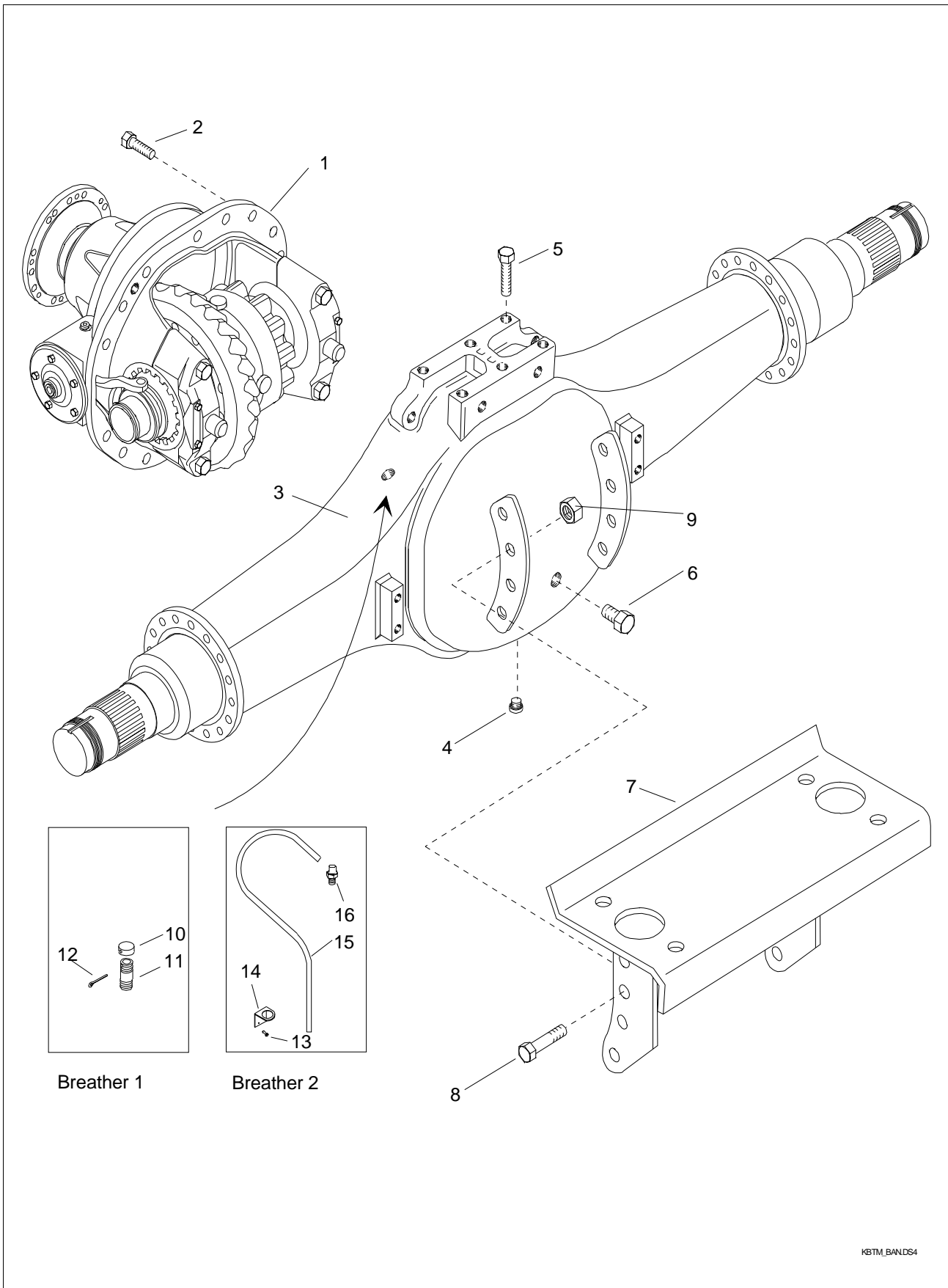


# **SISU AXLES**

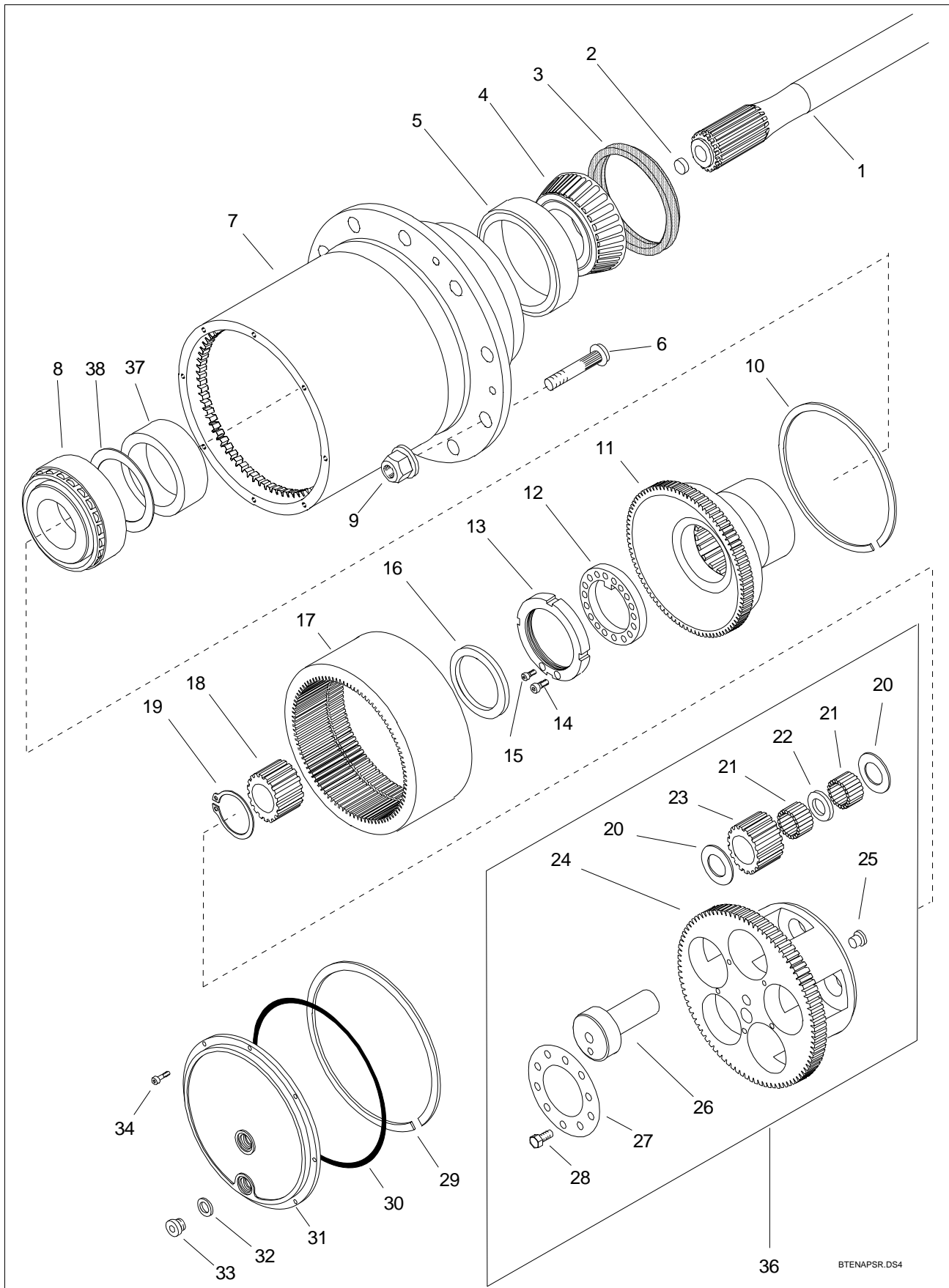
## **SPARE PARTS BOOK**

**Rear Tandem Axle  
FRDP  
FRDP16S0879/011&013  
Up to S/N 144392 (Nov 2004)  
Book No. 247 (2/2007)**

Sisu Axles, Inc.  
Autotehtaan tie 1  
PO Box 189  
FIN-13101 Hämeenlinna  
Finland  
Phone +358 204 55 2999  
Fax +358 204 55 2900

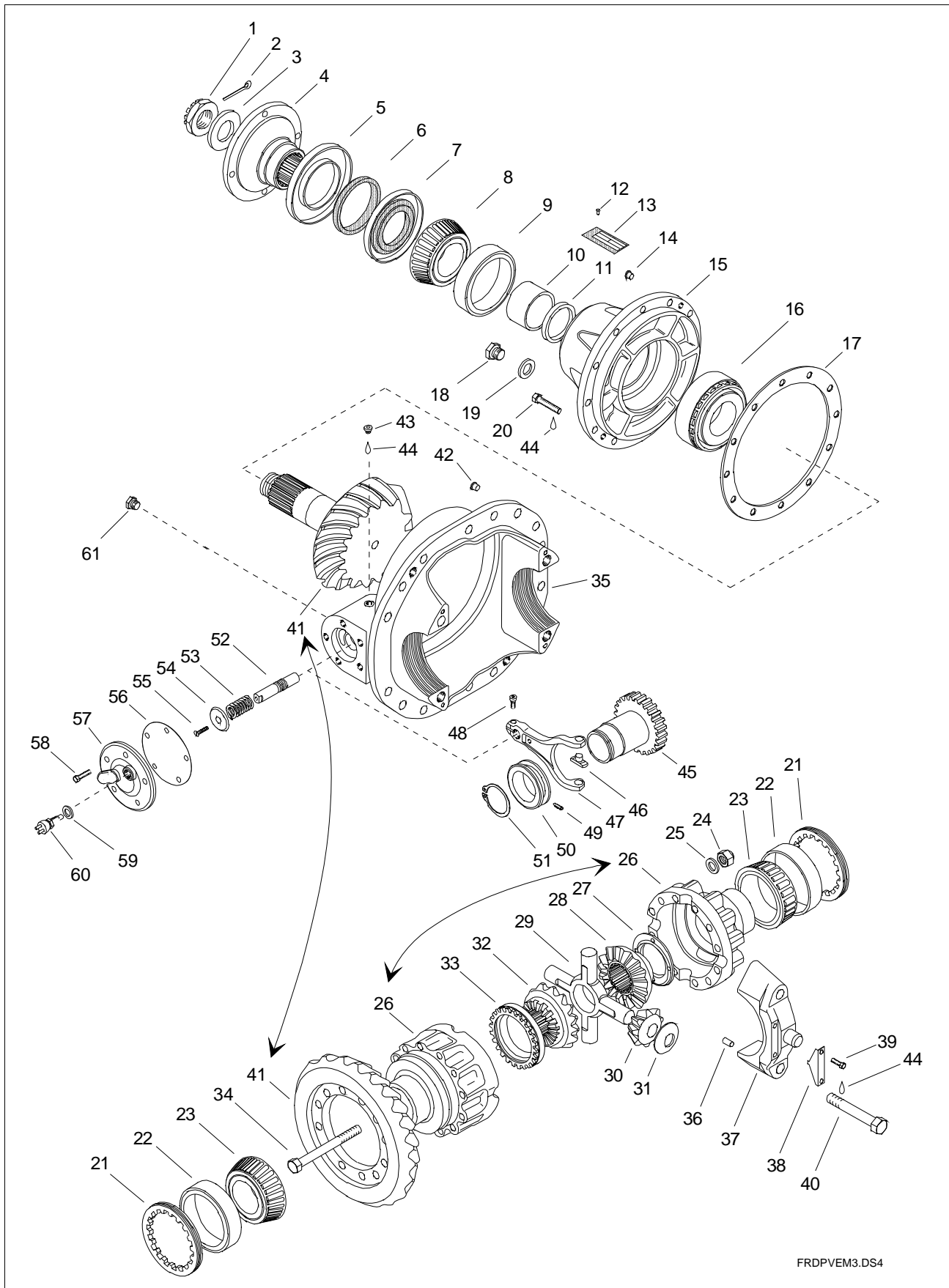


Item	Qty.	Order no.	Description	Note
1	1	<b>543-203-4656</b>	Diff. Carrier Assembly	FR 8.79, Yoke 1710
2	16	<b>90303-16407</b>	Hex Screw	M16x40, 10.9
3	1	<b>543-116-6110</b>	Axle Housing	2040 mm Track, 16 ton, Hendrickson RT650
3	1	<b>543-116-7200</b>	Axle Housing	2040 mm Track, 16 ton
4	1	<b>90873-22109</b>	Oil plug	M22x1.5, Allen head
4	1	<b>91201-22150</b>	Seal ring	D22/27x1.5 Cu
5	6	<b>90303-18503</b>	Hex Screw	M18x2,5x50
5	2	<b>90602-14323</b>	Spring cotter	D14x32
6	1	<b>90875-16243</b>	Plug	1/2"NPTF
7	1	<b>546-721-7400</b>	Chamber bracket	86 deg. for 165 mm slack adjuster
8	6	<b>90303-14307</b>	Hex Screw	M14x30
9	6	<b>90550-14227</b>	Nut	M14 self locking
10	1	<b>179-842-0000</b>	Breather Cover	
11	1	<b>179-841-1000</b>	Breather pipe	
12	1	<b>90621-32253</b>	Split pin	3.2x25
13	2	<b>90111-29054</b>	Rivet	D2.9x5
14	1	<b>143-227-0800</b>	Mounting Plate	
15		<b>95242-06010</b>	Plastic Pipe	Ø9.5/15.5 L=350
16	1	<b>592422-01603</b>	Hose clamp	
16	1	<b>91978-30901</b>	Binding screw	R3/8"/D10



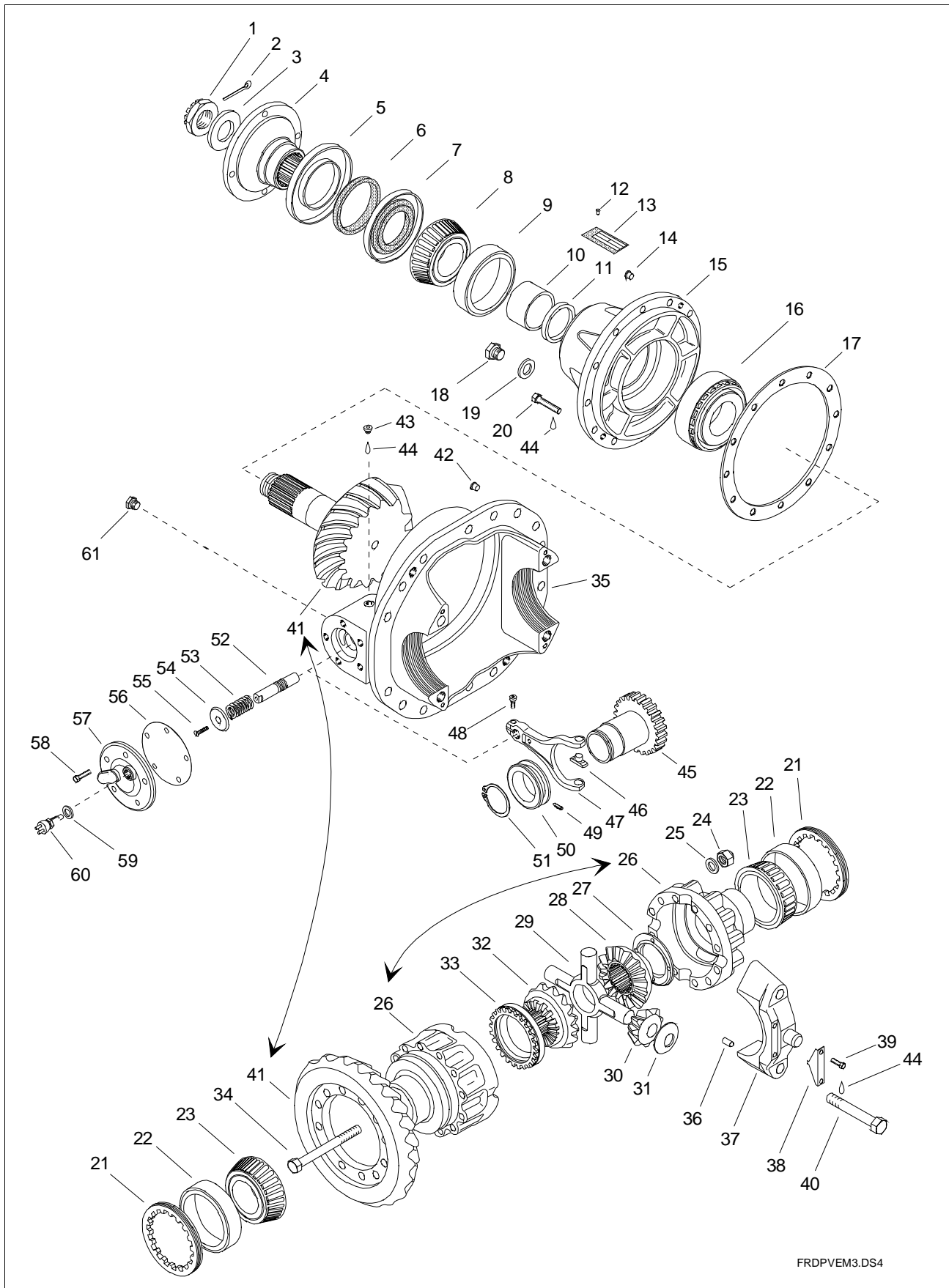
BTENAPSR.DS4

Item	Qty.	Order no.	Description	Note
