



one wheel
roller bearing cpl.
roller bearing cpl.
remove and fit
remove and fit
remove and fit
remove and fit

2, 3, 4, 5, 6, 8, 9, 10	2,0	0,4
2	25,0	5,0
2, 3, 4, 5, 6, 8, 9, 10	20,0	4,0
2, 3, 4, 5, 6, 8, 9, 10	7,5	1,5
2, 3, 4, 5, 6, 8, 9, 10	10,0	2,0
2, 3, 4, 5, 6, 8, 9, 10	2,5	
	25,0	

Min. 20,0
7,5
10,0
37,5

BPW - Recommended times for warranty work to BPW trailer axles and Suspensions

BPW - Recommended times for Warranty Work

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The recommended times for carrying out warranty work are summarised in this overview.
 All the following work times are stated in minutes and work time units respectively.
 e.g. 5 minutes (mins) = 1 work time unit (WTU)
 1 work time unit (WTU) = 5 minutes (mins.)

These recommendations have been determined in collaboration with BPW-affiliated workshops on the basis of average work times.

They are based on well equipped repair workshops, include all material and personal allocation times, and take safety regulations into consideration

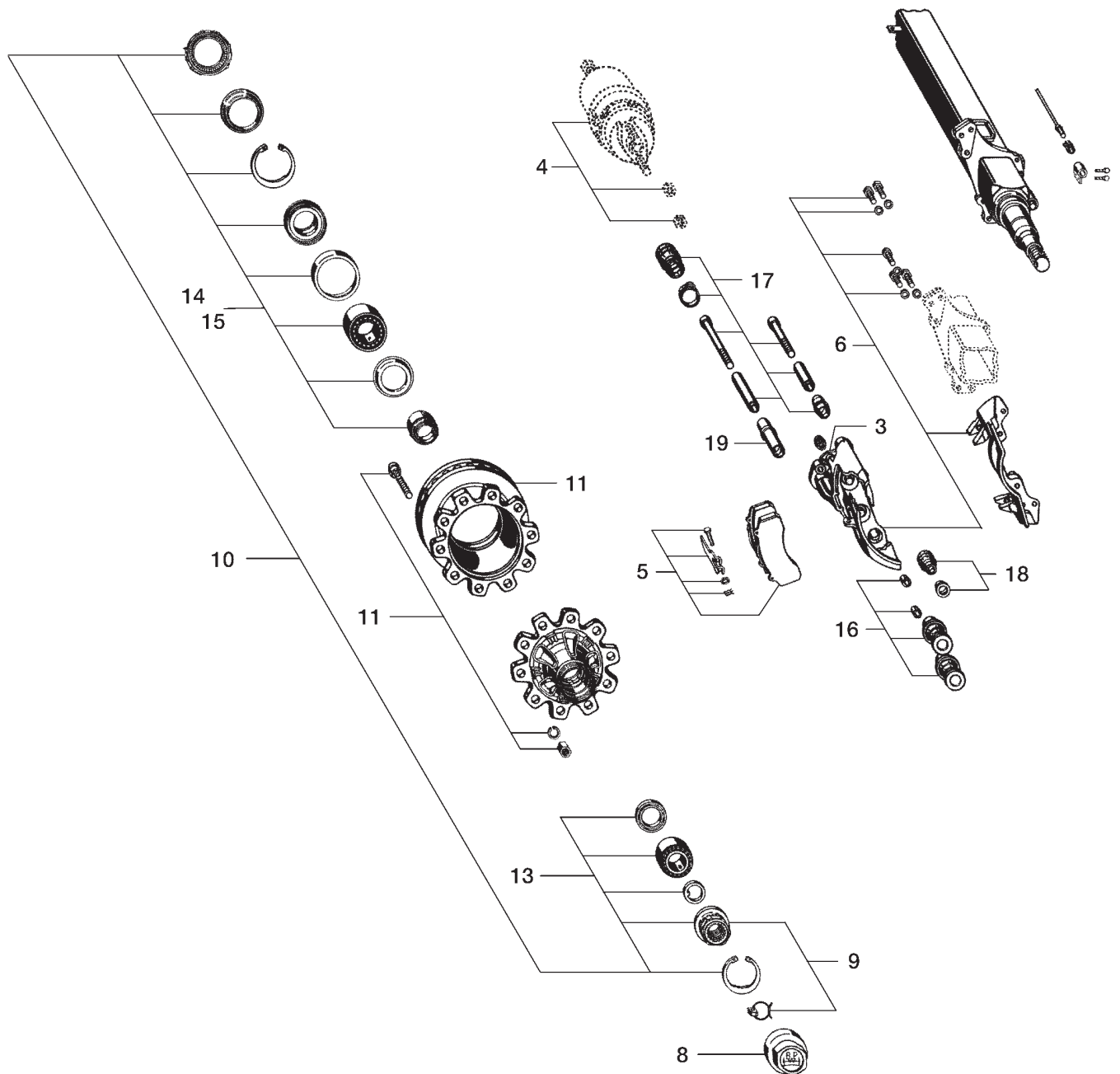
BPW Bergische Achsen Kommanditgesellschaft recognises warranty work carried out within these recommended times.

