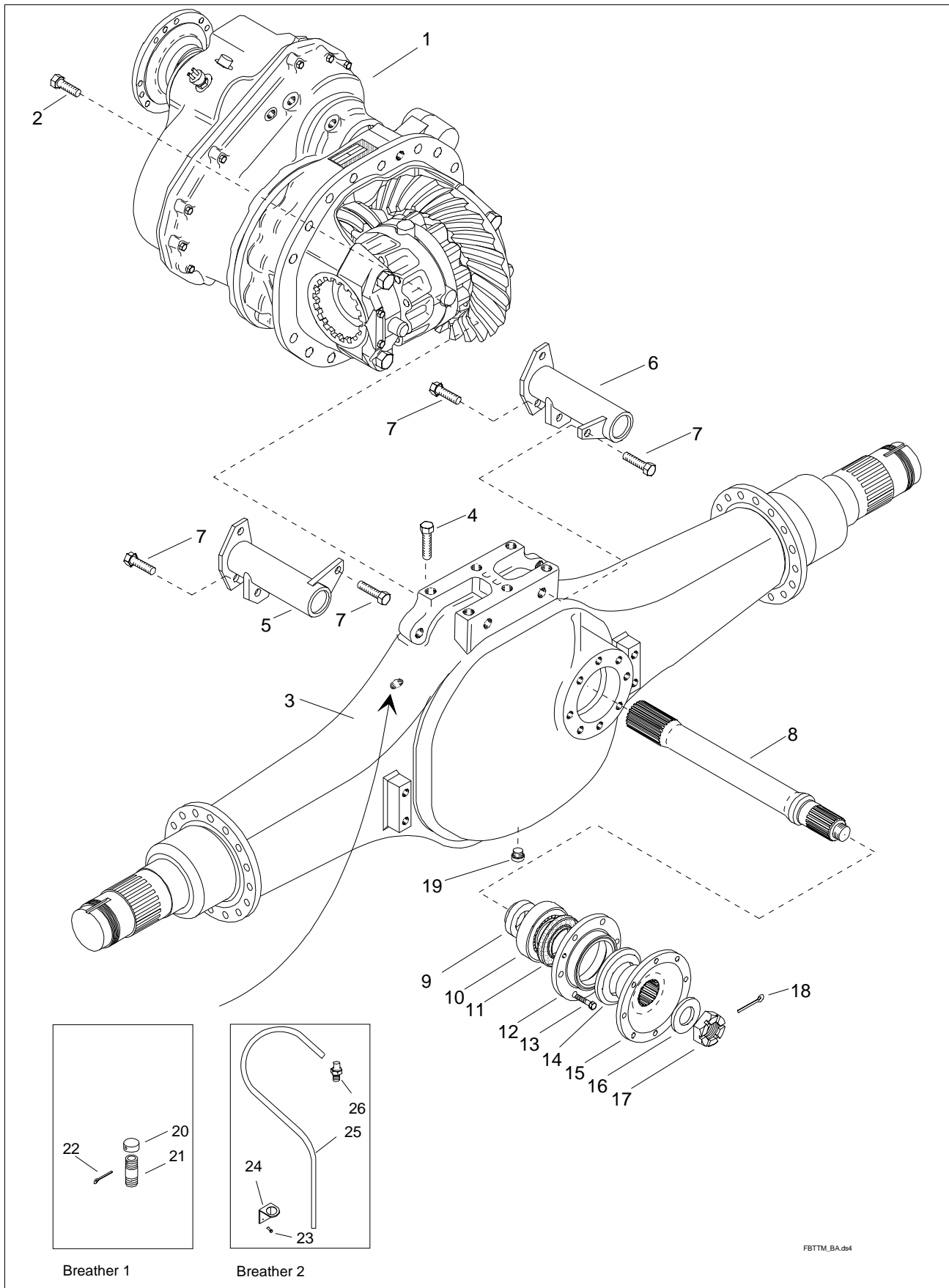


# **SISU AXLES**

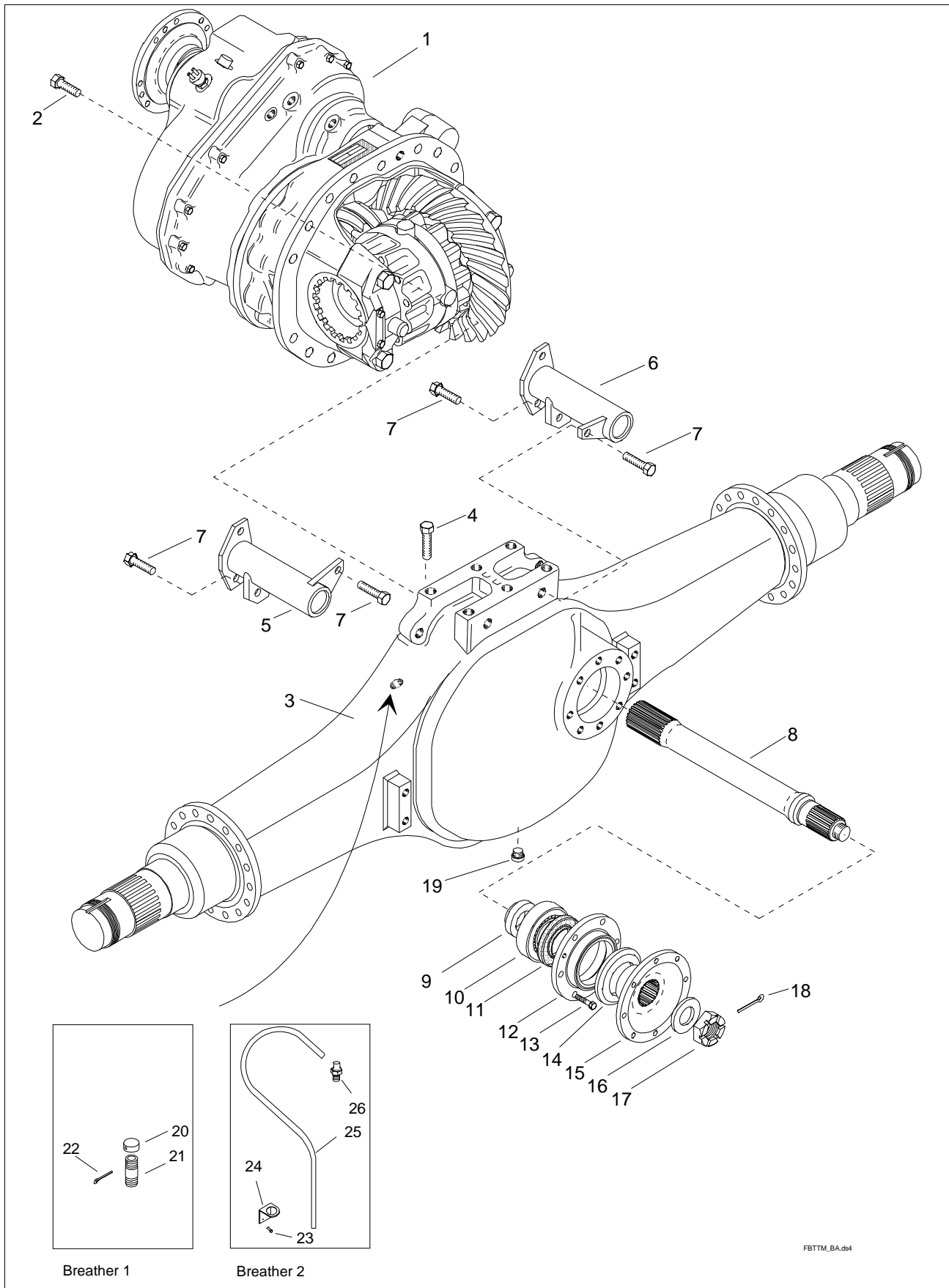
## **SPARE PARTS BOOK**

**Foremost Tandem Axle  
FRMP  
FRMP-13/16-S  
Up to S/N 144392 (11/2004)  