0,1		<b>N1</b>	Note	Axle Shaft Spline D58/ Z23
1	2	<b>143-511-0210</b>	Axle Shaft	L=1097, FRDP, 1800 mm Track
1	1	<b>143-511-5400</b>	Axle Shaft	LH, L=1049, FRMP&FRFP, 1800 mm Track
1	2	<b>143-511-5410</b>	Axle Shaft	L=1137, FRDP, 1880 mm Track
1	1	<b>143-511-5410</b>	Axle Shaft	RH, L=1137, FRMP&FRFP, 1800 mm Track
1	1	<b>143-511-6000</b>	Axle Shaft	LH, L=1089, FRMP&FRFP, 1880 mm Track
1	1	<b>143-511-6010</b>	Axle Shaft	RH, L=1177, FRMP&FRFP, 1880 mm Track
1	1	<b>143-511-6010</b>	Axle Shaft	LH, L=1177, FRFP & FRMP, 2040 mmTrack
1	1	<b>143-511-6300</b>	Axle Shaft	RH, L=1257, FRFP & FRMP, 2040 mm Track
1	2	<b>143-511-6310</b>	Axle Shaft	L=1217, FRDP, 2040 mm Track
2	2	<b>140-125-0100</b>	Thrust pin	D25
3	2	<b>591122-12702</b>	Shaft seal	127x160, Since No. 20577 (3/2002)
3	2	<b>91122-12701</b>	Shaft seal	127x159, Up to. No. 20576 (3/2002)
4	2	<b>090-111-0000</b>	Bearing inner race	
5	2	<b>090-121-5700</b>	Bearing outer race	
6	20	<b>140-911-2510</b>	Wheel bolt	93 mm
6	20	<b>140-911-2700</b>	Wheel bolt	113 mm (with aluminium rims)
7	2	<b>143-441-0410</b>	Wheel hub	With steel rims up to S/N 20576 (3/2002)
7	2	<b>543-441-0600</b>	Wheel hub	With aluminium rims up to S/N 20576 (3/2002)
7	2	<b>543-441-0700</b>	Wheel hub	With steel rims since S/N 20577 (3/2002)
7	2	<b>543-441-0710</b>	Wheel hub	With aluminium rims since S/N 20577 (3/2002)
8	2	<b>91744-01201</b>	T. Roller bearing	
9	20	<b>540-916-1610</b>	Wheel nut	M22x1.5
10	2	<b>91720-22001</b>	Retainer ring	D220x3
11	2	<b>135-271-0310</b>	Ring gear hub	Up to No. 80190 (2/98)