If these time values should be exceeded additional justification will be required.

Please request BPW service booklets and BPW repair handbooks as required.

Valid 01.01.2002 Replaces the work time stated in BPW - RZ - 00/1e
 Subject to change without notice. Previous work times are no longer valid.

BPW - Recommended times for Warranty Work

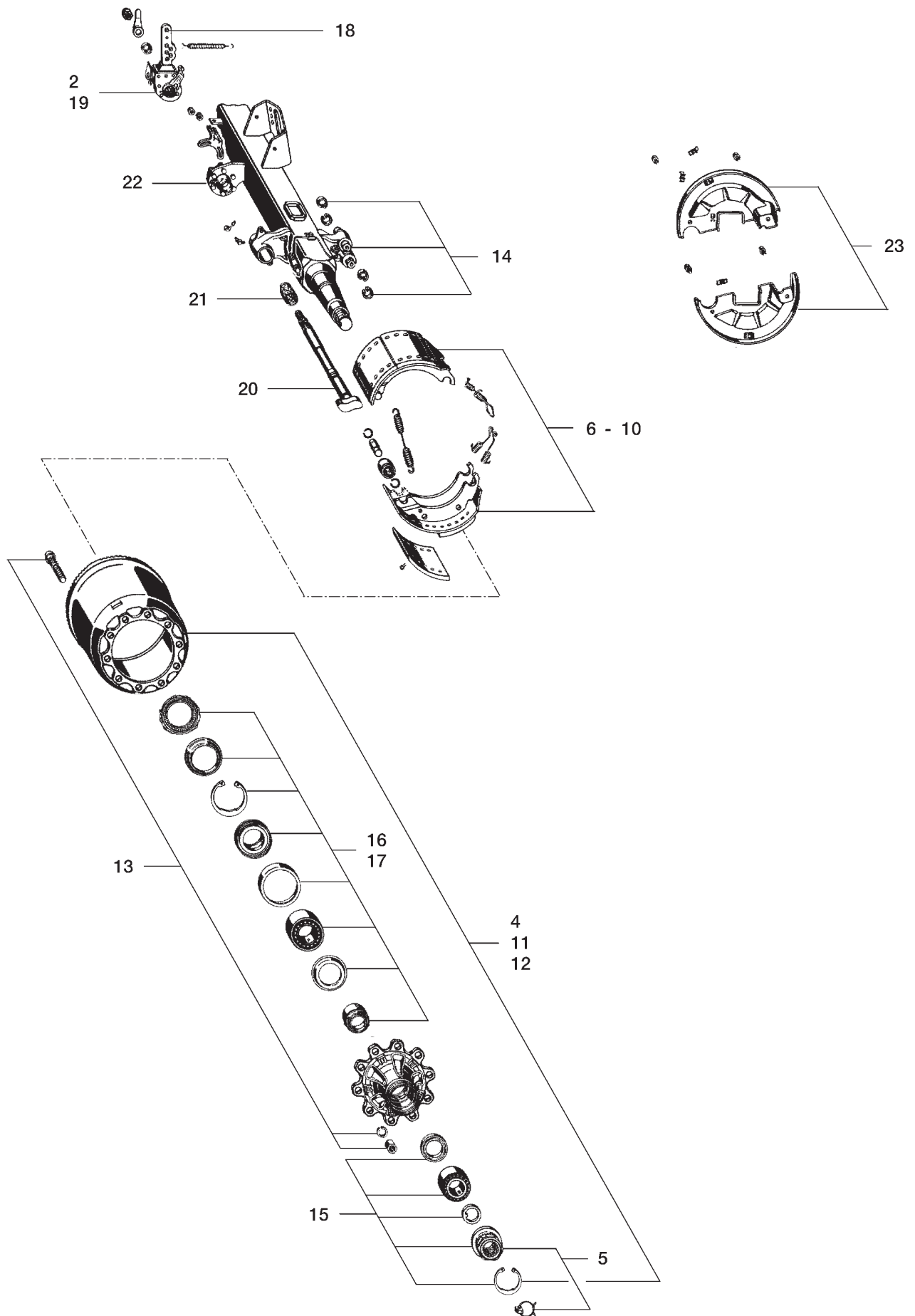




BPW trailer axles Series SH, SKH with ECO^{Plus} / ECO- hub system

Item no.	Extent of work	Work item	Prerequisite: work as per the consec. nos.	Recommended time	
				Mins.	WTU
1	Set-up time for the vehicle	—	—	30,0	6,0
2	Wheel complete with tyre	remove and fit	—	10,0	2,0
3	Brakes on one wheel	adjust and secure	—	1,0	0,2
4	Brake cylinder	remove and fit	—	5,0	1,0
5	Brake lining	remove and fit	2, 3	5,0	1,0
6	Brake caliper carrier	remove and fit	2, 3, 4, 5	30	6,0
7	Brake caliper	operational check		1,0	0,2
8	One hub cap	remove and fit		2,0	0,4