Book No. 187 (2/2007)**

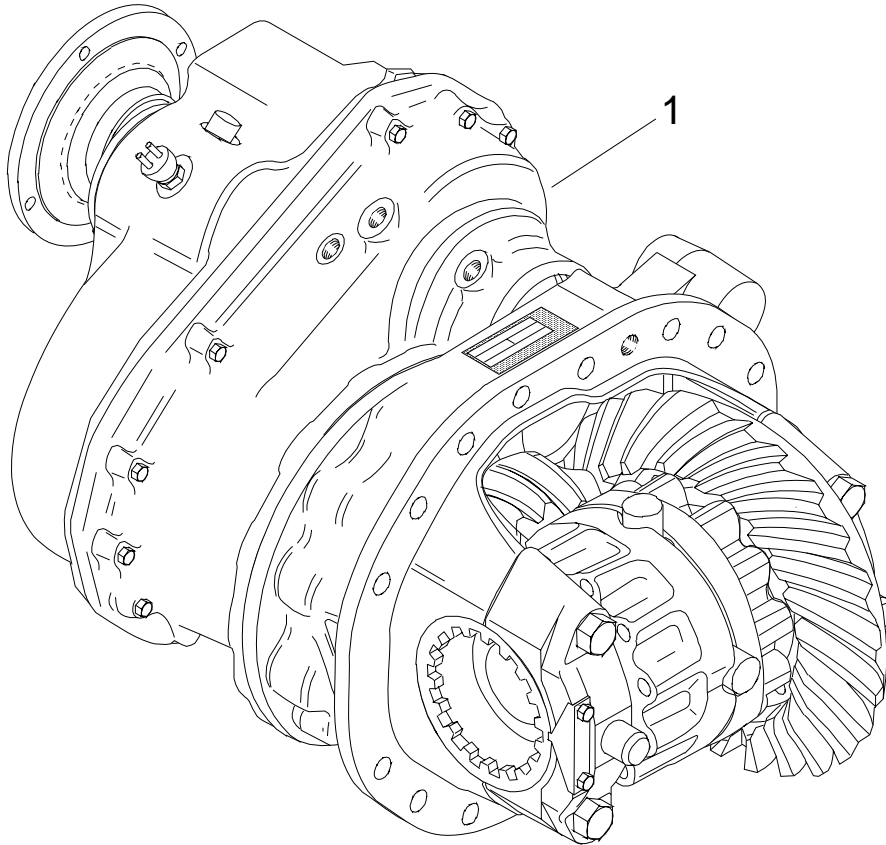
Sisu Axles, Inc.  
Autotehtaan tie 1  
PO Box 189  
FIN-13101 Hämeenlinna  
Finland  
Phone +358 204 55 2999  
Fax +358 204 55 2900