11	2	<b>535-271-0311</b>	Ring gear hub	Since No. 80191 (2/98)
12	2	<b>099-459-0000</b>	Lock washer	Up to No. 80190 (2/98)
12	2	<b>143-418-0510</b>	Lock Washer	Since No. 80191 (2/98)
13	2	<b>099-290-8003</b>	Lock Nut	Up to No. 80190 (2/98)
13	2	<b>599-290-8004</b>	Lock Nut	Since No. 80191 (2/98)
14	2	<b>590319-08186</b>	Allen Screw	M8x18, Since No. 80191 (2/98)
14	2	<b>90319-06106</b>	Lock Screw	Up to No. 80190 (2/98)
15	2	<b>590319-08126</b>	Allen Screw	M8x12, Since No. 80191 (2/98)
15	2	<b>90319-06106</b>	Lock Screw	Up to No. 80190 (2/98)
16	2	<b>090-721-8500</b>	Protective cup	D60/85x10
17	2	<b>135-261-0800</b>	Ring gear	
18	2	<b>135-211-0500</b>	Sun gear	
19	2	<b>91711-05600</b>	Retainer ring	D56x2
20	20	<b>090-353-5020</b>	Spacer plate	D57/35x1.5
21	520	<b>090-005-0530</b>	Needle roller	D4.762x28.5
22	10	<b>090-353-5000</b>	Spacer ring	D35/44x6.2
23	10	<b>135-241-0601</b>	Planet gear	
24	2	<b>141-441-0910</b>	Planet carrier	
25	2	<b>141-581-0001</b>	Counter Piece	D15/20x17
26	10	<b>135-251-0710</b>	Planet gear shaft	
27	2	<b>135-256-0210</b>	Lock Washer	
28	20	<b>90303-10203</b>	Hex Screw	M10 x 20 - DIN 933 - 8.8
29	2	<b>91720-26001</b>	Retainer ring	D265x4.2
30	2	<b>91109-50030</b>	O-ring	D249.5x3
31	2	<b>141-422-0410</b>	Planetary gear cover	Aluminium, up to No. 92927 (9/1999)
31	2	<b>541-422-1200</b>	Planetary gear cover	Cast iron, Since No. 92928 (9/1999)
31	2	<b>541-422-1300</b>	Planetary gear cover	Cooled, cast iron, optional
32	4	<b>91201-22150</b>	Seal ring	Cu (with cast iron hub cover)