9	Hub bearings on one wheel	adjust and secure	2, 3, 4, 5, 6, 8,	0,5	0,1
10	One hub with brake disc	remove and fit	2, 3, 4, 5, 6, 8, 9,	2,0	0,4
11	One brake disc	remove and fit	2, 3, 4, 5, 6, 8, 9, 10	25,0	5,0
12	Wheel studs on one wheel	remove and fit	2	20,0	4,0
13	One outer taper roller bearing cpl.	remove and fit	2, 3, 4, 5, 6, 8, 9, 10	7,5	1,5
14	One inner taper roller bearing cpl.	remove and fit	2, 3, 4, 5, 6, 8, 9, 10	10,0	2,0
15	Seal rings on one wheel	remove and fit	2, 3, 4, 5, 6, 8, 9, 10	2,5	0,5
16	Thrust pieces with bellow	remove and fit	2, 3, 4, 5, 6	25,0	5,0
17	Guide bush	remove and fit	2, 3, 4, 5, 6	20,0	4,0
18	Bellow (inner)	remove and fit	2, 3, 4, 5, 6, 17	10,0	2,0
19	Brass bushing	remove and fit	2, 3, 4, 5, 6	25,0	5,0

BPW - Recommended times for Warranty Work





BPW trailer axles

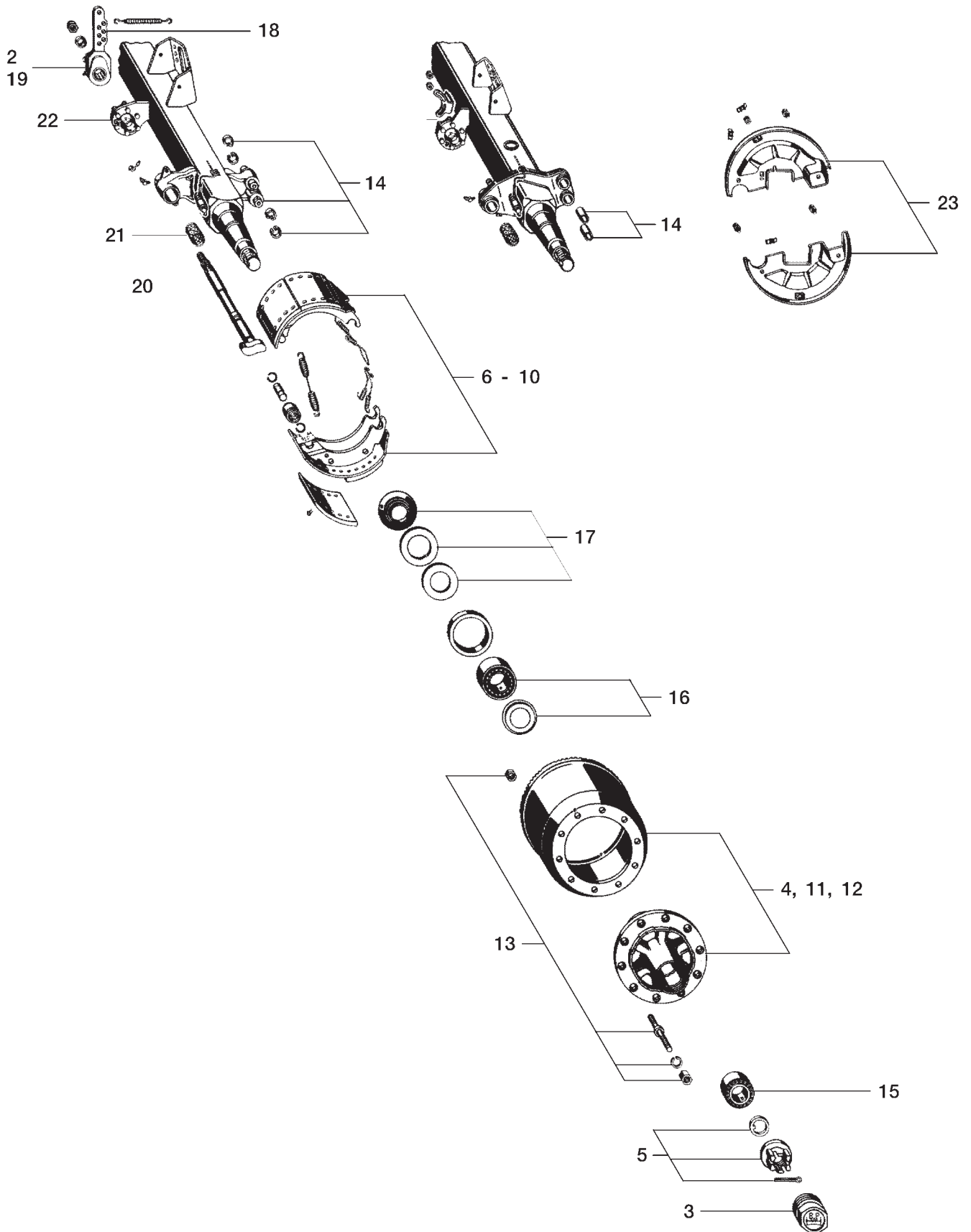
Series H, KH / KR, NH / NR with ECO^{Plus} / ECO- hub system

