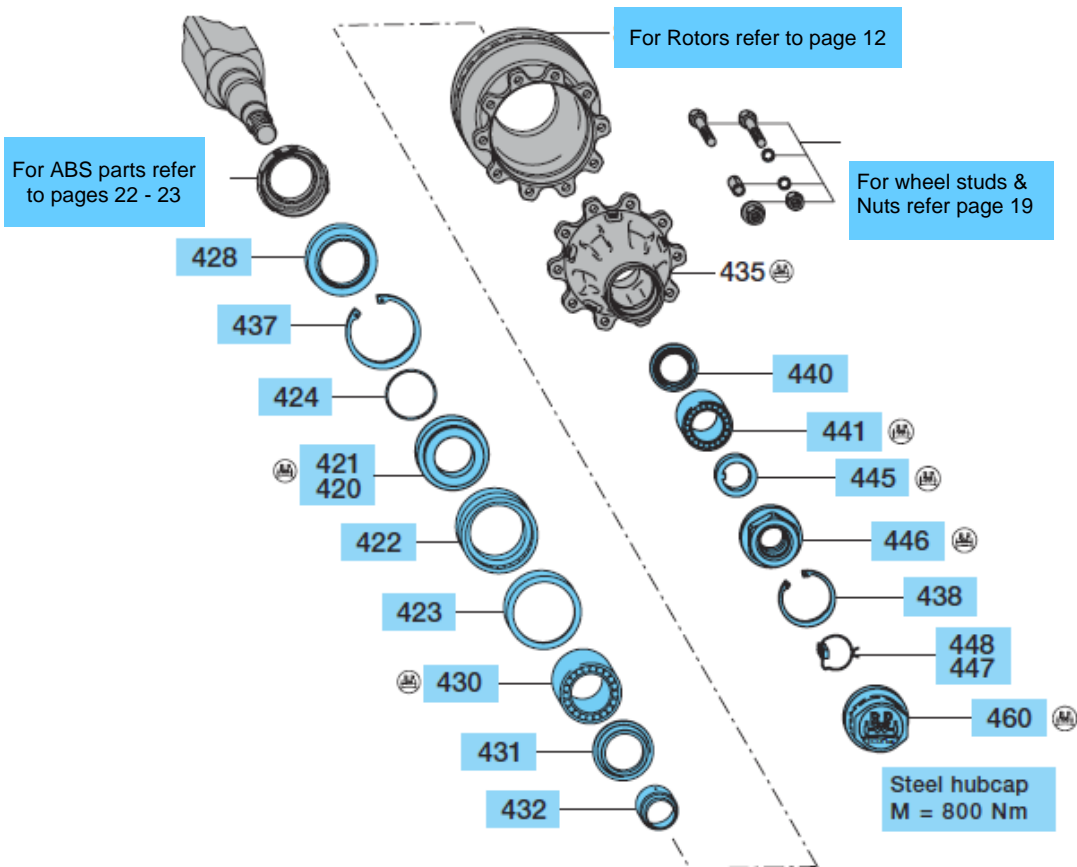


<b>HUBS AND HUB COMPONENTS</b>			
<b>Item No</b>	<b>Description</b>	<b>Part No</b>	<b>Qty Per Axle</b>
<b>435</b>	Hub 8/275 dual alloy/steel wheels (suits press in stud)	0327228710	2
	Hub Assembly 8/275 dual alloy/steel wheels (suits press in stud) includes items 421 - 460	0980106650	2
	Hub 10/335 alloy/dual steel (suits press in stud)	0327230970	2
<b>421</b>	Seal Carrier	0337007600TS	2
<b>422</b>	Grease Seal	0256645700	2
<b>423</b>	Seal Runner	0256836200	2
<b>424</b>	O-Ring	0256779040	2
<b>428</b>	Dust Seal	0256819800	2
<b>430</b>	Roller Bearing	0264102400	2
<b>431</b>	Grease shield inner	0301093330	2
<b>437</b>	Circlip	0256064090	2
<b>438</b>	Circlip	0256061290	2
<b>440</b>	Grease Shield outer	0337025160	2
<b>441</b>	Roller Bearing	0264102500	2
<b>445</b>	Washer	0332073130	2
<b>446</b>	Axle nut	0326646020	2
<b>447</b>	Locking pin	0308471170	2
<b>448</b>	Locking ring	0318803060	2
<b>460</b>	Hub cap (steel, standard)	0321224250	2
	Hub cap (steel, chrome)	0321224260	2
	Hub Cap - Hubodometer	0321224280	1

