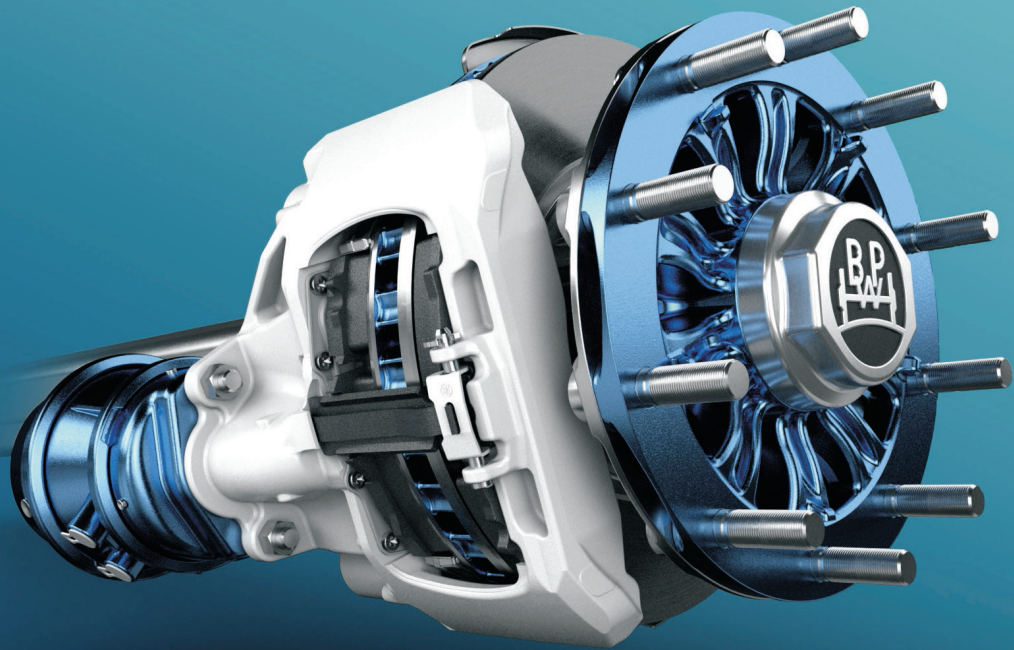




TRANSPEC

ENGINEERED TO LAST



BPW TS2 & TSB DISC BRAKE AXLES

SKH... SH... Axles

10-12t ECO Plus & ECO Plus 3

Spare Parts Catalogue

FOR AUSTRALIAN ASSEMBLED DISC BRAKE AXLES



The information and advice contained in this brochure including prices and specifications are current and correct as at 1st October 2020 but may be subject to change.

BPW Transpec shall not be liable for any changes that occur after that date. It is your responsibility to contact your BPW Transpec branch or representative to ensure that all information and advice is up to date before placing an order.



Important note:

This catalogue contains parts information for Australian assembled axles fitted with **BPW TSB DISC BRAKE** only.

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BPW Genuine spare parts are carefully designed to give you the best in quality, reliability and life expectancy. They are put through rigorous testing both in Europe and around the world.

The BPW axle is tested as a working group of components in order to receive the required SARN (sub-assembly registration number) - indicating the axle conforms to Australian legal requirements. When this test is performed all the components used are genuine BPW components.

Our spare parts catalogues are designed to assist you in correctly identifying the parts you will need to service your BPW axle systems.

This particular book is intended to assist with the identification of spare parts for Australian assembled axles fitted with **BPW TS2 & TSB 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 Operator's Manual and workshop manual or contact your nearest BPW Transpec Branch listed on the back cover of this book.

Identification of BPW Genuine spare parts

At time of assembly an identification **Type Label** is affixed to every Australian assembled BPW axle, usually along the axle centreline on the rear face of the axle beam.

The characters that make up the axle part number gives important information about that axle which can assist in the correct identification of spare parts.

On page 5 is a legend that can be used to decipher BPW Transpec axle part numbers.

The legend is divided into blocks that represent specific information. They are Axle Beam Profile, Hub, Bearing Combination, Wheel Fixing, Brake Size, Serial No, Hubcap Type, Hub Lubrication, Slack Adjuster Type (Drum Brakes Only) and ABS. Within these blocks there are the various alternatives that are represented by different character sets in the axle part number.

On the top, left hand side of the legend there is an example axle part number highlighted.

That part number is: **SHZA10110G01SPN**

Follow the grey lines moving down through each block of the legend to find the meaning of each character set within that example axle part number. The other character sets in each block of the legend represent all other alternatives that may appear in other BPW Transpec axle part numbers.

The axles fitted to any one trailer may have different axle part numbers. Therefore, when using the BPW Transpec Axle Part Number for the purposes of the correct identification of spare part numbers it is important that the axle part number being used is the actual part number for the specific axle requiring the parts.

AXLE PART NUMBER LEGEND

For Australian assembled BPW axles



Important note:

To correctly identify spare parts for BPW Transpec disc brake axles you will require the answers to the following questions:

1. Does the disc brake axle have SB Knorr Bremse, BPW TSB or BPW TS2 caliper fitted?
2. If the disc brake axle is fitted with a BPW TSB caliper what is the brake size? Is the rotor 377mm in diameter or 430mm in diameter?
3. Is the BPW TSB disc brake caliper left handed or right handed? Is the suspension underslung or overslung?
4. Does the BPW Caliper have 1 Piston (TS2) or 2 (TSB)?

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

BPW TRANSPEC AXLE MODEL AND PART NUMBERS											
For Australian assembled axles											
Axle part number example									Legend		
SH	ZA	101	10	G	01	S	P	N			
NR										Axle beam profile	Round Beam 127mm, 15" Tyres
H											Square Beam 120mm & 150mm, 20" Tyres
R											Round Beam 127mm, 20" Tyres
KH											Square Beam 120mm, 19.5" Tyres
SH											Square Beam 120mm, 20" Tyres
SKH, SK											Square Beam 120mm, 19.5" or 20" Tyres
NH											Square Beam 120mm, 15"/17.5" Tyres
	ZA									Hub	10 Stud 285 PCD Dual Wheel, Spigot Mount
	ZM										10 Stud 335 PCD, 8 Stud 275 PCD, 10 Stud 225 PCE Dual Wheel, Spigot Mount
	SA										10 Stud 285 PCD Single Wheel, Spigot Mount
	SM										10 Stud 335 PCD Single Wheel, Spigot Mount
	XZ										Spider Dual Wheel
	X										Spider Single Wheel
		90								Bearing combination	9 tonne bearing combination, 120mm square or 127mm round axle beam
		91									10-12 tonne bearing combination, 120mm square axle beam
		100									10-12 tonne bearing combination, 150mm square or 127mm round axle beam
		101									10-12 tonne bearing combination, 120mm square axle beam, ECO Plus, ECO Plus 3
			00							Wheel fixing	Spider
			08								8 Stud
			10								10 Stud
				A						Brake size	Drum Brake Ø420 x 180mm, suits 20" Tyres
				B							Drum Brake Ø360 x 200mm, suits 19.5" Tyres
				C							Drum Brake Ø300 x 200mm, suits 15" Tyres
				D							Disc Brake SB 3745 (Knorr Caliper), Ø377mm rotor, suits 19.5" and 20" Tyres
				E							Disc Brake SB 4309T (Knorr Caliper), Ø430mm rotor, suits 20" Tyres
				F							Disc Brake SB 3745T (Knorr Caliper), Ø377mm rotor, suits 19.5" Tyres
				G							Disc Brake TSB 4309 (BPW Caliper), Ø430mm rotor, suits 20" Tyres
				H							Disc Brake TSB 3709 (BPW Caliper), Ø377mm rotor, suits 19.5" Tyres
				I							Disc Brake TS2 4309 (BPW Caliper), Ø430mm rotor, suits 20" Tyres
				J							Disc Brake TS2 3709 (BPW Caliper), Ø377mm rotor, suits 19.5" Tyres
					00					Serial no.	Consecutive Serial No 00-99
					99						
						S				Hubcap type	Standard Hubcap
						H					Hubcap with Hubodometer
							G			Hub lubrication	Grease, Conventional Hub
							O				Oil, Conventional Hub
							B				Grease with Oil seal, Conventional Hub
							E				ECO Hub, Grease
							M				ECO Hub, Grease, Push it studs (ECO MAXX)
							P				ECO Plus Hub, Grease
							T				Eco Plus 3 Hub, Grease
								S		Slack adjuster (Drum brake only)	Manual Slack Adjusters
								M			Manual Slack Adjusters with multihole
								A			Automatic Slack Adjusters
									N	ABS	No ABS fitted
								A			ABS fitted



BPW TS2, TSB AND KNORR BREMSE DISC BRAKES

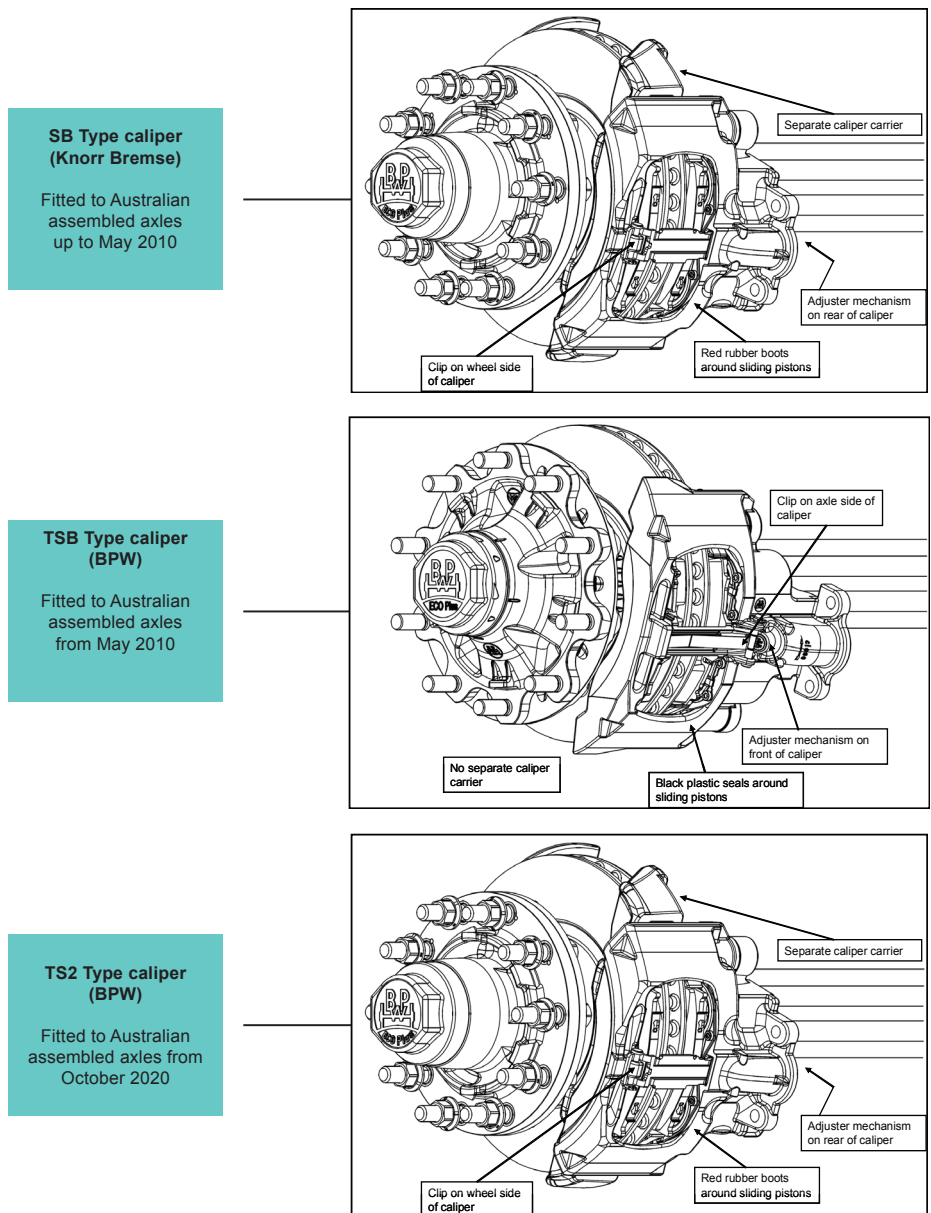
Prior to May 2010 all Australian assembled BPW disc brake axles were fitted with SB type disc brake caliper (Manufacturer - Knorr Bremse).