32	4	<b>91201-22152</b>	Seal ring	Al (with Al. hub cover)
33	4	<b>90873-22103</b>	Plug	M22x1.5, Allen head
34	16	<b>90313-06168</b>	Allen Screw	M6x16
36	2	<b>141-404-0100</b>	Planetary gear	
37	2	<b>543-416-0310</b>	Spacer ring	L=29 mm, since No. 93833, 11/99
38	ar	<b>590731-09510</b>	Shim	s= 0.1 mm, since No. 93833, 11/99
38	ar	<b>590731-09515</b>	Shim	s= 0.15 mm, since No. 93833, 11/99
38	ar	<b>590731-09520</b>	Shim	s= 0.2 mm, since No. 93833, 11/99
38	ar	<b>590731-09550</b>	Shim	s= 0.5 mm, since No. 93833, 11/99



FRDPVEM3.DS4

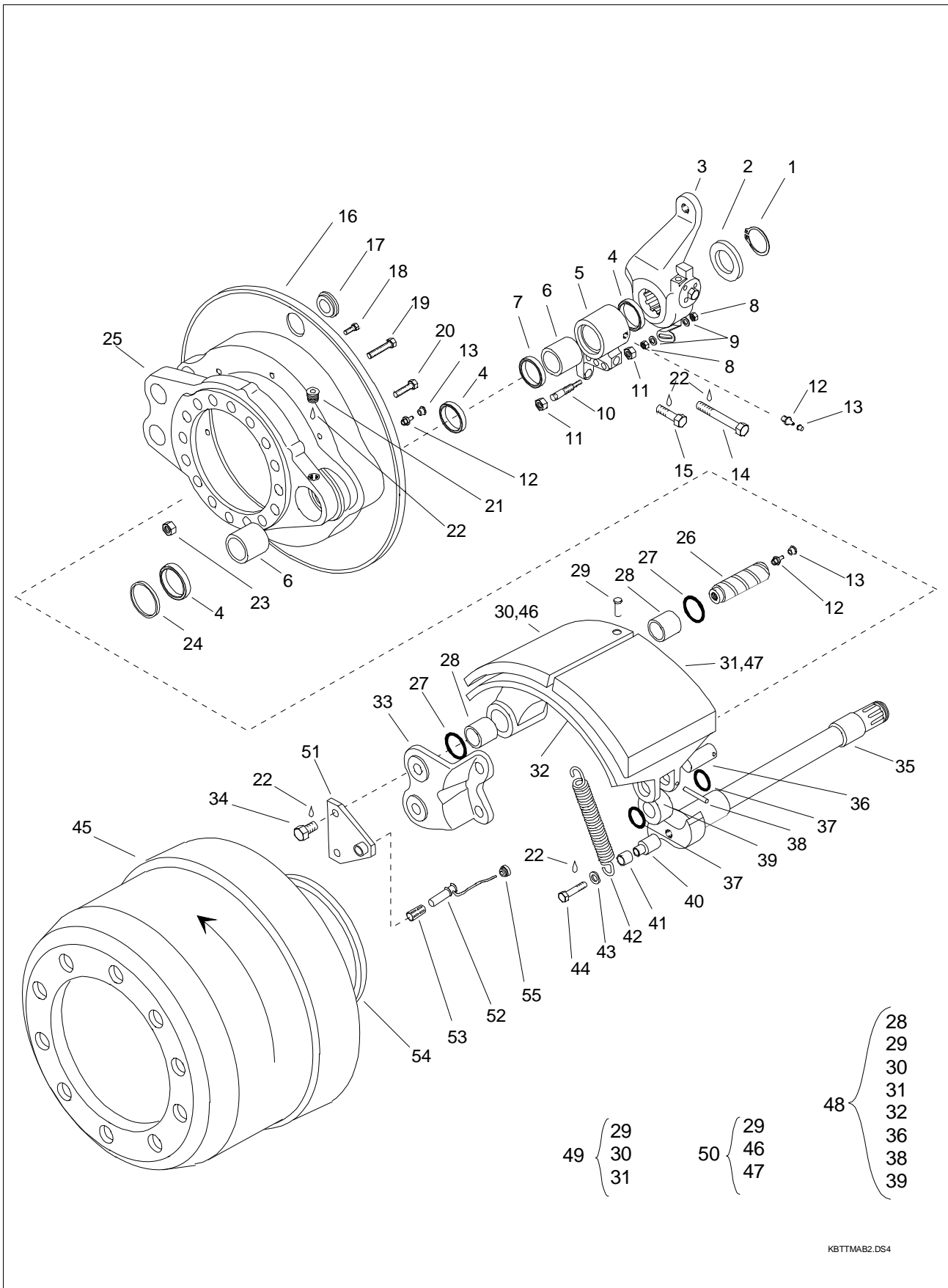
Item	Qty.	Order no.	Description	Note
1	1	90546-42653	Nut	M42x1.5
2	1	90621-63633	Split pin	6.3x63
3	1	90705-43069	washer	D43/80x6
4	1	138-916-2110	Flange	HS1600
4	1	138-918-0400	Flange	HS1700-1800
4	1	138-918-0401	Flange	ISO 8667 - T180
4	1	538-967-0100	End Yoke	Input Splined Yoke 1710, spline N65, Z=24
5	1	090-711-9000	Shield	
6	1	090-400-9500	V-ring	VS-95, Up to serial No 133452 (12/2003)
7	1	591122-08508	Shaft seal	D85/140x13/20, Since serial No 133453 (12/2003)
7	1	91122-08504	Shaft seal	D85/140x13, Up to serial No 133452 (12/2003)
8	1	090-110-6740	Bearing inner race	
9	1	090-121-3700	Bearing outer race	
10	ar	099-557-1026	Spacer ring	(l=53.70)
10	ar	099-557-1028	Spacer ring	(l=53.74)
10	ar	099-557-1030	Spacer ring	(l=53.78)
11	ar	099-517-1000	Shim	(s=0.30)
11	ar	099-517-1001	Shim	(s=0.40)
11	ar	099-517-1002	Shim	(s=0.50)
12	4	90111-29054	Rivet	D2.9x5
13	1	591600-20823	Name plate	
14	2	91425-09100	Shield plug	