**9 tonne ECO Plus 2 Hub from 2007**

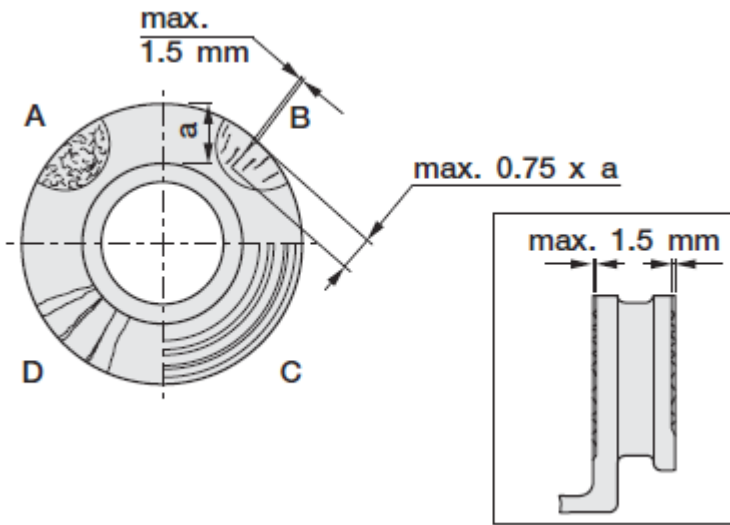


**ECO<sup>Plus</sup> Hub from 2004**



HUB							
435	Description	Tyre size	ECO PLUS 2 8-9t	ECO <sup>Plus</sup> 8 - 9T	ECO <sup>Plus</sup> 10-12T	Qty Per Axle	
<b>Hub Assembly - includes items 421 - 460</b>							
	8 Stud 275PCD Dual Alloy Wheels	19.5"	0980107360	0980106690		2	
	10 Stud 335PCD Dual Alloy Wheels	22.5"	0980107440				
	10 Stud 335PCD Dual Steel/single alloy Wheels	22.5"	0980107350	0980106070	0980106082		
<b>Hub only</b>							
	8 Stud 275PCD Dual Alloy Wheels	19.5"	0327246330	0327246282			
	10 Stud 335PCD Dual Steel/single alloy Wheels	22.5"	0327243290	0327243102			
	10 Stud 335PCD Dual Alloy Wheels				0327243232		

Fig	Description	ECO PLUS 2 8-9t	ECO <sup>Plus</sup> 8 - 9T	ECO <sup>Plus</sup> 10-12T	Qty Per Axle
419	Repair Kit (1 Side Only)			980106270	2
421	Thrust Washer			0337007720	2
422	Lip Seal	0256647400			2
424	O'Ring			0256780000	2
428	Dirt Seal		0312048150		2
430	Roller Bearing - Inner	0264089200			2
431	Grease Shield		0301093340		2
432	Seal / Grease Cartridge	0312047080	0312045150	0312045160	2
435	Hub - REFER TABLE ABOVE				2
437	Circlip - Inner	0256065890		0256066090	2
438	Circlip - Outer	0256062290			2
440	Thrust Washer - Outer		0337026240		2
441	Roller Bearing - Outer	0264076700			2
445	Washer - Axle Nut ECO Beam		0332064010		2
446	Axle Nut - ECO Beam	0900137030	0526647060		2
447	Locking Bolt (Piece)		0327700070		2
	Locking Ring ( Includes item 448 + 449)	0518803100			
448	Locking Ring	0318803090	0318804100		2
449	Locking Piece	0327710010			2
459	O-ring	0256786500			2
460	Hub Cap	0521225780	0321225310		2
	Hub Cap - Chrome	0521225810	0321225570		
	Hub Cap - Hubodometer	0521225790	0321225560		
	Hub Cap - Hubodometer Chrome	0521225790C	0321225560C		



Check the condition of the brake disc:

- every 12 weeks (quarterly) under harsh conditions
- every 26 weeks (twice annually) under normal conditions

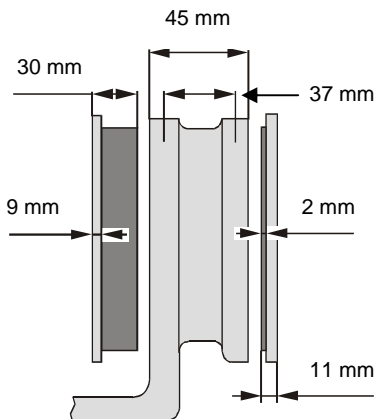
Sections A - D in the figure above show the possible conditions of the disc surface:

A:	Network-type tears	=	permissible
B:	Radial cracks up to max 1.5 mm width and depth	=	permissible
C:	Uneven disc surface less than 1.5 mm	=	permissible
D:	Continuous cracks	=	not permissible

Technical details:

- ◆ Disc thickness when new = 45 mm
- ◆ Minimum permissible disc thickness = 37 mm (check with slide gauge)

In case of conditions A, B & C the brake disc can be used until the minimum permissible disc thickness has been reached.



To prevent damage to the brake discs, the brake pads should be replaced when their thickness (excluding the backing plate) is **2 mm** or less.

If this instruction is not adhered to, there is a danger that braking performance could be seriously reduced.

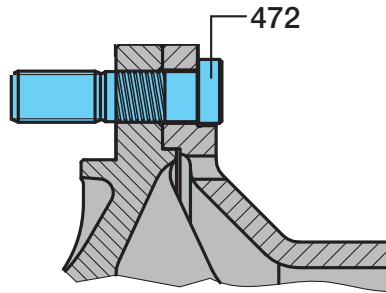
**The latest generation of BPW brake discs offer the following advantages:**

- ◆ Increased surface area for effective heat dissipation
- ◆ Optimisation of material for improved heat distribution over the surface of the disc
- ◆ Venturi contour for improved internal air flow
- ◆ Optimally matched friction pairing (Pads / Brake discs)
- ◆ Simplified parts provision thanks to uniform brake discs for 0 and 120 offsets

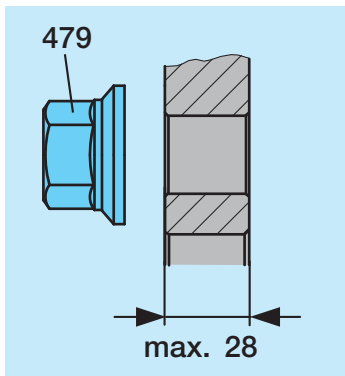


To help to determine replacements select the wheel nut type from Figures E or H below. Then select the appropriate combination using the table. For example the combination 1E represents push in type wheel studs for steel wheels.

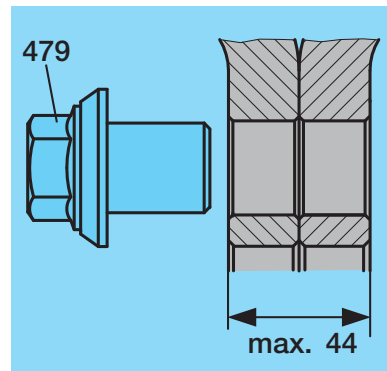
**1** Wheel Stud, push in type



**Fig E**



**Fig H**



WHEEL STUDS & NUTS TO SUIT DUAL WHEELS								
Axle Type	No of Studs	PCD	Wheel Type	Tyre Size	Fig	Stud (Item 472)	Wheel Nut (Item 479)	
							Fig E	Fig H
SHZM	10	335	Steel	20"	1E	0329633121	0526054100	
			Aluminium		1H			0526054140
SKHZM	8	275	Steel	19.5"	1E		0526054100	
			Aluminium		1H			0526054140
WHEEL STUDS & NUTS TO SUIT SINGLE WHEELS								
SHSM	10	335	Steel & Aluminium	20"	1E	0329623121	0526054100	
SHSM	10	335	Steel & Aluminium	19.5"	1E	0329633121	0526054100	
SKHSM	8	275	Steel & Aluminium		1E			