BPW Transpec have been assembling disc brake trailer axles in Australia fitted with the new BPW TSB type disc brake caliper (Manufacturer - BPW) since May 2010. From late 2020, BPW Transpec will commence using the updated BPW TS2 Caliper

For parts information for Knorr Type calipers, please contact your nearest BPW Transpec branch to obtain the correct parts catalogue.

The diagrams below show the basic differences between the SB, the TSB and the TS2 type disc brake calipers.

These diagrams may assist in the correct identification of disc brake calipers.



Important note:

This catalogue contains parts information for Australian assembled axles fitted with **BPW TS2, & BPW TSB** only.



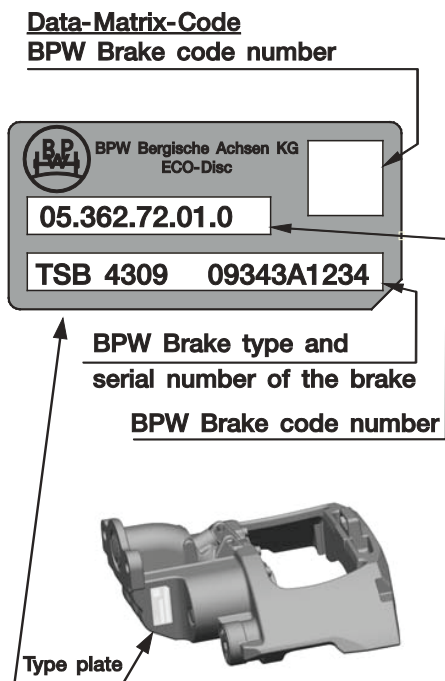
BRAKE SIZE			
TSB & TS2 3709		TSB & TS2 4309	
TSB/TS2	Disc brake	TSB/TS2	Disc brake
37	Disc Ø 377mm	43	Disc Ø 430mm
09	Standard axle load 9t	09	Standard axle load 9t

BPW TSB DISC BRAKE SIZES				
Axle code	Date range	Axle type	Brake size	Rotor diameter
SKH10108	From January 2011	10-12 tonne ECO Plus	TSB 3709 suit 19.5" tyres	377mm
SH10110	From May 2010		TSB 4309 suit 20" tyres	430mm

BPW TS2 DISC BRAKE SIZES				
Axle code	Date range	Axle type	Brake size	Rotor diameter
SHK10118	From Oct 2020	10 - 12 tonne ECO Plus 3	TS23709 to suit 19.5" tyres	377 mm
SHK10110	From Oct 2020	10 - 12 tonne ECO Plus 3	TS24309 to suit 20" tyres	430 mm

Please note:
TSB 4309 is the standard for Australian assembled disc brake axles to suit 20" tyres.

BPW BRAKE CODE NUMBER



There is a manufacturer's nameplate fixed onto each brake caliper, on which are stamped the data necessary for the identification of the brake in question.

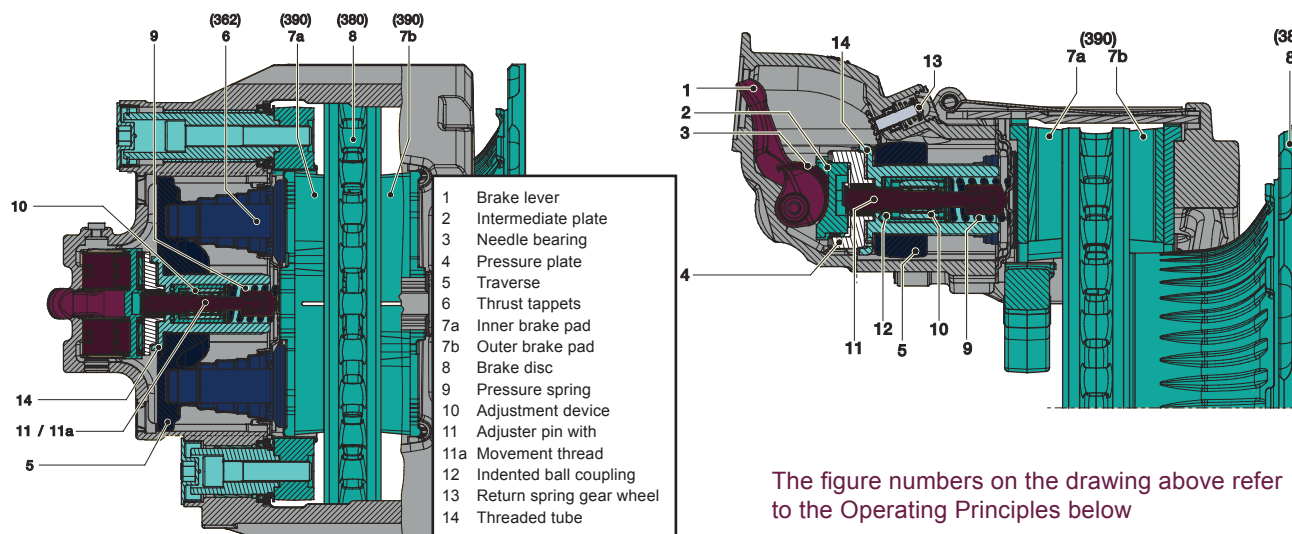
LEFT AND RIGHT HANDED CALIPERS

When the TSB caliper is mounted to the front of the axle (ie in the direction of travel) the long or fixed guide pins will be towards the bottom whether the suspension is underslung or overslung.

If the caliper is mounted behind the axle then the right handed caliper is used on the left hand side of the axle and the left handed caliper is used on the right side of the axle.

Underslung = suspension springs under the axle

Overslung = suspension springs over the axle



The figure numbers on the drawing above refer to the Operating Principles below

APPLYING THE BRAKE

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.

RELEASING THE BRAKE

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

ADJUSTMENT

The brake is fitted with an automatic non wearing adjusting device (10) to maintain constant clearance between the brake pad and the brake disc. Each time the brake is operated the axial movement of the lever block (2) and pressure plate (4) causes the adjuster pin (11) to be rotated via a trapezoidal thread. The adjuster pin is connected to the threaded tube (14) by the movement thread (11a) which in turn can rotate the threaded tube (25) via the spring loaded indented ball coupling sleeve (12). Axial play in the trapezoidal thread between the pressure plate (4) and the adjuster pin determines the free play value of the disc brake. When the free play is set correctly the spring loaded indented ball coupling sleeve (12) can disengage without turning the threaded tube (14). The overall play (total play on both sides of the disc brake) measures 0.8mm +/- 0.2mm.

RESET MECHANISM

The disc brake features a reset mechanism at the front for replacing the brake pads and brake disc. The return spring gear wheel (13) is mechanically connected to the external gearing of the threaded tube (14) so that the pressure plates (6) can return to their initial position. Only minimal torque is required to move the pressure plates (6) back to this position or preset the play.