Item no.	Extent of work	Work item	Prerequisite: work as per the consec. nos.	Recommended time Mins.	WTU
1	Set-up time for the vehicle	—	—	30,0	6,0
2	Brakes on one wheel	adjust	—	1,0	0,2
3	One hub cap	remove and fit	—	2,0	0,4
4	One hub with brake drum and wheel	remove and fit	2, 3	2,0	0,4
5	Hub bearings on one wheel	adjust and secure	3	0,5	0,1
6	Brake shoes on one wheel	remove and fit	2, 3, 4, 5	2,0	0,4
7	Brake shoes on one wheel	clean	2, 3, 4, 5, 6	7,5	1,5
8	Brems linings on one wheel	renew	2, 3, 4, 5, 6, 7	15,0	3,0
9	Set-up time for outside diameter machine tool	—	—	12,5	2,5
10	Brake linings on one wheel	machine outside dia.	2, 3, 4, 5, 6, 7, 8	10,0	2,0
11	One brake drum	skim	2, 3, 4, 5, (24)	10,0	2,0
12	One brake drum	remove and fit	2, 3, 4, 5	20,0	4,0
13	Wheel studs on one wheel	remove and fit	2, 3, 4, 5, 24	20,0	4,0
14	Brake bolts and “c” clips each side	remove and fit	2, 3, 4, 5, 6, (23)	5,0	1,0
15	One outer taper roller bearing cpl.	remove and fit	2, 3, 4, 5	7,5	1,5
16	One inner taper roller bearing cpl.	remove and fit	2, 3, 4, 5, 7	10,0	2,0
17	Seal rings on one wheel	remove and fit	2, 3, 4, 5	2,5	0,5
18	One brake cylinder	remove and fit	—	30,0	6,0
19	One slack adjuster	remove and fit	—	15,0	3,0
20	One brake camshaft	remove and fit	2, 3, 4, 5, (6), 19	15,0	3,0
21	Outer cam bush on one wheel	remove and fit	2, 3, 4, 5, (6), 19, 20	2,5 (5,0*)	0,5 (1,0*)
22	One camshaft spherical bearing	remove and fit	19	5,0	1,0
23	Dust covers on one wheel	remove and fit	—	10,0	2,0
24	Wheel complete with tyre	remove and fit	—	10,0	2,0