15	1	144-231-0502	Bearing housing	
16	1	090-050-7001	T. Roller bearing	
17	ar	144-239-1400	Shim	(s= 0.50 mm)
17	ar	144-239-1401	Shim	(s= 0.20 mm)
17	ar	144-239-1403	Shim	(s= 0.10 mm)
17	ar	144-239-1404	Shim	(s= 1.00 mm)
18	1	90871-22193	Plug screw	M22x1.5, hex head
19	1	91201-22150	Seal ring	D22/27x1.5 Cu
20	14	90303-12308	Hex Screw	M12x30
21	2	143-226-0012	Adjusting nut	D149
22	2	090-121-4700	Bearing outer race	
23	2	090-110-9000	Bearing inner race	
24	12	90556-16247	Nut	M16x1.5
25	12	099-601-8110	washer	D17/28x6
26	1	143-310-2711	Diff. case assy	
27	1	090-357-5000	Thrust washer	D75/111x3
28	1	143-351-0900	Side gear	D58/Z23
29	1	143-331-0603	Spider	
30	4	143-341-0700	Pinion gear	
31	4	143-345-0400	Thrust washer	D29/65x1.5
32	1	143-351-1410	Side gear	D58/Z23
33	1	143-357-0000	Sliding Ring	D97/136x24.5, serrated
34	12	099-116-3230	Hex Screw	M16x1.5, L=193, 12.9
35	1	143-210-1511	Differential Carrier	Incl. Bearing Case Halfs and Bolts
36	4	590604-08141	Pin	Ø8x14
37		143-214-2180	Bearing Case Half	Not Servised Separately
38	2	143-227-0610	Lock Washer	
39	4	90303-08163	Screw	M8x16
40	4	90301-20377	Hex Screw	M20x130
41	NLA	143-240-1811	Ring and pinion gear set	21/27, FR 4.68, LH, USE 543-240-7111
41	1	143-240-1819	Ring and pinion gear set	14/27, FR 7.01, LH
41	1	143-240-1821	Ring and pinion gear set	17/26, FR 5.56, LH
41	1	143-240-1829	Ring and pinion gear set	16/28, FR 6.36, LH
41	1	143-240-1831	Ring and pinion gear set	24/27 FR 4.09, LH
41	1	143-240-1839	Ring and pinion gear set	22/26, FR 4.30, LH