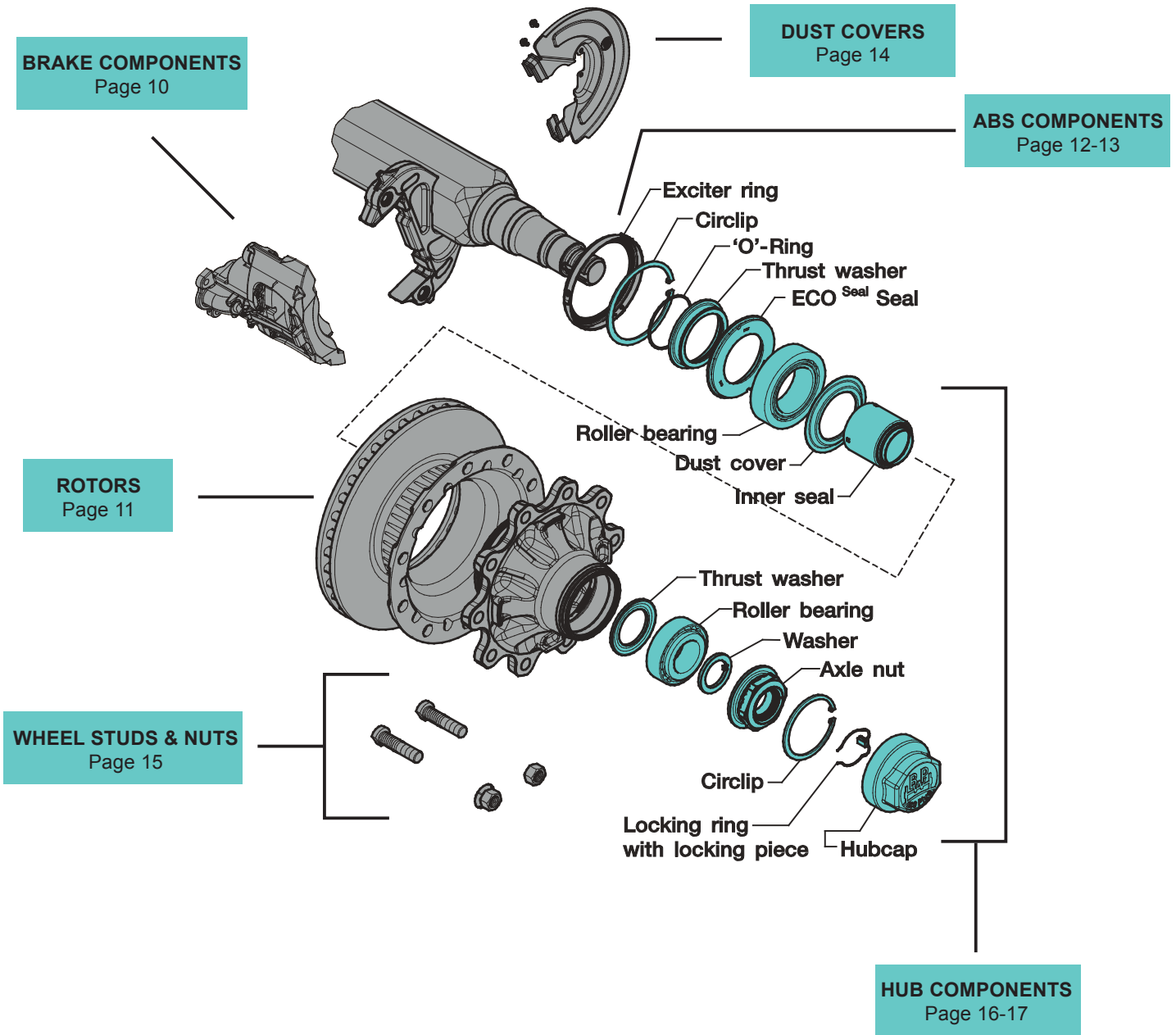
BRAKE CYLINDER

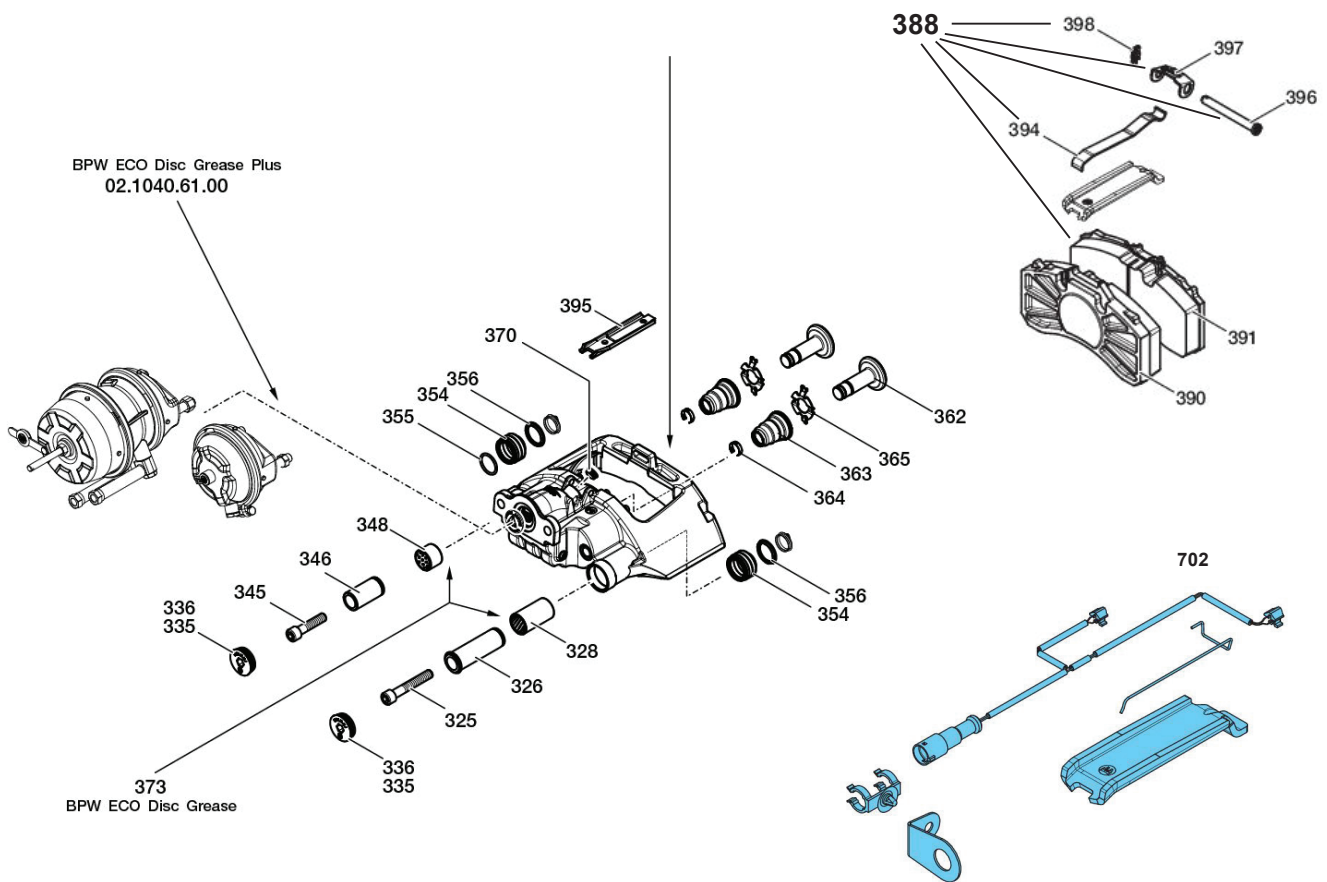
Air pressure builds up behind the diaphragm due to the action of compressed air on the brake cylinder. Air pressure forces the thrust rod out of the cylinder via the diaphragm plate. The brakes may only be fitted with brake cylinders which, apart from the sealing of the flange surfaces, are fitted with a so called "inner sealing". This means that the pushrod acting on the lever (1) must be hermetically sealed from the secondary chamber of the brake cylinder as otherwise the internal mechanism is completely open to its surroundings.

Numbers in brackets above refer to figure numbers on drawing above.



EXPLODED VIEW OF A RIGID BPW AXLE EQUIPPED WITH TS2 AND ECO PLUS 3

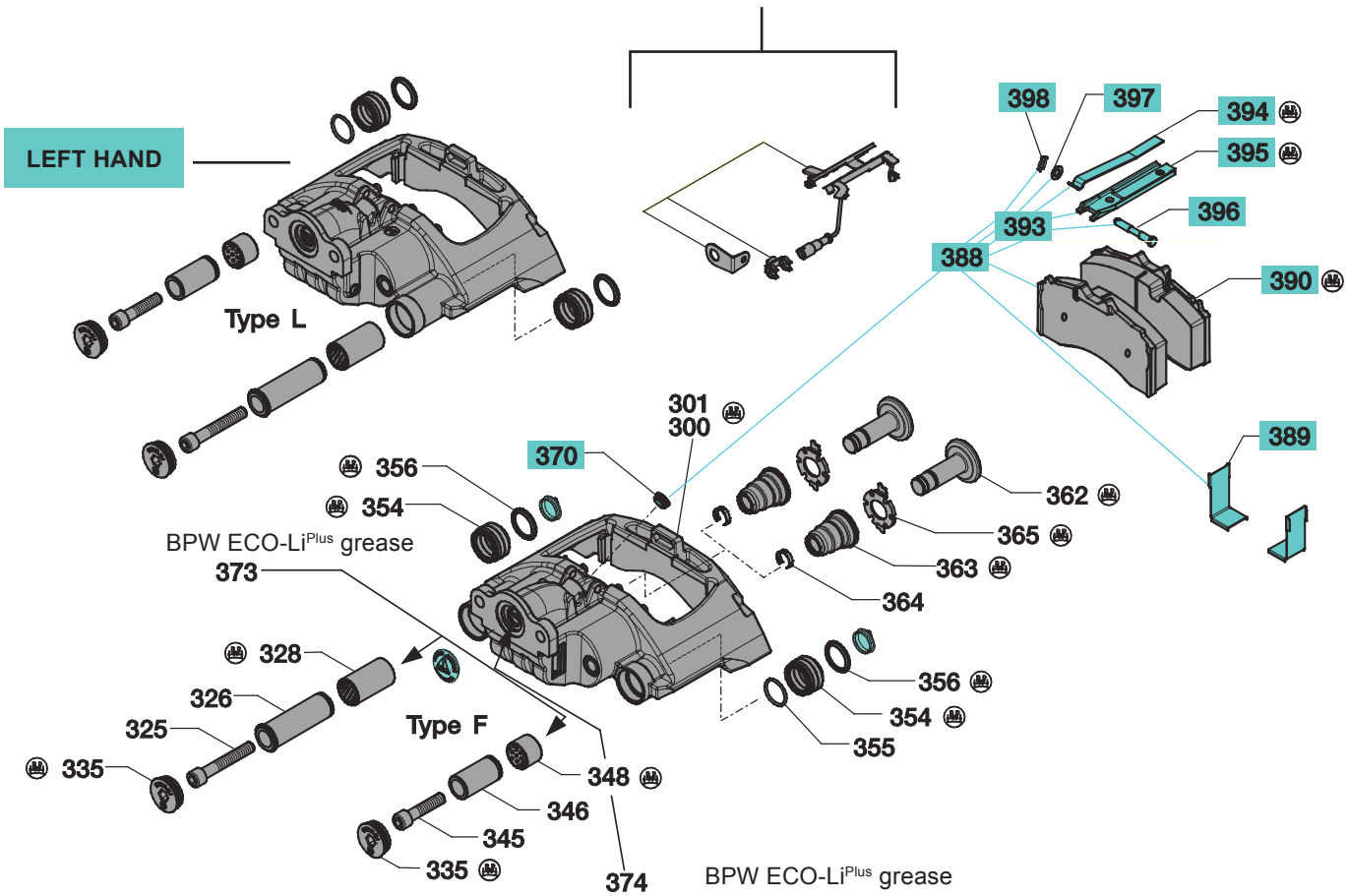




BRAKE COMPONENTS					
Item	Description	Dimension/Remark	TS2 3709	TS2 4309	Qty per axle
300	Replacement caliper	Left hand	0936272210TS2	0936272230TS2	1
		Right hand	0936272200TS2	0936272220TS2	1
	Repair kit guide pins and seals	Incl. item 325-328, 335, 336, 345-348, 354, 356, 370, 373	09.801.08.69.0		2
325	Main guide pin screw	M16 x 1.5 x 103 - 10.9	03.340.12.32.0		2
345	Loose guide pin screw	M16 x 1.5 x 73 - 10.9	03.340.12.31.0		2
363	Repair kit tappet and Seal		09.801.08.81.0		1
388	Repair kit brake pads	Incl item 390,391,394,394,397,398	09.801.08.72.0	09.801.08.73.0	1
393	Repair kit brake pad retainer	Incl. item 394 - 398	09.801.08.70.0		2
702	Wear sensor set		05.801.48.92.0		2



For brake monitor components see pages 22-23



BRAKE COMPONENTS					
Item	Description	Dimension/Remark	TSB 3709	TSB 4309	Qty per axle
			Part no.		
300	Replacement caliper	Left hand	0936272131TS	0936272110TS	1
		Right hand	0936272141TS	0936272120TS	1
323	Repair kit guide pins	Incl. items 325, 326, 328, 345, 346, 348, 373	09.801.07.61.1		2
325	Main guide pin screw *	M16 x 1.5 x 103 - 10.9	03.340.12.32.0		2
345	Loose guide pin screw *	M16 x 1.5 x 73 - 10.9	03.340.12.31.0		2
352	Repair kit seals for guide pins	Incl. items 335, 354, 355, 356, 370, 373	09.801.07.62.0		2
360	Repair kit tappet	Incl. items 362 - 365	09.801.07.63.1		2
388	Repair kit brake pads **	Incl. items 370, 389, 390, 394, 396 - 398	09.801.07.94.0	09.801.07.96.0	1
393	Repair kit brake pad retainer	Incl. items 394 - 398	09.801.07.68.1		2

* Guide pin screws are for single use only and must be replaced once removed.