() = as required

* = Self steering axle

BPW - Recommended times for Warranty Work





BPW trailer axles

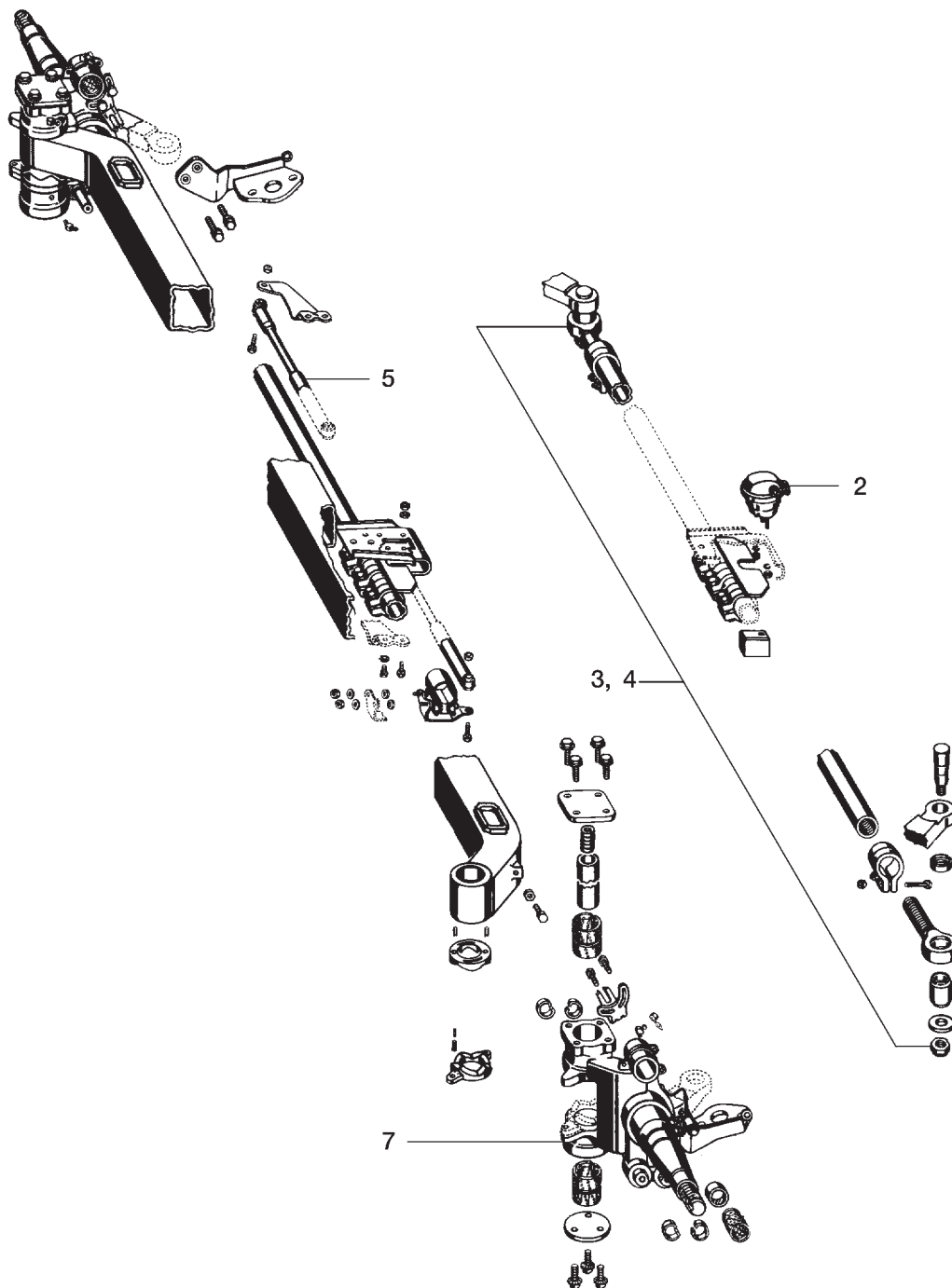
Series H, KH / KR, NR with standard hub system

Item Nr.	Extent of work	Work item	Prerequisite: work as per the consec. nos.	Recommended time Mins.	WTU
1	Set-up time for the vehicle	—	—	30,0	6,0
2	Brakes on one wheel	adjust	—	1,0	0,2
3	One hub cap	remove and fit	—	2,0	0,4
4	One hub with brake drum and wheel	remove and fit	2, 3	10,0	2,0
5	Hub bearings on one wheel	adjust and secure	3	1,0	0,2
6	Brake shoes on one wheel	remove and fit	2, 3, 4, 5	2,0	0,4
7	Brake shoes on one wheel	clean	2, 3, 4, 5, 6	7,5	1,5
8	Brake linings on one wheel	renew	2, 3, 4, 5, 6, 7	15,0	3,0
9	Set-up time for outside diameter machine tool	—	—	12,5	2,5
10	Brake linings on one wheel	machine outside dia.	2, 3, 4, 5, 6, 7, 8	10,0	2,0
11	One brake drum	skim	2, 3, 4, 5, (24)	10,0	2,0
12	One brake drum	remove and fit	2, 3, 4, 5	20,0	4,0
13	Wheel studs on one wheel	remove and fit	2, 3, 4, 5, 24	20,0	4,0
14	Brake bolts and “c” clips each side	remove and fit	2, 3, 4, 5, 6, (23)	5,0	1,0
15	One outer taper roller bearing cpl.	remove and fit	2, 3, 4, 5	7,5	1,5
16	One inner taper roller bearing cpl.	remove and fit	2, 3, 4, 5	12,5	2,5
17	Thrust washer and seal rings on one wheel	remove and fit	2, 3, 4, 5	2,5	0,5
18	One brake cylinder	remove and fit	—	30,0	6,0
19	One slack adjuster	remove and fit	—	15,0	3,0
20	One brake camshaft	remove and fit	2, 3, 4, 5, (6), 19	15,0	3,0
21	Outer cam bush on one wheel	remove and fit	2, 3, 4, 5, (6), 19, 20	2,5 (5,0*)	0,5 (1,0*)
22	One camshaft spherical bearing	remove and fit	19	5,0	1,0
23	Dust covers on one wheel	remove and fit	—	10,0	2,0
24	Wheel complete with tyre	remove and fit	—	10,0	2,0

