

FLEET PACK

SERVICE INFORMATION

XL-MP40001SI-en-AU Rev A

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SAF Disc Brake Axles with WABCO Brake Caliper (ZI9-19W Intradisc Integral)
Air Suspension Systems and Axles with Drum Brakes
Kedi Drum Brakes

SAF-HOLLAND Australia

Contact Information



03 9971 7900



sales@safholland.com.au



www.safholland.com.au



SH Connect

Customer Service

For sales and parts enquiries



03 9971 7900 (dial 1)



sales@safholland.com.au

Technical Services

For warranty and technical support



03 9971 7900 (dial 2)



service@safholland.com.au



Warranty Portal

<http://www.safhollandservice.com.au/>

Branches

Victoria

115 High St
PO Box 63
Melton
VIC 3337

Tel: (03) 9971 7900
Fax: (03) 9743 6763

South Australia

Unit 5
30-36 Birralee Rd
Regency Park
SA 5010

Tel: (08) 8345 1546
Fax: (08) 8345 0985

Western Australia

Unit 2
5 Noble Street
Kewdale
WA 6105

Tel: (08) 9353 1720
Fax: (08) 9353 1730

Queensland

Unit 1
2692 Ipswich Rd
Darra
QLD 4076

Tel: (07) 3375 7033
Fax: (07) 3375 7044

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PARTS	REPAIR	SERVICE	PARTNER	24 HOUR	12 HOUR
●	●	●		●	

PARTS	REPAIR	SERVICE	PARTNER	24 HOUR	12 HOUR
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PARTS	REPAIR	SERVICE	PARTNER	24 HOUR	12 HOUR
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PARTS	REPAIR	SERVICE	PARTNER	24 HOUR	12 HOUR
	●				●
●	●	●		●	
●	●	●		●	

PARTS	REPAIR	SERVICE	PARTNER	24 HOUR	12 HOUR
●	●	●			●
●	●	●			●

PARTS	REPAIR	SERVICE	PARTNER	24 HOUR	12 HOUR
●	●	●			●
●	●				
●	●				
●	●				

TELEPHONE	FAX NO	EMERGENCY	E-MAIL CONTACT	WEBSITE	CAPABILITIES
(02) 6297 3862	(02) 6299 2680	0418 534 299	declan@canberratrucks.com.au	www.canberratrucks.com.au	Truck & trailer repairs / service / maintenance

TELEPHONE	FAX NO	EMERGENCY	E-MAIL CONTACT	WEBSITE	CAPABILITIES
(03) 5440 9111	(03) 5440 9129	0418 332 534	brian@btc-bendigo.com.au	www.btc-bendigo.com.au	Truck & trailer repairs / service / maintenance
(03) 9308 6322		0409 782 502	christine@ctstrucks.com.au	www.ctstrucks.com.au	Truck & trailer repairs / service / maintenance
(03) 5173 4900	0428 400 217		gippsland@cmvtb.com.au	www.cmvtb.com.au	Truck & trailer repairs / service / maintenance
(03) 9371 8800	(03) 9706 7308		dandenong@cmvtb.com.au	www.cmvtb.com.au	Truck & trailer repairs / service / maintenance
(03) 5523 7322	(03) 5523 7323	0417 551 280	etrworkshop@hotmail.net.au		Truck & trailer repairs / service / maintenance
(03) 5298 3247		0407 728 727	gtrepairs@optusnet.com.au		Truck & trailer repairs / service / maintenance
(03) 5662 5266	(03) 5662 5833	0408 517 795	info@gtmleongatha.com.au	www.gtmleongatha.com.au	Truck & trailer repairs / service / maintenance
(03) 5821 3977	(03) 5821 9547	0418 579 518	service@gtm.com.au	www.grahamthomsonmotors.com.au	Truck & trailer repairs / service / maintenance
(03) 8796 9130	(03) 8796 4499	0407 462 048	hallam@hallamtruck.com.au	www.hallamtruck.com.au	Truck & trailer repairs / service / maintenance
(03) 8831 6100			vicsales@krueger.com.au	www.krueger.com.au	Truck & trailer repairs / service / maintenance
(03) 8786 2100	1300 247 629			www.maxitrans.com	Trailer repairs / service / maintenance
(03) 8368 1100	(03) 8368 1101			www.maxitrans.com	Trailer repairs / service / maintenance
(03) 5051 2800	(03) 5051 2890	0408 596 435	graeme.dunne@milduratruck.com.au	www.milduratruck.com.au	Truck & trailer repairs / service / maintenance
(03) 9215 2300					Truck & trailer repairs / service / maintenance
(03) 5334 2150				www.scobiesservicecentre.com.au	Truck & trailer repairs / service / maintenance
(03) 5033 1372	(03) 5033 1371	0429 331 372	a.field@thetruckspecialists.com.au	www.truckspecialists.com.au	Truck & trailer repairs / service / maintenance
(02) 6049 8888	(02) 6049 8889		tctc_service@twincitytruckcentre.com.au	www.twincitytruckcentre.com.au	Truck & trailer repairs / service / maintenance
(03) 9305 3155			sam.g@westar.com.au	www.westar.com.au	Truck & trailer repairs / service / maintenance
(03) 9394 0000				www.westar.com.au	Truck & trailer repairs / service / maintenance
1300 877 411			accounts.vic@west-trans.com.au	www.west-trans.com.au	Truck & trailer repairs / service / maintenance

TELEPHONE	FAX NO	EMERGENCY	E-MAIL CONTACT	WEBSITE	CAPABILITIES
(08) 9419 1199			adminperth@flexindustries.com.au	www.flexindustries.com.au	Truck & trailer repairs / service / maintenance
		0433 311 194	matt.cassi@bigpond.com		Truck & trailer repairs / service / maintenance

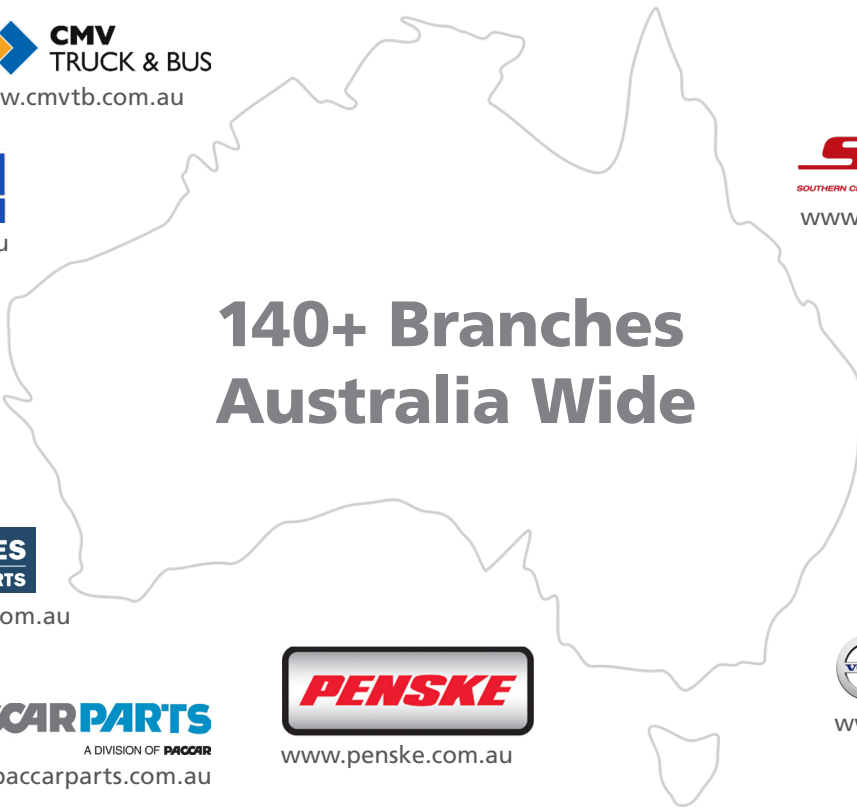
TELEPHONE	FAX NO	EMERGENCY	E-MAIL CONTACT	WEBSITE	CAPABILITIES
(03) 6431 9034	(03) 6431 4535	0448 396 318	wdamon@ajl.com.au		Truck & trailer repairs / service / maintenance
(03) 6427 5444			devonport.service@webstertrucks.com.au	www.webstertrucks.com.au	Truck & trailer repairs / service / maintenance
(03) 6211 5555			hobart.service@webstertrucks.com.au	www.webstertrucks.com.au	Truck & trailer repairs / service / maintenance
(03) 6340 7700			launceston.service@webstertrucks.com.au	www.webstertrucks.com.au	Truck & trailer repairs / service / maintenance



Service



AFTERMARKET PARTNERS



**140+ Branches
Australia Wide**

CMV
TRUCK & BUS
www.cmvb.com.au

GLEEMAN
TRUCK PARTS
www.gleeman.com.au

MaxiPARTS
www.maxiparts.com.au

MULTISPARES
TRUCK PARTS
www.multispares.com.au

PACCARPARTS
A DIVISION OF PACCAR
www.paccarparts.com.au

PENSKE
www.penske.com.au

SCTEG
SOUTHERN CROSS TRANSPORT EQUIPMENT GROUP
www.scteg.com.au

SKIPPER
TRANSPORT PARTS
www.skippertp.com.au

TRUCKLINE
www.truckline.com.au

VOLVO TRUCKS
www.volvotrucks.com.au

SAF-HOLLAND'S FREE FIRST SERVICE

“

Gives you the confidence you need in your equipment

”

Take advantage of our free first service for your INTRA DISC / DRUM SUSPENSION

Reduce the likelihood of avoidable downtime of your asset



**AT ANY OF OUR
SERVICE AGENTS
NATIONWIDE**



**AT A REPAIRER OF
YOUR CHOOSING***



**ASK US ABOUT
OUR FREE
TECHNICAL
TRAINING**

First Service must be performed within the first 5000 km or 3 months in service, whichever comes first, to get the maximum benefit from SAF-HOLLAND's 1,000,000 km 6 year warranty.

***conditions apply**

First Scheduled Maintenance Service 5,000 kms

At SAF-HOLLAND we want all of our customers to be completely satisfied with your suspension ownership experience. To help ensure that your ownership experience is pleasant, convenient and trouble-free. SAF-HOLLAND offer a complimentary 5,000 kilometre service which provides the assurance that your vehicle is running at optimal performance.

SAF-HOLLAND recommends having maintenance and repairs for your vehicle performed by an authorized SAF-HOLLAND dealership. To locate your nearest authorized SAF-HOLLAND dealership, contact SAF-HOLLAND Customer Service on 1300 131 613 or log on to www.safholland.com.au

First Scheduled Maintenance Service 5,000 kms:

SAF Holland provides your first scheduled maintenance service at no charge on all intra series suspension*.

Please refer to the relevant warranty card for further details on your product as failure to complete a first service may affect the products warranty.

* Vehicles fitted with a combination of intra series axle and modul series steer axles are also covered under the first service agreement.

First Suspension Service includes:

- Inspection/check of ride height valve setting – reset if required.
- Torque check of all suspension mounting hardware – re-torque if applicable.
- Inspection of all shock absorbers and air bags.
- Torque check of all axle spindle nuts, along with a thorough wheel bearing inspection.
- All mounting hardware and spindle nuts are marked as per SAF-HOLLAND guide lines for quick subsequent inspections. (For suspension torque settings refer to installation / maintenance manual).
- Check hub bearing play.
- Check condition and operation of the brake system.
- Visual inspection of loose bolts and fasteners – re-torque if applicable.

SAF & Kedi Axle and Suspension Recommended Maintenance Intervals

Refer to the specific axle / suspension type in the SAF torque charts or service manuals for specific values
Refer to first service document for specific first service checks and report requirements

<i>whichever comes first</i>	Distance intervals >	After first 5000 km or	Every 30000 km	Every 90000 km	Every 150000 km
	Time intervals >	After first month	Every 3 months	Every 6 months	Every 12 months

Visual Inspections

Inspect all suspension and axle components for wear leakage or damage		•		
Inspect all mounting bolts for security		•		
Inspect brake lining / pad wear		•		
Inspect service and park brake systems for air leaks		•		
Inspect air suspension system / bags for air leaks and contamination		•		
Inspect suspension pivot bushes for wear		•		
Inspect hub seals for leaks (hub cap removed for outer)		•		
Inspect hub nut tension marks (re-torque and remark if required and monitor)		•		
Inspect tyres for wear damage		•		

General Mechanical Check

Torque check all wheel nuts between 50 & 150 km after every fitment and at		•		
Torque check all securing bolts to recommended tension	•			•
Check ride height and adjust if required	•	•		
Check wheel bearing end play/rock test	•	•		
Perform wheel bearing noise test	•	•		
Check spindle nut				•
Check auto brake adjusters for correct function			•	
Perform brake balance check truck-trailer (+/- 2psi)				•
Perform wear check of pivot bushes			•	

Disc Brakes

At every pad change, inspect caliper boots and slides for wear or damage and at		•		
Inspect rotors for excess wear or heat cracking / warping		•		

Drum Brakes

Adjust brakes if required		•		
Lubricate S cam and slack adjusters		•		

Steer Axles

Inspect steering components for wear / damage		•		
Inspect steering travel limits for clearance and adjust if required				•
Inspect steering damper for wear		•		
Check kingpins for wear		•		
Check tie rod end for wear		•		
Lubricate king pins		•		

Kedi GP Axles Only

Repack wheel bearings				•
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Special service conditions

For vehicles with long standing periods ensure the service is performed at the time interval

Vehicles used under demanding conditions require an increased frequency of service to match the severity of the conditions

Applications such as tipper work and gravel road are considered demanding off-road conditions

It is the owners responsibility to ensure adequate servicing is performed to ensure longevity of performance

Warranty Summary

Intra and Modul Series

Highway/Off-Road Application	Brake Caliper	2 years (manufacturing faults)
	Disc Rotor	
	All Other Components	12 months



Highway Application	Shock Absorber	1,000,000 km or 6 years
	Wheel Bearings	
	Pivot Bush	
	Axle Beam*	
	Modul Suspension Components	12 months



Off-Road Application	Shock Absorber	500,000 km or 3 years
	Wheel Bearings	
	Pivot Bush	
	Axle Beam*	
	Modul Suspension Components	12 months

Kedi

Highway/Off-Road Application	Axle Beam	12 months
	All Suspension and Axle Components	

* on structural and manufacturing defects only

Excluded from the warranty are normal wear and tear parts, damaged due to extreme force, incorrect operation and subsequent damages.

Brake balance between Truck and Trailer must be checked regularly and damage of wheel bearings and brake components will not be warrantable if balance is outside recommendation. Damage to brake components including premature pad wear, caliper or rotor damage through brake code specification being used which differ from our specified data will not be covered under the terms of the warranty.

Regular inspection and preventative maintenance procedures must be carried out in accordance to SAF maintenance manual. The warranty is void with respect to any product which has been altered in any way from its manufactured condition, such as intentional modification, accident, corrosion, misuse failure to provide necessary and reasonable maintenance and is exclusive of normal wear. Defects incurred due to incorrectly maintained torque of nuts and bolts will not be warranted.

Hubodometer must be fitted to each trailer to ensure warranty is valid. Mileage figures must be maintained if replacements are required during the warranty period. If not fitted the warranty is null and void. All warranty periods start from date of build of trailer as indicated on the VIN plate.

SAF-HOLLAND maintain the right to request evidence of regular maintenance in accordance with SAF maintenance prior to accepting a claim. Failure to provide such evidence voids warranty.

See warranty certificates for more information.



TRAILER SPARE PARTS

AXLES, SUSPENSION, LANDING LEGS & KINGPINS

Ver 1

PRODUCT IDENTIFICATION	4-7
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RZT 12242/18C & RZT 10242/18C axles - K2 Hub (5 spoke)	93-95
RZ 12242/18C axle - Std. Hub (10x285.75PCD)	96-98
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AIR SUSPENSION SYSTEM, TYPE INTRA

Intra suspension is connected to the axle by brackets.



The axle type designation (Version), identification number and serial number (see type plate) are required for the warranty procedure.

AIR SUSPENSION SYSTEM, TYPE MODUL

Modul suspension is connected to the axle by U-Bolts.

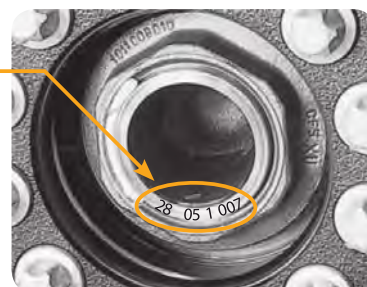


SAF-HOLLAND GMBH
D-63856 BESENBAACH · GERMANY



Version S9-4218	Serial No. 284 05 1 007
Type SNK4218-115	Ident No. 147 84 60 2 58 0
Test Report TDB0381	Perm axle cap. stat. 9000 kg
	V max. 105 km/h
AN 1754524	SN 284051007

Identification if the type plate is missing: The Serial No. of the axle is embossed in the axle end on the right-hand side (as seen in the direction of travel).



When ordering spare parts quote correct axle identification & serial no., refer to the axle type plate.
Please provide the following information from the type plate (as below) to ensure correct parts are ordered.

- 1 Axle type (example: "SKRZ 9019W", "SKRLB 9022KI" or "Z9-4218" etc.)
- 2 Ident No. (example: "147 83 25 7 6 69 0" or "171 91 50 7 49 1" etc.)
- 3 Serial No. (example: "167 06 3 648" etc.)

TYPE PLATE FROM MID-2004

OTTO SAUER ACHSENFABRIK GMBH D-63856 BESSENBACH GERMANY		SAF	
Type	SKRB9022WI	Serial No.	229 04 3 229
Basis Type	SBW2243-11S	Ident No.	247 96 38 7 48 1
Test Report	36110702	Perm. axle cap. stat.	9000 kg
		U max.	105 km/h
AN 1280397		SN 229043229	

TYPE PLATE UP TO MID-2004

SAF OTTO SAUER ACHSENFABRIK KEILBERG D-63856 BESSENBACH / G E R M A N Y	
TYP	
Ident.-No. /Prod.-No.	
zul. Last kg perm. cap. charge adm.	STAT. TECH. v max. km/h max. speed vitesse maxi.
TDB-No.	Grundtyp

Axle serial number code (up to July 2009)

The serial number looks like this:

DDDYXXNNN

DDD = Production day

YY = Production year

X = Site

NNN = Running number per day, year and site

Axle serial number code (from July 2009)

The serial number looks like this:

XX YY DDD NNNN

XX = Site

YY = Production year

DDD = Production day

NNN = Running number per day

SAF-HOLLAND GMBH D-63856 BESSENBACH • GERMANY		SAF-Holland	
Version	B9-22K01	Serial No.	11 09 156 0020
Type	SBK2243-11S	Ident No.	347 96 21 7 49 01
Test Report	36110303	Perm. axle cap. stat.	9000 kg
Made in Germany		V max.	105 km/h
AN 3335528		SN 11091560020	

SAF "SKR...: axle type codes

XXXXX 0000XX	Axle type/generation	SKR	= Super Compact Bearings Round Axle
XXXXX 0000XX	Axle type	(-)	= Rigid axle
		L	= Self-steer axle
XXXXX 0000XX	Tyres/wheels	S	= Single wheels without offset
		B	= Single wheels with offset
		Z	= Twin wheels
XXXXX 0000XX	Axle load capacity	90	= 9 tonnes load capacity
		11	= 11 tonnes load capacity
XXXXX 0000XX	Brake size	30	= Drum diameter 300 mm
		37	= Drum diameter 367 mm
		42	= Drum diameter 420 mm
		19	= Disc brake for 19.5" tyres (Rotor dia. 377 mm)
		22	= Disc brake for 22.5" tyres (Rotor dia. 430 mm)
XXXXX 0000XX	Additional information	W	= Wabco caliper classic disc brake rotor
		WI	= Wabco caliper INTEGRAL disc brake rotor
		K	= Knorr caliper classic disc brake rotor
		KI	= Knorr caliper INTEGRAL disc brake rotor

New type codes for the new axle generation with disc brakes

XXX0-0X0	Tyres / wheels	S	= Single wheels without offset
		B	= Single wheels with offset
		Z	= Twin wheels
XX00-0X0	Type of brake disc	I	= INTEGRAL technology
		(-)	= Conventional brake disc
XX00-0X0	Type of axle	(-)	= Rigid axles
		NL	= Self-steering axles
		VL	= Self-steering axles
		ZL	= Steering axles, twin wheels
XXX0-0X0	Axle load	9	= 9 tonnes axle load
		11	= 11 tonnes axle load
XXX0-0X0	Brake size	19	= 19.5" disc brake
		22	= 22.5" disc brake
XXX0-0X0	Brake manufacturer	K	= KNORR
		W	= WABCO
XXX0-0X0	Brake generation	(-)	
		01	

New type codes for the new axle generation with drum brakes

XX0-00	Tyres / wheels	S	= Single wheels without offset
		B	= Single wheels with offset
		Z	= Twin wheels
XX0-00	Type of axle	(-)	= Rigid axles
		L	= Self-steering axles
		ZL	= Steering axles, twin wheels
XX0-00	Axle load	9	= 9 tonnes axle load
		11	= 11 tonnes axle load
XX0-00	Drum diameter	30	= 300 mm
		37	= 367 mm
		42	= 420 mm
XX0-00	Brake shoe width	15	= 150 mm
		18	= 180 mm
		20	= 200 mm

[illegible]

Bolt On Kingpins

Type 65					
Part No	Description	Size	D Value	CRN	Torque
662101609K	50mm Kingpin & 8 bolts (M14x30)	50mm	210kN	16671	200Nm
KPB62818	50mm Kingpin on 8mm mounting plate & 8 bolts	50mm	210kN	16671	200Nm
KPB62018	50mm Kingpin on 10mm mounting plate & 8 bolts	50mm	210kN	16671	200Nm
KPB62218	50mm Kingpin on 12mm mounting plate & 8 bolts	50mm	210kN	16671	200Nm
KPBS0001	50mm Kingpin on 16mm mounting plate & 8 bolts	50mm	210kN	16671	200Nm



Type 67					
KPB51042BK	90mm Kingpin & 8 bolts (M14x35)	90mm	260kN	16670	240Nm
KPB62010	90mm Kingpin on 8mm mounting plate & 8 bolts	90mm	260kN	16670	240Nm
KPB62012	90mm Kingpin on 10mm mounting plate & 8 bolts	90mm	260kN	16670	240Nm
KPB62014	90mm Kingpin on 12mm mounting plate & 8 bolts	90mm	260kN	16670	240Nm
KPBS0003	90mm Kingpin on 16mm mounting plate & 8 bolts	90mm	260kN	16670	240Nm



Replaceable Style Kingpin

Part No	Description	Size	D Value	CRN	Torque
XA0676	50mm Kingpin only - suits replaceable style housing	50mm	200kN	16673	400Nm
XA0677	90mm Kingpin only - suits replaceable style housing	90mm	200kN	16674	400Nm
KP0882	50mm Kingpin & 10mm square housing	50mm	200kN	16673	400Nm
KP0883	50mm Kingpin & 12mm square housing	50mm	200kN	16673	400Nm
KP0884	90mm Kingpin & 10mm square housing	90mm	200kN	16674	400Nm
KP0885	90mm Kingpin & 12mm square housing	90mm	200kN	16674	400Nm
XA0767	Replaceable housing only - 10mm				
XA0768	Replaceable housing only - 12mm				



Mushroom Style Weldable Kingpin

Part No	Description	Size	D Value	CRN	Torque
KPT809EF	50mm kingpin with 8mm flat plate	50mm	151kN	16672	Weld
KPT809F	50mm kingpin with 10mm flat plate	50mm	151kN	16672	Weld
KPT809BF	50mm kingpin with 12mm flat plate	50mm	151kN	16672	Weld

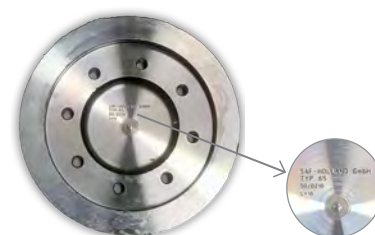


Accessories

Bolt Kits		
Part No	Description	Size
3341292808	Bolt Kit Qty 8 - to suit Type 65 - 50mm kingpin	M14 x 30
RK330218	Bolt Kit Qty 8 - to suit Type 65 - 50mm kingpin (Pre 2018)	M14 x 35
KP90BK	Bolt Kit Qty 8 - to suit Type 67 - 90mm kingpin	M14 x 35
RK08868	Bolt Kit Qty 8 - to suit 50 & 90mm kingpin (XA0676 & XA0677)	3/4" x 2"

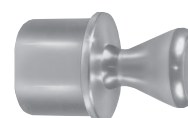
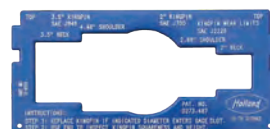


Housing - back plate		
Part No	Description	Size
BP5103808	Housing Only Suits 8mm Plate	50mm / 90mm
BP5103810	Housing Only Suits 10mm Plate	50mm / 90mm
BP5103812	Housing Only Suits 12mm Plate	50mm / 90mm
BP5103816	Housing Only Suits 16mm Plate	50mm / 90mm



Size is on unit (t = 8/10/12/16)

Misc.		
TF0110	Kingpin Gauge Tester	
GL0303000	Kingpin Lock	
TF0237	Jaw Test Plug 50mm	



MARK V



MARK V HD



SELF LEVELLING
(Elephant feet/Sandshoe)

Landing Legs with Self levelling Feet (Elephant feet/Sandshoe)

Part No	Description	Model	Static Lift	Travel		Retracted		Extended		Outer Case	Wt
				in	mm	in	mm	in	mm		
LGS1Z001	14" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	13.5	343	24.8	630	41.3	1049	640	93
LGS3Z001	17" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	16.5	419	27.8	706	44.3	1125	720	95
LGS4Z001	18" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	17.6	447	28.9	734	49.5	1257	740	97
LGS5Z001	19" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	18.7	475	30	762	51.8	1316	770	99
Set comes with 1 metre Cross Shaft and option of short or long Crank Handle.											
XAS81Z001	14" Geared leg with self levelling foot	Geared Leg		13.5	343	24.8	630	41.3	1049	640	52
XAS83Z001	17" Geared leg with self levelling foot	Geared Leg		16.5	419	27.8	706	44.3	1125	720	52
XAS84Z001	18" Geared leg with self levelling foot	Geared Leg		17.6	447	28.9	734	49.5	1257	740	52
XAS85Z001	19" Geared leg with self levelling foot	Geared Leg		18.7	475	30	762	51.8	1316	770	52
XAS91Z001	14" Slave Leg only with self levelling foot	Slave Leg		13.5	343	24.8	630	41.3	1049	640	41
XAS93Z001	17" Slave Leg only with self levelling foot	Slave Leg		16.5	419	27.8	706	44.3	1125	720	41
XAS94Z001	18" Slave Leg only with self levelling foot	Slave Leg		17.6	447	28.9	734	49.5	1257	740	41
XAS95Z001	19" Slave Leg only with self levelling foot	Slave Leg		18.7	475	30	762	51.8	1316	770	41



STANDARD SKID

Landing Legs with Skid Feet

Part No	Description	Model	Static Lift	Travel		Retracted		Extended		Outer Case	Wt
				in	mm	in	mm	in	mm		
LGS1Z115	14" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	13.5	343	24.8	630	42.2	1072	640	98
LGS3Z115	17" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	16.5	419	27.8	706	48.2	1224	720	99
LGH4Z312	18" Landing Leg Set - incl geared and slave leg	Heavy Duty	90,720kg	17.6	447	28.9	734	49.5	1257	740	148
LGS5Z115	19" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	18.7	475	30	762	52.7	1339	770	101

Set comes with 1 metre Cross Shaft and option of short or long Crank Handle.

LGS81Z115	14" Geared leg with skid foot	Geared Leg		13.5	343	24.8	630	41.3	1049	640	55
LGS83Z115	17" Geared leg with skid foot	Geared Leg		16.5	419	27.8	706	44.3	1125	720	55
LGH84Z312	18" Geared leg with skid foot	HD Geared Leg		17.6	447	28.9	734	49.5	1257	740	74
LGS85Z115	19" Geared leg with skid foot	Geared Leg		18.7	475	30	762	51.8	1316	770	55
LGS91Z115	14" Slave Leg only with skid foot	Slave Leg		13.5	343	24.8	630	41.3	1049	640	43
LGS93Z115	17" Slave Leg only with skid foot	Slave Leg		16.5	419	27.8	706	44.3	1125	720	43
LGH94Z312	18" Slave Leg only with skid foot	HD Slave Leg		17.6	447	28.9	734	49.5	1257	740	62
LGS95Z115	19" Slave Leg only with skid foot	Slave Leg		18.7	475	30	762	51.8	1316	770	43



WHEEL

Landing Legs with Wheeled Feet

Part No	Description	Model	Static Lift	Travel		Retracted		Extended		Outer Case	Wt
				in	mm	in	mm	in	mm		
LGS1Z103	14" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	13.5	343	24.8	630	42.2	1072	640	101
LGS3Z103	17" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	16.5	419	27.8	706	48.2	1224	720	102
LGS5Z103	19" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	18.7	475	30	762	49.5	1257	770	105
LGS81Z103	14" Geared leg with wheeled foot	Geared Leg		13.5	343	24.8	630	41.3	1049	640	56
LGS83Z103	17" Geared leg with wheeled foot	Geared Leg		16.5	419	27.8	706	44.3	1125	720	56
LGS85Z103	19" Geared leg with wheeled foot	Geared Leg		18.7	475	30	762	51.8	1316	770	56
LGS91Z103	14" Slave Leg only with wheeled foot	Slave Leg		13.5	343	24.8	630	41.3	1049	640	45
LGS93Z103	17" Slave Leg only with wheeled foot	Slave Leg		16.5	419	27.8	706	44.3	1125	720	45
LGS95Z103	19" Slave Leg only with wheeled foot	Slave Leg		18.7	475	30	762	51.8	1316	770	45

Set comes with 1 metre Cross Shaft and option of short or long Crank Handle.

Mark V & V HD Landing Legs



Landing Legs with Rocker Feet

Part No	Description	Model	Static Lift	Travel		Retracted		Extended		Outer Case	Wt
				in	mm	in	mm	in	mm		
LGS1Z120	14" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	13.5	343	24.8	630	41.1	1044	640	106
LGS3Z120	17" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	16.5	419	27.8	706	47.1	1196	720	109
LGH4Z320	18" Landing Leg Set - incl geared and slave leg	Heavy Duty	90,720kg	17.6	447	28.9	734	49.5	1257	740	148
LGS5Z120	19" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	18.7	475	30	762	51.5	1308	770	112
<i>Set comes with 1 metre Cross Shaft and option of short or long Crank Handle.</i>											
LGS81Z120	14" Geared leg with rocker foot	Geared Leg		13.5	343	24.8	630	41.3	1049	640	59
LGS83Z120	17" Geared leg with rocker foot	Geared Leg		16.5	419	27.8	706	44.3	1125	720	59
LGH84Z320	18" Geared leg with rocker foot	HD Geared Leg		17.6	447	28.9	734	49.5	1257	740	74
LGS85Z120	19" Geared leg with rocker foot	Geared Leg		18.7	475	30	762	51.8	1316	770	59
LGS91Z120	14" Slave Leg only with rocker foot	Slave Leg		13.5	343	24.8	630	41.3	1049	640	47
LGS93Z120	17" Slave Leg only with rocker foot	Slave Leg		16.5	419	27.8	706	44.3	1125	720	47
LGH94Z320	18" Slave Leg only with rocker foot	HD Slave Leg		17.6	447	28.9	734	49.5	1257	740	62
LGS95Z120	19" Slave Leg only with rocker foot	Slave Leg		18.7	475	30	762	51.8	1316	770	47
LGS3Z120R	17" Landing Leg Set - incl geared and slave leg	Reverse Gear Set	90,720kg	16.5	419	27.8	706	47.1	1196	720	118
LGS5Z120R	19" Landing Leg Set - incl geared and slave leg	Reverse Gear Set	90,720kg	18.7	475	30	762	51.5	1308	770	121



COMPENSATING

Landing Legs with Compensating Feet

Part No	Description	Model	Static Lift	Travel		Retracted		Extended		Outer Case	Wt
				in	mm	in	mm	in	mm		
LGS1Z109	14" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	13.5	343	24.8	630	41.1	1044	640	112
LGS3Z109	17" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	16.5	419	27.8	706	47.1	1196	720	118
LGS5Z109	19" Landing Leg Set - incl geared and slave leg	Standard Set	90,720kg	18.7	475	30	762	51.5	1308	770	121
Set comes with 1 metre Cross Shaft and option of short or long Crank Handle.											
LGS81Z109	14" Geared leg with compensating foot	Geared Leg		13.5	343	24.8	630	41.3	1049	640	60
LGS83Z109	17" Geared leg with compensating foot	Geared Leg		16.5	419	27.8	706	44.3	1125	720	60
LGS85Z109	19" Geared leg with compensating foot	Geared Leg		18.7	475	30	762	51.8	1316	770	60
LGS91Z109	14" Slave Leg only with compensating foot	Slave Leg		13.5	343	24.8	630	41.3	1049	640	48
LGS93Z109	17" Slave Leg only with compensating foot	Slave Leg		16.5	419	27.8	706	44.3	1125	720	48
LGS95Z109	19" Slave Leg only with compensating foot	Slave Leg		18.7	475	30	762	51.8	1316	770	48
LGS3Z109R	17" Landing Leg Set - incl geared and slave leg	Reverse Gear Set	90,720kg	16.5	419	27.8	795	47.1	1196	720	118
LGS5Z109R	19" Landing Leg Set - incl geared and slave leg	Reverse Gear Set	90,720kg	18.7	475	30	823	51.5	1308	770	121

Landing Leg Spares

Landing Leg Crank Handles

SPEED CRANKS

Vertical Folding

Part No	Description	A Length
112023	Speed Crank Handle	355mm
112025	Speed Crank Handle	508mm

OEM MARK V Crank Handles

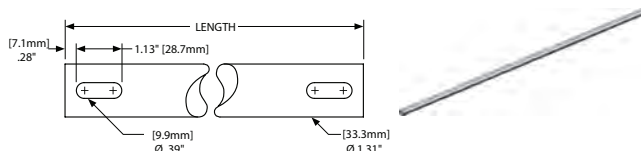
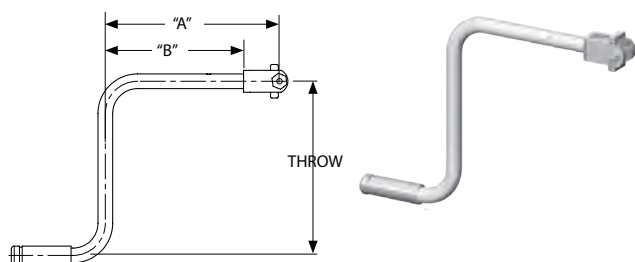
Vertical Folding

Part No	Description	A Length
XAV9010A	Crank handle long	450mm
XAV902A	Crank handle short	314mm

Landing Leg Cross Shafts

CROSS DRIVE SHAFT

Part No	Description	A Length
LG00943950P06	Cross Drive Shaft for landing legs	1mtre / 39.5"
LG0094	Cross Drive Shaft for landing legs	1730mm



ATLAS 55



LG700



STANDARD SKID



COMPENSATING



ROCKER

Atlas 55 Landing Legs

Part No	Description	Model	Static Lift	Travel		Retracted		Extended		Outer Case	Wt
				in	mm	in	mm	in	mm		
LG4019S	19" Landing Leg Set - incl geared and slave leg	Skid Feet	77,000kg	19	482.6	33.7	856	41.3	1049	762	81
LG4019C	19" Landing Leg Set - incl geared and slave leg	Comp Feet	77,000kg	19	482.6	33.7	856	44.3	1125	762	98
LG4019R	19" Landing Leg Set - incl geared and slave leg	Rocker Feet	77,000kg	19	482.6	33.7	856	44.3	1125	762	98



LG700 Landing Leg Kit

Part No	Description	Model	Static Lift	Travel		Retracted		Extended		Outer Case	Wt
				in	mm	in	mm	in	mm		
LG700	Binkley Leg Spring Lift Handle- KIT	Standard	9,090kg	26	660	24.38	619	50.38	1280	784	30

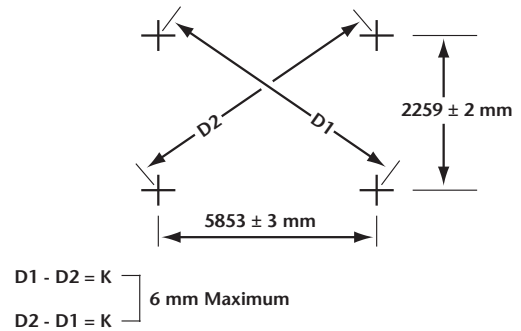
SAF-Holland's retractable twistlocks offer one handed easy operation and with its open design ensures easy maintenance.

The securing head retracts below the deck level which allows for the cartage of both containerised and non-containerised loads. An additional feature is the supporting of the Twistlock throughout the entire shaft length.

The operating lever has a positive lock through the full 90 degrees and offers visible detection of incorrect locking.

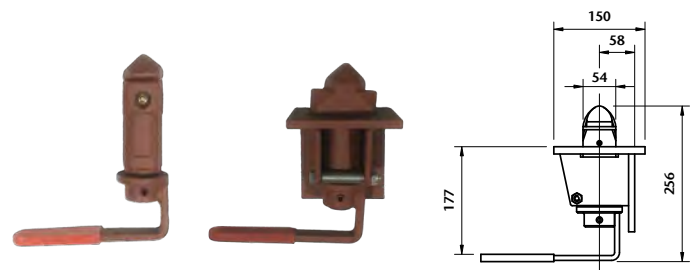
The twistlock is simply installed to any trailer configuration, made to ISO 1496 and ISO 1161 standards. Axial load rating 105kN.

TWISTLOCK INSTALLATION TOLERANCES



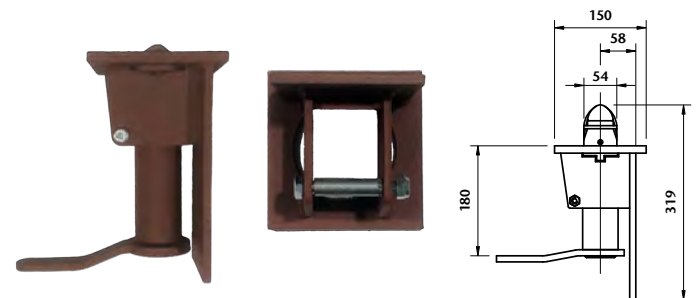
Standard Twistlock

Part No	Description	Information
HTL001	Twistlock assembly standard (256mm length)	105kN
HTL002	Twistlock body (standard size)	140mm body
HTL003	Twistlock register (standard size) - drop handle	256mm



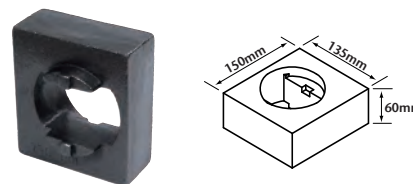
Extended Twistlock

Part No	Description	Information
HTL004	Twistlock assembly extended (319mm length)	105kN
HTL005	Twistlock body (extended size)	252mm body
HTL006	Twistlock register (extended size)	319mm
HTL010	Twistlock assembly (252mm body) and drop handle	Uses HTL003 & HTL005



Packer Block

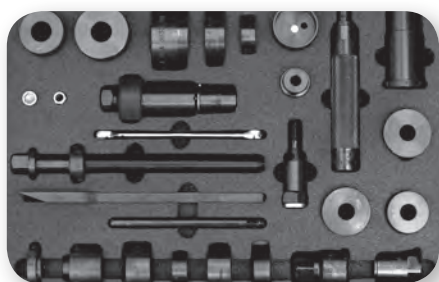
Part No	Description	Size (mm)
HTL007	Twistlock Packer Block (suits extended size)	150 x 135 x 60



Short Handle

Part No	Description	Information
HTL008	Twistlock assembly standard - short handle	Uses HTL002 & HTL009
HTL009	Twistlock register standard - short handle	Short handle
HTL011	Twistlock assembly - 252mm body and short handle	Uses HTL005 & HTL009





1. UNIVERSAL DISC BRAKE TOOL KIT

SAF Part No. 3434332800



2. AXLE NUT WRENCH W.A.F. 140MM (INTRADISC)

SAF Part No. 1012002400



2a. AXLE NUT WRENCH W.A.F. 85MM

(JSAF + Integral)

SAF Part No. 2501880



3. UNIVERSAL HUB PULLER 285 PCD

SAF Part No. 4434382200



4. 3D BUSH TOOL (INTRADISC)

SAF Part No. 3434332600



5. RING/OPEN-END SPANNER WITH ADAPTOR WAF 8 / 10 MM

SAF Part No. 3434332700

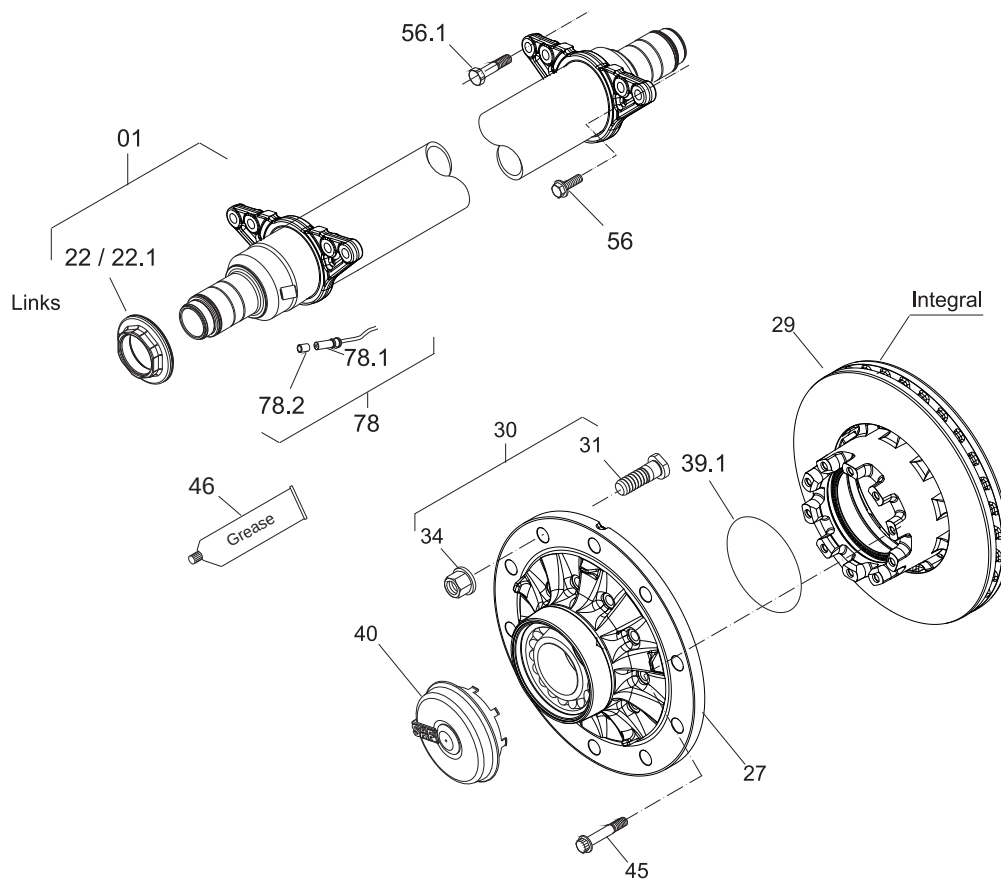
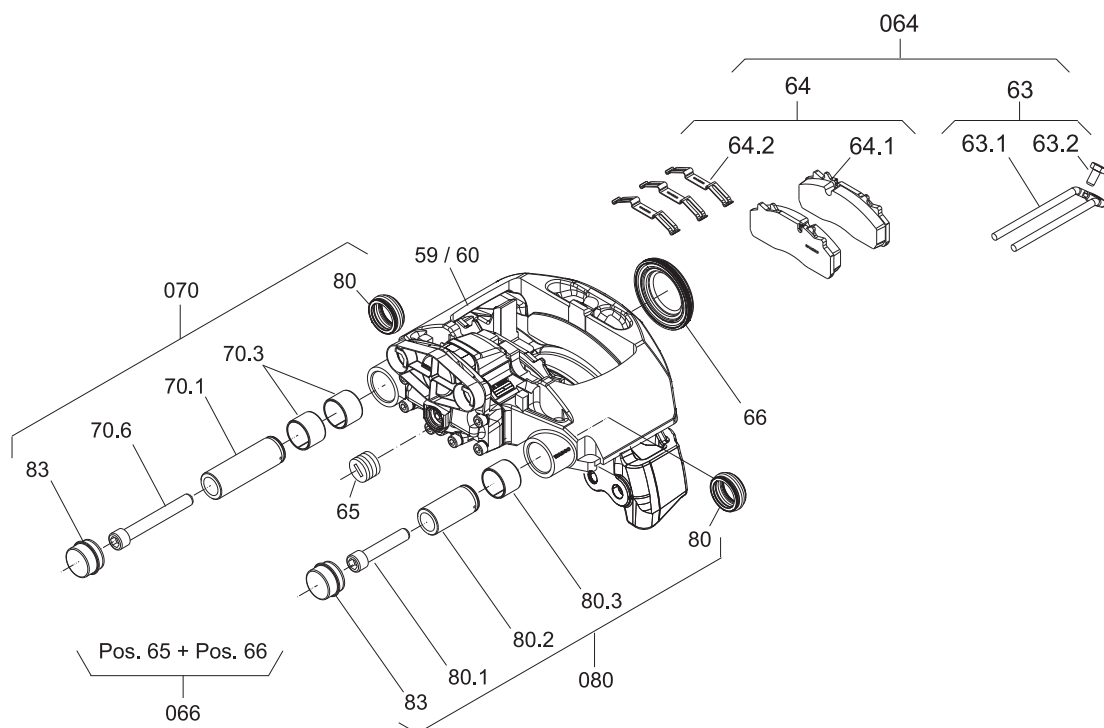


6. WHEEL CAP REMOVAL LEVER

SAF Part No. 1434104100

Z19-19W Intradisc *INTEGRAL* axle

WABCO CALIPER *INTEGRAL* ROTOR - DUAL WHEELS



IPL_17_300_0

Z19-19W Intradisc *INTEGRAL* axle

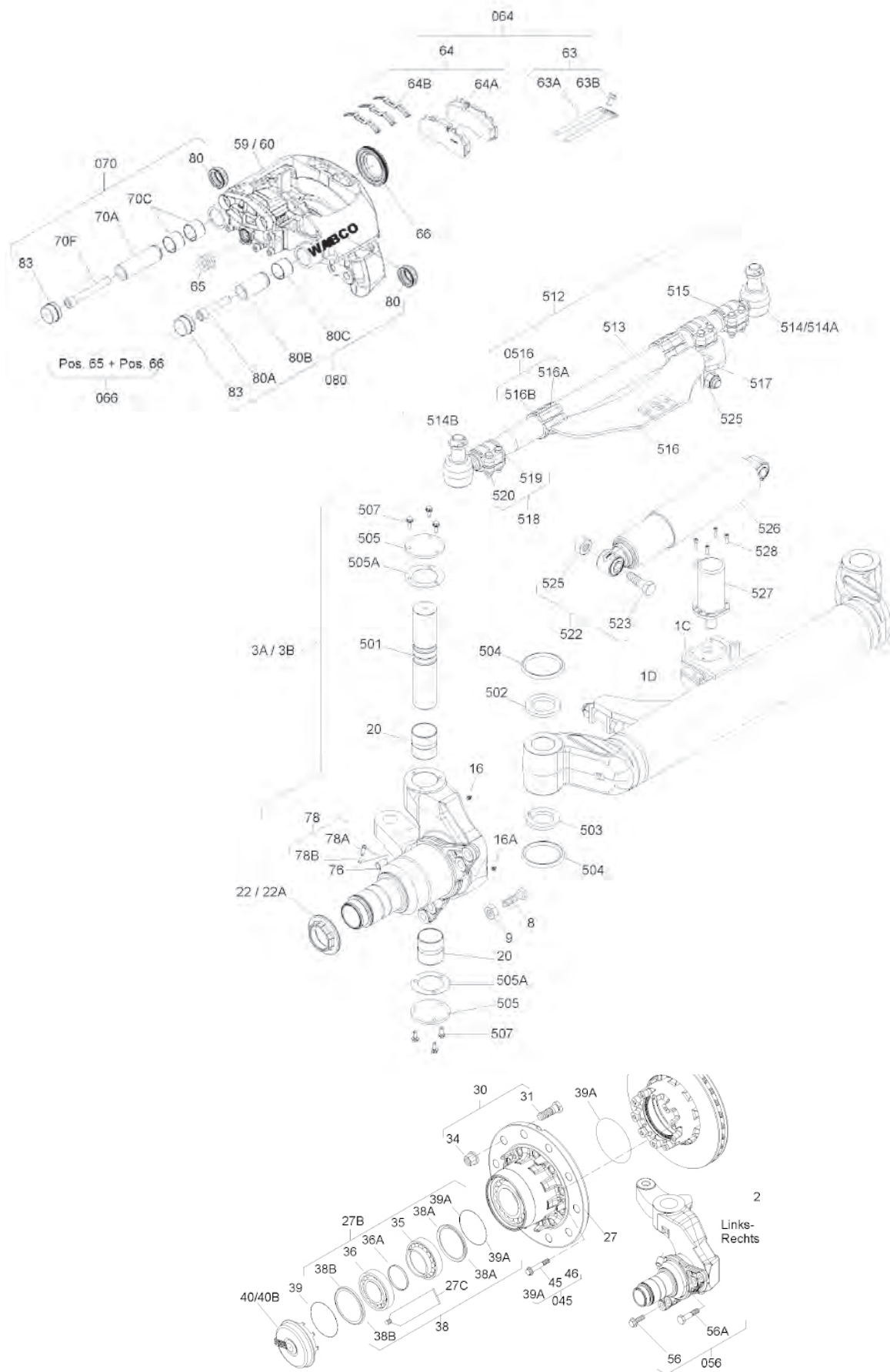
Intradisc Integral Axle		
Version ZI9-19W Disc brake - dual wheels - Wabco caliper.		
Description	Part No.	Notes
Full hub to Hub axle - Overslung	IOZI919W-3	10stud-335PCD - (no airbags or shockers)
Full hub to Hub axle - Overslung	IOZI919W-7	8stud-275PCD - (no airbags or shockers)
Full hub to Hub axle - Overslung	IOZI919W-8	10stud-285PCD - (no airbags or shockers)
Full hub to Hub axle - Underslung	IUZI919W-3	10stud-335PCD - (no airbags or shockers)
Full hub to Hub axle - Underslung	IUZI919W-7	8stud-275PCD - (no airbags or shockers)
Full hub to Hub axle - Underslung	IUZI919W-8	10stud-285PCD - (no airbags or shockers)
Beam only - Overslung	03516328000	Beam only with trailing arms.
Beam only - Underslung	03516327700	Beam only with trailing arms.

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate) Bare beam U/03516327700 0/03516328000	1
22	1011008600	1	Axle nut RH - M75x1.5/SW85 (without groove)	1
22.1	1011008500	1	Axle nut LH - M75x1.5/SW85 (with groove)	1
27	3307304900	1	Hub unit - INTEGRAL - 10x285.75PCD	2
27	3307304800	1	Hub unit - INTEGRAL - 8x275PCD	2
27	3307305500	1	Hub unit - INTEGRAL - 10x335PCD	1
29	3079001601	1	Brake disc (INTEGRAL rotor) - Dual steel/alloy wheels - 10x285.75PCD, 10x335PCB 8x275PCD	2
31	1303112810	1	Wheel stud - M22x1.5x103 - Dual steel/alloy wheels (stepped body)	16/20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32 (4 247 3012 20 Box 20)	16/20
34	33272215	1	Wheel nut M22x1.5x27 - SW33	16/20
39.1	4315007500	1	O-ring, hub seal, 92mmx4	1
40	3304010201	1	Hub cap/ Hub cap O ring 4315008200	2
40.2	4304010301	1	Hub cap for hubodometer + Seal	2
45	4375100912	1	Hub/rotor bolts M14x1.5x65 - 12pt socket	20
45-46-39.1	3434366300		Hub kit - 10 x M14 bolts, hub o-ring and grease	
56	4375100610	1	Bolt with collar M18 - Caliper	6
56.1	4375100810	1	Centering bolt M18 - Caliper	2
59	3080007200	1	Brake caliper assy, WABCO RH	1
60	3080007100	1	Brake caliper assy, WABCO LH	1
064	3057008000	1	Brake pad kit (incl. 63, 64.1, 64.2 & 65) - 4 Pads	1
066	34343829 00	1	Repair-kit (incl. 65 & 66)	2
070	3434382701	1	Guide pin kit (incl. 65, 66, 70.1 - 70.6 & 080) Caliper Repair Kit	2
78	3029024200	1	ABS Sensor and clamping sleeve kit	2
78.1	4410350010	1	Sensor ABS Wabco	2
78.2	8997598824	1	Clamping sleeve - ABS	2
	3434302218	1	Intra integral bearing and seal kit	1
	3434302500	1	Seal Kit	1
Avail.	3434366000	1	Caliper bolt kit ZI9-19W Axle suits One Caliper (4 bolts)	1
	3606304900	1	Hub and rotor assy 10 x 285	1
Tools	2501880	1	Hub nut socket (SW85mm) (Option 4 434 382 800L)	1
	2501871	1	Universal hub puller	1
	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	3434332700	1	SAF ratchet wrench	1

ZIL9-19W Brake SBW PAN19-1



OVERSLUNG



ZIL9-19W Brake SBW PAN19-1

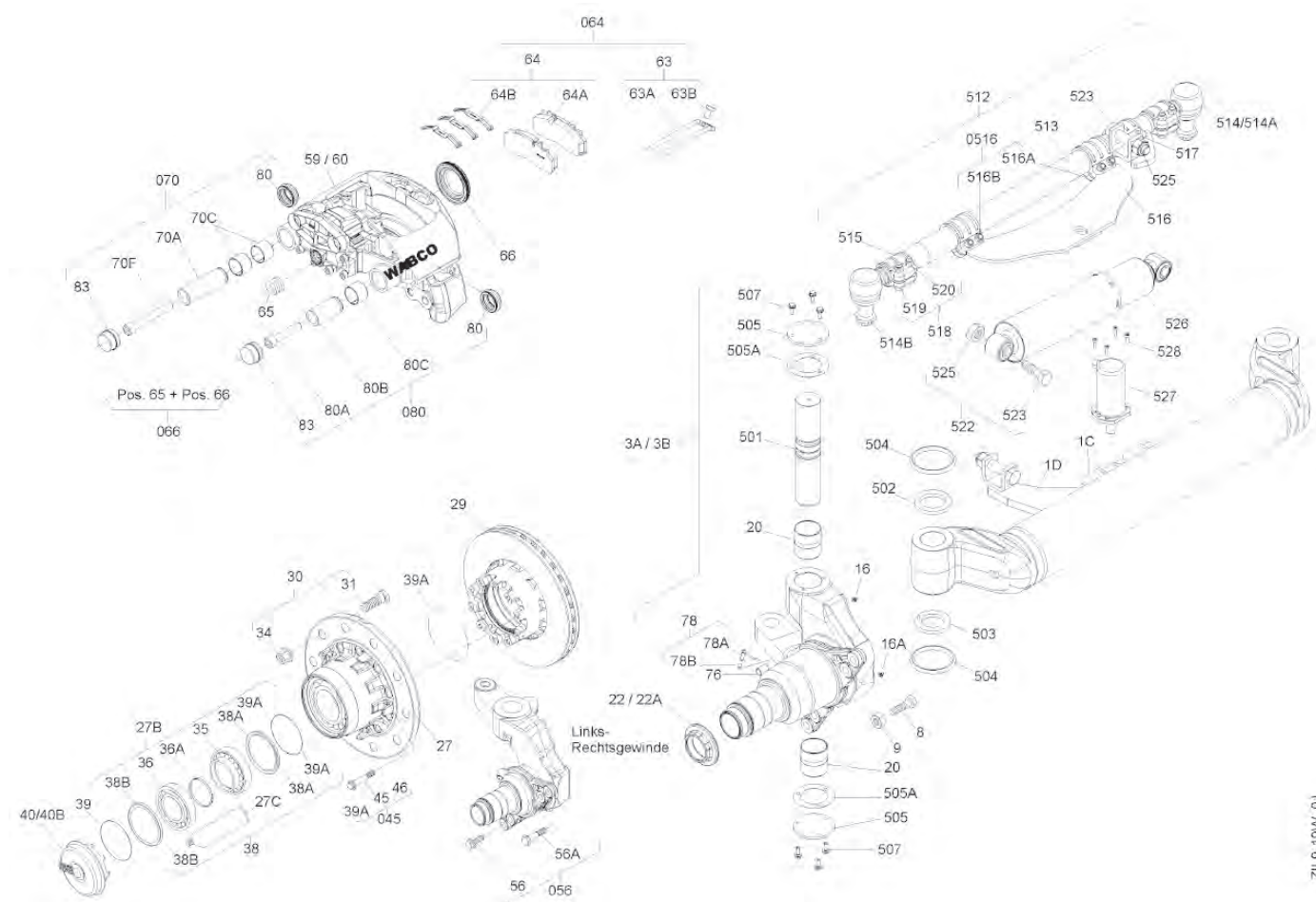
Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
01	03516328000	1	Axle beam		1
1C		1	Reverse gear lock		1
1D		1	Shock mount bracket		1
3A	3222186100	1	Steering knuckel assembly left	Pos. 4-9, 16-20, 22 ,25,	1
501-506		1			
3B	3222186200	1	Steering knuckel assembly right	Pos. 4-9, 16-20, 22 ,25,	1
501-506		1			
8	4343208001	1	Screw	M20x110	2
9	4342101780	1	Nut	M20	2
16	4201000100	1	Grease nipple	16L/AM8x1	2
16A	4201000200	1	Grease nipple	23,5L/BM8x1	2
20	4230017000	1	Bearing bush	ø65/60x70	4
22	1011008600	1	Axle nut right	M75x1,5/SW85	1
22A	1011008500	1	Axle nut left	M75x1,5/SW85	1
27	3307304900	1	Hub unit INTEGRAL 285 PCD	TK285,75-10L	2
27B	3434302218	1	Repair kit wheel bearing	88mm	2
29	3079001601	1	Brake disc INTEGRAL 19.5"	ø 377mm x50x145	2
31	1303112810	1	Wheel bolt	M22x1,5x103 - ALU	20
34	4247301201	1	Wheel bolt nut	M22x1,5x27H/SW32	20
35		1	Roller bearing	B/S/Z-Serie	2
36		1	Roller bearing	B/S/Z-Serie	2
36A		1	Holding ring		2
38	3434302500	1	Repair kit grease change	Pos. 27C, 36A, 38A, 38B, 39A	2
38A		1	Sealing ring (inside)	D112/138,5x11	2
38B		1	Sealing ring (outside)	D112/138,5x6	2
39		1	O-ring	ø139,07x5,33	2
39A	4315007500	1	O-ring	ø92x4	2
40	3304010201	1	Hub cap incl. O-Ring	S/Z/ZI/BI	2
40B	4304010301	1	Wheel cap assembly + hubodometer	S/Z/ZI/BI	2
45	4375100912	1	Double hex rotor bolt	M14	20
045		1	Accessories disc brake	Pos. 39A, 45, 46	2
46	5387001503	1	Grease	RENOLIT PASTE AZO-1 /	2
		1		5g Beute	
056	3434366000	1	Brake calliper fixing bolts kit	Pos. 56, 56.1	2
56	4375100610	1	Double hex bolt	M18x1,5x55	6
56A	4375100810	1	Pivot retaining bolt	M18x1,5x55	2
59	3080007100	1	Brake calliper assembly left	PAN19-1 - 4 Loch -	1
		1		inklusive P	
60	3080007200	1	Brake calliper assembly right	PAN19-1 - 4 Loch -	1
		1		inklusive	
63		1	Mounting plate kit (Knorr)	Pos. 63.1-63.2	2
63A		1	Mounting plate (Wabco)		2
63B		1	Bow screw (Wabco)		2
064	3057008000	1	Brake lining kit	19,5" - Pos. 63, 64.1, 64.2	1
64A		1	Brake lining		4

ZIL9-19W Brake SBW PAN19-1



OVERSLUNG – *continued*

Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
64B		1	Spring clamp		4
65		1	Plug (Wabco)		2
66	3434382900	1	Guide-/seal kit (Wabco)		2
66		1	Protecting cap (Wabco)		2
70	3434382701	1	Guide-/seal kit		2
70A		1	Guide pin (Wabco)		2
70C		1	Bush (HALDEX)		4
70F		1	Cylinder screw (Knorr)		2
76		1	Holder	19/13 H11x26	2
78	3029024200	1	ABS sensor	Pos. 78.1, 78.2	2
78A	4029107000	1	Sensor		2
78B		1	Locating sleeve		2
80		1	Bellow (Knorr)		2
80		1	Guide-/seal kit		2
80A		1	Cylinder screw (Knorr)		2
80B		1	Guide pin (Wabco)		2
80C		1	Bush (HALDEX)		2
83		1	Cap (Knorr)		4
500	3434365700	1	Repair kit steering knuckle	Pos. 20, 501-507	2
501		1	Steering bolt	ø60x298	2
502		1	Thrust plate	ø90/62x9,8	2
503		1	Thrust plate	unten / down	2
504		1	O-ring	ø84x11	4
505		1	Cover plate	ø100x6/TK80	4
505A		1	Gasket	ø100/64,5x0,5	4
507		1	Screw	M8x22-KL90	12
512	3357020600	1	Track rod assembly	58x1080-1139	1
513		1	Track rod	58x980	1
514	2205000300	1	Ball joint left	Konus 38	1
514A	2205000400	1	Ball joint right	Konus 38	1
514B	4202101150	1	Castle nut	M30x1,5	2
515		1	Collar	ø48	2
516	2193004600	1	Lock plate		1
516	3341202319	1	Screw assembly	M12x1,5x65	6
516A		1	Screw	M12x1,5x65	6
516B		1	Safety flange	M12x1,5	6
517		1	Clamping piece		1
518		1	Screw assembly	M12x1,5x62	4
519		1	Screw	M12x1,5x62	4
520		1	Safety flange	M12x1,5	4
522	3341002319	1	Screw assembly	Pos. 523-525	2
523	4343002388	1	Screw	M24x110	2
525	4247401480	1	Safety flange	M24	2
526	2376101300	1	Shock absorber		1
527	4454300400	1	Cylinder	ø65x50	1
528	4375400188	1	Cylinder screw (Knorr)	M6x20	4



ZIL9-19W_01

ZIL9-19W Brake SBW PAN19-1



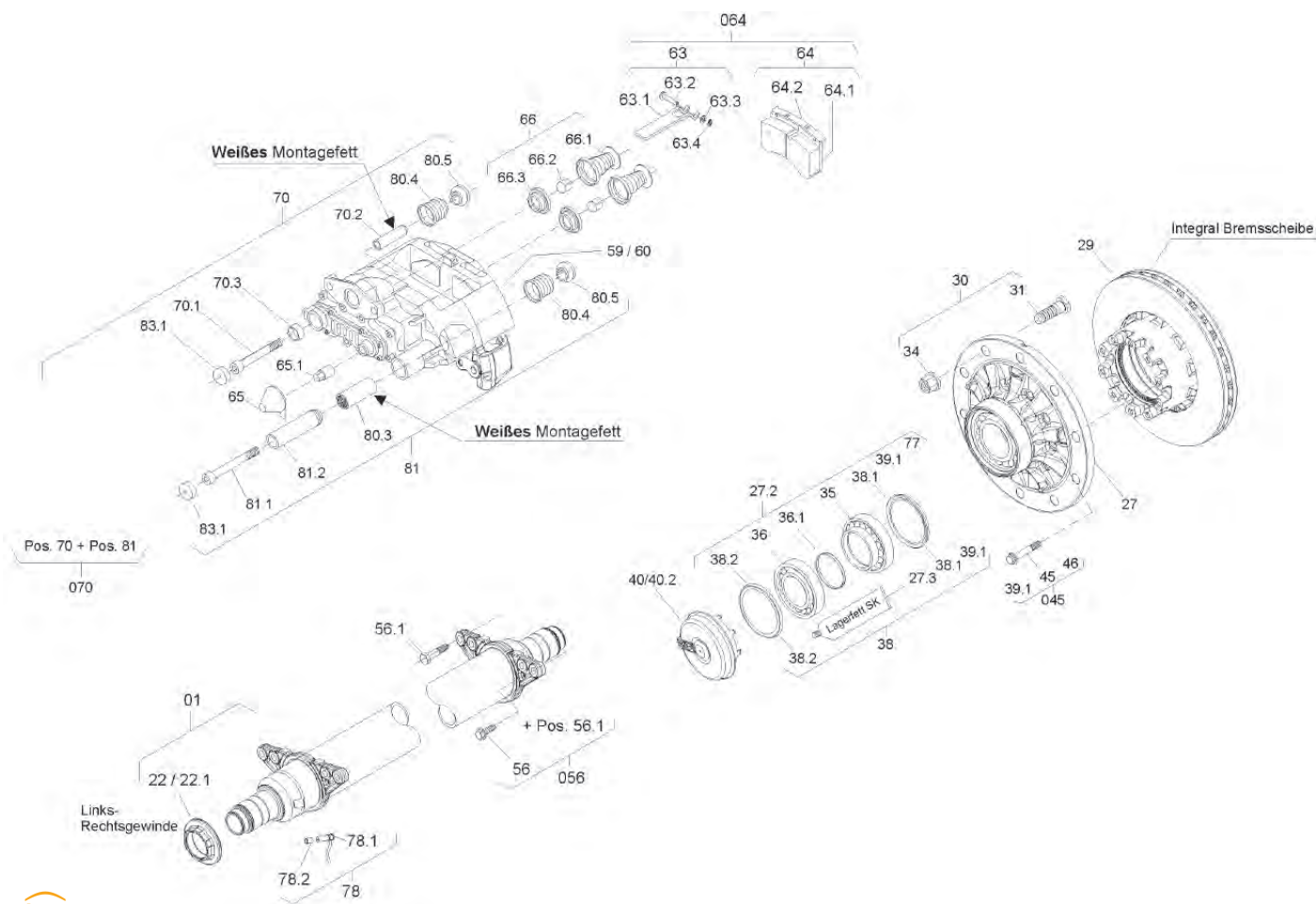
UNDERSLUNG – *continued*

Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
1		1	Axle beam assembly		1
3A	3222185900	1	Steering knuckel assembly left		1
3B	3222186000	1	Steering knuckel assembly right		1
8	4343208001	1	Screw	M20x110	2
9	4342001780	1	Nut	M20	2
16A	4201000200	1	Grease nipple	23,5L/BM8x1	4
20	4230017000	1	Bearing bush	ø65/60x70	4
22	1011008600	1	Axle nut right	M75x1,5/SW85	1
22A	1011008500	1	Axle nut left	M75x1,5/SW85	1
27	3307304900	1	Hub unit INTEGRAL	TK285,75-10L	2
27B	3434302218	1	Repair kit wheel bearing	88mm	2
29	3079001601	1	Brake disc INTEGRAL	ø 377mm x50x145	2
31	1303112810	1	Wheel bolt	M22x1,5x103 - ALU	20
34	4247301201	1	Wheel bolt nut	M22x1,5x27H/SW32	20
35		1	Roller bearing	B/S/Z-Serie	2
36		1	Roller bearing	B/S/Z-Serie	2
36A		1	Holding ring		2
38	3434302500	1	Repair kit grease change		2
38A		1	Sealing ring (inside)	ø112/138,5x11	2
38B		1	Sealing ring (outside)	ø112/138,5x6	2
39		1	O-ring	ø139,07x5,33	2
39A	4315007500	1	O-ring	ø92x4	2
40	3304010201	1	Hub cap incl. O-Ring	S/Z/ZI/BI	2
40B	3304010302	1	Wheel cap assembly / hubodometer	S/Z/ZI/BI	2
45	4375100912	1	Double hex bolt	M14	20
45		1	Accessories disc brake		2
46	5387004203	1	SAF LiLube Easy Fit	5g	2
056	3434366000	1	Brake calliper fixing bolts kit		2
56	4375100610	1	Double hex bolt	M18x1,5x55	6
56A	4375100810	1	Pivot retaining bolt	M18x1,5x55	2
59	3080007101	1	Brake calliper assembly left	PAN19-1 - 4 Loch -	1
				inklusive P	
60	3080007201	1	Brake calliper assembly right	PAN19-1 - 4 Loch -	1
				inklusive	
63		1	Mounting plate kit (Knorr)		2
63A		1	Mounting plate (Wabco)		2
63B		1	Bow screw (Wabco)		2
63E	3424200100	1	Brake pad wear indicator	WABCO 19,5"	1
64	3057008000	1	Brake lining kit	19,5"	1
64A		1	Brake lining		4
64B		1	Spring clamp		4
65		1	Plug (Wabco)		2
66	3434382900	1	Guide-/seal kit (Wabco)		2
66		1	Protecting cap (Wabco)		2

ZIL9-19W Brake SBW PAN19-1

Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
70	3434382701	1	Guide-/seal kit		2
70A		1	Guide pin (Wabco)		2
70C		1	Bush (HALDEX)		4
70F		1	Cylinder screw (Knorr)		2
76		1	Holder	19/13 H11x26	2
78	3029024200	1	ABS sensor kit		2
78A	4029107000	1	Sensor		2
78B		1	Locating sleeve		2
80		1	Bellow (Knorr)		2
80		1	Guide-/seal kit		2
80A		1	Cylinder screw (Knorr)		2
80B		1	Guide pin (Wabco)		2
80C		1	Bush (HALDEX)		2
83		1	Cap (Knorr)		4
500	3434365700	1	Repair kit steering knuckle		2
501		1	Steering bolt	ø60x298	2
502		1	Thrust plate	ø90/62x9,8	2
503		1	Thrust plate	unten / down	2
504		1	O-ring	ø84x11	4
505		1	Cover plate	ø100x6/TK80	4
505A		1	Gasket	ø100/64,5x0,5	4
507		1	Screw	M8x22-KL90	12
512	3357020600	1	Track rod assembly	ø58x1080-1139mm	1
513		1	Track rod	58x980	1
514	2205000300	1	Ball joint left	Konus 38	1
514A	2205000400	1	Ball joint right	Konus 38	1
514B	4202101150	1	Castle nut	M30x1,5	2
515		1	Collar	ø48	2
516	2193004600	1	Lock plate		1
516	3341202319	1	Screw assembly	M12x1,5x70	6
516A		1	Screw	M12x1,5x70	6
516B		1	Safety flange	M12x1,5	6
517		1	Clamping piece		1
518		1	Screw assembly	M12x1,5x62	4
519		1	Screw	M12x1,5x62	4
520		1	Safety flange	M12x1,5	4
522	3341002319	1	Screw assembly	M24x110	2
523	4343002388	1	Screw	M24x110	2
525	4247401480	1	Safety flange	M24	2
526	2376101300	1	Shock absorber		1
527	4454300400	1	Cylinder	ø65x50	1
528	4375400188	1	Cylinder screw (Knorr)	M6x20	4

ZI9-22K01 Brake SBK 2243-11S (SK7)