## General

### BPW hub bearings

#### BPW ECO hub bearing

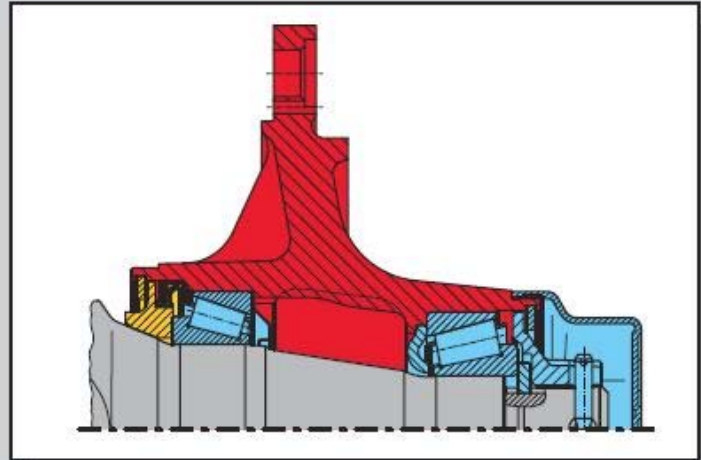
The ECO bearing is the first version of the ECO unit.

Disassembly is extremely easy with the patented BPW ECO hub bearing (European patent 0 407 719 B1).

The stepped bearing means there is no need to use a puller or other special tools. The roller bearings remain in the hub where they are well protected against dirt and moisture.

Installation is also quick and easy:

Box spanners are all that are required for the hubcap and axle nuts.



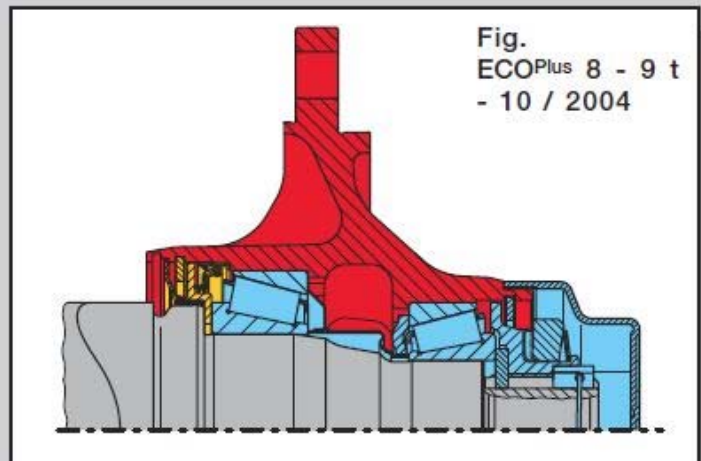
#### ECO<sup>Plus</sup> hub bearing

If you require long service life, rapid maintenance and low maintenance costs from your axle, there is only one option for you: ECO<sup>Plus</sup>.

Working on the basis of the special BPW ECO hub system, the ECO unit has been further developed to create the trendsetting ECO<sup>Plus</sup> bearing system.

The maintenance-free hub has an integrated multi-seal system for protecting the tapered roller bearings against dust and dirt.

A central threaded connection with integrated torque limiting function ensures the bearing preload is always optimum.



#### ECO Plus 2 - the new generation of the tried and tested BPW ECO unit

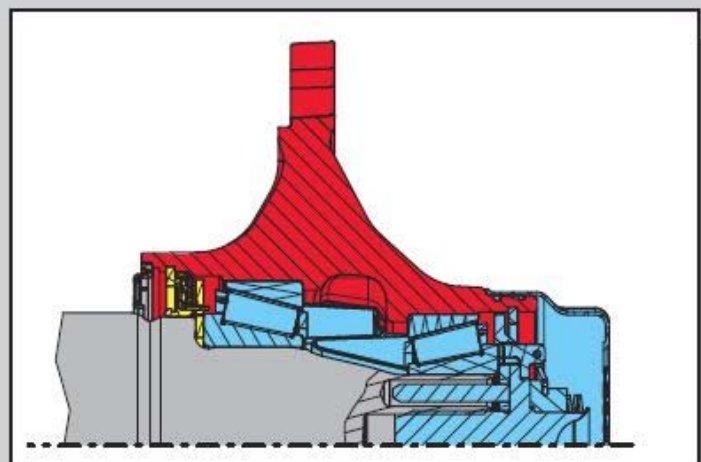
The BPW ECO unit, proven a million times over in its ECO<sup>Plus</sup> version, will be replaced from September 2007 by the still further improved, new ECO Plus 2 design.