() = as required

* = Self steering axle

BPW - Recommended times for Warranty Work



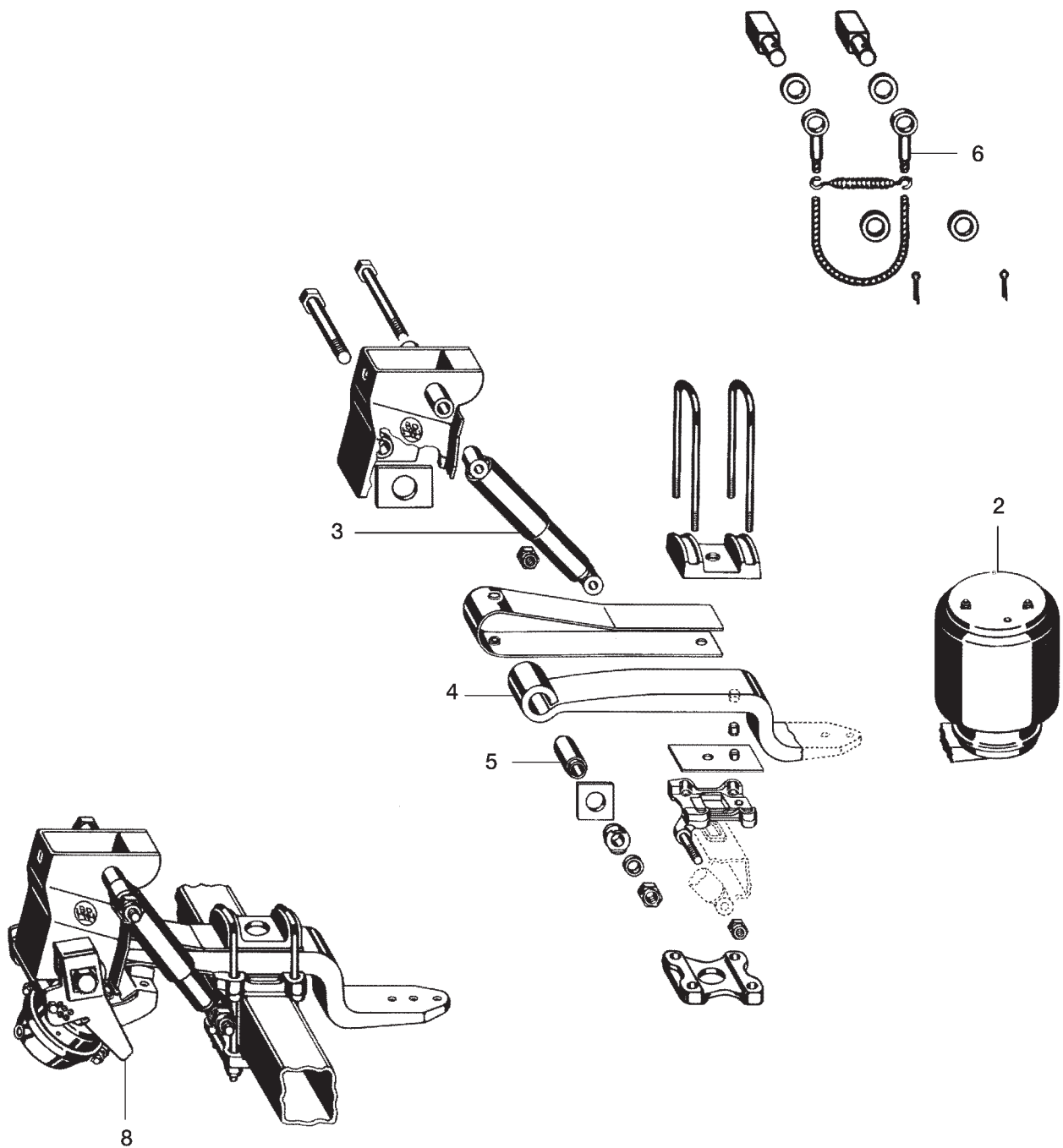
BPW-Self steering axles Series H.LL, K.LL, N.LL