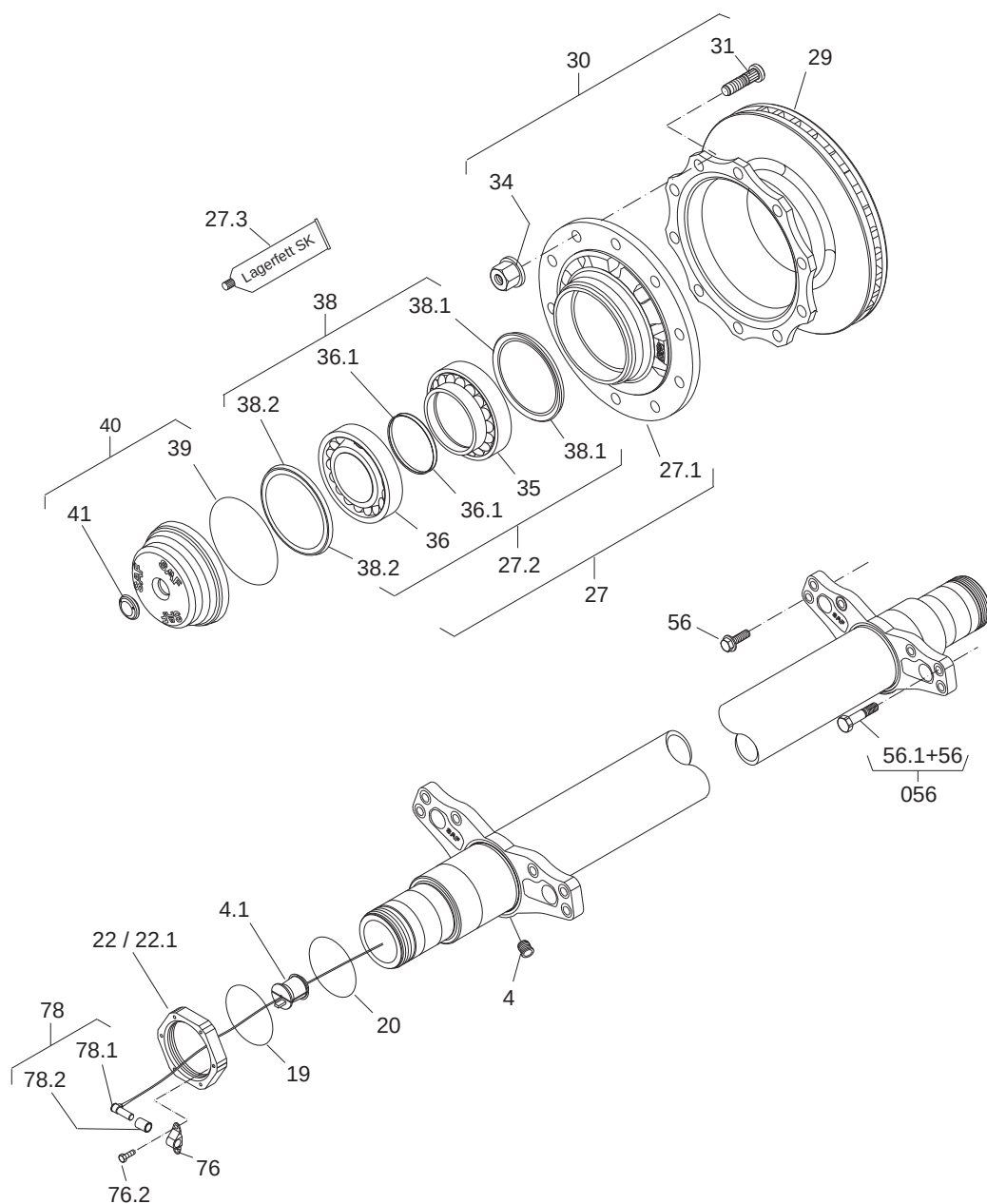
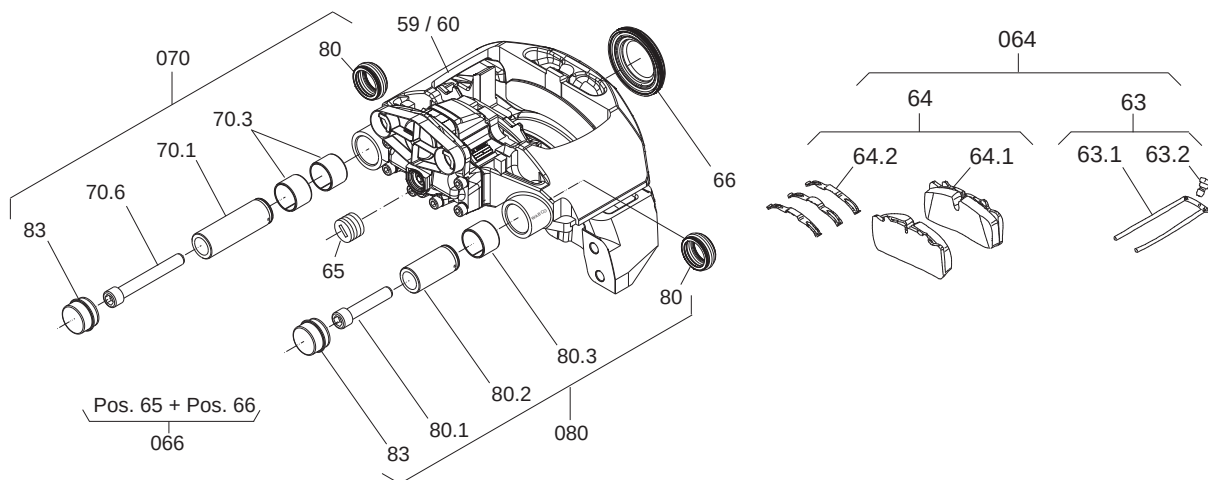
Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
22	1011008600	1	Axle nut right	M75x1,5/SW85	1
22.1	1011008500	1	Axle nut left	M75x1,5/SW85	1
27	3307304900	1	Hub unit INTEGRAL 285 PCD 10 Stud	TK285,75-10L	2
27.2	3434302218	1	Repair kit wheel bearing	88mm	2
29	3079001501	1	Brake disc INTEGRAL 22.5"	ø 430mm x45x135	2
31	1303112810	1	Wheel bolt	M22x1,5x103 - ALU	20
34	4247301201	1	Wheel bolt nut	M22x1,5x27H/SW32	20
35		1	Roller bearing	B/S/Z-Serie	2
36		1	Roller bearing	B/S/Z-Serie	2
36.1		1	Holding ring		2

ZI9-22K01 Brake SBK 2243-11S (SK7)

Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
38	3434302500	1	Repair kit grease change		2
38.1		1	Sealing ring (inside)	ø112/138,5x11	2
38.2		1	Sealing ring (outside)	ø112/138,5x6	2
39		1	O-ring	ø139,07x5,33	2
39.1	4315007500	1	O-ring	ø92x4	2
40	3304010201	1	Hub cap incl. O-Ring	S/Z/ZI/BI	2
40.2	3304010301	1	Wheel cap assembly / hubodometer	S/Z/ZI/BI	2
45		1	Accessories disc brake		2
45	4375100912	1	Double hex bolt	M14	20
46	5387004203	1	SAF LiLube Easy Fit	5g	2
56	3434366000	1	Brake calliper fixing bolts kit		2
56	4375100610	1	Double hex bolt	M18x1,5x55	6
56.1	4375100810	1	Pivot retaining bolt	M18x1,5x55	2
59	3080005901	1	Brake calliper assembly left	SBK2243 01	1
60	3080006001	1	Brake calliper assembly right	SBK2243 01	1
63		1	Mounting plate kit (Knorr)	22,5 "	2
63.1		1	Mounting plate (Wabco)	22,5 "	2
63.2		1	Guide pin (Wabco)	22,5 "	2
63.3		1	Washer (Knorr)	22,5 "	2
63.4		1	Cotter pin (Knorr)	22,5 "	2
64	3057008500	1	Brake lining kit	22,5 "	1
64.1		1	Brake lining	22,5 "	4
64.2		1	Spring clamp		4
65		1	Adjusting cap (Knorr)		2
65.1		1	Adaptor (Knorr)		2
66	3434381400	1	Thrust member	SN/SK	2
66.1		1	Thruster with bellows		4
66.2		1	Bush (Knorr)		4
66.3		1	Sealing ring		4
70	3434381500	1	Guide-/seal kit	SK7, (SN7 ab Ausf. 3 080...21)	2
70		1	Guide-/seal kit		2
70.1		1	Cylinder screw (Knorr)	M16x1,5	2
70.2		1	bushing guide with guide bush (Knorr)		2
70.3		1	Guide bush (Knorr)		2
77		1	Exciter ring	90 Zähne	2
78	3029024200	1	ABS sensor		2
78.1	4029107000	1	Sensor		2
78.2		1	Locating sleeve		2
80.3		1	Brass bush		2
80.4		1	Bellow (Knorr)		2
80.5		1	O-ring		2
81		1	Guide-/seal kit		2
81.1		1	Cylinder screw (Knorr)		2
81.2		1	Bushing guide (Knorr)		2
83.1		1	Steel cap (Knorr)		2

SK RZ 9019W Intradisc axle

WABCO CALIPER PAN19-1 - DUAL WHEELS



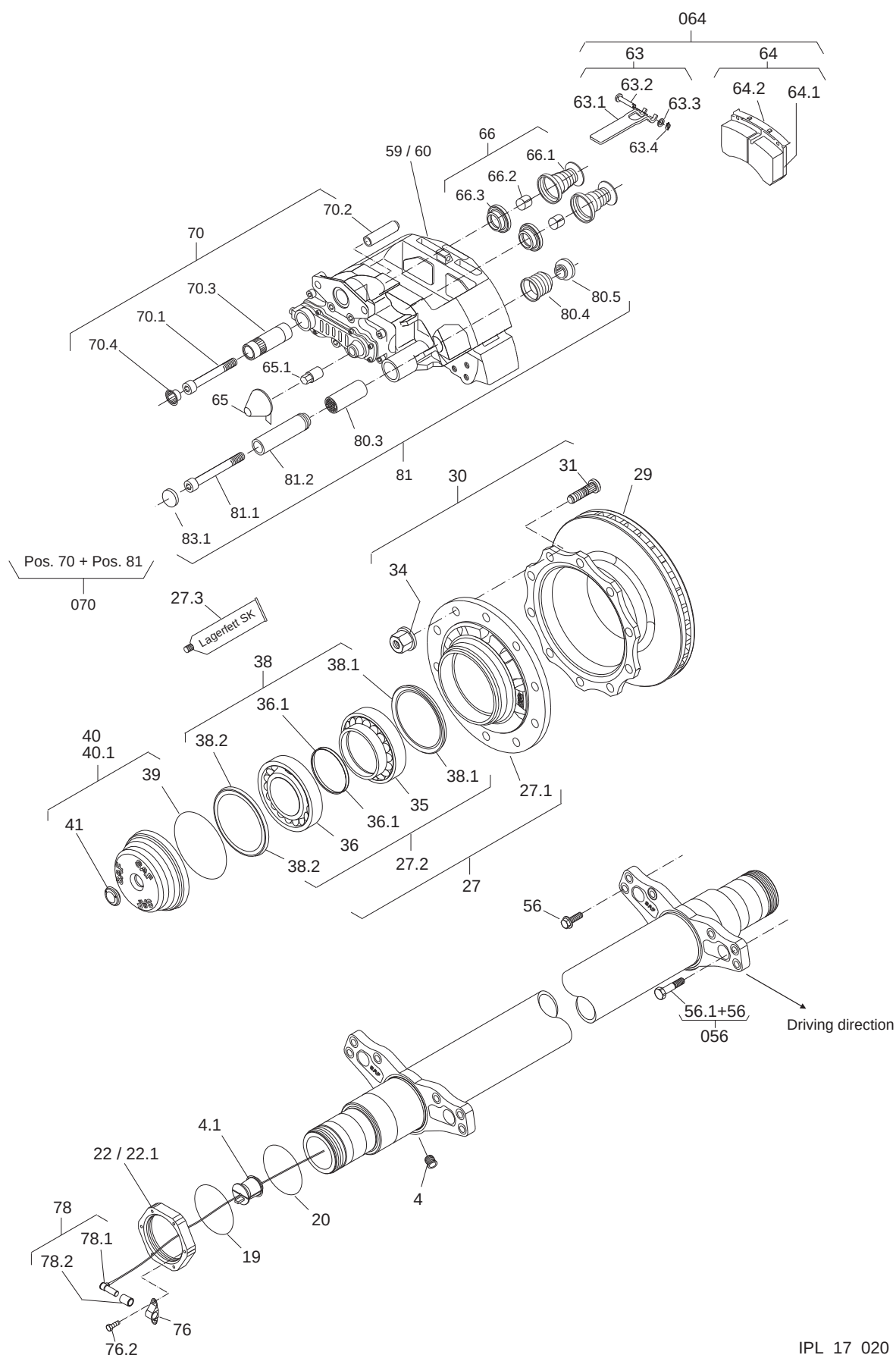
SK RZ 9019W Intradisc axle

IPL_17_031_0

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate) Bare beam IO 0351644000 IU 351653500	1
4	4337202800	1	ABS Protection plug	2
4.1	4337202900	1	ABS cable plug (inside of spindle)	2
19	4315005200	1	Axle nut lock O-Ring $\phi 116 \times 3$	2
20	4315005600	1	Spindle O-Ring $\phi 110 \times 2$	2
22	1011007001	1	Axle nut RH - M120x2/SW140 (without groove)	1
22.1	1011007101	1	Axle nut LH - M120x2/SW140 (with groove)	1
27	3307302600	1	Hub assembly (Incl. 27.1, 35, 36, 36.1, 38.1 & 38.2) - Dual alloy wheels - 8x275PCD	2
27	3307302501	1	Hub assembly (Incl. 27.1, 35, 36, 36.1, 38.1 & 38.2) - Dual steel wheels - 8x275PCD	2
27	3307303300	1	Hub assembly (Incl. 27.1, 35, 36, 36.1, 38.1 & 38.2) - Dual alloy wheels - 10x285.75PCD	2
27.2	3434301201	1	Bearing and seal kit (Incl. 20, 27.3, 35, 36, 36.1 & 38)	2
27.3	5387001105	1	Bearing grease pack (230gr)	2
29	4079000400	1	Brake disc (rotor) - Dual steel only wheels - 8x275PCD Star face	2
29	4079001400	1	Brake disc (rotor) - Dual steel/alloy wheels - 8x275PCD Round face	2
29	4079001201	1	Brake disc (rotor) - Dual steel/alloy wheels - 10x285.75PCD	2
31	1303107512	1	Wheel stud - M22x1.5x93 - Dual steel wheels	16/20
31	1303111210	1	Wheel stud - M22x1.5x112 - Dual steel/alloy wh. (straight body - used with 1 095 1057 00 sleeve)	16/20
31	1303112510	1	Wheel stud - M22x1.5x112 - Dual steel/alloy wheels (stepped body)	16/20
N.A.	1095105700	1	Wheel stud sleeve (used with 1 303 1112 10 stud)	16/20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32	16/20
34	33272215	1	Wheel nut M22x1.5x27 - SW33	16/20
38	3434301401	1	Seal repair kit (Incl. 20, 27.3, 36.1, 38.1 & 38.2)	2
39	4315005400	1	Hub cap O-Ring $\phi 182 \times 4$	2
40	3304109200	1	Hub cap assembly - Chromed - (Incl. 39-41)	2
40	3304009200	1	Hub cap assembly - Matt finish - (Incl. 39-41)	2
41	4337202601	1	Protection plug	2
N.A.	1094003701	1	Hubodometer installation washer	1
56	4343291410	1	Bolt with collar M16x1.5	10
56.1	4375100410	1	Centering bolt M16x1.5	2
59	3080003200	1	Brake caliper assy, WABCO PAN19-1, RH c/w brake pads	1
60	3080003300	1	Brake caliper assy, WABCO PAN19-1, LH c/w brake pads	1
64	3057008000	1	Brake pad kit (incl. 63, 64.1, 64.2 & 65)	1
66	3434382900	1	Repair-kit (incl. 65 & 66)	2
70	3434382701	1	Guide pin kit (incl. 65, 66, 70.1 - 70.6 & 080) Caliper Repair Kit	2
76	4189005100	1	Sensor mount bracket	2
76.2	4343206700	1	Sensor mount screw M6x12 (self tapping)	4
Tools	1012002400	1	Hub nut socket (SW140mm)	1
	2501871	1	Universal hub puller	1
	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	3434332700	1	SAF ratchet wrench	1
	6401959232	1	Main piston seal kit with piston. Suit WABCO pan 19 & 22 caliper	1

SK RZ 9019K axle

KNORR CALIPER SN6 - DUAL WHEELS

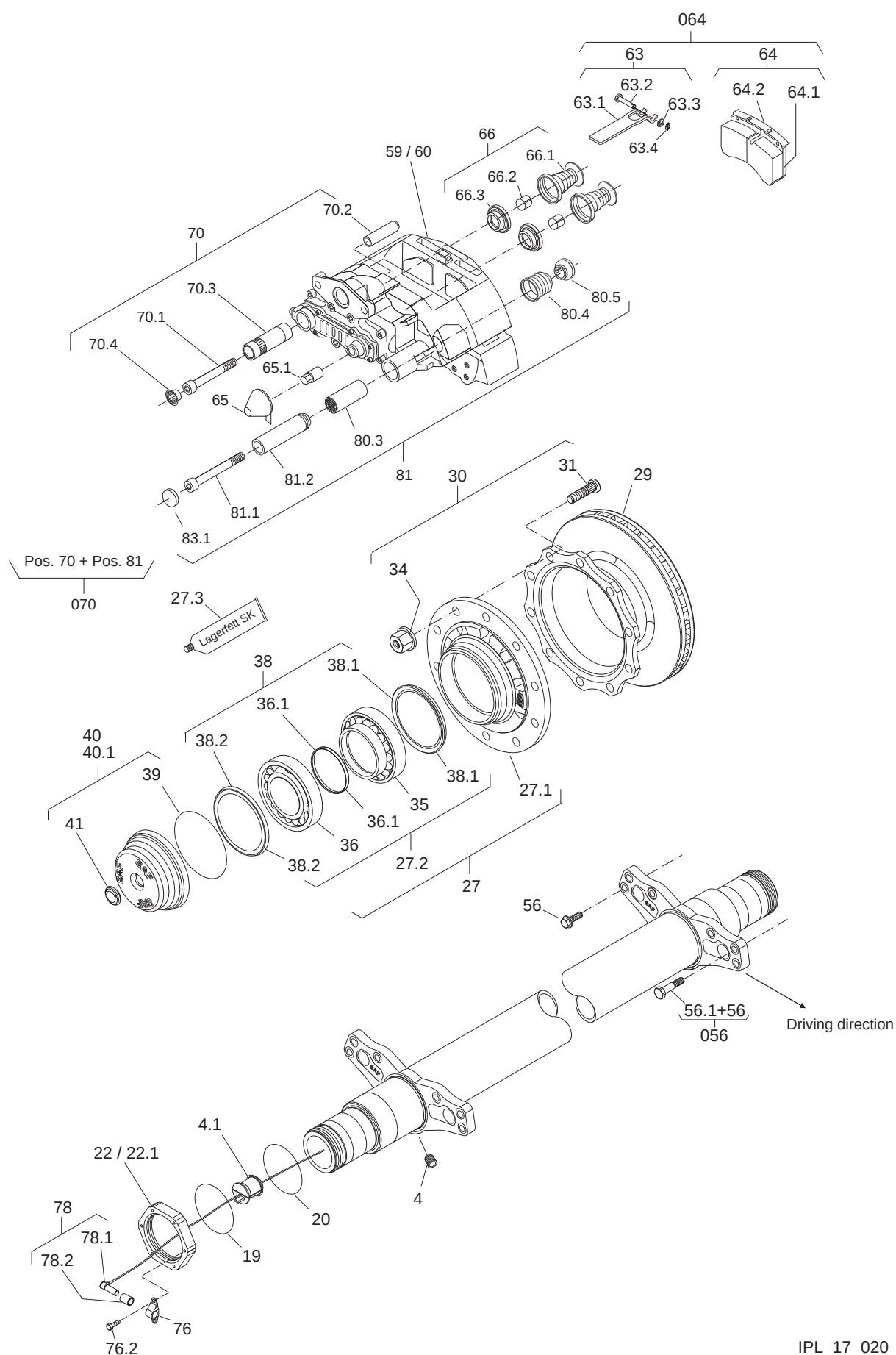


IPL_17_020_0

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
4	4337202800	1	ABS Protection plug	2
4.1	4337202900	1	ABS cable plug (inside of spindle)	2
19	4315005200	1	Axle nut lock O-Ring $\phi 116 \times 3$	2
20	4315005600	1	Spindle O-Ring $\phi 110 \times 2$	2
22	1011007001	1	Axle nut RH - M120x2/SW140 (without groove)	1
22.1	1011007101	1	Axle nut LH - M120x2/SW140 (with groove)	1
27	3307302600	1	Hub assembly (Incl. 27.1, 35, 36, 36.1, 38.1 & 38.2) - Dual alloy wheels - 8x275PCD - 8 Stud - 19.5"	2
27	3307302501	1	Hub assembly (Incl. 27.1, 35, 36, 36.1, 38.1 & 38.2) - Dual steel wheels - 8x275PCD - 8 Stud - 19.5"	2
27	3307303300	1	Hub assembly (Incl. 27.1, 35, 36, 36.1, 38.1 & 38.2) - Dual alloy wheels - 10x285.75PCD - 10 Stud	2
27.2	3434301201	1	Bearing and seal kit (Incl. 20, 27.3, 35, 36, 36.1 & 38)	2
27.3	5387001105	1	Bearing grease pack (230gr)	2
29	4079000400	1	Brake disc (rotor) - Dual steel only wheels - 8x275PCD Star shaped mount	2
29	4079001400	1	Brake disc (rotor) - Dual steel/alloy wheels - 8x275PCD Round face	2
29	4079001201	1	Brake disc (rotor) - Dual steel/alloy wheels - 10x285.75PCD	2
31	1303107512	1	Wheel stud - M22x1.5x93 - Dual steel wheels	16/20
31	1303111210	1	Wheel stud - M22x1.5x112 - Dual steel/alloy wh. (straight body - used with 1 095 105700 sleeve)	16/20
31	1303112510	1	Wheel stud - M22x1.5x112 - Dual steel/alloy wheels (stepped body)	16/20
N.A.	1095105700	1	Wheel stud sleeve (used with 1 303 1112 10 stud)	16/20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32	16/20
34	4373004300	1	Wheel nut M22x1.5x27 - SW32 - Dual alloy sleeved	16/20
34		1	Wheel nut M22x1.5x27 - SW33	16/20
38	3434301401	1	Seal repair kit (Incl. 20, 27.3, 36.1, 38.1 & 38.2)	2
39	4315005400	1	Hub cap O-Ring $\phi 182 \times 4$	2
40	3304109200	1	Hub cap assembly - Chromed - (Incl. 39-41)	2
40	3304009200	1	Hub cap assembly - Matt finish - (Incl. 39-41)	2
41	4337202601	1	Protection plug	2
N.A.	1094003701	1	Hubodometer installation washer	1
56	4343291410	1	Bolt with collar M16x1.5	10
56.1	4375100410	1	Centering bolt M16x1.5	2
59	3080002401	1	Brake caliper assy, Knorr Bremse (SN6) - RH c/w brake pads	1
60	3080002501	1	Brake caliper assy, Knorr Bremse (SN6) - LH c/w brake pads	1
63		1	Lining holder kit (incl. 63.1 - 63.4)	2
64	3057007800	1	Brake lining kit (incl 64.1 & 64.2)	1
66	3434381400	1	Tappet kit SN6 & SN7 (incl. 66.1 - 66.3)	2
70	3434381200	1	Guide/Seal kit SN6 & SN7 (incl. 65, 70.1 - 70.3 & 81)	2
76	4189005100	1	Sensor mount bracket	2
76.2	4343206700	1	Sensor mount screw M6x12 (self tapping)	4
Tools	1012002400	1	Hub nut socket (SW 140 mm)	1
	2501871	1	Universal hub puller	1
	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	2501890	1	3D bush replacement tool.(Suit 10 x 285 only)	1
	5387004203	1	SAF Fitting Paste 5gm (to be applied to spindles)	1
	3434332700	1	SAF ratchet wrench	1

SK RZ 9022K axle

KNORR CALIPER SN7 - DUAL WHEELS



SK RZ 9022K axle

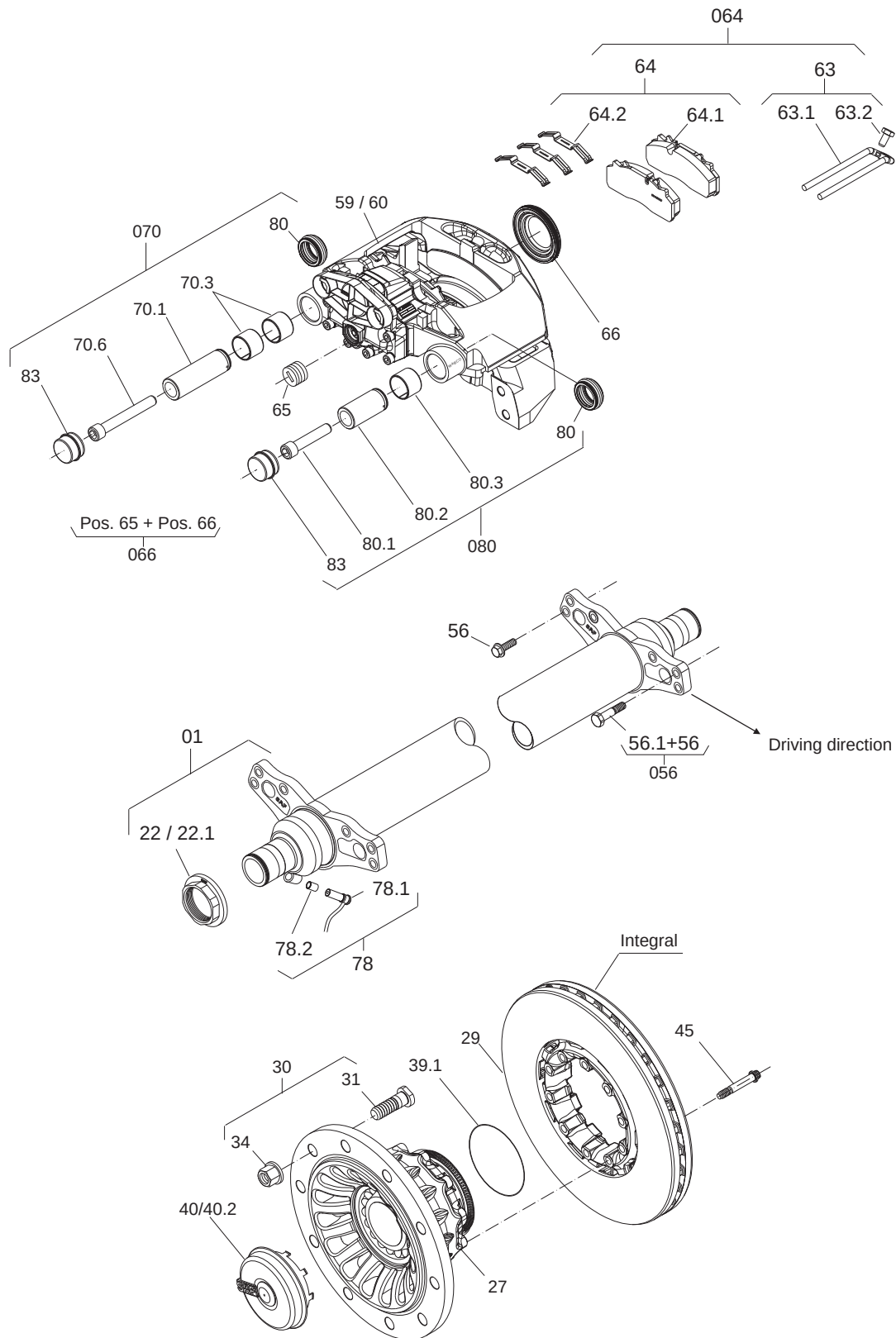
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Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
4	4337202800	1	ABS Protection plug	2
4.1	4337202900	1	ABS cable plug (inside of spindle)	2
19	4315005200	1	Axle nut lock O-Ring ϕ 116x3	2
20	4315005600	1	Spindle O-Ring ϕ 110x2	2
22	1011007001	1	Axle nut RH - M120x2/SW140 (without groove)	1
22.1	1011007101	1	Axle nut LH - M120x2/SW140 (with groove)	1
27	3307302900	1	Hub assembly (Incl. 27.1, 35, 36, 36.1, 38.1 & 38.2) - Dual alloy wheels - 10x335PCD	2
27.2	3434301201	1	Bearing and seal kit (Incl. 20, 27.3, 35, 36, 36.1 & 38)	2
27.3	5387001105	1	Bearing grease pack (230gr)	2
29	4079000300	1	Brake disc (rotor) - Dual alloy wheels - 10x335PCD	2
31	1303107512	1	Wheel stud - M22x1.5x93 - Dual steel wheels	20
31	1303111210	1	Wheel stud - M22x1.5x112 - Dual steel/alloy wheels	20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32	20
34	33272215	1	Wheel nut M22x1.5x27 - SW33	20
38	3434301401	1	Seal repair kit (Incl. 20, 27.3, 36.1, 38.1 & 38.2)	1
39	4315005400	1	Hub cap O-Ring ϕ 182x4	2
40	3304007200	1	Hub cap assembly - Without ABS pole wheel - (Incl. 39-41)	2
40	3304007600	1	Hub cap assembly - With ABS pole wheel - (Incl. 39-41)	2
41	4337202601	1	Protection plug	2
N.A.	1094003701	1	Hubodometer installation washer	1
56	4343291410	1	Bolt with collar M16x1.5	10
56.1	4375100410	1	Centering bolt M16x1.5	2
59	3080003001	1	Brake caliper assy, Knorr Bremse (SN7) - RH	1
60	3080003101	1	Brake caliper assy, Knorr Bremse (SN7) - LH	1
63		1	Lining holder kit (incl. 63.1 - 63.4)	2
64	3057007700	1	Brake lining kit (incl. 63, 64.1, 64.2, 65 & 65.1) - 4 Pads - 1 Axle	1
66	3434381400	1	Tappet kit SN6 & SN7 (incl. 66.1 - 66.3)	2
70	3434381200	1	Guide/Seal kit SN6 & SN7 (incl. 65, 70.1 - 70.3 & 81)	2
70	3434381500	1	Guide/Seal kit SN6 & SN7 (incl. 65, 70.1 - 70.3 & 81) for the Calipers with P. N. 3_080_..._21	2
76	4189005100	1	Sensor mount bracket - ABS	2
76.2	4343206700	1	Sensor mount screw M6x12 (self tapping) - ABS	4
Tools	1012002400	1	Hub nut socket (SW 140 mm)	1
	2501871	1	Universal hub puller	1
	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	2501890	1	3D bush replacement tool. (Suit 10 x 285 only)	1
	5387004203	1	SAF Fitting Paste 5gm (to be applied to spindles)	1
	3434332700	1	SAF ratchet wrench	1

SK RB 9019W Intradisc *INTEGRAL* axle



WABCO CALIPER PAN19-1 - SINGLE WHEELS



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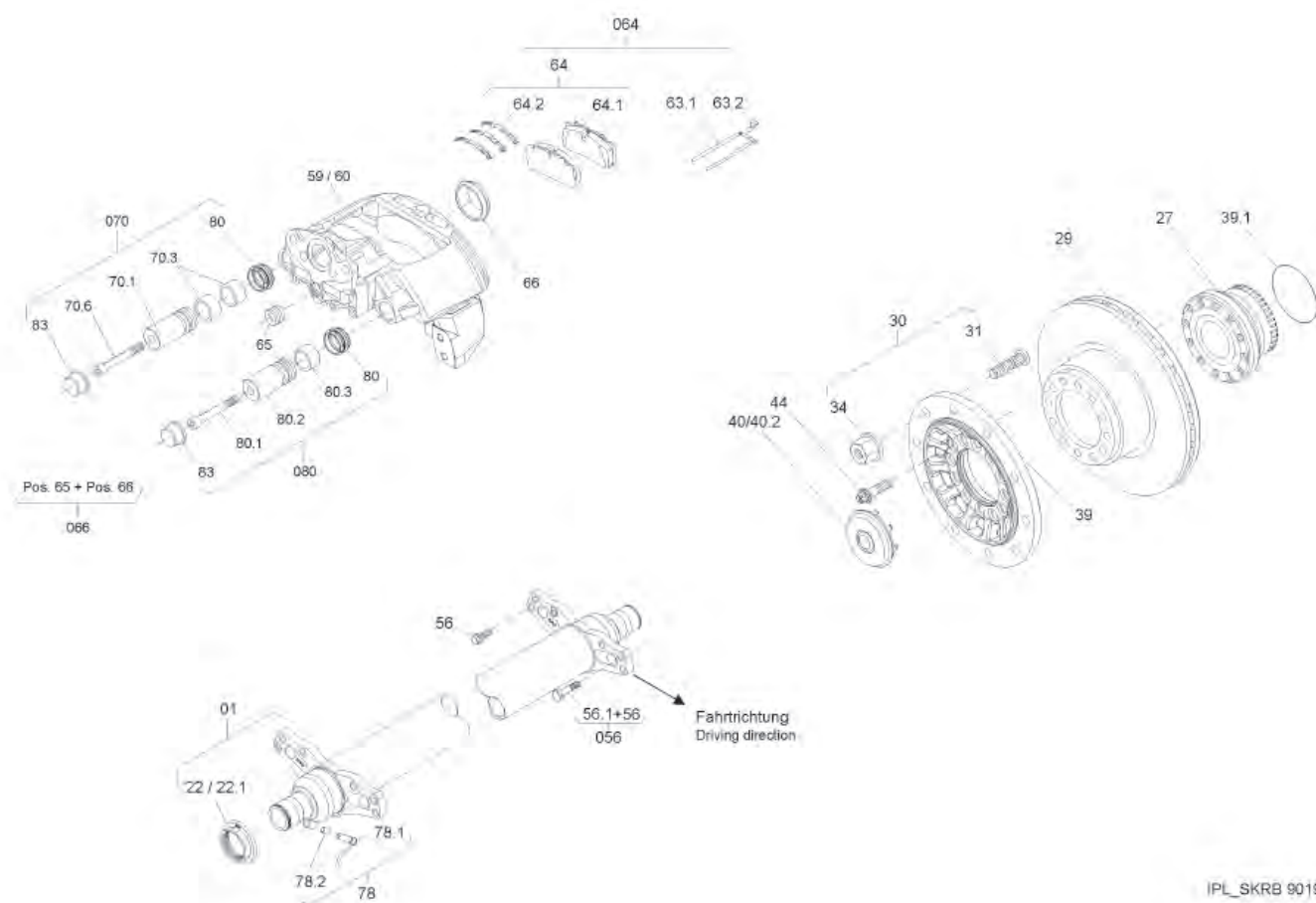
SK RB 9019W Intradisc INTEGRAL axle

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
22	1011008800	1	Axle nut RH - M72x1.5 / SW85	1
22.1	1011008700	1	Axle nut LH - M72x1.5 / SW85	1
27	3307303001	1	Hub unit INTEGRAL - 10x335PCD	2
29	4079001002	1	Brake disc INTEGRAL - 377 mm	2
31	1303112010	1	Wheel Stud M22x1,5x78 - Single Alloy Wheels	20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32	20
39.1	4315007500	1	O-Ring - ϕ 92x4	2
40	3304010201	1	Hub cap black slimline	2
40.2	4304010301	1	Hub cap for hubodometer	2
45	4375100512	1	Torx Bolt 12Pt. Head - Rotor	20
56	4343291410	1	Bolt with collar M16x1.5 - Caliper	10
56.1	4375100410	1	Centering bolt M16x1.5 - Caliper	2
59	3080003200	1	Brake caliper assy, WABCO PAN19-1, RH	1
60	3080003300	1	Brake caliper assy, WABCO PAN19-1, LH	1
64	3057008000	1	Brake pad kit (incl. 63, 64.1, 64.2 & 65) - 4 Pads - 1 Axle	1
66	3434382900	1	Repair-kit (incl. 65 & 66)	2
70	3434382701	1	Guide pin kit (incl. 65, 66, 70.1 - 70.6 & 080)	2
Tools	4434382800	1	Hub nut socket (SW85mm)	1
	2501871	1	Universal hub puller	1
	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	2501890	1	3D bush replacement tool. (Suit 10 x 285 only)	1
	5387004203	1	SAF Fitting Paste 5gm (to be applied to spindles)	1
	3434332700	1	SAF ratchet wrench	1

SKRB 9019W Brake SBW PAN19-1



WABCO CALIPER - SINGLE WHEELS

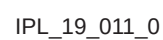


IPL_SKRB 9019

SKRB 9019W Brake SBW PAN19-1

Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
1		1	Axle beam assembly		1
22	1011008800	1	Axle nut right	M72x1,5	1
22.1	1011008700	1	Axle nut left	M72x1,5	1
27	3434365000	1	Hub-Unit kit	Pos. 39.1, 44	2
29		1	Brake disc	Ø 377mm x45x139,5	2
30		1	Wheel bolt assembly MZ/ALU	Pos.31,34	20
31	1303112010	1	Wheel bolt	M22x1,5x78	20
34	4247301201	1	Wheel bolt nut	M22x1,5x27H/SW32	20
39	1146200402	1	Flange	TK335/10L	2
39.1	4315007500	1	O-ring	Ø92x4	2
40	3304009300	1	Wheel cap assembly - Hubcap	Pos.39	2
40.2		1	Wheel cap assembly/ hubodometer	Pos. 39 - SKRB 9019/9022	2
44	4343280110	1	Torque bolt	M18x1,5x65	24
56	4343291410	1	Screw	M16x1,5x55	10
56	3434365600	1	Brake calliper fixing bolts		2
56.1	4375100410	1	Pivot retaining bolt - Caliper	M16x1,5/D19x55	2
59	3080003200	1	Brake calliper assembly right	PAN19-1 inklusive Pads	1
60	3080003300	1	Brake calliper assembly left	PAN19-1 inklusive Pads	1
63		1	Mounting plate kit 19.5" (Wabco)	Pos. 63.1-63.2	2
63.1		1	Mounting plate (Wabco)		2
63.2		1	Bow screw (Wabco)		2
64	3057008000	1	Brake lining kit (Wabco) - 4 Pads	19,5" - Pos. 63, 64.1, 64.2	1
64.1		1	Brake lining 19.5" (Wabco)		4
64.2		1	Spring clamp (Wabco)		4
65		1	Plug (Wabco)		2
66		1	Protecting cap (Wabco)		2
70	3434382701	1	Guide-/seal kit (Wabco)		2
70.1		1	Guide pin (Wabco)		2
70.3		1	Bush (Wabco)		4
70.6		1	Cylinder screw (Wabco)		2
78	3029024200	1	WABCO - INTRA- ABS sensor		2
78		1	ABV / WABCO -Modul- (VGL.Nr. 441 032 922 2)	Pos. 78.1, 78.2	2
78.1	4029106800	1	Sensor -INTRA-		2
78.1	4029104200	1	Sensor -Modul-		2
78.2	4029101300	1	Clamping bush		2
80		1	Bellow (Wabco)		2
80		1	Mounting plate kit 19.5" (Wabco)	Pos. 63.1-63.2	2
80.1		1	Cylinder screw (Wabco)		2
80.2		1	Guide pin (Wabco)		2
80.3		1	Bush (Wabco)		2
83		1	Cap (Wabco)		2

SK RLB 9019W Intradisc INTEGRAL steer axle

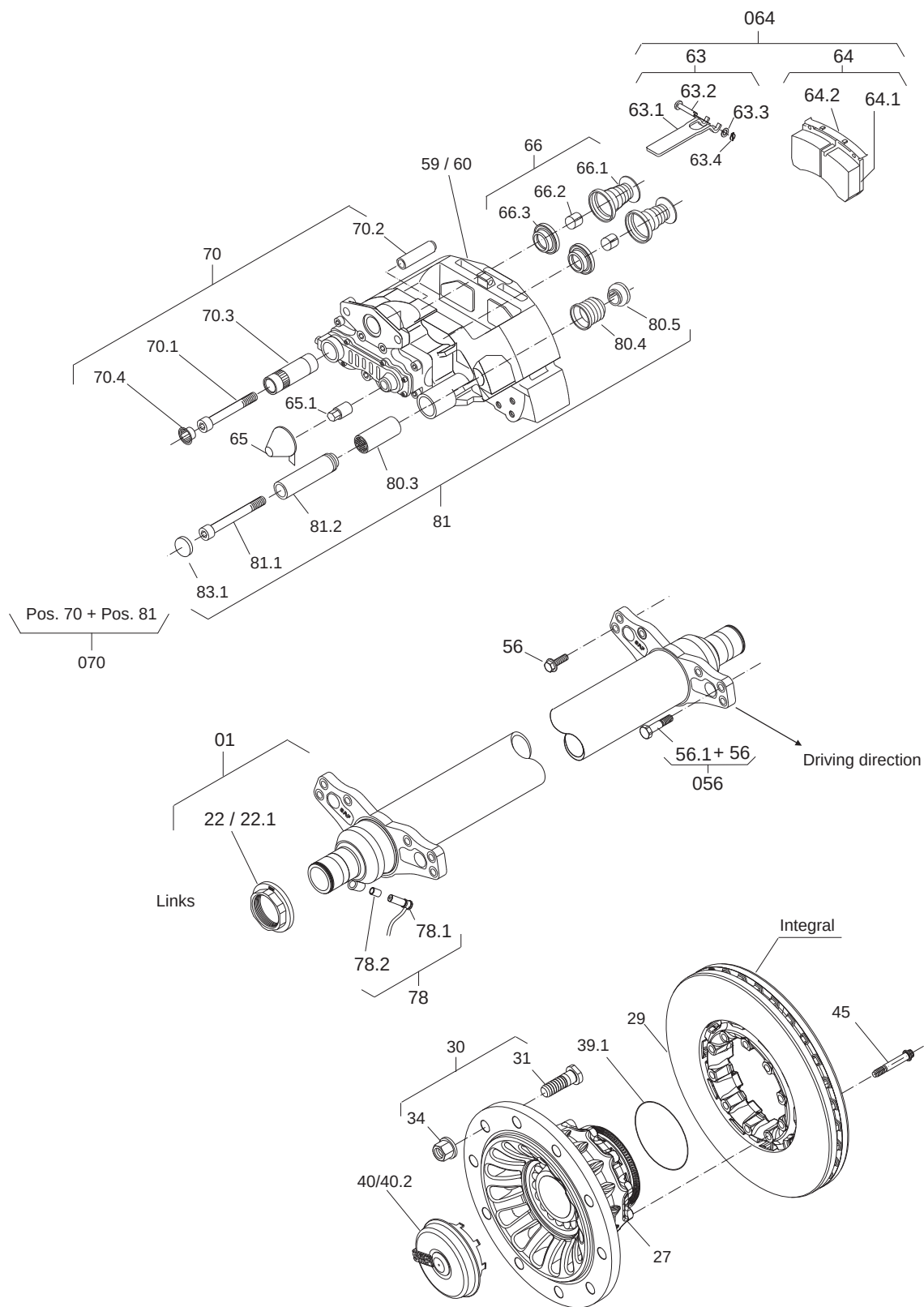


Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
3.1	See type plate	1	Steering knuckle LH (See Ident. No. on the type plate)	1
3.2	See type plate	1	Steering knuckle RH (See Ident. No. on the type plate)	1
8	4343101401	1	Bolt steering stop M20	2
9	4342001780	1	Nut M20	2
16	4201000100	1	Grease nipple AM 8x1 - 16mm lg.	2
17	4201000200	1	Grease nipple BM 8x1 - 23.5mm lg.	2
20	4230017000	1	Bronze bush $\phi 65/60 \times 70$	4
22	1011008800	1	Axle nut RH - M72x1.5 / SW85	1
22.1	1011008700	1	Axle nut LH - M72x1.5 / SW85	1
27	3307303001	1	Hub unit INTEGRAL - 10x335PCD	2
29	4079001002	1	Brake disc INTEGRAL - 377 mm - 19.5" 10x335PCD	2
31	1303112010	1	Wheel Stud M22x1.5x78 - Single Alloy Wheels	20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32	20
39.1	4315007500	1	O-Ring - $\phi 92 \times 4$	2
40	3304010201	1	Hub cap	2
40.2	4304010301	1	Hub cap for hubodometer	2
45	4375100512	1	Torx Bolt 12Pt. Head - Rotor	20
56	4343291410	1	Bolt with collar M16x1.5 - Caliper	10
56.1	4375100410	1	Centering bolt M16x1.5 - Caliper	2
59	3080003200	1	Brake caliper assy, WABCO PAN19-1, RH	1
60	3080003300	1	Brake caliper assy, WABCO PAN19-1, LH	1
64	3057008000	1	Brake pad kit (incl. 63, 64.1, 64.2 & 65) - (4 Pads)	1
66	3434382900	1	Repair-kit (incl. 65 & 66) - Caliper	2
70	3434382701	1	Guide pin kit (incl. 65, 66, 70.1 - 70.6 & 080) - Caliper Repair Kit	2
500	3434365700	1	Repair-kit steering knuckle (incl. 20 & 501-508)	2
506		1	Bolt-kit (incl. 506 & 507)	12
512	3357014000	1	Track rod assembly (incl. 513 - 515 & 519 - 520)	1
514	2205000300	1	Ball joint LH	1
514.1	2205000400	1	Ball joint RH	1
514.2	4202101150	1	Castle nut	2
516	2193002901	1	Axle-lock plate	1
517		1	Clamping bracket	1
518	3341202319	1	Bolt-kit M12 (incl. 519 & 520) 65 x 5	10
522	3341002319	1	Bolt-kit M24 (incl. 523 - 525)	2
523	4343002388	1	Bolt M24 3.0 x 110	2
525	4247401480	1	Lock nut M24	2
526	2376101300	1	Shock Absorber	1
527	4454300400	1	Axle-lock cylinder	1
528	4375400188	1	Allen-Screw M6	4
	4434382800L	1	Hub nut socket (SW85mm)	1
	2501871	1	Universal hub puller	1
Tools	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	5387004203	1	SAF Fitting Paste 5gm (to be applied to spindles)	1
	3434332700	1	SAF ratchet wrench	1

SK RB 9022K Intradisc *INTEGRAL* axle



KNORR CALIPER SN7 - SINGLE WHEELS



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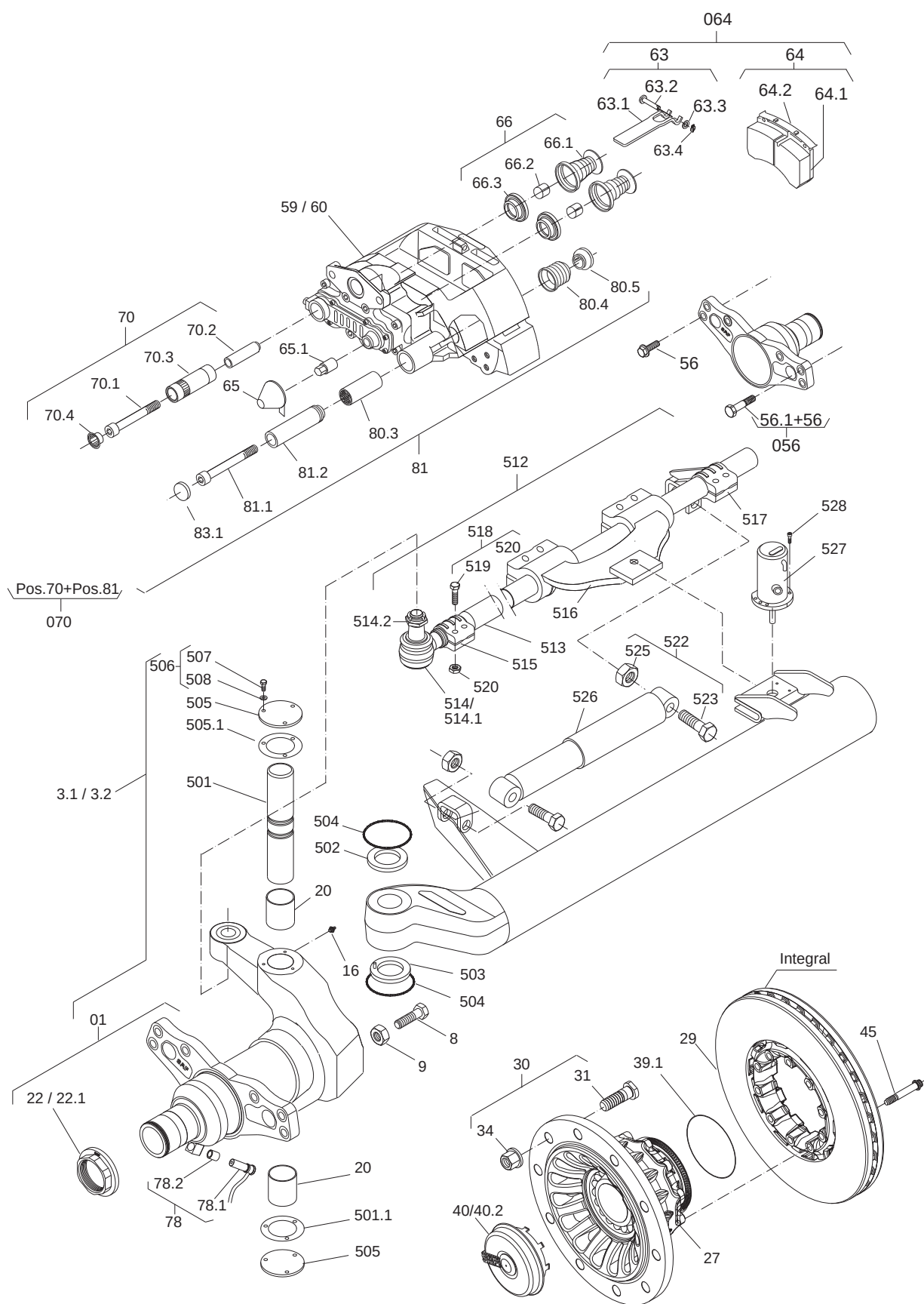
SK RB 9022K Intradisc INTEGRAL axle

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
22	1011008800	1	Axle nut RH - M72x1.5 / SW85	1
22.1	1011008700	1	Axle nut LH - M72x1.5 / SW85	1
27	3307303001	1	Hub unit INTEGRAL -10x335PCD	2
29	4079001304	1	Brake disc INTEGRAL - 430 mm	2
31	1303112010	1	Wheel Stud M22x1,5x78 - Single Alloy Wheels	20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32	20
39.1	4315007500	1	O-Ring - ϕ 92x4	2
40	3304010201	1	Hub cap	2
40.2	4304010301	1	Hub cap for hubodometer	2
45	4375100512	1	Torx Bolt 12Pt. Head - Rotor Bolt	20
56	4343291410	1	Bolt with collar M16x1.5 - Caliper	10
56.1	4375100410	1	Centering bolt M16x1.5 - Caliper	2
59	3080003001	1	Brake caliper assy, Knorr Bremse (SN7) - RH	1
60	3080003101	1	Brake caliper assy, Knorr Bremse (SN7) - LH	1
63		1	Lining holder kit (incl. 63.1 - 63.4)	2
64	3057007700	1	Brake lining kit (incl. 63, 64.1, 64.2, 65 & 65.1)	1
66	3434381400	1	Tappet kit SN6 & SN7 (incl. 66.1 - 66.3)	2
70	3434381200	1	Guide/Seal kit SN6 & SN7 (incl. 65, 70.1 - 70.3 & 81)	2
70	3434381500	1	Guide/Seal kit SN6 & SN7 (incl. 65, 70.1 - 70.3 & 81) for the Calipers with P. N. 3_080____21	2
	4434382800	1	Hub nut socket (SW85mm)	1
	4434382200	1	Universal hub puller	1
Tools	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1
	3434332700	1	SAF ratchet wrench	1

SK RLB 9022K Intradisc INTEGRAL steer axle



KNORR CALIPER SN7 - SINGLE WHEELS

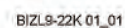


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SK RLB 9022K Intradisc INTEGRAL steer axle

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
3.1	See type plate	1	Steering knuckle LH (See Ident. No. on the type plate)	1
3.2	See type plate	1	Steering knuckle RH (See Ident. No. on the type plate)	1
8	4343101401	1	Bolt steering stop M20	2
9	4342001780	1	Nut M20	2
16	4201000100	1	Grease nipple AM 8x1 - 16mm lg.	2
17	4201000200	1	Grease nipple BM 8x1 -23.5mm lg.	2
20	4230017000	1	Bronze bush ϕ 65/60x70	4
22	1011008800	1	Axle nut RH - M72x1.5 / SW85	1
22.1	1011008700	1	Axle nut LH - M72x1.5 / SW85	1
27	3307303001	1	Hub unit INTEGRAL - 10x335PCD	2
29	4079001304	1	Brake disc INTEGRAL - 430 mm Knorr	2
31	1303112010	1	Wheel Stud M22x1,5x78 - Single Alloy Wheels	20
34	4247301201	1	Wheel nut M22x1.5x27 - SW32	20
39.1	4315007500	1	O-Ring - ϕ 92x4	2
40	3304010201	1	Hub cap	2
40.2	4304010301	1	Hub cap for hubodometer	2
45	4375100512	1	Torx Bolt 12Pt. Head	20
56	4343291410	1	Bolt with collar M16x1.5	10
56.1	4375100410	1	Centering bolt M16x1.5	2
59	3080003001	1	Brake caliper assy, Knorr Bremse (SN7) - RH	1
60	3080003101	1	Brake caliper assy, Knorr Bremse (SN7) - LH	1
63		1	Lining holder kit (incl. 63.1 - 63.4)	2
64	3057007700	1	Brake lining kit (incl. 63, 64.1, 64.2, 65 & 65.1)	1
66	3434381400	1	Tappet kit SN6 & SN7 (incl. 66.1 - 66.3)	2
70	3434381200	1	Guide/Seal kit SN6 & SN7 (incl. 65, 70.1 - 70.3 & 81)	2
70	3434381500	1	Guide/Seal kit SN6 & SN7 (incl. 65, 70.1 - 70.3 & 81) for the Calipers with P. N. 3_080_...._21	2
500	3434365700	1	Repair-kit steering knuckle (incl. 20 & 501-508)	2
506		1	Bolt-kit (incl. 506 & 507)	12
512	3357014000	1	Track rod assembly (incl. 513 - 515 & 519 - 520)	1
514	2205000300	1	Ball joint LH	1
514.1	2205000400	1	Ball joint RH	1
514.2	4202101150	1	Castle nut	2
516	2193002901	1	Axle-lock plate	1
517		1	Clamping bracket	1
518	3341202319	1	Bolt-kit M12 (incl. 519 & 520)	10
522	3341002319	1	Bolt-kit M24 (incl. 523 - 525)	2
523	4343002388	1	Bolt M24 x 3.0 x 110	2
525	4247401480	1	Lock nut M24	2
526	2376101300	1	Shock Absorber	1
527	4454300400	1	Axle-lock cylinder	1
528	4375400188	1	Allen-Screw M6	4
	4434382800	1	Hub nut socket (SW85mm)	1
	4434382200	1	Universal hub puller	1
Tools	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1
	3434332700	1	SAF ratchet wrench	1

Axle BIZL9-22K01 Brake SBK 2243-11S 01



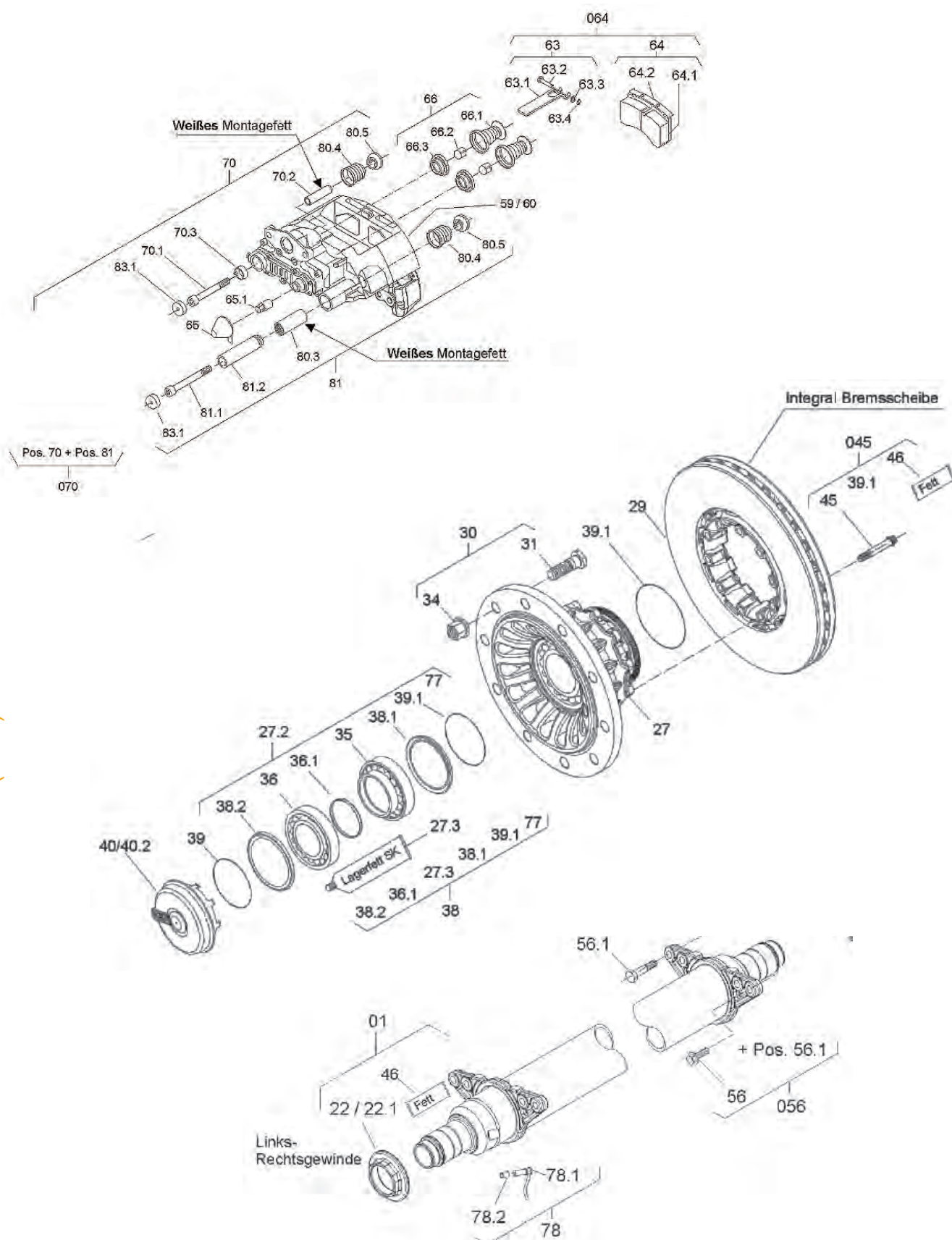
Ident. No 178900674820

Item	Part No.	Qty	Description	Qty per Axle
8	4343101401	1	Screw M20x70	2
9	4342001780	1	Nut M20	2
16	4201000100	1	Grease nipple 16L/AM8x1	4
20	4230017000	1	Bearing bush ø65/60x70	4
22	1011008600	1	Axle nut right M75x1,5/SW85	1
22A	1011008500	1	Axle nut left M75x1,5/SW85	1
27	3307304502	1	Hub unit TK335-10L	2
27B	3434302001	1	Repair kit wheel bearing	2
27C	5387001105	1	Grease LiLube Expert	2
29	4079001304	1	Brake disc INTEGRAL ø 430mm x48 - 10 Stud 335PCD	2
30		1	Wheel bolt assembly Pos. 31, 34	20
31	1303111811	1	Wheel bolt M22x1,5x68	20
34	4247402001	1	Wheel bolt nut M22x1,5x27H/SW32	20
38	3434302401	1	Repair kit grease change Pos. 27.3, 36.1, 38.1, 38.2, 39.1, 77	2
39A	4315007500	1	O-ring ø92x4	2
40	3304010201	1	Hub cap incl. O-Ring S/Z/ZI/BI	2
40B	3304010301	1	Wheel cap assembly / hubodometer S/Z/ZI/BI	2
45		1	Accessories disc brake INTEGRAL RB/BI	2
45	4375100512	1	Double hex bolt M12x1,5x75	20
46	5387002309	1	Grease RENOLIT PASTE AZ0-1 / 5g Beute	2
56	3434366000	1	Brake calliper fixing bolts Pos. 56, 56.1 (4 bolts)	2
56	4375100610	1	Double hex bolt M18x1,5x55	6
56A	4375100810	1	Pivot retaining bolt M18x1,5x55	2
59	3080006001	1	Brake calliper assembly right SBK2243 01	1
60	3080005901	1	Brake calliper assembly left SBK2243 01	1
64	3057008500	1	Brake lining kit 22,5" - Pos. 63, 64.1, 64.2	1
65		1	Adjusting cap (Knorr) Pos. 65.1 (65A)	2
66	3434381400	1	Thrust member SN/SK Pos. 66.1, 66.2, 66.3 Caliper Repair Kit	2
70	3434381500	1	Guide/seal kit SK7, (SN7 ab Ausf. 3 080...21) Caliper Repair Kit SK7	2
78	3029023100	1	ABS Sensor (VGL.Nr. 441 032 921 2) Pos. 78.1, 78.2	2
78A		1	Sensor -Modul-	2
78B	4029101300	1	Clamping bush - Sensor	2
501		1	Steering bolt ø60x298 - VSE	2
502		1	Thrust plate ø90/62x9,8	2
503		1	Thrust plate unten / down	2
504		1	O-ring ø84x11	4
505		1	Cover plate ø100x6/TK80	4
505A		1	Gasket ø100/64,5x0,5	4
507		1	Screw M8x22-KL90	12
512	3357020400	1	Track rod assembly ø58x1380	1
514	2205000300	1	Ball joint left Konus 38	1
514A	2205000400	1	Ball joint right Konus 38	1
514B	4202101150	1	Castle nut M30x1,5	2
518	3341202319	1	Screw assembly M12x1,5x62	4
519		1	Screw M12x1,5x62	4
520		1	Safety flange M12x1,5	4

Axle BI9-22K01 Brake SBK 2243 01 (SK7)



Ident. No 147910674920



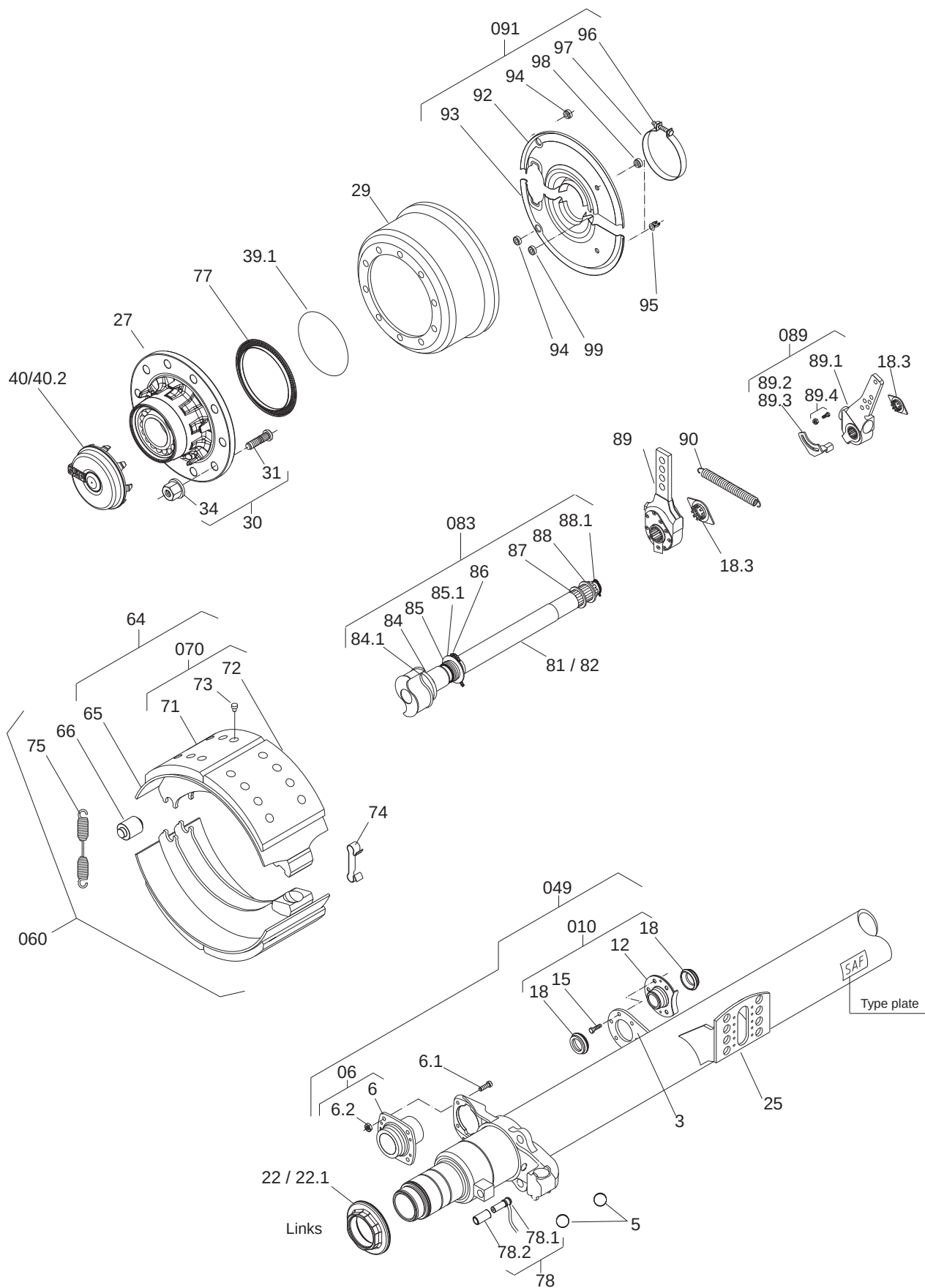
Axle BI9-22K01 Brake SBK 2243 01 (SK7)

Ident. No 147910674920

Item	Part No.	Qty	Description	Qty per Axle
22	1011008600	1	Axle nut right M75x1,5/SW85	1
22.1	1011008500	1	Axle nut left M75x1,5/SW85	1
27	3307304502	1	Hub unit TK335-10L - 10 Stud 335PCD	2
27.2	3434402001	1	Repair kit wheel bearing	2
29	4079001304	1	Brake disc INTEGRAL ø 430mm x48	2
31	1303112010	1	Wheel bolt M22x1,5x78	20
34	4247301201	1	Wheel bolt nut M22x1,5x27H/SW32	20
38	3434402001	1	Repair kit grease change Pos. 27.3, 36.1, 38.1, 38.2, 39.1, 77	2
39.1	4315007500	1	O-ring ø92x4	2
40	3304010201	1	Hub cap incl. O-Ring S/Z/ZI/BI	2
40.2	3304010301	1	Wheel cap assembly / hubodometer S/Z/ZI/BI	2
45		1	Accessories disc brake INTEGRAL RB/BI	2
45	4375100512	1	Double hex bolt M12x1,5x75	20
46	5387002309	1	Grease RENOLIT PASTE AZO-1 / 5g Beute	2
56	4375100610	1	Double hex bolt M18x1,5x55	6
56	3434366000	1	Brake calliper fixing bolts Pos. 56, 56.1	2
56.1	4375100810	1	Pivot retaining bolt M18x1,5x55	2
59	3080005901	1	Brake calliper assembly left SBK2243 01	1
60	3080006001	1	Brake calliper assembly right SBK2243 01	1
64	3057008500	1	Brake lining kit 22,5" - Pos. 63, 64.1, 64.2	1
65		1	Adjusting cap (Knorr) Pos. 65.1 (65A)	2
66	3434381400	1	Thrust member SN/SK Pos. 66.1, 66.2, 66.3 Caliper Repair Kit	2
70	3434381500	1	Guide-/seal kit SK7, (SN7 ab Ausf. 3 080...21) Caliper Repair Kit	2

Z9-4218 NG axle (used on Intradrum)

DRUM BRAKE 420X180 - 10X285.75PCD - DUAL WHEELS



Z9-4218 NG axle (used on Intradrum)

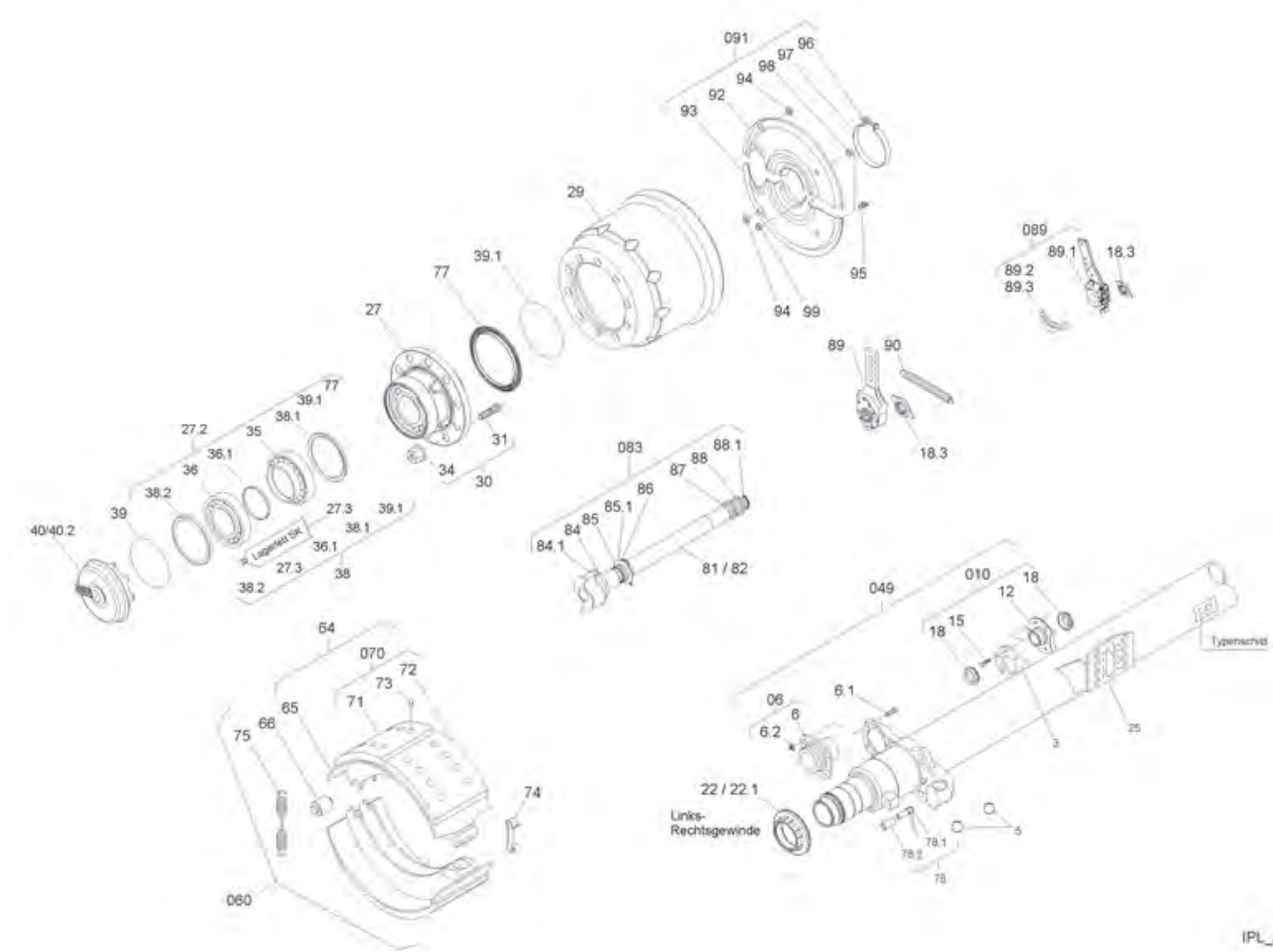
Z9-4218 NG axle (used on Intradrum)

DRUM BRAKE 420X180 - 10X285.75PCD - DUAL WHEELS

Item	Part No.	Qty	Description	Qty per Axle
1	IUZ094218-8	1	IU - Intradrum - complete axle module with brakes	1
1	IOZ094218-8	1	IO - Intradrum - complete axle module with brakes	1
4	4337202800	1	Rubber plug - ABS	2
5	4199100200	1	Anchor ball 40 mm	4
06	3268005000	1	S-cam bush kit - SNK 420/367 (Incl. Pos. 6 & 6.2)	2
6.1	4051700110	1	Bolt M8x25	8
010	3268004700	1	Inner S-cam bush kit (Incl. Pos. 12-18)	2
18.3	4187001000	1	Wear indicator - S-Cam	2
22	1011008600	1	Hub nut M75x1.5 - RH - (spanner 85 mm)	1
	40445	1	Locking mechanism for spindle nut	1
	3434302500	1	Seal Kit	1
	3434301918	1	Bearing and seal kit	1
22.1	1011008500	1	Hub nut M75x1.5 - LH - (spanner 85 mm)	1
27	3307305700	1	Hub unit - Intradrum - 10x285.75PCD	2
27	3307305200	1	Hub unit - Intradrum - 10x335PCD	2
29	1064029800	1	Brake drum - ϕ 420x180 - 10x285.75PCD	2
29	1064026002	1	Brake drum - ϕ 420x180 - 10x335PCD	2
30	3302114500	1	Wheel bolt kit (Incl. Pos. 31 & 34)	1
31	1303111210	1	Wheel bolt M22x1.5X112	20
34	4247301201	1	Wheel nut M22x1.5X27 - (spanner 32 mm)	20
39.1	4315007500	1	O-ring - ϕ 92x4	2
40	3304010201	1	Hubcap - with O-ring	2
	4315008200	1	Hub cap O-ring	1
	4373004700	1	Outer Seal	1
40.2	4304010301	1	Hubcap for hubodometer - with O-ring	2
049	3434365200	1	Camshaft Repair Kit	2
64	3055012000	1	Brake shoe assembly - with lining	4
66	1265001900	1	Cam roller	4
70	3057396000	1	Brake lining kit (Incl. Pos. 71-73)	1
74	1151000800	1	Retaining clamp	2
75	1447005801	1	Return spring	2
77	4029107000	1	ABS pole-wheel - 90	2
78	3029023100	1	ABS kit (Incl. Pos. 78.1, 78.2 & Renolit paste)	2
81	2262111502	1	Camshaft LH - 698 mm	1
82	2262111402	1	Camshaft RH - 698 mm	1
83	3317001600	1	Camshaft replacement kit (Incl. Pos. 85-88.1 & 18.3)	2
89	4175031400	1	Slack adjuster	2
89	3434350202	1	Auto-slack adjuster kit (Incl. Pos. 89.1-89.3 & 18.3)	1
89.2	4018006301	1	Bracket Anchor LH	1
89.3	4018006401	1	Bracket Anchor RH	1
90	1447003600	1	Return spring	2
91	3005017300	1	Dust cover pair (Incl. Pos. 92-94 & 96-99)	2
95		1	Cable clip	2
Tools	4434382800L	1	Hub nut socket (SW85mm) for NG axles (2501880)	1
	2501871	1	Universal hub puller	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1

Z9-4218 NG axle (used on Intradrum)