A rigorous upgrade of the components has resulted in a significant weight reduction compared with the current ECO<sup>Plus</sup> unit.

In the case of the ECO Plus 2 the hubcap has a bayonet fitting, enabling convenient fitting and removal of the cap.

Grease is supplied to the wheel bearings by means of a grease cartridge located between the bearings.

The axle nut previously used is replaced by an axle bolt with integrated torque limiter.





## BPW ECO-Li<sup>Plus</sup> is:

- usable at temperature between -30°C and + 150°C
- resistant to aging
- protecting against corrosion, even in aggressive surroundings
- wear reducing
- generally plastics compatible
- suitable for extremely long re-lubrication periods

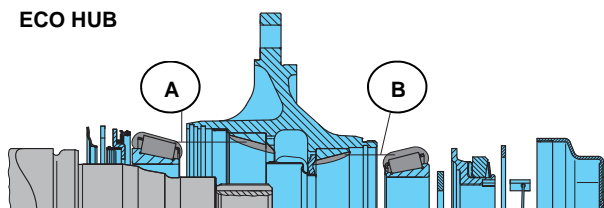


ECO-Li<sup>Plus</sup> is suitable for the lubrication of high temperature roller and friction bearings of commercial vehicles. It has been especially developed for highly loaded taper roller bearings and hub units with very long re-lubrication periods.

BPW ECO-Li <sup>Plus</sup> GREASE Is available in the following container sizes	
Part Number	Container Size
0210404500	400 gm cartridge
0210404700	5 kg container
0210404900	25 kg container

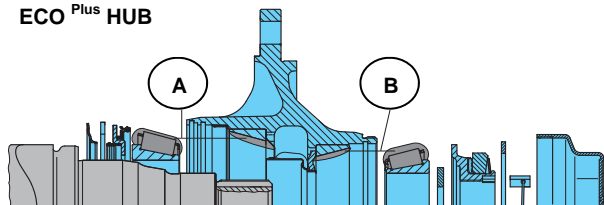
## GREASE FILLING

### ECO HUB



ECO HUB ECO-Li <sup>Plus</sup> Grease quantity per taper roller bearing		
Axle Load	A = Inner Bearing	B = Outer Bearing
6000 - 9000 kg	120 g	120 g
10000 - 12000 kg	170 g	120 g

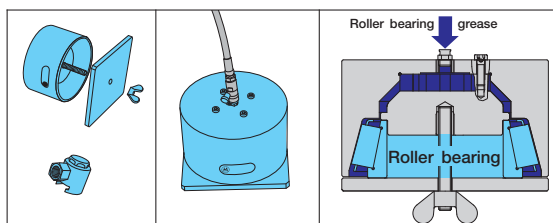
### ECO<sup>Plus</sup> HUB



ECO <sup>Plus</sup> HUB ECO-Li <sup>Plus</sup> Grease quantity per taper roller bearing		
Axle Load	A = Inner Bearing	B = Outer Bearing
8000 - 12000 kg Manual greasing	170 g	120 g
8000 - 12000 kg Greasing with grease applicator	130 g	90 g

## BPW GREASE SHOWER TOOLS Used to quickly, accurately and cleanly fill the bearing with the required amount of BPW ECO-Li<sup>Plus</sup> Grease

Hub	Grease Shower Part Number	To Suit Bearing Size	
		ISO	BPW Bearing Part Numbers
ECO	9900000954	33116 / 32310	0264102400 / 0264102500
ECO Plus	9900000955	33118 / 33213	0264102300 / 0264102200