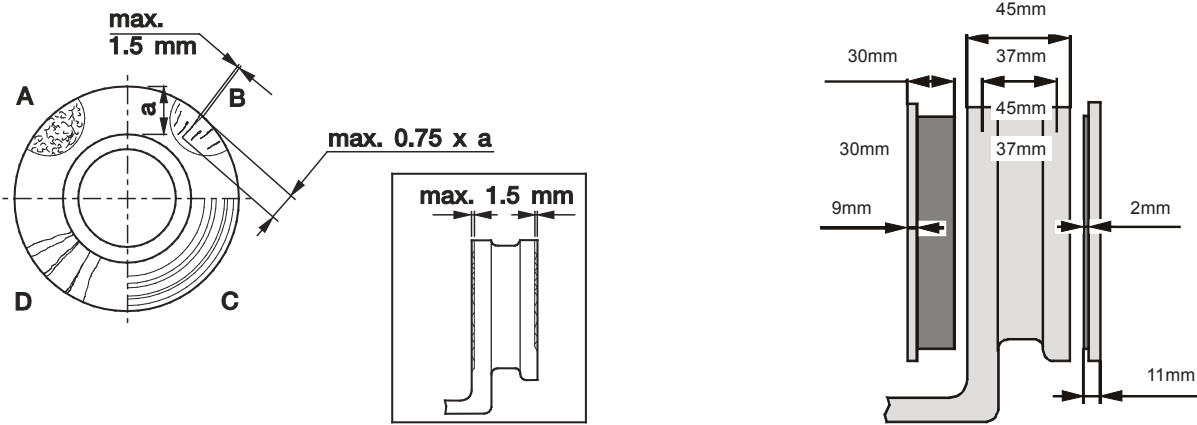
** Disc Brake Pads:

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

Single disc brake pad part number 05.092.90.15.1 to suit TSB3709 can only be supplied in kit part number 09.801.07.94.0. Single disc brake pad part number 05.092.90.13.1 to suit TSB4309 can only be supplied in kit part number 09.801.07.96.0.

Check the condition of the disc brake rotor:

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



Sections A - D in the figure below 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 of TSB 3709 and TSB 4309:

- Disc thickness when new = 45mm
- Minimum permissible disc thickness = 37mm (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.

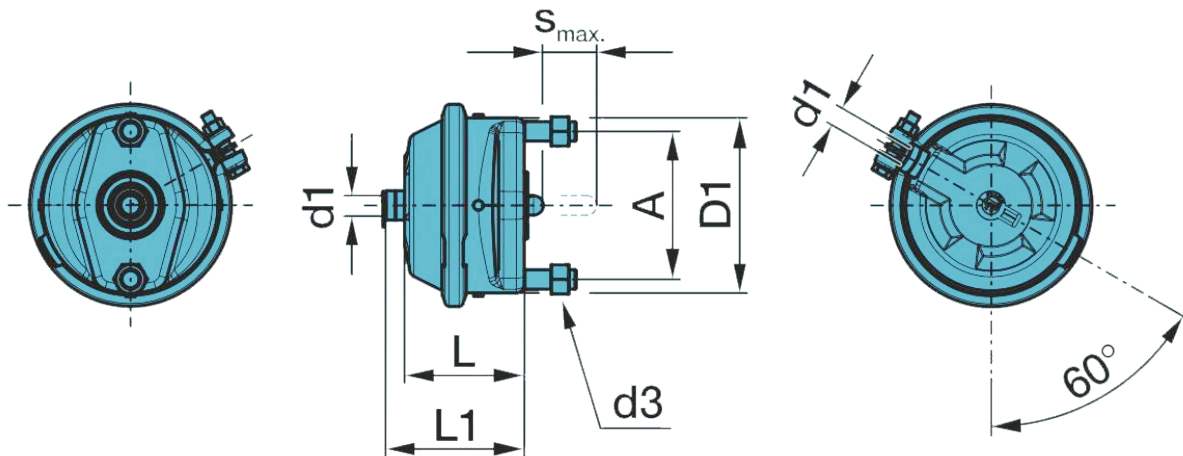
To prevent damage to the brake discs, the brake pads should be replaced when their thickness (excluding the backing plate) is 2 mm or less.

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

ROTORS			
Brake	Part no.	Description	Qty per axle
TSB/TS2 3709	03.088.34.15.0	8 Stud 275mm PCD	2
TSB/TS2 3709	03.088.34.16.0	8 Stud 275mm PCD for ABS	2
TSB/TS2 4309	03.088.35.14.0	10 Stud 285mm PCD	2
TSB/TS2 4309	03.088.35.12.0	10 Stud 335 PCD	2



SINGLE DIAPHRAM BRAKE BOOSTERS						
Part no.	Size	L (mm)	L1 (mm)	D1 (mm)	Overslung Suspension	Underslung Suspension
05.444.30.01.0	14"	101	116	143	right hand	left hand
05.444.30.02.0					left hand	right hand
05.444.31.01.0	15"	101	116	143	right hand	left hand
05.444.31.02.0					left hand	right hand
05.444.32.01.0	16"	101	116	145	right hand	left hand
05.444.32.02.0					left hand	right hand
05.444.33.01.0	18"	108	124	150	right hand	left hand
05.444.33.02.0					left hand	right hand
05.444.34.01.0	20"	105	124	150	right hand	left hand
05.444.34.02.0					left hand	right hand
05.444.35.01.0	22"	110	125	160	right hand	left hand
05.444.35.02.0					left hand	right hand
05.444.36.01.0	24"	110	125	160	right hand	left hand
05.444.36.02.0					left hand	right hand
					Lock nuts for brake booster	
					Thread	Part no.
					M 16 x 1.5	02.5220.23.82

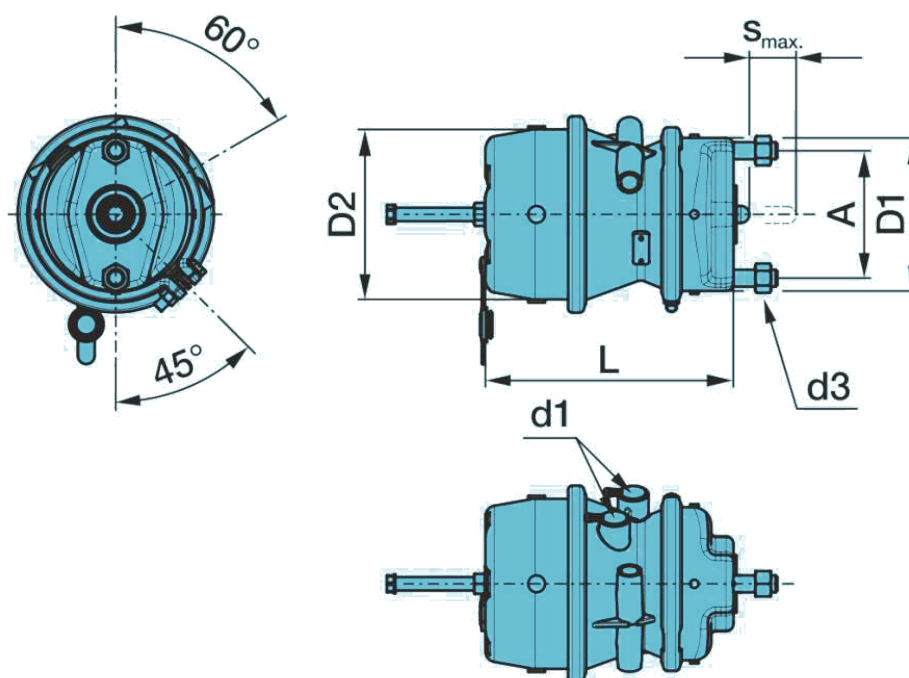
Please note:

All Brake Boosters are not serviceable and therefore no spare parts are available. Boosters come complete with fixing nuts. If replacement nuts are needed, please use the locking nuts.

For underslung suspensions the right hand Brake Booster is used on the left hand side of the axle, and the left hand Brake Booster is used on the right hand side of the axle. When identifying right or left hand Brake Boosters you must know whether the suspension is underslung or overslung.

Not all Brake Boosters are listed above. For more information please contact BPW Transpec.

Underslung = suspension springs under axle
Overslung = suspension springs over axle



DOUBLE DIAPHRAM BRAKE BOOSTERS						
Part no.	Size	L (mm)	L1 (mm)	D1 (mm)	Overslung Suspension	Underslung Suspension
05.444.38.01.0	14/24"	235	145	161	right hand	left hand
05.444.38.02.0					left hand	right hand
05.444.39.01.0	15/24"	235	145	161	right hand	left hand
05.444.39.02.0					left hand	right hand
05.444.40.01.0	16/24"	235	145	161	right hand	left hand
05.444.40.02.0					left hand	right hand
05.444.42.01.0	18/24"	257	145	161	right hand	left hand
05.444.42.02.0					left hand	right hand
05.444.44.01.0	20/24"	257	152	161	right hand	left hand
05.444.44.02.0					left hand	right hand
05.444.45.01.0	22/24"	257	163	174	right hand	left hand
05.444.45.02.0					left hand	right hand
					Lock nuts for brake booster	
					Thread	Part no.
					M 16 x 1.5	02.5220.23.82

Please note:

All Brake Boosters are not serviceable and therefore no spare parts are available. Boosters come complete with fixing nuts. If replacement nuts are needed, please use the locking nuts.

For underslung suspensions the right hand Brake Booster is used on the left hand side of the axle, and the left hand Brake Booster is used on the right hand side of the axle. When identifying right or left hand Brake Boosters you must know whether the suspension is underslung or overslung.

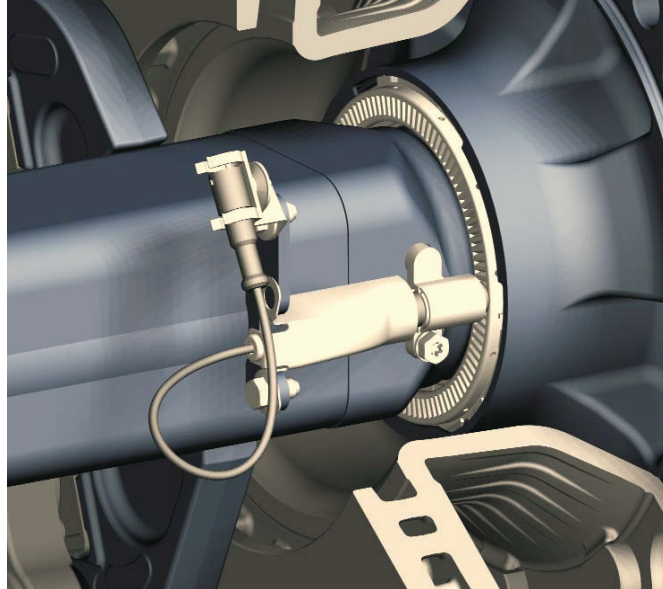
Not all Brake Boosters are listed above. For more information please contact BPW Transpec.