Z9-3720 Brake SNK 367 X 200



IPL_Z9-3720_02

Z9-3720 Brake SNK 367 X 200

Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
3		1	Spherical mounting plate	SNK 367	2
5	4199100200	1	Ball	ø40	4
6	3268005000	1	Compact cam bearing anchor bracket	SNK420/367	2
6		1	Camshaft bearing	SNK420/367	2
6.1	4051700110	1	Bolt	M8x25	8
6.2		1	Safety flange	M8-10	8
10	3268004700	1	Compact cam bearing anchor bracket		2
12		1	Camshaft bearing		2
15		1	Screw	M8x22-KL90	10
18	4131000800	1	Bellow (Knorr) - Rubber boot	ø60/36,6x17	4
18.3	4187001000	1	Wearing gauge		2
22	1011008500	1	Axle nut left	M75x1,5/SW85	1
22.1	1011008600	1	Axle nut right	M75x1,5/SW85	1
25		1	Brake cylinder support		2
27	3307305001	1	Hub unit - 8 Stud 275PCD	TK275/8	2
27.2	3434401900	1	Repair kit hub unit		2
27.3	5387003104	1	Grease	LiLube Expert	2
29	1064027700	1	Brake drum	260H/367/8-23 TK275	2
30	3302107600	1	Wheel bolt assembly	M22x1,5x31h SW32	16
31	1303107512	1	Wheel bolt	M22x1,5x93	16
34	4247301201	1	Wheel bolt nut	M22x1,5x27H/SW32	16
35		1	Roller bearing	B/S/Z-Serie	2
36		1	Roller bearing	B/S/Z-Serie	2
36.1		1	Holding ring		2
38	3434302500	1	Repair kit grease change		2
38.1		1	Sealing ring (outside)	ø112/138,5x6	2
38.2		1	Sealing ring (inside)	ø112/138,5x11	2
39		1	O-ring	ø139,07x5,33	2
39.1	4315007500	1	O-ring	ø92x4	2
40	3304010201	1	Hub cap incl. O-Ring	S/Z/ZI/BI	2
40.2	3304010301	1	Wheel cap assembly / hubodometer	S/Z/ZI/BI	2
49	3434365200	1	Repair kit camshaft bearing		1
60		1	Brake kit	SNK367x200	1
64	3055012800	1	Brake shoe assembly with linings		4
65		1	Brake shoe assembly without linings		4
66	1265001900	1	Cam roller	ø36,2x53	4
70		1	Brake lining kit	SNK367x200	1
71		1	Brake lining	SNK367x200	4
72		1	Brake lining	SNK367x200	4
73		1	Rivet kit	B8x15	1
74	1151000800	1	Spring clamp	SNK367/420	2
75	1447005801	1	Return spring	ø32,8x232	2
77	4029107000	1	Exciter ring	90 Zähne	2
78	3029023100	1	ABS / WABCO -Modul- (VGL.Nr. 441 032 921 2)		2
78.1		1	Sensor -Modul-		2
78.2	4029101300	1	Clamping bush		2

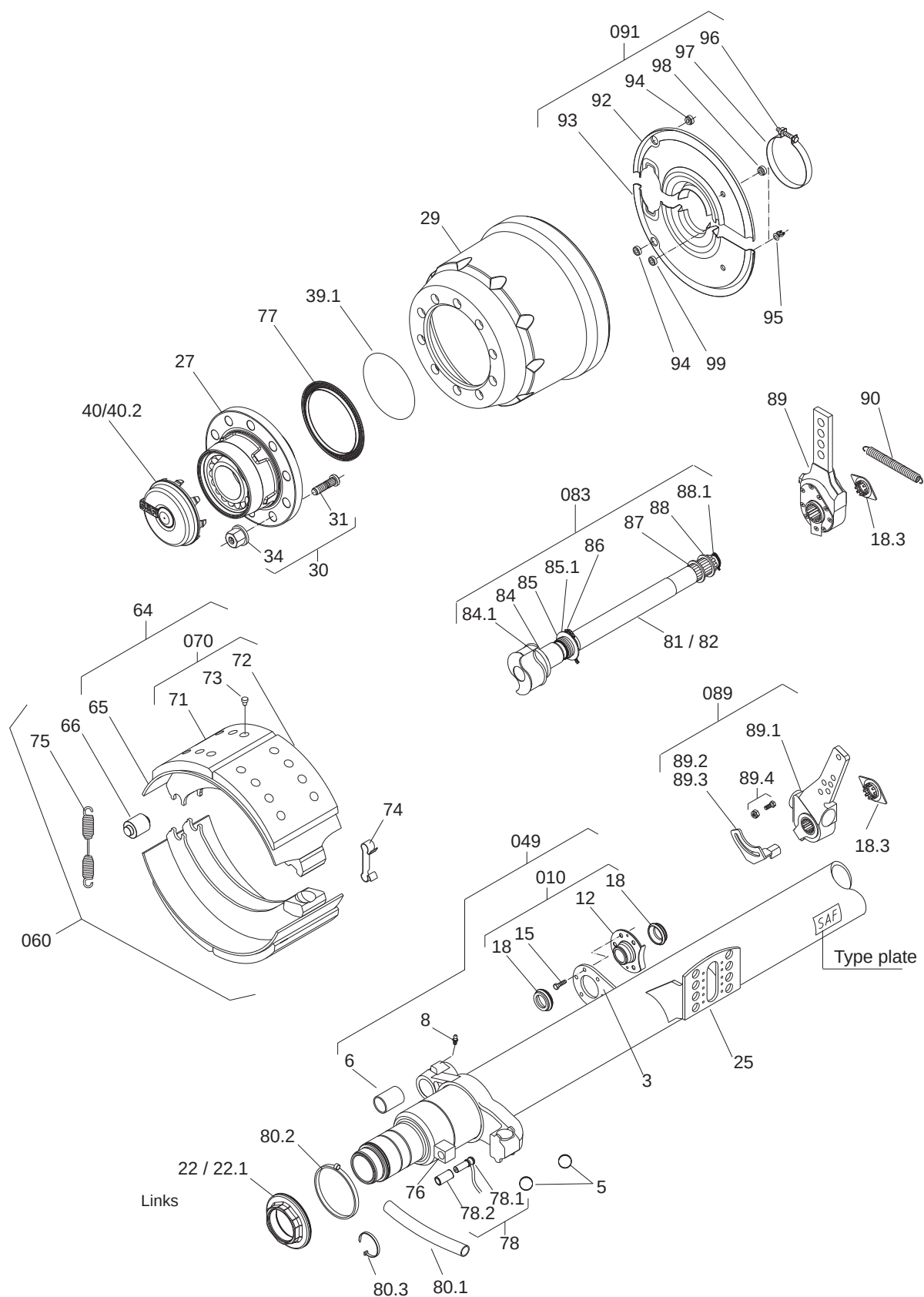
Z9-3720 Brake SNK 367 X 200



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Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
81	2262110902	1	Camshaft left	669	1
82	2262110802	1	Camshaft right	669	1
83	3317001600	1	Repair kit camshaft		2
84		1	O-ring	ø45x4	2
84.1		1	Spacer	52,5/46,7x4	2
85		1	Disc spring	ø63/43x1,75	2
85.1		1	Shaft seal	ø45x60x7	2
86		1	Spring clamp	ø39	2
87		1	Washer (Knorr)	ø51/38,8x1,5	2
88		1	Washer (Knorr)	ø51/28,1x1,5	6
88.1		1	Spring clamp	ø23	2
89	2175029400	1	Slack adjuster		2
89		1	Automatic slack adjuster assembly	SAF	2
89.1		1	Slack adjuster	S-ASA5	2
89.2		1	Anchor bracket left		1
89.3		1	Anchor bracket right		1
89.4	3341102200	1	Screw assembly	M8x30	4
90	1447003700	1	Return spring	ø25,8x2,8x148	2
91	3005017100	1	Dust shield assembly		2
92		1	Dust shield left		2
93		1	Dust shield right		2
94	4337200801	1	Protecting cap (Wabco)	ø31,75x9,52	4
95		1	cable holder		2
96	4343107588	1	Screw	M8x40	2
97	4194202500	1	Band clamp	ø130x20	2
98	4337202700	1	Protecting cap		4
99	4177301800	1	Rubber funnel ABS	ø18x8	2

Z9-3720 Brake SNK 367 X 200



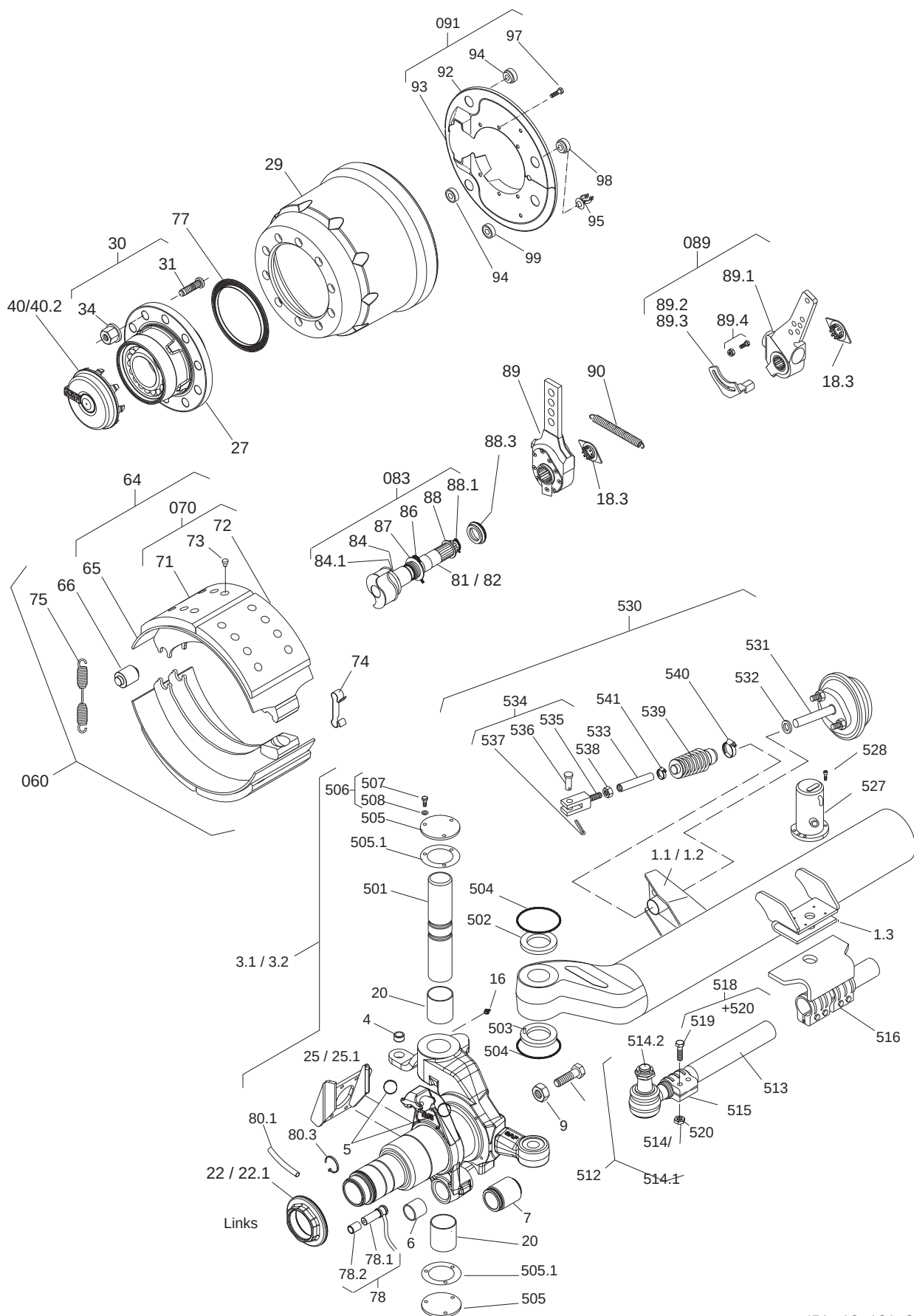
Z11-3020 low loader NG axle



DRUM BRAKE 300X200 - DUAL WHEELS – *continued*

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
5	4199100200	1	Anchor ball 40mm	4
6	4230018000	1	Cam bronze bush - $\phi 50/46 \times 40$	2
8	4201000100	1	Grease nipple AM 8x1 - 16 lg.	4
10	3268004700	1	Camshaft bearing assembly (incl. 12-18)	2
18.3	4187001000	1	Wear indicator	2
22	1011008600	1	Axle nut RH - M75x1.5 (spanner 85 mm)	1
22.1	1011008500	1	Axle nut LH - M75x1.5 (spanner 85 mm)	1
27	3307304600	1	Hub unit assembly - 10x225PCD	2
29	1064027300	1	Brake drum - $\phi 300 \times 200$ - 10x225PCD	2
31	1303107512	1	Wheel bolt - M22x1,5x 93	20
34	4247301201	1	Wheel nut - M22x1,5 x27	20
39.1	4315007500	1	O-Ring - $\phi 92 \times 4$	2
40	3304010201	1	Hub cap	2
40.2	4304010301	1	Hub cap for hubodometer	2
49		1	Camshaft bushing repair kit (incl. 6-8, 010, 18.3, 84-88.1 & 90) Use 010 + 6	1
64	3055012901	1	Brake shoe assembly with linings	4
66	1265001900	1	Cam-roller	4
70		1	Brake lining kit (incl. 71-73)	1
74	1151001300	1	Retaining clamp	2
75	1447006000	1	Return spring	2
77		1	ABS Pole wheel - 80	2
80.1		1	Cable protect. hose	2
80.2		1	Band clamp	2
80.3		1	Fastener ring	2
81	2262150300	1	Camshaft LH - 497.5mm long	1
82	2262150400	1	Camshaft RH - 497.5mm long	1
83	3317001600	1	Camshaft kit (incl. 84-88.1 & 18.3)	2
89	2175029400	1	Slack adjuster - manual	2
89	3434350202	1	Auto-Slack adjuster kit (incl. 89.1-89.3 & 18.3)	1
90	1447002502	1	Return spring	2
91	3005016100	1	Dust cover kit (incl. 92-94 & 96-99)	2
95		1	Cable clip	2
96	3434402100	1	Bearing Repair Kit	2
	4434382800L	1	Hub nut socket (SW85mm) for NG Axles	1
Tools	2501875	1	Universal hub puller	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1

Z11-3020 low loader NG axle



ZL11-3020 low loader NG steer axle

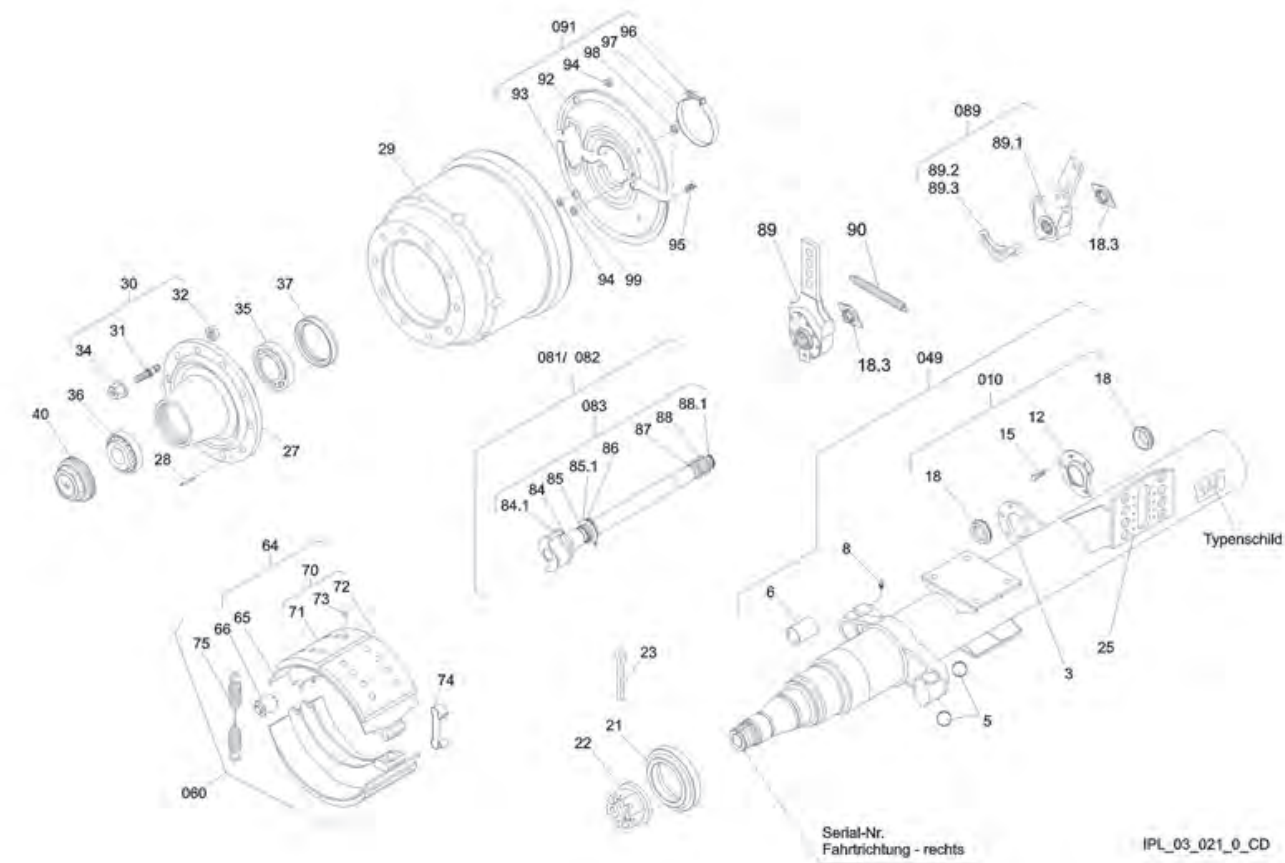


DRUM BRAKE 300X200 - DUAL WHEELS – *continued*

ZL11-3020 low loader NG steer axle

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
3.1	a.r.	1	Steering knuckle LH (See Ident. No. on the type plate)	1
3.2	a.r.	1	Steering knuckle RH (See Ident. No. on the type plate)	1
4		1	Bush $\phi 25/18 \times 14.5$	2
5	4199100200	1	Anchor ball 40mm	4
6	4230018000	1	Cam bronze bush $\phi 50/46 \times 40$	2
7	1230010604	1	Camshft.bronze bush $\phi 42/38.1 \times 44.9$	2
8	4343101401	1	Bolt steering stop M20x70	2
9	4342001780	1	Nut M20	2
16	4201000100	1	Grease nipple AM 8x1 - 16mm lg.	6
17	4201000200	1	Grease nipple BM 8x1 - 23.5mm lg.	2
18.3	4187001000	1	Wear indicator	2
20	4230017000	1	Bronze bush $\phi 65/60 \times 70$	4
22	1011008600	1	Axle nut RH - M75x1.5 (spanner 85 mm)	1
22.1	1011008500	1	Axle nut LH - M75x1.5 (spanner 85 mm)	1
27	3307304600	1	Hub unit assembly - 10x225PCD	2
29	1064027300	1	Brake drum - $\phi 300 \times 200$ - 10x225PCD	2
31	1303107512	1	Wheel bolt - M22x1,5x 93	20
34	4247301201	1	Wheel nut - M22x1,5 x27	20
40	4304010200	1	Hub cap	2
60	3434365500	1	Brake Kit SNK 300x200 (incl. 64, 74 & 75)	1
64	3055012901	1	Brake shoe assembly with linings	4
66	1265001900	1	Cam-roller	4
70		1	Brake lining kit (incl. 71-73)	1
74	1151001300	1	Retaining clamp	2
75	1447006000	1	Return spring	2
77		1	ABS Pole wheel - 80	2
81	2262150100	1	Camshaft LH - 258.5mm long	1
82	2262150200	1	Camshaft RH - 258.5mm long	1
83	3317001600	1	Camshaft kit (incl. 84-88.1 & 18.3)	2
89	3434350601	1	Auto-Slack adjuster kit (incl. 89.1-89.4 & 18.3) Axle Ident No. 171_11_07_1_67_1	1
89		1	Auto-Slack adjuster kit (incl. 89.1-89.4 & 18.3) Axle Ident No. 171_11_08_1_67_1	1
90	1447002502	1	Return spring - Axle Ident No. 171_11_07_1_67_1	2
90	1447003600	1	Return spring - Axle Ident No. 171_11_08_1_67_1	2
91	3005018300	1	Dust cover kit (incl. 92-94 & 97-99)	2
95		1	Cable clip	2
500	3434365700	1	Repair-kit steering knuckle (incl. 20 & 501-508)	2
500.1		1	Repair-kit steering knuckle (incl. 20, 502-507, 539, 540 & 541)	1
512	3357014300	1	Track rod assembly (incl. 513-515 & 519-520)	1
516		1	Axle-lock plate	1
527	4454300400	1	Axle-lock cylinder	1
528	4375400188	1	Allen-Screw M6x20	4
530	3233001400	1	Stabilizing kit assembly (incl. 531-541)	2
531		1	Stabilizing chamber 30"	2
532		1	Spherical washer	2

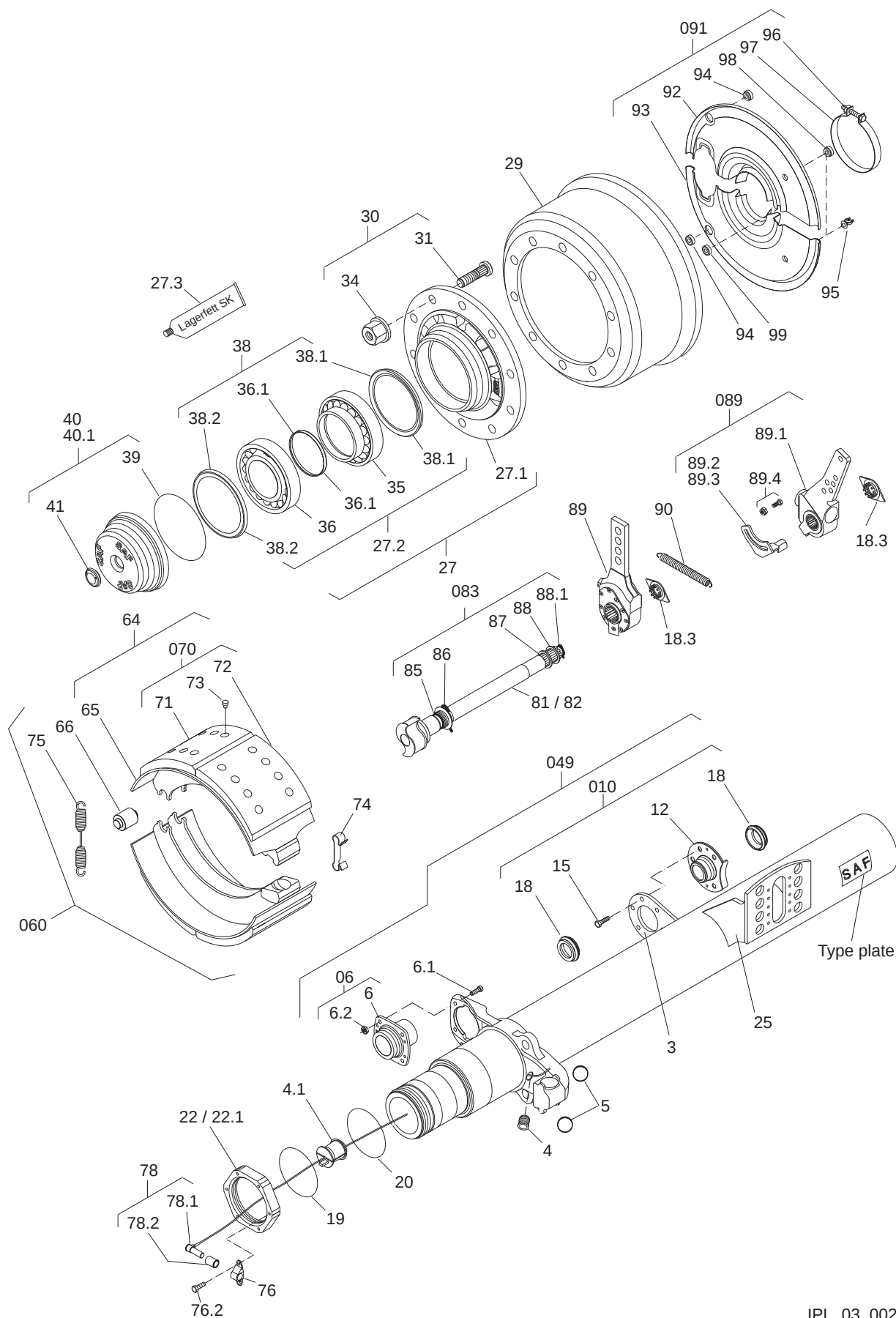
Item	Part No.	Qty	Description	Qty per Axle
533	1103002000	1	Push-rod - L=370mm	2
534	3161001100	1	Clevis set	2
535	1161001100	1	Clevis	2
536	1051200200	1	Clevis pin	2
537	4353000900	1	Split-pin	2
538	4342100880	1	Nut M20	2
539	1131000400	1	Rubber collar	2
540	1194000700	1	Clamp band	2
541	1194000800	1	Clamp band	2
Tools	4434382800	1	Hub nut socket (SW85mm) for NG Axles	1
	4434382200	1	Universal hub puller	1
	4387001506	1	SAF fitting paste (to be applied on spindles)	1



Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
3	1043101300	1	Spherical mounting plate	SNK420	2
5	4199100200	1	Ball	ø40	4
6	4230018000	1	Bearing bush	ø50/46x40	2
8	4201000100	1	Grease nipple	16L/AM8x1	2
10	3268004700	1	Compact cam bearing anchor bracket		2
12		1	Camshaft bearing		2
15	4343291201	1	Screw	M8x22-KL90	10
18	4131000800	1	Bellow (Knorr)	ø60/36,6x17	4
18.3	4187000900	1	Wearing gauge		2
21	1368006300	1	Race washer	180/109,9x45	2
22	1011007900	1	Axle nut	M60x2/56H/SW85	2
23	4353001600	1	Cotter pin (Knorr)	10x80	2
25	1171138102	1	Brake cylinder support		2
27	2307105400	1	Hub		2
28	1198000600	1	Drive pin	ø6x19,5	2
29	1064029200	1	Brake drum	287H/420/10-23 TK335	2
30	3302102800	1	Wheel bolt assembly	M22x2x25h SW32	20
31	1303102811	1	Wheel bolt	M22x2/M22x2x108	20
32	4342000910	1	Nut	M22x2x17H	20
34	4342001510	1	Nut	M22x2x25H	20
35	4200002800	1	Roller bearing	32221A 105/190x53	2
36	4200003400	1	Roller bearing	32314A 70/150x54	2
37	4373000600	1	Shaft seal	ø180x200x15 B2	2
40	1304001900	1	Wheel cap	M155x3/75H/SW130	2
49	3434364001	1	Repair kit camshaft bearing		1
60	3434365400	1	Brake kit	SNK420x200	1
64	3055012200	1	Brake shoe assembly with linings		4
65	3054012200	1	Brake shoe assembly without linings		4
66	1265001900	1	Cam roller	ø36,2x53	4
70	3057396600	1	Brake lining kit	SNK420x200	1
71		1	Brake lining	SNK420x200	4
72		1	Brake lining	SNK420x200	4
73	3267000764	1	Rivet kit	B8x15	1
74	1151000800	1	Spring clamp	SNK367/420	2
75	1447005801	1	Return spring	ø32,8x232	2
76	1189002201	1	Holder	30x25x60	2
76.2	4375401388	1	Screw	M8x30	4
77	4029103100	1	Exciter ring	100 Zähne	2
78	3029023100	1	ABV / WABCO -Modul- (VGL.Nr. 441 032 921 2)		2
78.1	3029100290	1	Sensor -Modul-		2
78.2	4029101300	1	Clamping bush		2
80.1	4338001000	1	Protective hose	17x1,5x250	2
80.2	4194202100	1	Collar	ø140-160x9	2
80.3	1194400100	1	Clamp ring	ø24,5/21,5x6	2

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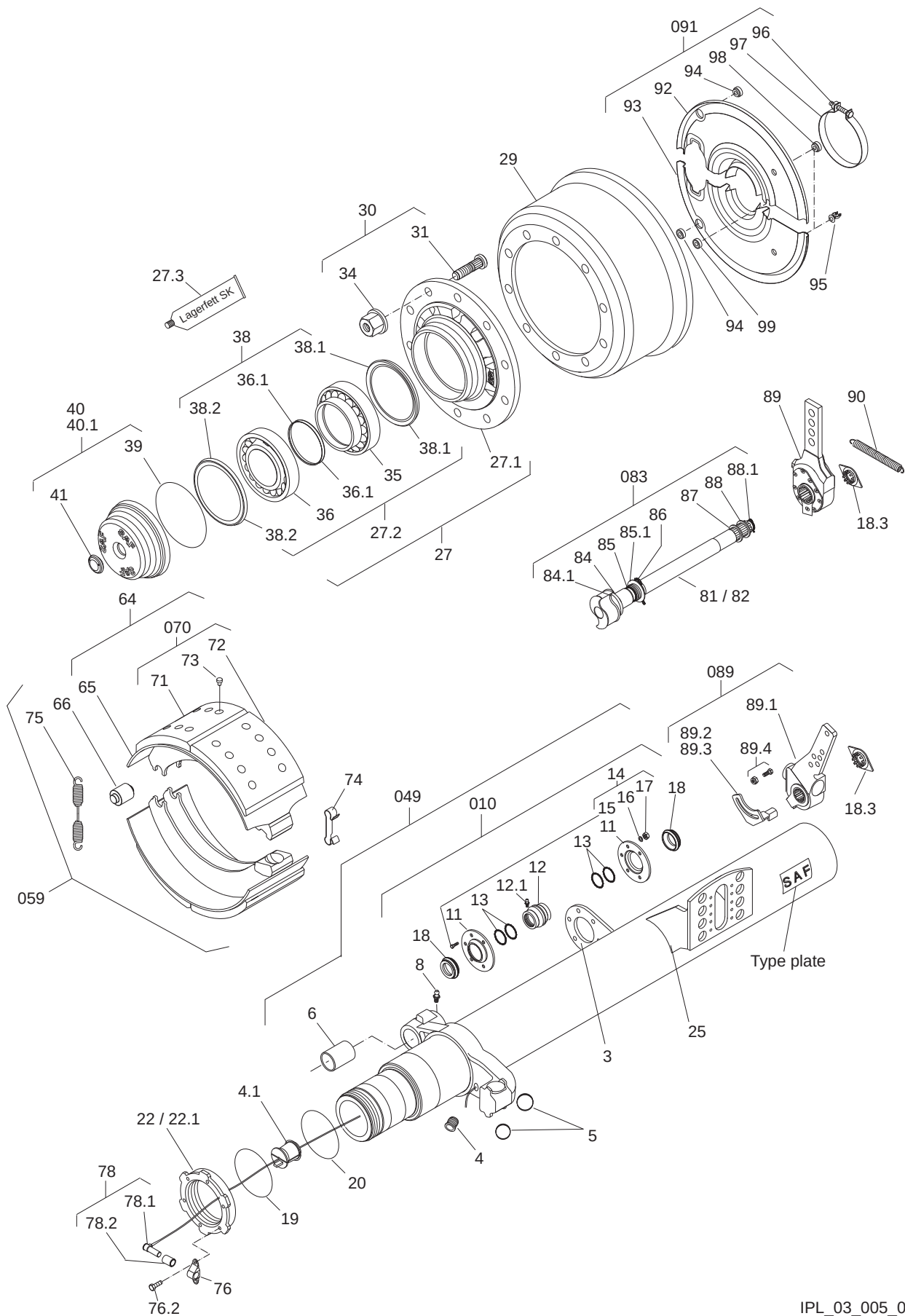
Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
81		1	Camshaft assembly left (SNK420/367)		1
82		1	Camshaft assembly right (SNK420/367)		1
83	3317001600	1	Repair kit camshaft		2
84		1	O-ring	ø45x4	2
84.1		1	Spacer	52,5/46,7x4	2
85		1	Disc spring	ø63/43x1,75	2
85.1		1	Shaft seal	ø45x60x7	2
86		1	Spring clamp	ø39	2
87		1	Washer (Knorr)	ø51/38,8x1,5	2
88		1	Washer (Knorr)	ø51/28,1x1,5	6
88.1		1	Spring clamp	ø23	2
89	2175029400	1	Slack adjuster		2
89	3434350204	1	Automatic slack adjuster assembly	SAF	1
89.1	4175037400	1	Slack adjuster	S-ASA5	2
89.2		1	Anchor bracket left		1
89.3		1	Anchor bracket right		1
89.4	3341102200	1	Screw assembly	M8x30	4
90	1447003600	1	Return spring	ø22,5x2,5x185	2
91	3005017301	1	Dust shield assembly		2
92		1	Dust shield left	SNK420	2
93		1	Dust shield right	SNK420	2
94	4337200801	1	Protecting cap (Wabco)	ø31,75x9,52	4
95	4189004400	1	cab holder		2
96	4343107588	1	Screw	M8x40	2
97	4194202301	1	Claming piece	ø149x20	2
98	4337202700	1	Protecting cap		4
99	4177301800	1	Rubber funnel ABS	ø18x8	2



IPL_03_002_0

DRUM BRAKE 420X180/200 - DUAL WHEELS – *continued*

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
3	1350200104	1	Cam bushing lock plate	2
4	4337202800	1	ABS Protection plug	2
4.1	4337202900	1	ABS cable plug (inside of spindle)	2
5	4199100200	1	Anchor ball - 40mm	4
6	3268005000	1	Cam bush unit - SNK420/367 - (incl. 6 & 6.2)	2
6.1	4051700110	1	Locating bolt - M8x25	8
10	3268004700	1	Camshaft bush & fixing kit - (incl. 12-18)	2
18.3	4187001000	1	Wear indicator	2
19	4315005200	1	Axle nut lock O-Ring ϕ 116x3	2
20	4315005600	1	Spindle O-Ring ϕ 110x2	2
22	1011007001	1	Axle nut RH - M120x2/SW140	1
22.1	1011007101	1	Axle nut LH - M120x2/SW140	1
27	3307301600	1	Hub-unit 10x285.75PCD - (incl. 27.1, 35, 36, 36.1, 38.1 & 38.2)	2
27	3307301500	1	Hub-unit 10x335PCD - (incl. 27.1, 35, 36, 36.1, 38.1 & 38.2)	2
27.2	3434301201	1	Hub-Bearing repl. Kit - (incl. 20, 27.3, 35, 36, 36.1 & 38)	2
27.3	5387001105	1	Bearing grease pack	2
29	1064029800	1	Brake drum - SNK420x180 - 10x285.75PCD	2
29	1064026002	1	Brake drum - SNK420x180 - 10x335PCD	2
29	1064027000	1	Brake drum - SNK420x200 - 10x335PCD	2
31	1303111210	1	Wheel bolt - Alloy Wh. - M22x1,5x112	20
34	4247301201	1	Wheel nut - M22x1,5 x27	20
38	3434301401	1	Hub seal kit - (incl. 20, 27.3, 36.1, 38.1 & 38.2)	1
39	4315005400	1	Hub cap O-Ring ϕ 182x4	2
40	3304007200	1	Hub cap assembly - Without ABS pole wheel - (Incl. 39-41)	2
40	3304007600	1	Hub cap assembly- With ABS pole wheel - (Incl. 39-41)	2
N.A.	1094003701	1	Hubodometer installation washer	1
41	4337202602	1	Protection plug	2
64	3055012000	1	Brake shoe assembly with linings - SNK420x180	4
64	3055012200	1	Brake shoe assembly with linings - SNK420x200	4
66	1265001900	1	Cam-roller	4
70	3057396000	1	Brake lining kit - (incl. 71-73) - SNK420x180	1
70	3057396600	1	Brake lining kit - (incl. 71-73) - SNK420x200	1
74	1151000800	1	Retaining clamp	2
75	1447005801	1	Return spring	2
76	4189005100	1	Sensor mount bracket	2
76.2	4343206700	1	Sensor mount screw M6x12 (self tapping)	4
81	2262111502	1	Camshaft LH - 698mm	1
82	2262111402	1	Camshaft RH - 698mm	1
83	3317001600	1	Camshaft replacement kit - (incl. 85-88.1 & 18.3)	2
89	3434350202	1	Auto-Slack adjuster kit - (incl. 89.1-89.3 & 18.3)	1
90	1447003600	1	Return spring	2
91	3005017300	1	Dust cover pair - (incl. 92-94 & 96-99)	2
95	4189004400	1	Cable clip	2
Tools	1012002400	1	Hub nut socket (SW 140 mm)	1
	2501871	1	Universal hub puller	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1



IPL_03_005_0

SK RZ 9037 axle (before 14.02.98)



DRUM BRAKE 367X200/180 - DUAL WHEELS – *continued*

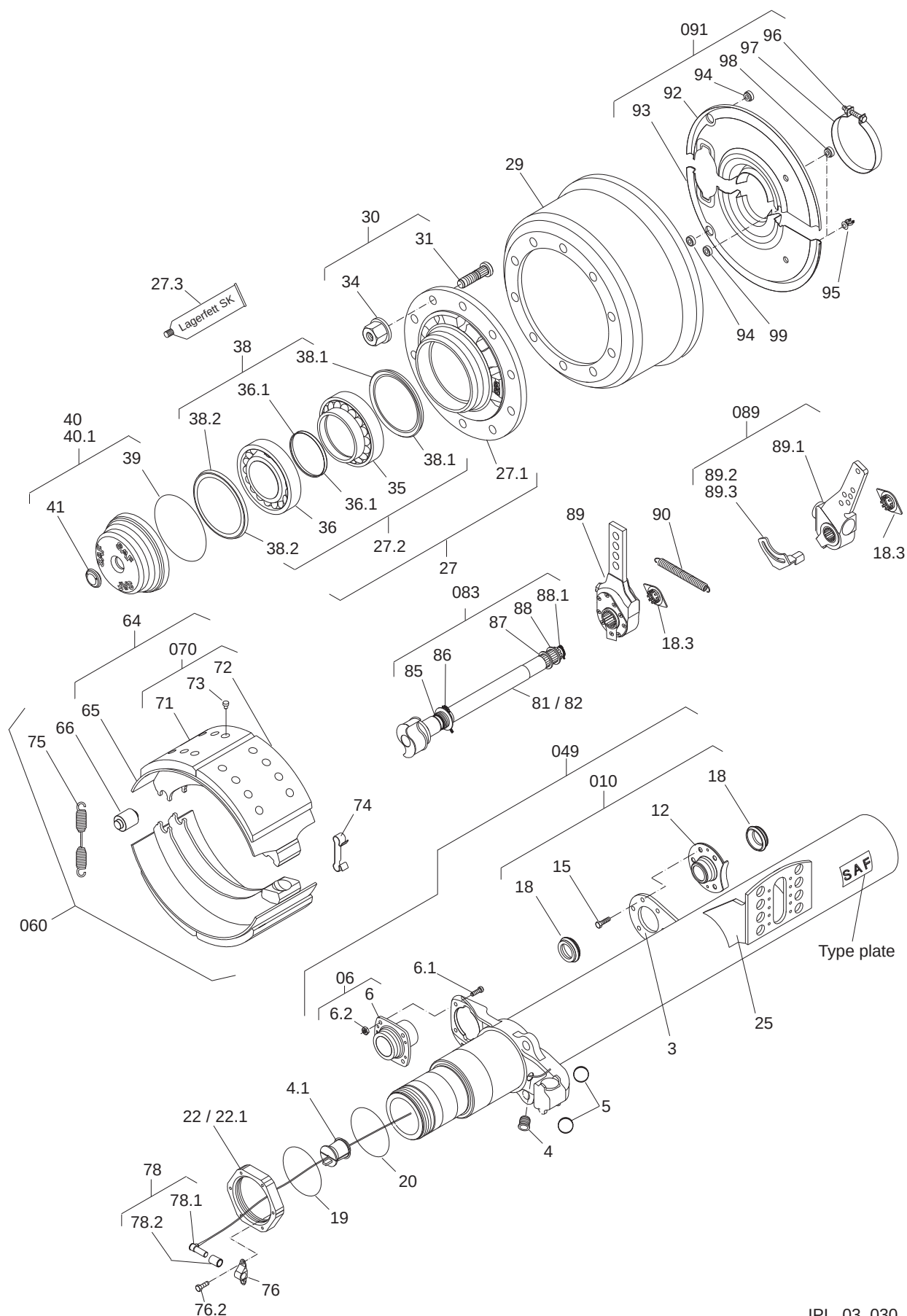
Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
4	4337202800	1	ABS Protection plug	2
4.1	4337202900	1	ABS cable plug (inside of spindle)	2
5	4199100200	1	Anchor ball - 40mm	4
6	4230018000	1	Cam bronze bush $\phi 50/46 \times 40$	2
8	4201002600	1	Grease nipple - M8x36	2
12	3230100204	1	Camshaft bearing with 12.1 & 13	2
15	4343102288	1	Hex bolt - M8x30	12
16	4141000100	1	Spring washer - A8	12
17	4342001380	1	Hex nut - M8	12
18	4131000800	1	Camshaft bellows	4
18.3	4187001000	1	Wear indicator	2
19	4315006000	1	Axle nut lock O-Ring $\phi 96 \times 3$	2
20	4315006600	1	Spindle O-Ring $\phi 90 \times 2.5$	2
22	1011007600	1	Hub nut RH-thread - M100x2 / SW140	1
22.1	1011007700	1	Hub nut LH-thread - M100x2 / SW140	1
27	3307301000	1	Hub-unit - Dual steel wh. 8x275PCD - (incl. 27.1, 35, 36, 36.1, 38.1 & 38.2)	2
27	3307301300	1	Hub-unit - Dual alloy wh. 8x275PCD - (incl. 27.1, 35, 36, 36.1, 38.1 & 38.2)	2
27.2	3434301100	1	Hub-Bearing repl. Kit - (incl. 20, 27.3, 35, 36, 36.1 & 38)	2
27.3	5387001105	1	Bearing grease	2
29	1064027700	1	Brake drum - SNK367x200 - 8x275PCD	2
29	1064028000	1	Brake drum - SNK367x180 - 8x275PCD	2
31	1303107512	1	Wheel bolt - Dual steel wheels - M22x1,5x 93	16
31	1303111210	1	Wheel bolt - Dual alloy wheels - M22x1,5x 112	16
34	4247301201	1	Wheel nut - M22x1,5 x27	16
38	3434301300	1	Hub seal kit - (incl. 20, 27.3, 36.1, 38.1 & 38.2)	2
39	4315006100	1	Hub cap O-Ring $\phi 158 \times 4$	2
40	3304007900	1	Hub cap assembly without ABS pole wheel - (incl. 39-41)	2
40.1	5304009000	1	Hub cap assembly with ABS pole wheel - 90 - (incl. 39-41)	2
41	4337202601	1	Plug	2
49	3434364200	1	Camshaft bushing repair kit - (incl. 6/6.2, 010, 18.3, 19-20, 39, 84-88.1 & 90)	1
64	3055012800	1	Brake shoe assembly with linings - SNK367x200	4
66	1265001900	1	Cam roller	4
70	3057397000	1	Brake lining kit - (incl. 71-73) - SNK367x200	1
70	3057316800	1	Brake lining kit - (incl. 71-73) - SNK367x180	1
73	3267000764	1	Rivet kit	1
74	1151000800	1	Retaining clamp	2
75	1447005801	1	Return spring	2
76	4189007100	1	Sensor mount bracket	2
76.2	4343206700	1	Sensor mount screw M6x12 (self tapping)	4
78	3029023200	1	ABV kit (incl. Renolit Paste)	2
81	2262110902	1	Camshaft LH - 669mm	1
82	2262110802	1	Camshaft RH - 669mm	1

SK RZ 9037 axle (before 14.02.98)

Item	Part No.	Qty	Description	Qty per Axle
83	3317001600	1	Camshaft replacement kit - (incl. 85-88.1 & 18.3)	2
89	2175029400	1	Slack adjuster	2
89	3434350202	1	Auto-Slack adjuster kit - (incl. 89.1-89.3 & 18.3)	1
90	1447017100	1	Return spring	2
91	3005017100	1	Dust cover pair - (incl. 92-94 & 96-99)	2
Tools	1012002400	1	Hub nut socket (SW 140 mm)	1
	2501871	1	Universal hub puller	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1

SK RZ 9037 axle (after 15.02.98)

DRUM BRAKE 367X200 - DUAL WHEELS



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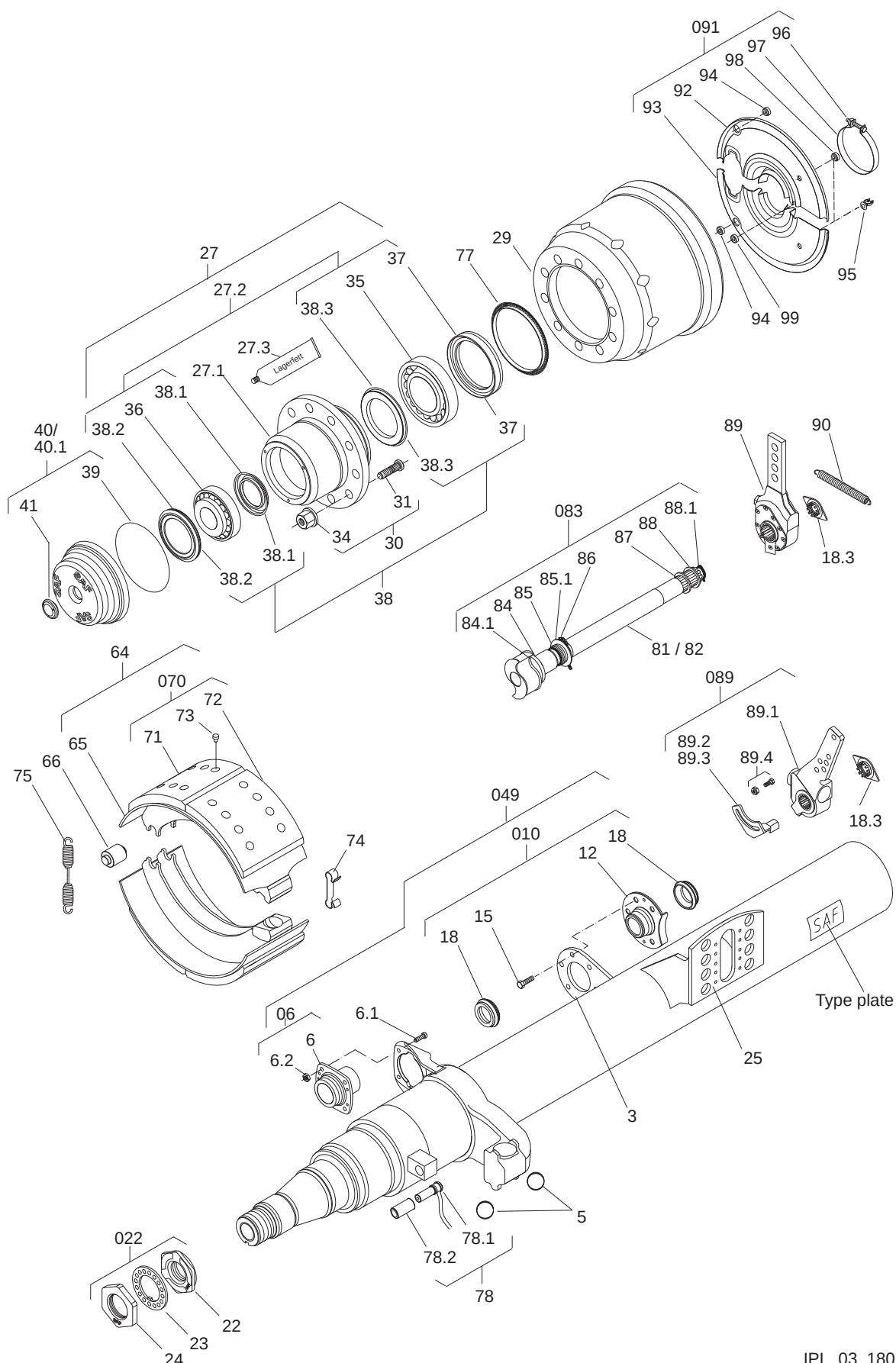
SK RZ 9037 axle (after 15.02.98)

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
4	4337202800	1	ABS Protection plug	2
4.1	4337202900	1	ABS cable plug (inside of spindle)	2
5	4199100200	1	Anchor ball - 40mm	4
6	3268005000	1	Cam bush unit - SNK420/367 - (incl. 6 & 6.2)	2
6.1	4051700110	1	Locating bolt - M8x25	8
10	3268004700	1	Camshaft bush & fixing kit - (incl. 12-18)	2
18.3	4187001000	1	Wear indicator	2
19	4315006000	1	Axle nut lock O-Ring Ø96x3	2
20	4315006600	1	Spindle O-Ring Ø90x2.5	2
22	1011007600	1	Hub nut RH-thread - M100x2 / SW140	1
22.1	1011007700	1	Hub nut LH-thread - M100x2 / SW140	1
27	3307301000	1	Hub-unit - Dual steel wh. 8x275PCD - (incl. 27.1, 35, 36, 36.1, 38.1 & 38.2)	2
27	3307301300	1	Hub-unit - Dual alloy wh. 8x275PCD - (incl. 27.1, 35, 36, 36.1, 38.1 & 38.2)	2
27.2	3434301100	1	Hub-Bearing repl. Kit - (incl. 20, 27.3, 35, 36, 36.1 & 38)	2
27.3	5387001105	1	Bearing grease	2
29	1064027700	1	Brake drum - SNK367x200 - 8x275PCD	2
31	1303107512	1	Wheel bolt -Dual steel wheels - M22x1,5x 93	16
31	1303111210	1	Wheel bolt -Dual alloy wheels - M22x1,5x 112	16
34	4247301201	1	Wheel nut - M22x1,5 x27	16
38	3434301300	1	Hub seal kit - (incl. 20, 27.3, 36.1, 38.1 & 38.2)	2
39	4315006100	1	Hub cap O-Ring Ø158x4	2
40	3304007901	1	Hub cap assembly without ABS pole wheel - (incl. 39-41)	2
40.1	5304009000	1	Hub cap assembly with ABS pole wheel - 90 - (incl. 39-41)	2
41	4337202601	1	Plug	2
49	3434364200	1	Camshaft bushing repair kit - (incl. 6/6.2, 010, 18.3, 19-20, 39, 84-88.1 & 90)	1
64	3055012800	1	Brake shoe assembly with linings - SNK367x200	4
66	1265001900	1	Cam roller	4
70	3057397000	1	Brake lining kit - (incl. 71-73) - SNK367x200	1
74	1151000800	1	Retaining clamp	2
75	1447005801	1	Return spring	2
76	4189007100	1	Sensor mount bracket	2
76.2	4343206700	1	Sensor mount screw M6x12 (self tapping)	4
81	2262110902	1	Camshaft LH - 669mm	1
82	2262110802	1	Camshaft RH - 669mm	1
83	3317001600	1	Camshaft replacement kit - (incl. 85-88.1 & 18.3)	2
89	2175029400	1	Slack adjuster	2
89	3434350202	1	Auto-Slack adjuster kit - (incl. 89.1-89.3 & 18.3)	1
90	1447002502	1	Return spring	2
91	3005017100	1	Dust cover pair - (incl. 92-94 & 96-99)	2
95	4189004400	1	Cable clip	2
Tools	1012002400	1	Hub nut socket (SW 140 mm)	1
	4434382200	1	Universal hub puller	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1

SK RZ 9030 axle



DRUM BRAKE 300X200 - 10 STUD 225 PCD - DUAL WHEELS



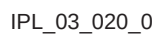
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SK RZ 9030 axle

DRUM BRAKE 300X200 - 10 STUD 225 PCD - DUAL WHEELS

Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
5	4199100200	1	Anchor ball 40mm	4
6	4230018000	1	Cam bronze bush $\phi 50/46 \times 40$	2
8	4201000100	1	Grease nipple AM 8x1 - 16mm lg.	4
10	3268004700	1	Camshaft bearing kit	1
18	4131000800	1	Camshaft bellows	4
18.3	4187001000	1	Wear indicator	2
22	3011004000	1	Axle nut kit	2
22	1011004002	1	Inner axle nut - M56x2, Socket 85	2
23	1345000801	1	Retaining washer	2
24	4011003901	1	Outer axle nut - M56x2 Socket 85	2
27	3307205600	1	Hub unit assembly - 10x225PCD	2
27.2	3434301600	1	Bearing kit (incl. Pos. 27.3, 35, 36, 37 & 38.1 - 38.3)	2
29	1064027300	1	Brake drum - $\phi 300 \times 200$ - 10x225PCD	2
31	1303107512	1	Wheel bolt - M22x1,5x 93	20
34	4247301201	1	Wheel nut - M22x1,5 x27	20
35	4200100600	1	Inner wheel bearing 218 248/210	2
36	4200006000	1	Outer wheel bearing 33213	2
37	4373003501	1	Hub seal	2
38	3434301700	1	Seal kit (incl. Pos. 27.3, 37 & 38.1-38.3)	1
39	4315006400	1	O-Ring - $\phi 148 \times 4$	2
40	3304008600	1	Hub cap assy - (incl. Pos. 39 & 41)	2
41	4337202601	1	Protection plug	2
64	3055012901	1	Brake shoe assembly with linings	4
66	1265001900	1	Cam-roller	4
70		1	Brake lining kit (incl. 71-73)	1
74	1151001300	1	Retaining clamp	2
75	1447006000	1	Return spring	2
81	2262150100	1	Camshaft LH - 662.5mm long	1
82	2262150200	1	Camshaft RH - 662.5mm long	1
83	3317001600	1	Camshaft kit (incl. 84-88.1 & 18.3)	2
89	2175029400	1	Slack adjuster	2
89	3434350202	1	Auto-Slack adjuster kit (incl. 89.1-89.4 & 18.3)	1
90	1447003700	1	Return spring	2
91	3005016100	1	Dust cover kit (incl. 92-94 & 96-99)	2
95		1	Cable clip	2
Tools	4434382800L	1	Hub nut socket	1
	2501871	1	Universal hub puller	1

SK RZ 12342/18 axle



Item	Part No.	Qty	Description	Qty per Axle
1	See type plate	1	Axle beam assembly (See Ident. No. on the type plate)	1
3	4199100200	1	Anchor ball 40mm	4
5	4199100200	1	Anchor ball 40mm	4
6	4199100200	1	Anchor ball 40mm	4
06	3268005000	1	Camshaft bearing assembly	2
6.1	4051700110	1	Bolt (M8x25)	8
6.2	250003	1	Locknut (M8-10)	8
010	3268004700	1	Camshaft bearing assembly (Pos. 12, 15, 18)	2
12		1	Camshaft bearing	2
15		1	Screw (M8x22-KL90)	10
18	4131000800	1	Bellow (ø60/36, 6x17)	4
18.3	4187001000	1	Wearing gauge	2
022	3011004001	1	Axle nut (M56x2/SW85)	2
22	1011004002	1	Axle nut with lock bolt (M56x2/14,5/SW85)	2
23	1345000801	1	Locking plate (ø93/TK74x4,75)	2
24	4011003901	1	Axle nut (M56x2/12H/SW85)	2
27	3307303900	1	Hub unit (10x285.75PCD)	2
27	3307303500	1	Hub unit (10x335PCD) with bearings + Pole Ring	2
27.3	5387001105	1	Grease (RENOLIT LX-PEP 2/230g)	2
29	1064029800	1	Brake drum (ø420x180-10x285.75PCD)	2
29	1064026002	1	Brake drum (ø420x180-10x335PCD)	2
30	3302114500	1	Wheel bolt assembly (M22x1, 5x31h SW32)	20
31	1303111210	1	Wheel bolt (M22x1 5x1/2)	20
34	4247301201	1	Wheel bolt nut (M22x1, 5x27H/SW32)	20
35	4200100600	1	Roller bearing (KHM218248/HM218210) - Inner	2
36	4200006000	1	Roller bearing (33213 65/120x41) - Outer	2
37	4373003501	1	Hub seal	2
38	3434301700	1	Repair kit grease change (Pos. 27.3, 37, 38.1, 38.2, 38.3)	2
38.1	1337004000	1	Protecting cap (ø106/66x15)	2
38.2	1092200100	1	Sealing ring- outside (ø127/86x12)	2
38.3	1092200200	1	Sealing ring- inside (ø143/95x9)	2
39	4315006400	1	O-ring (ø148x4)	2
40	3304008600	1	Hub cap assembly (Pos. 39, 40, 41)	2
N/A		1	Hub cap	2
41	4337202601	1	Plug	2
049	3434364200	1	Repair kit camshaft bearing	1
060	3434365300	1	Shoe kit (SNK420x180)	1
64	3055012000	1	Brake shoe assembly with linings	4
65		1	Brake shoe assembly without linings	4
66	1265001900	1	Cam roller (ø36, 2x53)	4
070	3057396000	1	Brake lining kit (SNK420x180 - Pos. 71-73) - 8 pads	1
71		1	Brake lining (SNK420x180)	4
72		1	Brake lining (SNK420/180)	4
74	1151000800	1	Retaining clamp (SNK367/420)	2
75	1447005801	1	Return spring (ø32, 8x232)	2

SK RZ 12342/18 axle



DRUM BRAKE 420X180 - 10 STUD 285 PCD - DUAL WHEELS

Item	Part No.	Qty	Description	Qty per Axle
76		1	ABS sensor bracket (4kt30x33)	2
77	4029100101	1	Exciter ring (100 teeth) Pole Ring	2
78	3029023100	1	ABS kit (Pos. 78.1, 78.2)	2
78.1		1	Sensor- Modul-	2
78.2	4029101300	1	Clamping bush - ABS	2
81	2262111402	1	Camshaft right- 698mm	1
82	2262111502	1	Camshaft left- 698mm	1
83	3317001600	1	Replacement kit- camshaft	2
89	3434350202	1	Automatic slack adjuster assembly (S-ABA)	2
89.1	4175024900	1	Automatic slack adjuster	2
89.2	4018006301	1	Anchor bracket left	1
89.3	4018006401	1	Anchor bracket right	1
89.4	3341102200	1	Screw assembly(M8x30) Bolt + Nut + Washer	2
90	1447003600	1	Return spring (ø22,5x2,5x185) - Slack Adjuster	2
091	3005017300	1	Dust shield assembly	2
95		1	Cable clip	2

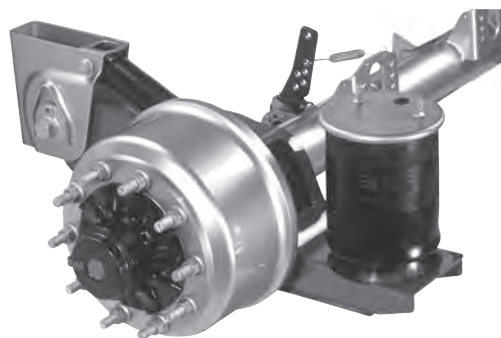
SK RZ 12342/18 axle

INTRADISC



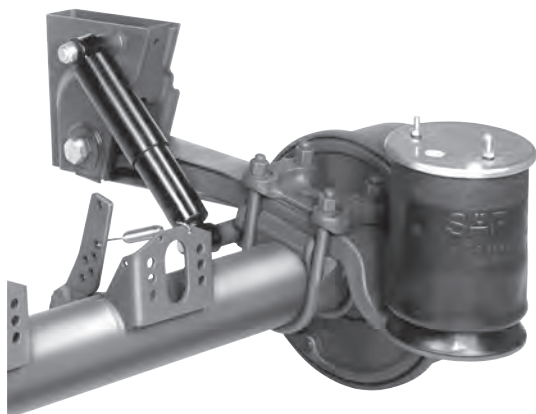
*Welded Bracket Fitment

INTRADRUM



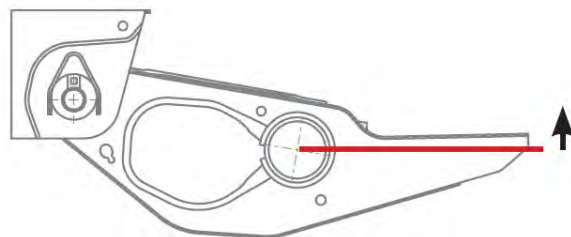
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MODUL

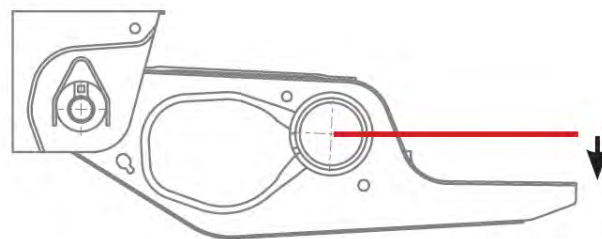


*U Bolt Fitment

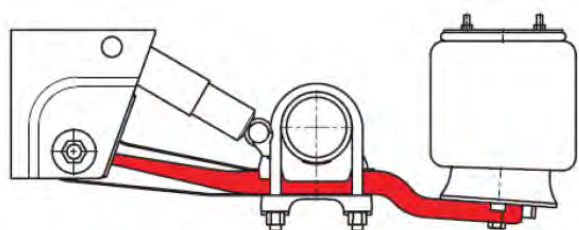
OVERSLUNG



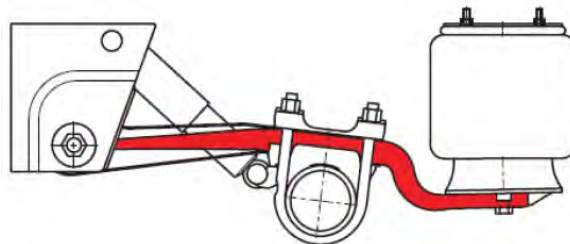
UNDERSLUNG

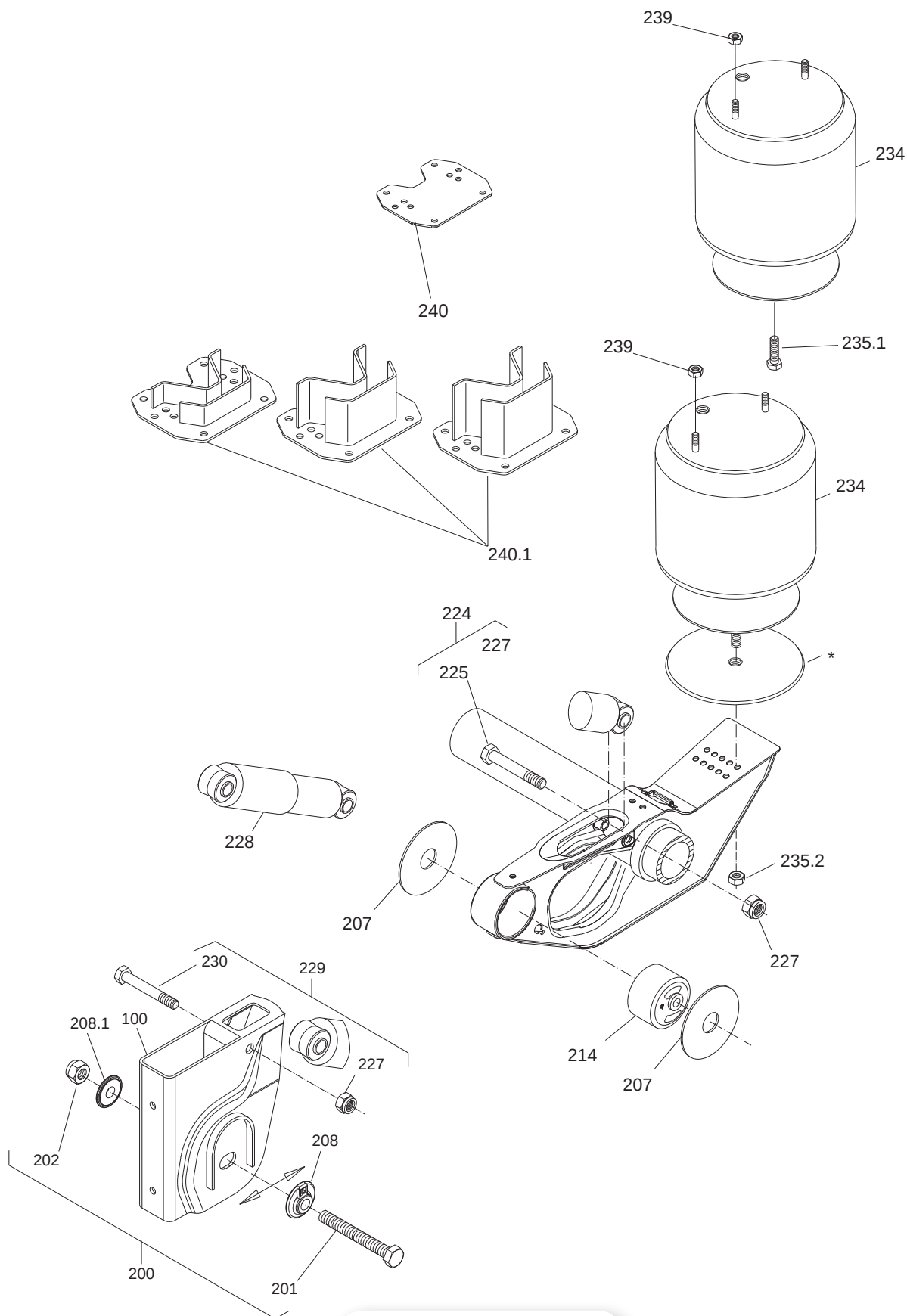


UNDERSLUNG



OVERSLUNG





RK2377 – Hanger repair kit,
includes repair boss, bolt,
nut, washers.