Item Nr.	Extent of work	Work item	Prerequisite: work as per the consec. nos.	Recommended time Mins.	WTU
1	Set-up time for the vehicle	—	—	30,0	6,0
2	Steering lock / Locking cylinder	remove and fit	—	20,0	4,0
3	Track rod end bearing without removing booster bracket with removing booster bracket	renew on one side		35,0 60,0	7,0 12,0
4	Steering rod without removing booster bracket with removing booster bracket	remove and fit	(5)	60,0 80,0	12,0 16,0
5	Steering damper	remove and fit	—	10,0	2,0
6	Self steering axle	remove and fit	—	150,0	30,0
7	Steering pivot on one side	renew bearing	6	170,0	34,0
8	Toe in	check and adjust	—	40,0	8,0

() = as required

For recommended times for removing / fitting brake and hub items see pages 5 / 7 / 9.

BPW - Recommended times for Warranty Work



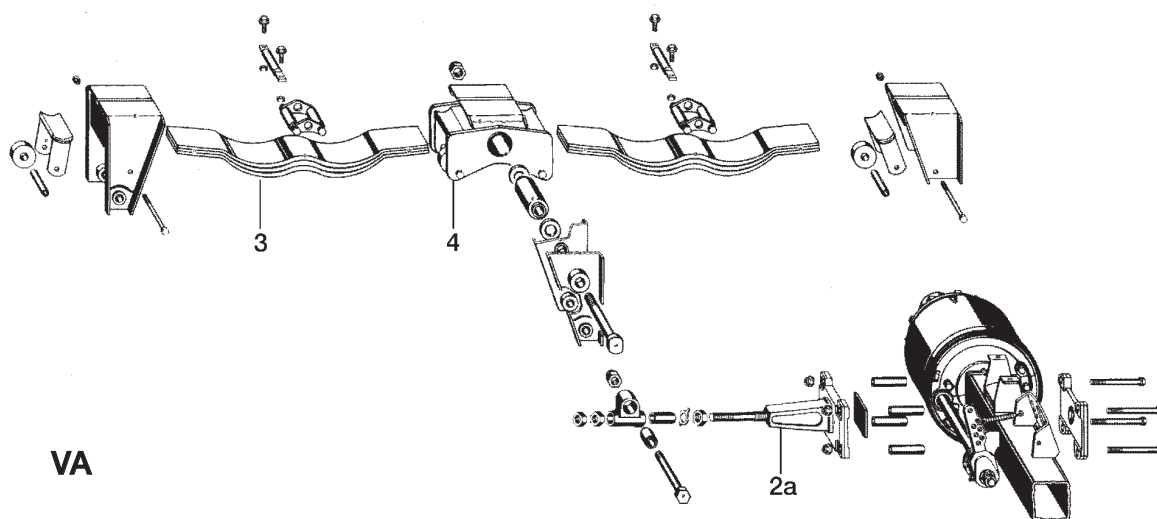


BPW Air suspension Series O, OM, OT / SLO, SLM, SLU / ALO, ALM, ALU

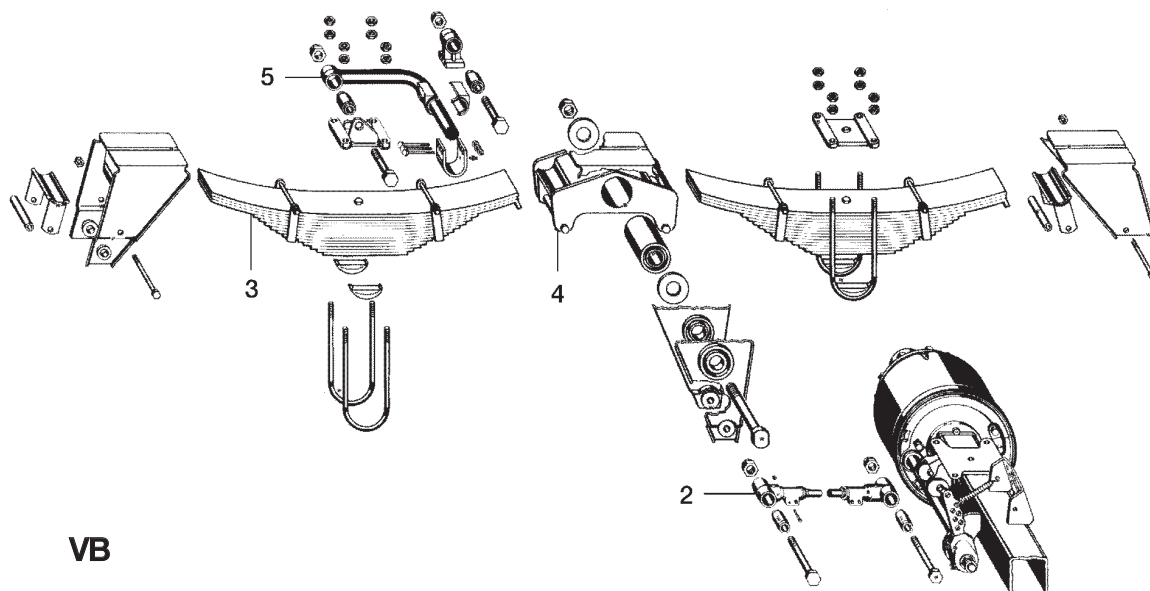
Item Nr.	Extent of work	Work item	Prerequisite: work as per the consec. nos.	Recommended time Mins.	WTU
1	Set-up time for the vehicle	—	—	30,0	6,0
2	One air bag	remove and fit	—	40,0	8,0
3	One shock absorber	remove and fit	—	15,0	3,0
4	One trailing arm	remove and fit	—	90,0	18,0
5	One bushing for trailing arm	remove and fit	—	20,0	4,0
6	One check strap	remove and fit	—	20,0	4,0
7	One axle	remove and fit	—	150,0	30,0
8	Lift arm	remove and fit	—	60,0	12,0
9	Levelling valve	remove and fit	—	30,0	6,0
10	Air suspension circuit	adjustment	—	30,0	6,0
11	One axle alignment check under vehicle	measure and align	—	60,0	12,0