Underslung = suspension springs under axle

Overslung = suspension springs over axle



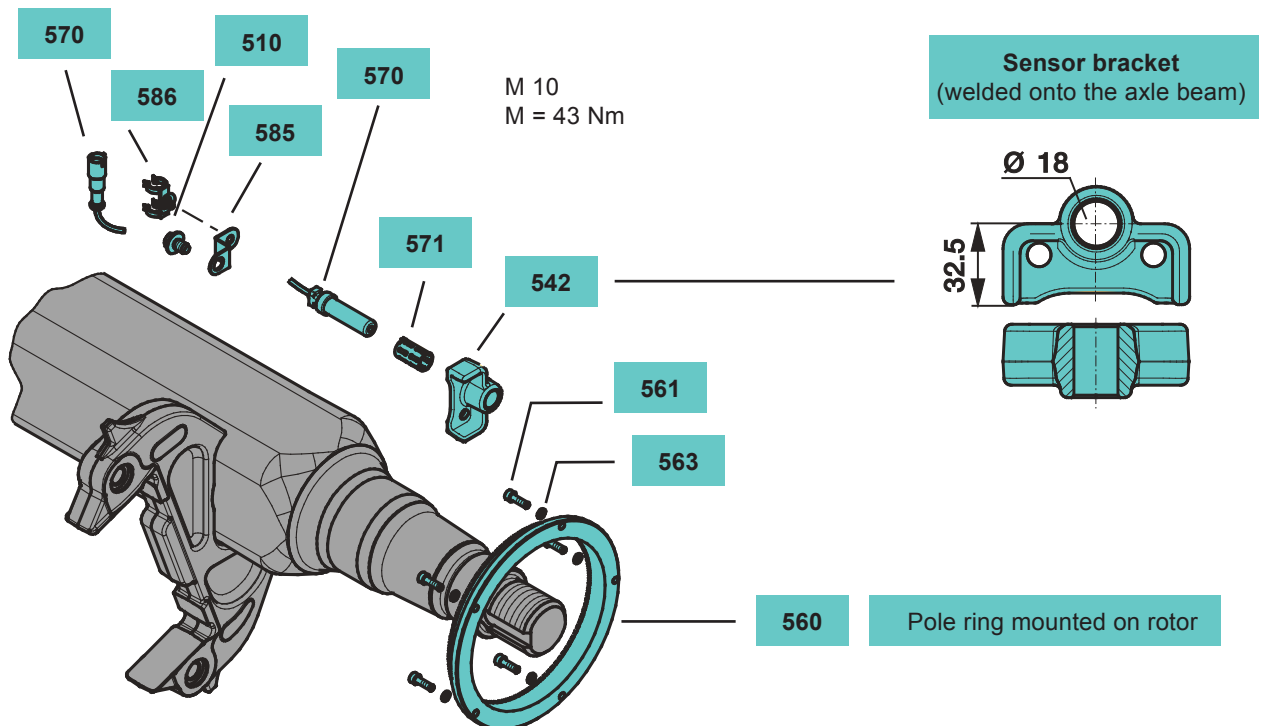
ABS General information

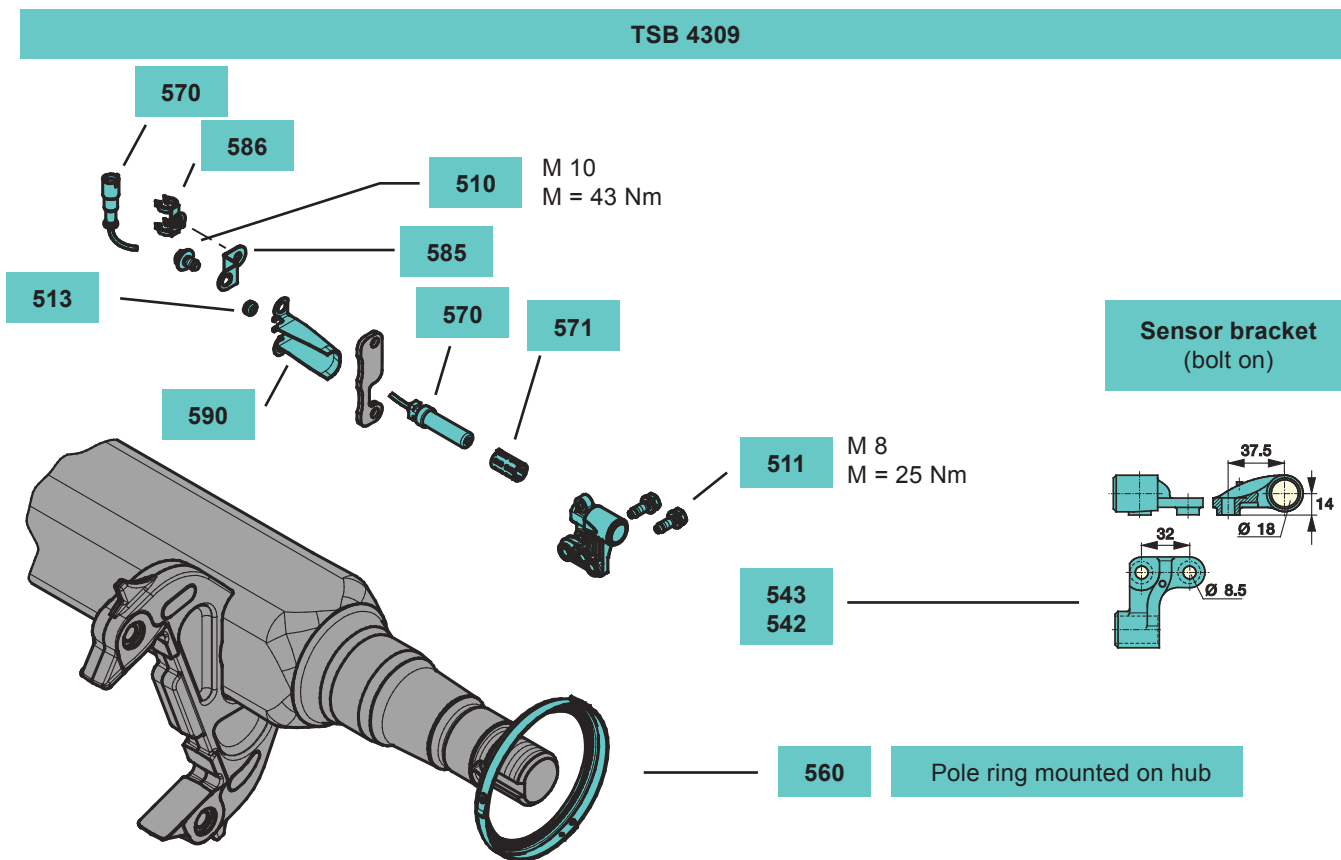


In the anti-lock brake system (ABS), the wheel movement is recorded using a proximity type arrangement with an exciter ring attached to the hub and a sensor (speed sensor) that generates the pulses.

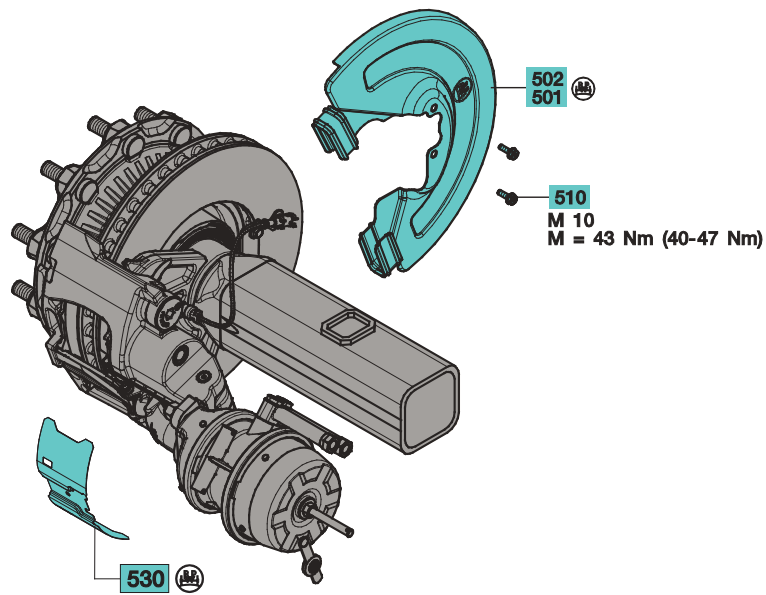
As a result, the wheel speed of each wheel is continuously sent to the central electronic control unit (ECU). This runs a complex system for processing the received informant about the movement of the wheel as well as for calculating and performing logical operations on the control signals. Using the pressure control valves assigned to each wheel, it adjusts the air pressure and therefore the braking of each individual wheel (depending on the ABS system).