Item	Part No.	Qty	Description	Qty per Axle
100	2183082502	1	Intra hanger - steel - 200H	2
100	2183082602	1	Intra hanger - steel - 250H	2
100	2183082701	1	Intra hanger - steel - 300H	2
100	2183082801	1	Intra hanger - steel - 350H	2
100	2183083000	1	Intra hanger - alloy - 250H	2
100	2183083100	1	Intra hanger - alloy - 300H	2
100	2183083200	1	Intra hanger - alloy - 350H	2
100		1	Intra cross member - self steer - 200H	1
100		1	Intra cross member - self steer - 250H	1
100		1	Intra cross member - self steer - 300H	1
200	3341104819	1	Pivot bolt kit (incl. 201 & 202) - Suits steel hanger	2
201	4343104888	1	Pivot bolt M30x205 - suits steel hanger	2
201	4343105388	1	Pivot bolt M30x240 - suits alloy hanger	2
202	4247402280	1	Lock nut M30	2
207	4331502900	1	Wear pad - plastic	4
208	1123000101	1	Alignment washer - eccentric 102 x 20	2
208.1	1101200100	1	Washer 5 x 20	2
214	4177303500	1	Pivot bush	2
224	3341280210	1	Shock bolt kit bottom - M20X155 (Bolt + Nut)	2
225	4343280210	1	Shock bolt - M20x155 - bottom	2
227	4247404410	1	Nut M20 - flanged	4
228	2376008400	1	Shock absorber - standard - Part no. on shocker	2
228	2376008500	1	Shock absorber - standard - Part no. on shocker	2
228	2376507000	1	Shock absorber - road friendly	2
228	2376507100	1	Shock absorber - road friendly	2
228	2376507200	1	Shock absorber - road friendly	2
229	3044105400	1	Shock bolt kit- top - alloy hanger	2
230	4343280310	1	Shock bolt - M20x125 - top - steel hanger (125mm under bolthead)	2
230	4343280410	1	Shock bolt - M20x205 - top - alloy hanger	2
	1097000800	1	Spacer washer - alloy hanger 5 x 10	4
234	3228103300	1	Air bag - SAF 2619V - 300mm dia (incl. 235.2 & 239) 1 Bolt - Part no. on unit	2
234	3228104100	1	Air bag - SAF 2924V - 350mm dia - long 1 Bolt - Part no. on unit	2
234	3228104200	1	Air bag - SAF 2919V - 350mm	2
235.1	4343103688	1	Hex bolt M16x40 (for SAF 0027 & 1041 bags)	2
235.2	4247400780	1	Lock nut M16 (for SAF 0033 bags)	2
239	4247404710	1	Lock nut M12	4
240	1043026101	1	Air bag plate 5mm - top 5 x 195 x 245	2
240.1	2237008101	1	Air bag pedestal - 50mm	2
240.1	2237008001	1	Air bag pedestal - 100mm	2
240.1	2237008201	1	Air bag pedestal - 150mm	2

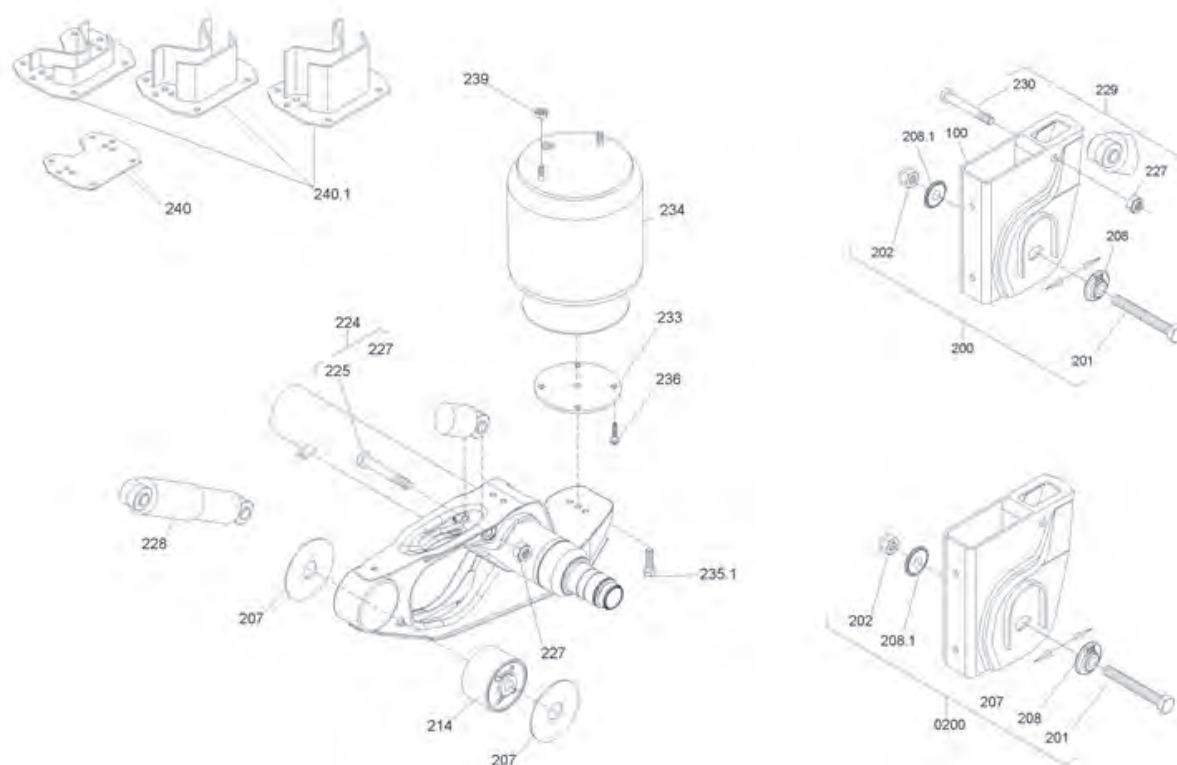
Intra susp. range (Intradisc / Intradrum)



IO - OVERSLUNG & IU - UNDERSLUNG – *continued*

Item	Part No.	Qty	Description	Qty per Axle
*N.A.	1284605200	1	Air bag plate 5mm - bottom (for 60mm offset bags)	2
	RK2377	1	Hanger Pivot Repair Kit	2
	1012002400	1	Hub nut socket (SW140mm)	1
	4434382800L	1	Hub nut socket (SW85mm) for NG axles	1
	2501871	1	Universal hub puller - 285PCD	1
Tools	3434332800	1	SAF universal toolbox (Wabco & Knorr calipers)	1
	2501890	1	3-D bush replacement tool - Intra	1
	5387004203	1	SAF fitting paste (to be applied on spindles)	1
	3434332700	1	SAF ratchet wrench	1

Intra susp. range (Intradisc / Intradrum)



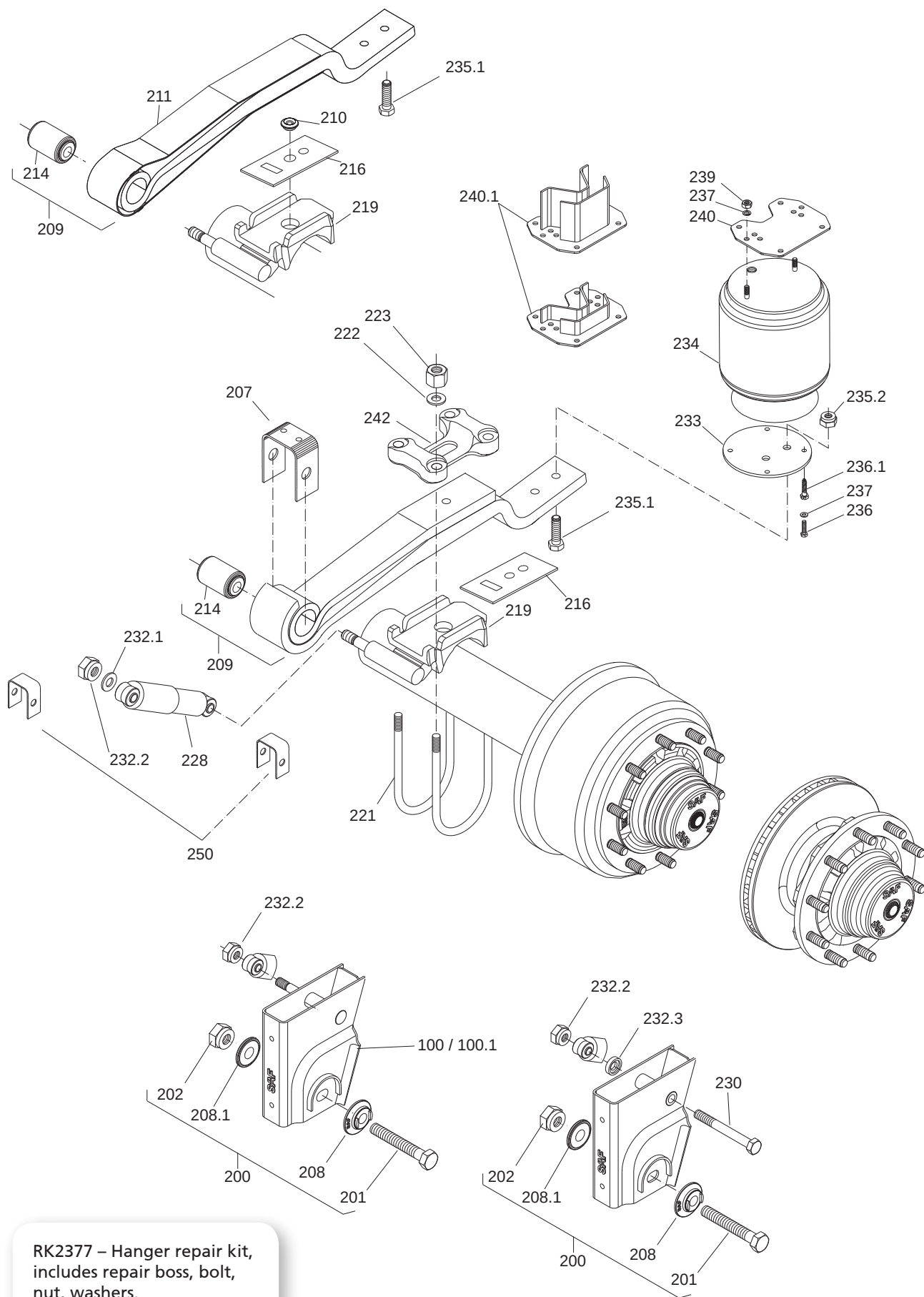
IPL_IU_003_Mega

Air Suspension IU27/2000 30V90



MEGA SUSPENSION – *continued*

Item	Part No.	Qty	Description	Dimensions / reference	Qty per Axle
Axle BI9-19K Brake SBK 1937 (SN6)					
100	2183082502	1	Hanger bracket	200H	2
200	3341104819	1	Screw assembly	M30	2
201	4343104888	1	Bolt M30x205	M30x205	2
202	4247402280	1	Safety flange M30 Nut	M30	2
207	4331502900	1	Sealing washer	ø170/60,5x4,75	4
208	1123000101	1	Eccentric washer	ø102x20	2
208.1	1101200100	1	Thrust washer	ø88/30,5x20	2
214	4177302800	1	Rubber bush		2
224	3341280210	1	Screw assembly	M20x1,5	2
225	4343280210	1	Screw	M20x1,5x155	2
227	4247404410	1	Flange nut	M20x1,5	4
228		1	Shock absorber		2
229	3341280310	1	Screw assembly	M20x1,5	2
230	4343280310	1	Screw	M20x1,5x125	2
233	2043030600	1	Mounting plate		2
234		1	Air bag	SAF2926V	2
235.1	4343103688	1	Screw	M16x40	2
236	4343500188	1	Countersink screw	M12x30	8
239	4247404710	1	Safety flange	M12	4
240		1	Air suspension plate		2
240.1		1	Top mounting bracket		2



Item	Part No.	Qty	Description	Qty per Axle
100	2183075101	1	Hanger - 250mm Pivot Height - LH New Generation Old No. 2183074501	1
100	2183075201	1	Hanger - 250mm Pivot Height - RH New Generation Old No. 2183074601	1
100	2183075301	1	Hanger - 290mm Pivot Height - LH New Generation Old No. 2183074701	1
100	2183075401	1	Hanger - 290mm Pivot Height - RH New Generation Old No. 2183074801	1
100	2183075500	1	Hanger - 355mm Pivot Height - LH Alt. No. 2183074901	1
100	2183075600	1	Hanger - 355mm Pivot Height - RH Alt. No. 2183075001	1
200	3341104819	1	Pivot Bolt Assy. (incl. Bolt M30x205 & Lock Nut M30)	2
201	4343104888	1	Pivot Bolt M30x205	2
202	4247402280	1	Lock Nut M30	2
207	4405207100	1	U-Profile	2
208	1123000101	1	Flanged Eccentric Washer	2
208.1	1101200100	1	Flanged Washer	2
209	3155108700	1	Trailing Arm Single-Leaf 51 mm (EN) (Incl. 211&214) Supersedes Single-Leaf 48mm (E) 3155103602 & Twin-Leaf 38/38mm (N) 3155102701	2
209	3155103501	1	Trailing Arm Twin-Leaf 43/43 mm (S) (Incl. 214)	2
210	4208200100	1	Trust Block (for single-leaf trailing arm only)	2
211	1345100502	1	Security Strap (for single-leaf trailing arm only)	2
214	4177301000	1	Bush HD 68/30x104	2
216	1345003000	1	Locking Plate 95x5x225 (suits single leaf trailing arm)	2
216	1345000703	1	Locking Plate 95x5x225 (suits twin leaf trailing arm)	2
219	2010045300M	1	Spring Seat LH - suits axle ϕ 127mm - bolt 2501812	1
219	2010045400M	1	Spring Seat RH - suits axle ϕ 127mm - bolt 2501812	1
219	2010042901M	1	Spring Seat LH (with shock bolt stud for 146mm axle) - Disc/Drum	1
219	2010043001M	1	Spring Seat RH (with shock bolt stud for 146mm axle) - Disc/Drum	1
221	1402007101	1	U-Bolt (M22x1.5 - 267lg - for single leaf arm and 127mm axle)	4
221	1402007201	1	U-Bolt (M22x1.5 - 304lg - for twin leaf arm and 127mm axle)	4
221		1	U-Bolt (M22x1.5 - 307lg - for twin leaf arm and 133mm axle)	4
221	1402006401	1	U-Bolt (M22x1.5 - 285.5lg - for single leaf arm and 146mm axle)	4
221	1402006501	1	U-Bolt (M22x1.5 - 321.5lg - for twin leaf arm and 146mm axle)	4
222	1331020400	1	U-Bolt Washer - 39/22.5x3	8
222	1331017700	1	U-Bolt Washer - 40/22x6 (For AR313 suspensions)	8
223	4342004710	1	U-Bolt Nut M22x1.5	8
228	2376002600	1	Shock Absorber - Standard - number on shocker	2
228	2376502600	1	Shock Absorber - Road Friendly - number on shocker	2
230	4343203488	1	Top Shock Bolt M24x2x250	2
232.2	4247404080	1	Lock Nut M24x2	4
232.3	1097001100	1	Shock Washer	2
233	1043032700	1	Air Bag Plate ϕ 240x15 - 55mm Offset - LH	1
233	1043032800	1	Air Bag Plate ϕ 240x15 - 55mm Offset - RH	1
233	2043028900	1	Air Bag Plate ϕ 240x15 - 70mm Offset - LH	1
233	2043029000	1	Air Bag Plate ϕ 240x15 - 70mm Offset - RH	1

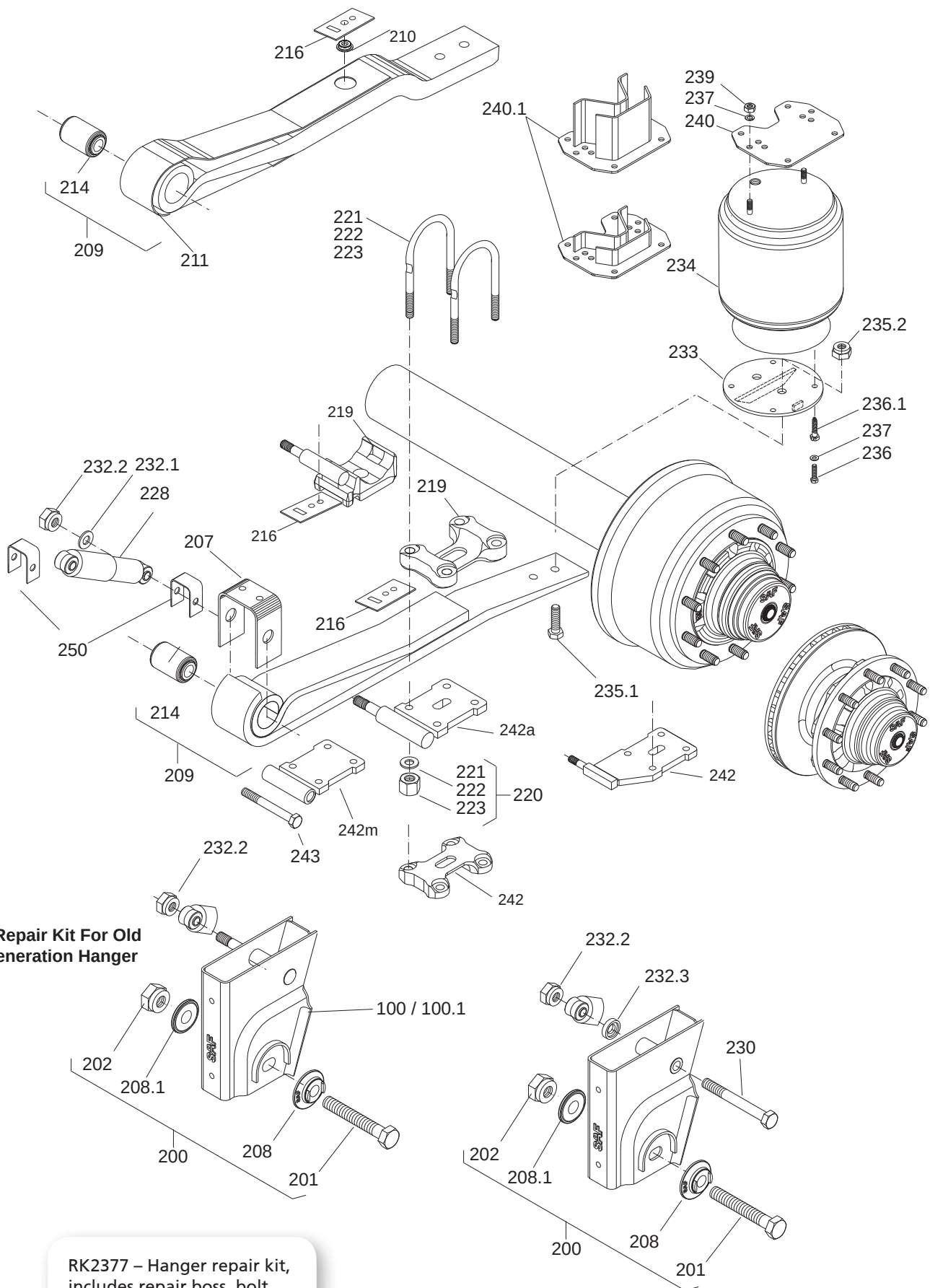
Item	Part No.	Qty	Description	Qty per Axle
234	3228002900	1	Air Bag SAF2618V (300mm DIA) 4 Bolt - without 236.1, 237 & 239)	2
234	3228002700	1	Air Bag SAF2918V (350mm DIA) 4 Bolt	2
234	3228003100	1	Air Bag SAF2923V (350mm DIA) 4 Bolt - long - without 236, 237 & 239)	2
235.1	4343500888	1	Countersunk bolt M20x80	4
235.2	4247401280	1	Lock Nut M20	4
236	4343100788	1	Hex Bolt M12x30 - Suits air bag	6
236.1	4343203700	1	Cut Screw 10x40	6
237	4141000300	1	Spring Washer A12	4
239	4342000460	1	Hex Nut M12	4
240	1043026101	1	Air Bag Plate - 5mm 195 x 245	2
240.1	2237007001	1	Air Bag Pedestal - 40mm	2
240.1	2237007101	1	Air Bag Pedestal - 70mm	2
240.1	2237008001	1	Air Bag Pedestal - 100mm	2
240.1	2237008201	1	Air Bag Pedestal - 150mm	2
242	1350008810	1	Clamping Plate for 127/133mm axle	2
242	1350008610	1	Clamping Plate for 146mm axle	2
243	2501812	1	Bolt - Spring Seat M24 x 2 x 190	2
250	XBAS0004	1	Shock Strap Bracket (2mm thick) - New style	4
	4247404080	1	Nut - Spring Seat M24 x 2	2

AIR BAG

Side view	Description	Article number - code	Tap view
	2618V Hmin = 180 mm Hmax = 550 mm Ø 300 mm plastic piston	3228002900	
	2918V Hmin = 180 mm / Hmax = 520 mm Ø 350 mm steel piston	3228002700	
	2923V Hmin = 225 mm / Hmax = 625 mm Ø 350 mm steel piston	3228003100	

SHOCK ABSORBER

Side view	Part Number	Stroke	L Min	L Max	Style
	2376002600	170 mm	325 mm	495 mm	Standard
	2376502600	170 mm	325 mm	495 mm	Road Friendly



Item	Part No.	Qty	Description	Qty per Axle
100	2183075101	1	Hanger - 250mm Pivot Height - LH Alt. 2 183 0745 01 - Steel	1
100	2183075201	1	Hanger - 250mm Pivot Height - RH Alt. 2 183 0746 01 - Steel	1
100	2183075301	1	Hanger - 290mm Pivot Height - LH Alt. 2 183 0747 01 - Steel	1
100	2183075401	1	Hanger - 290mm Pivot Height - RH Alt. 2 183 0748 01 - Steel	1
100	2183075500	1	Hanger - 355mm Pivot Height - LH Alt. 2 183 0749 01 - Steel	1
100	2183075600	1	Hanger - 355mm Pivot Height - RH Alt. 2 183 0750 01 - Steel	1
200	3341104819	1	Pivot Bolt Assy. (incl. Bolt M30x205 & Lock Nut M30)	2
201	4343104888	1	Pivot Bolt M30x205 - Suits steel hanger	2
202	4247402280	1	Lock Nut M30 - Suits steel hanger	2
207	4405207100	1	Thrust Plate - 70 x 5 x 368	2
208	1123000101	1	Flanged Eccentric Washer 102 x 20	2
208.1	1101200100	1	Thrust Washer 5 x 20	2
209	3155108600	1	Trailing Arm Single-Leaf 51 mm (EN) (Incl. 211&214) Supersedes Single-Lead 48mm (E) 3 155 1044 01 & Twin-Leaf 38/38mm (N) 3 155 1046 01	2
209	3155104800	1	Trailing Arm Twin-Leaf 43/43 mm (S) (Incl. 214)	2
210	4208200100	1	Trust Block (for single-leaf trailing arm only)	2
211	1345100901	1	Security Strap (for single-leaf trailing arm only)	2
214	4177301000	1	Bush HD 68/30x104 - Rubber	2
216	1345003000	1	Locking Plate 95x5x225 (suits single leaf trailing arm)	2
216	1345000703	1	Locking Plate 95x5x225 (suits twin leaf trailing arm)	2
219	1010044500	1	Spring Seat (without shock bolt stud for 127mm axle)	2
219	1010037200	1	Spring Seat (without shock bolt stud for 133mm axle - Steer)	2
219	1010036802	1	Spring Seat (without shock bolt stud for 146mm axle) - Disc	2
219		1	Spring Seat (without shock bolt stud for 146mm axle) - Old Style	2
219	2010043701	1	Spring Seat LH (with shock bolt stud for 146mm axle) - Disc	1
219	2010043801	1	Spring Seat RH (with shock bolt stud for 146mm axle) - Disc	1
219		1	Spring Seat LH (with shock bolt stud for 146mm axle) - Drum	1
219		1	Spring Seat RH (with shock bolt stud for 146mm axle) - Drum	1
219	2010045300M	1	Spring Seat LH (with shock bolt stud for 127mm axle) - U Susp Shock above the trailing arm	1
219	2010045400M	1	Spring Seat RH (with shock bolt stud for 127mm axle) - U Susp Shock above the trailing arm	1
221	1402007101	1	U-Bolt (M22x1.5 - 267lg - for single leaf arm and 127mm axle)	4
221	1402007201	1	U-Bolt (M22x1.5 - 304lg - for twin leaf arm and 127mm axle)	4
221		1	U-Bolt (M22x1.5 - 307lg - for twin leaf arm and 133mm axle)	4
221	1402006401	1	U-Bolt (M22x1.5 - 285.5lg - for single leaf arm and 146mm axle)	4
221	1402006501	1	U-Bolt (M22x1.5 - 321.5lg - for twin leaf arm and 146mm axle)	4
222	1331017700	1	U-Bolt Washer - 40/22x6 For AR313 susp.	8
223	4342004710	1	U-Bolt Nut M22x1.5	8
228	2376002700	1	Shock Absorber - Standard - Number on unit - underslung	2
228	2376002600	1	Shock Absorber - Standard - Number on unit - overslung	2
228	2376003100	1	Shock Absorber - Standard - underslung	2

Item	Part No.	Qty	Description	Qty per Axle
228	2376503100	1	Shock Absorber - Road Friendly - underslung	2
230	4343203488	1	Top Shock Bolt - M24x2x250	2
232.2	4247404080	1	Lock Nut M24x2	2
232.3	1097001100	1	Shock Washer	1
233	1043032700	1	Air Bag Plate $\phi 240 \times 15$ - 55mm Offset - LH	1
233	1043032800	1	Air Bag Plate $\phi 240 \times 15$ - 55mm Offset - RH	1
233	2043028900	1	Air Bag Plate $\phi 240 \times 15$ - 70mm Offset - LH	1
233	2043029000	1	Air Bag Plate $\phi 240 \times 15$ - 70mm Offset - RH	2
234	3228002900	1	Air Bag SAF2618V (300mm DIA - without 236.1, 237 & 239)	2
234	3228002700	1	Air Bag SAF2918V (350mm DIA - without 236, 237 & 239)	2
234	3229003100	1	Air Bag SAF2923V (350mm DIA - long - without 236, 237 & 239)	4
235.1	4343500888	1	Countersunk bolt M20x80235.24 247 4012 804 Lock Nut M20	6
236	4343100788	1	Hex Bolt M12x30	6
236.1	4343203700	1	Cut Screw 10x40	4
237	4141000300	1	Spring Washer A12	4
239	4342000460	1	Hex Nut M12	2
240	1043026101	1	Air Bag Plate - 5mm	2
240.1	2237007001	1	Air Bag Pedestal - 40mm	2
240.1	2237007101	1	Air Bag Pedestal - 70mm	2
240.1	2237008001	1	Air Bag Pedestal - 100mm	2
242	2350020100	1	Clamping Plate LH - (with shock bolt 230 for 127mm axle)	1
242	2350020000	1	Clamping Plate RH - (with shock bolt 230 for 127mm axle)	1
242	1350008800	1	Clamping Plate for 127/133mm axle	2
242	1350008610	1	Clamping Plate for 146mm axle	1
242	2350009701	1	Clamping Plate LH - (with shock bolt stud for 146mm axle) - Disc (U33)	1
242	2350009801	1	Clamping Plate RH - (with shock bolt stud for 146mm axle) - Disc (U33)	1
242	2350012600	1	Clamping Plate - (with shock bolt stud for 146mm axle) - Disc (U25)	2
243	2501812	1	Bolt M24x2mmx190mm	4
250	XBAS0004	1	Shock strap bracket (2mm thick) - New Style	4

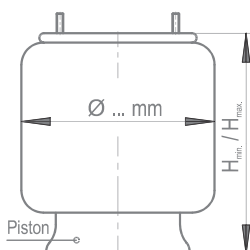
AIR BAG

Side view

Description

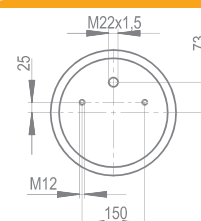
Article number - code

Tap view



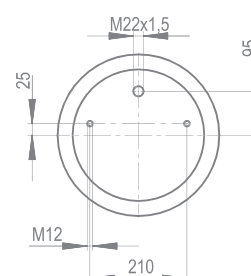
2618V Hmin = 180 mm
Hmax = 550 mm
Ø 300 mm
plastic piston

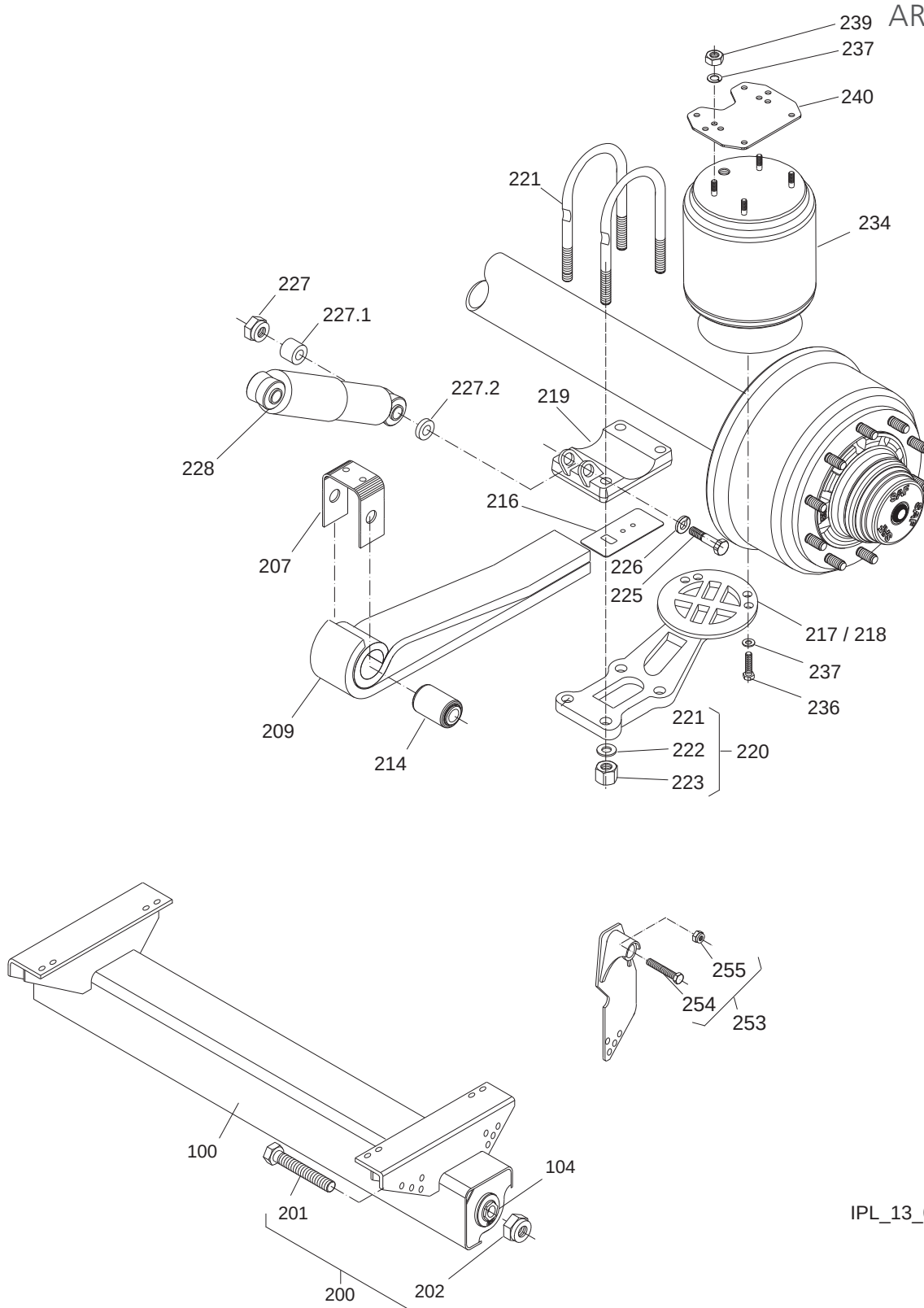
3228002900



2918V Hmin = 180 mm / Hmax = 520 mm 3228002700
Ø 350 mm
steel piston

2923V Hmin = 225 mm / Hmax = 625 mm 3228003100
Ø 350 mm
steel piston

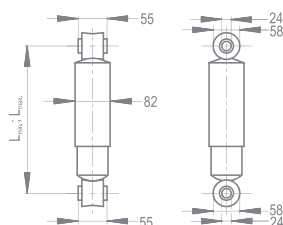




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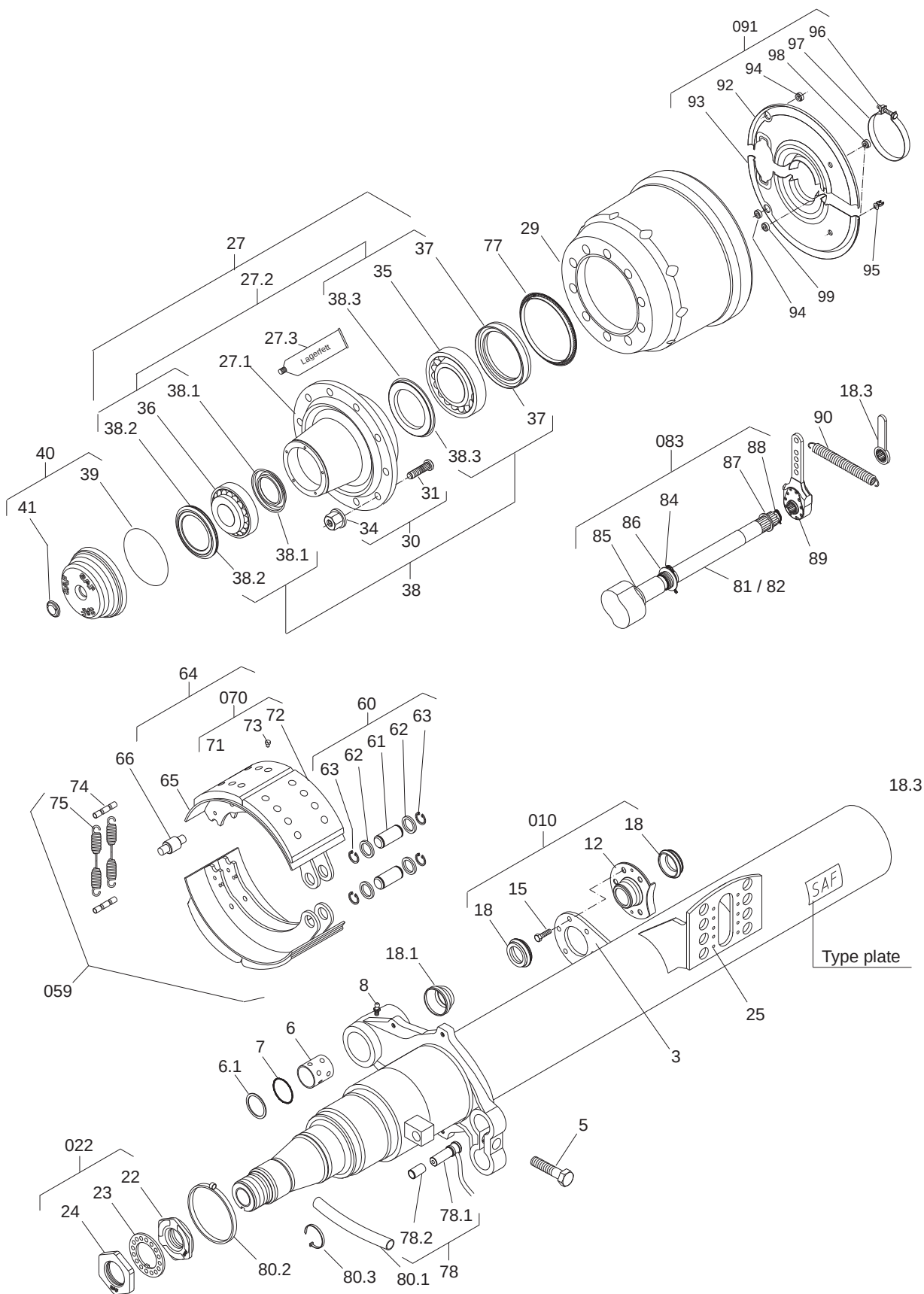
SHOCK ABSORBER

Side view



Part Number	Stroke	L Min	L Max	Style
2376502600	170mm	325mm	495mm	Road Friendly
2376002600	170 mm	325 mm	495 mm	Standard
2376002700	140mm	292mm	424mm	Standard
2376003100	190 mm	350 mm	540 mm	Standard
2376503100	190mm	350mm	540mm	Road Friendly

Item	Part No.	Qty	Description	Qty per Axle
100	2291024201	1	Crossmember (MAN M2000 - drum brake)	1
100	2291047000	1	Crossmember (MAN M2000 - disc brake)	1
100		1	Crossmember (VOLVO - disc brake)	1
104	1251200300	1	Pivot flange	4
200	3341104819	1	Kit Pivot bolt & nut (incl. 201 & 202)	2
201	4343104888	1	Pivot Bolt M30x205 - suits steel hanger	2
202	4247402280	1	Lock Nut M30	2
207	4405207100	1	U - Profile 70 x 5 x 368	2
209	3155100802	1	Trailing arm 43/43 & bush assy.	2
214	4177301000	1	Bush HD 68/30x104	2
216	1345000703	1	Locking Plate 95x5x225 (suits twin leaf trailing arm)	2
217	1236000900	1	Air bag carrier LH	1
218	1236001000	1	Air bag carrier RH	1
219		1	Spring seat LH (MAN M2000 - drum brake)	1
219		1	Spring seat RH (MAN M2000 - drum brake)	1
219		1	Spring seat (MAN M2000 - disc brake)	2
219		1	Spring seat (VOLVO - disc brake)	2
220	3401007300	1	U-Bolt Kit (incl. 221-223) - (MAN M2000 - drum brake)	4
220		1	U-Bolt Kit (incl. 221-223) - (MAN M2000 - disc brake)	4
220		1	U-Bolt Kit (incl. 221-223) - (VOLVO - disc brake)	4
221	1402007301	1	U-Bolt (M22x1.5 - 326lg - for twin leaf arm and 127mm axle)	4
221	1402009901	1	U-Bolt (M22x1.5 - 363.5lg - for twin leaf arm and 146mm axle)	4
221	1402008101	1	U-Bolt (M22x1.5 - 383.5lg - for twin leaf arm and 146mm axle)	4
222	1331017700	1	Spring washer - U bolt	8
223	4342004710	1	U-Bolt Nut M22x1.5x25	8
225	4343011088	1	Bolt M20x110	2
226	2501233	1	Washer	2
227	4247401280	1	Lock nut M20	2
227.1	1095104201	1	Spacers Φ 28/20x14	2
227.2	1095104301	1	Spacers Φ 28/20x4	2
228	2376000302	1	Shock absorber (MAN - drum & VOLVO - disc)	2
228	2376001001	1	Shock absorber (MAN - disc)	2
234	3229003500	1	Air bag SAF 2623V (MAN M2000 - disc & drum). 2 x stud.	2
234	2229000300	1	Air bag 1T19E2 (VOLVO - disc). 4 x stud.	2
236	4343292210	1	Bolt M12 x 30	6
239	4247404710	1	Lock nut M12	8
240	1043026101	1	Mounting plate upper 5 x 195 x 245	2
253	3341012219	1	Bolt-kit (incl. 254 & 255) M20 x 85	2
254		1	Bolt 20x85 - Use Kit Above	2
255	4247401280	1	Nut M20	2



Axle RZ 12242/18C & RZ 10242/18C



K2 HUB (10X285.75PCD) – *continued*

Ident. No C 147 10 05 6 69 0 & Ident. No C 147 12 14 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
5	4343290400	1	Bolt M16, self locking	2
6	1230010604	1	Camshaft bronze bush	2
6.1	1094003400	1	Spacer ring	2
7	4315004800	1	O-Ring 38	2
8	4201000500	1	Grease nipple M10	4
010	3268004700	1	Camshaft bush & bearing kit (incl. 12-18)	2
12	3268004500	1	Camshaft bush unit	2
15	4343291201	1	Screw, self locking	10
18	4131000800	1	Rubber boot	4
18.1	1173300200	1	Rubber boot	2
18.3	4187000900	1	Wear indicator	2
022	3011004000	1	Axle nut kit (incl. 22-24) * Req star washer in addition to kit.	2
22	1011004002	1	Inner axle nut - M56x2, Socket 85	2
23	1345000801	1	Retaining washer - Star lock tab washer 2501690	2
24	4011003901	1	Outer axle nut - M56x2 Socket 85	2
27	3307303900	1	Hub assy - RZ 12242 - K2 - 10x285.75PCD	2
27.2	3434301600	1	Bearing & seal kit (incl. Pos. 27.3, 35, 36, 37 & 38.1 - 38.3)	2
27.3	5387001105	1	Bearing grease	2
29	1064030500	1	Brake drum, 420x180 - 262 lg - 10x285.75PCD	2
30	3302114500	1	Wheel bolt & nut kit, incl. pos. 31 & 34	20
31	1303111201	1	Wheel bolt - 112 lg. - intermediate (for alloy & steel wheels)	20
34	4247301201	1	Wheel nut - M22x1.5 - 27lg - Socket 32	20
34	33272215	1	Wheel nut - M22x1.5 - 27lg - Socket 33	20
35	4200100600	1	Inner wheel bearing - 218 248/210	2
36	4200006000	1	Outer wheel bearing - 33213	2
37	4373003501	1	Hub seal	2
38	3434301700	1	Seal kit (incl. Pos. 27.3, 37 & 38.1-38.3)	2
38.1	1337004000	1	Sleeve - $\phi 106 \times 66 \times 15$	2
38.2	1092200100	1	Seal - $\phi 127 \times 86 \times 12$	2
38.3	1092200200	1	Seal - $\phi 143 \times 95 \times 9$	2
39	4315006400	1	O-Ring - $\phi 148 \times 4$	2
40	3304008600	1	Hub cap assy - (incl. Pos. 39 & 41)	2
N.A.	1304008600	1	Hub Cap	2
41	4337202601	1	Plug	2
059	3077022300	1	Brake shoe/lining kit SNF 420x180 (incl. 60, 64 & 75)	2
60	3213002301	1	Anchor pin kit (incl. pos. 61-63)	4
61	1214002301	1	Anchor pin	4
62	1331001300	1	Washer	8
63	4348100400	1	Circlip	8
64	3055013300	1	Brake shoe assembly (with linings incl. pos. 65-74)	4
65	2056012000	1	Brake shoe - metal part	4
66	1265002100	1	Camshaft roller	4
70	3057391200	1	Brake lining kit (incl. pos. 71-73)	1
71 & 72	1057991200	1	Linings (OEM thickness of 17.5mm)	8

Axle RZ 12242/18C & RZ 10242/18C

Ident. No C 147 10 05 6 69 0 & Ident. No C 147 12 14 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
73	1267000700	1	Rivet kit (incl. 80ea of B8x15)	1
74	1395100500	1	Retaining pin	4
75	1447003800	1	Return spring	4
77	4029103100	1	Pole ring ABS, 100	2
78	3029023100	1	ABS Sensor kit (incl. sensor, sleeve & paste)	2
80.1	4338001000	1	Cable protecting hose	2
80.2	4194201800	1	Band clamp	2
80.3	1194400100	1	Fastener ring	2
81	2262026902	1	Camshaft LH, 668 lg	1
82	2262027002	1	Camshaft RH, 668 lg	1
83	3317000400	1	Camshaft installation replacement kit (incl. Pos. 84-88)	2
84	4348100600	1	Circlip	2
85	1331005600	1	Washer - $\phi 60/38.2 \times 1.75$	2
86	1133100200	1	Spring washer	2
87	1331001500	1	Washer - $\phi 51/38.8 \times 1.5$	12
88	4348100500	1	Circlip	2
89	2175030600	1	Manual Slack Adjuster ($\phi 12.7$ mm holes)	2
90	1447003600	1	Return Spring	2
91	3005021900	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92	1005021900	1	Dust cover, LH	2
93	1005022000	1	Dust cover, RH	2
94	4337200801	1	Plug, lining inspection	4
95	4189004400	1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97	4194202500	1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

Axle RZ 12242/18C & RZ 10242/18C



This exploded view diagram illustrates the assembly of a mechanical component, likely a pump or motor. The parts are numbered as follows:

- Top Section:** Includes parts 27, 27.1, 27.2, 27.3 (labeled "Lagerfett"), 35, 37, 38, 38.1, 38.2, 38.3, 39, 40, 41, 59, 60, 61, 62, 63, 64, 65, 66, 71, 72, 73, 74, 75, 78, 78.1, 78.2, 80.1, 80.2, 80.3, 81/82, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99.
- Bottom Section:** Includes parts 1, 2, 3, 4, 5, 6, 7, 8, 12, 15, 18, 18.1, 18.3, 22, 23, 24, 25, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99.

Additional labels include "Type plate" and "SAF".

Ident. No C 147 10 03 6 69 0 & Ident. No C 147 12 01 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
5	4343290400	1	Bolt M16, self locking	2
6	1230010604	1	Camshaft bronze bush	2
6.1	1094003400	1	Spacer ring 38	2
7	4315004800	1	O-Ring 38	2
8	4201000500	1	Grease nipple M10	4
010	3268004700	1	Camshaft bush & bearing kit (incl. 12-18)	2
12		1	Camshaft bush unit	2
15		1	Screw, self locking	10
18	4131000800	1	Rubber boot	4
18.1	1173300200	1	Rubber boot	2
18.3	4187000900	1	Wear Indicator	2
022	3011004001	1	Axle nut kit (incl. 22-24) - Washer 2501690	2
22	1011004002	1	Inner axle nut - M56x2, Socket 85	2
23	1345000801	1	Retaining washer	2
24	4011003901	1	Outer axle nut - M56x2 Socket 85	2
27	3307303500	1	Hub Assy. - RZ 12242 - K2 - 10x335PCD	2
27.2	3434301600	1	Bearing kit (incl. Pos. 27.3, 35, 36, 37 & 38.1 - 38.3)	2
27.3	5387001105	1	Bearing grease	2
29	1064032600	1	Brake drum, 420x180 - 262 lg - 10x335PCD	2
30	3302114500	1	Wheel bolt & nut kit, incl. pos. 31&34	20
31	1303111210	1	Wheel bolt - intermediate (for alloy & steel wheels) M22 x 1.5 x 112	20
34	4247301201	1	Wheel nut - M22x1.5 - 27lg - Socket 32	20
34	33272215	1	Wheel nut - M22x1.5 - 27lg - Socket 33	20
35	4200100600	1	Inner wheel bearing 218 248/210	2
36	4200006000	1	Outer wheel bearing 33213	2
37	4373003501	1	Hub seal	2
38	3434301700	1	Seal kit (incl. Pos. 27.3, 37 & 38.1-38.3)	2
38.1	1337004000	1	Sleeve - $\phi 106 \times 66 \times 15$	2
38.2	1092200100	1	Seal - $\phi 127 \times 86 \times 12$	2
38.3	1092200200	1	Seal - $\phi 143 \times 95 \times 9$	2
39	4315006400	1	O-Ring - $\phi 148 \times 4$	2
40	3304008600	1	Hub cap assy - (incl. Pos. 39 & 41)	2
N.A.	1304001600	1	Hub Cap	2
41	4337202602	1	Plug	2
60	3213002301	1	Anchor pin kit (incl. pos, 61-63)	4
61		1	Anchor pin	4
62		1	Washer	8
63		1	Circlip	8
64	3055013300	1	Brake shoe assembly (with linings)	4
65	2056012000	1	Brake shoe - metal part	4
66	1265002100	1	Camshaft roller	4
070	3057391200	1	Brake lining kit (incl. pos. 71-73)	1
71 & 72		1	Linings (OEM thickness of 17.5mm)	8

Axle RZ 12242/18C & RZ 10242/18C



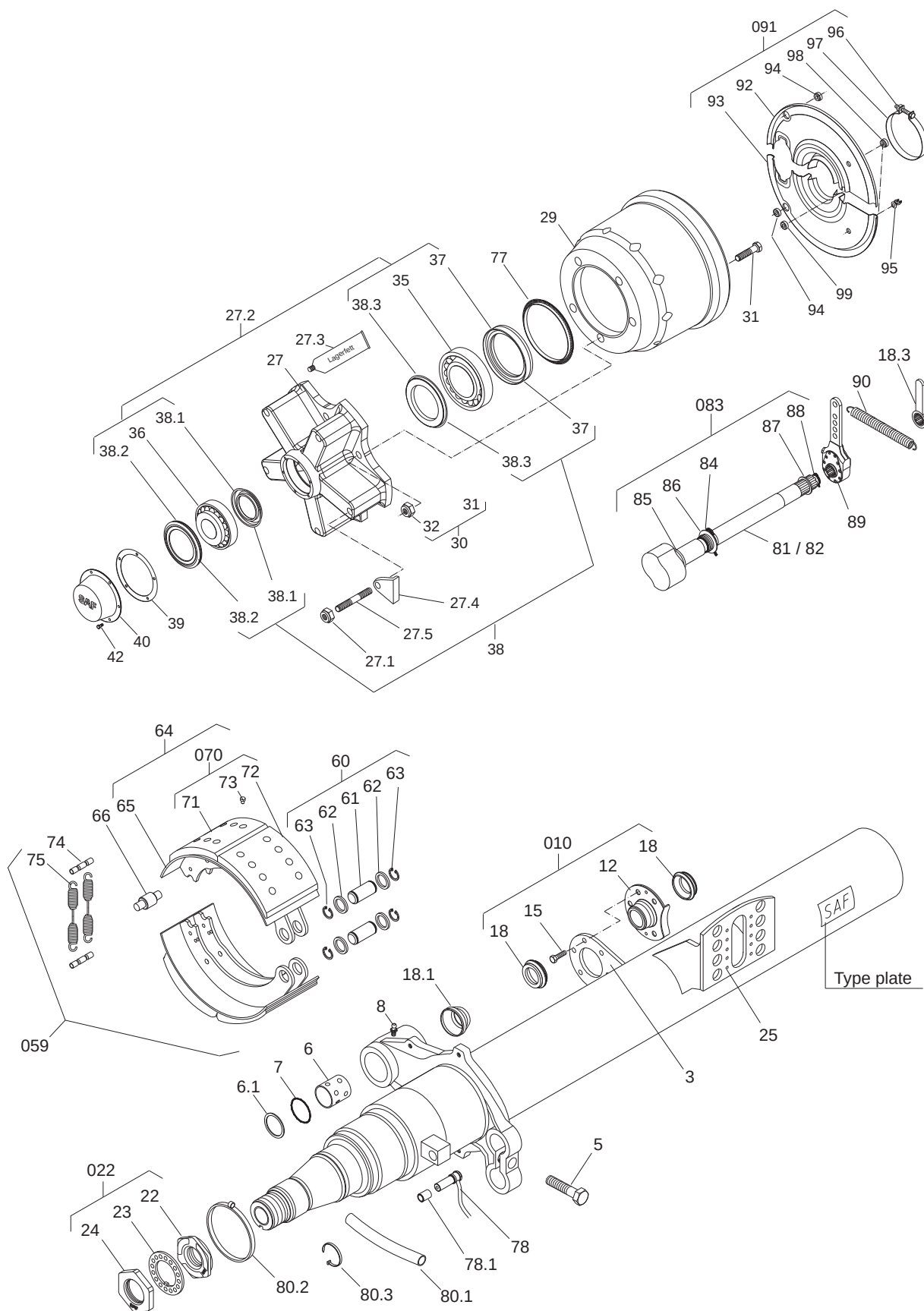
K2 HUB (10X335PCD) – *continued*

Ident. No C 147 10 03 6 69 0 & Ident. No C 147 12 01 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
73		1	Rivet kit (incl. 80ea of B8x15)	1
74	1395100500	1	Retaining pin	4
75	1447003800	1	Return spring	4
77		1	Pole ring ABS, 100	2
078	3029023100	1	ABS Sensor kit (incl. sensor, sleeve & paste)	2
80.1		1	Cable protecting hose	2
80.2		1	Band clamp	2
80.3		1	Fastener ring	2
81	2262026902	1	Camshaft LH, 668	1
82	2262027002	1	Camshaft RH, 668	1
083	3317000400	1	Camshaft install. replacement kit, incl. Pos. 84-88	2
84		1	Circlip	2
85		1	Washer - $\phi 60/38.2 \times 1.75$	2
86		1	Spring washer	2
87		1	Washer - $\phi 51/38.8 \times 1.5$	12
88	4348100500	1	Circlip	2
89	2175030600	1	Manual Slack Adjuster ($\phi 12.7$ mm holes) Auto slack JSAF BP21103	2
90	1447003600	1	Return Spring	2
91	3005021900	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92		1	Dust cover, LH	2
93		1	Dust cover, RH	2
94	4337200801	1	plug, lining inspection	4
95		1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97	4194202500	1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

Axle RZ 12242/18C & RZ 10242/18C

Ident. No C 147 10 04 6 01 0 & Ident. No C 147 12 02 6 01 0



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Axle RZT 12242/18C & RZT 10242/18C



K2 HUB - 5 SPOKE – *continued*

Ident. No C 147 10 04 6 01 0 & Ident. No C 147 12 02 6 01 0

Item	Part No.	Qty	Description	Qty per Axle
5	4343290400	1	Bolt M16, self locking	2
6	1230010604	1	Camshaft bronze bush 38	2
6.1	1094003400	1	Spacer ring 38	2
7	4315004800	1	O-Ring 38	2
8	4201000500	1	Grease nipple M10	4
010	3268004700	1	Camshaft bush & bearing kit (incl. pos. 12-18)	2
12		1	Camshaft bush unit	2
15		1	Screw, self locking M8	10
18	4131000800	1	Rubber boot	4
18.1	1173300200	1	Rubber boot	2
18.3	4187000900	1	Wear indicator	2
022	3011004001	1	Axle nut kit (incl. 22-24) - Washer 2501690	2
22	1011004002	1	Inner axle nut - M56x2, Socket 85	2
23	1345000801	1	Retaining washer	2
24	4011003901	1	Outer axle nut - M56x2 Socket 85	2
27	1398005600	1	Hub - 5 Spoke	2
27.1	4342290300	1	Nut - Wheel Clamp - 3/4"	10
27.2	3434301600	1	Bearing kit (incl. positions 27.3, 35, 36, 37 & 38.1-38.3)	2
27.3	5387001105	1	Bearing grease	2
27.4	4398401000	1	Clamp	10
27.5	1051104400	1	Stud - 3/4"	10
29	1064030600	1	Brake drum, 420x180 - 208 lg - 5-Spoke	2
30	3341292419	1	Wheel bolt & nut kit, incl. pos, 31-32	20
31	4343292488	1	Wheel bolt - intermediate (for alloy & steel wheels) M22 x 1.5 x 112	20
32	4247404880	1	Nut 3/4"	10
35	4200100600	1	Inner wheel bearing 218 248/210	2
36	4200006000	1	Outer wheel bearing 33213	2
37	4373003501	1	Hub seal	2
38	3434301700	1	Bearing seal kit (incl. positions 27.3, 37, & 38.1 - 38.3) For one wheel only	2
38.1	1337004000	1	Sleeve $\phi 106 \times 66 \times 15$	2
38.2	1092200100	1	Seal $\phi 127 \times 86 \times 12$	2
38.3	1092200200	1	Seal $\phi 143 \times 95 \times 9$	2
39	1093000500	1	Gasket	2
40	1304001600	1	Hub cap	2
41	4337202601	1	Plug	2
42	4343291888	1	Screw 5/16" - 18 x 20	12
60	3213002301	1	Anchor pin kit (incl. pos, 61-63)	4
61		1	Anchor pin kit (incl. pos, 61-63)	4
62		1	Anchor pin kit (incl. pos, 61-63)	8
63		1	Anchor pin kit (incl. pos, 61-63)	8
64	3055013300	1	Brake shoe assembly (with linings incl. pos. 65-74)	4
65	2056012000	1	Brake shoe - metal part	4
66	1265002100	1	Camshaft roller	4
070	3057391200	1	Brake lining kit (incl. pos. 71-73)	1
71 & 72		1	Linings (OEM thickness of 17.5mm)	8

Axle RZT 12242/18C & RZT 10242/18C

Ident. No C 147 10 04 6 01 0 & Ident. No C 147 12 02 6 01 0

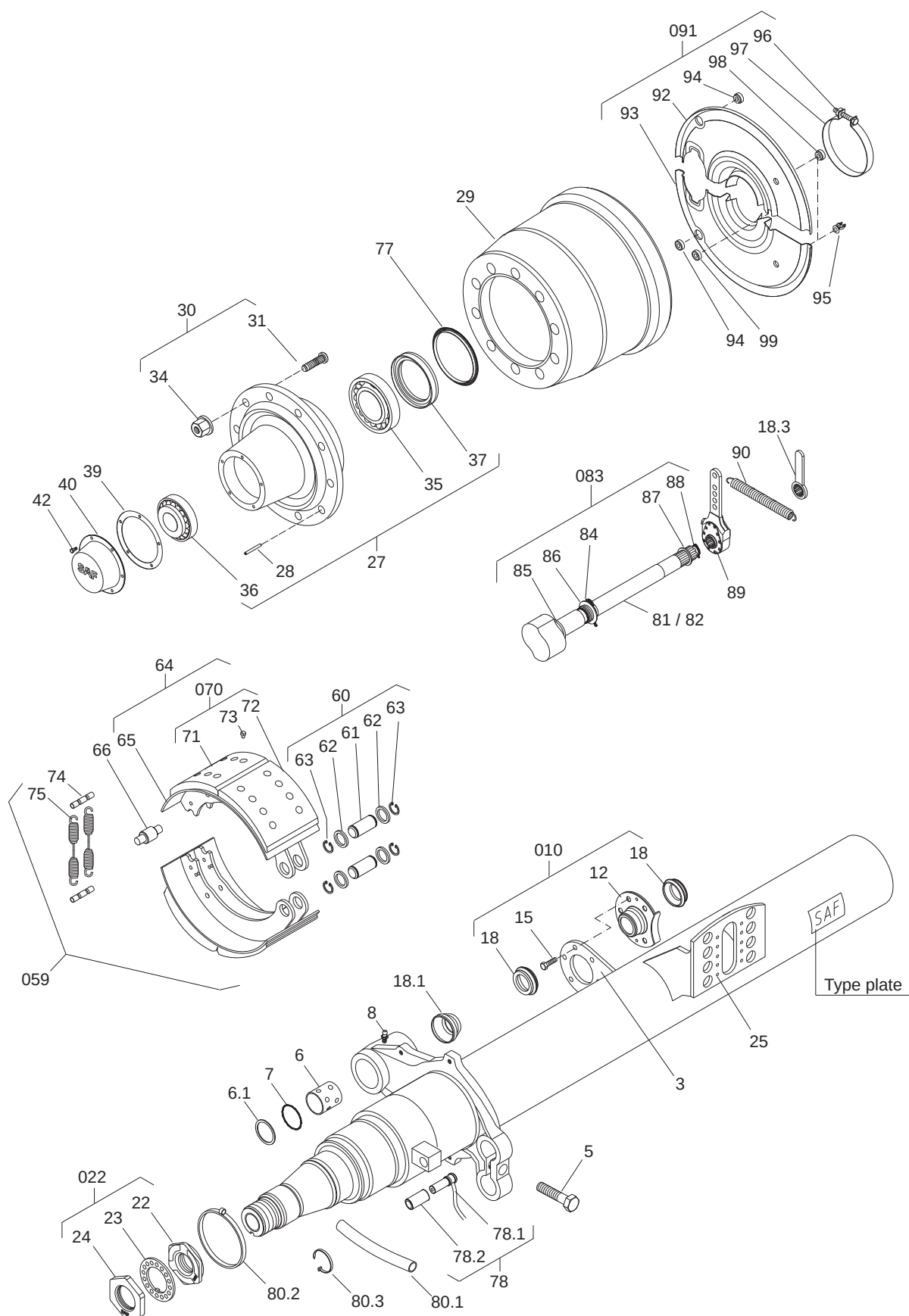
Item	Part No.	Qty	Description	Qty per Axle
73		1	Rivet kit (incl. 80ea of B8x15)	1
74	1395100500	1	Retaining pin	4
75	1447003800	1	Return spring	4
77		1	Pole ring ABS, 100	2
078	3029023100	1	ABS Sensor kit (incl. sensor, sleeve & paste)	2
80.1		1	Cable protecting hose	2
80.2		1	Band clamp	2
80.3		1	Fastener ring	2
81	2262026902	1	Camshaft LH, 668	1
82	2262027002	1	Camshaft RH, 668	1
083	3317000400	1	Camshaft install. replacement kit, incl. Pos. 84-88	2
84		1	Circlip	2
85		1	Washer, $\phi 60/38.2 \times 1.75$	2
86		1	Spring washer	2
87		1	Washer, $\phi 51/38.8 \times 1.5$	12
88		1	Circlip	2
89	2175030600	1	Manual Slack Adjuster $\phi 12.7$ sleeve dia.	2
90	1447003600	1	Return Spring	2
091	3005021900	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92		1	Dust cover, LH	2
93		1	Dust cover, RH	2
94	4337200801	1	plug, lining inspection	4
95		1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97	4194202500	1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

Axle RZ 12242/18C



STD. HUB (10X285.75PCD)

Ident. No C 147 12 02 6 69 0



IPL_02_101_0

Ident. No C 147 12 02 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
1	2500486300	1	Axle Beam Assembly	1
3	1043100200	1	Bracket Camshaft bush	2
5	4343290400	1	Bolt M16, self locking	2
6	1230010604	1	Camshaft bronze bush	2
6.1	1094003400	1	Spacer ring	2
7	4315004800	1	O-Ring 38	2
8	4201000500	1	Grease nipple M10	4
010	3268004700	1	Camshaft bush & bearing kit (incl. 12-18)	2
12		1	Camshaft bush & bearing kit (incl. 12-18)	2
15		1	Camshaft bush & bearing kit (incl. 12-18)	10
18	4131000800	1	Rubber boot	4
18.1	1173300200	1	Rubber boot	2
18.3	4187000900	1	Wear indicator	2
022	3011004001	1	Axle nut kit (incl. 22-24) - Washer 2501690	2
22	1011004002	1	Inner axle nut - M56x2, Socket 85	2
23	1345000801	1	Retaining washer	2
24	4011003901	1	Outer axle nut - M56x2 Socket 85	2
27	3307303900	1	Hub Assy - Standard 10x285.75PCD	2
27.3	5387001105	1	Bearing Grease	2
29	1064030500	1	Brake drum, 420x180 - 262 lg - 10x285.75PCD	2
30	3302114500	1	Wheel bolt & nut kit, incl. pos. 31&34	20
31		1	Wheel bolt & nut kit, incl. pos. 31&34	20
32		1	Wheel bolt & nut kit, incl. pos. 31&34	
34	4247301201	1	Wheel nut - M22x1.5 - 27lg - Socket 32	20
34	33272215	1	Wheel nut - M22x1.5 - 27lg - Socket 33	20
35	4200100600	1	Inner wheel bearing 218 248/210	2
36	4200006000	1	Outer wheel bearing 33213	2
37	4373003501	1	Hub seal	2
39	1093000500	1	Gasket	2
40	1304001600	1	Hub cap	2
42	4375200388	1	Screw M8	12
059		1	Brake shoe/lining kit SNF 420x180 (incl. 60, 64 & 75)	2
60	3213002301	1	Anchor pin kit (incl. pos. 61-63)	4
61		1	Anchor pin	4
62		1	Washer	8
63		1	Circlip	8
64	3055013300	1	Brake shoe assembly (with linings incl. pos. 65-74)	4
65	2056012000	1	Brake shoe - metal part	4
66	1265002100	1	Camshaft roller	4
070	3057391200	1	Brake lining kit (incl. pos. 71-73)	1
71 & 72		1	Linings (OEM thickness of 17.5mm)	8

Axle RZ 12242/18C



STD. HUB (10X285.75PCD)E – *continued*

Ident. No C 147 12 02 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
73		1	Rivet kit (incl. 80ea of B8x15)	1
74	1395100500	1	Retaining pin	4
75	1447003800	1	Return spring	4
77		1	Pole ring ABS, 100	2
78	3029023100	1	ABS Sensor kit (incl. sensor, sleeve & paste)	2
80.1		1	Cable protecting hose	2
80.2		1	Band clamp	2
80.3		1	Fastener ring	2
81	2262026902	1	Camshaft LH, 668	1
82	2262027002	1	Camshaft RH, 668	1
083	3317000400	1	Camshaft install. replacement kit, incl. Pos. 84-88	2
84		1	Camshaft install. replacement kit, incl. Pos. 84-88	2
85		1	Camshaft install. replacement kit, incl. Pos. 84-88	2
86		1	Camshaft install. replacement kit, incl. Pos. 84-88	2
87		1	Camshaft install. replacement kit, incl. Pos. 84-88	12
88		1	Camshaft install. replacement kit, incl. Pos. 84-88	2
89	2175030600	1	Manual Slack Adjuster (Ø12.7mm holes)	2
90	1447003600	1	Return Spring	2

For axles manufactured up to 30/06/2004

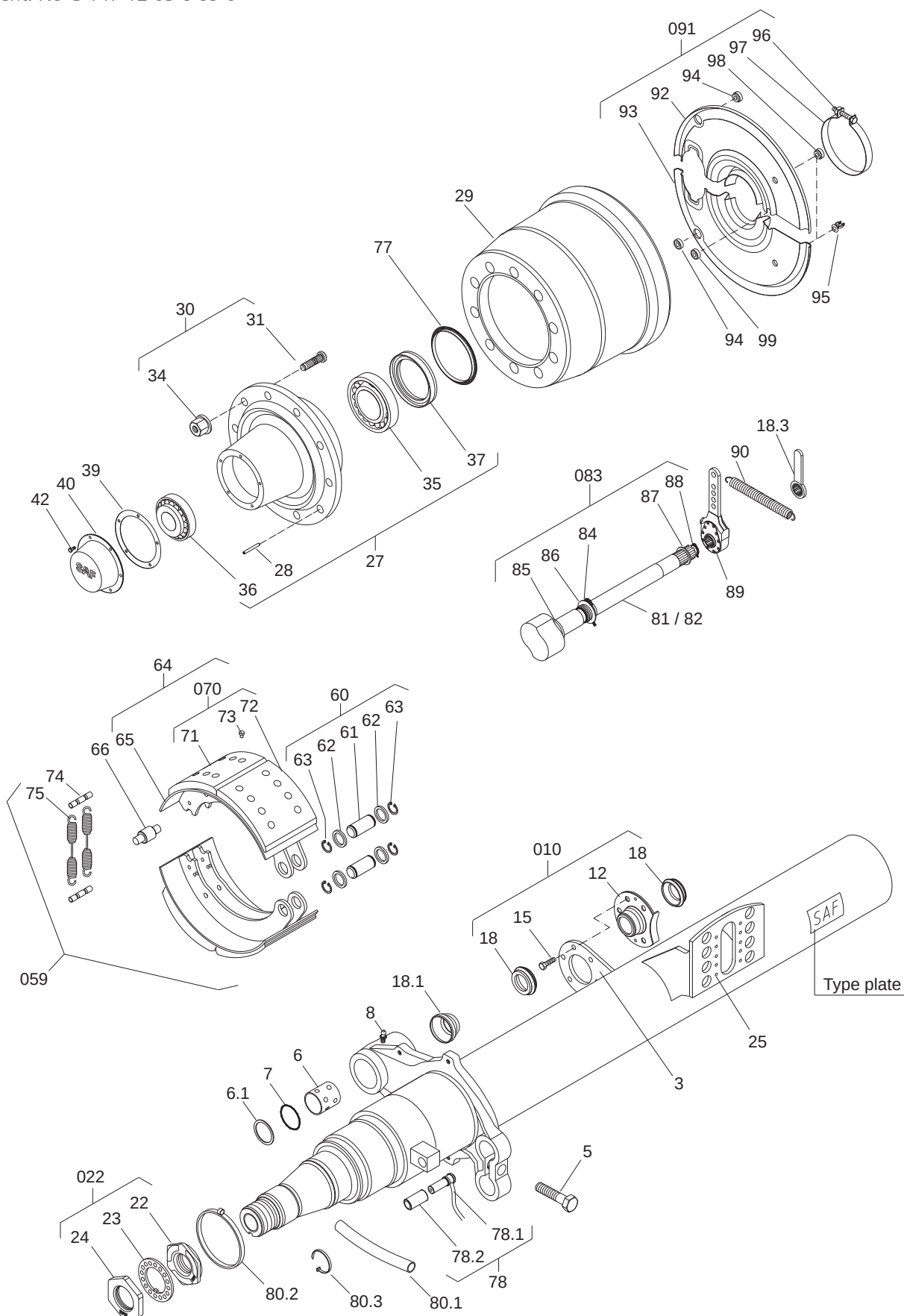
Item	Part No.	Qty	Description	Qty per Axle
091	3005017300	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92		1	Dust shield pair, incl. pos. 92-94 & 96-99	2
93		1	Dust shield pair, incl. pos. 92-94 & 96-99	2
94	4337200801	1	plug, lining inspection	4
95		1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97	4194202301	1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

For axles manufactured after 01/07/2004

Item	Part No.	Qty	Description	Qty per Axle
91	3005021900	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92	1005021900	1	Dust cover, LH	2
93	1005022000	1	Dust cover, RH	2
94	4337200801	1	plug, lining inspection	4
95	4189004400	1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97	4194202500	1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

Axle RZ 12242/18C

Ident. No C 147 12 03 6 69 0



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Axle RZ 12242/18C



STD. HUB (10X335PCD) – *continued*

Ident. No C 147 12 03 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
1		1	Axle Beam Assembly	1
3		1	Bracket Camshaft bush	2
5	4343290400	1	Bolt M16, self locking	2
6	1230010604	1	Camshaft bronze bush	2
6.1	1094003400	1	Spacer ring	2
7	4315004800	1	O-Ring 38	2
8	4201000500	1	Grease nipple M10	4
010	3268004700	1	Camshaft bush & bearing kit (incl. 12-18)	2
12		1	Camshaft bush & bearing kit (incl. 12-18)	2
15		1	Camshaft bush & bearing kit (incl. 12-18)	10
18	4131000800	1	Rubber boot	4
18.1	1173300200	1	Rubber boot	2
18.3	4187000900	1	Wear Indicator	2
022	3011004001	1	Axle nut kit (incl. 22-24) - Washer 2501690	2
22	1011004002	1	Inner axle nut - M56x2, Socket 85	2
23	1345000801	1	Retaining washer	2
24	4011003901	1	Outer axle nut - M56x2 Socket 85	2
27	3307303800	1	Hub Assy - Standard 10x335PCD	2
27.3	5387001105	1	Bearing Grease	2
29	1064030400	1	Brake drum, 420x180 - 262 lg - 10x335PCD	2
30	3302114500	1	Wheel bolt & nut kit, incl. pos. 31&34	20
31	1303111210	1	Wheel bolt - 112 lg. - intermediate (for alloy & steel wheels)	20
34	4247301201	1	Wheel nut - M22x1.5 - 27lg - Socket 32	20
34	33272215	1	Wheel nut - M22x1.5 - 27lg - Socket 33	20
35	4200100600	1	Inner wheel bearing - 218 248/210	2
36	4200006000	1	Outer wheel bearing - 33213	2
37	4373003501	1	Hub seal	2
39	1093000500	1	Gasket	2
40	1304001600	1	Hub cap	2
42	4375200388	1	Screw M8	12
059		1	Brake shoe/lining kit SNF 420x180 (incl. 60, 64 & 75)	2
60	3213002301	1	Anchor pin kit (incl. pos. 61-63)	4
61		1	Anchor pin	4
62		1	Washer	8
63		1	Circlip	8
64	3055013300	1	Brake shoe assembly (with linings incl. pos. 65-74)	4
65	2056012000	1	Brake shoe - metal part	4
66	1265002100	1	Camshaft roller	4
070	3057391200	1	Brake lining kit (incl. pos. 71-73)	1
71 & 72	1057991200	1	Linings (OEM thickness of 17.5mm)	8
73		1	Rivet kit (incl. 80ea of B8x15)	1

Axle RZ 12242/18C

Ident. No C 147 12 03 6 69 0

Item	Part No.	Qty	Description	Qty per Axle
73		1	Rivet kit (incl. 80ea of B8x15)	1
74	1395100500	4	Retaining pin	2
75	1447003800	4	Return spring	2
77		2	Pole ring ABS, 100	2
078	3029023100	2	ABS Sensor kit (incl. sensor, sleeve & paste)	2
80.1		2	Cable protecting hose	4
80.2		2	Band clamp	2
80.3		2	Fastener ring	2
81	2262026902	1	Camshaft LH, 668 lg	10
82	2262027002	1	Camshaft RH, 668 lg	4
083	3317000400	2	Camshaft installation replacement kit (incl. Pos. 84-88)	2
84		2	Circlip	2
85		2	Washer - $\phi 60/38.2 \times 1.75$	2
86		2	Spring washer	2
87		12	Washer - $\phi 51/38.8 \times 1.5$	2
88		2	Circlip	2
89	2175030600	2	Manual Slack Adjuster ($\phi 12.7$ mm holes)	2
90	1447003600	2	Return Spring	2

For axles manufactured up to 30/06/2004

Item	Part No.	Qty	Description	Qty per Axle
091	3005017300	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92		1	Dust shield pair, incl. pos. 92-94 & 96-99	2
93		1	Dust shield pair, incl. pos. 92-94 & 96-99	2
94	4337200801	1	plug, lining inspection	4
95		1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97		1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

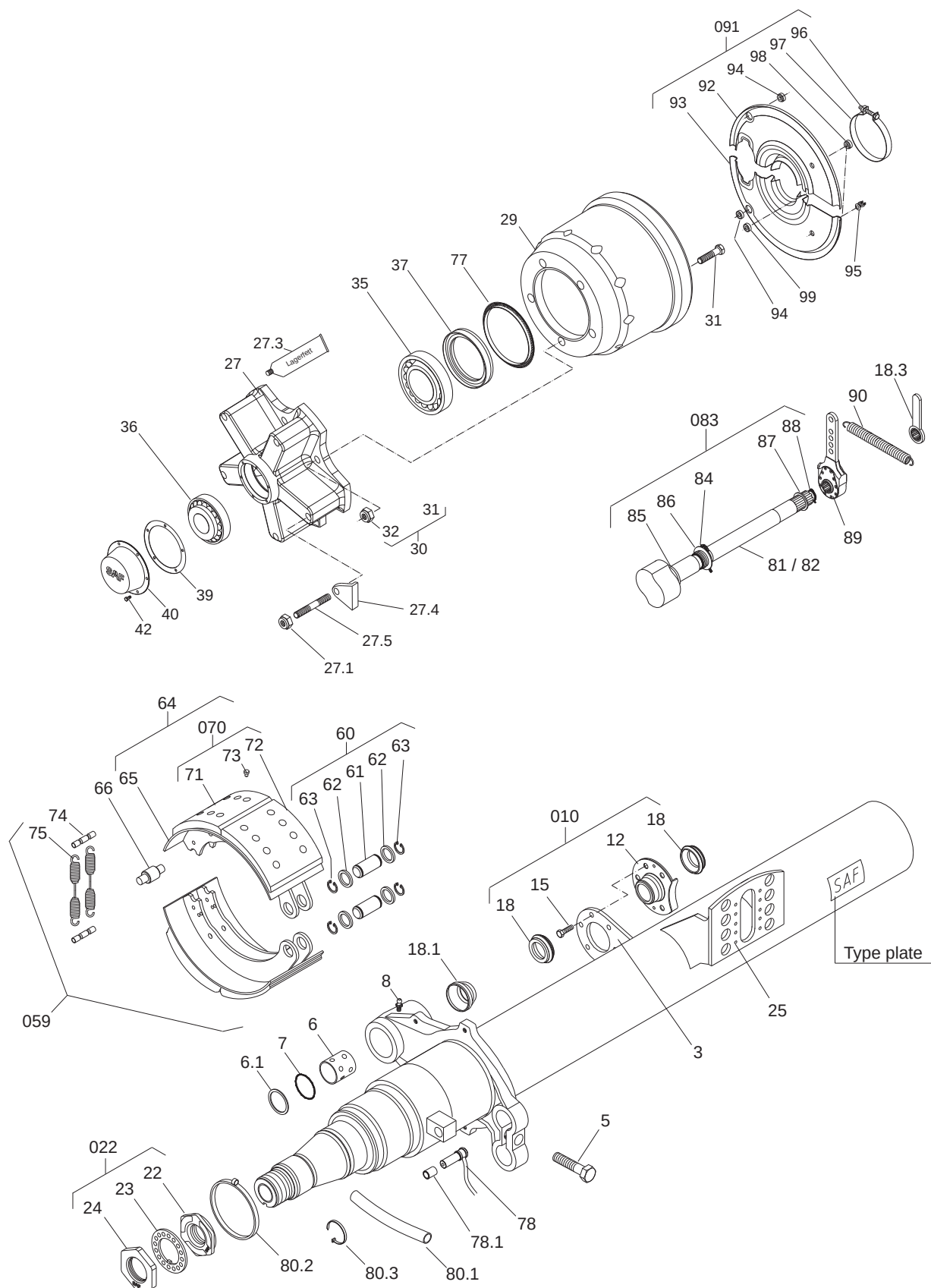
For axles manufactured after 01/07/2004

Item	Part No.	Qty	Description	Qty per Axle
091	3005021900	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92		1	Dust cover, LH	2
93		1	Dust cover, RH	2
94	4337200801	1	plug, lining inspection	4
95		1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97	4194202500	1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

Axle RZT 12242/18C

STD. HUB (5 SPOKE)

Ident. No C 147 12 01 6 01 0



IPL_02_100_0

Axle RZT 12242/18C

Ident. No C 147 12 01 6 01 0

Item	Part No.	Qty	Description	Qty per Axle
1		1	Axle Beam Assembly	1
3		1	Bracket Camshaft bush	2
5	4343290400	1	Bolt M16, self locking	2
6	1230010604	1	Camshaft bronze bush	2
6.1	1094003400	1	Spacer ring	2
7	4315004800	1	O-Ring 38	2
8	4201000500	1	Grease nipple M10	4
010	3268004700	1	Camshaft bush & bearing kit (incl. pos. 12-18)	2
12		1	Camshaft bush & bearing kit (incl. pos. 12-18)	2
15		1	Camshaft bush & bearing kit (incl. pos. 12-18)	10
18	4131000800	1	Rubber boot	4
18.1	1173300200	1	Rubber boot	2
18.3	4187000900	1	Wear indicator	2
022	3011004001	1	Axle nut kit (incl. 22-24)	2
22	1011004002	1	Inner axle nut - M56x2, Socket 85	2
23	1345000801	1	Retaining washer	2
24	4011003901	1	Outer axle nut - M56x2 Socket 85	2
27	1398005600	1	Hub - 5 Spoke	2
27.1	4342290300	1	Nut - Wheel Clamp - 3/4"	10
27.3	5387001105	1	Bearing grease 150g	2
27.4	4398401000	1	Clamp	10
27.5	1051104400	1	Stud - 3/4"	10
29	1064030600	1	Brake drum, 420x180 - 208 lg	2
30	3341292419	1	Wheel bolt & nut kit, incl. pos. 31-32	10
31		1	Wheel bolt & nut kit, incl. pos. 31-32	10
32		1	Wheel bolt & nut kit, incl. pos. 31-32	20
35	4200100600	1	Inner wheel bearing 218 248/210	2
36	4200006000	1	Outer wheel bearing 33213	2
37	4373003501	1	Hub seal	2
39	1093000500	1	Gasket - 5 spoke	2
40	1304001600	1	Hub cap - 5 spoke	2
42	4343291888	1	Screw 5/16"-18 x 20	12
059		1	Brake shoe/lining kit SNF 420x180 (incl. 60, 64 & 75)	2
60	3213002301	1	Anchor pin kit (incl. pos. 61-63)	4
61		1	Anchor pin kit (incl. pos. 61-63)	4
62		1	Anchor pin kit (incl. pos. 61-63)	8
63		1	Anchor pin kit (incl. pos. 61-63)	8
64	3055013300	1	Brake shoe assembly (with linings incl. pos. 65-74)	4
65	2056012000	1	Brake shoe - metal part	4
66	1265002100	1	Camshaft roller	4
71 & 72		1	Linings (OEM thickness of 17.5mm)	8
73		1	Rivet kit (incl. 80ea of B8x15)	1

Axle RZT 12242/18C



STD. HUB (5 SPOKE) – *continued*

Ident. No C 147 12 01 6 01 0

Item	Part No.	Qty	Description	Qty per Axle
070	3057391200	1	Brake lining kit (incl. pos. 71-73)	1
71 & 72		1	Linings (OEM thickness of 17.5mm)	8
73		1	Rivet kit (incl. 80ea of B8x15)	1
74	1395100500	1	Retaining pin	4
75	1447003800	1	Return spring	4
77		1	Pole ring ABS, 100	2
078	3029023100	1	ABS Sensor kit (incl. sensor, sleeve & paste)	2
80.1		1	Cable protecting hose	2
80.2		1	Band clamp	2
80.3		1	Fastener ring	2
81	2262026902	1	Camshaft LH, 668	1
82	2262027002	1	Camshaft RH, 668	1
083	3317000400	1	Camshaft install. replacement kit, incl. Pos. 84-88	2
84		1	Circlip	2
85		1	Washer, $\phi 60/38.2 \times 1.75$	2
86		1	Spring washer	2
87		1	Washer, $\phi 51/38.8 \times 1.5$	12
88		1	Circlip	2
89	2175030600	1	Manual Slack Adjuster $\phi 12.7$ sleeve dia.	2
90	1447003600	1	Return Spring	2

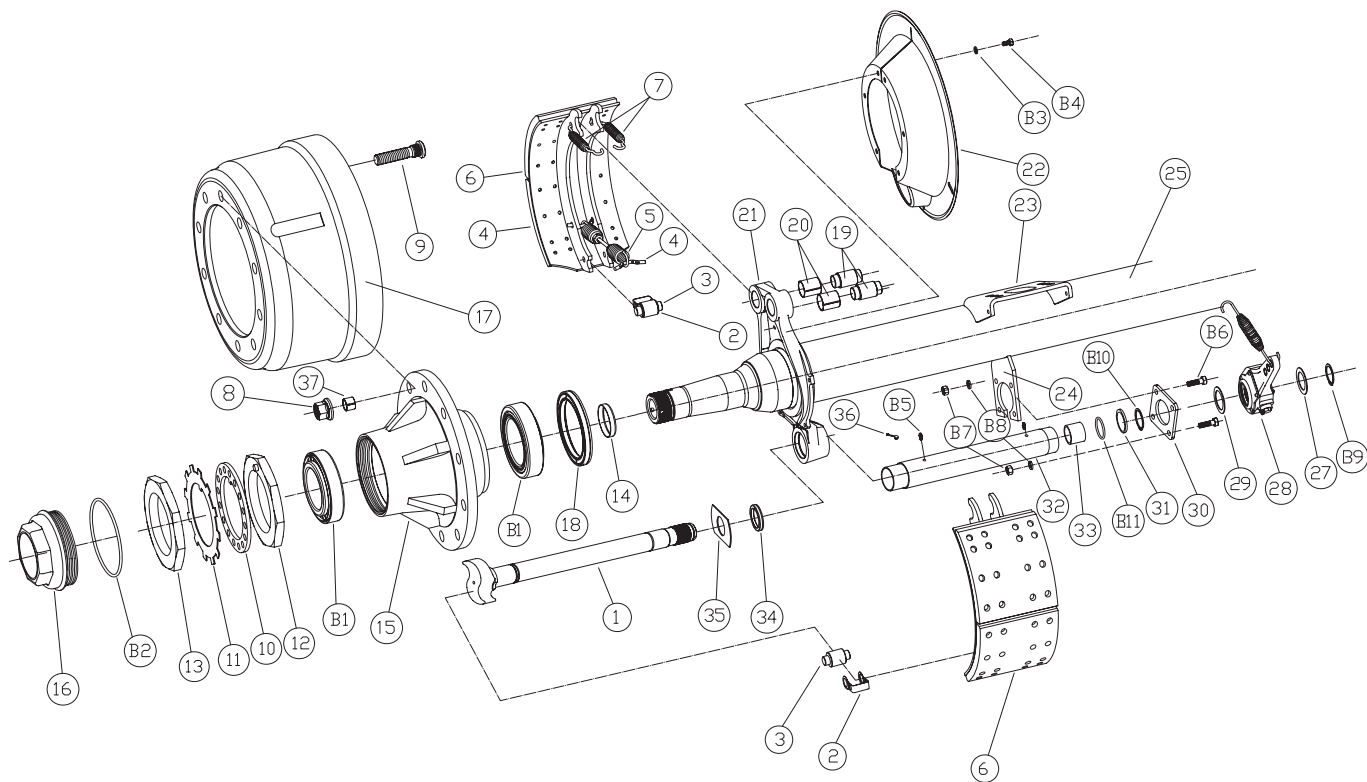
For axles manufactured up to 30/06/2004

Item	Part No.	Qty	Description	Qty per Axle
091	3005017300	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92		1	Dust shield pair, incl. pos. 92-94 & 96-99	2
93		1	Dust shield pair, incl. pos. 92-94 & 96-99	2
94	4337200801	1	Plug, lining inspection	4
95		1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97		1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

For axles manufactured after 01/07/2004

Item	Part No.	Qty	Description	Qty per Axle
091	3005021900	1	Dust shield pair, incl. pos. 92-94 & 96-99	2
92		1	Dust cover, LH	2
93		1	Dust cover, RH	2
94	4337200801	1	plug, lining inspection	4
95		1	Cable clip	2
96	4343107588	1	Screw, M8x40	2
97	4194202500	1	Band clamp	2
98	4337202700	1	Plug	4
99	4177301800	1	Grommet	2

Axle RZT 12242/18C



Axle Type	Capacity	Brake	Stud	PCD	Axle	Track
K1328501	11.5t	420x180	10 Stud	285.75	127mm	1850mm
K1333501	11.5t	420x180	10 Stud	335	127mm	1850mm
K1350001	11.5t	420x180	5 Stud	5 Spoke	127mm	1850mm

Kedi Axle K1328501



11.5T 127mm 10 STUD 285 PCD – *continued*

Item	Part No.	Qty	Description	Qty per Axle
1	K131011013L	1	Camshaft (10 splines, Left)	2
1	K131011013R	1	Camshaft (10 splines, Right)	2
2	K131020101	1	Retainer Roller	4
3	K131030101	1	Brake Shoe Roller	4
4	K131040101	1	Pin Return Spring	4
5	K131050101	1	Heavy Duty Return Spring	2
6	K131060101K	1	Brake Shoe Assembly 420*180mm (MB21 Carlisle Brake Lining)	4
7	K131070101	1	Anchor Pin Spring	4
8	K131090101	1	Flange Nut M22*1.5	20
9	K131100206	1	Wheel Stud M22*1.5*125	20
10	K131110201	1	Adjusting Washer	2
11	K131110301	1	Stop Washer	2
12	K131120301	1	Adjusting Nut	2
13	K131120302	1	Axle Locknut	2
14	K131130103	1	Axle Stop Cover	2
15	K131151302AWP	1	Hub - 10 x 285 PCD - including Pole Ring	2
16	K131140124A	1	Blank Hub Cap (K131140124H - HUB0)	2
17	K131161302	1	Brake Drum - 10 x 285 PCD	2
18	K131170101	1	Hub Seal (ø108)	2
19	K131180101	1	Spider Supporting Roller	4
20	K131190101	1	Spider Supporting Bush	4
22	K131210101	1	Dust Cover	2
25	K1328501	1	Axle beam – 11.5t -127mm - 10 stud 285PCD	1
25	K1333501	1	Axle beam – 11.5t – 127mm – 10 stud 335PCD	1
	K131230265	1	Nameplate	1
27	K131290101	1	Washer ø38.5	2
28	K131301011	1	Auto Slack Adjuster (10 splines)	2
29	K131290102	1	Washer ø41.7	4
31	K131290106	1	Cam Tube Washer	2
33	K131320302	1	Camshaft Bush	4
32	K131480102	1	Cam Tube and bracket	2
34	K131170201	1	Camshaft Oil Seal	2
35	K131290201	1	Long Washer	2
B1	K13B101001	1	Bearing HM518445/10	4
B2	K13B103001	1	O Ring ø150*5.3 - Hub Cap	2
B4	K13B105001	1	Stud M8*16	12
B6	K13B105002	1	Stud M10*30	8
B7	K13B107001	1	Nut M10	8
B9	K13B108001	1	Circlip 38	2
B10	K13B108002	1	Circlip 42	2
B11	K13B103002	1	O Ring ø39.7*3.55	2
15	1151303A	1	Hub Assy 10x335 PCD	2
17	1161303A	1	Brake Drum 10x335 PCD	2
17	1161364	1	Brake Drum 5 Spoke	2
Tool	ACC5963900		Kedi Hub Cap Socket	

Kedi Axle K1328501

1. INTERPRETATION

"Company" means SAF-HOLLAND (Aust.) Pty. Ltd. "Customer" means the person to or for whom Goods are supplied by the Company. "Delivery Date" has the meaning given in clause 4(b). "Goods" means the goods, which are the subject matter of these terms. "Implied Warranties," mean any term, condition or warranty implied law.