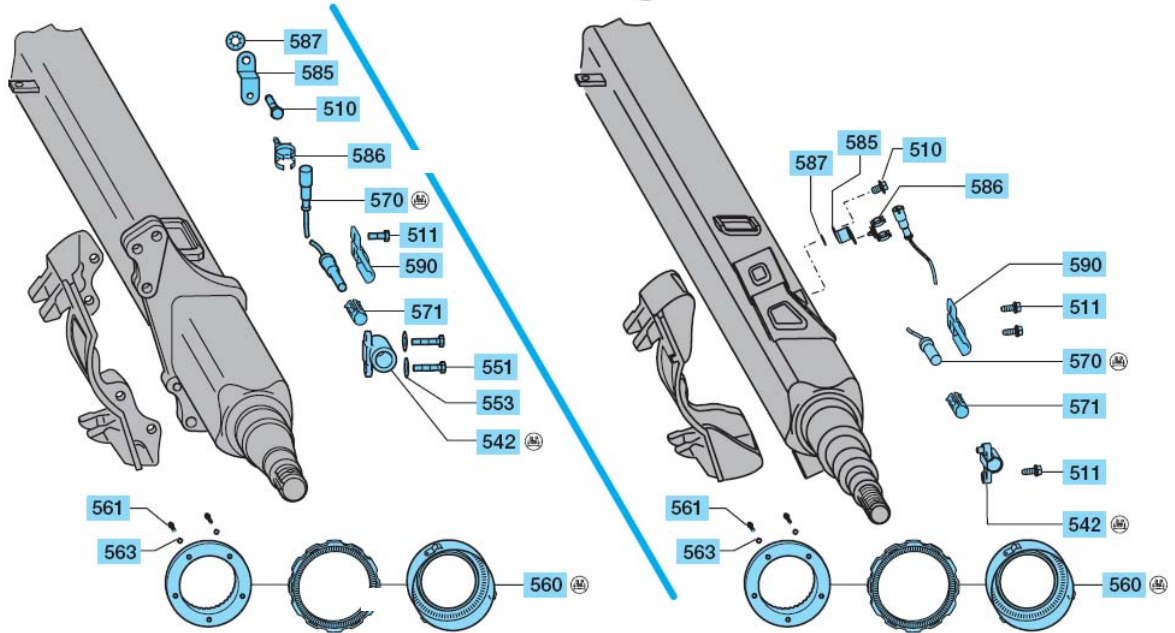


- SB3745
- ECO Hub
- 9 tonne

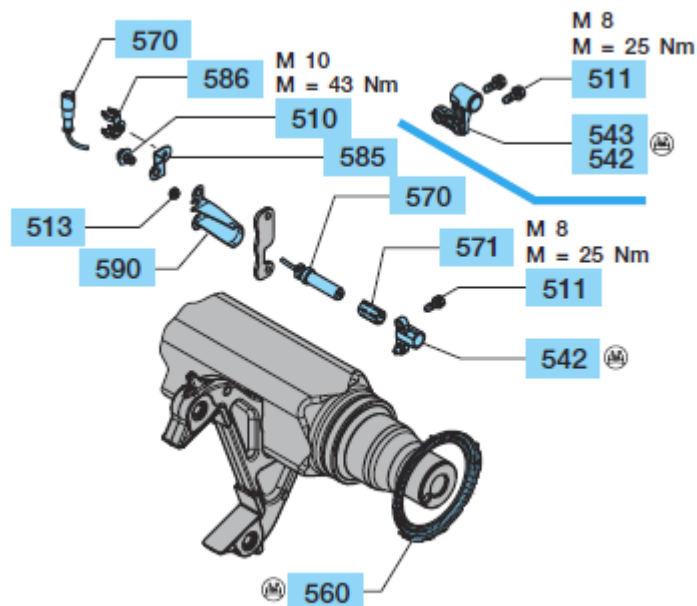
- SB3745T
- ECO<sup>Plus</sup> & ECOPLUS 2 Hub
- 9 tonne