41	1	143-240-1851	Ring and pinion gear set	12/29, FR 8.79, LH
41	1	143-240-1881	Ring and pinion gear set	10/29, FR 10.54, LH
41	1	143-240-1891	Ring and pinion gear set	Final Ratio 12.53, LH
41	1	543-240-1849	Ring and pinion gear set	27/28, FR 3.77
41	1	543-240-1859	Ring and pinion gear set	18/26, FR 5.25, LH
41	1	543-240-7111	Ring and pinion gear set	25/32, FR 4.65, LH
42	2	91425-13120	Shield plug	



FRDPVEM3.DS4



Item	Qty.	Order no.	Description	Note
43	1	<b>90873-10053</b>	Plug screw	M10x1, Allen head
44		<b>95752-10010</b>	Thread locking compound	
45	1	<b>144-341-0900</b>	Sliding Gear	
46	2	<b>133-348-0710</b>	Sliding shoe	
47	1	<b>144-751-1210</b>	Control fork	
48	1	<b>90313-06208</b>	Allen Screw	M6x20
49	1	<b>90335-05108</b>	Stopping screw	M5x10
50	1	<b>144-348-0000</b>	Sliding ring	
51	1	<b>91711-06500</b>	Retainer ring	D65
52	1	<b>172-212-1710</b>	Sliding Shaft	D16/20x125
53	1	<b>097-122-0100</b>	Return spring	D29.5x43
54	1	<b>172-361-0410</b>	Push plate	D70x12
55	1	<b>90319-08206</b>	Screw	M8x20
56	1	<b>172-351-1202</b>	Membrane	
57	1	<b>572-161-1502</b>	Membrane cover	For use with signal lamp switch
58	5	<b>90303-08203</b>	Hex Screw	M8x20
59	1	<b>91201-18150</b>	Seal ring	D18/22x1.5 Cu
60	1	<b>586-490-0381</b>	Signal Lamp Switch	M18x1.5
61	1	<b>90871-18173</b>	Plug screw	M18x1.5
61	1	<b>91201-18150</b>	Seal ring	D18/22x1.5 Cu



KBTTMAB2.DS4

Item	Qty.	Order no.	Description	Note
1	2	91712-04000	Retainer ring	D40x2.5
2	4	91726-43065	Support ring	D43/65x3
3	1	146-530-1011	Slack adjuster	RH, 145 mm, 13/17 deg, Up to S/N 20898 (11/2002)