2. OPERATION

- (a) All orders for and supply of Goods shall be governed by these conditions of sale.
- (b) A Customer shall be deemed to have accepted these conditions of sale by placing an order with the Company.

3. ORDERS

- (a) The Customer may order Goods only by completing the order forms approved by the Company from time to time.
- (b) The Company is not obliged to accept any order for Goods. The Company may accept an order only by notifying the Customer in writing or by delivering the Goods described in the order to the Customer or to a carrier.
- (c) The Customer authorises the Company to complete any uncompleted order form received from the Customer and agrees to be bound by the terms of such a completed order form.
- (d) The Customer cannot cancel an order, which has been accepted by the Company, without prior written consent of the Company. The Customer acknowledges that if the Company accepts the cancellation, the Company may charge a cancellation fee.

4. DELIVERY AND RISK

- (a) Delivery of goods is conditional upon availability. The Customer acknowledges that the Company shall be under no liability for late delivery.
- (b) Delivery shall be deemed to take place at the time of physical taking of the Goods by the Customer or by a carrier whether engaged by the Company or by the Customer ("Delivery Date").
- (c) Goods shall be at Customer's risk on and from the Delivery Date.
- (d) Subject to Implied Warranties, which are not capable of exclusion or limitation, the Company's responsibility for damage or shortage ceases on and from the Delivery Date.
- (e) All delivery and return costs shall be borne by the Customer, unless otherwise specified.

5. PRICES AND PAYMENT

- (a) The provision of a price list is not to be construed as an offer to sell.
- (b) Prices are subject to withdrawal or change without notice.
- (c) If partial delivery is made proportionate payment shall apply. If the Customer is in breach of any obligation, the Company has the right not to fulfil any unexecuted part orders.
- (d) The prices charged for the Goods will be those ruling at the Delivery Date.
- (e) Unless stated to the contrary, prices do not include taxes, duties, levies, imports or charges for which the Customer will be responsible.
- (f) The Company may recover from the Customer interest on any unpaid amounts at a rate (set out on the invoice).
- (g) Subject to clause 5(h) payment of the full purchase price for the Goods is due and payable within 30 days of the date specified on the invoice.
- (h) The full purchase price for the Goods shall become immediately due and payable if the Customer, takes or has taken or instituted against it any action or proceeding whether voluntary or compulsory which has object or may result in the bankruptcy or winding up of the Customer (other than a voluntary winding up for the purposes of amalgamation or reconstruction) or is placed under official management or a receiver, receiver and manager or administrator is appointed over the whole or any part of its undertaking or the Customer is unable to pay its debts if and when they fall due.

6. RETURNS

- (a) Subject to any Implied Warranties which are not capable of exclusion or limitation, credit will not be issued for Goods returned unless the Company believes it appropriate, and:
 - i. Invoice numbers are quoted; and
 - ii. The Customer notifies the Company immediately on receipt of Goods.
- (b) Subject to any Implied Warranties which are not capable of exclusion or limitation, credit will not be issued for Goods made to order.
- (c) The Customer must provide the reasons for return upon request by the Company.
- (d) Subject to any Implied Warranties which are not capable of exclusion or limitation, a penalty restocking fee of 15% of the value of the goods being returned will be charged on all goods returned after the expiration of 30 days from the original delivery date.
- (e) Subject to any Implied Warranties, which are not capable of exclusion or limitation, no goods will be returned without the customer firstly obtaining goods return number from the Company.
- (f) Subject to any Implied Warranties, which are not capable of exclusion or limitation, no goods will be accepted as being returned for credit upon the expiration of six (6) calendar months from the original delivery date.

7. RISK AND INSURANCE

- (a) The Customer at its own expense must insure Goods on and from the Delivery Date.

8. PROPERTY

- (a) Title to Goods remains in the Company until:
- The full purchase price and all other sums payable by the Customer to the Company in respect of the Goods are paid; or
 - The Customer sells or disposes of the Goods to its customers in the ordinary cause of business.
- (b) While title to the Goods remains in the Company, the Customer shall have no ownership or rights in the Goods and shall, while possesses of the same, hold only as a mere bailee for the Company.
- (c) Until the full purchase price and all other sums payable by the Customer to the Company in respect of the Goods are paid the Customer shall store the Goods separately so that they are clearly identifiable and shall label the Goods in a way which clearly manifests the Company's title (and shall not transform the Goods or incorporate the Goods into other products).
- (d) Notwithstanding anything in this clause the Customer may sell or dispose of the Goods to its customers in the ordinary course of business in which case the Customer shall:
- Hold the process of sale for the Company and shall not mix any of the proceeds of sale with its own money but shall ensure that all receipts are kept separate and identifiable; and
 - Where requested by the Company assign to the Customer the benefit of any claim against a third party.
- (e) If the Customer fails to pay the full purchase price for the Goods by the due date and the Goods are in the Customer's possession or control, the Company or its representative may enter the Customer's premises or any premises where the Company reasonably believes the Goods are kept and remove the Goods and the Customer shall assist and indemnify the Company in relation to such removal.

9. PACKAGING

The Company recommends that deliveries to country areas be packed in timber crates to prevent transit damage.

10. WARRANTIES

- (a) If the liability of the Company to the Customer for any breach of any Implied Warranty is capable of exclusion it is excluded.
- (b) If the liability of the Company to the customer for any breach of any Implied Warranty is capable of limitation it is limited to resupplying or replacing the Goods.
- (c) Subject to any Implied Warranties which are not capable of exclusion or limitation:
- The Company makes no warranties in relation to the Goods;
 - The Company, its servants, agents and contractors shall not be liable for any loss, damage or injury (including without limitation any loss of profit, indirect or consequential loss) arising from the supply or use of the Goods or for any act or omission (including negligence) of the Company;
 - The Customer indemnifies the Company from any loss, damage or injury resulting from any claims or demands by any third party relating in any way to the Goods.
- (d) These conditions of sale supersede and exclude all prior and other discussion and arrangements relating to the supply of the Goods.

11. GENERAL

- (a) Special conditions embodied in Customer's orders are not considered binding unless specifically agreed to in writing by the Company.
- (b) These conditions of sale are governed by the law of Victoria and the Customer agrees to submit to the jurisdiction of Victorian courts and tribunals.
- (c) Subject to any Implied warranties which are not capable of exclusion or limitation, the Company reserves the right to charge a restocking fee of 15%.
- (d) The Customer acknowledges that the minimum amount of any order is \$100.00.
- (e) The Customer acknowledges some Goods are not kept as stock lines. It is the Customer's responsibility to check lead times for Goods they have ordered.

CS-1b



SAF MODUL SUSPENSION AND J-SERIES AXLE WARRANTY

SAF-HOLLAND (AUST.) PTY. LTD. warrants all SAF MODUL suspensions and J-Series axles manufactured by it, when properly installed, to be free from defects in material and workmanship under normal use and service.

- SAF MODUL suspensions and J-Series axles are covered for a period of one (1) year from the date of installation.
- The axle beam has five (5) years warranty for structural and manufacturing defects only.

The warranty is void with respect to any product which has been altered in any way from its manufactured condition, such as intentional modification, accident, corrosion, misuse failure to provide necessary and reasonable maintenance and is exclusive of normal wear.

The sole responsibility of SAF-HOLLAND under this warranty is limited to repairing or replacing at the factory any part or parts which are returned, with transportation charges prepaid, and are found to be defective to the satisfaction of SAF-HOLLAND.

Written authorization from SAF-HOLLAND must be obtained prior to returning any part or parts.

No charges for transportation or for labour performed on SAF-HOLLAND products by unauthorized persons will be allowed under this warranty.

SAF-HOLLAND shall not be liable, in any event, for proximate, incidental, consequential or other damages, including but not limited to damages for loss of production or injury to persons or property arising out of any breach of this warranty.

Hubodometer must be fitted to each trailer to ensure warranty is valid. If not fitted the warranty is null and void. Records will be compared to inspection and preventative maintenance manual to ensure accuracy.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE EXTENDING BEYOND THAT SET FORTH ABOVE.

SAF-HOLLAND reserves the right, without prior notice, to change specifications and dimensions as designs are altered and/or improved.

Options and features other than those shown may be provided.

W-2a



SAF INTRADRUM WARRANTY

SAF-HOLLAND (AUST.) PTY. LTD. warrants all SAF Intradrum axle suspension assemblies manufactured by it.

- Lifetime warranty is offered on Axle Connection for normal on-road operation.
- Shock Absorber, Hub Unit and Pivot Bush, when properly installed, to be free from defects in material and workmanship under normal use and service, are covered for a period of up to 1,000,000 km or six (6) years on sealed road application only and 500,000 km or three (3) years for off-road application.
- Automatic Slack Adjusters have 300,000 km warranty or two (2) years.
- Other Parts are covered for one (1) year against manufacturing fault only.

Excluded from the warranty are normal wear and tear parts, damaged due to extreme force, incorrect operation and subsequent damage.

Brake balance between Truck and Trailer must be checked regularly and damage of wheel bearings and brake components will not be warrantable if balance is out side recommendation. Regular inspection and preventative maintenance procedures must be carried out in accordance to SAF maintenance manual. The warranty is void with respect to any product which has been altered in any way from its manufactured condition, such as intentional modification, accident, corrosion, misuse failure to provide necessary and reasonable maintenance and is exclusive of normal wear. The sole responsibility of SAF-HOLLAND under this warranty is limited to repairing or replacing at the factory any part or parts which are returned, with transportation charges prepaid, and are found to be defective to the satisfaction of SAF-HOLLAND.

Written authorization from SAF-HOLLAND must be obtained prior to returning any part or parts.

No charges for transportation or for labour performed on SAF-HOLLAND products by unauthorized persons will be allowed under this warranty.

SAF-HOLLAND shall not be liable, in any event, for proximate, incidental, consequential or other damages, including but not limited to damages for loss of production or injury to persons or property arising out of any breach of this warranty.

Hubodometer must be fitted to each trailer to ensure warranty is valid. If not fitted the warranty is null and void. Records will be compared to inspection and preventative maintenance manual to ensure accuracy.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE EXTENDING BEYOND THAT SET FORTH ABOVE.

SAF-HOLLAND reserves the right, without prior notice, to change specifications and dimensions as designs are altered and/or improved.

Options and features other than those shown may be provided.

W-3



SAF INTRADISC WARRANTY

SAF-HOLLAND (AUST.) PTY. LTD. warrants all SAF Intradisc axle suspension assemblies manufactured by it.

- Lifetime warranty is offered on Axle Connection for normal on-road operation.
- Shock Absorber, Wheel Bearings and Pivot Bush, when properly installed, to be free from defects in material and workmanship under normal use and service, is covered for a period of up to 1,000,000 km or six (6) years on sealed road application only and 500,000 km or three (3) years for off-road application.
- Brake Caliper has a two (2) year warranty against manufacturing fault.
- The Disc Rotor has two (2) year's unlimited mileage against manufacturing failure.
- Other Parts are covered for one (1) year against manufacturing fault only.

Excluded from the warranty are normal wear and tear parts, damaged due to extreme force, incorrect operation and subsequent damage. Brake balance between Truck and Trailer must be checked regularly and damage of wheel bearings and brake components will not be warrantable if balance is out side recommendation. Damage to brake components including premature Pad wear, Caliper or Rotor damage through brake code specification being used which differ from our specified data will not be covered under the terms of the warranty. Regular inspection and preventative maintenance procedures must be carried out in accordance to SAF maintenance manual. The warranty is void with respect to any product which has been altered in any way from its manufactured condition, such as intentional modification, accident, corrosion, misuse failure to provide necessary and reasonable maintenance and is exclusive of normal wear.

The sole responsibility of SAF-HOLLAND under this warranty is limited to repairing or replacing at the factory any part or parts which are returned, with transportation charges prepaid, and are found to be defective to the satisfaction of SAF-HOLLAND. Written authorization from SAF-HOLLAND must be obtained prior to returning any part or parts.

No charges for transportation or for labour performed on SAF-HOLLAND products by unauthorized persons will be allowed under this warranty.

SAF-HOLLAND shall not be liable, in any event, for proximate, incidental, consequential or other damages, including but not limited to damages for loss of production or injury to persons or property arising out of any breach of this warranty.

Hubodometer must be fitted to each trailer to ensure warranty is valid. If not fitted the warranty is null and void. Records will be compared to inspection and preventative maintenance manual to ensure accuracy.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE EXTENDING BEYOND THAT SET FORTH ABOVE.

SAF-HOLLAND reserves the right, without prior notice, to change specifications and dimensions as designs are altered and/or improved. Options and features other than those shown may be provided.

W-4



SAF MODUL SUSPENSION WITH 146MM AXLE DIAMETER WARRANTY

SAF-HOLLAND (AUST.) PTY. LTD. warrants all SAF MODUL air suspensions, axles (both drum and disc) manufactured by it, when properly installed, to be free from defects in material and workmanship under normal use and service.

- The axle beam has five (5) years for structural and manufacturing defects only.
- The axle hub and bearings are covered for 1,000,000 km or six (6) years, on sealed road application only and 500,000 km or three (3) years for off-road application, whichever comes first.
- Brake caliper and disc rotor both have two (2) years warranty for structural and manufacturing defects.
- All other parts are warranted for one (1) year.

Excluded from the warranty shall be all damage caused intentionally or by gross negligence or by improper or inappropriate handling or the failure to observe the operating, service and installation instructions. Normal wear and tear shall also be excluded from said warranty such as brake linings, drums, brake rollers and springs, disc pads and rotors. Our warranty obligations shall be voided if the goods supplied by us are repaired or modified, parts are used that are not original SAF parts or if SAF identification plates are removed.

Brake balance between truck and trailer must be checked regularly and damage of wheel bearings and brake components will not be warrantable if balance is outside recommendation. The warranty is void with respect to any product which has been altered in any way from its manufactured condition, such as intentional modification, accident, corrosion, misuse failure to provide necessary and reasonable maintenance and is exclusive of normal wear. The sole responsibility of SAF-HOLLAND under this warranty is limited to repairing or replacing at the factory any part or parts which are returned, with transportation charges prepaid, and are found to be defective to the satisfaction of SAF-HOLLAND. Written authorization from SAF-HOLLAND must be obtained prior to returning any part or parts. No charges for transportation or for labour performed on SAF-HOLLAND products by unauthorized persons will be allowed under this warranty.

SAF-HOLLAND shall not be liable, in any event, for proximate, incidental, consequential or other damages, including but not limited to damages for loss of production or injury to persons or property arising out of any breach of this warranty.

Hubodometer must be fitted to each trailer to ensure warranty is valid. If not fitted the warranty is null and void.

Records will be compared to inspection and preventative maintenance manual to ensure accuracy.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE EXTENDING BEYOND THAT SET FORTH ABOVE.

SAF-HOLLAND reserves the right, without prior notice, to change specifications and dimensions as designs are altered and/or improved. Options and features other than those shown may be provided.

W-5



TRAILER AXLES AND
SUSPENSION SYSTEMS



COUPLING AND LIFTING
TECHNOLOGIES



SUSPENSIONS FOR
TRUCKS AND BUSES



SUSPENSIONS AND COMPONENTS
FOR COMMERCIAL VEHICLES



BUS AIR SUSPENSION
SYSTEMS



COUPLING AND LIFTING
TECHNOLOGIES



TRAILER AXLES AND
SUSPENSION SYSTEMS

safholland.com.au

SAF-HOLLAND (Aust.) Pty. Ltd.

PO Box 63 · 115 High St · Melton Vic 3337

Tel: (03) 9971 7900 Fax: (03) 9743 6763

ABN: 79004371215

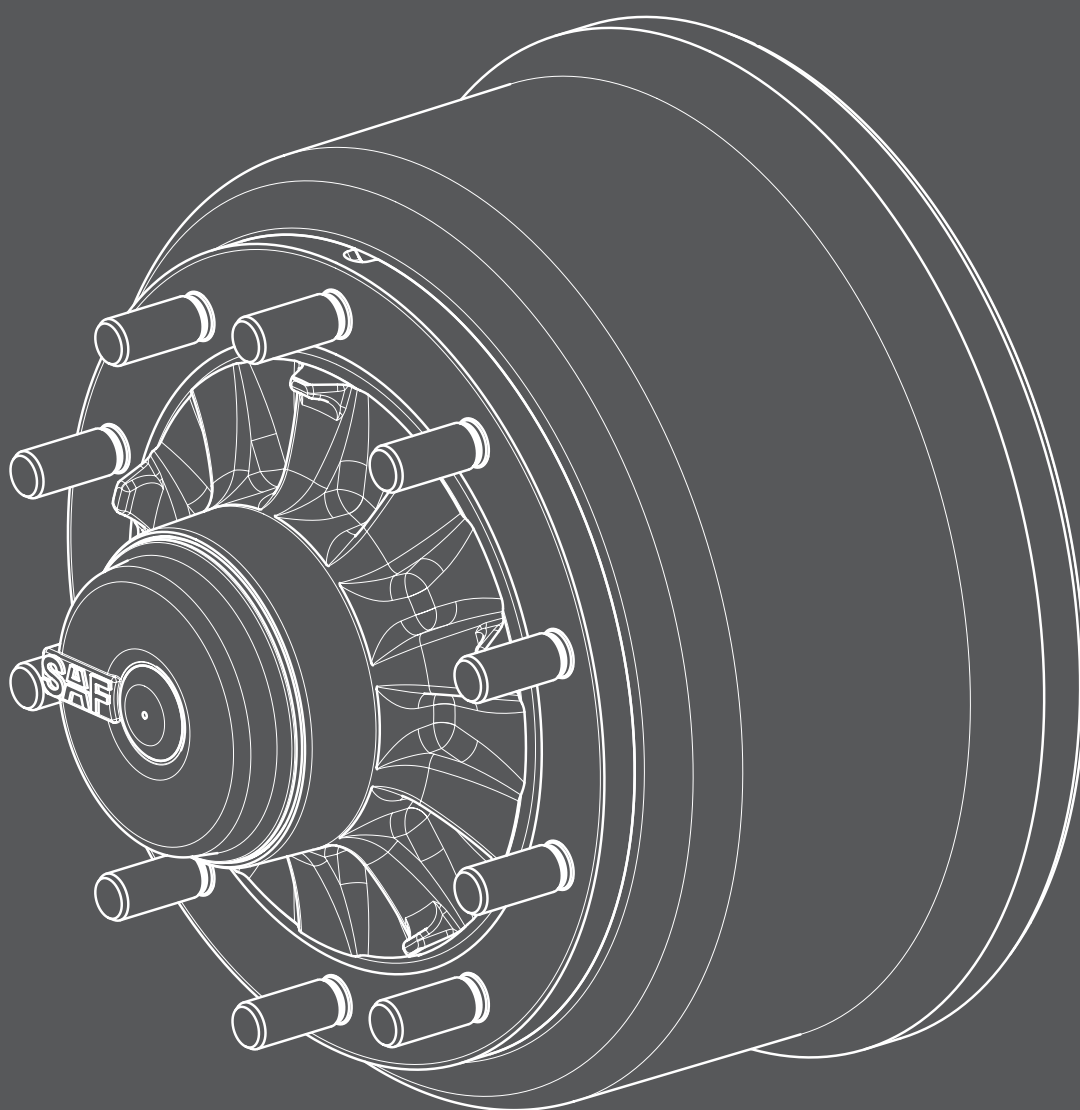
Sales: 1300 131 613

Email: sales@safholland.com.au

Web: www.safholland.com.au

General Operating and Service Manual

Air suspension systems and axles with drum brakes



Identification and maintenance instructions

Axle / Suspension identification	2-3
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General Information

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Air suspension system

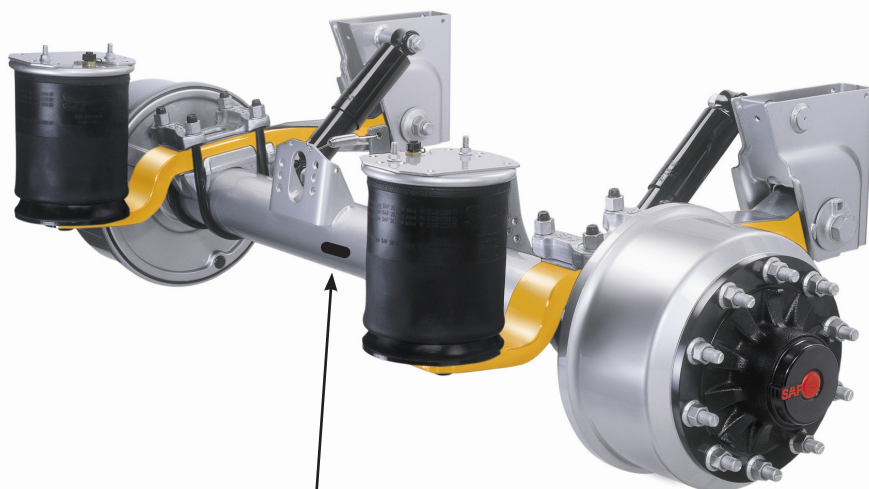
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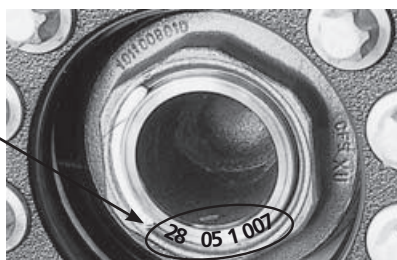
The axle type designation (version), identification number and serial number (see type plate) are required for the warranty procedure.

Air suspension system

Type Modul



SAF-HOLLAND GMBH D-63856 BESSENBACH · GERMANY			 
Version	BI9-22K01	ID1 – SBK2243 – 11S	
Serial No.	11 12 117 0009	ID2 – SBK2243 – 11S 01	
Ident No.	147 96 62 7 48 20	ID3 – 10791	
Stat. 9000 kg Vmax. 105 km/h		ID4 – 36110303	
Made in Germany	E	SN 11121170009	



Identification if the type plate is missing:
 The Serial No. of the axle is embossed in the axle end on the right-hand side (as seen in the direction of travel).

When ordering spare parts quote correct axle identification & serial no., refer to the axle type plate.
Please provide the following information from the type plate (as below) to ensure correct parts are ordered.

- ① Axle type (example: "SKRZ 9019W", "SKRLB 9022KI" or "Z9-4218" etc.)
- ② Ident No. (example: "147 83 25 7 6 69 0" or "171 91 50 7 49 1" etc.)
- ③ Serial No. (example: "167 06 3 648" etc.)

Type plate from mid-2004

OTTO SAUER ACHSENFABRIK GMBH D-63856 BESENBACH · GERMANY		SAF	
Type	SKRB9022WI	Serial No.	229 04 3 229
Basis Type	SBW2243-11S	Ident No.	247 96 38 7 48 1
Test Report	36110702	Perm. axle cap. stat.	9000 kg
		V max.	105 km/h
AN 1280397		SN 229043229	

Type plate up to mid-2004

SAF OTTO SAUER ACHSENFABRIK KEILBERG D-63854 BESENBACH / GERMANY			
TYP			
Ident.-No. /Prod.-No.			
zul. Last kg perm. cap. charge adm.	STAT.	TECH.	v max. km/h max. speed vitesse maxi.
TDB-No.		Grundtyp	

Axle serial number code (up to July 2009)

The serial number looks like this:

DDYYXNNN

DDD = Production day

YY = Production year

X = Site

NNN = Running number per day, year and site

Axle serial number code (from July 2009)

The serial number looks like this:

XX YY DDD NNNN

XX = Site

YY = Production year

DDD = Production day

NNN = Running number per day, year and site

SAF-HOLLAND GMBH D-63856 BESENBACH · GERMANY		SAF-Holland	
Version	B9-22K01	Serial No.	11 09 156 0020
Type	SBK2243-11S	Ident No.	347 96 21 7 49 01
Test Report	36110303	Perm. axle cap. stat.	9000 kg
Made in Germany		V max.	105 km/h
AN 3335528		SN 11091560020	

QR codes

QR codes on type plates lead directly to a list that only displays spare parts that are relevant for the scanned product.

SAF-HOLLAND GMBH D-63856 BESENBACH · GERMANY		SAF-Holland	
Version	BI9-22K01	ID1 - SBK2243 - 11S	
Serial No.	11 12 117 0009	ID2 - SBK2243 - 11S 01	
Ident No.	147 96 62 7 48 20	ID3 - 10791	
Stat. 9000 kg Vmax. 105 km/h		ID4 - 36110303	
Made in Germany	E		
		SN 11121170009	

Please observe the following safety instructions in order to maintain the operational and road safety of your SAF-HOLLAND axles and suspension systems:

1. The wheel contact surfaces between the wheel disc and wheel hub and the wheel nut contact surface at the wheel disc must not be additionally painted. The contact surfaces must be clean, smooth and free from grease. Failure to observe this may result in the wheel coming loose. Any additional instructions of the wheel manufacturer must also be observed.
2. Only the wheel and tyre sizes approved by the trailer builder may be used. The tyres must always have the specified inflation pressure.
3. The brake systems of the tractor and the trailer/semi-trailer must be synchronised by means of a tractor/trailer brake synchronisation not later than 5,000 km after the initial start of operation of the trailer/semi-trailer in order to ensure a safe and uniform braking behaviour and uniform brake pad wear. Tractor/trailer brake synchronisations should be carried out by appropriately qualified and equipped brake workshops.
4. Before starting a journey, ensure that the maximum permissible axle load is not exceeded and that the load is distributed equally and uniformly.
5. On trailers with air suspension, ensure that the air bags are filled with air before starting the journey. Flat air bags may result in damage to axles, suspension, frame and superstructure and impair road safety.
6. Ensure that the brakes are not overheated by continuous operation. With drum brakes, overheating can result in a hazardous deterioration in the braking efficiency. With disc brakes, overheating can result in damage to surrounding components – in particular the wheel bearings. This can result in a significant deterioration in road safety, e.g. failure of wheel bearings.
7. The parking brake must not be immediately applied when the brakes are hot, as the brake discs and brake drums may be damaged by different stress fields during cooling.
8. Observe the operating recommendations for off-road operation of the installed axles and suspension systems. The SAF-HOLLAND definition of OFF-ROAD means driving on non-paved roads, such as e.g. gravel roads, agricultural and forestry tracks, on construction sites and in gravel pits.
9. SAF-HOLLAND axles and suspension systems require continuous care, service and maintenance in order to maintain operational and road safety and to be able to recognise natural wear and defects in good time. The daily inspection of the trailer for road safety before starting the journey is one of the driver's obligations. SAF-HOLLAND recommends that at least the inspections and maintenance operations described on pages 6 & 7 should be carried out.
10. Caution: After every wheel change, always retighten the wheel nuts to the prescribed torque after 50 km and again after 150 km.
11. Check the brake lining thickness at regular intervals.
12. Carry out general visual inspections of the brakes, tyres and all suspension components at regular intervals and check for proper attachment, wear, leaks, corrosion and damage.
13. Carry out regular visual inspections of the wheel bearing unit for grease leaks and axial clearance. For wheel bearing grease change information, see pages 12 - 17.
14. Regularly check the camshaft for smooth return and the slack adjuster for proper function.
15. Lubricate the camshaft at regular intervals.
16. Inspect the brake drum for wear and cracking at every brake lining change. For wear limits see pages 12 to 17.
17. Replace the brake shoe return springs at every brake lining change.
18. Check the air suspension ride height at regular intervals in accordance with the trailer builder's specifications and adjust as described on page 32.
19. With aluminium and steel hanger brackets, check that the bolts of the spring brackets and shock absorbers are tightened to the prescribed torques as described on page 8-9.
20. Modul suspension u-bolts are tightened to the prescribed torques as described on page 10.
21. For steering axles, observe also the points on pages 18 and 19.
22. Carry out a general safety check in accordance with the statutory provisions.
23. We recommend the use of original SAF-HOLLAND spare parts.

* We recommend the use of original SAF-HOLLAND spare parts. A service network of SAF-HOLLAND partners companies is available for the technical support of the SAF-HOLLAND axles and suspension systems and for the supply of original SAF-HOLLAND spare parts. Updates will be published as necessary on the internet under www.safholland.com.au
We recommend that a full general safety check is carried out when the minimum wear limit is reached.

Intra Disc/Drum Suspension

Service schedule			Periodic checks		
	Distance intervals >	After first 5000 km or	Every 30000 km	Every 90000 km	Every 150000 km
<i>whichever comes first</i>	Time intervals >	after first month	Every 3 months	Every 6 months	Every 12 months

Mechanical check

Attention: Torque check wheel nuts after the first 50 km and 150 km (and after every wheel removal).

Torque check all nuts and bolts to recommended setting.

Hub unit maintenance-free.

Visual inspection for grease leakage, bearing noise and end play check.

Inspect hub nuts and make sure they are not loose. If loose, retighten as per prescribed procedure.

Lubricate camshaft bearings after every brake lining replacement, however, at least every 12 months.

Visual inspection for wear/damage

Check suspension components for wear, fluid leakage and damage

Check brake linings for wear

Check camshafts for free movement

Check slack adjusters for correct function

Check braking system for leaks (brake applied)

Check air suspension for air leaks

Check air suspension bellows for damage

Check piston surface for contamination and clean, if necessary

Check trailing arms for damage, scoring and corrosion

Check self steering axle for correct function

Check tyre wear and tracking (if required)

Safety inspection

Check wheel brake for correct adjustment

Check service brake and hand brake efficiency

Check truck-trailer combination for brake compatibility

Check service brake pressure to manufacturer's recommendation

Check air suspension for correct ride height.

With 2 levelling valves, the max. permissible bellows pressure difference (LH to RH vehicle side) is 0.2 bar.

Special service conditions

Vehicles with long standing periods: service at specified time intervals

Vehicles used under extreme conditions: service at suitably reduced intervals

Warranty claims will only be accepted as long as the operating and maintenance instructions have been complied with and if SAF-HOLLAND approved spare parts have been fitted.

First service free if completed according to SAF-HOLLAND first service requirements and appropriate documentation is submitted to SAF-HOLLAND before 5000 km or one month from in service date.

Modul Suspension

Service schedule	Periodic checks				
	Distance intervals >	After first 5000 km or	Every 30000 km	Every 90000 km	Every 150000 km
<i>whichever comes first</i>	Time intervals >	after first month	Every 3 months	Every 6 months	Every 12 months

Mechanical check

Attention: Torque check wheel nuts after the first 50 km and 150 km (and after every wheel removal).

Torque check all nuts and bolts to recommended setting.

Check and adjust hub end-float (if required).

Pack wheel bearings with fresh grease after 300,000 km or 36 month, whichever comes first.

Check condition of taper roller bearings and replace, if necessary.

Lubricate camshaft bearings after every brake lining replacement, however, at least every 12 months.

Visual inspection for wear/damage

Check suspension components for wear, fluid leakage and damage

Check brake linings for wear

Check camshafts for free movement

Check slack adjusters for correct function

Check braking system for leaks (brake applied)

Check air suspension for air leaks

Check air suspension bellows for damage

Check air bag piston surface for contamination and clean, if necessary

Check parabolic springs for damage, scoring and corrosion

Check function of steering axle

Check tyre wear and tracking (if required)

Safety inspection

Check wheel brake for correct adjustment

Check service brake and hand brake efficiency

Check truck-trailer combination for brake compatibility

Check service brake pressure to manufacturer's recommendation

Check air suspension for correct ride height.

With 2 levelling valves, the max. permissible bellows pressure difference (LH to RH vehicle side) is 0.2 bar.

Special service conditions

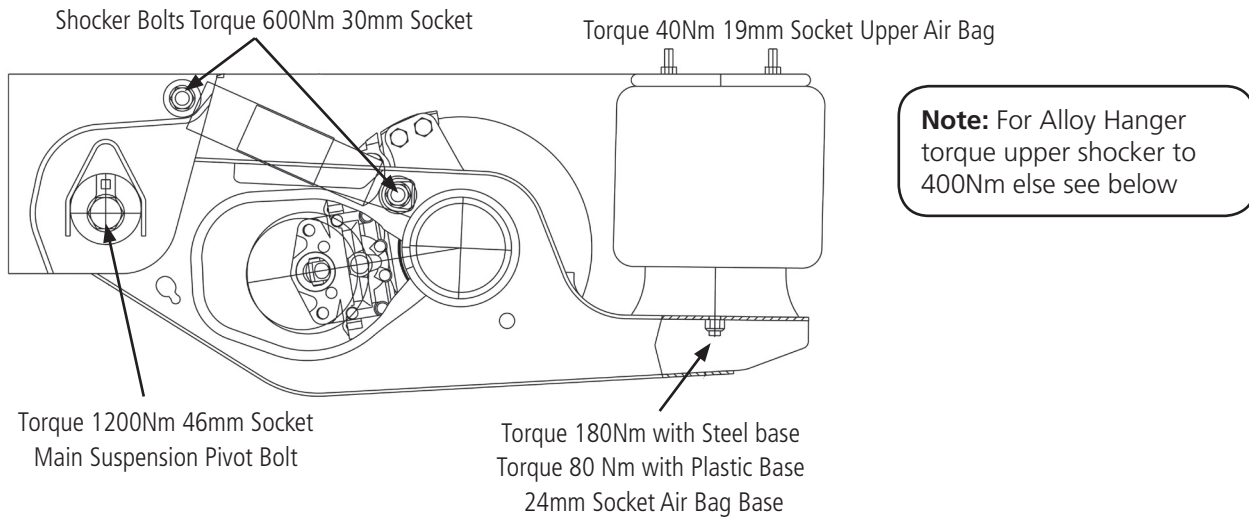
Vehicles with long standing periods: service at specified time intervals

Vehicles used under extreme conditions: service at suitably reduced intervals

Warranty claims will only be accepted as long as the operating and maintenance instructions have been complied with and if SAF-HOLLAND approved spare parts have been fitted.

Intra Disc/Drum Suspension Maintenance

Torque settings and procedures



The First Service Provider is responsible for re-torquing and marking the suspension pivot, shocker bolts and axle spindle nuts to facilitate the regular visual inspection as required in the "Repair and Maintenance Manual".



When torquing pivot bolt ensure bolt head cannot turn by use of a suitable spanner or socket and bar "the torque application should be on the nut, not the bolt head".



Clearly mark with counterpunch and or line marker the relative position of the bolt, nut and hanger after the final tightening for the future visual inspections (to be easily visible).

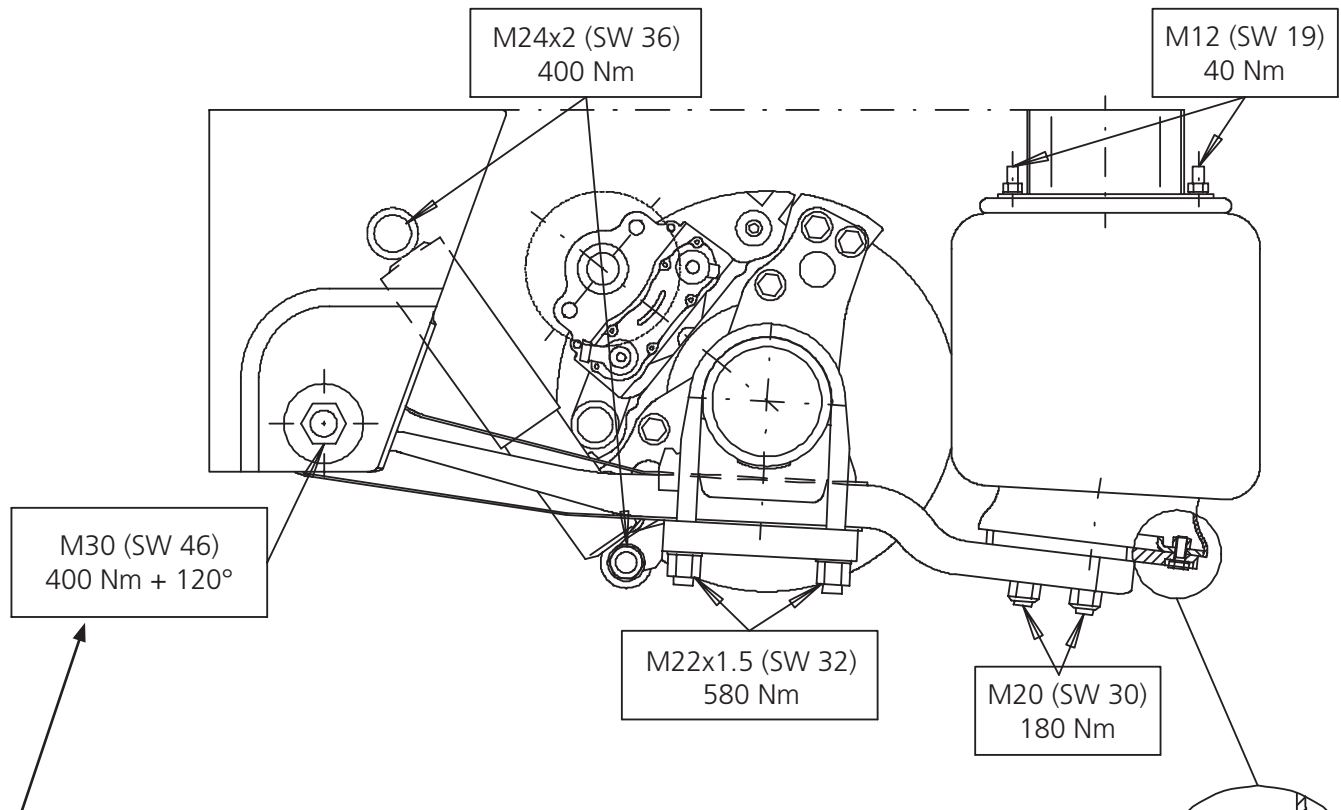
Note: As an alternative only if the appropriate torque wrench is not available to achieve 1200Nm the pivot bolt can be tensioned by first loosening and re-torquing to 400Nm and then turning a further 120 deg... 2 flats of the nut.

Warranty on SAF Intradisc/Intradrum suspension would be void if the prescribed maintenance procedures are not performed as per the "Repair and Maintenance Manual".

If the manual has not been delivered with the trailer, please call **SAF-HOLLAND Customer Service on 03 9971 7900**.

Modul Disc/Drum Suspension Maintenance

The max. coat thickness of any primer or paint must not exceed 45 µm on any contact surfaces of the suspension arm and shock absorber fixation!



Torque - Tightening procedure

1. Faces of the HD bearing bush and hanger must be free from paint, oil and grease.
2. Install the functional suspension arm parts as shown in the spare parts drawing.
3. Adjust the vehicle to ride height.
4. Tension the bolt to 1200 Nm or alternatively follow the procedure below if a large tension wrench is not available.
 - Pre-tighten the nuts M30/WAF46 to 400 Nm using a torque wrench.
 - Align the marks on the welded hub, hexagon head bolt and nut over one corner of the nut.
 - Tighten the nut a further 120° (2 nut corners), holding the bolt head to prevent the bolt from turning with the nut.
 - Perform a visual check. Correct the turn angle, if necessary.
5. Make marks with a counter punch on the welded hub, hexagon head bolt and nut in a line after completing the tightening procedure.

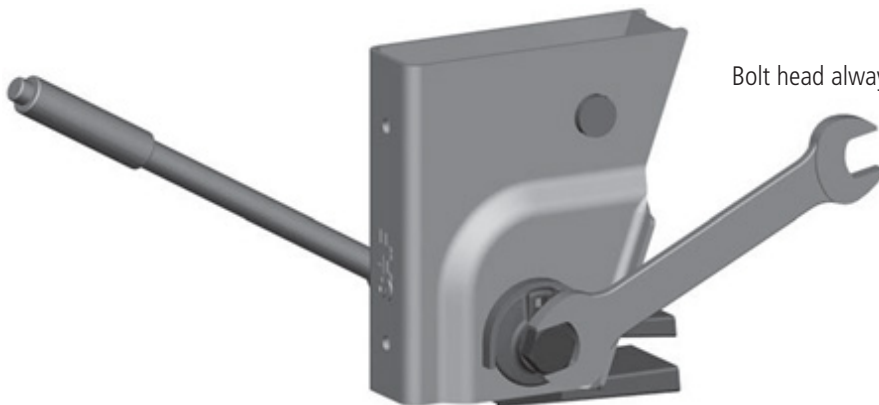
M12 (SW 19) 80 Nm
for steel plunger piston

K100x40 (SW10) 20 Nm
for plastic plunger piston

Attention!

- Threads are not to be oiled or greased!
- Pivot bolt mounting for hanger bracket, steel maintenance free.
- Pivot bolt mounting for hanger bracket aluminium to be checked after 500 km, further checks every 6000 km. Inspection torque 1200 Nm.

Initial Tightening instructions for adjustable pivot bolt



Bolt head always on the eccentric washer side.

Attention!

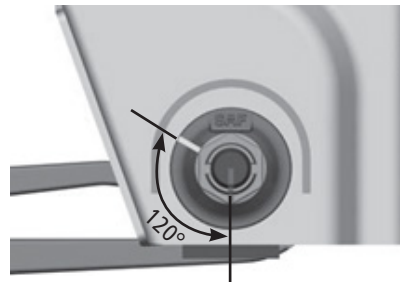
- Pivot bolt tightening must always be performed at the specified ride height
- No paint residues on mounting surfaces of pivot or shocker bolts e.g. between eccentric/thrust washer and hanger to bush faces.

The Pivot Bolt can be directly tightened to 1200Nm with the appropriate Tension wrench. Alternatively the following lower tension value and angle turn tightening method can be used. Please note to always tension the nut and hold the bolt head which should be on the eccentric washer.

Pre-tightening: 400 Nm Use torque wrench



Marking for angle tightening



Angle tightening: 120° Use impact wrench or extended lever to 2.5 m



Visual inspection



Attention!

- Pivot bolt tightening must always be performed at the specified ride height
- No paint residues between eccentric/thrust washer and hanger!

Axle Torque Chart

Tensioning Chart				
Axle types	Axle spindle tension	Alternate tension method	Max hub bearing backlash	Hub nut size
Z9-4218 Z9-3720 ZL9-3720 Z11-3020 ZL11-3020	900Nm whilst turning hub at least twice	Pre tension to 150Nm turn hub by min 5 revolutions, then add additional 30 deg turn to nut "1 increment"	0.25mm	85mm
SK RZ 9037	900Nm whilst turning hub at least twice	N/A	0.20mm	140mm
SK RZ 9042	900Nm whilst turning hub at least twice	Pre tension to 200Nm whilst rotating wheel hub, then turn an additional 1 - 1.5 graduations of nut (10-15deg)	0.20mm	140mm
SK RZ 9030 SK RZ 12242 SK RZ 12342	Tighten hub nut to 150Nm whilst rotating hub, turnback nut by 2.5 holes of the lock washer, fit lock washer and lock nut then tension lock nut to 400nm	N/A	0.20mm	85mm

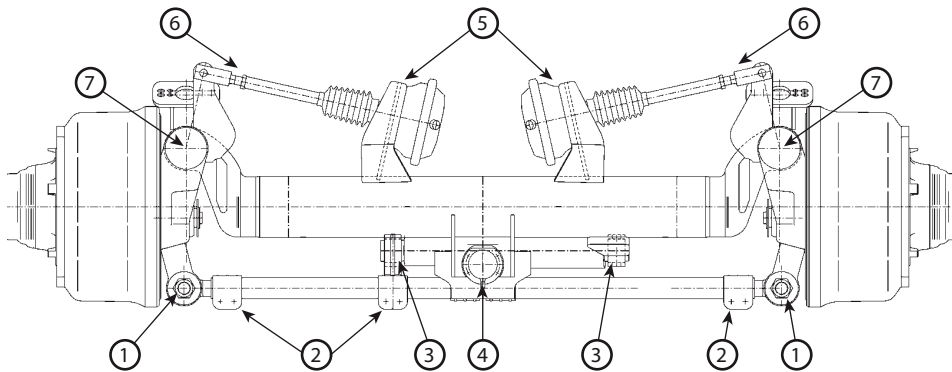
Lubrication Chart

Lube part numbers - All Axles			
Axle Stub end	Camshaft	Wheel bearing if applicable	Brake carrier ball
5387004203 x 5gm 5387004201 x 1kg	5387001105	5387001105	Proprietary Copper Lube type anti seize

Brake Drum Dimensions and Hub/Brake Tooling

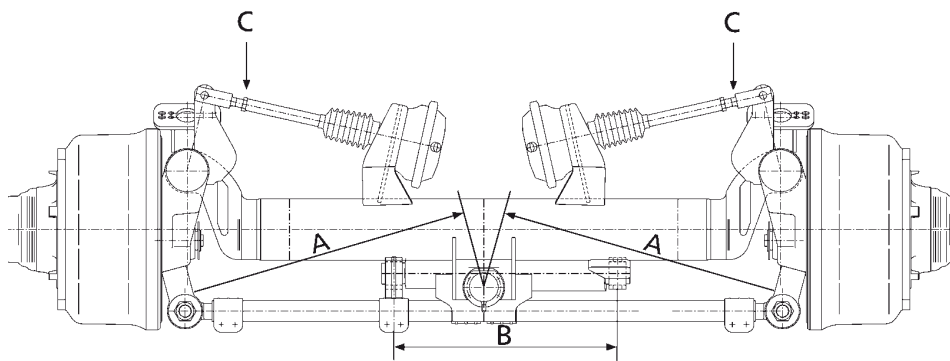
Axle type	Brake designation	Brake shoe width	Brake drum min dia	Max machining max dis	Brake drum max dia	Axle nut tool	Brake shoe tensioner tool	Wheel hub puller	Wheel bearing mandrel
Z9-4218	SNK 420	180	420 mm	424 mm	425 mm	4434382800L	3349100100	2501871	NA
Z9-3720 Z9-3720	SNK 367	200	367 mm	371 mm	372 mm	4434382800L	3349100100	2501871	NA
SKRZ-9030	SNK 300	200	300 mm	303 mm	304 mm	1012002400	3349100100	2501871	3434101400, 3434330800
SKRZ-9037	SNK 367	200	367 mm	371 mm	372 mm	1012002400	3349100100	2501871	3434105800
SKRZ-9042	SNK 420	180	420 mm	424 mm	425 mm	1012002400	3349100100	2501871	3434104300
Z11-3020 ZL11-3020	SNK 300	200	300 mm	303 mm	304 mm	4434382800L	3349100100	2501871	NA
SKRZ12242 J-SAF	SNK 420	180	420 mm	424 mm	425 mm	4434382800L	3349100100	2501871	3434332000, 3434103600
SKRZ12342	SNK 420	180	420 mm	424 mm	425 mm				

Tightening Torques



No.	Designation	Number per axle	Tightening torque
1	Ball joint screw	2	M30 (340 Nm)
2	Retaining clamp screw	10	M12 (80 - 90 Nm)
3	Steering damper screw	2	M24 (600 - 660 Nm)
4	Lock cylinder screw	4	M6 (8 - 10 Nm)
5	Stabilising cylinder screw	4	M16 (180 ± 30 Nm)
6	Lock nut	2	M20 (is locked against the thrust rod)
7	Cover plate screw	6	M8 (25 - 30 Nm)

Adjustment instructions for self steering axles



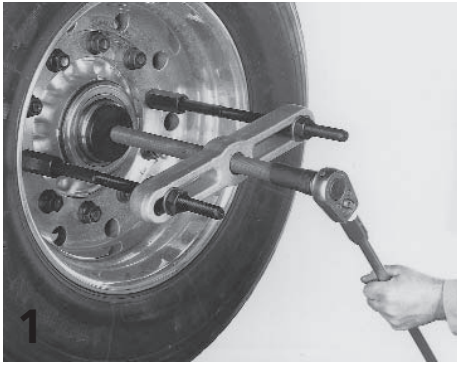
- Dimension "A" must be the same; observe the toe-in (approx. 4.0 mm/m).
- Dimension "B" is 537 mm; engage the reversing lock.
- On versions with pneumatic stabilisation, a steering damper is not necessary. Additional pneumatic kit is required.
- On versions without pneumatic stabilisation, a steering damper must be used.
- Check: Backlash-free seating of the piston rods of the stabilising cylinders.

Apply stabilising pressure (2 bar min) to the cylinders. Piston and pressure rods must then be backlash-free (under slight pressure); otherwise adjust at "C".

- When setting the track width on the trailer, the cylinders must be under stabilising pressure and the correct ride height of the air suspension system must have been set.
- Tighten all bolts to the prescribed torque and lock the nuts or insert the cotter pin.

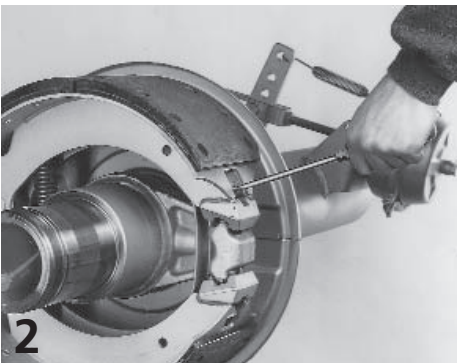
Note: During lubrication work on the steering pin bearing, the axle must be relieved (raised).

Lubrication at the bearing points of the king pin bolt for the first time after 1 month, then every 6 months.



1. Disassembly instructions

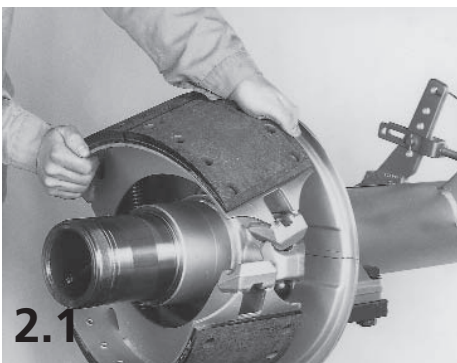
- The complete wheel hub unit can be easily pulled off the stub axle.
- If the bearing inner races tilt on the stub shaft, the hub unit can be pulled off using a normal workshop puller or using SAF Part No. 4 434 3822 00.
- **Note: Do not disassemble the compact wheel bearing unit!**
- The wheel bearings have a long-life grease packing.



2. Disassembling the brakes

- Lever the spring clip out of the retainer in the brake shoe using a screwdriver.
- Remove the spring clip.

2.1 Pull the upper brake shoe sideways over the cam and ball pivot point and then remove both brake shoes from the brake carrier.



3. Inspecting the camshaft

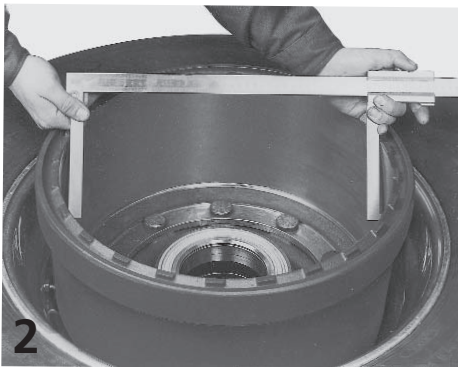
- Push the camshaft firmly from side to side in the bearing of the brass bush and measure the radial clearance.
- Max. permissible radial clearance: 2.0 mm.
- If the max. permissible radial clearance is exceeded, the camshaft must be removed and the brass bush in the brake carrier replaced.





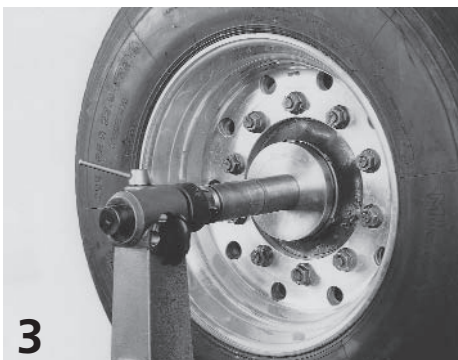
1. Brake lining

- For original dimensions and wear limits, see table on page 10.
- Intradrum brake has two different brake linings riveted onto each brake shoe. The lining contour tapers towards the ball side.
- The thicker end of the brake lining is riveted on the roller side (S-cam).
- Corrosion-proofed steel rivets are used for securing the linings. The brake linings have a monitoring shoulder on the face end indicating the brake lining type approved by SAF and the wear limit for the minimum brake lining thickness.
- Only brake linings of the same quality may be installed on the same axle.
- The brake lining must contact the brake drum over its full surface.
- The corners of the brake lining must not be broken and the lining must not be cracked at the rivets.



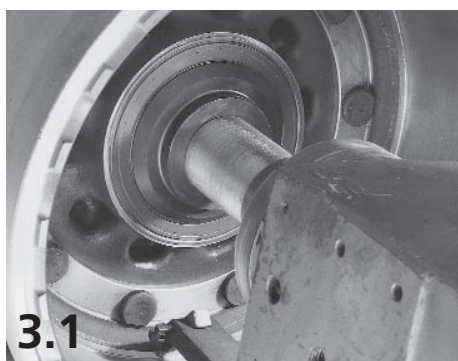
2. Brake drum

- For brake drum diameter permissible wear limits, see table on page 10.



2.1 Brake drum cleaning

- The brake drum may only be cleaned using a dry cleaning material.
- Liquid cleansers, high-pressure cleaners or machine cleaning are not permitted. With this type of cleaning there is a danger of cleansing fluid entering the wheel bearing with a consequent failure of the wheel bearing lubrication.

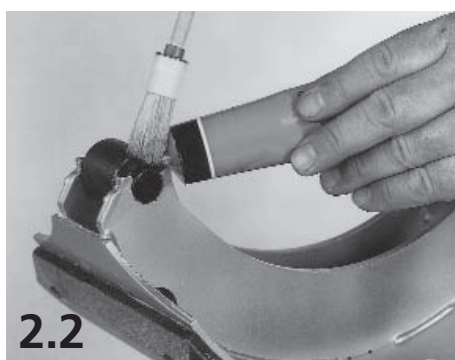
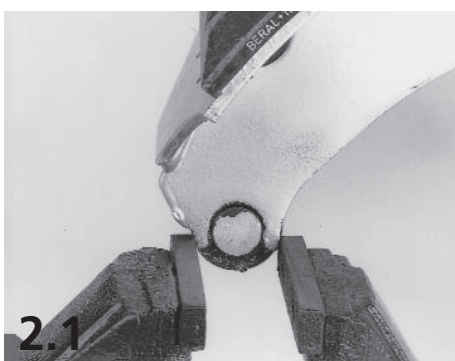
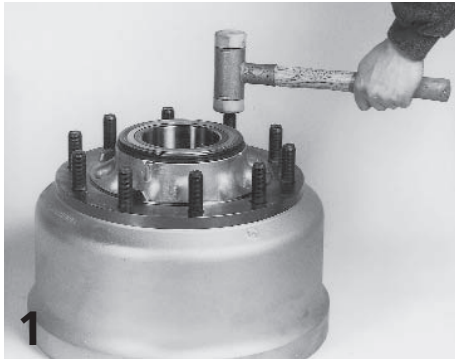


3. Inspecting the brake drum, removing and installing the brake drum

- Inspect the brake surface of the brake drum closely for further serviceability.
- Brake drums with fine hairline cracks in the contact surface can continue to be used. If the contact surfaces of the brake drums exhibit deep scoring, the drums must be turned down. If cracks are still visible after turning down, replace the brake drums.
- Measure the brake drum diameter and turn down to the next repair stage, if necessary. When the maximum permissible brake drum inside diameter is reached, the brake drums must be replaced.
- For permissible wear limits, see table in chapter "Maintenance instructions".

3.1 Note: The compact wheel bearing units are not removed when turning down the brake drum.

- Centre wheel hub on the brake drum lathe using clamping device, SAF Part No. 3 343 1040 01.
- Further machining of the brake drum can then be carried out as normal in the workshop.



1. Replacing the brake drum

- In order to remove the brake drum from the wheel hub, drive all the wheel studs out of the wheel hub using a plastic hammer.
- Before assembling the wheel hub and brake drum, remove any corrosion from the contact surfaces.

1.1 Drive the wheel studs into the brake drum flange until they are flush with the inner surface using a normal workshop drift.

- Ensure that the studs are secured in the position.
- If necessary, the wheel studs can also be correctly positioned by pulling in using a wheel nut.

2. Installing the brake shoes

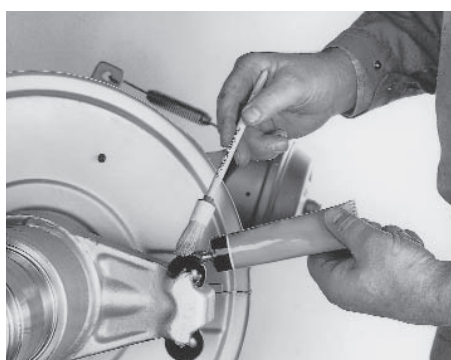
- Check the proper mounting seat of the two balls in the brake carrier.
- The balls can still be moved easily by hand in their mountings.
- If a ball has come loose in its mounting, a secure fit can be achieved again by tapping the sides of the mounting lightly with a hammer.

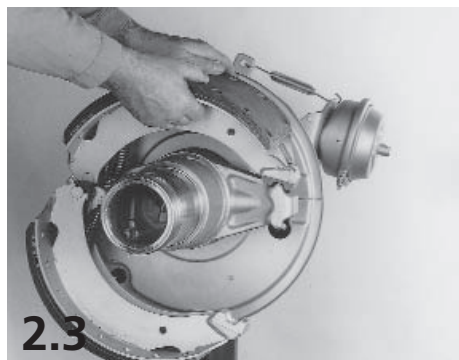
2.1 Check the proper mounting of the cam roller on the brake shoes. The cam roller must not jam in the mounting. It must turn easily, but without radial clearance.

- Replace the cam roller if the journal is severely worn. When installing new cam rollers, a secure mounting in the brake shoe can be achieved by pressing in the two side faces in a vice.

2.2 Apply copper paste to the brake shoes, to the ball surface and to the two journals of the cam roller.

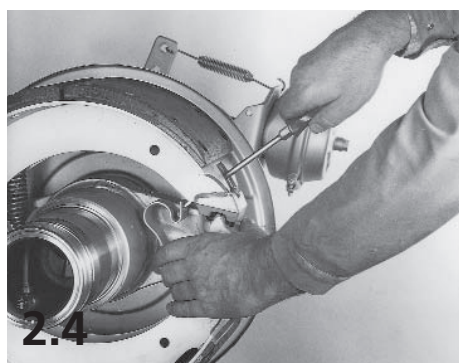
- See chapter "Maintenance instructions" for recommended media.





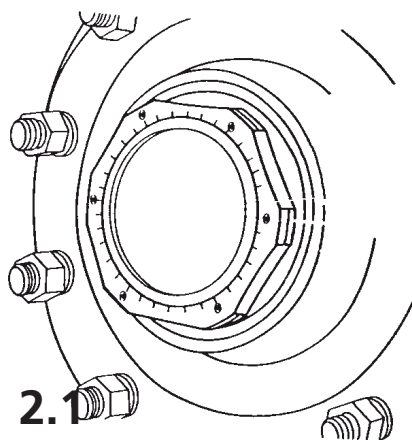
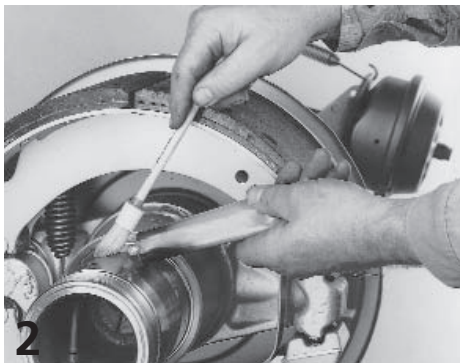
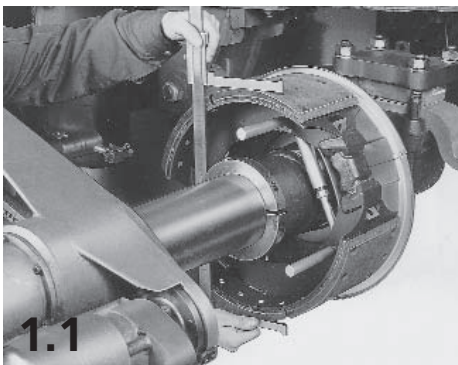
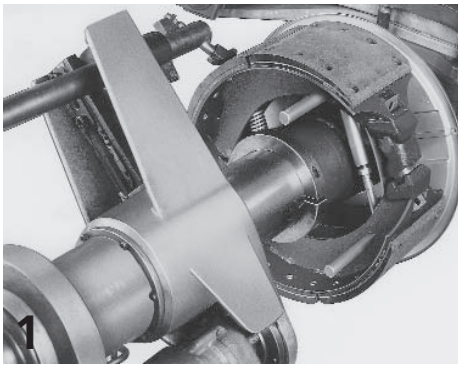
2.4 Hook a new return spring into the tabs of the brake shoes.

- Position the upper brake shoe on the ball pivot point and the cam roller surface.
- Tilt the lower brake shoe towards the cover plate until the correct seating on the cam and on the ball pivot point is achieved; if necessary, turn the camshaft into the required position. Insert the spring clip into the groove on the lower brake shoe and hook into the retainer on the upper brake shoe using a screwdriver.



2.5 Ensure that the spring clip is fitted securely.

- Check the assembly and the proper operational condition of the installed brakes.
- Turn the camshaft by actuating the slack adjuster by hand and check the correct positioning and smooth return of the brake shoes; readjust the camshaft bearing, if necessary.



1. Turning down the brake linings

- Even after a brake lining replacement with new brake linings, the brake lining must be in full contact with the braking surface of the brake drum over its whole surface in order to achieve an optimum braking effect.
- For a uniform contact pattern, the brake lining must therefore be turned down centrally to the stub shaft on a normal workshop brake lining lathe.
- Set the lathe tool to the diameter of the brake drum + 0.3 mm.
- Use the clamping device for the brake shoes, SAF Part No. 3 349 1001 00.
- **Leave the clamping device loose at this stage – do not clamp!**

1.1 Turn the camshaft by actuating the slack adjuster until the brake shoes are spread sufficiently that the lathe tool can take off material over the whole circumference of the brake linings.

- Now tighten the clamping device. Turn down the brake linings. Inspect the brake lining surface all over for complete machining.
- If necessary, loosen the clamping device and spread the brake shoes slightly further and repeat the machining process.
- Remove all chips of the brake lining from the brake shoes and stub axle.

1.2 Brake lining lathe

- 120 mm diameter supporting tube for axle type SK 9042/11242
- 100 mm diameter supporting tube for axle type SK 9037/11037
- Order adapter sleeves from the lathe manufacturer.

2. Installing the wheel hub with brake drum

- Completely coat the wheel bearing seats on the stub shaft and in the wheel hub with SAF fitting paste (SAF Part No. 5387004203)
- See chapter "Maintenance instructions" for recommended media.
- Replace O-ring - stub axle (19).

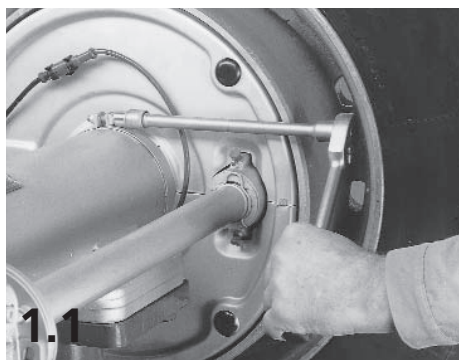
2.1 Completely release the wheel brake by turning the adjusting screw on the slack adjuster until the cam rollers of the brake shoes are in the end position.

- Position a wheel mounting carriage and push the complete wheel hub unit with brake drum onto the stub axle.
- Inspect the O-rings on the axle nut and replace, if necessary.
- Screw on the axle nut.



1. Axle nut:

- On right-hand side of vehicle (as seen in direction of forward travel) right hand thread.
- On left-hand side of vehicle (as seen in direction of forward travel) – left-hand thread.
- Identification of axle nut with left-hand thread: Milled groove on the outside surface.
- Tighten the axle nut.
- Axle nut socket: SAF Part No. 4434382800L
- Tightening torque 900 Nm. Each hub unit must be rotated smoothly at least twice while tightening the bolts.
- Special locking of the axle nut is not necessary.



1.1 Measure the voltage output on the ABS sensor cable using a voltmeter (approx. 100 mV) whilst turning the brake drum.

- Check the sensor, if necessary.
- Check that the cover plate of the brake shoes is correctly installed and correct the positioning, if necessary, using a clamp.

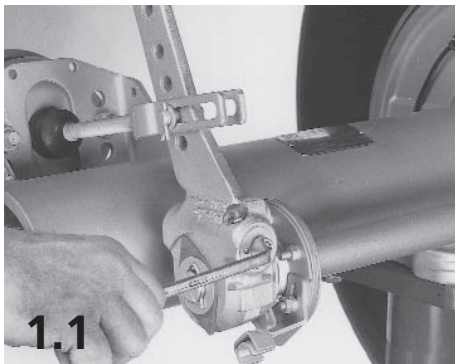


1. Checking the brake lining thickness

- The brake lining thickness can be checked at the two sight holes in the rear cover plate.
- Carry out the adjustment of the wheel brakes as normal at the slack adjuster.
- See chapter "Slack adjuster".

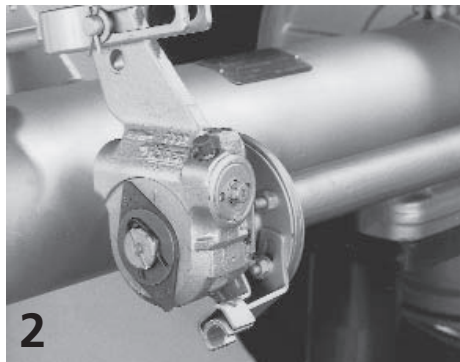
1.1 Carry out a normal test run and check the function and adjustment of the wheel brakes.

- Check the free wheeling of the brake drum and check the clearance; repeat the adjustment at the slack adjuster, if necessary.



2. Brake lining wear indicator

- On the slack adjuster the camshaft has a milled groove and a slip-on indicator for visual checking of the brake lining wear.
- Wear indicator in vertical position = Brake linings as good as new.
- When the wear indicators have reached a horizontal position, an inspection of the brake lining thickness must be carried out.