TSB 3709

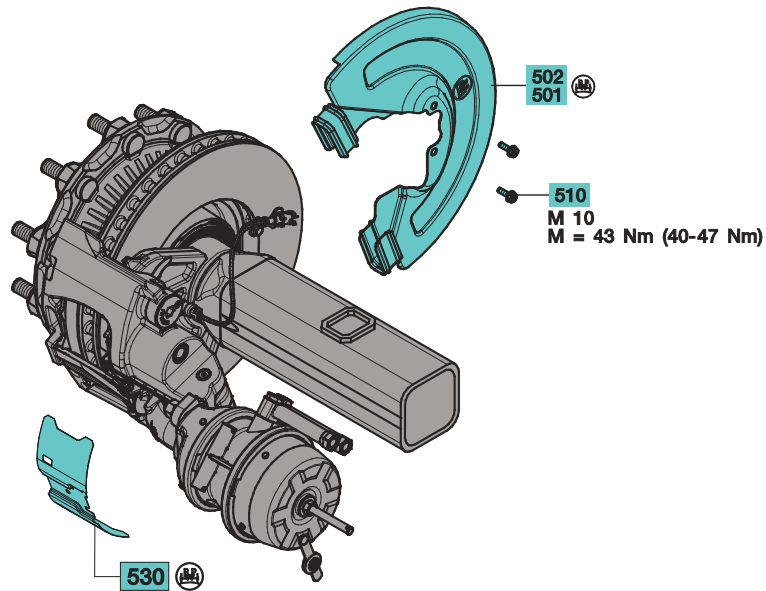




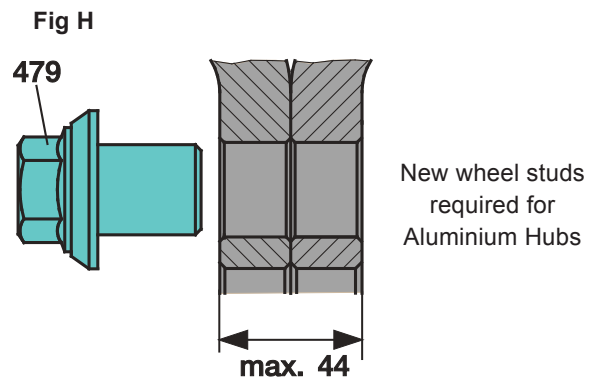
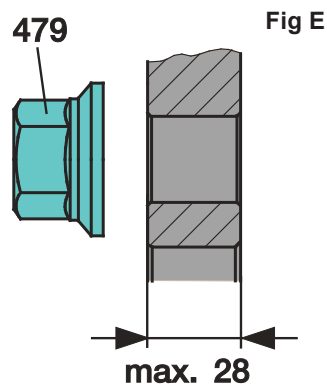
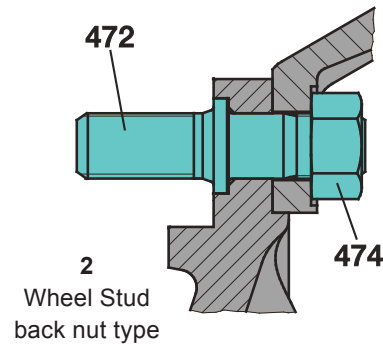
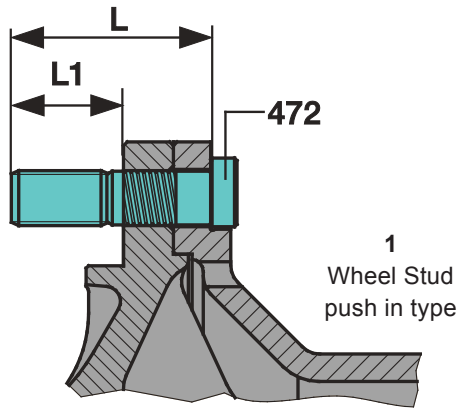
ABS COMPONENTS					
Item	Description	Dimension/Remark	Part no.TS2 & TSB		Qty per axle
			3709	4309	
Kits	ABS kit	Incl. all items as indicated in table below	05.801.74.58.0	05.801.74.59.0	1
510	Locking bolt	M 10 x 15	02.5071.22.00		2
511	Locking bolt	M 8 x 20	02.5071.23.00		2
513	Sealing plug	M 8 x 20		02.5681.78.00	2
542	Sensor bracket	Welded onto the axle beam (reference only)	03.189.15.76.0		2
542	Sensor bracket, right			03.189.07.58.0	2
543	Sensor bracket, left			03.189.07.59.0	2
560	Pole ring	80 teeth (TSB 3709)	03.310.09.38.0		2
		100 teeth (TSB 4309)		05.310.08.50.1	2
561	Cylinder head bold	M 6 x 20 - 8.8	02.5015.06.82		4
563	Spring washer	Ø 6	02.5611.06.90		4
570	Sensor cranked	L = 350	02.3317.05.00		2
570	Sensor straight	L = 350		02.3317.07.00	2
571	Bush		02.0316.59.00		2
585	Support	Short - L 35	03.189.07.35.0		2
586	Support		02.1421.11.00		2
590	Heat protection plate			03.165.14.23.0	2



BPW TSB DUST COVERS					
Item	Description	Dimension	Part no.		Qty per axle
			TSB 3709	TSB 4309	
501	Disc cover - left hand		03.010.71.59.0	03.010.71.61.0	1
502	Disc cover - right hand		03.010.71.60.0	03.010.71.62.0	1
510	Locking screw	M 10 x 15	02.5071.22.00		4
530	Pad shield TSB	140 x 290 x 1.5	03.010.95.32.0		2



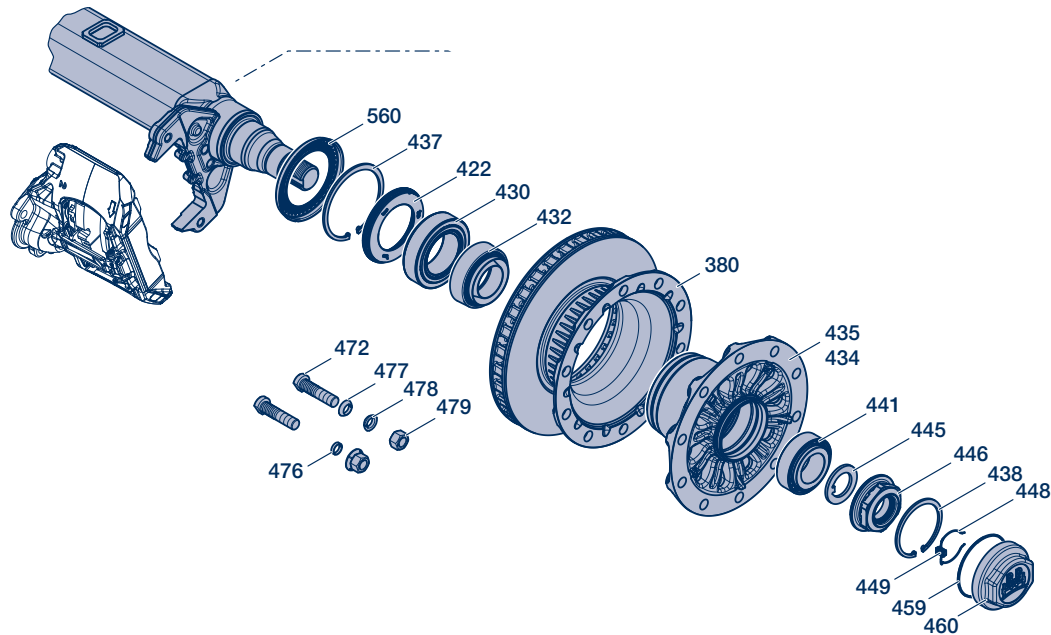
BPW TS2 DUST COVERS					
Item	Description	Dimension	Part no.		Qty per axle
			TS2 3709	TS2 4309	
501	Disc cover - left hand		03.010.81.87.0	03.010.81.91.0	1
502	Disc cover - right hand		03.010.81.88.0	03.010.81.92.0	1
510	Locking screw	M10 x 15 - 10.9 / SW13	02.5071.22.00		4
530	Pad Shield TS2	148.5 x 235 x 1.5	03.010.95.42.0		2



To help to determine replacement wheel studs and nuts select the wheel stud or bolt type from figures 1 and 2 above. Then determine the wheel nut type from Figures E or H below. Then select the appropriate combination using the table below. For example the combination 1E represents push in type wheel studs for steel wheels.

WHEEL STUDS & NUTS FOR ECO PLUS HUB 3									
Item	Description	Part no.	Wheel type		Fig	Stud style	No. of studs	Dimension	Qty per axle
472	Wheel stud	03.296.33.12.1	dual	Steel	1	push in	10	M 22x1.5x97	20
		03.296.23.17.0	dual / single	Steel	2	back nut	10	M 22x1.5x114	20
		03.296.23.24.0	dual	Aluminium			10	M 22x1.5x136	20
479	Wheel nut	05.260.54.10.0	dual	Steel	E			M 22x1.5	16/20*
		05.260.54.14	single	Aluminium	H			M 22x1.5 / Ø 32 sleeve	16/20*
474	Back nut	03.260.04.06.0	dual / single	Steel / Aluminium	2			M 22x2	20
	Peg	02.6010.35.60				back nut		Ø 6x19.5	20

* Qty 16 for 8 stud hub/ 20 per axle for 10 stud hub



HUBS				
Item	Description	Tyre size	10-12 tonne	Qty per axle
435	Hub 10 stud 335 PCD -D/AL Drum Push In	20" / 22.5"	03.272.43.46.0	2
	Hub SH101 10 stud 335 PCD -D/AL Disc Push In	20" / 22.5"	03.272.43.47.0	2
	Hub NH101 10 stud 225 PCD -D/AL	15" / 17.5"	03.272.44.51.0	2
	Hub SKH10 8 stud 275 PCD -D/AL Disc	19.5"	03.272.46.38.0	2
	Hub KH10 8 stud 275 PCD -D/AL Drum	19.5"	03.272.46.39.0	2
	Hub H10 10 stud 285 PCD -D/AL Drum	20" / 22.5"	03.272.47.44.0	2
	Hub H10 10 stud 285 PCD -D/AL Disc	20" / 22.5"	03.272.47.45.0	2
	Hub H10 10 stud 285 PCD -D/AL Disc LW Alum	20" / 22.5"	03.272.47.46.0	2
	Hub H10 10 stud 285 PCD -D/AL Drum LW Alum	20" / 22.5"	03.272.47.47.0	2
	Hub 3 Spoke Spider H/R10	20" / 22.5"	03.328.76.51.0	2

HUB COMPONENTS			
Item	Description	10-12 tonne	Qty per axle
Kits	Wheel bearing and Seal Kit	0980107050TS	2
	Wheel bearing and Seal Kit (incl Seal Carrier, O-ring)	0980107050TSSC	2
460	Hub cap with o-ring, Chrome	0321229088CTS	2
436	PEG 6mm ALLOY HUB	02.6010.39.60	20



ECO PLUS 3 RETRO FIT KITS					
Item	Description	0980107092TS ECO RETROFIT	0980107092EPTS ECO PLUS RETROFIT	0980107092CONVTS ECO RETROFIT CONV BEAM	Qty per axle
421	Seal Carrier		03.370.07.82.0		2
422	Thrust ring with seal		02.5664.77.00		2
430	Inner Bearing		02.6410.23.00		2
431	Dust Cover		03.010.93.34.0		2
440	Thrust Ring		03.370.26.24.0		2
441	Outer Bearing		02.6410.22.00		2
424	O-ring seal carrier		02.5678.00.00		2
432	Dust seal	03.120.45.16.0			2
437	Circlip inner hub	02.5606.58.90			2
438	Circlip outer hub	02.5606.22.90			2
445	Washer	03.320.64.01.0			2
446	Axle nut	03.266.47.03.0	05.807.00.44.0	03.262.17.12.0	2
447	Pin/Wedge axle nut	03.084.71.17.0	03.277.00.07.0	02.6201.84.01	2
448	Locking Ring Axle Nut	03.188.04.08.0	03.188.04.10.0		2
459/460	Hubcap incl O-ring	0321229060TS			2

Retrofit Wheel Bearing and Seal Kits

When an Eco Plus 3 Hub is used to replace a Conventional Spider, Conventional 10/285, ECO 10/285 or Eco Plus 10/285 hub then a retrofit Wheel Bearing and Seal Kit must also be fitted.