3	1	146-530-1021	Slack adjuster	LH, 145 mm, 13/17 deg, Up to S/N 20898 (11/2002)
3	1	146-530-1311	Slack adjuster	RH, 145 mm, 78/86, Up to S/N 20898 (11/2002)
3	1	146-530-1321	Slack adjuster	LH, 145 mm, 78/86, Up to S/N 20898 (11/2002)
3	1	546-530-2011	Slack adjuster	LH, 165 mm, 86 deg, Since S/N 20899 (11/2002)
3	1	546-530-2021	Slack adjuster	RH, 165 mm, 86 deg, Since S/N 20899 (11/2002)
3	1	546-530-3111	Slack adjuster	LH, 165 mm, 13/17 deg, Since S/N 20899 (11/2002)
3	1	546-530-3121	Slack adjuster	RH, 165 mm, 13/17 deg, Since S/N 20899 (11/2002)
4	6	91122-04201	Shaft seal	D42/55x8
5	1	146-224-2310	Bearing housing	LH (RH when chamber angle 13/17 deg)
5	1	146-224-2400	Bearing housing	RH (LH when chamber angle 13/17 deg)
6	4	590-314-2062	Sleeve	Sub. for 090-314-2060
7	2	91122-04202	Shaft seal	D42/55x7
8	4	90502-08133	Nut	M8
9	4	90705-08423	washer	D8.4/17x1.6
10	2	90177-01203	Stud bolt	M12/M8
11	4	90502-12193	Nut	M12
12	8	91402-10003	Grease nipple	M10x1, Straight
13	8	91421-06060	Shield hat	
14	2	90301-16117	Hex Screw	M16x100, 10.9
15	2	90303-16407	Hex Screw	M16x40, 10.9
16	2	146-131-2210	Dust Shield	210 mm
17	4	095-553-2000	Shield plug	D33/44
18	14	90303-08123	Hex Screw	M8x12
19	24	90169-01401	Hex Screw	M14x45
20	4	90301-14558	Hex Screw	M14x55
21	2	90873-10053	Plug screw	M10x1, Allen head
22		95752-10010	Thread locking compound	
23	28	90550-14227	Nut	M14 self locking
24	2	91726-43065	Support ring	D43/65x3
25	2	146-111-2610	Brake Bracket	
26	4	146-341-1200	Anchor bolt	With grease nipple