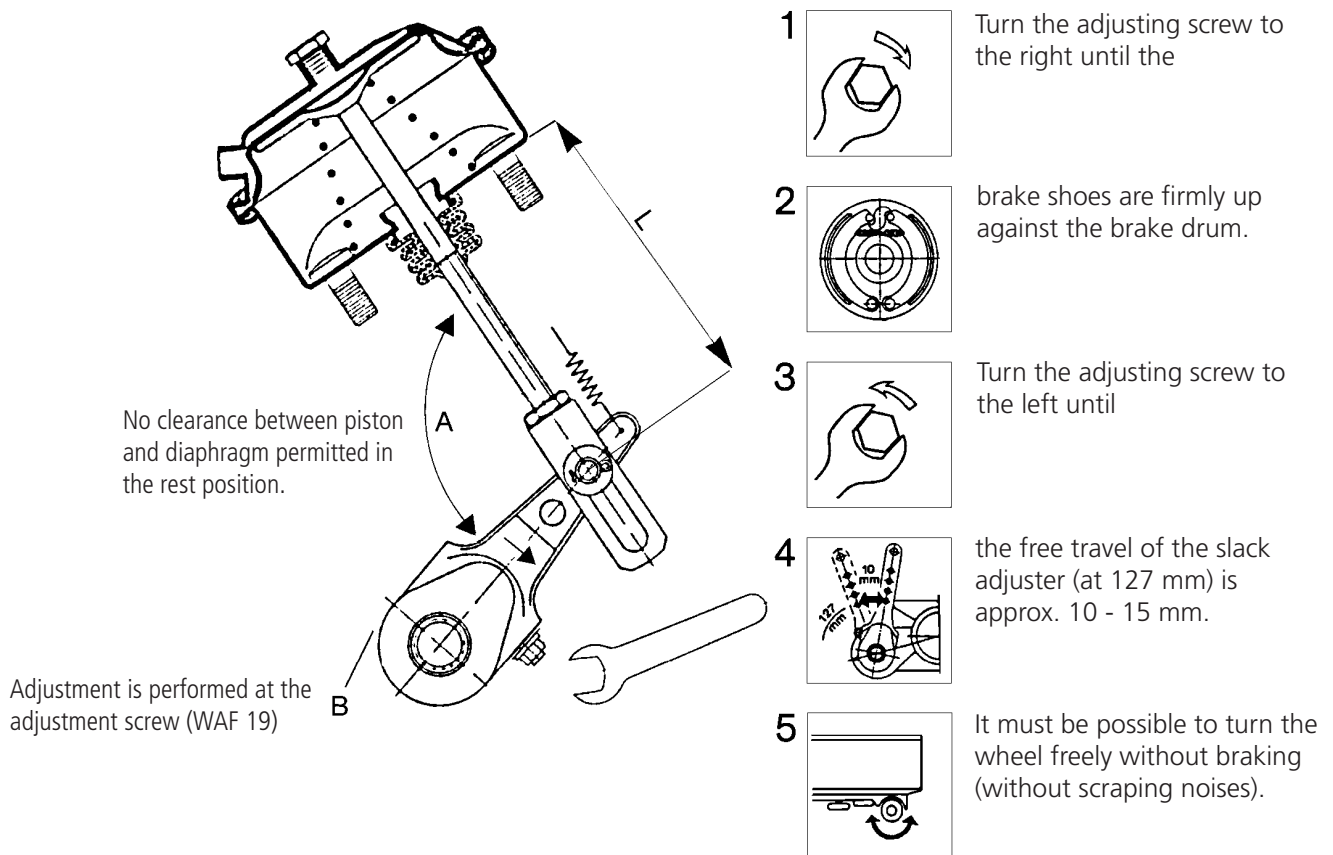


S-cam brakes with manual slack adjusters.

The natural wear of the brake drum and brake lining necessitate frequent adjustment of the wheel brakes in order to maintain the maximum stroke of the brake cylinders.

In order to achieve good braking, it is essential to minimise the clearance between the brake drum and brake lining. In order to check the clearance, the service brake is applied with full pressure and the stroke of the brake cylinder checked.

If the stroke at the yoke end is more than 2/3 of the maximum cylinder stroke, the brake must be urgently adjusted. If the brakes are correctly adjusted, it should not be possible to move the piston rod more than 15 mm by hand.



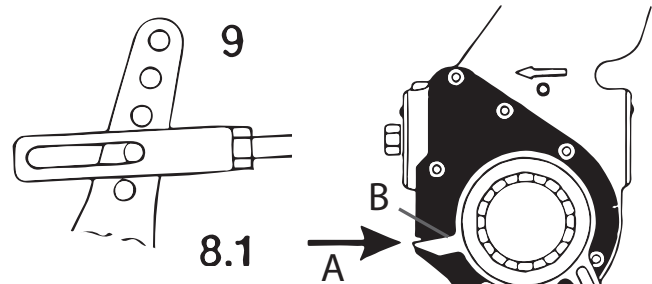
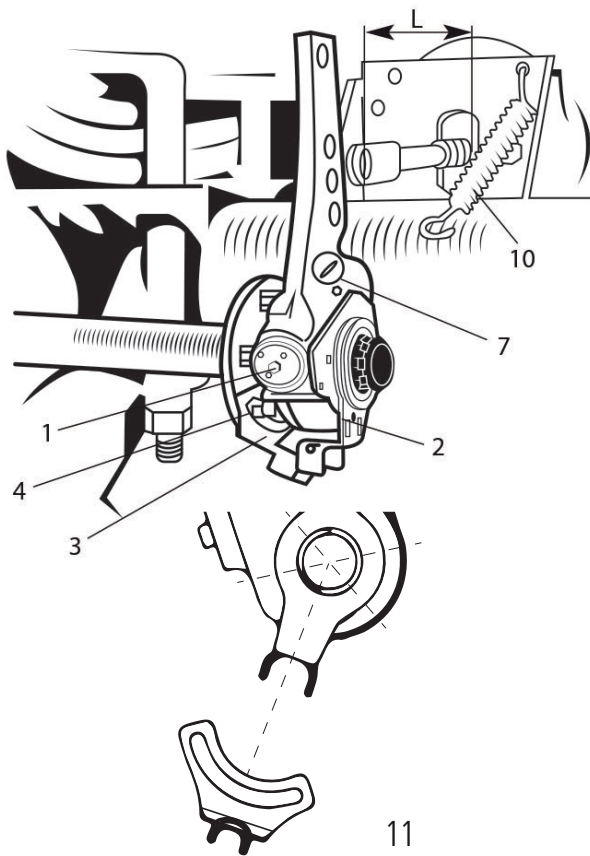
Special instructions apply for automatic slack adjusters (see adjustment procedure on the following pages).

A = Angle must not exceed 90° at 1/2 stroke.

B = No contact permissible between slack adjuster and axle beam during emergency braking.

L = Observe piston rod length as per the SAF-HOLLAND specifications.

Installation & adjustment of HALDEX automatic slack adjusters



When correctly installed, the Tip of the arrow B must match notch A in the control unit.

Cams and brake shoes are in the zero position.

Observe the correct piston rod length "L" as given in the SAF-HOLLAND specifications.

Brake chambers

1. Before installation, ensure that the brakes are fully released.
2. Spring brake chambers, on the other hand, must be under full working pressure (6 bar min).

IMPORTANT: If this is not observed, the basic setting will be wrong!

3. Grease the camshaft.
4. Install mounting point strap (3); be sure to use two mounting bolts (4).
5. Install the slack adjuster on the camshaft.
6. The arrow mark (7) points in the braking direction.
7. Turn adjusting screw (1) until the bore in the slack adjuster (8.1) is aligned with the bore in the yoke end (9) (see figure).
8. Grease cotter pin and secure.

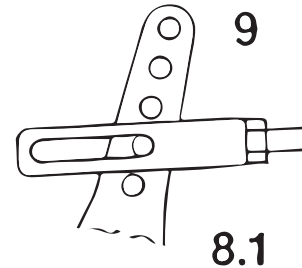
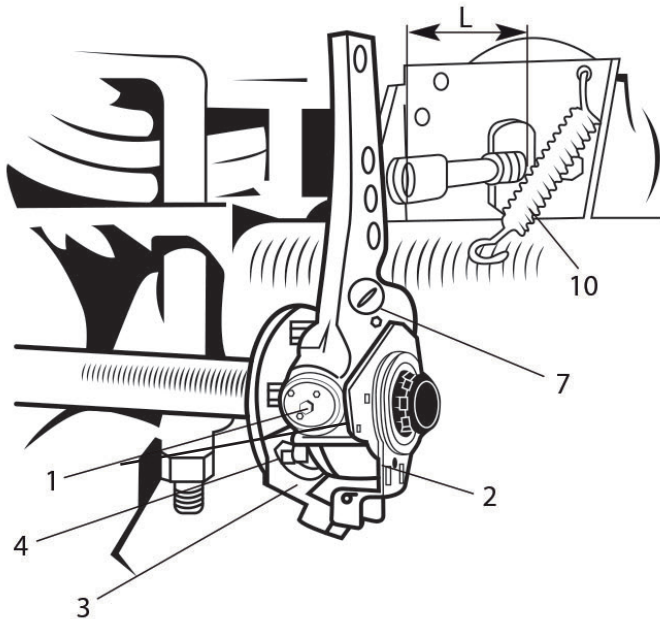
9. Hook in return spring (10).
10. Turn the control arm in the direction of the arrow (working direction of the slack adjuster) into its end position without using force.
11. In this end position of control arm (2), tighten mounting bolts (4).
12. With the fixed mounting point (11), ensure that the 2 U-profiles engage correctly in one another.
13. Fix the slack adjuster on the camshaft.
14. Axial clearance: Adjust the nominal value of 0.5 - 2 mm using shims.
15. Adjust the clearance of the brake lining by turning adjusting screw (1) in clock-wise direction until the brake lining is in contact with the brake drum. Then back off adjusting screw (1) by 3/4 turn.

Do not use an impact wrench!

FUNCTION CHECK

- If the adjustment coupling is functioning correctly, a torque of at least 18 Nm must be felt when backing off adjusting screw (1); a ratchet noise should also be clearly audible.
- Actuate the service brake several times, check the free running of the brake drum, check the clearance. If necessary, repeat the adjustment of the slack adjuster.

Installation & adjustment of S-ABA automatic slack adjusters



Cams and brake shoes are in the zero position.

Observe the correct piston rod length "L" as given in the SAF-HOLLAND specifications.

Brake chambers

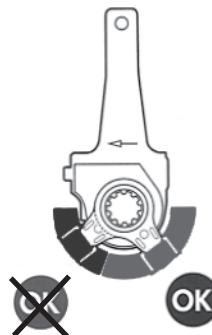
1. Before installation, ensure that the brakes are fully released.
2. Spring brake chambers, must be under full working pressure (6 bar min).

IMPORTANT: If this is not observed, the basic setting will be wrong!

3. Grease the camshaft.
4. Install mounting point strap (3); be sure to use two mounting bolts (4).
5. Install the slack adjuster on the camshaft.
6. The arrow mark (7) points in the braking direction.
7. Turn adjusting screw (1) until the bore in the slack adjuster (8.1) is aligned with the bore in the yoke end (9) (see figure).
8. With the fixed mounting point, ensure that the 2 U-profiles engage correctly in one another.
9. Grease cotter pin and secure.
10. Hook in return spring (10).
11. Fix the slack adjuster on the camshaft.
12. Axial clearance: Adjust the nominal value of 0.5 - 2 mm using shims.

13. Adjust the control arm.

14. Observe the possible setting range for the control lever position.



15. Adjust the clearance of the brake lining by turning adjusting screw (1) in clock-wise direction until the brake lining is in contact with the brake drum. Then back off adjusting screw (1) by 3/4 turn.

Do not use an impact wrench!

FUNCTION CHECK

- If the adjustment coupling is functioning correctly, a torque of at least 18 Nm must be felt when backing off adjusting screw (1); a ratchet noise should also be clearly audible.
- Actuate the service brake several times, check the free running of the brake drum, check the clearance. If necessary, repeat the adjustment of the slack adjuster.

Semi-trailer tilt angle

Ride Heights

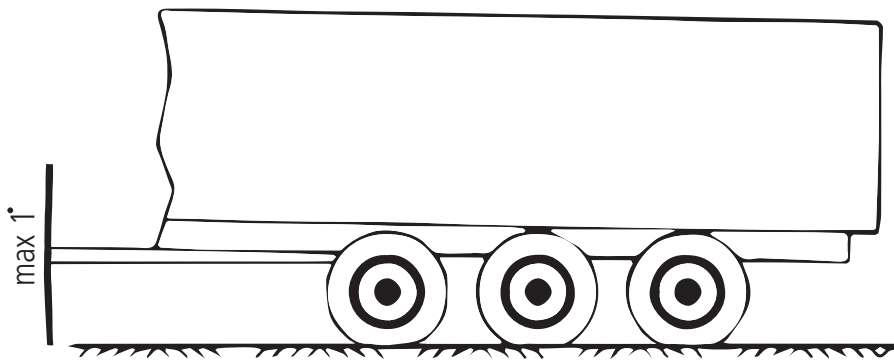
Adjust the ride height of the air suspension axles to the permissible range indicated in the corresponding SAF-HOLLAND documents.

With single axles, allow for a minimum suspension travel of 60 mm.

For trailers with multiple axles, allow for a minimum suspension travel of 70 mm.

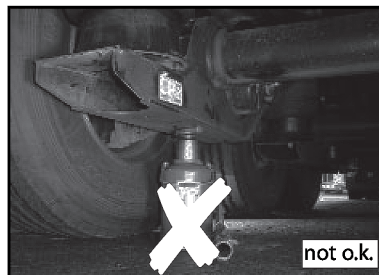
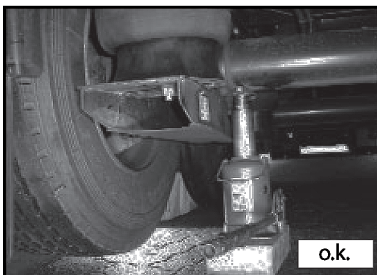
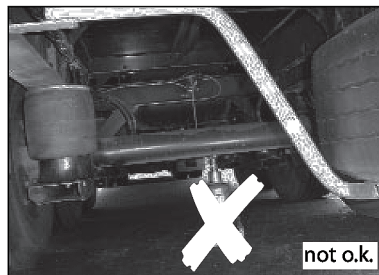
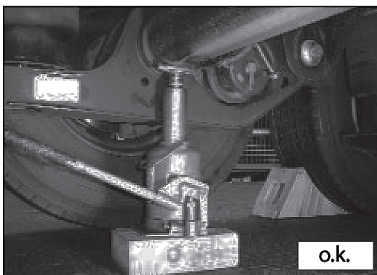
Exception:

For multi-axle trailers with lift axles, the minimum suspension travel at the lift axle should not be less than 100 mm in order to ensure an adequate ground clearance.



Tyre changing on fully loaded trailer with INTRA axle

Jack positioning points:



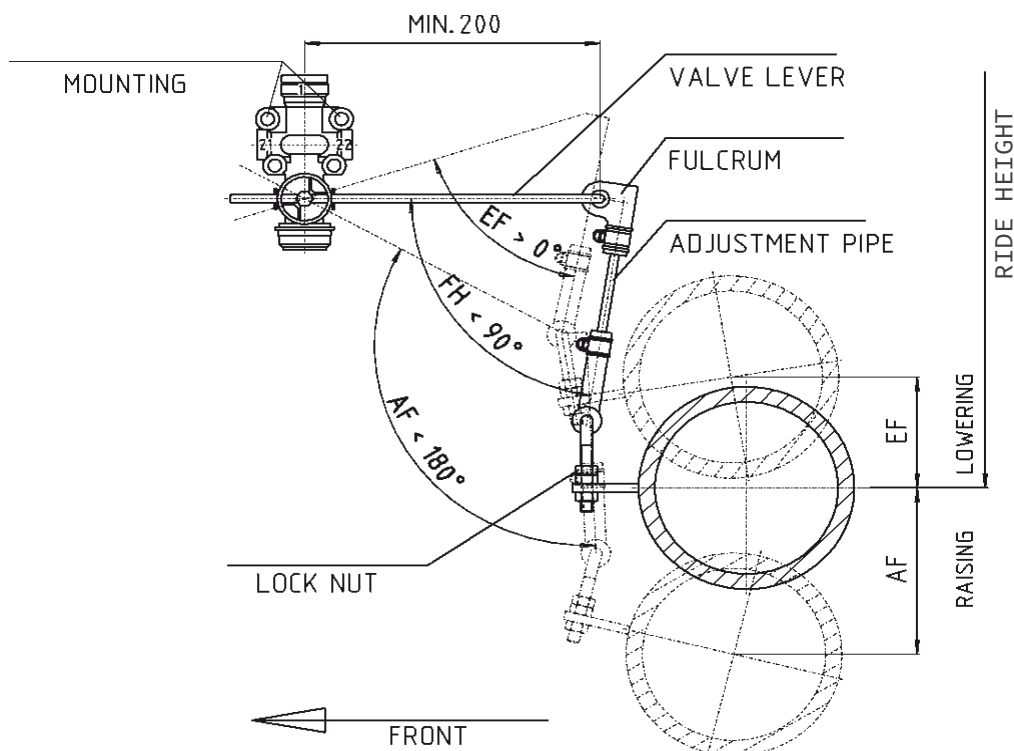
Adjustment of the air suspension system ride height

Air suspension valve

As standard, SAF-HOLLAND air suspension axles and system require only one air suspension valve. The air suspension valve controls the air bag pressure in relation to the trailer load in order to maintain a constant ride height in every load condition.

The air suspension valve is fastened to the trailer frame with screws and connected to the axle via the pivot joint (valve lever and adjustment pipe). On triple-axle trailers, the system is generally connected to the middle axle (normally in the middle of the axle), and on twin-axle trailers to the rear axle. In special cases (e.g. large trailer tilt angle), the air suspension valve can be installed in the rear axle.

For trailers with axle lifting system, the axle to which the system is connected depends on the axle to be lifted.



Installation

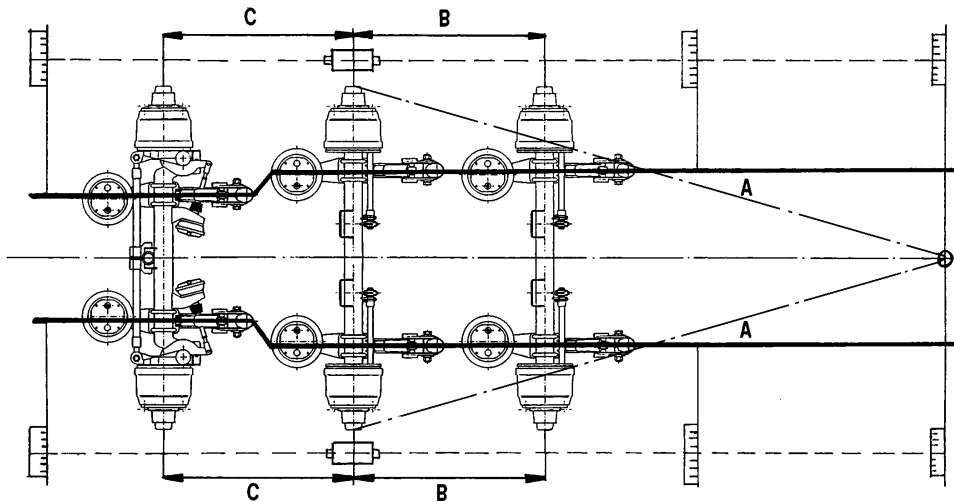
The valve lever should be at least 200 mm long and is horizontal when the trailer is in the driving position. As a function check, move the lever down slightly. Air must now escape via the venting cap into the atmosphere. If air flows into the air bags when the lever is pushed down, the valve lever has to be turned through 180°. For this, the valve lever has to be disconnected. The ride height is set by adjusting the adjustment pipe in the fulcrums and by turning the locknuts.

The adjustment must be carried out with the trailer standing on level ground. It can be carried out with the trailer either empty or loaded.

Note

For a final check, the air suspension system should be lowered to the suspension stop or raised to the limit (shock absorbers, stop ropes, air bag length). During this process, the specified angle (marked in the position EF, FH & AF) between valve lever and adjustment pipe must be observed in order that the valve lever does not move in the wrong direction.

For track control, the air suspension ride height must be adjusted to the values specified by SAF-HOLLAND.

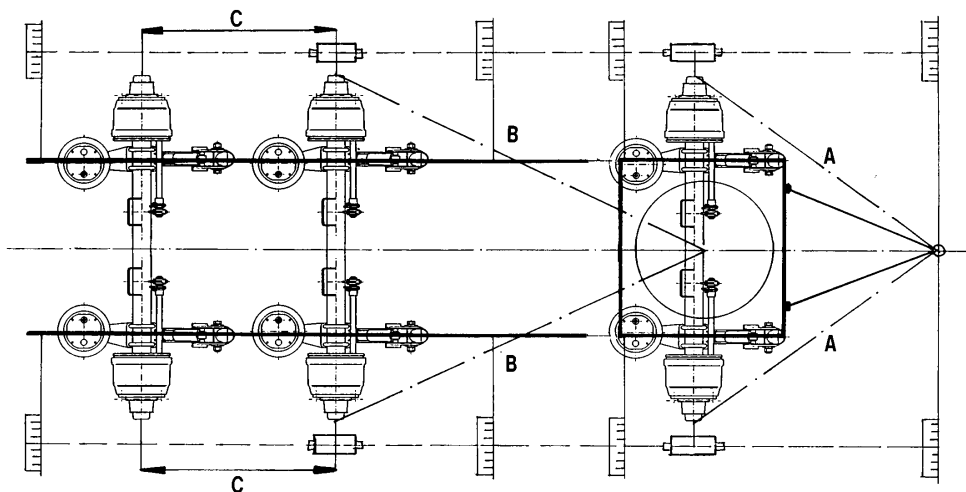


Semi-trailers with trailing steering axle

Distance A, B, C, max. permissible deviation 1.0 mm Toe setting ± 3.0 mm/m Camber ± 3.0 mm/m

In the case of trailing steering axles the membrane cylinder must be pressurised to 2.0 bar.

Total toe 4.0 mm/m i.e. 2.0 mm/m per wheel side (values apply to unloaded vehicle).



Trailer

Distance A, B, C, max. permissible deviation 1.0 mm Toe setting ± 3.0 mm/m Camber ± 3.0 mm/m (values apply to unloaded vehicle).

The max. permissible deviations for track values are identical with the manufacturer's specifications. To avoid excessive tyre wear we recommend having the track checked at regular intervals.

Track deviations may be caused by:

- loose U-bolts
- spring guide bearing wear
- deformation of axle assembly components due to improper use

The relevant reference point for alignment is the hub cap centre or stub axle centre.

Notes

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TRAILER AXLES AND SUS-
PENSION SYSTEMS



COUPLING AND LIFTING
TECHNOLOGIES



SUSPENSIONS FOR
TRUCKS AND BUSES



SUSPENSIONS AND COMPONENTS
FOR COMMERCIAL VEHICLES



BUS AIR SUSPENSION
SYSTEMS



COUPLING AND LIFTING
TECHNOLOGIES



TRAILER AXLES AND SUS-
PENSION SYSTEMS

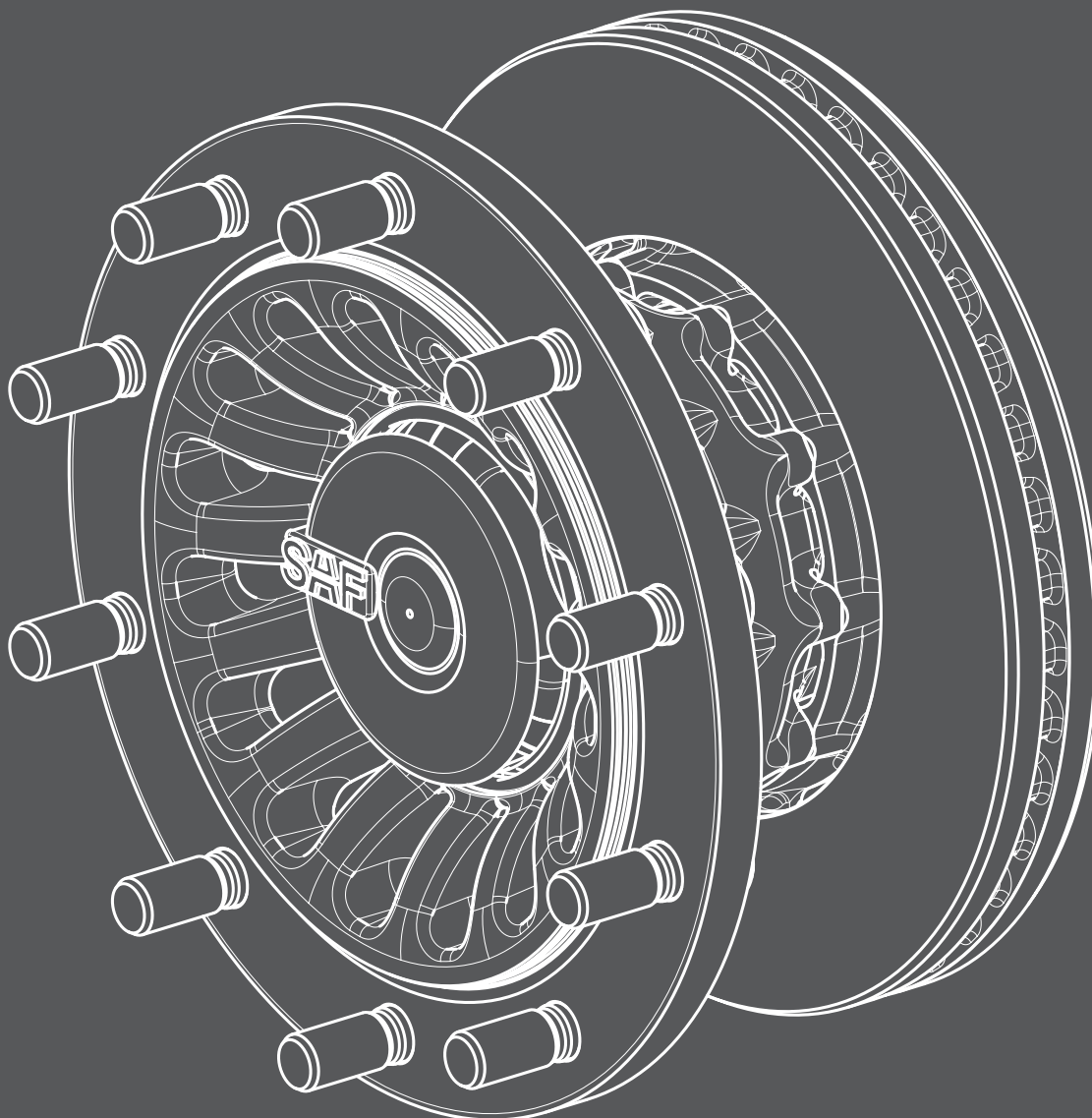
safholland.com.au

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Maintenance and Repair Manual

SAF disc brake axles with WABCO brake calliper
ZI9-19W Intradisc INTEGRAL
SK RZ 9019 W Intradisc



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The item numbers indicated are given only for identification and to distinguish between different versions.

Use the part numbers from the valid spare parts documents for identification of spare parts.

SAF axles and suspension units are subject to continuous further development; the data and drawings contained in the manual may therefore differ from the details given in the operating permit.

The contents of the manual does not constitute the basis for a legal claim.

Introduction

This manual is intended for vehicle operators and workshop service engineers for use with the SAF axles and suspension units.

Always read the instructions in full prior to operating the trailer or proceeding with maintenance and repair works.

Failure to comply with instructions without written permission from SAF-HOLLAND will void the axle or suspension warranty.

The maintenance schedules are recommended by SAF-HOLLAND, but as operating conditions and milages dictate frequency in servicing, a maintenance schedule to suite each individual operation must be established by the operator.

This manual does not cover all specifications manufactured by SAF-HOLLAND. The information contained herein is general in nature. The parts shown in the illustrations are representative only and can vary in some details to your axle suspension components.

Every precaution has been taken in the preparation of this manual to ensure accuracy. However, SAF-HOLLAND neither accepts responsibility for any omissions or errors that may appear, nor accepts legal liability for any loss in connection with the information contained within this manual.

Personal Safety Precautions

Maintain workshop fitters safety precautions to avoid serious personal injury or loss of life. Only qualified staff are permitted to install, operate, maintain or repair brakes, axles and suspension components.

Notes, Cautions and Warnings

On all suspensions a system failure may occur. This can cause the trailer chassis or axle to drop down violently. It is recommended that on air suspensions the system is completely deflated during repair works.

Before raising up the axle or the trailer, check for solid ground, chock the wheels. Always firmly secure the chassis and axles on strong support stands. This removes all imposed weight from the suspension and ensures that any work required underneath the trailer is carried out in safety. You must read and understand all of the safety procedures presented in this manual before starting any work on the suspension/axle.

Throughout this manual, you will notice the terms "NOTE", "IMPORTANT", "CAUTION" and "WARNING" followed by important product information. So that you may better understand the manual, those terms are as follows:

WARNING Failure to follow the instructions and safety precautions in this manual can result in serious injury or death.

Proper tools must be used to perform the maintenance and repair procedures described in this manual. Many of these procedures require special tools.

NOTE: Includes additional information to enable accurate and easy performance of procedures.

IMPORTANT: Includes additional information that if not followed could lead to hindered product performance.

CAUTION Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, may result in property damage.

CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.

General Safety Instructions

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

⚠ WARNING Failure to properly support the vehicle and axles prior to commencing work could create a crush hazard which, if not avoided, could result in serious injury or death.

NOTE: Several maintenance procedures in this manual require pre-positioning of the brake chamber, brake callipers and/or ABS system. Consult the manufacturer's manual for procedures on the proper operation of brake chamber, brake callipers and/or ABS system.

IMPORTANT: Key components on each axle's braking system, including brake pads and brake discs, are intended to wear over time. Worn parts should be replaced in sets on both the driver and curb side of an axle.

⚠ WARNING Failure to follow manufacturer's instructions regarding spring pressure or air pressure control may allow uncontrolled release of energy which, if not avoided, could result in serious injury or death.

Please observe the following safety instructions in order to maintain the operational and road safety of your SAF axles:

1. The rim contact surfaces between the rim and hub must not be additionally painted. The contact surfaces must be clean, smooth and free from grease.

⚠ WARNING Failure to keep rim and hub contact surfaces clean and clear of foreign material could allow rim/hub separations which, if not avoided, could result in serious injury or death.

2. Only the rim and tire sizes approved by the trailer builder may be used.
3. Before operating vehicle, ensure that the maximum permissible axle load is not exceeded and that the load is distributed equally and uniformly.

4. Ensure that the brakes are not overheated by continuous operation.

⚠ WARNING Failure to minimize the use of brakes during overheating conditions could result in deterioration of brake efficiency which could result in serious injury or death.

5. The parking brake must not be immediately applied when the brakes are overheated, as the brake discs may be damaged by different stress fields during cooling.
6. Observe the operating recommendation of the trailer builder for off-road operation of the installed axles.
7. SAF axles require routine service, inspection and maintenance in order to maintain optimum performance, operational and road safety and to be able to recognize natural wear and defects before they become serious. Refer to the Routine Service Schedule in Section 12.

Only use SAF-HOLLAND Original Parts for all service and maintenance work.

Type plate location

The axle type designation (Version), identification number and serial number (**Figure 1**) are required for the warranty procedure.

Intra suspension

Axle identification plate is located on the left hand trailing arm vertical wall just below the air bag (**Figure 2**).

MODUL suspension

Axle identification plate is located in the centre of the axle tube (**Figure 3**).

Identification if the type plate is missing

The Serial No. of the axle is embossed in the axle end on the right-hand side. As seen in the direction of travel (**Figure 4**).

Figure 1

SAF-HOLLAND GMBH D-63856 BESSENBACH • GERMANY		
Version ZI9-19W	Serial No. 11 09 156 0020	
Type SBW1937-10Z	Ident No. 347 96 21 7 49 01	
Test Report 36110303	Perm. axle cap. stat. 9000 kg	
Made in Germany	V max. 105 km/h	
 AN 3335528		 SN 11091560020

Figure 2



Figure 3

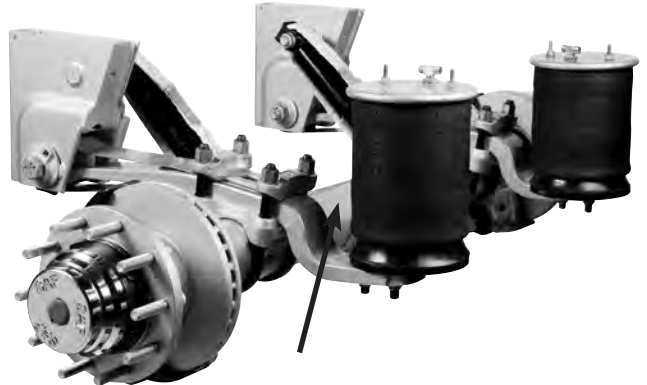


Figure 4



When ordering spare parts quote the correct axle identification & serial no., refer to the axle identification plate.

Please provide the following information from the identification plate (as below) to ensure correct parts are ordered.

- ① Axle (example: "SKRZ 9019W", "SKRLB 9022KI" or "ZI9-19W" etc.)
- ② Ident No. (example: "147 83 25 7 6 69 0" or "171 91 50 7 49 1" etc.)
- ③ Serial No. (example: "167 06 3 648" etc.)

Axle serial number code (up to July 2009)

The serial number looks like this:

DDDYXNNN

DDD = Production day

YY = Production year

X = Site

NNN = Running number per day, year and site

Axle serial number code (from July 2009)

The serial number looks like this:

XX YY DDD NNNN

XX = Site

YY = Production year

DDD = Production day

NNN = Running number per day, year and site

Axle identification plate up to mid-2004

Axle identification plate from mid-2004

Axle identification plate from July 2009

SAF Intradisc axle suspension assemblies are covered with conditional Warranties for up to 1,000,000 km or 6 years on sealed road application only and 500,000 km or 3 years off-road application.

Specifics of the SAF Intradisc warranty for normal Road operation are:

1. Shock absorber 1,000,000 km or 6 years on sealed road application
- 1a. Shock absorber 500,000 km or 3 years on off-road application
2. Wheel Bearings 1,000,000 km on sealed road application
- 2a. Wheel bearings 500,000 km on off-road application
3. Pivot Bush 1,000,000 kms on sealed road application
- 3a. Pivot Bush 500,000 km on off-road application
4. Brake Calliper 2 years against Manufacturing fault
5. Disc Rotor 2 year's unlimited mileage, Manufacturing failure only
6. All other parts (including Airbags) 1 year only

Excluded from the warranty are normal wear and tear parts, damage due to extreme force, incorrect operation and subsequent damage.

Brake balance between Truck and Trailer must be checked regularly and damage of wheel bearings and brake components will not be warrantable if balance were outside recommendation (± 2 PSI).

Damage to brake components including premature Pad wear, Calliper or Rotor damage through brake code specification being used which differ from our specified data will not be covered under the terms of the warranty.

Regular inspection and preventative maintenance procedures must be carried out in accordance to SAF maintenance manual.

Hubodometer must be fitted to each trailer to ensure warranty is valid. If not fitted the warranty is null and void. Records will be compared to inspection and preventative manual to ensure accuracy.

Before any repairs are carried out that may involve warranty, authorization must be obtained from SAF-HOLLAND (Aust.) Pty Ltd.

Use of Non Genuine parts including Brake Pads null and void warranty.

In order to be able to handle customers' complaints quickly and thoroughly, SAF-HOLLAND has simplified its warranty processing system. In order for you to be able to utilize this service when necessary, we would ask you to observe the following information:

- The first contact partner in the event of a complaint is always the trailer builder who will pass on the matter where necessary to the respective supplier, i.e. SAF-HOLLAND (in Australia SAF-HOLLAND (Aust.) Pty Ltd).
- For repairs under warranty, we insist on the use of original SAF spare parts. The original SAF spare parts for repairs under the SAF-HOLLAND warranty must be purchased directly from SAF-HOLLAND in Australia (SAF-HOLLAND (Aust.) Pty Ltd.)
- For work associated with repairs under warranty, only spare parts costs for original SAF spare parts will be acknowledged and refunded.
- SAF-HOLLAND warranty repairs, are subject to workshop hourly rates in conjunction with currently valid reference times for the performance of work associated with these repairs. No further labor or material costs beyond these figures will be refunded.
- All costs associated with warranty complaints will be refunded with credits for original SAF spare parts.
- For service and repair work outside repairs under the warranty, SAF-HOLLAND recommends the use of original SAF spare parts or original spare parts or spare parts of equivalent quality from other manufacturers.
- In the event of a complaint, always complete the SAF Service Report (template available on website <http://www.safholland.com.au> or from any SAF-HOLLAND branch in Australia). The service report must be submitted to SAF-HOLLAND on the same day as the trailer is brought into the workshop – in exceptional cases on the next working day, at the latest.
- Complete the SAF Service Report carefully and completely (Vital data required are the Serial No. and Ident. No. This information can be found on the axle type plate or stub axle).
- Details of wear dimensions of the individual brake pads in mm are important for assessing the damage: Please do not forget the necessary information on the towing vehicle.
- Please always submit complaints in as detailed form as possible.
- Send the completed SAF Service Report and photographs of the damage to SAF-HOLLAND (Aust.) Pty Ltd; if necessary, also make contact by telephone.
- Costs and invoices incurred will be demanded by SAF-HOLLAND (Aust.) Pty Ltd.
- Do not send in damaged parts to SAF-HOLLAND unless requested to do so.
- Please always indicate the exact address, contact person and telephone number of the company where the damaged parts are to be collected.
- Where appropriate, mark the damaged parts according to their installation location.

For any warranty issues, please consult your nearest SAF-HOLLAND state branch:

VIC/TAS Ph: 03 9971 7900
SA/NT Ph: 08 8346 7035
WA Ph: 08 9353 6122
Qld Ph: 07 3375 7033
NSW Ph: 02 9672 1950
email service@safholland.com.au

TRAILER WARRANTY CLAIM

Claim Number:


PLEASE NOTE:

- Before any work is done under warranty, the warranty claim must be assessed by SAF-HOLLAND to ensure it is within the terms & conditions for warranty.
- If the warranty claim meets the terms & conditions for warranty it will be accepted by SAF-HOLLAND and a Claim Number will be issued. The issuing of a Claim Number authorizes the work to be done and must be referenced handling of the work, such as enquiries, correspondence, requests for parts etc.
- Please complete this form in full and forward with supporting documentation to SAF-HOLLAND Service Dept (fax 61 3 9747 3895; email Service@safholland.com.au) to have your warranty claim assessed. Failure to complete any section of this form may result in a delay in assessing your claim.
- Mandatory digital photos required as supporting evidence are: All axle ID plate serial numbers (if not available, photo of RHS axle spindle serial number); Rego plate; VIN plate; Hubometer reading; failed part; failed part serial number or batch number. Digital photos must be clear & in focus.
- Hold all parts until advised of disposition by SAF-HOLLAND Rep. If parts are to be returned to SAF-HOLLAND, they must be identified with a copy of the Warranty Claim form.
- If you have any queries, please contact SAF-HOLLAND Technical Service Department.

Section 1

Date:		Vehicle manufacturer:	
REPAIRER		VEHICLE OWNER	
Company		Company	
Street Address		Street Address	
Town		Town	
State	Postcode	State	Postcode
Contact name		Contact name	
Phone number	Fax:	Phone number	Fax:
Email:		Email:	
Registration No:		Initial date of registration	
Chassis No:		KM in service (read out from HUBO)	
Complaint:			

Axle type: ☐ Disc ☐ Drum Suspension: ☐ Intra ☐ Modul Underslung IU ☐ Overslung IO ☐ EBS: ☐ Yes ☐ No Tyre size ☐ Single ☐ Dual		Vehicle Type ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ <		
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Datenerfassung „Hub Unit“ Data Input Sheet “Hub Unit”



SAF Meldungsnr. SAF Report no.	
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Bitte beachten! / Please note!

- Die folgenden Daten sind zur Bearbeitung der Reklamation notwendig.
The following data are required for processing of the complaint.
 SAF benötigt die Messwerte unbedingt vor Beginn der Reparaturarbeiten.
The measured values must be supplied to SAF before the start of the repair.

Fahrzeugeigentümer / Vehicle Owner

Firma Company			
Straße Street			
PLZ / Ort Post code / Town		Land Country	
Nachname Surname		Vorname First name	
Telefon Telephone		Fax Fax	
E-mail E-mail		Internet Internet	

Kippspiel Prüfung / Wheel Rock Test

	Serial-Nummer / Serial number	Links / Left	Rechts / Right
1. Achse 1 st axle		mm	mm
2. Achse 2 nd axle		mm	mm
3. Achse 3 rd axle		mm	mm
4. Achse 4 th axle		mm	mm
5. Achse 5 th axle		mm	mm

**Fettaustritt
(nach SAF Vorgabe)
Grease Escape
(to SAF Specification)**

	links / Left		Rechts / Right	
	Ja / Yes	Nein / No	Ja / Yes	Nein / No
1. Achse 1 st axle	☐	☐	☐	☐
2. Achse 2 nd axle	☐	☐	☐	☐
3. Achse 3 rd axle	☐	☐	☐	☐
4. Achse 4 th axle	☐	☐	☐	☐
5. Achse 5 th axle	☐	☐	☐	☐

**Radlagergeräusch Prüfung
(raues oder mahlendes Geräusch)
Wheel Bearing Noise Test
(rough or grinding noise)**

	Links / Left		Rechts / Right	
	Ja / Yes	Nein / No	Ja / Yes	Nein / No
1. Achse 1 st axle	☐	☐	☐	☐
2. Achse 2 nd axle	☐	☐	☐	☐
3. Achse 3 rd axle	☐	☐	☐	☐
4. Achse 4 th axle	☐	☐	☐	☐
5. Achse 5 th axle	☐	☐	☐	☐

1. Instructions and tips for vehicle operations

In order to maintain the operation and road safety of the vehicle, the maintenance operations prescribed by SAF-HOLLAND must be carried out regularly at the specified intervals (see "Service instructions").

Furthermore, ensure that

- 1.1 The disc brake is not overheated due to continuous braking action as irreparable damage to the surrounding components – in particular the wheel bearings – cannot be ruled out. This can impair the operational and road safety of the vehicle and represent a serious hazard for man and machine.
- 1.2 The compatibility of the brakes on the truck-trailer combination is checked. For reliable braking and uniform brake lining wear, the brake systems of the two vehicles must be matched to each other.
- 1.3 The parking brake is not applied immediately when the brakes are hot as the resulting different stress fields can damage the brake discs / drums.
- 1.4 The maximum permissible axle loads and speeds are not exceeded.
- 1.5 The cargo is evenly distributed over the loading area and safely secured.
- 1.6 Always ensure the air bags are fully inflated on vehicles with air suspension before moving.
- 1.7 The prescribed wheel rims and tire sizes are employed.
- 1.8 The location and securing of the wheels is correctly maintained. Do not repaint the contact faces on either the wheels or hubs. On the contact surface of the wheel the maximum permissible coating thickness of 50 µm (primer plus paint) must not be exceeded. All attachment faces must be clean with plain smooth surfaces free from any contamination of dirt, rust, grease, excessive paint and damage. In general refer to the wheel manufacturers recommendations, or consult your trailer builder for any wheel mounting details.
- 1.9 The tires are inflated to the prescribed inflation pressure.
- 1.10 Your driving style is matched to the road and weather conditions.
- 1.11 Chassis support legs are used when loading/unloading construction machinery.
- 1.12 The use of auxiliary trailer braking facilities (trailer under run brake) is not permitted.

2. Vehicle safety

- 2.1 The daily check of the vehicle for road safety before moving the vehicle is the responsibility of the driver.
- 2.2 Modifications to the suspension and braking system are strictly forbidden.
- 2.3 Compliance with the specified permissible axle loads, observing the specifications in the vehicle operating manual, vehicle inspection intervals and the regular maintenance intervals is the responsibility of the vehicle owner.
- 2.4 We strongly recommend using only SAF-HOLLAND approved replacement and spare parts which are covered by SAF-HOLLAND product liability. These products have been thoroughly tested by SAF-HOLLAND for safety, functionality and suitability. Usage of these parts guarantees not only safety on the roads but satisfies the legal operational requirements. SAF-HOLLAND is not in a position to judge whether those products from other companies represent a safety risk for SAF axles and systems.

3. Warranty

- 3.1 Warranty claims will only be accepted as long as the operating and maintenance instructions have been complied with and SAF-HOLLAND approved spare parts have been utilized.
- 3.2 Warranty claims must be reported to SAF-HOLLAND prior to starting the work.
- 3.3 The warranty period is as stated on page 5.

4. Service and spare parts

The service network of SAF-HOLLAND partner companies is at your disposal for technical advice on SAF axles and suspension systems as well as for supplying approved SAF spare parts.

In case of repair we strongly recommend using only SAF original parts for those reasons mentioned in point 2.4.

SAF axles and suspension units are subject to continuous further development; the data and drawings contained in the manual may therefore differ from the details given in the operating permit. The content of this manual does not constitute a basis for a legal claim. Reprinting, reproduction or translation in whole or in part of this manual is not permitted. This manual supersedes all earlier maintenance and repair manuals.

General Service / Maintenance

CAUTION

After every wheel change, always retighten the wheel nuts to the prescribed torque after 50 km and again after 150 km.

1. Carry out regular visual checks of the brakes, tires and all chassis components. Refer to detailed explanation in related section of this manual for more information:
 - a. Inspect for secure mounting, wear, leaks, corrosion and damage.
 - b. Check for loose, broken or cracked air hoses, air system leaks, and damaged components.
 - c. Check that brake hoses and cables are properly secured.
 - d. For proper brake pad wear, check that there is enough clearance to allow the calliper full movement during normal operation.
2. Check the brake pads at regular service intervals to ensure that the brake pad hold down springs are in the correct position, and that brake pads are not worn beyond the minimum wear limits described in this manual.
3. When replacing brake pads, inspect the rotors for signs of wear, cracks, grooves, scoring or hot spots.
4. Visually check the brake calliper at regular service intervals as defined by the brake calliper manufacturer's 'Basic Inspection Program'. Refer to detailed explanation in related section of this manual for more information.
5. Check the spring brake chambers to be sure the parking springs are not caged in the released position. Be sure the dust plugs are properly installed.
6. Make sure that the vent holes in the air brake chamber are not covered with mud, dirt, etc.
7. Inspect the wheel bearing unit for grease leaks at every brake pad change.
8. Visually check the brake assembly (eg. pads, rotor, etc.) for oil or grease contamination.
9. Check that all dust caps and boots are present and in good condition.
10. Regularly carry out general safety checks in accordance with any applicable laws.

CAUTION

Failure to retighten wheel nuts at specified intervals may result in component failure which, if not avoided may result in damage to property.

We highly recommend the use of only SAF-HOLLAND Original Parts.

Special notes

Storage instructions

During storage outdoors, ensure that moisture cannot enter the inside of the brake calliper through the brake cylinder connection.

Painting instructions

During painting work, all rubber parts must be covered as otherwise the rubber will become brittle and thus be damaged.

Brake cylinders

Only brake cylinders approved by the brake or axle manufacturer may be used.

Brake balance

To obtain maximum performance from the disc brakes, brake balance between the truck and trailer must be carried out before going into service and again at 5000 km service, and then every 12 months thereafter. Maximum lead to trailer must not exceed 0.14 bar (2 psi). If the balance were outside of these values, there would be no warranty on parts or labour!

ZI9-19 W
SK RZ 9019W

with WABCO Disc Brake type PAN 19-1

			PERIODIC CHECK		
MAINTENANCE INTERVALS WHICHEVER COMES FIRST	DISTANCE INTERVALS>	AFTER FIRST 5,000 KM	EVERY 30,000KM	EVERY 75,000KM	EVERY 150,000KM
	TIME INTERVALS >	AFTER FIRST MONTH	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS

MECHANICAL CHECK

Attention: After every wheel change, always retighten the wheel nuts to the prescribed torque after 50 km and again after 150 km.

VISUAL AND SAFETY INSPECTION

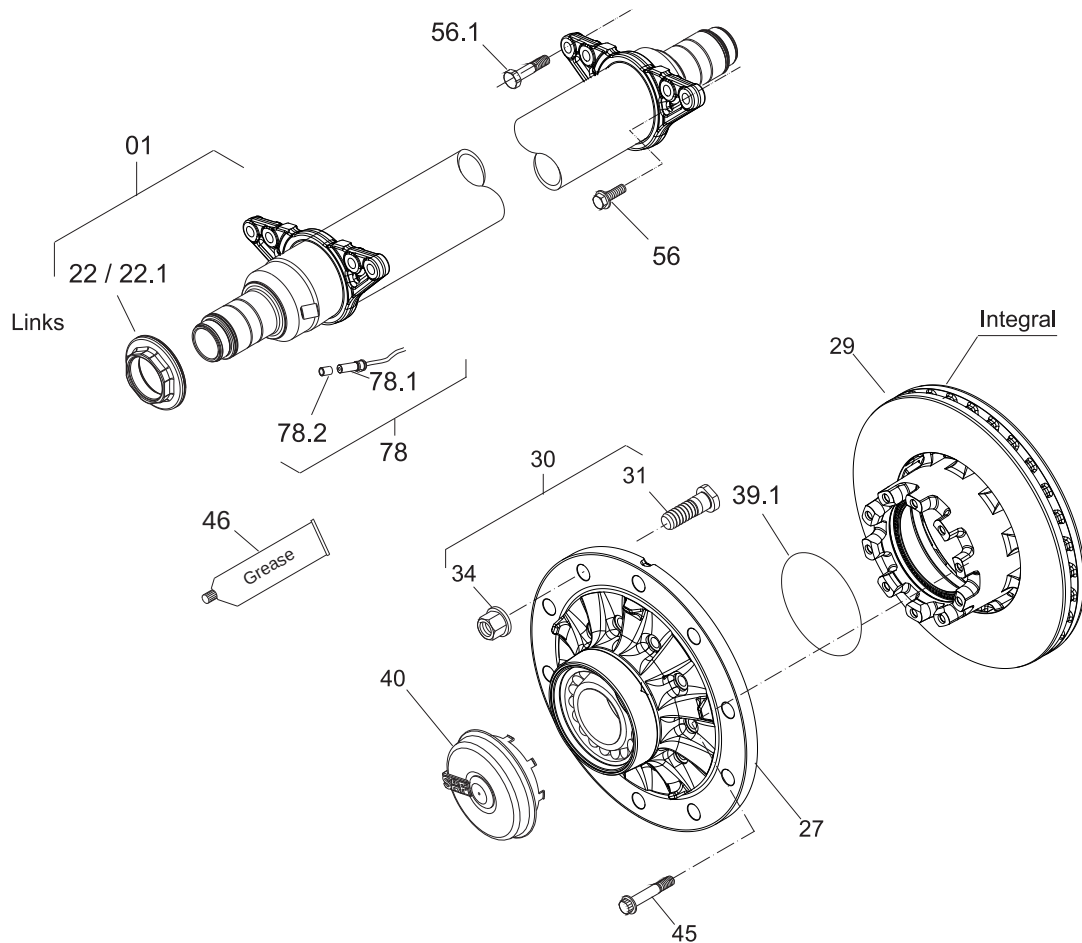
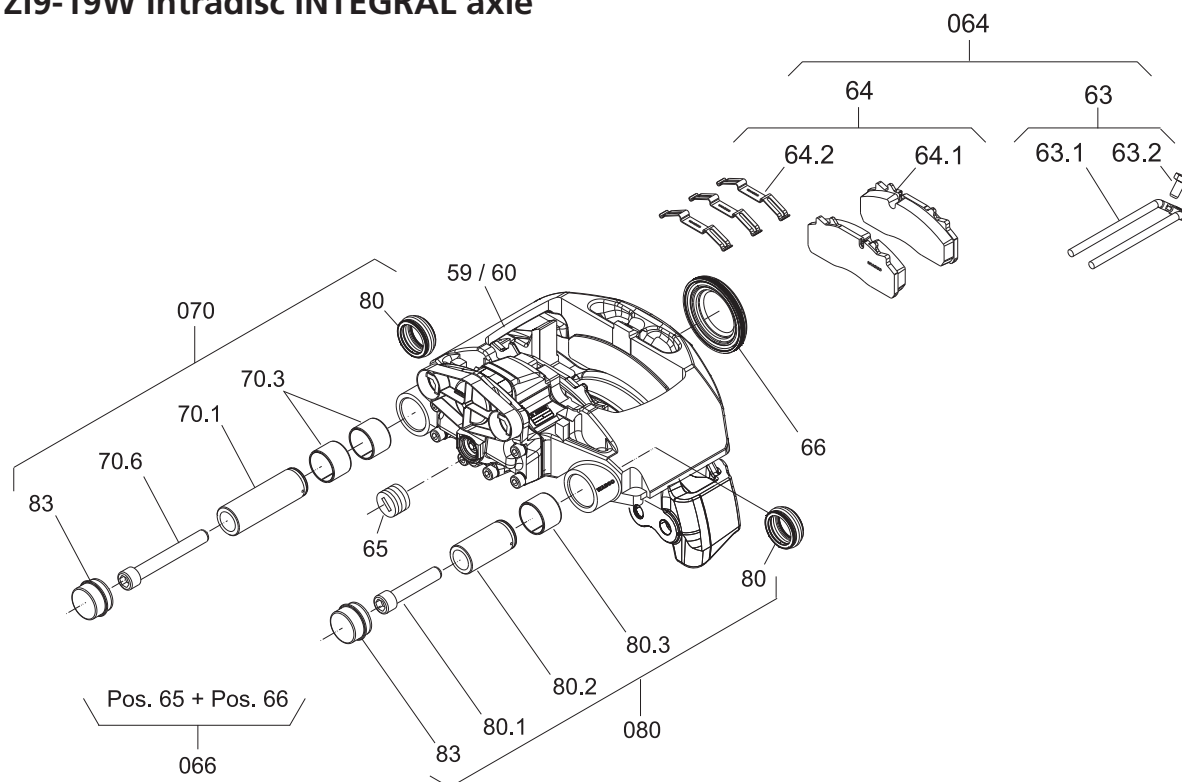
Hub unit maintenance-free. Visual inspection for grease leakage, bearing noise and end play check.	•	•		
Inspect hub nuts and make sure they are not loose. If loose, retighten as per prescribed procedure.	•	•		•
Check rubber dust covers for cracks and damages. Check adjuster cap for correct setting.	•			•
Inspect the brake pad thickness at regular intervals (eg. whenever tyre pressure is checked) but at least every 3 months.		•		•
Inspect the brake disc for cracks.		•		•
On aluminium hanger brackets inspect the pivot-bush assembly bolts and shock absorber bolts with the recommended torque setting.	•		•	
Inspect suspension for correct ride-height setting, readjust if required.	•		•	•
Perform general annual inspection (brakes, air bags, tyres, pivot and shock absorber bolts etc.)	•			•
Perform general annual safety check [tractor/(semi) trailer brake compatibility balance, ABS, etc.]	•			•

SPECIAL SERVICE CONDITIONS

Vehicles with long standing periods	Service at specified intervals
Vehicles used under extreme conditions	Service at suitably reduced intervals. e.g. Trailer operating in continuous multi-shifts or in off-road construction sites.

Warranty claims will only be accepted as long as the operating and maintenance instructions have been completed and SAF spare parts have been fitted.

219-19W Intradisc INTEGRAL axle



IPL_17_300_0

ITEM	PART NO.	DESCRIPTION	QTY
1	See type plate	Axle beam assembly (See Ident. No. on the type plate)	1
22	1 011 0086 00	Axle nut RH - M75x1.5/SW85 (without groove) - RH Thread	1
22.1	1 011 0085 00	Axle nut LH - M75x1.5/SW85 (with groove) - LH Thread	1
27	3 307 3049 00	Hub unit - INTEGRAL - 10x285.75PCD	2
27	3 307 3048 00	Hub unit - INTEGRAL - 8x275PCD	2
27	3 307 3055 00	Hub unit - INTEGRAL - 10x335PCD	2
29	4 079 0016 00	Brake disc (INTEGRAL rotor) - Dual steel/alloy wheels - 10x285.75PCD	2
31	1 303 1128 10	Wheel stud - M22x1.5x103 - Dual steel/alloy wheels (stepped body)	16/20
34	4 247 3012 01	Wheel nut M22x1.5x27 - SW32	16/20
34	33272215	Wheel nut M22x1.5x27 - SW33	16/20
39.1	4 315 0075 00	O-Ring	1
40	3 304 0102 01	Hub cap	2
40.2	4 304 0103 01	Hub cap for hubodometer	2
45	4 375 1009 12	Hub/rotor bolt - 15mm 12 point socket req'd	20
56	4 375 1006 10	Bolt with collar M18	6
56.1	4 375 1008 10	Centering bolt M18	2
59	3 080 0072 00	Brake calliper assy, WABCO RH	1
60	3 080 0071 00	Brake calliper assy, WABCO LH	1
064	3 057 0080 00	Brake pad kit (incl. 63, 64.1, 64.2 & 65)	1
066	3 434 3829 00	Repair-kit (incl. 65 & 66)	2
070	3 434 3827 01	Guide pin kit (incl. 65, 66, 70.1 - 70.6 & 080)	2
78	3 029 0242 00	Sensor and clamping sleeve kit	2
78.1	441 035 001 0	Sensor	2
78.2	899 759 882 4	Clamping sleeve	2

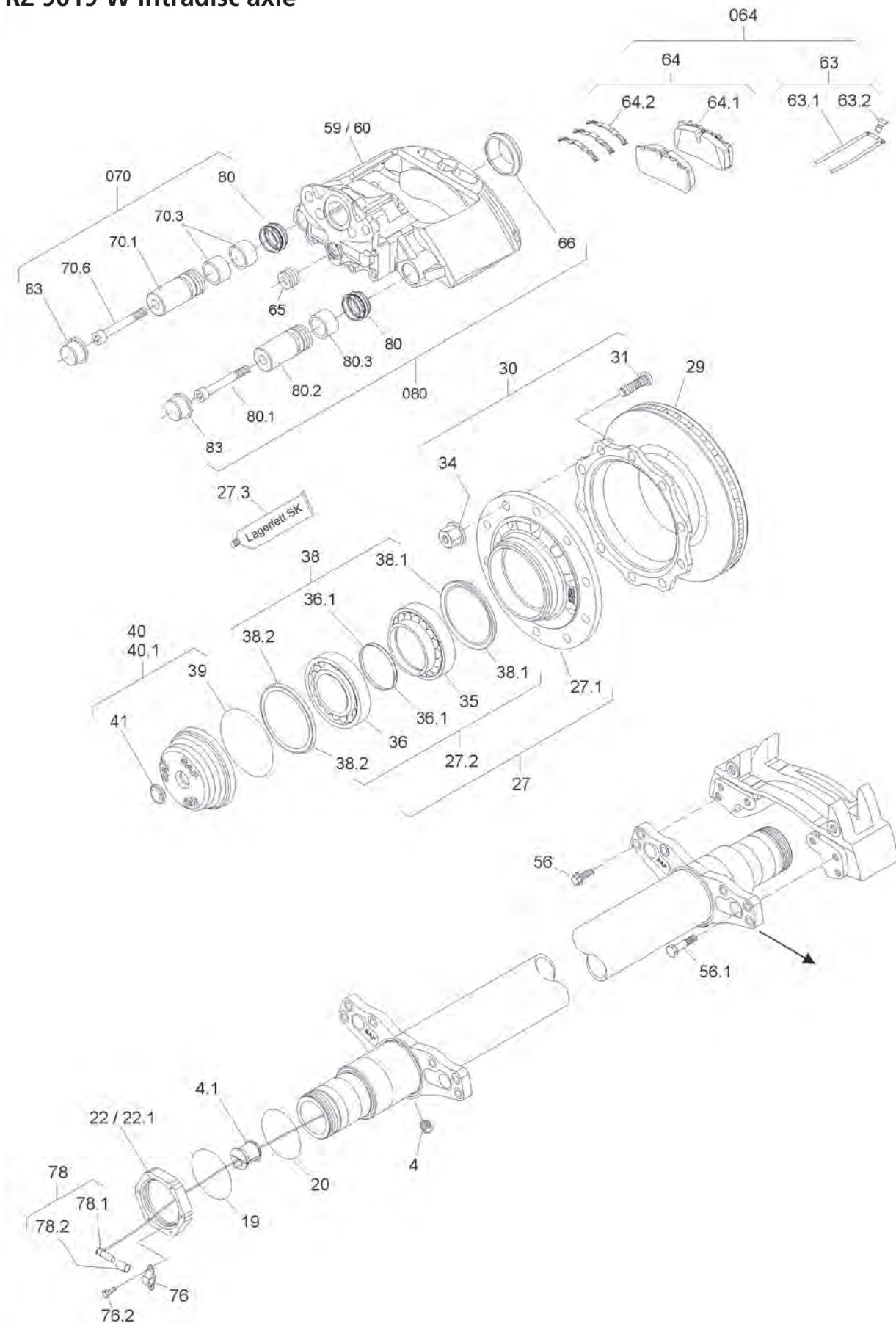
TOOLS

4 434 3828 00L	Hub nut socket (SW85mm)	1
2 501 871	Universal hub puller	1
3 434 3328 00	SAF universal toolbox (Wabco & Knorr callipers)	1
3 434 3327 00	SAF ratchet wrench	1

BEARING KITS

3 434 3022 18	Bearing and seal kit	1
3 434 302 500	Seal kit	1

SK RZ 9019 W Intradisc axle



ITEM	PART NO.	DESCRIPTION	QTY
4	4 337 2028 00	Protection plug - for ABS sensor	2
4.1	4 337 2029 00	Spindle plug	2
19	4 315 0052 00	O-Ring Φ 116x3	2
20	4 315 0056 00	O-Ring Φ 110x2	2
22	1 011 0070 01	Axle nut RH - M120x2 - Socket 140mm (SUPERSEDES) 1 011 0070 00 - RH Thread	1
22.1	1 011 0071 01	Axle nut LH - M120x2 - Socket 140mm (SUPERSEDES) 1 011 0071 00 - LH Thread	1
27	3 307 3025 01	Hub Assy - Dual Steel Wheels (ONLY) 8 std x 275 PCD	2
27	3 307 3026 00	Hub Assy - Dual Alloy Wheels (USE STEEL AND ALLOY WHEELS) 8 std x 275 PCD	2
27	3 307 3033 00	Hub Assy - Dual Alloy Wheels 10 X 285.75 PCD	2
27.2	3 434 3012 01	Bearing & Seal kit - Incl. pos.20, 27.3, 35, 36, 36.1 & 38	2
27.3	5 387 0011 05	Bearing grease	2
29	4 079 0004 00	Brake disc (rotor) - Dual steel only wheels - 8x275PCD (Star Face)	2
29	4 079 0014 00	Brake disc (rotor) - Dual steel/alloy wheels - 8x275PCD (Round Face)	2
29	4 079 0012 01	Brake disc (rotor) - Dual steel/alloy wheels - 10x285.75PCD	2
31	1 303 1075 12	Wheel bolt - 93mm for dual steel wheels	16/20
31	1 303 1112 10	Wheel bolt - 112mm for dual steel/alloy wheels - used with spacer 1 095 1057 00	16/20
31	1 095 1057 00	Wheel bolt spacer - (used with 1 303 112 10 stud)	16/20
31	1 303 1125 10	Wheel bolt - 112mm for dual steel/alloy wheels - stepped shoulder	16/20
34	4 247 3012 01	Wheel nut - 27mm long - socket 32mm	16/20
34	3 327 2215	Wheel nut - 27mm long - socket 33mm	16/20
38	3 434 3014 01	Hub seal kit - Incl. pos.20, 27.3, 36.1,38.1 & 38.2	2
39	4 315 0054 00	Hub Cup O-Ring Φ 182x4	2
40	3 304 0092 00	Hub Cap Assy - Incl. Pos. 39-41	2
40	3 304 1092 00	Chrome Hub Cap Assy - Incl. Pos. 39-41	2
41	4 337 2026 01	Protection plug	2
na	1 094 0037 01	Hubo Mount Washer	1
56	4 343 2914 10	Calliper Mount Bolt - M16 with collar	10
56.1	4 375 1004 10	Calliper Centering Bolt - M16	2
59	3 080 0032 00	Wabco Brake Calliper Assy - RH	1
60	3 080 0033 00	Wabco Brake Calliper Assy - LH	1
064	3 057 0080 00	Brake lining kit - Incl. Pos. 63, 64.1, 64.2 & 65	1
70	3 434 3827 01	Guide pin kit - Incl. Pos. 65, 66, 70.1-70.6 & 080	2
76	4 189 0051 00	ABS Sensor Mount Bracket	2
76.2	4 343 2067 00	Self-tapping bolt - M6x12	4
78	4 029 1042 00	Sensor	2
78.2	4 029 1013 00	Sensor clamping sleeve	2

TOOLS

1 434 1041 00	Lever for hub cap	1
1 012 0024 00	Hub nut socket - 140mm	1
2 501 871	Universal hub puller	1
3 434 3328 00	SAF universal toolbox (Wabco & Knorr callipers)	1
2 501 890	3-D bush replacement tool	1

Disc Brake / Hub Unit Inspection

IMPORTANT: During removal inspect components for wear and replace worn components.

⚠ WARNING Failure to properly support axle during maintenance may allow axle to fall which, if not avoided, could result in serious injury or death.

Pad Wear Inspection

Check the brake pads for proper thickness at regular service intervals based on vehicle usage. Brake pad inspections should be carried out at least every 3 months and in accordance with any legal requirements. Refer to the service schedule shown in this document.

NOTE: Severe duty applications may require more frequent regular service intervals.

A quick visual inspection of the condition of the brake pads can be performed without removing the wheel:

Replace pads when distance on long guide pin exceeds 97 mm or on short guide pin which exceeds 70 mm. **(Figure 5)**

IMPORTANT: After inspecting the brake pads, check that the brake system is functioning properly.

IMPORTANT: When replacing worn brake pads, all pads on the axle must be replaced.

The friction material of the brake pad is less than 11 mm including the backplate at its thinnest area, the brake pad must be replaced.

NOTE: Minor breakouts at the edges are permitted; major breakouts on the surface of the brake pad are not permitted **(Figure 6)**.

Figure 5

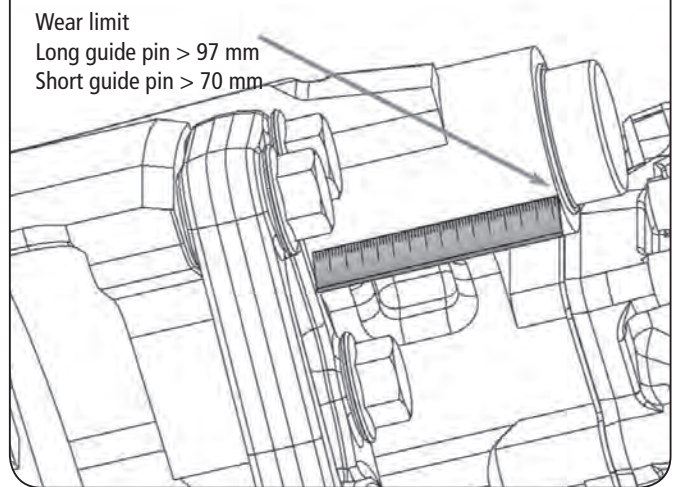
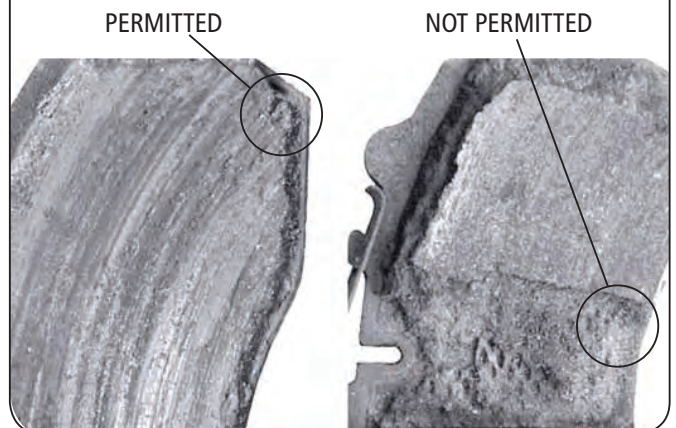


Figure 6



Rotor Wear Inspection

1. Carefully inspect both sides of the brake rotor friction surface (**Figure 7**).
 - a. Spider web cracking is acceptable (**Area A**).
 - b. Cracks that run from the outer edge to the hub center are acceptable only if they are less than 1.5mm deep or wide and their length is less than 75% of the width of the rotor friction surface (**Area B**).
 - c. Grooves in the rotor surface are acceptable only if they are less than 1.5mm deep (**Area C**).
 - d. Cracks that run completely from the outer edge to the hub center are not acceptable, regardless of depth (**Area D**).
2. Measure the brake rotor thickness and resurface if necessary. For proper brake function, the minimum thickness for resurfacing the brake rotor is defined as 39 - 40mm.

⚠ WARNING Resurfacing the brake rotor beyond the minimum thickness may cause component failure which, if not avoided, may result in serious injury or death.

IMPORTANT: Do not use high-pressure cleaners or liquid cleaners on the brake rotor.

If the overall wear limits for the brake rotor and brake pads are exceeded (**Figure 8**), the rotor/pads must be replaced (See pad change/rotor change instructions as detailed in this manual).

For both the inner and outer pads, the maximum brake pad wear difference is 5.0 mm.

BRAKE ROTOR			BRAKE PAD	
DIAMETER (mm)	"A" NEW (mm)	"B" MAX. WEAR LIMIT (mm)	"C" NEW (mm)	"D" MAX. WEAR LIMIT (mm)
370	45	37.0	30	11.0

⚠ WARNING Failure to replace brake rotor/pads when minimum wear limits are reached may cause component failure which, if not avoided, may result in serious injury or death.

NOTE: When replacing the brake pads or brake rotor, use only SAF-HOLLAND Original Parts.

IMPORTANT: When replacing worn brake pads, all pads on the axle must be replaced.

NOTE: During brake repairs, carry out a visual inspection of the seals on the brake calliper. Refer to detailed explanation in related section of this manual for more information.

NOTE: Check the condition of rotor chamfer in case of uneven pad and rotor wear.

Figure 7

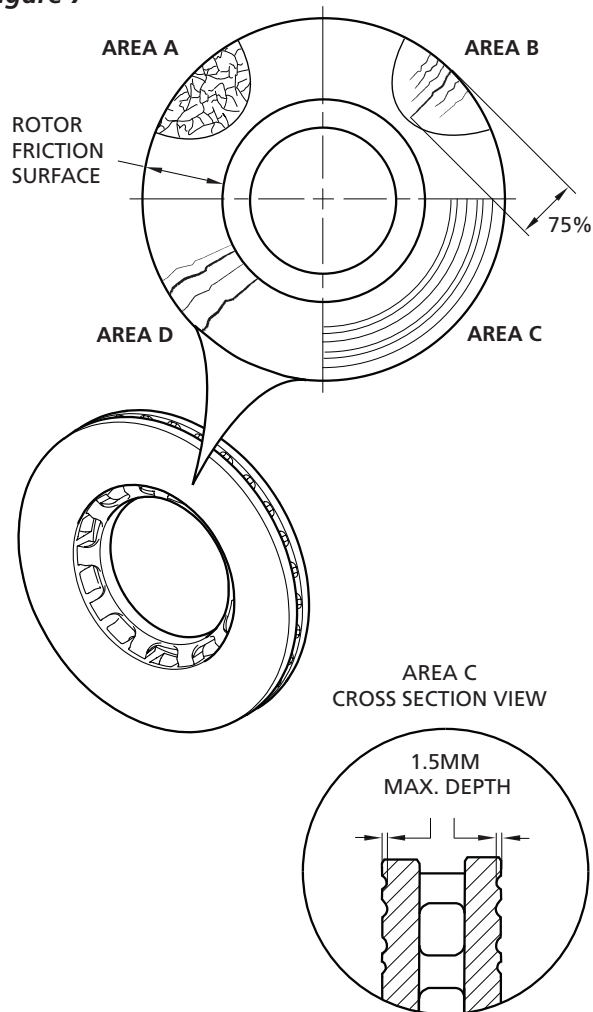
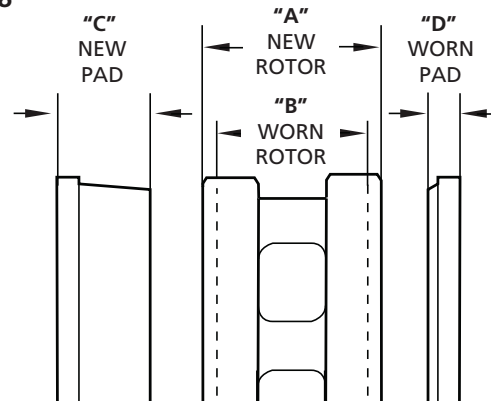


Figure 8



Hub Unit Inspection

The SAF-HOLLAND disc brake hub unit with compact bearing system is designed to be maintenance-free. If there is a malfunction with the hub unit, the hub unit including the compact bearing system must be replaced. The integrated compact bearing system is sealed and requires no additional grease or oil application to the bearing.

IMPORTANT: Do not remove the integrated compact bearing system. If there is a malfunction, the bearing system and hub unit must be replaced.

1. When changing brake pads / rotors or in the event of damage (e.g. brake overheating), inspect the bearing for signs of wear and grease leakage. Perform the Grease Leak Inspection, Wheel Rock Test and Wheel Bearing Noise Test as described in this manual.

⚠ WARNING Failure to replace bearing system and hub unit when required may cause component failure which, if not avoided, may result in serious injury or death.

2. Visually check the seal system to ensure that it is functioning properly and that there is minimal grease leakage. Refer to Hub Unit Grease Leak Inspection in this manual for more information.