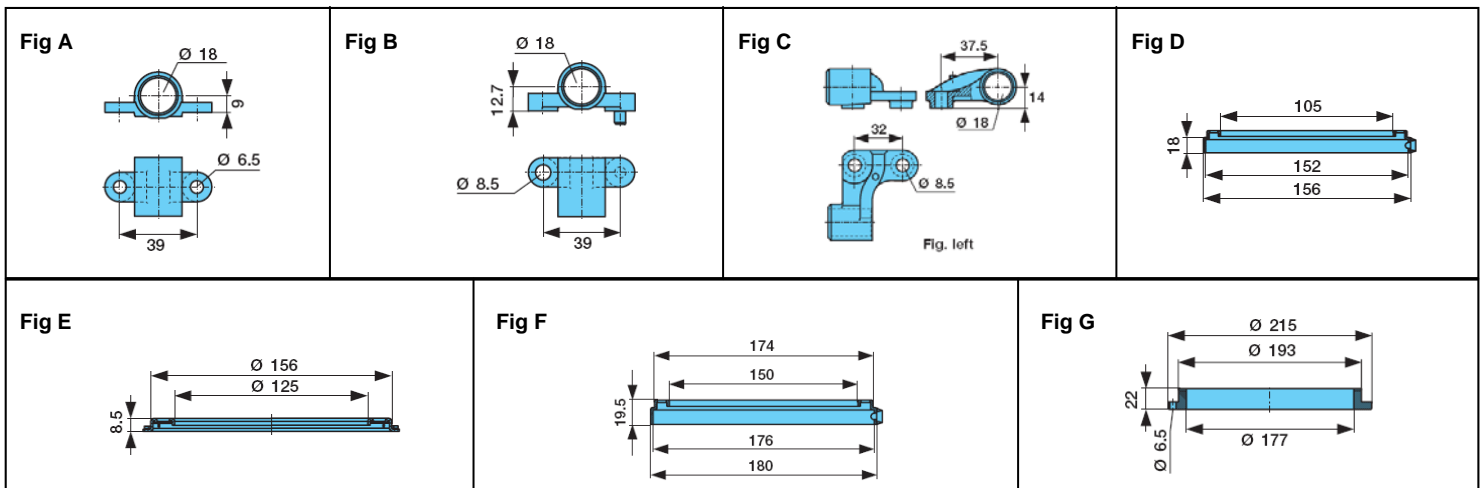
## Axial

## Tangential



- TSB3709
- ECO PLUS 2 Hub
- 9 tonne





\*Please note: To determine which exciter ring is required you will need to know both the tyre size and the type of exciter ring. You can determine the type of exciter ring by referring to the figures above. The ABS Kits will only include the exciter ring that is relevant to the correct type and wheel size.

ABS PARTS									
Item No	Description	Part Numbers	Dimension	Fig	SB3745 & SB3745T			TSB3709	
					ECO Hub	ECO <sup>Plus</sup> & EP2 Hub		ECO <sup>Plus</sup> 2 Hub	
					9 tonne	9 tonne	10 tonne	9 tonne	
					Axial Brake	Tangential			
					Qty				
Inc's all listed items *See note above	ABS Kit for 19.5" wheels	0580173860			1				
		0580174090				1		1	
		0580173880						1	
	ABS Kit for 20" wheels	0580173870				1			
		0580174080					1		
510	Locking bolt	0250712200	M10 x 15		2	2	2	2	
511	Locking bolt	0250712300	M8 x 20			2			
542	Sensor bracket	0318912020		A	2				
		0318914610		B		2		2	
551	Cylinder cap bolt	0250159480	M6 x 12 - 8.8		4				
	Locking screw	0250712300	M8 x 20			2			
553	Spring washer	0256010690	A6		4				
560	Exciter Ring - 80 teeth (For 19.5" wheels)	0531007290	$\varnothing 105/152/156 \times 18$	D	2				
		0331008530	$\varnothing 125/156 \times 8.5$	E		2			
	Exciter Ring - 100 teeth (For 20" wheels)	0531007300	$\varnothing 105/152/156 \times 18$	D	2				
		0331008510	$\varnothing 125/156 \times 8.5$	E		2		2	
561	Cylinder cap screw	0250154882	m6 x 30				10		
563	Spring washer	0256010690					10		
570	Sensor, straight	0233170700	L = 350		2	2		2	
570	Sensor, angled	0233170500	L = 350				2		
571	Bush	0203165900			2	2	2	2	
585	Support	0318907350	Short - L 35		2	2	2	2	
586	Support	0214211100			2	2	2	2	
587	Serrated lock washer	0254141190	A 10.5		2	2	2	2	
590	Heat protection plate	0316524640			2	2		2	
		0316514230						2	
	Special silicone grease	0210401700	5gm		1	1	1	1	







# TRANSPORT

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