There are three retrofit kits;

1. Item number = 0980107092CONVTS

Description= KIT BSC 10-12t EP3-ECO RETROFIT CONV BEAM

(This kit suits older conventional beams that do not have a keyway through the axle nut thread)

2. Item number = 0980107092TS

Description= KIT BSC 10-12t EP3-ECO RETROFIT

(This kit suits ECO axle beams with the keyway through the axle nut thread, these were used from early 1996 on axles with ECO hubs and axles with Conventional hub)

3. Item number = 0980107092EPTS

Description= KIT BSC 10-12t EP3-ECO PLUS RETROFIT

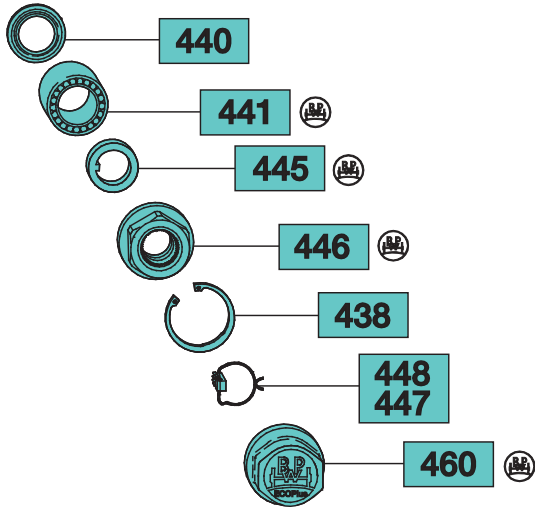
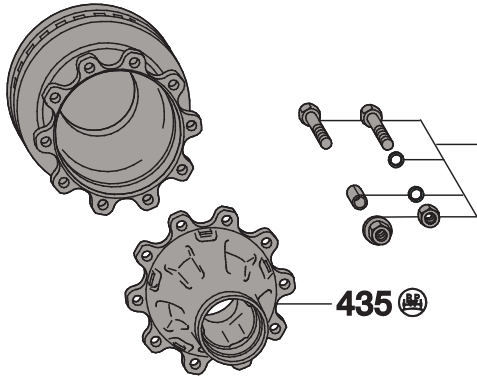
(This kit suits ECO PLUS axle beams with the keyway through the axle nut thread, these were used from late 2008 on axles with ECO PLUS hubs)



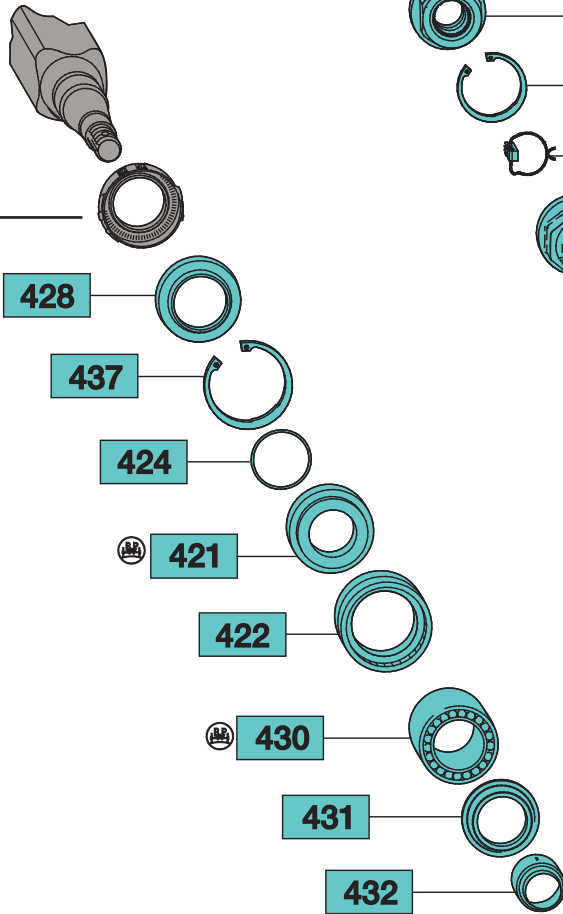
10-12 tonne ECO Plus hub in axles assembled from May 2010 (10 stud) / January 2011 (8 stud)

For rotors refer to page 11

For wheel studs and nuts refer to pages 15



For ABS components refer to pages 12-13





HUBS AND HUB COMPONENTS TO SUIT 10-12 TONNE										
KITS per hub						PARTS				
Description	Part no.	Description	Part no.	Description	Part no.	Item	Description	To suit 10-12t		Qty per axle
								Part no.	Dimension	
						435	Hub 8 stud 275mm PCD	03.272.46.30.2	M 136x2,5 / Ø 120/150	2
							Hub 10 stud 285mm PCD	03.272.47.38.0	M 136x2,5 / Ø 120/150	
							Hub 10 stud 335mm PCD	03.272.43.26.2	M 136x2,5 / Ø 120/150	
Wheel bearing and seal kit (incl. seal carrier, o-ring, axle nut and washer kit and grease 450g)	0980107040TSSCT	Wheel bearing and seal kit (incl. seal carrier and o-ring)	0980107040TSSC	Wheel bearing and seal kit	0980107040TS	421	Seal carrier	03.370.07.72.0	Ø 96/117.5/132x22	2
						422	Hub seal	02.5664.74.00	Ø 20/157.5x20	2
						424	O-ring	02.5678.00.00	Ø 100x3	2
						428	Dust seal	03.120.48.15.0	Ø 122/160x8.7	2
						430	Roller bearing inner	02.6410.23.00	33118	2
						431	Grease shield inner	03.010.93.34.0	Ø 94/149x8.5	2
						432	Dust seal	03.120.45.16.0	Ø 67 / 93x90,5	2
						440	Thrust washer	03.370.26.24.0	Ø 71/108x8	2
						441	Roller bearing outer	02.6410.22.00	33213	2
						447	Locking wedge axle nut	03.277.00.07.0		2
						448	Hooked ring spring - locking wedge	03.188.04.10.0	Ø 62x1.8	2
						445 446	Axle nut and washer kit	05.807.00.44.0	M 52x2 / SW95	2
							Grease ECO-Li Plus 450g	0210404500-450	refer to page 19-20	
					437	Circlip inner	02.5606.58.90	Ø 158x4	2	
					438	Circlip outer	02.5606.22.90	Ø 122x4	2	
					460	Hub cap	03.212.25.31.0	M 136x2.5 / H 70 / SW110	2	
						Hub cap, chrome	0321225310C			



BPW ECO-Li^{PLUS} Grease

BPW ECO-Li^{PLUS} 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

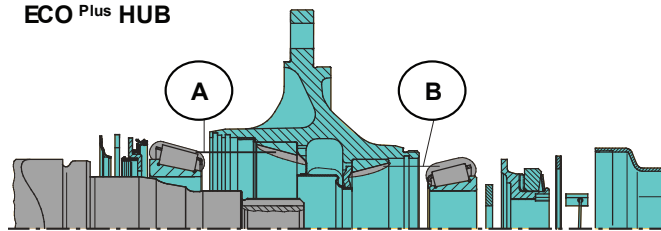
ECO-Li^{PLUS} is suitable for the lubrication of high temperature roller and friction bearings of commercial vehicles. It has been especially developed for highly loaded taper roller bearings and hub units with very long re-lubrication periods.

BPW ECO-Li^{PLUS} GREASE is available in the following container sizes

Part no.	Container size
0210404500-450	450g cartridge
02.1040.47.00	5kg container
0210404900-20	20kg container

GREASE FILLING

ECO Plus HUB



ECO-LiPlus Grease quantity per taper roller bearing

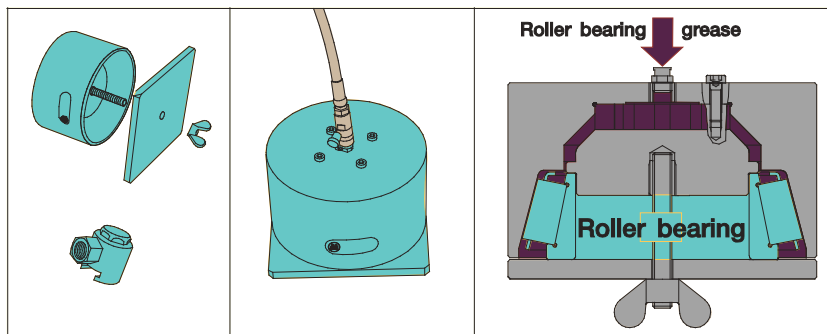
ECO Plus HUB

Axle load	A = Inner bearing	B = Outer bearing
8,000 - 12,000kg Manual greasing	170g	120g



BPW GREASE SHOWER TOOLS
Used to quickly, accurately and cleanly fill the bearing with the required amount of BPW ECO-LI^{Plus} Grease

Grease shower part no.	To suit bearing size	
	ISO	BPW Bearing part numbers
99.00.000.9.54	33116 / 32310	02.6410.24.00 / 02.6410.25.00
99.00.000.9.55	33118 / 33213	02.6410.23.00 / 02.6410.22.00



BPW ECO A&P SPRAY



- Simple to use
- Good sliding properties
- Easier hub removal
- Long-term dry lubrication
- Good adhesion on prepared base surfaces
- Helps to prevent fretting corrosion

BPW ECO A&P SPRAY	
Part no.	Size
OKS571	400ml Aerosol

Important note:

Please be aware for safe management and handling of this products you must read the material data safety sheets which are available on our website or you can contact your account representative.



Tyre rolling circumference:

The tyre rolling circumferences in the table above are based according to standard ETRTO (European Tyre and Rim Technical Organisation). Data of various tyre manufacturers can vary slightly.