NOTE: Adjustment of the compact bearing system is not necessary.

IMPORTANT: Do not use high-pressure cleaners or liquid cleaners on the hub unit.

IMPORTANT: The red dot in the middle of the SAF plastic hub cap is permanent. If you attempt to remove it, hub cap failure will result.

⚠ WARNING Failure to replace plastic hub cap when broken may cause component failure which, if not avoided, may result in serious injury or death.

Wheel Rock Test

1. Raise the wheel off the ground to allow for sufficient clearance to perform the test. Do not remove the wheel!
2. Carefully remove the hub cap.
3. Using a size 85 mm socket, check the torque of the axle nut to ensure that it is torqued to 900 Nm by rotating the nut in either a left- or right-handed direction, depending on the road or curb side of the axle.

NOTE: The SAF compact bearing system uses a single piece spindle nut which has a left-hand thread on the curb side of the axle and a right-hand thread on the road side of the axle. The axle nut with a left-handed thread can be identified by a circular groove (**Figure 15**). The left hand threaded axle spindle can be identified by a frontal groove on the end of the axle spindle.

4. Clean the surface of the axle nut, then attach the magnetic foot of the dial gauge to the surface of the nut and spindle, and place the pointer on the rim surface as shown (**Figure 9**).
5. Rock the wheel by first pulling at the top and pressing at the bottom, then pulling at the bottom and pressing at the top. While rocking/moving the wheel record the end play shown on the dial gauge.

NOTE: Rotate the wheel several times before each measurement.

NOTE: If a recorded wheel end play of more than 0.25 mm while applying 250 Nm of force is measured, the hub unit must be replaced.

Figure 9

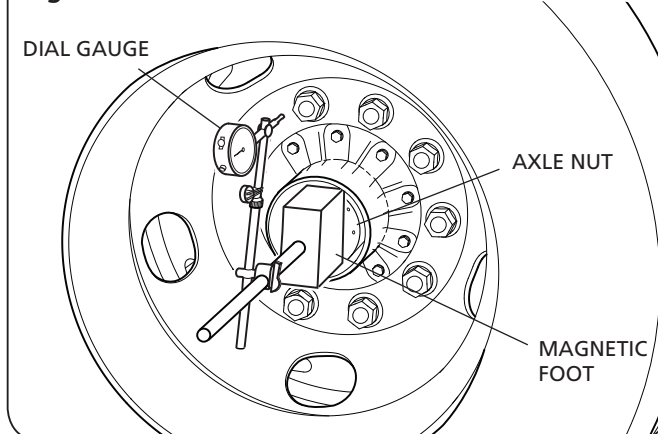
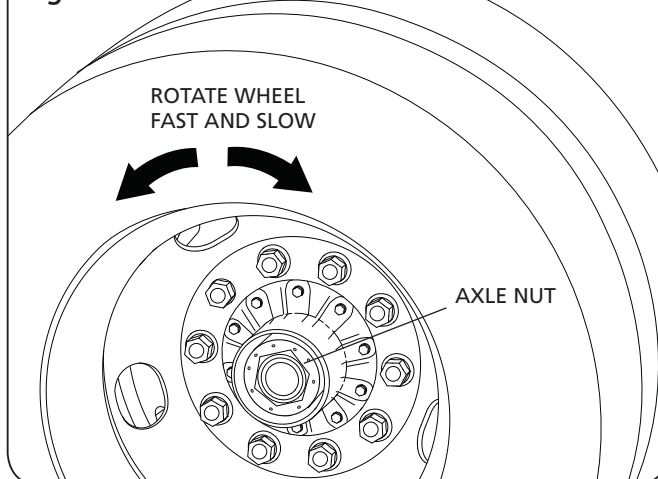


Figure 10



Wheel Bearing Noise Test

1. Raise the wheel off the ground to allow for sufficient clearance to perform the test. Do not remove the wheel!
2. Carefully remove the hub cap.
3. Using a size 85 mm socket, check the torque of the axle nut to ensure that it is torqued to 900 Nm.
4. Rotate the wheel in both forward and rearward directions, using varying speeds (**Figure 10**).
5. If the bearing feels rough and/or a "grinding" noise is heard, the hub must be replaced.

NOTE: Noises can also be caused by the brakes. Before removing the hub unit, remove the brake pads and repeat the bearing noise test.

Hub Unit Grease Leak Inspection

A hub unit grease leak inspection should be performed if more than half of the wheel flange is covered with grease.

1. Carefully remove the hub cap.
2. Inspect the grease levels inside of the wheel flange including the inside of the hub cap, the axle nut, axle tube spindle and hub seal.
 - a. If the hub seal is not completely covered with grease (**Figure 11**) the hub unit is ok and does not need to be replaced.
 - b. If the hub seal is completely covered with tar-like grease (**Figure 12**), the hub unit must be replaced.

NOTE: There may be a small amount of grease on the lower edge of the hub seal. This is normal, and does not indicate grease leakage.

Figure 11



Figure 12



Disc Brake / Hub Unit Service

IMPORTANT: During removal inspect components for wear and replace worn components.

⚠ WARNING Failure to properly support axle during maintenance may allow axle to fall which, if not avoided, could result in serious injury or death.

⚠ CAUTION Do not hit steel parts with a steel hammer as parts could break, sending flying steel fragments in any direction creating a hazard which, if not avoided may result in minor to moderate injury.

NOTE: For certain service and repair work, some bolts must be replaced. All bolts must not be oiled or greased for installation. Tighten bolts with a torque wrench following the specified procedure and torque value (see Torque Chart as shown in this manual).

Proper tools must be used to perform the maintenance and repair procedures described in this manual. Many of these procedures require special tools.

Rotor Replacement - ZI9-19W INTEGRAL

⚠ WARNING Failure to observe these instructions may cause component failure which, if not avoided, may result in serious injury or death.

1. Remove the ABS sensor by following the instructions detailed in related section of this manual.
2. Remove the brake chamber from the brake calliper by loosening and removing the two mounting nuts (**Figure 13**).
3. Remove the brake calliper from the brake spider by using a size 24 mm socket to loosen all four brake calliper bolts (**Figure 14**).
4. Remove the plastic hub cap (**Figure 15**) using a hub cap puller at the reinforced undercut on the side of the cap.

IMPORTANT: The red dot in the middle of the SAF plastic hub cap is permanent and must not be removed.

5. Using a size 85 mm socket remove the axle spindle nut by rotating the nut in either a left- or right-handed direction, depending on the road or curb side of the axle.

Figure 13

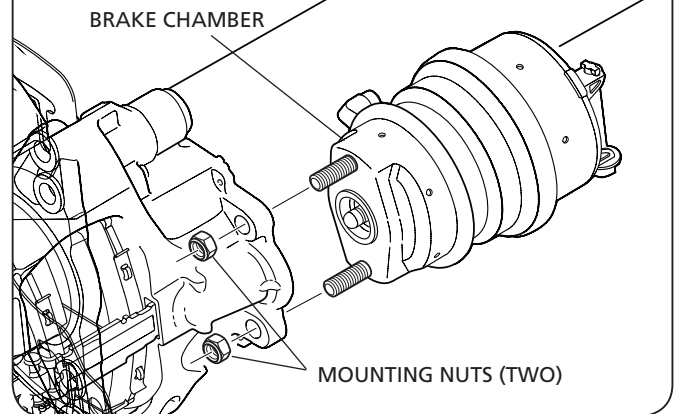


Figure 14

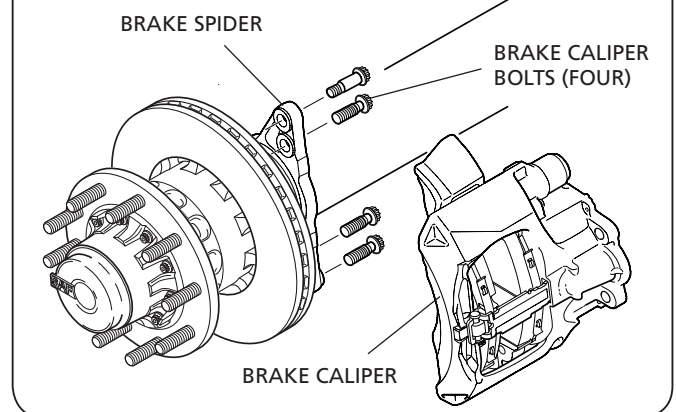
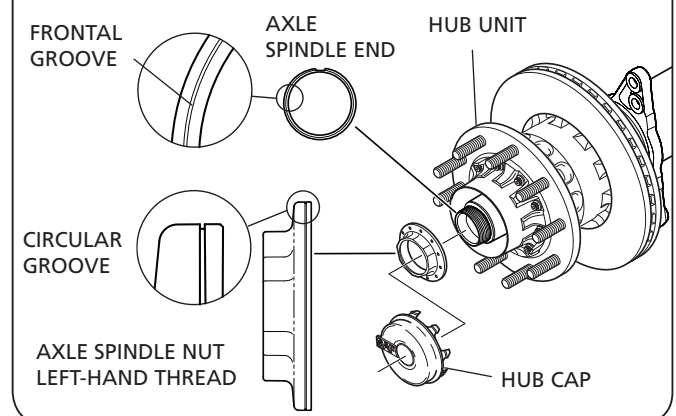


Figure 15



NOTE: The SAF compact bearing system uses a single piece spindle nut which has a left-hand thread on the curb side of the axle and a right-hand thread on the road side of the axle. The axle nut with a left-handed thread can be identified by a circular groove (**Figure 15**). The left hand threaded axle spindle can be identified by a frontal groove on the end of the axle spindle.

6. Remove the head unit by gently sliding it off the spindle. (**Figure 16**).
7. Remove the bearing o-ring seal from the hub unit and discard (**Figure 17**).

NOTE: The o-ring seal may be stuck to the bearing system or on the axle spindle.

8. Clean the hub unit bearing surface.
9. Remove the hub unit from the rotor by using a size 15mm socket to loosen and discard all ten connection bolts (**Figure 17**).
10. Clean the rotor contact surface on the hub unit. Using compressed air, clean the tapped holes in the disc unit. Check that the threads are in good working condition.
11. Re-install the hub unit to the rotor by using ten NEW SAF GENUINE connection bolts. Use a torque wrench to pre-torque the bolts to 50 Nm. For final torque, tighten the bolts with an additional 120 degree turn using a crisscross pattern (Refer to the Torque Chart shown in related section of this manual for more information).

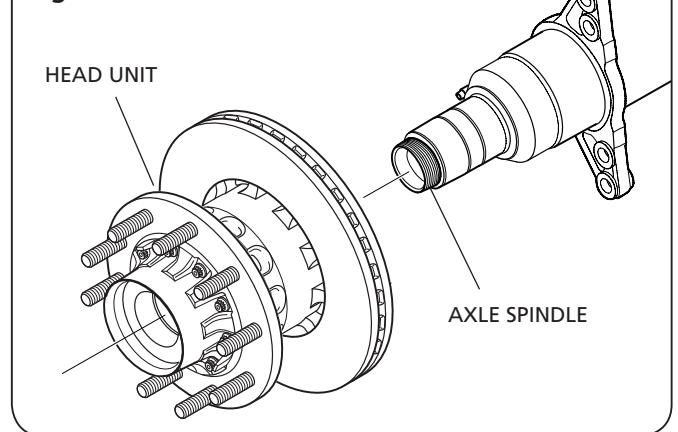
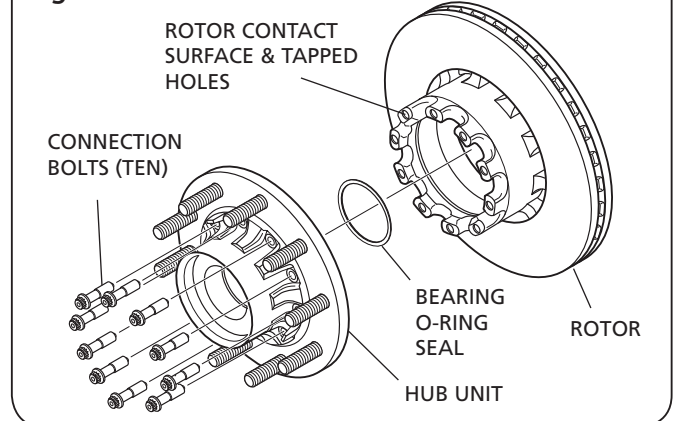
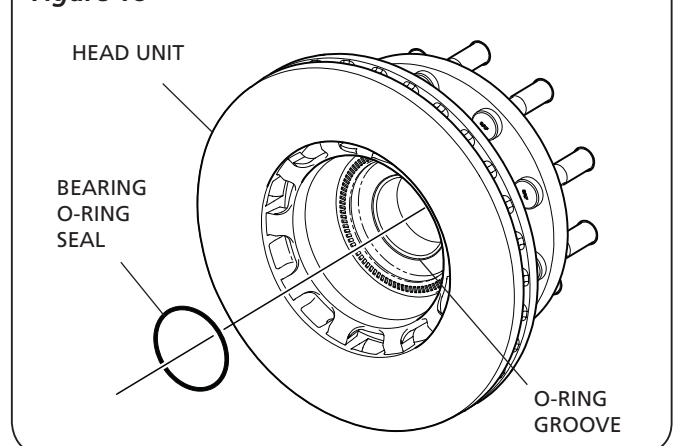
IMPORTANT: When re-installing the hub unit and rotor, use only NEW SAF GENUINE connection bolts. Bolts must be clean and free of oil and grease.

⚠ WARNING Failure to observe these instructions may cause component failure which, if not avoided, may result in serious injury or death.

12. Clean any grease residues from the axle spindle end and recoat the bearing journal with SAF-HOLLAND fitting paste or nickel based anti-seize. Do not grease or oil the spindle threads.

IMPORTANT: Do not use high-pressure cleaners or liquid cleaners on the spindle.

13. Insert a new bearing o-ring seal into the groove of the hub unit (**Figure 18**).
14. Re-install the head unit by gently sliding it on the spindle (**Figure 16**). During re-installation be sure the o-ring seal is in the proper position.

Figure 16

Figure 17

Figure 18


15. Re-install the SAF axle spindle nut by rotating the nut onto the axle spindle in either a left or right-handed direction, depending on the direction of the thread:
 - a. Pre-torque the axle spindle nut with a torque wrench and size 85 mm socket to 150 Nm.
 - b. Rotate the head unit slowly by 5 revolutions.
 - c. For final torque tighten the axle spindle nut by 1/12 turn (30°). Check that the axle spindle nut has a final torque of 900 Nm. For more information refer to the Torque Chart in this manual.

NOTE: The maximum permissible end play of the hub unit is less than 0.25 mm.

16. Check that the hub cap o-ring seal is in good condition and replace if necessary.
17. Re-install the hub cap onto the hub unit by pressing it slowly and uniformly against the hub seat until the snap fit is secure. (**Figure 19**). Visually inspect for a proper o-ring seal.
18. Re-install the calliper to the brake spider using four SAF specific brake calliper bolts (**Figure 20**):

NOTE: The calliper is connected to the disc brake spider using four SAF bolts: three standard bolts and one shoulder bolt (**Figure 20**). The shoulder bolt is located at the outer mounting hole where the brake rotor rotates OUT of the calliper when turning in driving direction (**Figure 21**).

⚠ WARNING Failure to install shoulder bolt in proper location may cause component failure which, if not avoided, may result in serious injury or death.

- a. Pre-torque the bolts to 120 Nm from inner bolts to outer bolts using a size 24 mm socket.
- b. Inspect the pre-torque of the bolts and if necessary re-tighten all bolts to 120 Nm.
- c. Final torque from inner bolts to outer bolts to 450 +/- 30 Nm.

Figure 19

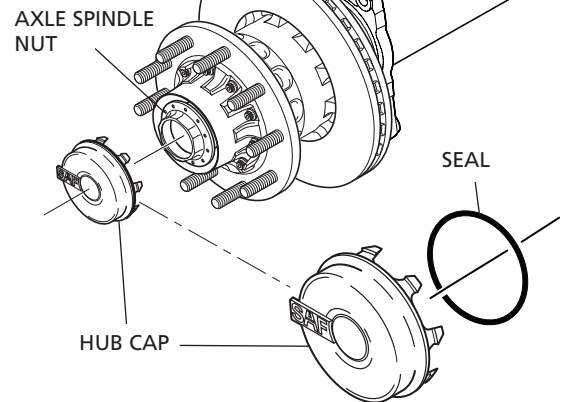


Figure 20

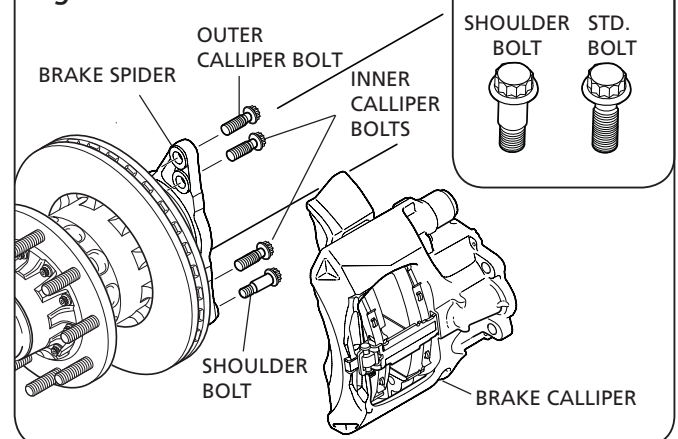
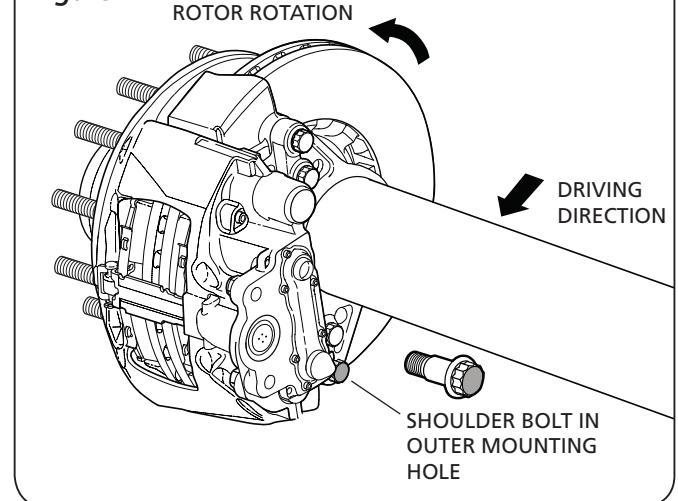


Figure 21

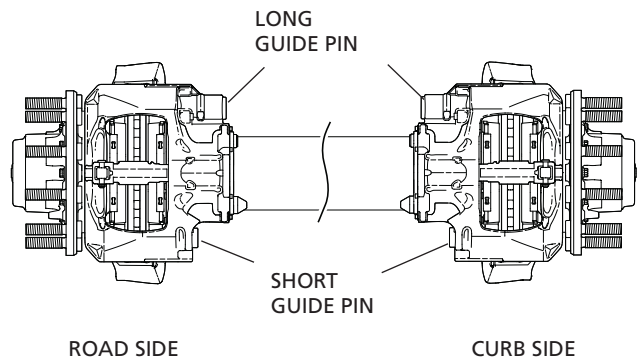


IMPORTANT: Be sure that the brake calliper is mounted on the correct side of the axle. The correct location can be identified by the lengths of the guide pins on the calliper unit. The longer guide pins should be located on the top of the calliper unit when installed on the axle in driving direction. The shorter guide pins should be located on the bottom of the calliper unit (**Figure 22**).

19. Re-install the brake chamber.
20. Re-install the ABS sensor by following the instructions detailed in the related section of this manual.
21. To enable the ABS sensor to function properly press the ABS sensor against the pole wheel at the hub unit to eliminate any clearance between these parts.

IMPORTANT: After replacing the rotor check that the brake system is functioning properly.

Figure 22



Servicing the Hub Unit

The SAF-HOLLAND disc brake hub unit with compact bearing system is designed to be maintenance-free. If there is a malfunction with the hub unit, the hub unit including the compact bearing system must be replaced. The integrated compact bearing system is lifetime sealed and requires no grease or oil application to the bearing.

IMPORTANT: Do not remove the integrated compact bearing system. If there is a malfunction, the bearing system and hub unit must be replaced.

When replacing the wheel bolts, refer to the hub removal instructions described in the related section of this manual.

NOTE: Not all studs may need to be replaced. Only replace bolts that are damaged or in need of replacement.

1. Remove the wheel studs by pressing them out of the hub unit and discard if necessary (**Figure 23**).
2. Install new studs by pressing them into the hub unit. To ensure correct alignment of the bolts during installation, position the flat side of each wheel bolt head so that it is facing the center of the hub (**Figure 24**).

CAUTION Do not hit steel parts with a steel hammer as parts could break, sending flying steel fragments in any direction creating a hazard which, if not avoided, may result in minor to moderate injury.

Figure 23

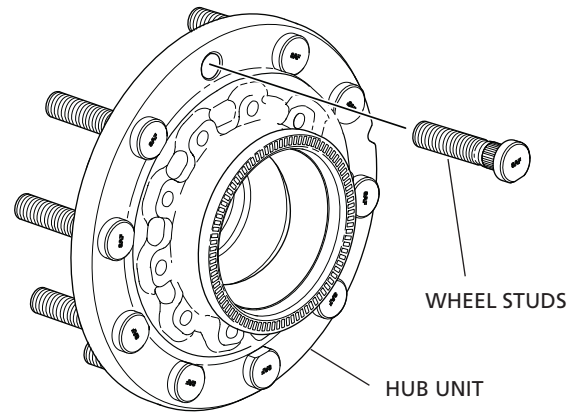
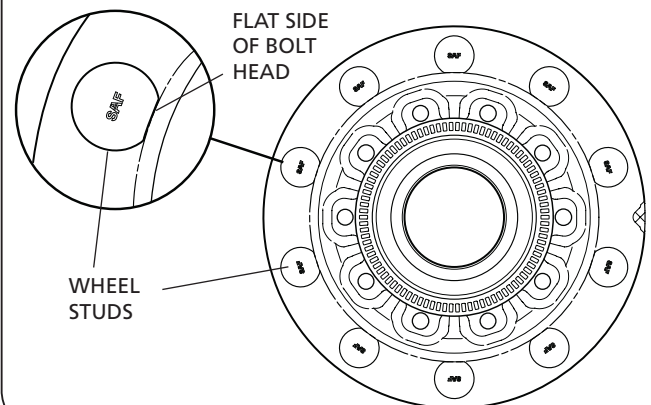


Figure 24



Disc Brake Options

ABS Sensor

NOTE: When replacing the ABS sensor, only install a sensor manufactured by WABCO. Do not mix sensors from different manufacturers. The SAF-HOLLAND INTEGRAL Disc Brake comes with a WABCO ABS mini sensor Ø11. For further ABS sensor information contact SAF-HOLLAND Customer Service

1. Disconnect the ABS sensor.
2. Remove the ABS sensor from the sensor holder by pulling it straight out from the holder and discard (**Figure 25**).
3. If necessary, remove the sensor retaining spring clip from the sensor holder and replace with new. (**Figure 25**).
4. Install a new ABS sensor by pushing it directly into the sensor holder / spring clip until it contacts the tooth wheel in the hub unit (**Figure 25**).
5. Re-connect the ABS sensor.

Figure 25

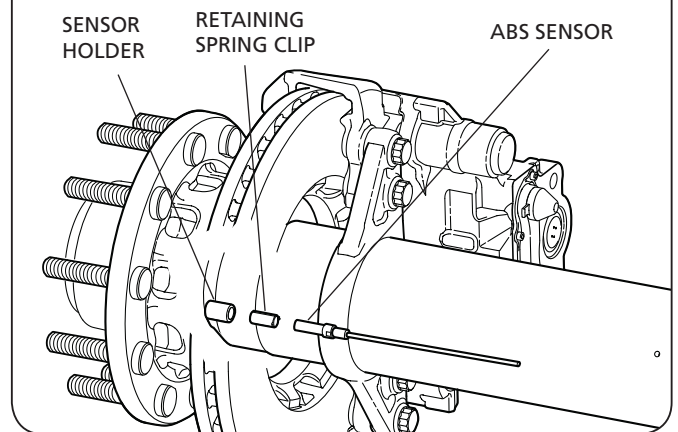
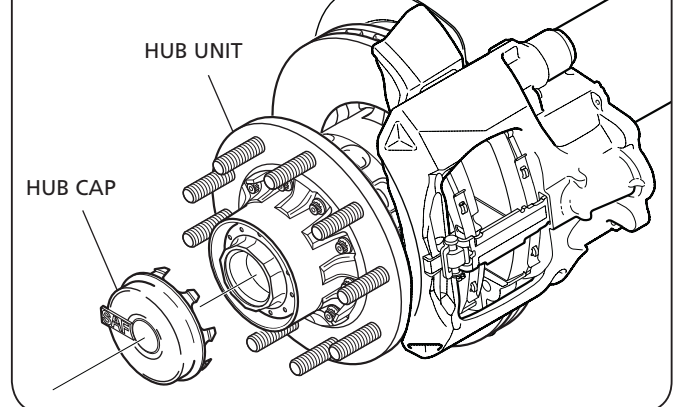


Figure 26

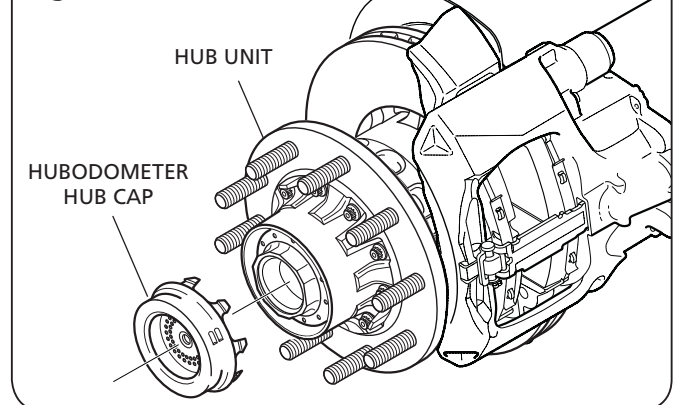


Hubodometer

The SAF-HOLLAND INTEGRAL Disc Brake can be factory equipped or retrofitted with a hubodometer hub cap for installation of a hubodometer.

1. Remove the original plastic hub cap (**Figure 26**) using a hub cap puller at the reinforced undercut on the side of the cap.
2. Install hubodometer onto hubodometer hub cap.
3. Check that the hubodometer hub cap o-ring is installed correctly and is in good condition.
4. Install the hubodometer hub cap by pressing it slowly and uniformly against the hub seat until the snap fit is secure (**Figure 27**). Visually inspect the O-ring for a proper seal.

Figure 27



Dust Shield

The SAF-HOLLAND INTEGRAL Disc Brake can be factory equipped or retrofitted with a disc dust shield.

1. Using a size 24mm socket, loosen and discard the two outer brake calliper bolts (**Figure 28**).
2. Install the dust shield with the SAF logo facing towards the hub unit (**Figure 28**).
3. Re-install one new shoulder and one new standard outer SAF specific brake calliper bolts to the brake spider (**Figure 29**):
 - a. Pre-torque the bolts to 120 Nm from inner bolts to outer bolts to outside using a size 24 mm socket.
 - b. Inspect the pre-torque of the bolts and if necessary re-tighten all bolts to 120 Nm.
 - c. Final torque from inner bolts to outer bolts to 450 +/- 30 Nm.

Figure 28

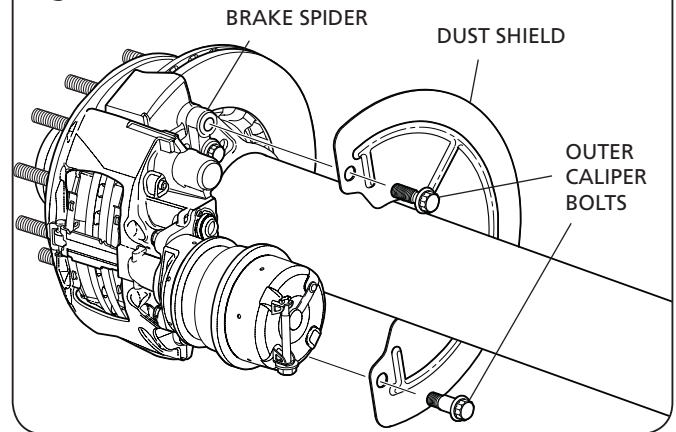
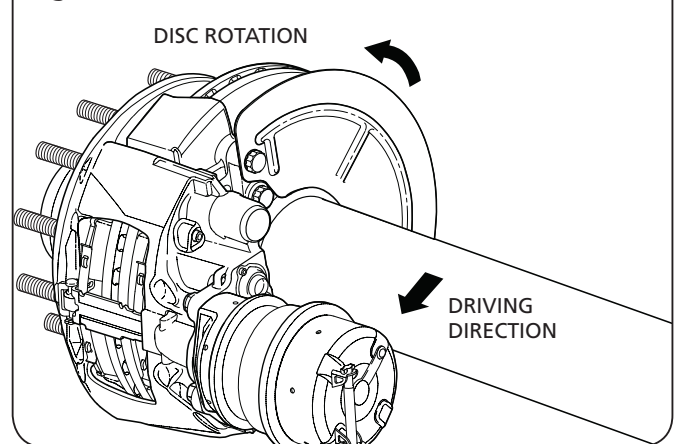


Figure 29



Hub unit inspection

The Hub Unit is maintenance free.

Do not dismantle the hub bearing assembly.

Inspect the Hub Unit at any brake disc replacement.

Check for excessive grease leakage and any abnormal noises whilst rotating the hub.

When replacing brake pads inspect the rubber boot seals of the calliper guide pins and the tappet seals.

IMPORTANT: Never use high-pressure cleaners or cleaning fluids on the brake disc or Hub Unit.

Clean stub axle of any old grease and apply very thin coat of fresh SAF fitting paste or nickel based anti-seize.

Lubricant specifications:

Grease for repairs is contained in every repair kit.

Stub axle: SAF Part No. EX0300 SAF fitting paste

Check the hub nut for tightening torque as per maintenance schedule by following the prescribed procedure.

Tightening the hub nut

On LH side – LH thread

On RH side – RH thread

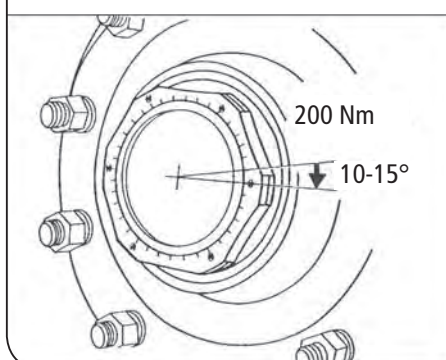
Pre-tighten to 200 Nm whilst rotating wheel hub and disc. For final torque, continue tightening by one to one & half (1 to 1-1/2) graduations (10-15°). (**Figure 30**)

Alternatively the nut hub could be tightened to 900 Nm whilst rotating the hub and disc.

Hub nuts with LH thread are marked with a groove milled into the outside of the hexagon.

Hub Unit bearing axial end float 0 - 0.25 mm (see maintenance section for the procedure)

Figure 30



NOTE: Check the condition of rotor chamfer in case of uneven pad and rotor wear.

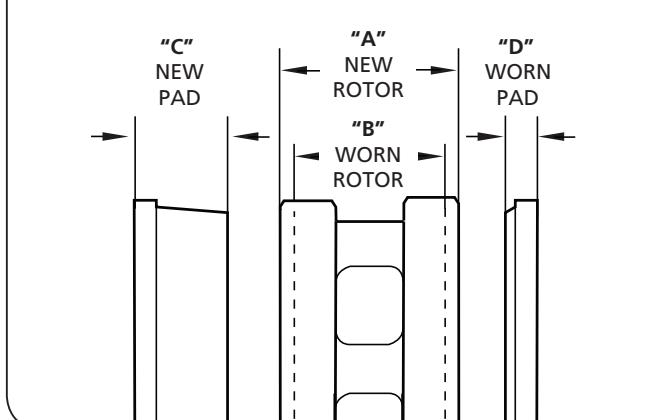
NOTE: Failure to observe these instructions could result in a road traffic accident. Worn brake linings or excessively worn brake discs result in a reduction in the braking efficiency or in a complete failure of the brake system.

BRAKE ROTOR			BRAKE PAD	
DIAMETER (mm)	"A" NEW (mm)	"B" MAX. WEAR LIMIT (mm)	"C" NEW (mm)	"D" MAX. WEAR LIMIT (mm)
370	45	37.0	30	11.0

IMPORTANT: Bolts must not be oiled.

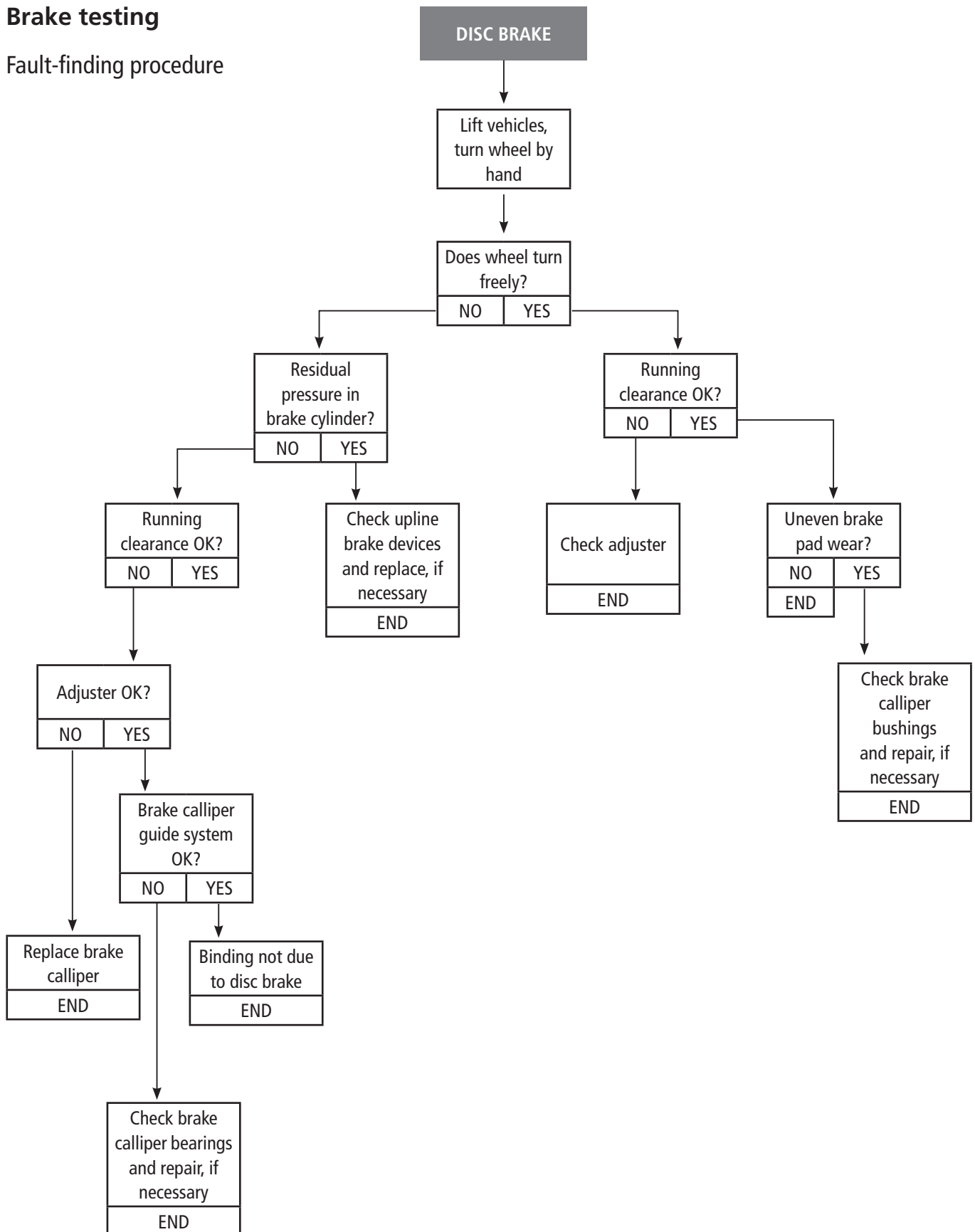
ASSEMBLY TOOLS	PART
Hub nut socket	1 012 0024 00
Hub puller	2 501 871
Lever for hub cap	1 434 1041 00
Tool box universal	3 434 3328 00

Figure 31



Brake testing

Fault-finding procedure



NOTE: Difference between wear of inboard and outboard pad, and diagonal wear 5 mm.

Self-Adjuster check

Remove adjusting screw cap. (**Figure 32**)

CAUTION Do not overload or damage the hexagon drive (8 mm) of the adjusting screw. Do not use an open-ended spanner.

Turn the adjusting screw clockwise using an 8 mm ring spanner.

Actuate the brakes 5 times (approx. 1 bar).

When the self-adjuster is functioning correctly the ring spanner must turn anti-clockwise.

CAUTION Ensure that there is sufficient room for the ring spanner to rotate freely during adjustment. (**Figure 33**)

Keep your hands away from the spanner whilst actuating the brakes.

Figure 32

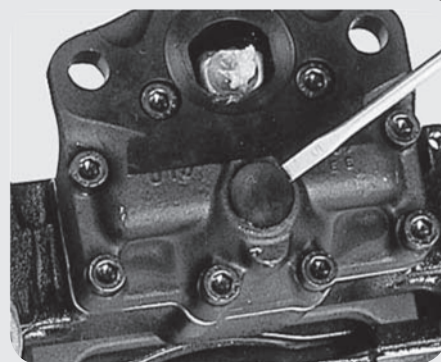


Figure 33



NOTE: As the number of rotation steps of the ring spanner increases, the turn angle or movement of the ring spanner must reduce.

If the spanner rotates as described above, the self-adjuster is functioning correctly.

Remove the ring spanner.

Coat the adjusting screw cap with grease in the snap-fit area, then push on the cap and ensure that it is firmly sealed.

Inspect condition of adjusting screw cap for proper seal function to avoid water entry into the self-adjusting gear.

Replace adjusting screw cap if found worn or damaged.

If the following faults occur, calliper should be replaced or repaired:

The adjusting screw or ring spanner

- does not turn,
- turns only with the first application of the brakes,
- turns forward and then back again at each application of the brakes, the self-adjuster is not functioning correctly and the brake calliper has to be replaced.

Repairing the brakes

Removal of the brake calliper.

Park the vehicle on level, solid ground and chock the wheels to prevent the vehicle from rolling away.

1. Lift the axle using a jack.
2. Loosen the wheel nuts and remove the wheel (**Figure 34**).
3. Remove the adjusting screw cap (**Figure 35a**).
4. Turn the adjuster in anti clockwise direction up to the stop until it clicks 2 - 3 times (**Figure 35b**).
5. Unbolt the diaphragm cylinder, if necessary.
6. Remove the pad retaining clamp (**Figure 36**).
7. Remove the brake pads.
8. Unbolt the brake calliper.

Removal of the hub unit.

1. Lever the hub cap off the hub unit by inserting a tyre lever into one of the recesses around the circumference of the hub cap (**Figure 37**).

Figure 34

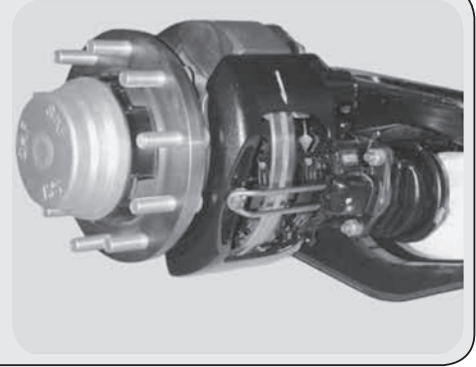


Figure 35a

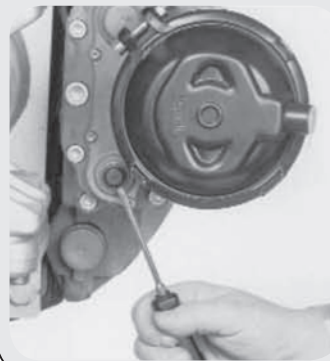


Figure 35b



Figure 36

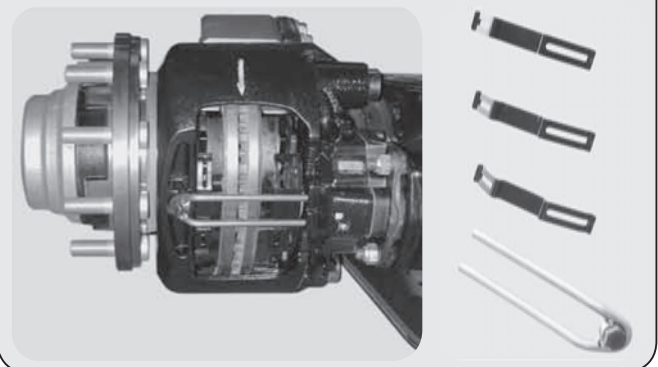
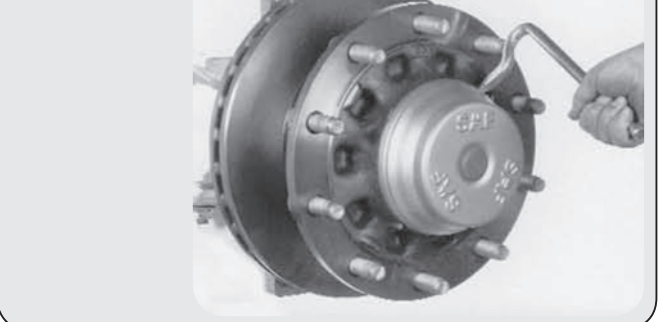


Figure 37



2. Press the ABS sensor completely out of the sensor-mounting block and place inside the axle tube. (**Figure 38**)

The sensor holder can remain on the axle nut.

3. Loosen the axle nut and unscrew from the stub axle. (**Figure 39**)

Axle nut socket of 140mm: SAF Part No. 1 012 0024 00 should be used with 1" square drive tool equipment.

NOTE: On left-hand side of vehicle (as seen in direction of forward travel) – left-hand thread. Identification of axle nut with left-hand thread: Milled groove on outside of hexagonal head.

4. The complete hub unit with brake disc can be easily pulled off the stub axle (**Figure 40**).

If the bearing inner races tilt on the stub shaft, the hub unit can be pulled off using a normal workshop puller or SAF Part No. 2 501 871. It is recommended to oil the tool tread at the beginning.

NOTE: Do not disassemble the hub unit bearing assembly!

The hub bearings have a long-life grease packing.

5. Check the brake calliper for free movement, and sliding action (**Figure 41**).
6. Back off the tappets on the adjuster until the boots are visible.
7. Perform a visual inspection of the boots and all seals.
8. Screw in the tappets again completely.

Figure 38

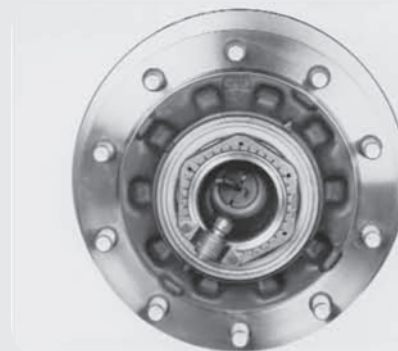


Figure 39

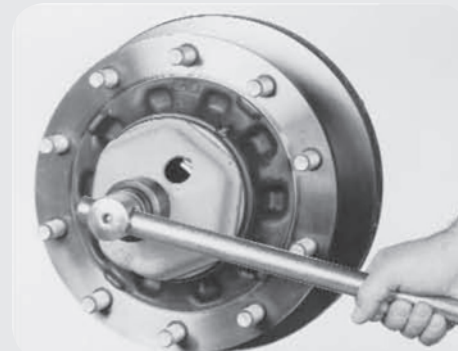


Figure 40

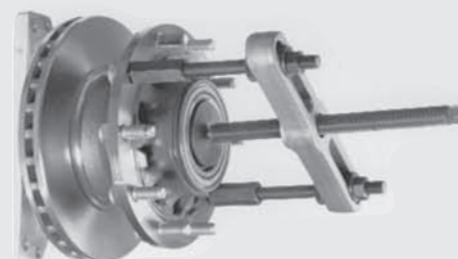
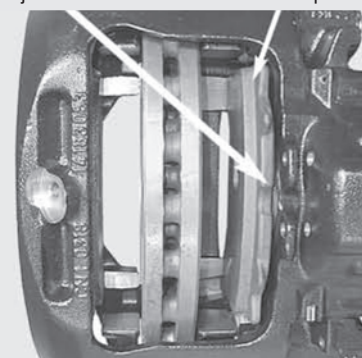


Figure 41

Adjustment screw Pressure plate



Brake disc

See table in chapter "maintenance Instructions".

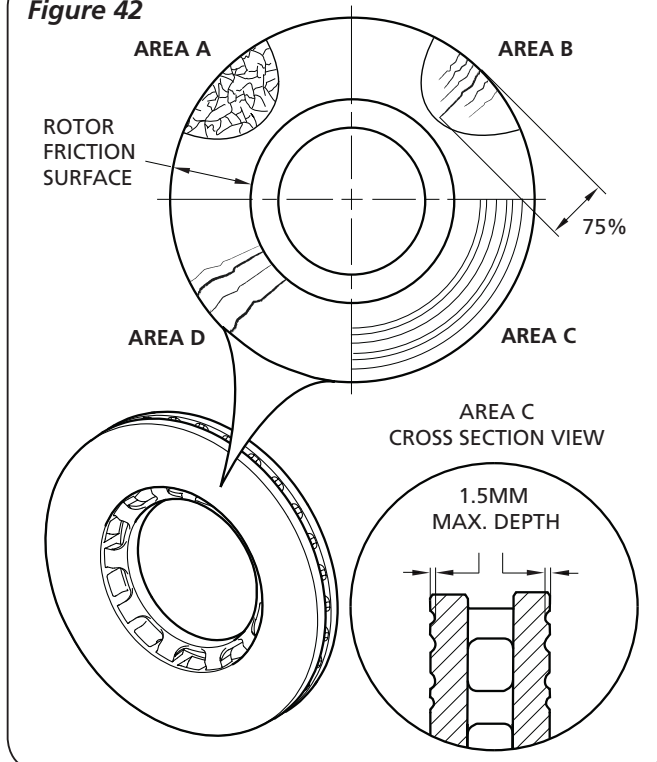
The brake disc may only be cleaned using a dry cleaning agent.

Inspecting the brake disc

1. Inspect the braking surface of the brake disc carefully for serviceability. (**Figure 42**)
 - a. Network-like cracks are permissible (**AREA A**).
 - b. Cracks up to max. 1.5 mm deep or wide, running towards the middle of the hub are permissible (**AREA B**).
 - c. Unevenness in the disc surface up to 1.5 mm is permissible (**AREA C**).
 - d. Cracks going right through the disc are not permissible (**AREA D**).
2. Check the brake disc thickness and machine, if necessary. For safety reasons, the limit thickness for machining the brake discs is 39 - 40 mm.

NOTE: Max. wear limit, see table in chapter "SK RZ 9019W Maintenance Instructions".

Figure 42



Replacing the disc brake

1. To remove the brake disc from the hub unit, drive all the wheel studs out of the hub unit using a brass hammer (**Figure 43**).
2. Before reassembling wheel hub and brake disc, remove any corrosion from the contact surfaces.
3. Insert the wheel studs at an angle from below and hammer into place (**Figure 44**). observe twist lock.
4. Draw the studs completely into the hub unit using a wheel nut and an impact wrench (**Figure 45**).

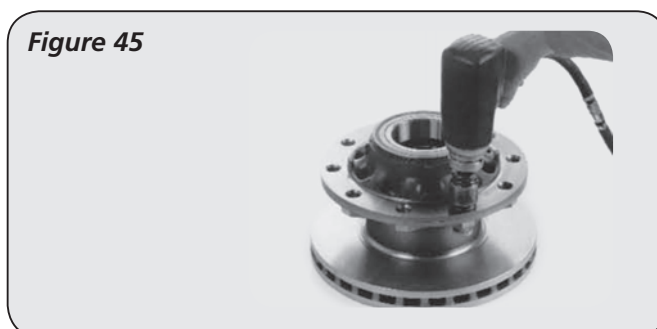
Figure 43



Figure 44



Figure 45



Installing the Hub Unit with brake disc

1. Completely coat the wheel bearing seats on the stub shaft and in the Hub Unit with SAF fitting paste or nickel based anti-seize. (**Figure 46**)
SAF Part No. EX0300
2. Replace the rear O-ring on the stub shaft.
 - a. Inspect the O-ring on the axle nut and replace, if necessary.
3. Push the Hub Unit brake disc assembly onto the stub axle.
4. Screw on the axle nut.
5. Axle nut socket - 140mm – SAF Part No 1 012 0024 00.
Use 1" square drive socket.
6. On LH side of vehicle (as seen in direction of forward travel) – LH thread. Identification of axle nut with LH thread: Milled groove on outside of hexagonal head.
7. Tighten the axle nut (**Figure 47**).
 - a. Pre-tighten the axle nut to 200 Nm manually.
Do not use an air impact wrench.
 - b. Rotate the hub at least 5 times.
 - c. The axle must then be tightened a further 10-15° torque angle while rotating.
 - d. Loosen the axle nut again and repeat procedure.
 - e. When final torque has been completed, clearly mark both the axle nut and the spindle so that there is a permanent reference point.

NOTE: Alternatively the nut hub could be tightened to 900 Nm whilst rotating the hub and disc (**Figure 48**).

8. Completely coat the ABS sensor with copper paste and install in the sensor holder.
9. Inspect the O-ring on the Hub Unit for the snap fastening of the hubcap; replace, if necessary. Push on the hubcap and check that it is securely seated.
10. Remove the plug from the hubcap and push the ABS sensor until it is contacting the exciter ring (**Figure 49**). Insert the plug into the hubcap again.
11. Measure the voltage output on the ABS sensor cable using a voltmeter (approx. 100 mV) whilst rotating the hub.

Figure 46

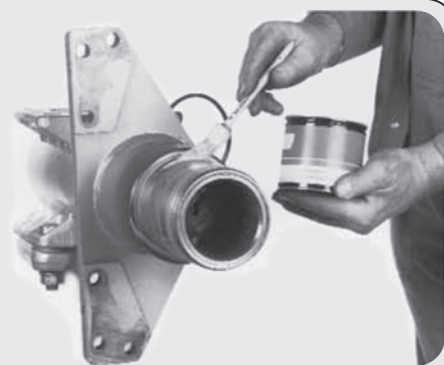


Figure 47

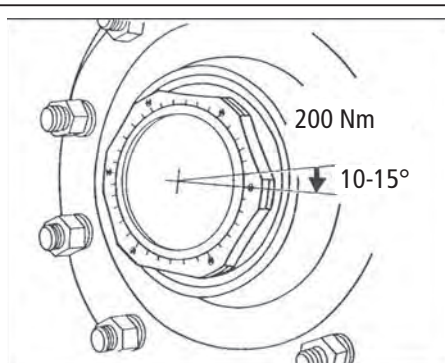


Figure 48

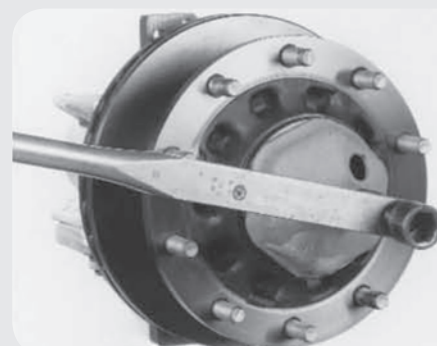
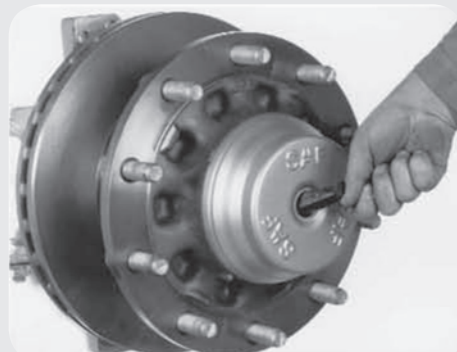


Figure 49



Move the brake calliper so there is enough distance between the brake disc on the actuation side to insert the brake lining. **(Figure 50)**

Insert the pressure plate into the brake mounting and push it against the adjustment screw.

NOTE: The pressure plate must seat correctly in the brake mounting guide and the pin of the adjustment screw must be seated in the groove of the pressure plate, otherwise the correct functioning of the adjustment mechanism is endangered! Provision is made so that the adjustment screw can be turned until the pin sits correctly in the pressure plate groove. The protection cap must not be rotated during this action.

Inserting new brake linings 64.1 on the actuation pad. **(Figure 51)**

Move the brake calliper in the direction of the rim until the actuation side of the brake lining 64.1 sits on the brake disc.

Inserting new brake linings 64.1 on the rim side. **(Figure 52)**

With the help of a 1 mm thick feeler gauge (arrow) inserted between the rim side of the lining and the brake calliper, regulate the adjuster with a ring spanner until both brake linings sit on the brake disc.

ATTENTION: Do not use excessive force on the corners of the adjuster.

NOTE: Direction of rotation in regulating the adjuster is anti-clockwise. Do not assemble the lining retainer hoop until play has been adjusted.

Setting new retainer springs 64.2 onto the brake linings 64.1 and pressure plate. **(Figure 53)**

Push and depress the lining retainer hoop 63.1 in the opening of the brake calliper so that the radial lugs of the retainer spring seat in the hoop.

Figure 50

Adjustment screw Pressure plate

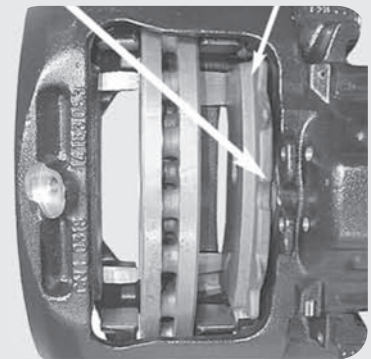


Figure 51

64.1

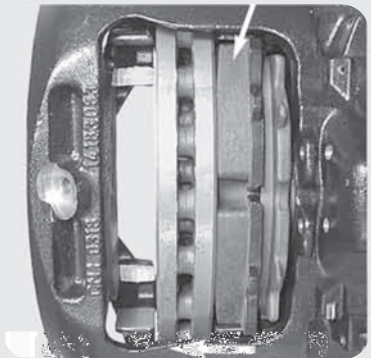


Figure 52

64.1

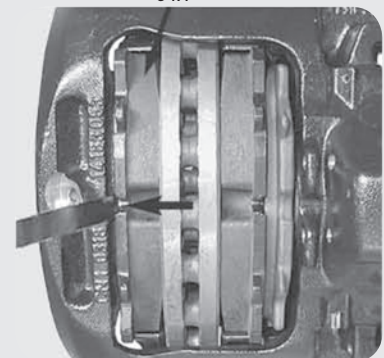
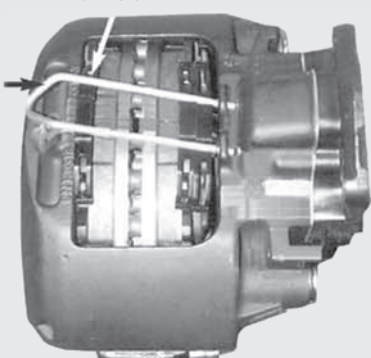


Figure 53

64.2 / 64.1

63.1



Affixing new hex. screw 63.2 with 30 ± 15 using a spanner onto the brake calliper. (**Figure 54**)

Push the new plug 65 into the opening of the brake calliper! Check the wheel hub for freedom of movement. (**Figure 55**)

NOTE: Check the brakes on a rolling road test station after completion of work.

Replacing of the tappet rubber boot seals

Ensure brakes are released & safe.

Dismantle brake linings and pressure plate. (**Figure 56**)

Move brake calliper by hand towards the cylinder. (**Figure 57**)

Pull out the protection cap 66 using a screwdriver from the brake calliper seating.

Check the thread on the adjuster screw.

NOTE: Lay the rim side brake lining in the lining cavity so that the adjuster cannot be screwed out of adjustment. After checking remove the linings again.

Secure the adjuster screw against turning (arrow) and screw out approx. 30 mm anti-clockwise using a ring spanner on the hexagonals.

During this time check the thread for damage or corrosion.

Figure 54

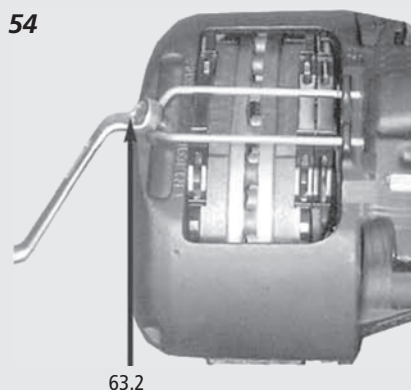


Figure 55

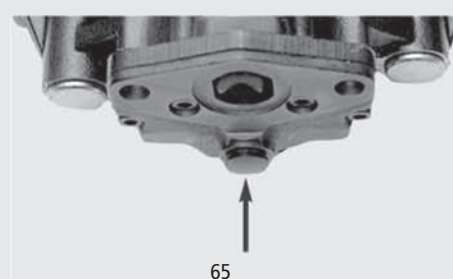


Figure 56

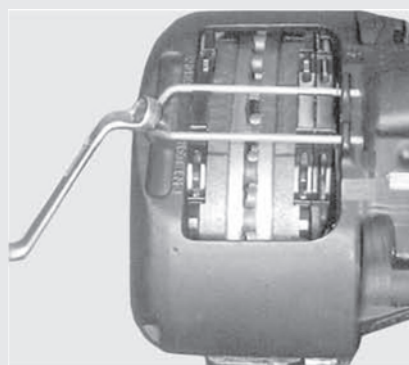
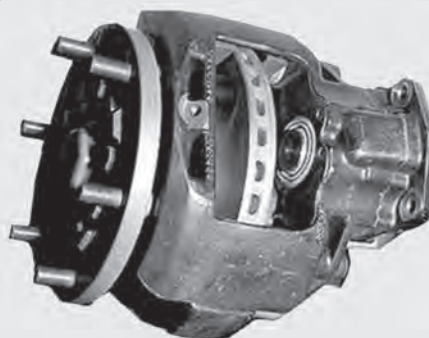


Figure 57



NOTE: The protection cap 66 can be replaced if dirt or water is seen to be present over the seal seat of the brake calliper, or if the protection cap has been damaged immediately prior to servicing. Should parts be found to be corroded then the brake should be replaced in case of doubt. (**Figure 58**)

After checking, grease the thread and partly screw the adjuster clockwise again. (**Figure 59**)

Clean the seating of the protection cap 66 in the brake calliper (arrow). Illustration without adjustment screw. (**Figure 60**)

Push the new protection cap 66 over the adjuster.

Centralize the press-in tool over the protection cap 66 and insert the protection cap in its seat in the brake calliper 59.

Illustration without adjustment screw. (**Figure 61**)

Figure 58

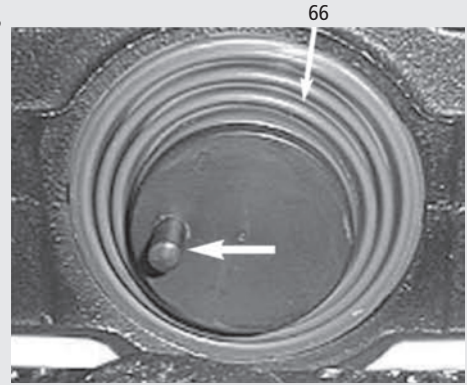


Figure 59



Figure 60

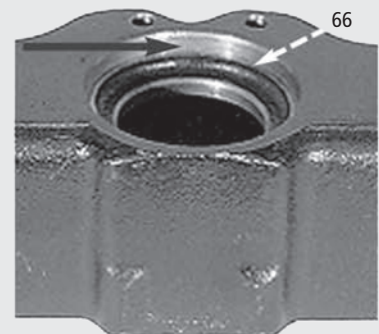
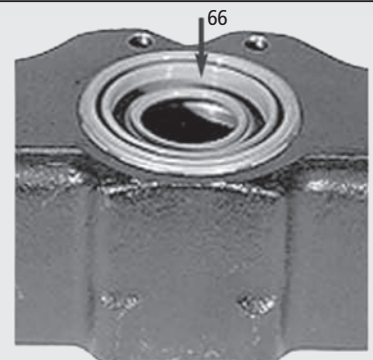


Figure 61



Insert the protection cap 66 into the adjustment screw seating. **(Figure 62)**

Grease the rim lip before insertion.

NOTE: Ensure an even and unwrinkled seating of the protection cap's rim lip in the groove of the adjustment screw.

Repairing the brake calliper bearing with "guide and seal kit"

Dismantle the brake calliper 59 from the brake mounting 61 and additionally remove the cap 83 of the guide pin 70.1/80.2 with a screwdriver from the housing 59. **(Figure 63)**

NOTE: Do not damage the holes for the cap in the housing.

Loosen the screws 70.6/80.1 with a spanner. Remove the brake calliper 59 from the brake mounting 61. **(Figure 64)**

NOTE: Fingers may get trapped through loose brake calliper.

Clean contact surface (flush) on the brake mounting 61 to the guide pin.

Remove the guide pin 70.1/80.2 from the brake calliper 59, remove the protection cap 80 from the groove. **(Figure 65)**

Figure 62

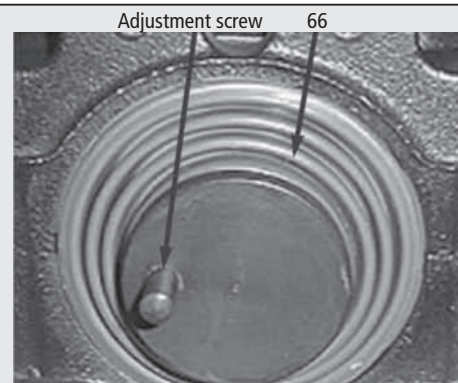


Figure 63

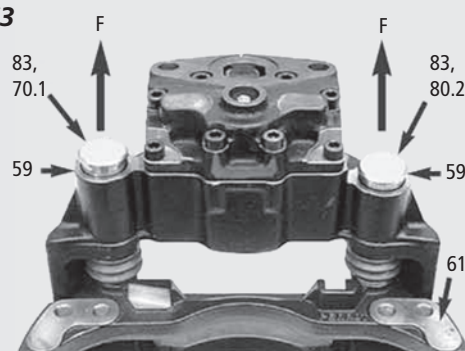


Figure 64

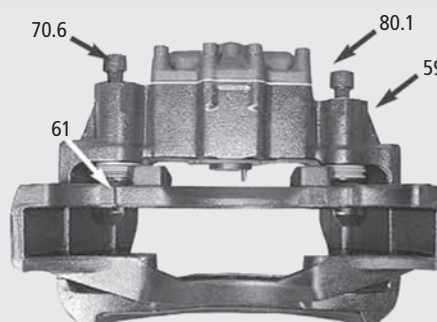
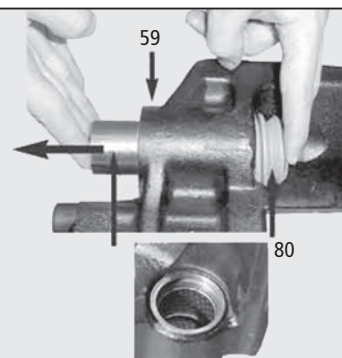


Figure 65



Lay the brake calliper 59 on a firm surface so that the cover opening of the brake calliper is uppermost in order to press out the bushes 70.3/80.3. (**Figure 66**)

Press out the bushes 70.3/80.3 from the brake calliper using a press and mandrel. (**Figure 67**)

Clean the holes in the brake calliper.

Press in two new bushes 70.3 and for the longer guide pin 70.1: Firstly (A) (**Figure 68a**) the inner bush with mandrel ($L_1 = 52.2 \pm 0.2$ mm), and finally (B) (**Figure 68b**) the outer bush with a mandrel ($L_2 = 13.2 \pm 0.2$ mm), in both cases press in until they meet the stop.

Grease sliding surfaces of the bushes and the space between them.

Press in a new bush 80.3 for the shorter guide pin 80.2. (**Figure 69**)

Press in bush (C) with mandrel ($L_3 = 38.7 \pm 0.2$ mm) until it meets the stop.

Grease sliding surfaces of the bush.

Figure 66

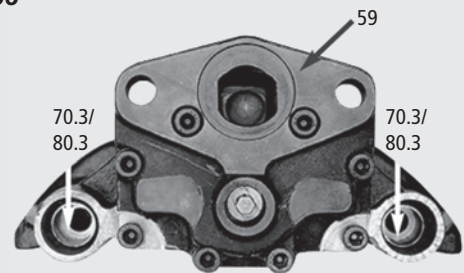


Figure 67

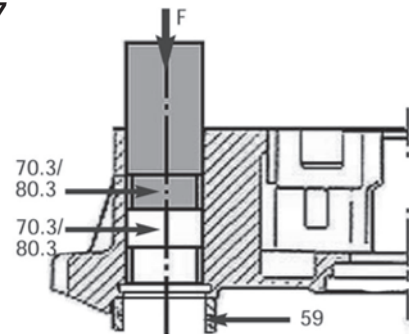


Figure 68a

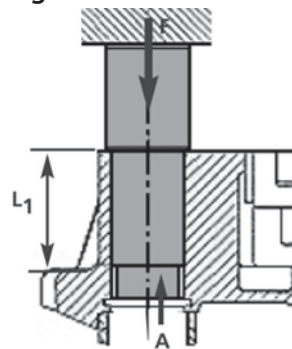


Figure 68b

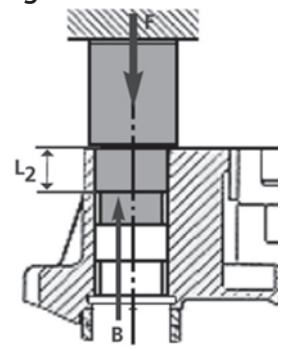
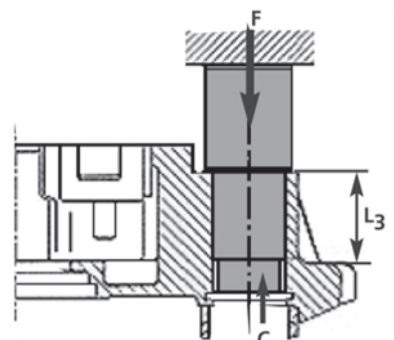


Figure 69



Insert the new protection cap 80 in the seat (arrow) of the brake calliper (59). (**Figure 70**)

NOTE: Clean seating before insertion. For ease of insertion of the protection cap it is recommended to lightly grease the rim lip.

NOTE: Ensure an even and unwrinkled seating of the protection cap's rim lip in the groove of the brake calliper.

Grease the running surfaces for the guide pins 70.1/80.2 and the rim lip of the protection cap 80.

Insert the new guide pins from the direction of the cylinder into the brake calliper 59 and push the protection cap 80 against the seating of the guide pins 70.1/80.2. (**Figure 71**)

Lightly move the guide pins backwards and forwards several times as illustrated in the sketch.

The longer guide pin 70.1 is the shoulder bolt and is fitted on the brake disc run in side. The shorter guide pin 80.2 is the play bolt and is fitted on the brake disc run out side.

Remove excessive grease. The flat surfaces of the guide pins to the brake mounting (arrow) must be free of grease!

Seat the brake calliper 59 onto the brake mounting 61 and insert the fitted guide pins 70.1/80.2 flush. (**Figure 72**)

Fit the new screws 70.6 (long for the shoulder bolt 70.1), 80.1 (short for the play bolt 80.2) through the previously fitted guide pins in the brake calliper 59 and screw the brake calliper to the brake mounting 61.

Tightening sequence: 1st screw 70.6 / 2nd screw 80.1

NOTE: It must be ensured during tightening of the screws when assembling that the protection cap 80 is not damaged or rotated.

First, screw tightly the slide fit longer guide pin 70.1 and then screw tightly the running fit shorter guide pin 80.2.

Should the guide pins 70.1/80.2 be loosened during maintenance work from the brake mounting 61, then these must be replaced with new screws 70.6/80.1 when re-assembling.

Move the brake calliper several times backwards and forwards over the guide pins 70.1/80.2. Ensure ease of movement. (**Figure 73**)

NOTE: Do not squash the guide pins against the brake mounting!

Figure 70



Figure 71

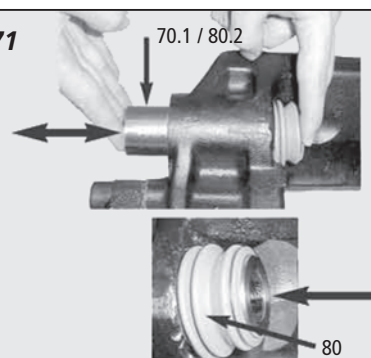


Figure 72

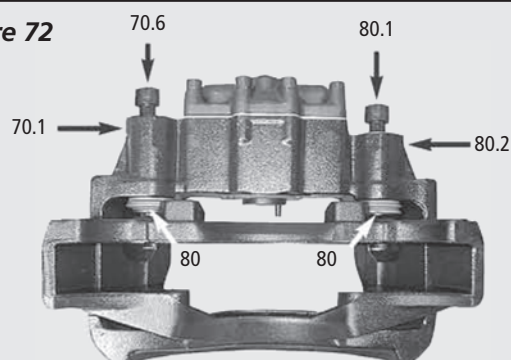
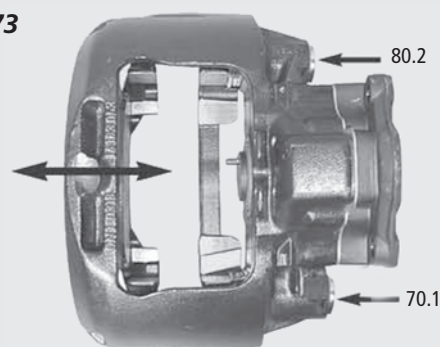


Figure 73



Grease the holes for the cover plate 83 in the brake calliper 59. Insert the new cover plate 83 into the holes of the brake calliper 59 and press home using a suitable tool. (**Figure 74**)

NOTE: Avoid damaging the cover.

Fitting the brake calliper

Seat the brakes with brake mounting over the brake disc and fit to the axle. (**Figure 75**)

Tightening sequence of the screws:

RH side clockwise

LH side anti-clockwise

Each time begin the sequence with the shoulder bolt (if applicable).

Position of shoulder bolt: In the direction of wheel rotation – the run out side of the outer corner of the flange.

Replacing the brake cylinder

Before fitting the brake cylinder clean the sealing surface of the brake calliper and grease the bearing on the brake lever (**Figure 76**).

Set the brake cylinder onto the brake calliper and screw the nut slightly with a spanner - torque to 210 Nm.

NOTE: According to the respective fitting position, the lower drain holes on the bottom of the cylinder must be clear.