26	4	146-341-1210	Anchor bolt	W/o grease nipple
27	8	91106-36212	O-ring	D36,2x3 Viton
28	8	590-313-2091	Sleeve	Sub. for 090-313-2090
29	96	91501-00819	Rivet	Not serviced separately
30	4	546-361-6313	Brake lining	210 mm, Beral1561, not serviced separately
31	4	546-361-6213	Brake lining	210 mm, Beral1561, not serviced separately
32	4	146-351-4100	Brake shoe	210 mm
33	2	146-331-0400	Anchor support	
34	4	90303-10203	Hex Screw	M10x20, w/o ABS
34	4	90303-10303	Hex Screw	M10x30, with ABS
35	1	146-213-0400	S-cam shaft	L=550, RH 1800 mm Track
35	1	146-213-0500	S-cam shaft	L=550, LH 1800 mm Track
35	1	146-213-0600	S-cam shaft	L=590, RH 1880 mm Track
35	1	146-213-0700	S-cam shaft	L=590, LH 1880 mm Track
35	1	146-213-0800	S-cam shaft	L=670, RH 2040 mm Track
35	1	146-213-0900	S-cam shaft	L=670, LH 2040 mm Track
36	4	146-373-0201	Pin	Substitute for 146-373-0200
37	8	91106-25232	O-ring	No longer used
38	4	90602-05450	Spring cotter	D5x40
39	4	146-371-0700	Roller	D25/54x28
40	6	599-601-8900	Bush	Substitute for 099-601-2480
41	6	099-601-7240	Bush	Obsolete NLA
42	4	92052-30002	Return spring	D30x165.5
43	6	90705-13023	washer	D13/24x2.5
44	6	90303-12603	Hex Screw	M12x60
45	2	146-311-7900	Brake drum	W/o valve groove, 146-311-7910 is substitute
45	2	146-311-7910	Brake drum	With valve groove, substitute for 146-311-7900
48	4	546-306-0083	Brake shoe assy	210mm, Beral1561
49	ar	546-360-3113	Brake lining set	210mm, Beral1561, for one wheel
50		146-360-1126	Br. lining set(over size)	210mm, for one wheel