For recommended times for removing / fitting axle parts / self steering axle parts see pages 5 / 7 / 9 / 11.

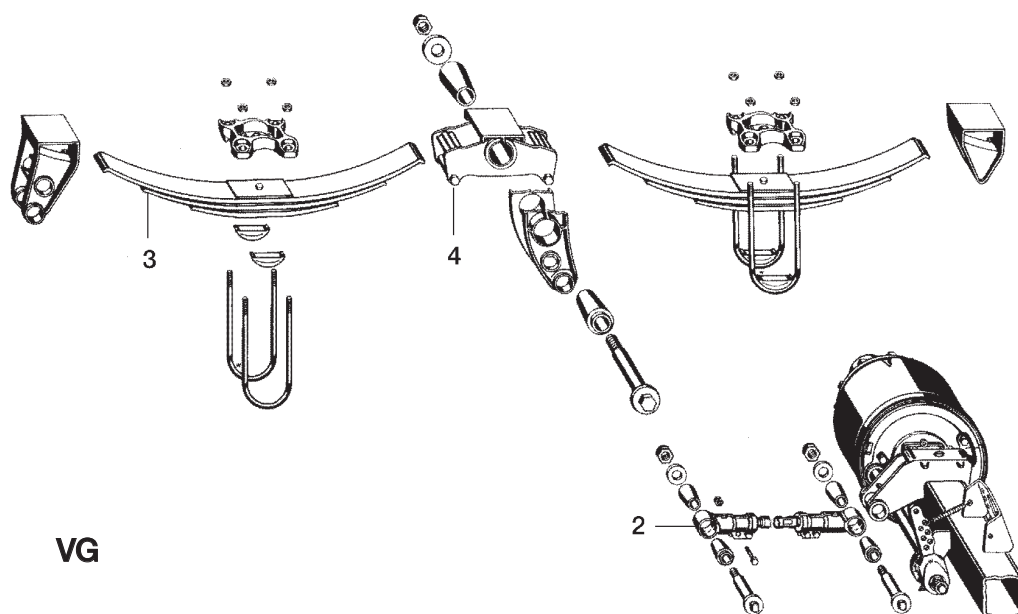
BPW - Recommended times for Warranty Work



VA



VB



VG



BPW Mechanical suspensions Series VA, VB, VG

Item no.	Extent of work	Work item	Prerequisite: work as per the consec. nos.	Recommended time Mins.	WTU
1	Set-up time for the vehicle	—	—	30,0	6,0
2	VB / VG One connecting rod with bush change	remove and fit	—	60,0	12,0
2a	VA One connecting rod with bush change	remove and fit	—	90,0	18,0
3	One leaf spring	VB / VG VA remove and fit	— —	60,0 25,0	12,0 5,0
4	One equalizing beam with support and bush change	remove and fit	—	180,0	36,0
5	One U-stabilizer bar with bush change	remove and fit	—	80,0	16,0
6	One axle	remove and fit	—	150,0	30,0
7	One axle alignment check under vehicle	measure and align	—	50,0	10,0

For recommended times for removing / fitting axle parts / self-steering axle parts see pages 5 / 7 / 9 / 11.



BPW-RZ-02/1e