Figure 74

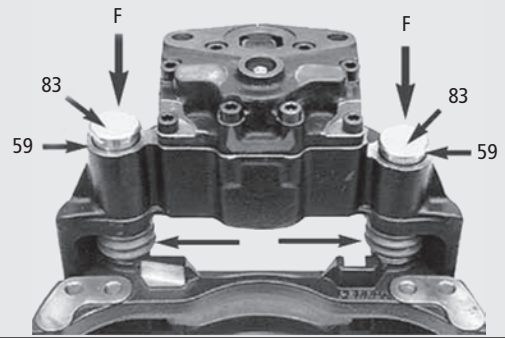


Figure 75

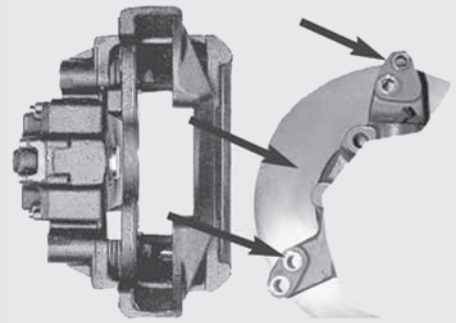
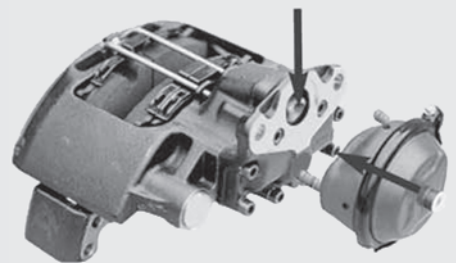
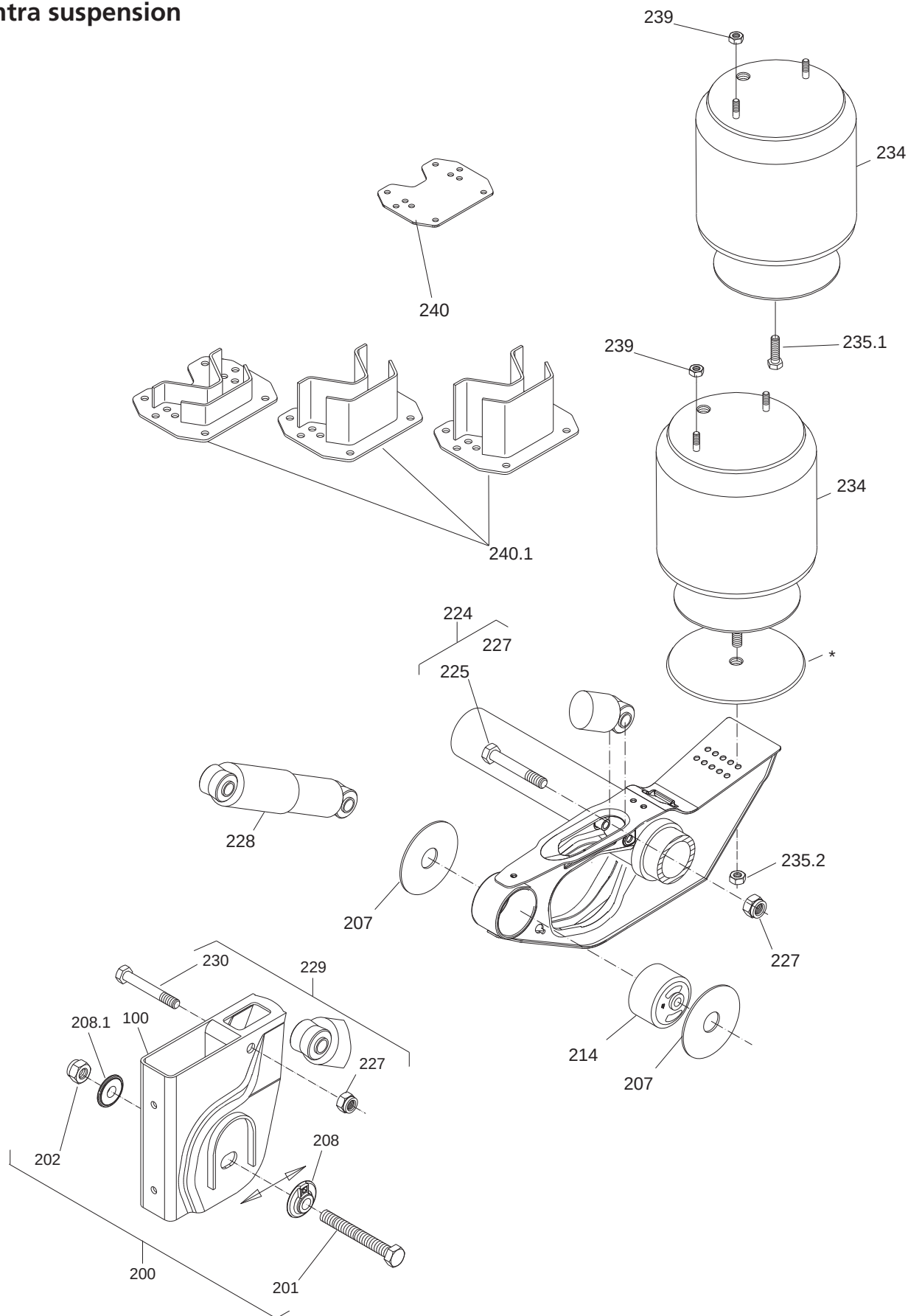


Figure 76



Intra suspension



ITEM	PART NO.	DESCRIPTION	QTY
100	2 183 0825 01	Intra hanger - steel - 200H (SUPERSEDES) 2 183 0825 00	2
100	2 183 0826 01	Intra hanger - steel - 250H (SUPERSEDES) 2 183 0826 00	2
100	2 183 0827 01	Intra hanger - steel - 300H (SUPERSEDES) 2 183 0827 00	2
100	2 183 0828 01	Intra hanger - steel - 350H (SUPERSEDES) 2 183 0828 00	2
100	2 183 0829 00	Intra hanger - alloy - 200H	2
100	2 183 0830 00	Intra hanger - alloy - 250H	2
100	2 183 0831 00	Intra hanger - alloy - 300H	2
100	2 183 0832 00	Intra hanger - alloy - 350H	2
200	3 341 1048 19	Pivot bolt kit (incl. 201 & 202) (Suits steel hanger)	2
201	4 343 1048 88	Pivot bolt M30x205 - suits steel hanger	2
201	4 343 1053 88	Pivot bolt M30x240 - suits alloy hanger	2
202	4 247 4022 80	Lock nut M30	2
207	4 331 5029 00	Wear pad - plastic	4
208	1 123 0001 01	Alignment washer - eccentric	2
208.1	1 101 2001 00	Washer	2
214	4 177 3035 00	Pivot Bush (SUPERSEDES) 4177302800	2
225	4 343 2802 10	Shock bolt - M20x155 - bottom	2
227	4 247 4044 10	Locknut M20 - flanged	4
228	2 376 0084 00	Shock absorber - standard (SUPERSEDES) 2 376 0070 01, 2376007900	2
228	2 376 0085 00	Shock absorber - standard (SUPERSEDES) 2 376 0071 01, 2376008000	2
228	2 376 0072 01	Shock absorber - standard	2
228	2 376 5070 00	Shock absorber - road friendly	2
228	2 376 5071 00	Shock absorber - road friendly	2
228	2 376 5084 00	Shock absorber - road friendly	2
229	3 044 1054 00	Shock bolt kit - top - alloy hanger	2
230	4 343 2803 10	Shock bolt - M20x125 - top - steel hanger	2
230	4 343 2804 10	Shock bolt - M20x205 - top - alloy hanger	2
N.A.	1 097 0008 00	Spacer washer - alloy hanger	4
234	3 228 1033 00	Air bag - SAF 2619V - 300 mm dia (incl. 235.2 & 239)	2
234	3 228 1042 00	Air bag - SAF 2918V - 350 mm dia - short	2
234	3 228 1041 00	Air bag - SAF 2924V - 350 mm dia - long	2
235.1	4 343 1036 88	Hex bolt M16x40 (for SAF 0027 & 1041 bags)	2
235.2	4 247 4007 80	Lock nut M16 (for SAF 0033 bags)	2
239	4 247 4047 10	Lock nut M12	4
240	1 043 0261 01	Air bag plate - top - 5 mm	2
240.1	2 237 0081 01	Air bag pedestal - 50 mm	2
240.1	2 237 0080 01	Air bag pedestal - 100 mm	2
240.1	2 237 0082 01	Air bag pedestal - 150 mm	2
*	1 284 6052 00	Air bag plate 5 mm - bottom (for 60mm offset bags)	2
	4343203700	Screw K10 x 40	

ZI9-19W INTEGRAL Torque Chart

PART	APPLICATION	TORQUE SPECIFICATIONS
SAF Specific Axle Spindle Nut M75 x 1.5	Compact Bearing System	Left-hand thread located on the left-hand side of the axle Right-hand thread located on the right-hand side of the axle. The axle nut with a left-handed thread can be identified by a circular groove. 1. Pre-torque with a size 85 mm socket to 150 Nm. 2. Rotate the head unit slowly by 5 revolutions. 3. For final torque tighten the axle spindle nut by 1/12 turn (30°). 4. Check that the axle spindle nut has a final torque of 900 Nm. Max. Permissible end play of the hub unit is shown in previous section of this manual.
SAF Specific INTEGRAL Bolt M14 x 1.5	Rotor - Hub	Torque all ten bolts in a crisscross pattern. 1. Pre-torque to 50 Nm. 2. For final torque tighten by an additional 120 degree turn.
SAF Specific Calliper Bolt M18 x 1.5	Calliper - Spider	Torque bolts from inner bolts to outer bolts 1. Pre-torque to 120 Nm. 2. Inspect the pre-torque of the bolts and if necessary re-tighten all bolts to 120 Nm. 3. Final torque from inner bolts to outer bolts to 450 +/- 30 Nm.
SAF Specific Brake Chamber Nut 5/8-11 UNC Nylock or M16 x 1.5"	Brake Chamber	1. Pre-torque both chamber nuts to 80-100 Nm 2. For final torque tighten both chamber nuts to 180-210 Nm.

SK RZ 9019 Torque Chart

PART	APPLICATION	TORQUE SPECIFICATIONS
Spindle nut		Left-hand thread is located on the left-hand side of the direction of travel, can be identified by a circular grooved hub nut and spindle. Right-hand thread located on the right-hand side of the direction of travel, can be identified by an axle serial number on spindle. 1. Pre-torque to 200 Nm while rotating wheel hub. 2. Rotate the head unit slowly at least 5 revolutions. 3. For final torque tighten the axle spindle nut by 10-15°. 4. Check that the axle spindle nut has a final torque of 900 Nm. Alternatively the nut hub could be tightened to 900 Nm whilst rotating the hub and rotor.
Diaphragm brake cylinder M16	Springbrake	210 Nm
Brake calliper mounting bolt M16	Brake Calliper	290 Nm
Wheel nuts M22		600 Nm

SK RZ 9019 W Torque Chart

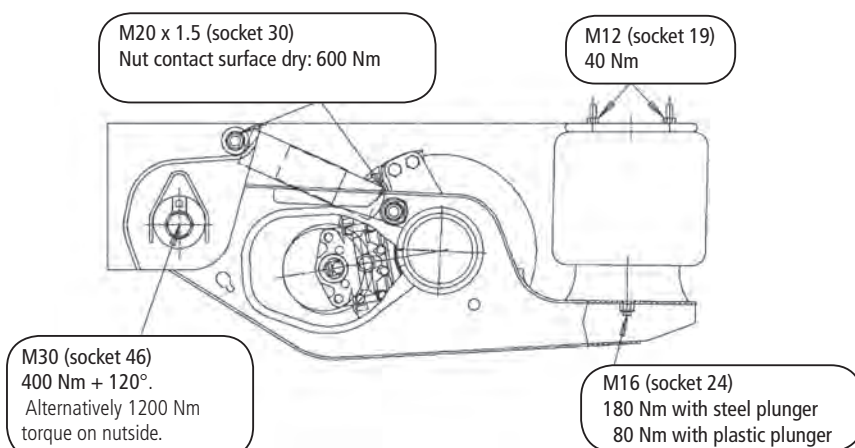
PART	APPLICATION	TORQUE SPECIFICATIONS
Spring brake chamber 2 hex. nuts M16 x 1.5	Brake Chamber	210 Nm
Guide pin bolts	Brake Calliper	340 +/- 20 Nm
Brake calliper mounting on axle M16 x 1.5 x 55	Calliper - mounting	290 Nm
Brake pad retainer clamp	Brake pad	30 +/- 40 Nm

Intradisc Suspension Torque Chart

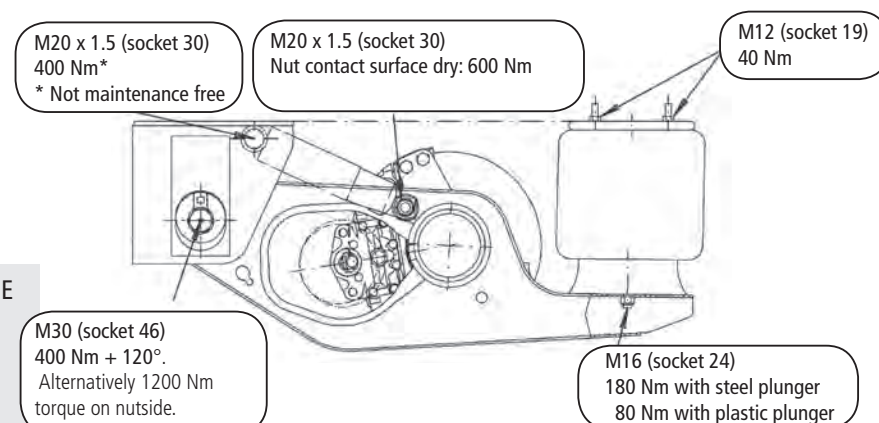
PART	APPLICATION	TORQUE SPECIFICATIONS
Pivot Bolt Assy M30		Pre-tighten to 400 Nm. Final tightening torque 120° (two flats of the nut) Alternatively the pivot bolt could be tightened to 1200 Nm
Shock Absorber Nuts M20		Nut Contact Surface Dry 600 Nm
Air spring top Nut M12		40 Nm
Air Spring Plunger Bolts M16		Plastic Plunger-Piston 80 Nm Steel plunger-Piston 180 Nm

NOTE: All contact surfaces of the suspension arm and shock absorber bolts must not be coated with primer or paints over the existing primer coating (Coat thickness max. 45 µm)

SAF INTRA with steel hanger brackets, pivot bolt, shock absorbers and air bags



SAF INTRA with alloy hanger brackets, pivot bolt, shock absorbers and air bags



NOT MAINTENANCE FREE

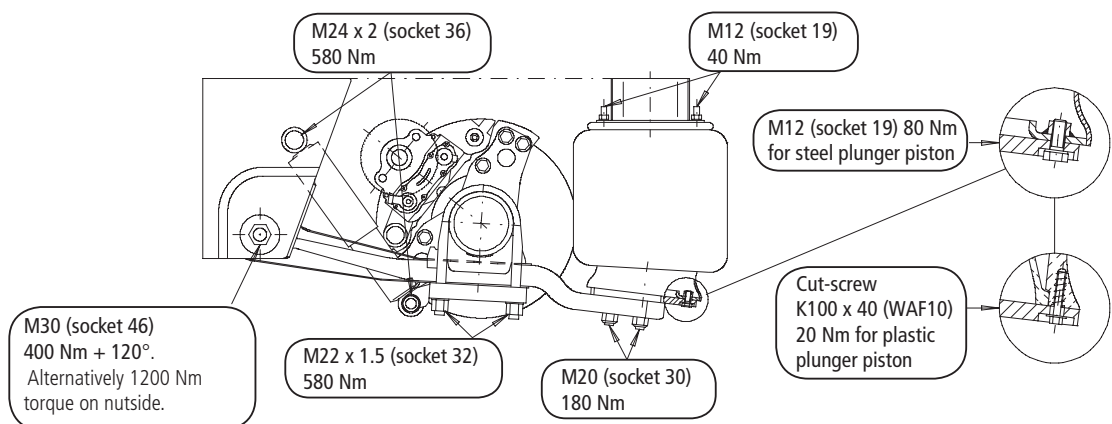
Refer to pivot bolt
tightening procedure in
this manual!

Modul Suspension Torque Chart

PART	APPLICATION	TORQUE SPECIFICATIONS
Pivot Bolt Assy M30		Pre-tighten to 400 Nm. Final tightening torque 120° (two flats of the nut) Alternatively the pivot bolt could be tightened to 1200 Nm
Shock Absorber Nuts M24		580 Nm
U/Bolts for Trailing Arms M22 (Diagonally in three Stages)		580 Nm
Air Spring Mounting Plate M20		180 Nm
Air spring top Nut M12		40 Nm
Air Spring Plunger Bolts M16	Plastic Plunger-Piston	80 Nm
Air Spring Self Tapping Bolts	Plastic Plunger-Piston	20 Nm

NOTE: All contact surfaces of the suspension arm and shock absorber bolts must not be coated with primer or paints over the existing primer coating (Coat thickness max. 45 µm)

SAF MODUL



Ride height / shock absorber allocation

SERIES / STANDARD	NOMINAL RIDE HT (mm)	HANGER BRACKET (mm)	AIR BAG BRACKET (mm)	LIFT / LOWER (mm)	LENGTH OF SHOCK ABSORBER (mm)			TYPE OF SHOCK ABSORBER	RFS OPTION
					min	Ride ht	max.		
IU 25/2000 33/27	250	200	0	90 / 90	306	340	380	2376 0084 00	2376507000
IU 28/2005 33/27	280	200	50	90 / 90	316	351	390	2376 0084 00	2376507000
IU 30/2505 33/27	300	250	50	90 / 90	350	391	437	2 376 0085 00	2376507100
IU 33/2510 33/27	330	250	100	90 / 90	363	404	447	2 376 0085 00	2376507100
IU 35/3010 33/27	350	300	100	90 / 90	350	391	437	2 376 0085 00	2376507100
IO 35/2000 33/27	355	200	0	90 / 90	343	381	421	2 376 0085 00	2376507100
IO 37/2500 33/27	375	250	0	90 / 90	382	424	470	2 376 0085 00	2376507100
IO 40/2505 33/27	405	250	50	90 / 90	395	437	482	2 376 0072 01	2376507200
IO 42/3005 33/27	425	300	50	90 / 90	382	424	470	2 376 0085 00	2376507100
IO 45/3010 33/27	455	300	100	90 / 90	395	437	482	2 376 0072 01	2376507200
IO 47/3510 33/27	475	350	100	90 / 90	382	424	470	2 376 0085 00	2376507100
IO 50/3515 33/27	505	350	150	90 / 90	395	437	482	2 376 0072 01	2376507200
IU 29/2000 31/41	290	200	0	95 / 105	316	355	408	2376 0084 00	2376507000
IU 31/2500 31/41	310	250	0	95 / 105	349	395	455	2 376 0085 00	2376507100
IU 34/2505 31/41	340	250	50	95 / 105	362	408	466	2 376 0085 00	2376507100
IU 36/3005 31/41	360	300	50	95 / 105	349	395	455	2 376 0085 00	2376507100
IU 39/3010 31/41	390	300	100	95 / 105	362	408	466	2 376 0085 00	2376507100
IU 42/3015 31/41	420	300	150	95 / 105	375	422	476	2 376 0072 01	2376507200

SHOCK ABSORBER TYPE REFERENCE TABLE		
SUPERSEDED 1	SUPERSEDED 2	CURRENT
2 376 0070 01	2 376 0079 00	2376 0084 00
2 376 0071 01	2 376 0080 00	2376 0085 00
	2 376 0072 01	

Year 2015 Australian market SAF Intradisc INTEGRAL standard specifications

MODEL	NOMINAL RIDE HT	RIDE HEIGHT RANGE	HANGER PIVOT HT	STANDARD SHOCK	RFS SHOCK (OPTIONAL)	AIR SPRING PED. HT	STANDARD AIR SPRING TYPE & DIA (MOD.33)	OPTIONAL AIR SPRING TYPE & DIA (MOD.27)	WEIGHT (KG) (WITH 300MM AIR SPRING INCL. 14/16" BOOSTERS)	WEIGHT (KG) (WITH 350MM AIR SPRING INCL. 14/16" BOOSTERS)
IU 25/2000 XX	250 mm	230-270 mm	200 mm	2 376 0084 00	2 376 5070 00	5 mm	SAF 2619V (300 mm)	SAF 2918V (350 mm)	399	410
IU 28/2005 XX	280 mm	260-300 mm	200 mm	2376 0084 00	2 376 5070 00	50 mm	SAF 2619V (300 mm)	SAF 2918V (350 mm)	401	412
IU 30/2505 XX	300 mm	280-320 mm	250 mm	2 376 0085 00	2 376 5071 00	50 mm	SAF 2619V (300 mm)	SAF 2918V (350 mm)	403	414
IO 35/2000 XX	355 mm	335-375 mm	200 mm	2 376 0085 00	2 376 5071 00	5 mm	SAF 2619V (300 mm)	SAF 2918V (350 mm)	408	419
IO 37/2500 XX	375 mm	355-395 mm	250 mm	2 376 0085 00	2 376 5071 00	5 mm	SAF 2619V (300 mm)	SAF 2918V (350 mm)	411	422
IO 42/3005 XX	425 mm	405-455 mm	300 mm	2 376 0085 00	2 376 5071 00	50 mm	SAF 2619V (300 mm)	SAF 2918V (350 mm)	417	428
IO 47/3510 XX	475 mm	455-495 mm	350 mm	2 376 0085 00	2 376 5071 00	100 mm	SAF 2619V (300 mm)	SAF 2918V (350 mm)	423	434

SHOCK ABSORBER TYPE REFERENCE TABLE		
SUPERSEDED	SUPERSEDED 2	CURRENT
2 376 0070 01	2 376 0079 00	2376 0084 00
2 376 0071 01	2 376 0080 00	2376 0085 00
	2 376 0072 01	

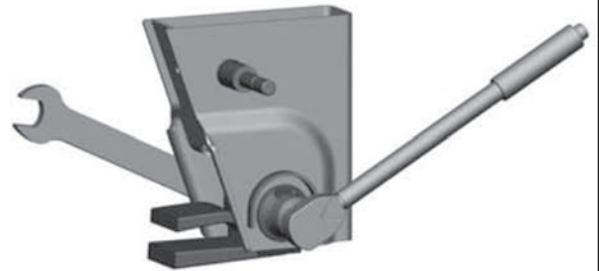
Pivot Bolt Tightening Procedure

ATTENTION: Pivot bolt tightening always has to be performed at the specified ride height!
No paint residues between eccentric/thrust washer and hanger!
Bolt head always on the eccentric washer side.

*Torques to be performed on outside only

1. Pre-tighten to: 400 Nm (**Figure 77**).
Use torque wrench with socket size of 46 mm.

Figure 77



2. Mark the angle of 120° (two flats) for the final tightening (**Figure 78**).

Figure 78



3. Perform the final tightening of 120° (two flats).
Use impact wrench or extend lever to 2.5m. Hold hexagon bolt head to prevent it from turning during the final tightening. (**Figure 79**)

Figure 79



NOTE: Alternatively steps 1 to 3 can be replaced by tightening the pivot bolt to 1200 Nm.

4. Clearly mark with counterpunch and line marker relative position of the bolt, nut and hanger after the final tightening for the future visual inspections (to be easily visible)! (**Figure 80**)
There is no warranty on the pivot connection if the marking is not performed!

Figure 80



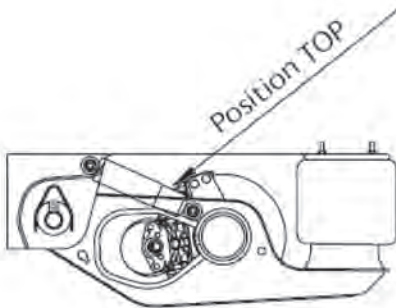
Shock absorber tensions for steel hanger bracket / crossmember and suspension arm

Bolt kit 3 341 2803 10

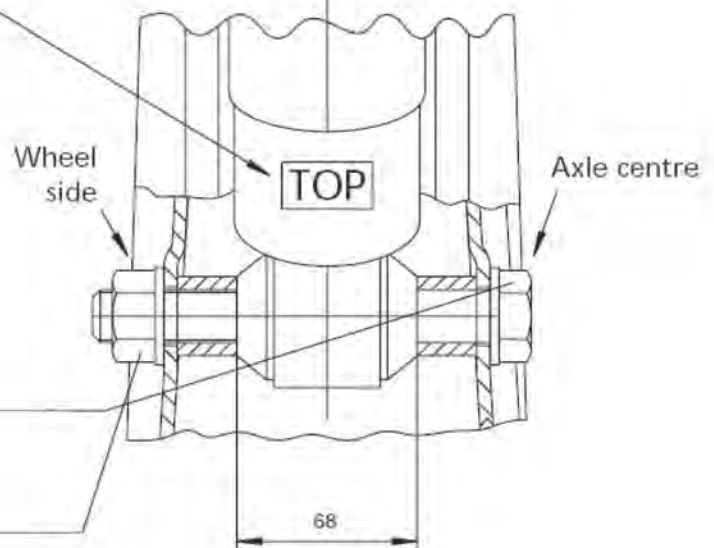
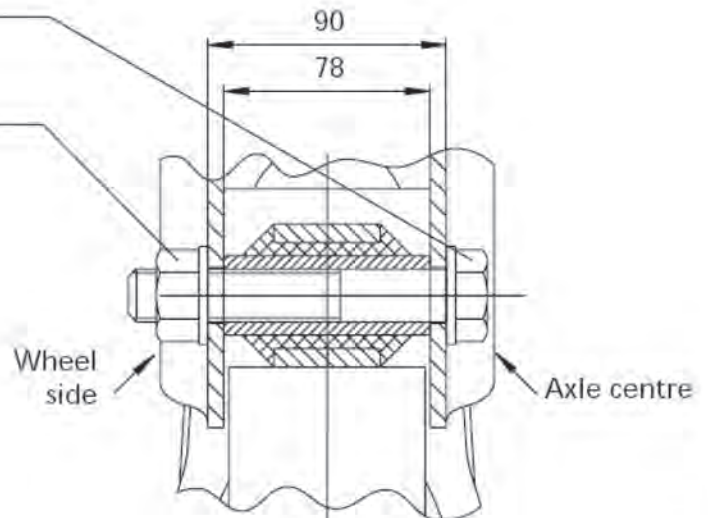
PART NO.	DESCRIPTION
4 343 2803 10	Collared bolt M20x1.5x120 - Gr 10,9 dacromet coated
4 247 4044 10	Collared nut M20x1.5 - Gr 10

Tightening torque: **Contact surfaces dry 600 Nm**

ATTENTION: TOP mark facing upwards in working position.



Steel hanger bracket / crossmember



Bolt kit 3 341 2802 10

PART NO.	DESCRIPTION
4 343 2802 10	Collared bolt M20x1.5x150 - Gr 10,9 dacromet coated
4 247 4044 10	Collared nut M20x1.5 - Gr 10

Tightening torque: **Contact surfaces dry 600 Nm**

NOTE: All shock bolts to be tightened at the specified ride height!

Functional suspension arm

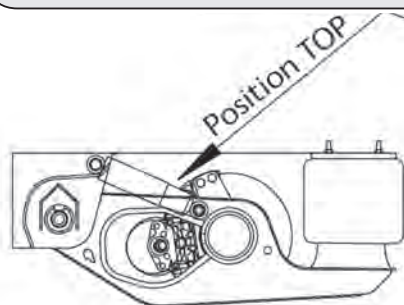
Shock absorber tensions for aluminium hanger bracket / crossmember and suspension arm

Mounting parts kit 3 044 1054 00

PART NO.	DESCRIPTION
4 343 2804 10	Collared bolt M20x1.5x200 - Gr 10,9 dacromet coated
1 097 0008 00	Spacer washer (2x)
1 331 0136 00	Washer
4 247 4044 10	Collared nut M20x1.5 - Gr 10

Tightening torque: **Contact surfaces dry 400 Nm**
 Caution! Mounting bolt not maintenance free!

ATTENTION: TOP mark facing upwards in working position.

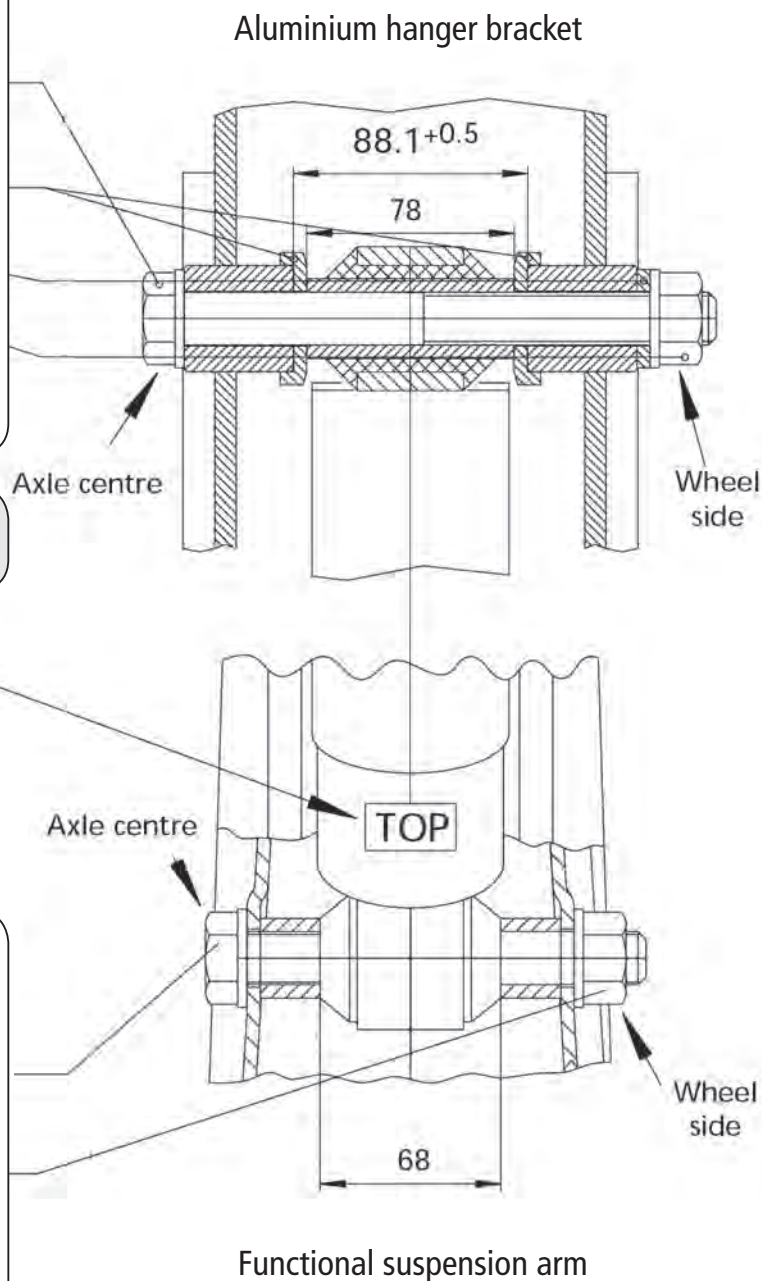


Bolt kit 3 341 2802 10

PART NO.	DESCRIPTION
4 343 2802 10	Collared bolt M20x1.5x150 - Gr 10,9 dacromet coated
4 247 4044 10	Collared nut M20x1.5 - Gr 10

Tightening torque: **Contact surfaces dry 600 Nm**

NOTE: All shock bolts to be tightened at the specified ride height!



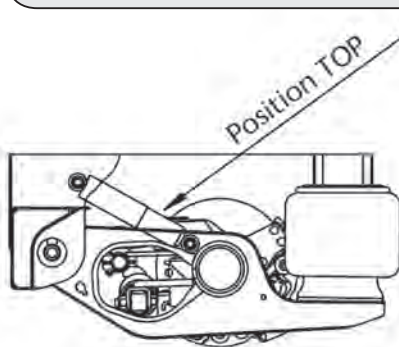
Shock absorber tensions for crossmember and suspension arm / steered axle / V = 110

Bolt kit 3 341 2802 10

PART NO.	DESCRIPTION
4 343 2802 10	Collared bolt M20x1.5x120 - Gr 10,9 dacromet coated
4 247 4044 10	Collared nut M20x1.5 - Gr 10

Tightening torque: **Contact surfaces dry 600 Nm**

ATTENTION: TOP mark facing upwards in working position.

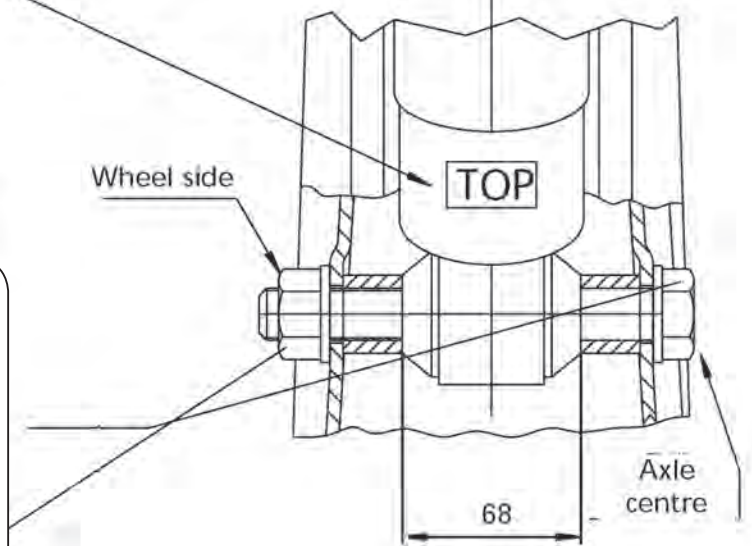
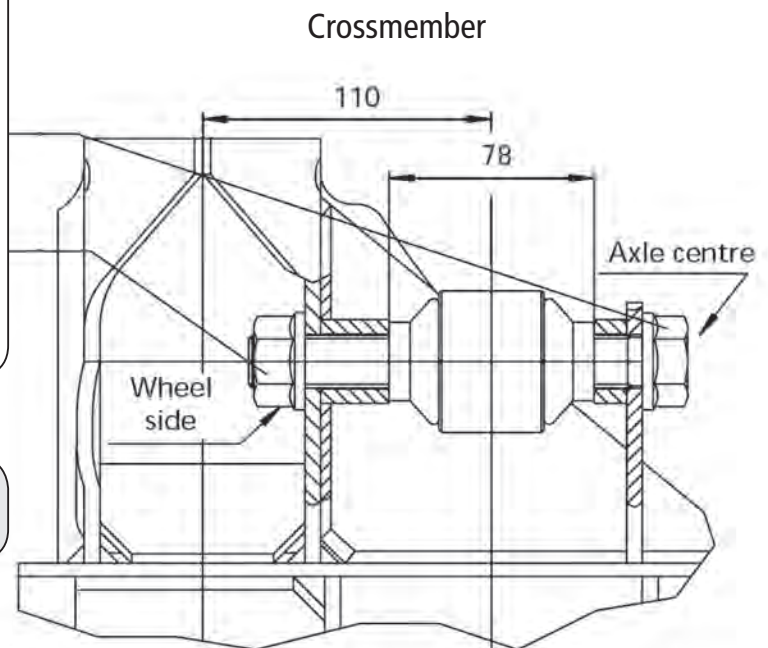


Bolt kit 3 341 2802 10

PART NO.	DESCRIPTION
4 343 2802 10	Collared bolt M20x1.5x150 - Gr 10,9 dacromet coated
4 247 4044 10	Collared nut M20x1.5 - Gr 10

Tightening torque: **Contact surfaces dry 600 Nm**

NOTE: All shock bolts to be tightened at the specified ride height!



Functional suspension arm

Axle alignment

IMPORTANT: For axle alignment, the air suspension must be adjusted to the ride height specified by SAF-HOLLAND.

Semi-trailers with self steering axle

Distance A, B, C (**Figure 81**) max. permissible deviation 1.0 mm,

Toe setting $\pm 12' = \pm 3.0$ mm/m Camber $\pm 12'$

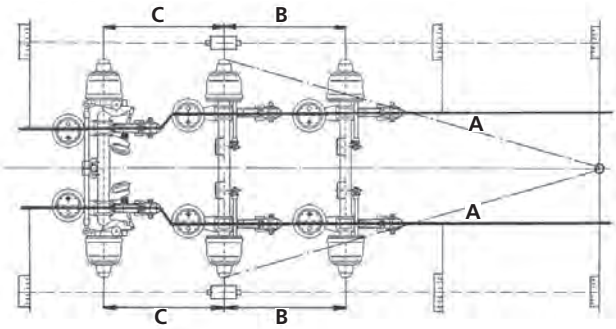
Values apply to unloaded vehicle.

Air suspension must be in Ride Height for axle alignment check and re-adjustment works.

In the case of self-steering axles the stabilizing chambers must be pressurised to 2.0 bar.

Total toe-in 4.0 mm/m.

Figure 81



Trailer

Distance A, B, C (**Figure 82**) max. permissible deviation 1.0 mm,

Toe setting $\pm 12' = \pm 3.0$ mm/m Camber $\pm 12'$

Values apply to unloaded vehicle.

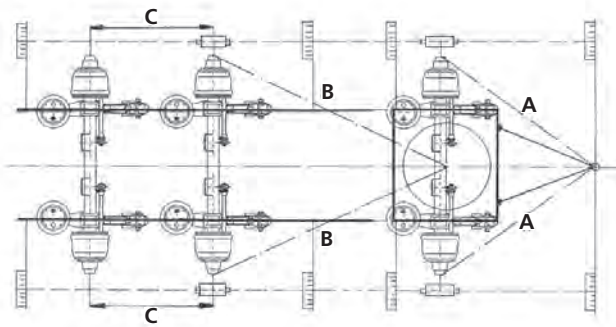
Air suspension must be in Ride Height for axle alignment check and re-adjustment works.

The max. permissible deviation values for axle alignment are according to the tyre manufacture specifications.

To avoid excessive tyre wear we recommend having the alignment checked at regular intervals.

The relevant reference point for alignments is the hub cap centre or stub axle centre.

Figure 82



Semi-trailer tilt angle

Ride Heights (**Figure 83**)

Adjust the ride height of the air suspension axles to the permissible range indicated in the corresponding SAF-HOLLAND documents.

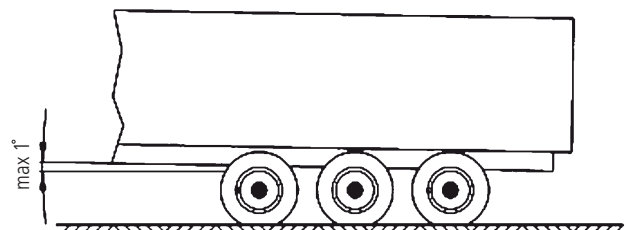
With single axles, allow for a minimum suspension travel of 60 mm.

For trailers with multiple axles, allow for a minimum suspension travel of 70 mm.

Exception:

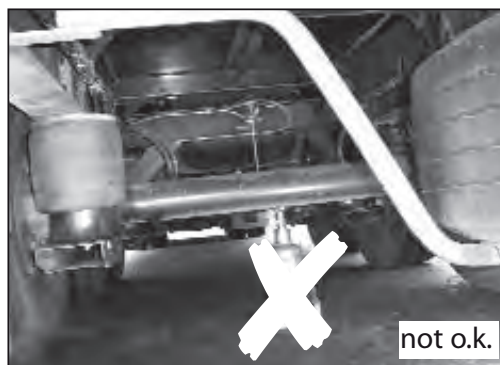
For multi-axle trailers with lift axles, the minimum suspension travel at the lift axle should not be less than 100 mm in order to ensure an adequate ground clearance.

Figure 83



Tyre changing on fully loaded trailer with INTRA axle

Jack positioning points:





1. Universal disc brake tool kit

SAF Part No. 3 434 3328 00



2. Axle nut wrench W.A.F. 140mm

SAF Part No. 1 012 0024 00



2a. Axle nut wrench W.A.F. 85mm

SAF Part No.4 434 3828 00L (Local)



3. Universal hub puller

SAF Part No. 2 501 871



4. 3D bush tool

SAF Part No. 2 501 890 (Local)



5. Wheel cap removal lever

SAF Part No. 1 434 1041 00

The following tightening torques are only valid if no other values are given in the axle maintenance chart.

Torque wrench settings, impact wrench not permissible.

THREAD	 W.A.F.	MATERIAL		
		8,8	10,9	12,9
M 8	W.A.F. 13	25	35	41
M 8 x 1		27	38	45
M 10	W.A.F. 17 / 16	49	69	83
M 10 x 1		52	73	88
M 12	W.A.F. 19 / 18	86	120	145
M 12 x 1.5		90	125	150
M 14	W.A.F. 22 / 21	135	190	230
M 14 x 1.5		150	210	250
M 16	W.A.F. 24	210	300	355
M 16 x 1.5		225	315	380
M 18	W.A.F. 27	300	405	485
M 18 x 1.5		325	460	550
M 20	W.A.F. 30	410	580	690
M 20 x 1.5		460	640	770
M 22	W.A.F. 32	550	780	930
M 22 x 1.5		610	860	1050
M 24	W.A.F. 36	710	1000	1200
M 24 x 2		780	1100	1300
M 27	W.A.F. 41	1050	1500	1800
M 27 x 2		1150	1600	1950
M 30	W.A.F. 46	1450	2000	2400
M 30 x 2		1600	2250	2700
M 36 x 2	W.A.F. 55	2450	3450	4150

WHEEL FIXING

Wheels see appropriate axle maintenance chart.

TRILEX wheels	M 18	270 - 300 Nm
	M 20	320 - 350 Nm

FIRST SCHEDULED MAINTENANCE (@ 5000km) – WORKSHOP & GUIDE

Forward completed document to SAF-HOLLAND Australia. (email: service@safholland.com.au)

Customer:						SAF-HOLLAND ONLY	
						SERVICE #	
Service provider:							
Fleet No		Rego No		Date of Rego		Build date	
Vehicle manufacturer				VIN			
km's travelled **				Service date:			
Technician's name:				Admin persons name:			

This guide describes the order that work is to be carried out for the 1st service of SAF-HOLLAND suspensions to facilitate completing the service within the allocated time.

Order of work:

1. Safely place trailer on pit.
2. Ensure wheel chocks are secured – preventing movement.
3. Ensure brakes are released.
4. Check hubbo for operation. Record kilometres travelled.**
5. Check ride height and adjust if necessary. Refer Table 1
6. Check torque of all 3D pivot bolts & mark. Table 2 (A)
7. Check torque of all shocker bolts & mark. Table 2 (B) & (C)
8. Check torque of all top & bottom airbag bolts. Table 2 (D) & (E)
9. Check torque of all brake booster mounting bolts.
10. On Integral disc suspensions only- check torque on all rotor bolts. Table 2 (G)
11. Jack front axle according to SAF-Holland specifications.
12. Perform steps 14-18 on LHS and RHS hubs.
13. Rotate hubs – check for noisy hubs – record findings. Table 3
14. Perform wheel rock test on all hubs – record findings. Table 3
15. Inspect hubs for grease escape – record findings. Table 3
16. Torque spindle nut according to SAF-Holland specifications. Table 2 (H)
17. Mark hub nut and date 1st service on inner spindle.
18. Lower jack from front axle, repeat process (steps 12 to 18) on subsequent axles.
19. **On Intra drum suspensions only**– check & grease all S-Cam & slack adjusters.

Payment Terms & Conditions :

Note:

Modul Suspension is not covered under complimentary free 1st service only Intra series.

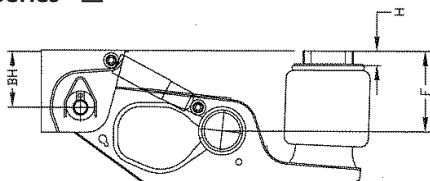
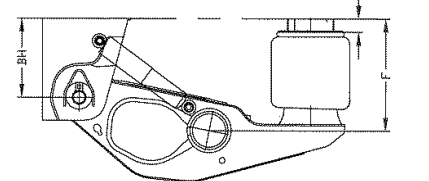
If Modul Suspension is equipped with a SAF axle, then the axle component only will be covered as complimentary service.

Code :	Chargeable Item :	Time Allowance :
S11100	Each axle serviced:	½ hr per axle.
S11101	Vehicle / administration preparation time:	½ hr per trailer.

FIRST SCHEDULED MAINTENANCE (@ 5000km) – WORKSHOP & GUIDE

RIDE HEIGHT CHECK ☒ applicable series

TABLE 1

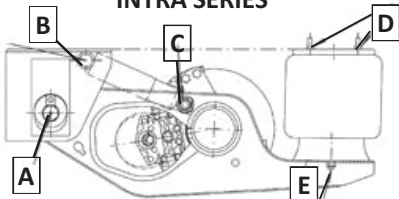
IU Intra Series ☐		IO Intra Series ☐					
							
Trailing Arm Type	Hanger Pivot Height BH	Pedestal Height H	Nominal Ride Height F	Ride Height Range	Standard Shock Part #	RFS Shock Part #	Ride height ✓ = In range □ = Not chkd or not in range
IU	200mm	5mm	250mm	230-270mm	2376007900	2376507000	☐
IU	200mm	50mm	280mm	260-300mm	2376007900	2376507000	☐
IU	250mm	50mm	300mm	280-320mm	2376008000	2376507100	☐
IO	200mm	5mm	355mm	335-375mm	2376008000	2376507100	☐
IO	250mm	5mm	375mm	355-395mm	2376008000	2376507100	☐
IO	300mm	50mm	425mm	405-455mm	2376008000	2376507100	☐
IO	350mm	100mm	475mm	455-495mm	2376008000	2376507100	☐

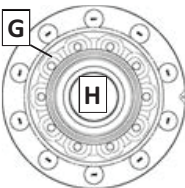
TORQUE CHECKS

TABLE 2

SUSPENSION TYPE		TORQUE REQUIREMENTS (Nm)															
		A Pivot bolt	B Top shock bolt		C Bottom shock bolt		D Top airbag nuts		E Bolt airbag nut		F U bolt nuts		G Rotor bolts		H Wheel end nut (Hub nut)		
INTRADISC		1200 Nm on nut	600-Steel 400-Alloy		600		40		Plastic plunger – 80 Steel plunger – 180		Not applicable		200		900 whilst rotating hub		
INTRADRUM									Not applicable				Not applicable				
SAF AXLE/MODULE			580		580				M16 bolt – 80 Self taper bolt - 20		580		200				
Axle	Axle Serial No	TORQUE CHECKS ✓= Correct torque □= Not checked or Torque not correct															
		LH	RH	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH
1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

INTRA SERIES





MODUL SERIES

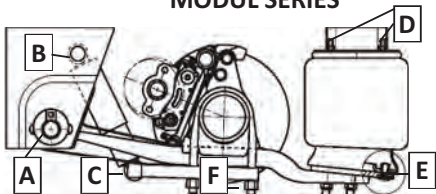


TABLE 3

HUB CHECK

HUB POSITION	Axle Serial Number	End Play Measurement Max = 0.25mm		Noise ✓ = No noise □ = Not chkd or Noise not OK		Grease Escape ✓ = No grease escape □ = Not checked or grease escaping	
		L/H	R/H	L/H	R/H	L/H	R/H
1 st				☐	☐	☐	☐
2 nd				☐	☐	☐	☐
3 rd				☐	☐	☐	☐
4 th				☐	☐	☐	☐
5 th				☐	☐	☐	☐
6 th				☐	☐	☐	☐



TRAILER AXLES AND
SUSPENSION SYSTEMS



COUPLING AND LIFTING
TECHNOLOGIES



SUSPENSIONS FOR
TRUCKS AND BUSES



SUSPENSIONS AND COMPONENTS
FOR COMMERCIAL VEHICLES



BUS AIR SUSPENSION
SYSTEMS



COUPLING AND LIFTING
TECHNOLOGIES



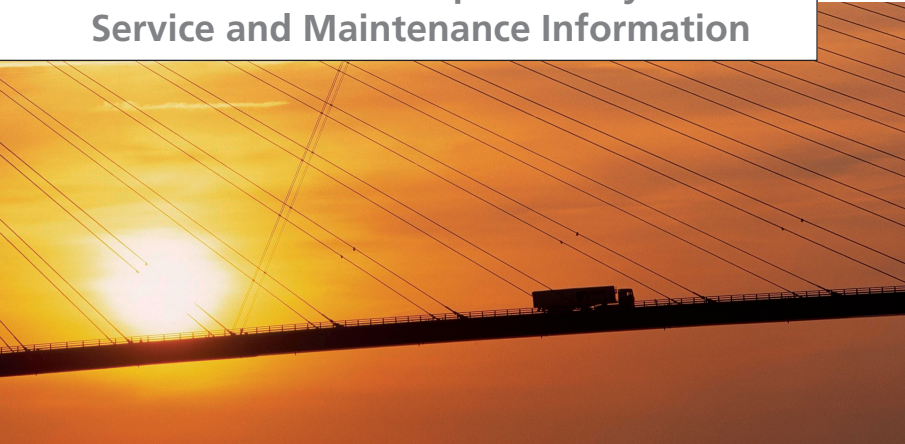
TRAILER AXLES AND
SUSPENSION SYSTEMS

safholland.com.au

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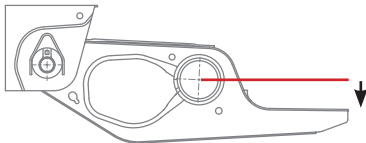
Trailer Axles and Suspension Systems Service and Maintenance Information



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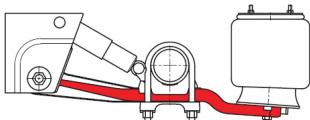
Underslung IU

Air bag position is below centreline of axle beam



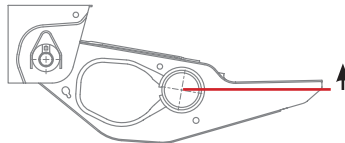
MODUL Series - Underslung

Trailing arm below the axle



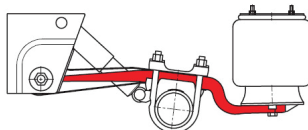
Overslung IO

Air bag position is above centreline of axle beam



MODUL Series - Overslung

Trailing arm above the axle



Axle Serial Numbers

SAF-HOLLAND GMBH D-63856 BESSENBACH • GERMANY		
Version S9-4218	Serial No. 11 09 307 0137	
Type SNK4218-11S	Ident. No. 147 95 02 2 58 3	
Test Report 0381	Perm. axle cap. stat. 9000 kg	
Made in Germany	V max. 105 km/h	

Axle identification tag

OR



Right hand side of axle spindle

Spindle Nuts

Left hand spindle has left hand thread

Right hand spindle has right hand thread

INTRA Series

Trailing Arm Type	Hanger Pivot Height BH	Pedestal Height H	Nominal Ride Height F	Ride Height Range	Standard Shock Part #	RFS Shock Part #	Standard Airbag
IU25	200mm	5mm	250mm	230-270mm	2376007900	2376507000	SAF 2619V (300mm)
IU28	200mm	50mm	280mm	260-300mm	2376007900	2376507000	SAF 2619V (300mm)
IU30	250mm	50mm	300mm	280-320mm	2376008000	2376507100	SAF 2619V (300mm)
IO35	200mm	5mm	355mm	335-375mm	2376008000	2376507100	SAF 2619V (300mm)
IO37	250mm	5mm	375mm	355-395mm	2376008000	2376507100	SAF 2619V (300mm)
IO42	300mm	50mm	425mm	405-455mm	2376008000	2376507100	SAF 2619V (300mm)
IO47	350mm	100mm	475mm	455-495mm	2376008000	2376507100	SAF 2619V (300mm)

MODUL Series

Air Suspension Series U/ E29 Ride Height Chart

Model	Hanger Pivot HT(BH)	Air Spring Ped. HT(H)	Nominal Ride HT(F)	Ride Height Range	Standard Shock	RFS Shock (Optional)	Standard Air Spring Type & Dia
U20/2500 E29	250	5	200	170-220	2376003100	2376503100	SAF 2618V (300mm)
U22/2504 E29	250	40	220	190-240	2376003100	2376503100	SAF 2618V (300mm)
U25/2907 E29	290	70	255	225-275	2376003100	2376503100	SAF 2618V (300mm)
U27/2910 E29	290	100	270	240-290	2376003100	2376503100	SAF 2618V (300mm)
U30/3510 E29	355	100	300	270-320	2376003100	2376503100	SAF 2618V (300mm)
U33/3516 E29	355	160	330	300-350	2376003100	2376503100	SAF 2618V (300mm)

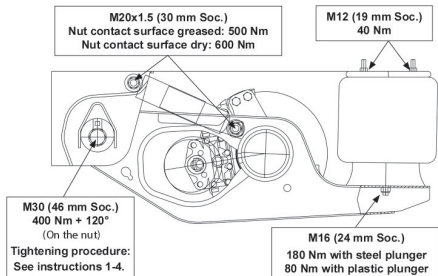
MODUL Series

Air Suspension Series M/ E29 Ride Height Chart

Model	Hanger Pivot HT(BH)	Air Spring Ped. HT(H)	Nominal Ride HT(F)	Ride Height Range	Standard Shock	RFS Shock (Optional)	Standard Air Spring Type & Dia
M36/2500 E29	250	5	365	345-385	2376002600	2376502600	SAF 2618V (300mm)
M38/2504 E29	250	40	385	365-405	2376002600	2376502600	SAF 2618V (300mm)
M40/2904 E29	290	40	400	380-420	2376002600	2376502600	SAF 2618V (300mm)
M42/2907 E29	290	70	420	400-440	2376002600	2376502600	SAF 2618V (300mm)

INTRADISC / INTRADRUM SUSPENSION MAINTENANCE

TORQUE SETTINGS AND PROCEDURES - STEEL HANGERS



The **First Service Provider** is responsible for the shock absorber bolts and axle spindle nuts re-torque/markng for the regular visual inspection as required in the "Repair and Maintenance Manual".



1*. Pre-tighten to : 400 Nm.

Use torque wrench with socket size of 46mm.

*Torque must be applied to the nut.



2*. Mark the angle of 120° (two flats) for the final tightening.



3*. Perform the final tightening of 120° (two flats)

Use impact wrench or extend lever to 2.5 m. Hold hexagon bolt head to prevent it from turning during the final tightening.



4. Clearly mark with counterpunch and line marker relative position of the bolt, nut and hanger after the final tightening for the future visual inspections (to be easily visible)!

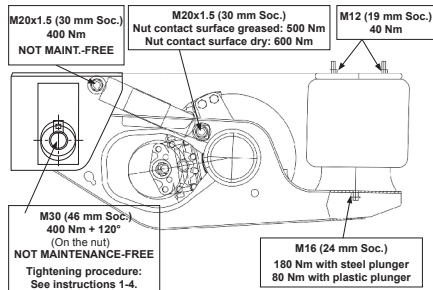
***Note 1:** As an alternative to points 1-3, the pivot nut can be tightened to 1200Nm if the appropriate torque wrench is available.

***Note 2:** The pivot connection **MUST** be marked by the **OEM**, otherwise there will be no warranty.

Warranty on SAF Intradisc/Intradrum suspension would be void if the prescribed maintenance procedures were not performed as per "Repair and Maintenance Manual". If the Manual has not been delivered with the trailer, please call **SAF-HOLLAND - Customer Service on 03 9971 7900**.

EX00289 rev.2

INTRADISC / INTRADRUM SUSPENSION MAINTENANCE TORQUE SETTINGS AND PROCEDURES - ALLOY HANGERS



The First Service Provider is responsible for the shock absorber bolts and axle spindle nuts re-torque/mark for the regular visual inspection as required in the "Repair and Maintenance Manual".

Warranty on SAF Intradisc/Intradrum suspension would be void if the prescribed maintenance procedures were not performed as per "Repair and Maintenance Manual". If the Manual has not been delivered with the trailer, please call **SAF-HOLLAND - Customer Service on (03) 9971 7900**



1*. Pre-tighten to : 400 Nm.

Use torque wrench with socket size of 46mm.
*Torque must be applied to the nut.



2*. Mark the angle of 120° (two flats) for the final tightening.

Alternatively pivot bolt can be tightened to 1200Nm if the appropriate torque wrench is available.



3*. Perform the final tightening of 120° (two flats)

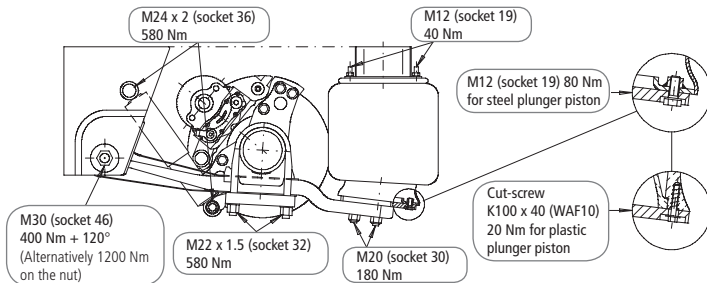
Use impact wrench or extend lever to 2.5 m. Hold hexagon bolt head to prevent it from turning during the final tightening.



4. Clearly mark with counterpunch and line marker relative position of the bolt, nut and hanger after the final tightening for the future visual inspections (to be easily visible)!

***Note 1:** As an alternative to points 1-3, the pivot nut can be tightened to **1200Nm** if the appropriate torque wrench is available.

***Note 2:** The pivot connection **MUST** be marked by the OEM, otherwise there will be no warranty.



Tightening procedure

1. Faces of the HD bearing bush must be free from oil and grease.
2. Install the suspension arm bearing parts as shown in the repair and maintenance manual.
3. Adjust the vehicle to ride height (Refer page 5)
4. Pretighten the nuts M30/WAF46 to 400 Nm using a torque wrench.
5. Align the marks on the alignment washers, hexagon head bolt and nut over one corner of the nut.
6. Tighten the nut a further 120° (2 nut corners), holding the bolt head to prevent the bolt from turning with the nut. Alternatively 12 Nm.
7. Perform a visual check. Correct the turn angle, if necessary.
8. Make marks with a centrepunch on the alignment washers, hexagon head bolt and nut in a line after completing the tightening procedure.

Attention!

- Threads are not to be oiled or greased!
- Thrust plate for steel hanger brackets are maintenance free
- All contact surfaces of the suspension arm and shock absorber bolts must not be coated with primer or paints over the existing primer coating (Coat thickness max 45 µm)

ZI9-19W INTEGRAL Axle Torque Chart

Part	Application	Torque Specifications
SAF Specific Axle Spindle Nut M75 x 1.5	Compact Bearing System	<u>Left-hand thread located on the left-hand side of the axle. Right-hand thread located on the right-hand side of the axle.</u> The axle nut with a left-handed thread can be identified by a circular groove. 1. Pre-torque with a size 85 mm socket to 150 Nm. 2. Rotate the head unit slowly by 5 revolutions. 3. Tighten axle spindle nut to final a torque of 900 Nm. Max. Permissible end play of the hub unit is shown in page 19.
SAF Specific INTEGRAL Bolt M14 x 1.5	Rotor - Hub	Torque all ten bolts in a criss-cross pattern. 1. Pre-torque to 50 Nm. 2. For final torque tighten by an additional 120 degree turn.
SAF Specific Calliper Bolt M18 x 1.5	Calliper - Spider	Torque bolts from inner bolts to outer bolts 1. Pre-torque to 120 Nm. 2. Final torque from inner bolts to outer bolts to 450 +/- 30 Nm.
SAF Specific Brake Chamber Nut 5/8-11 UNC Nylock or M16 x 1.5"	Brake Chamber	1. Pre-torque both chamber nuts to 80-100 Nm 2. For final torque tighten both chamber nuts to 180-210 Nm.

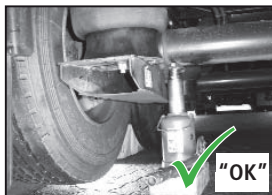
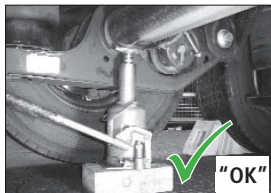
Z9-4218 Axle Torque Chart

Part	Application	Torque Specifications
SAF Specific Axle Spindle Nut M75 x 1.5	Compact Bearing System	<u>Left-hand thread located on the left-hand side of the axle.</u> <u>Right-hand thread located on the right-hand side of the axle.</u> The axle nut with a left-handed thread can be identified by a circular groove. 1. Pre-torque with a size 85 mm socket to 150 Nm. 2. Rotate the head unit slowly by 5 revolutions. 3. Tighten axle spindle nut to final a torque of 900 Nm. Max. Permissible end play of the hub unit is shown in page

SK RZ 9019 Axle Torque Chart

Part	Application	Torque Specifications
Spindle nut		Left-hand thread is located on the left-hand side of the direction of travel and can be identified by a circular grooved hub nut and spindle. Right-hand thread located on the right-hand side of the direction of travel, can be identified by an axle serial number on spindle. 1. Pre-torque to 200 Nm while rotating wheel hub. 2. Rotate the head unit slowly at least 5 revolutions. 3. Tighten the axle spindle nut to a final torque of 900 Nm. Alternatively the nut hub could be tightened to 900 Nm whilst rotating the hub and rotor.
Spring brake chamber 2 hex. nuts M16 x 1.5	Brake Chamber	210 Nm
Brake calliper mounting on axle M16 x 1.5 x 55	Calliper - mounting	290 Nm
Guide pin bolts	Brake Calliper	340 +/- 20 Nm
Brake pad retainer clamp	Brake pad	30 +/- 15 Nm
Wheel nuts M22		600 Nm

Tyre changing on fully loaded trailer with INTRA axle. Jack positioning points.



NOTE: In House (Company) safety rules and regulations are to be followed at all times.

1. Safely place trailer on pit.
2. Ensure wheel chocks are secured – preventing movement.
3. Ensure brakes are released.
4. Check hubbo for operation. Record kilometres travelled.**
5. Check ride height and adjust if necessary.
6. Check torque of all 3D pivot bolts & mark.
7. Check torque of all shocker bolts & mark.
8. Check torque of all top & bottom airbag bolts.
9. Check torque of all brake booster mounting bolts.
10. On Integral disc suspensions only- check torque on all rotor bolts.
11. Jack front axle according to SAF-HOLLAND specifications.
12. Perform steps 14-18 on LHS and RHS hubs.
13. Rotate hubs – check for noisy hubs – record findings.
14. Perform wheel rock test on all hubs – record findings.
15. Inspect hubs for grease escape – record findings.
16. Torque spindle nut according to SAF-HOLLAND specifications.
17. Mark hub nut and date 1st service on inner spindle.
18. Lower jack from front axle, repeat process (steps 12 to 18) on subsequent axles.
19. On Intra drum suspensions only- check & grease all S-Cam & slack adjusters.

WARNING: Do not perform final torques of bolts unless the trailer is at the correct ride height. Failure to do so can introduce premature wear and failure.

1st Scheduled Service after first 5,000 km or first month in service.

- Ensure hub nut torque setting is correct.
- Check hub assembly for noise, end play and excessive grease leakage from seals.
- Mark spindle and nut with paint pen for further visual inspections.
- Ensure pivot bolt connections are at the correct torque setting.
- Ensure shock-absorber bolts upper and lower are at the correct torque setting.
- Ensure calliper, brake booster and air spring bolts are at the correct torque settings.
- Check rotor mounting bolts at 200Nm.

*** Note refer to page 12 for procedure**

NOTE: If the vehicle is driven under adverse conditions, lubricating frequency should be increased and the maintenance interval should be shortened.

Every 30,000 km or 3 Months whichever occurs first.

- Inspect hub assembly for noise, end play and excessive grease leakage from seals.
- Check spindle nut for correct torque setting. This can also be done with a visual inspection, only if spindle and nut were marked during the 5000 km service.
- Inspect brake pad thickness.
- Inspection of all brake air lines and fittings for leaks.
- Inspect disc brake rotors for excessive cracks.
- Check tyre pressures.
- Inspect shock absorbers for leaking only.
- Inspect suspension for correct ride height setting, adjust if required. (Refer to page 4)

NOTE: If the vehicle is driven under adverse conditions, lubricating frequency should be increased and the maintenance interval should be shortened.

Every 150,000 km or 12 months whichever occurs first.

- Check torque setting of spindle nut.
- Check hub assembly for noise, end play and for excessive grease leakage from seals.
- Check all suspension bolts for correct torque setting.
- Check pivot bushes for excessive movement. (Refer to maintenance and repair manual for specifications /tolerances on 3D bush movement).
- Perform general annual inspection (brakes, air bags and tyres).

NOTE: If the vehicle is driven under adverse conditions, lubricating frequency should be increased and the maintenance interval should be shortened.

1st Scheduled Service after first 5,000 km or first month in service

- Ensure hub torque setting is correct.
- Check hub assembly for noise, end play and excessive grease leakage from seals.
- Mark spindle and nut with paint pen for further visual inspections.
- Ensure pivot bolt connections are at the correct torque setting.
- Ensure shock absorber bolts upper and lower are at the correct torque setting.
- Ensure brake booster and air spring bolts are at the correct torque settings.
- Grease all cam bushes

*** Note refer to page 12 for procedure**

NOTE: If the vehicle is driven under adverse conditions, lubricating frequency should be increased and maintenance interval should be shortened.

Every 30,000 km or 3 Months whichever occurs first.

- Inspect hub assembly for noise, end play and excessive grease leakage from seals.
- Check spindle nut for correct torque setting. This can also be done with a visual inspection, only if spindle and nut were marked during the 5000km service.
- Inspect brake lining thickness at regular intervals.
- Inspection of all brake air lines and fittings for leaks.
- Inspect brake drum for excessive cracks.
- Check tyre pressures at regular intervals.
- Inspect shock absorbers for leaking only.
- Inspect camshafts for free movement.
- Grease all cam bushes
- Inspect suspension for correct ride height setting, adjust if required. (Refer to page 4)

NOTE: If the vehicle is driven under adverse conditions, lubricating frequency should be increased and maintenance interval should be shortened.

Every 150,000 km or 12 months whichever occurs first.

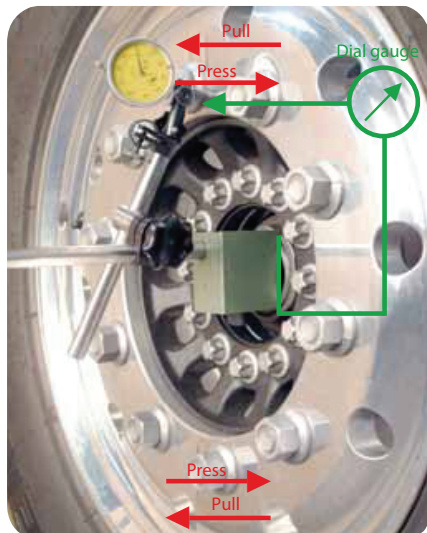
- Check torque setting of spindle nut.
- Check hub assembly for noise, end play and for excessive grease leakage from seals.
- Check all suspension bolts for correct torque setting.
- Check pivot bushes for excessive movement. (Refer to maintenance and repair manual for specifications /tolerances on 3D bush movement).
- Perform general annual inspection (brakes, air bags and tyres).

NOTE: If the vehicle is driven under adverse conditions, lubricating frequency should be increased and maintenance interval should be shortened.

End Play Check

1. Raise the wheel. Do not remove the wheel!
2. Carefully remove the wheel cap.
3. Check that the axle nut is tightened to the torque specification for the axle model.
4. Position the magnetic foot of the dial gauge as shown on the right.
Surface must be cleaned before.
5. By alternately pulling and pressing (first pull at the top and press at the bottom, then pull at the bottom and press at the top), rock the wheel and read off the travel on the dial gauge.
Rotate the wheel several times before each measurement!

NOTE: If the end play is more than 0.25 mm (250 µm) the hub unit must be replaced or adjusted.



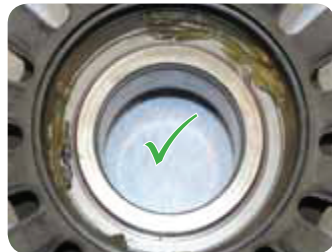
Grease Escape Test (Unitised Bearings)

Increased grease escape:

Indicator:

Bearing seal is fully covered with grease

NOTE: There may be a small amount of grease on the lower edge of the seal. This is normal and does not indicate grease leakage.



Wheel Bearing Noise Test

1. Raise the wheel. Do not remove the wheel!
2. Carefully remove the wheel cap.
3. Check that the axle nut is tightened to the torque specification.
4. Rotate the wheel in both directions (fast and slow).
5. If the bearing feels rough and/or a "grinding" noise is heard, the hub unit must be replaced.

NOTE: Noise can also be caused by the brakes. Before replacing the hub unit, confirm by removing the brake pads and repeat the bearing noise test.



Misting

Misting is the process whereby very small amounts of shock fluid evaporate at high operating temperatures through the upper seal of the shock.

- **This is normal**

Leaking Shock Absorber

Leaking Shock Absorber will show clear signs of fluid leaking in streams from the upper seal. As illustrated in the above photo.

- **Shocker needs to be replaced.**



KEDI Axle

			PERIODIC CHECK		
MAINTENANCE INTERVALS WHICHEVER COMES FIRST	DISTANCE INTERVALS>	AFTER FIRST 5,000 KM OR	EVERY 30,000KM	EVERY 90,000KM	EVERY 150,000KM
	TIME INTERVALS >	AFTER FIRST MONTH	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS
MECHANICAL CHECK					
Attention: Check torque of wheel nuts after the first 100km to the recommended torque setting, also after any removal of the wheel.					
Torque check all nuts and bolts to recommended setting.		•			•
Check and adjust hub end-float (if required). Check condition of taper roller bearing and replace, if necessary.				•	
Pack wheel bearing with fresh grease after 150,000 km or 12 months, whichever comes first					•
Lubricate camshaft bearings after every brake lining replacement.			•		•

Axle Lubrication

Brake camshaft bearing

Near the S cam and spline of camshaft, there is camshaft bushing and spherical bearing inside of the camshaft bracket. Add grease to it every three months (before drive it again after it is not used for a long time). Fill grease in until new grease spills out around the nipple (Figure 2).

Brake slack adjuster

Add lubricant grease every three months until new grease spills out around the nipple. The maximum lubricating interval should not exceed 30,000 kilometres (Figure 3).

Replacing wheel hub bearing seal

Inspect and replace grease and oil seal every 150,000 kilometres or 12 months or every time after replacing the brake lining or reassembling the bearing.

When replacing bearing grease, make sure to firstly thoroughly clean the bearing and the sealing element and check whether these parts can be reused. Clean the wheel hub cavity and wheel hub cap cavity, and then fill grease into it. The space between bearing rollers must be fully filled with grease.

1. If the vehicle is driven under adverse conditions, lubricating frequency should be increased and maintenance interval should be shortened.
2. Composite lithium based grease with a temperature of $-30^{\circ} \sim 180^{\circ}$ should be used.
3. Never use mixed greases of different types!

Figure 2

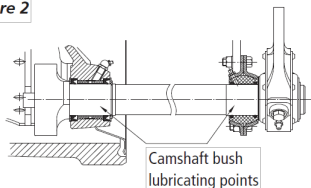
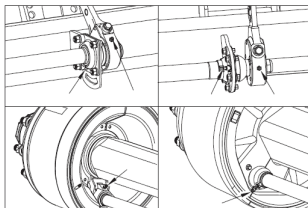


Figure 3



Axle maintenance

Check the working conditions of the wheel hub bearing

Once every six months, check the working conditions of the wheel hub bearing. When check, it is necessary to lift the axle to the height where the wheels are lifted from the ground. Use a jack to support the axle against the position near the leaf spring or the crossbeam.

Lift the tires off the ground and check whether the bearing can rotate normally.

Bearing Clearance Adjustment

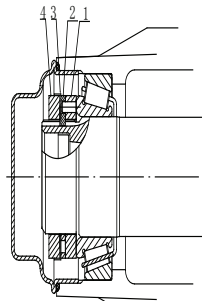
When performing first service after initial driving of 5,000 km, or after every 90,000 kilometres of normal driving, bearing clearance adjustment must be carried out.

Procedure for adjusting bearing clearance and tightening of wheel end nut for Kedi axle

- 1- Adjusting Axle Nut (Figure 1);
- 2- Adjusting Washer (Figure 1);
- 3- Stop Washer (Figure 1);
- 4- Axle Lock Nut (Figure 1).

Bearing Clearance adjustment

1. Torque axle adjusting nut (Item 1) to 271 Nm while rotating the wheel.
2. Back the axle adjusting nut off one full turn.
3. Torque the axle adjusting nut to 68Nm while rotating the wheel.
4. Back the axle adjusting nut off 1/4 turn.
5. Install the adjusting washer (Item 2). The inner tooth of the adjusting washer should be put into the spindle groove, making sure the pin of the adjusting axle nut and adjusting washer align. If not, turn over the adjusting washer and install. If required, loosen the axle adjusting nut (only a small amount) to achieve alignment.
6. Install the tab washer (Item 3). The inner tooth should be put into the spindle groove.
7. Fit to axle lock nut (Item 4) and torque to 10-540 Nm. Bend two symmetrical outer tabs of the tab washer (Item 3) to secure the axle lock nut.
8. Verify the bearing setting with a dial indicator to ensure a 0.025 - 0.127 mm End Play setting.



INTRA Series		
Highway Application	Shock Absorber	1,000,000 km or 6 Years
	Wheel Bearings	
	Pivot Bush	
	Axle Beam	1,000,000 km or 6 Years on Structural and Manufacturing defects only
Off-Road Application	Shock Absorber	500,000 km or 3 Years
	Wheel Bearings	
	Pivot Bush	
	Axle Beam	500,000 km or 3 Years on Structural and Manufacturing defects only
Highway Application/ Off-road Application	Brake Caliper	2 years
	Disc Rotor	2 Years
	All other components	12 months
• All warranty periods start from date of build of trailer as indicated on the VIN plate • Brake balance between Truck and Trailer must not exceed ± 2 PSI, and must be check on a regular basis		
MODUL Series with Pre-Set Bearings		
Highway Application	Wheel Bearings	1,000,000 km or 6 Years
Off-Road Application	Wheel Bearings	500,000 km or 3 Years
Highway Application/ Off-road Application	All other components	12 Months Warranty
	Axle Beam	5 Years Warranty on Structural and Manufacturing defects only
	Brake Caliper	2 years
	Disc Rotor	2 Years
	All other components	12 months
• All warranty periods start from date of build of trailer as indicated on the VIN plate • Brake balance between Truck and Trailer must not exceed ± 2 PSI, and must be check on a regular basis		
MODUL Series with Kedi Axle		
Highway Application/ Off-road Application	All Suspension and Axle Components	12 Months Warranty
	Axle Beam	
• All warranty periods start from date of build of trailer as indicated on the VIN plate • Brake balance between Truck and Trailer must not exceed ± 2 PSI, and must be check on a regular basis		

Within the SAF-HOLLAND warranty period. Refer to the Warranty Certificate for a product. A summary of the warranty conditions are as follows:

- ☐ Failure not due to normal wear and tear.
- ☐ Installed and commissioned according to the Manufacturer's installation manual.
- ☐ Maintained at regular intervals in accordance with the Manufacturer's recommendation. Note: 1st 5,000 kilometre service is mandatory for the warranty to be valid.
- ☐ Use of genuine replacement parts, including brake pads.
- ☐ Not operated once the defect was known.
- ☐ Free of any unauthorized modifications or alterations (including tampering with security seals). Any modifications or alterations must be authorised by SAF-Holland Technical Service Manager before implementing.

The failure is NOT covered by warranty if the following conditions are applicable:

- ☐ Outside of warranty terms & conditions.
- ☐ Failure due to normal wear and tear.
- ☐ Damage resulting from misuse or abuse including incorrect application.
- ☐ Damage resulting from incorrect installation. Installation NOT as defined in Manufacturer's literature.
- ☐ Incorrectly maintained or repaired. 1st 5,000 kilometre service is mandatory for the warranty period to be valid.
- ☐ Use of non genuine parts including brake pads.
- ☐ Unauthorised modification or alteration.
- ☐ Operated after defect was known.

Branch locations and contact information

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QLD Unit 1, 2692 Ipswich Rd Darra 4076 • Tel: 07 3375 7033 • Fax: 07 3375 7044

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