BPW HUBCAPS WITH INTERGRADET ANALOGUE HUBODOMETER						
Axle load	Axle beam profile	Hub type	Hubcap thread	Tyre size	Tyre rolling circumference $\pm 2\%$	Part no.
10 - 12 tonne	SH	ECO Plus	M 136x2.5	255/70 R 22.5	2,830mm - 2,860mm	05.212.25.41.0
				275/70 R 22.5	2,915mm	05.212.25.42.0
				315/70 R 22.5	3,015mm - 3,134mm	05.212.25.44.0
				11 R 22.5	3,175mm - 3,220mm	05.212.25.45.0
				385/65 R 22.5	3,240mm - 3,260mm	05.212.25.46.0
				12.00 R 22.5	3,280mm - 3,310mm	05.212.25.47.0
	SKH	ECO Plus	M 136x2.5	265/70 R 19.5	2,620mm - 2,650mm	05.212.25.38.0
10 - 12 tonne	SH	Eco Plus 3	M 135 X 2	215/75 R 17.5	2830 mm - 2860 mm	05.212.75.53.0
			M 135 X 2	235/75 R 17.5	2915 mm	05.212.75.54.0
			M 135 X 2	245/70 R 19.5	3015 mm - 3134 mm	05.212.75.55.0
			M 135 X 2	255/70 R 22.5	3240 mm - 3260 mm	05.212.75.46.0
			M 135 X 2	12.00 R 22.5	3280 mm - 3310 mm	05.212.75.47.0
			M 135 X 2	11R 22.5	3175 mm - 3220 mm	05.212.75.49.0
	SKH	Eco Plus 3	M 135 X 2	265/70 R 19.5	3175 mm - 3220 mm	05.212.75.56.0



DISC BRAKE TOOLS

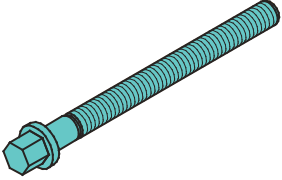
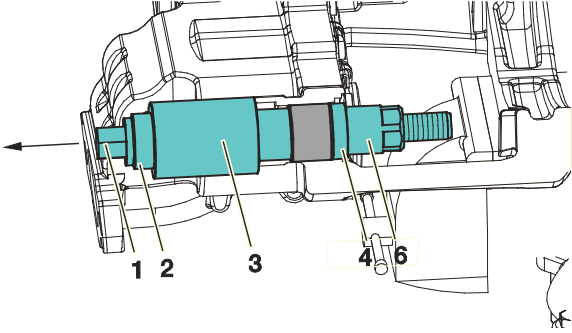

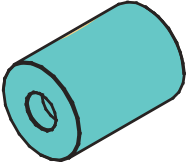
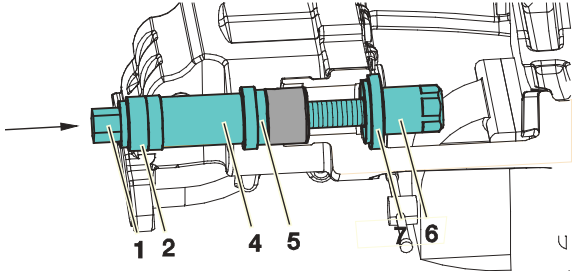


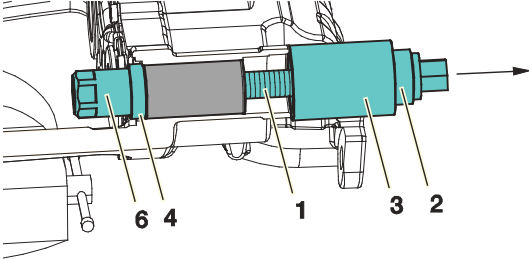


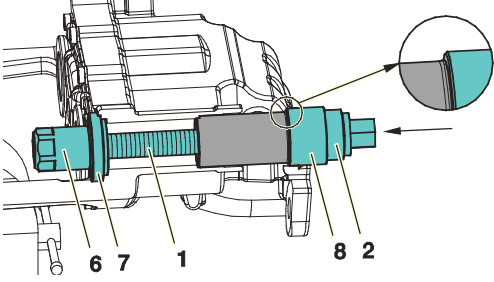
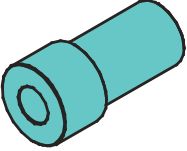
BPW TS 2 TOOLS	
Description	Illustration
TS2 Supplemental set 09.801.08.82.0	

BPW TSB DISC BRAKE TOOL KIT OVERVIEW

Description	Part no.	Description	Part no.	Details on page no.
Tool kit	99.00.000.9.68	Threaded spindle	02.0130.39.10	25
		Ball bearing	02.0130.40.10	
		Sleeve	02.1410.26.00	
		Press out tool (both bearings)	02.0130.41.10	
		Press tool (movable bearing)	02.0130.42.10	
		Nut	02.5270.37.00	
		Counter-hold tool	02.1421.22.00	
		Pressing tool (fixed bearing)	02.0130.43.10	
		Press-on tool (plastic bellows)	02.0130.45.10	26
		Torx spanner return mechanism	02.0130.44.10	
		Two-hole spanner - coarse dirt seal	02.3516.20.00	
		Adapter for movable bearing screw	02.0130.46.10	
		Adapter for plastic cap	02.0130.47.10	
		Adaptor for torque wrench (movable bearing)	02.0130.48.10	
		Adaptor for torque wrench (plastic cap)	02.0130.49.40	
		Ring for pulling wheel studs	02.5683.92.00	


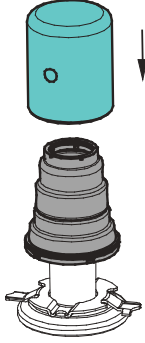
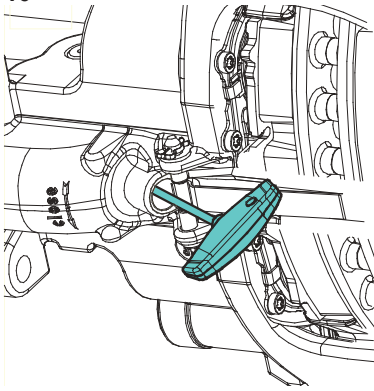
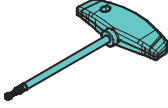
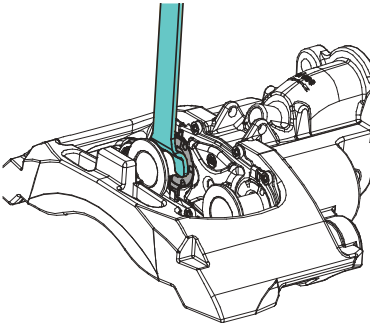
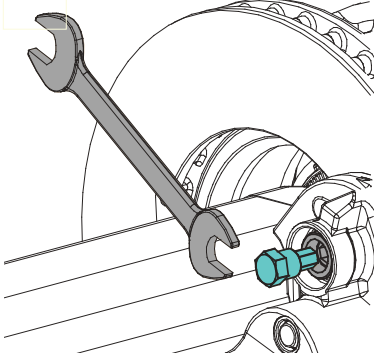
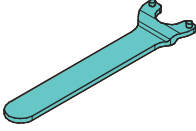

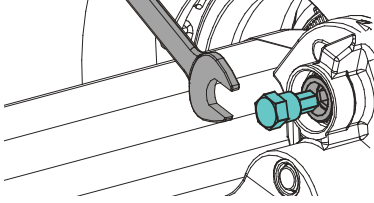

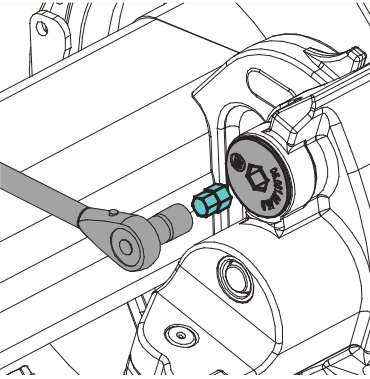
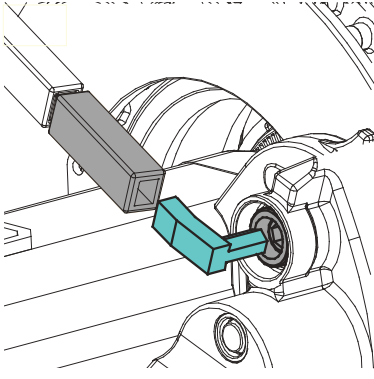

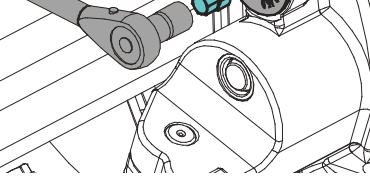
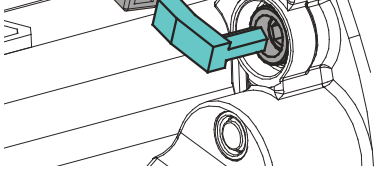
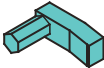
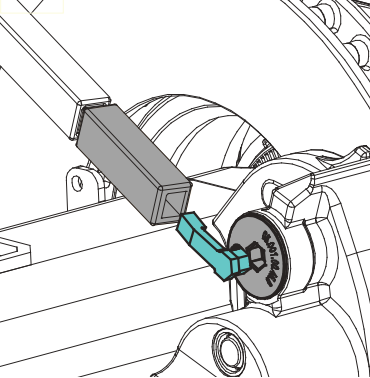
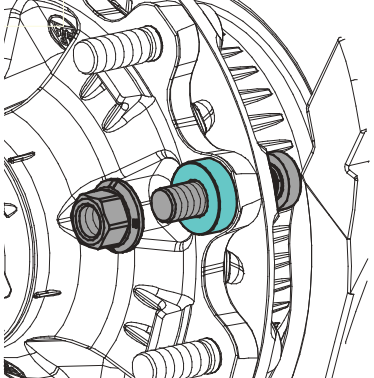

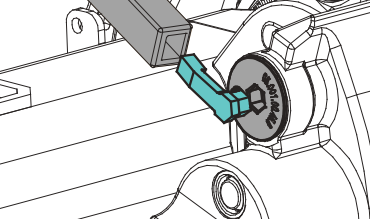
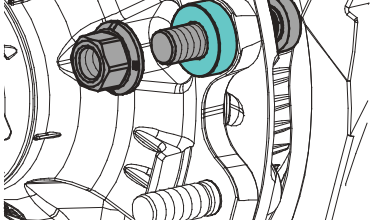

Please note that the parts shown in the table above are only available in the tool kit.



<p>1 02.0130.39.10 Threaded spindle M18/SW22</p>		<p>Press-out tool for movable bearing consists of item 1, 2, 3, 4, 6</p> 
<p>2 02.0130.40.10 Ball bearing</p>		
<p>3 02.1410.26.00 Sleeve Ø20.5 / Ø42 / Ø55</p>		<p>Pressing tool for movable bearing consists of item 1, 2, 3, 4, 5, 6, 7</p> 
<p>4 02.0130.41.10 Press-out tool for movable and fixed bearings</p>		
<p>5 02.0130.42.10 Pressing tool (movable bearing)</p>		<p>Press-out tool for fixed bearing consists of item 1, 2, 3, 4, 6</p> 
<p>6 02.5270.37.00 Nut M18/SW32</p>		
<p>7 02.1421.22.00 Counter-hold tool</p>		<p>Pressing tool for fixed bearing consists of item 1, 2, 5, 6, 7, 8</p> 
<p>8 02.0130.39.10 Pressing tool (fixed bearing)</p>		

SW: Spanner width



<p>9 02.0130.45.10 Press-on tool (plastic bellows)</p>		<p>9</p> 	<p>10</p> 
<p>10 02.0130.44.10 Torx spanner return mechanism</p>		<p>11</p> 	<p>12</p> 
<p>11 02.3516.20.00 Two-hole spanner for coarse dirt seal</p>		<p>12</p> 	<p>12</p> 
<p>12 02.0130.46.10 Adapter for movable bearing screw</p>		<p>13</p> 	<p>14</p> 
<p>13 02.0130.47.10 Adapter for plastic cap SW14/SW24</p>		<p>14</p> 	<p>14</p> 
<p>14 02.0130.48.10 Adapter for torque wrench (movable bearing) SW14</p>		<p>15</p> 	<p>16</p> 
<p>15 02.1421.22.00 Adapter for torque wrench (plastic cap) SW14</p>		<p>16</p> 	<p>16</p> 
<p>16 02.5683.92.00 Ring for pulling in wheel studs</p>		<p>SW: Spanner width</p>	









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