Item	Qty.	Order no.	Description	Note
1	NLA	<b>144-201-5311</b>	Diff. Carrier Assembly	FR 4.68, USE 544-304-4011 (FR4.65)
1	NLA	<b>144-201-5319</b>	Diff. Carrier Assembly	Final Ratio 7.01, USE 544-301-5319
1	NLA	<b>144-201-5321</b>	Diff. Carrier Assembly	Final Ratio 5.56, USE 544-301-5321
1	NLA	<b>144-201-5329</b>	Diff. Carrier Assembly	Final Ratio 6.36, USE 544-301-5329
1	NLA	<b>144-201-5351</b>	Diff. Carrier Assembly	Final Ratio 8.79, USE 544-301-5351
1	NLA	<b>544-201-5381</b>	Diff. Carrier Assembly	Final Ratio 10.55, USE 544-301-5381
1	NLA	<b>544-201-6321</b>	Diff. Carrier Assembly	FR 5.56, Pressure lubrication, USE 544-301-6321
1	NLA	<b>544-201-6329</b>	Diff. Carrier Assembly	FR 6.36 , Pressure lubrication, USE 544-301-6329
1	NLA	<b>544-201-6381</b>	Diff. Carrier Assembly	FR 10.55, Pressure lubrication, USE 544-301-6381
2	16	<b>90303-16407</b>	Hex Screw	M16x40, 10.9
3	1	<b>143-112-7310</b>	Axle Housing	16 ton, 1880 mm Track, up to No. 53334
3	1	<b>143-112-7600</b>	Axle Housing	13 ton, 1800 mm Track, up to No. 53334
3	1	<b>143-112-7610</b>	Axle Housing	16 ton, 2040 mm Track, up to No. 53334
3	1	<b>143-112-7700</b>	Axle Housing	16 ton, 1800 mm Track, up to No. 53334
4	6	<b>90303-18503</b>	Hex Screw	M18x50
5	1	<b>146-721-5610</b>	Chamber bracket	LH, 17 deg. for 145 mm slack adjuster
6	1	<b>146-721-5600</b>	Chamber bracket	RH, 17 deg. for 145 mm slack adjuster
7	4	<b>90303-16407</b>	Hex Screw	M16x40, 10.9
8	1	<b>144-251-3010</b>	Output Shaft	
9	1	<b>144-287-0310</b>	Spacer ring	D54.6/76.4x21
10	1	<b>91734-40651</b>	Deep groove ball bearing	
11	1	<b>91122-08505</b>	Shaft seal	D85/105x10
12	1	<b>144-321-0010</b>	Seal housing	
13	8	<b>90303-10303</b>	Hex Screw	M10x30
14	1	<b>91121-09001</b>	Seal ring	D90/110x5
15	1	<b>138-917-2410</b>	Output flange	HS1700/1800 D55
16	1	<b>90705-43069</b>	washer	D43/80x6
17	1	<b>90546-42653</b>	Nut	M42x1.5
18	1	<b>90621-63633</b>	Split pin	D6.3x63
19	1	<b>90831-24139</b>	Oil plug	R 3/4"
20	1	<b>179-842-0000</b>	Breather Cover	
21	1	<b>179-841-1000</b>	Breather pipe	
22	1	<b>90621-32253</b>	Split pin	3.2x25
23	2	<b>90111-29054</b>	Rivet	D2.9x5
24	1	<b>143-227-0800</b>	Mounting Plate	
25	1	<b>95242-06010</b>	Plastic Pipe	Ø9.5/15.5 L=350
26	1	<b>91978-30901</b>	Binding screw	R3/8"/D10

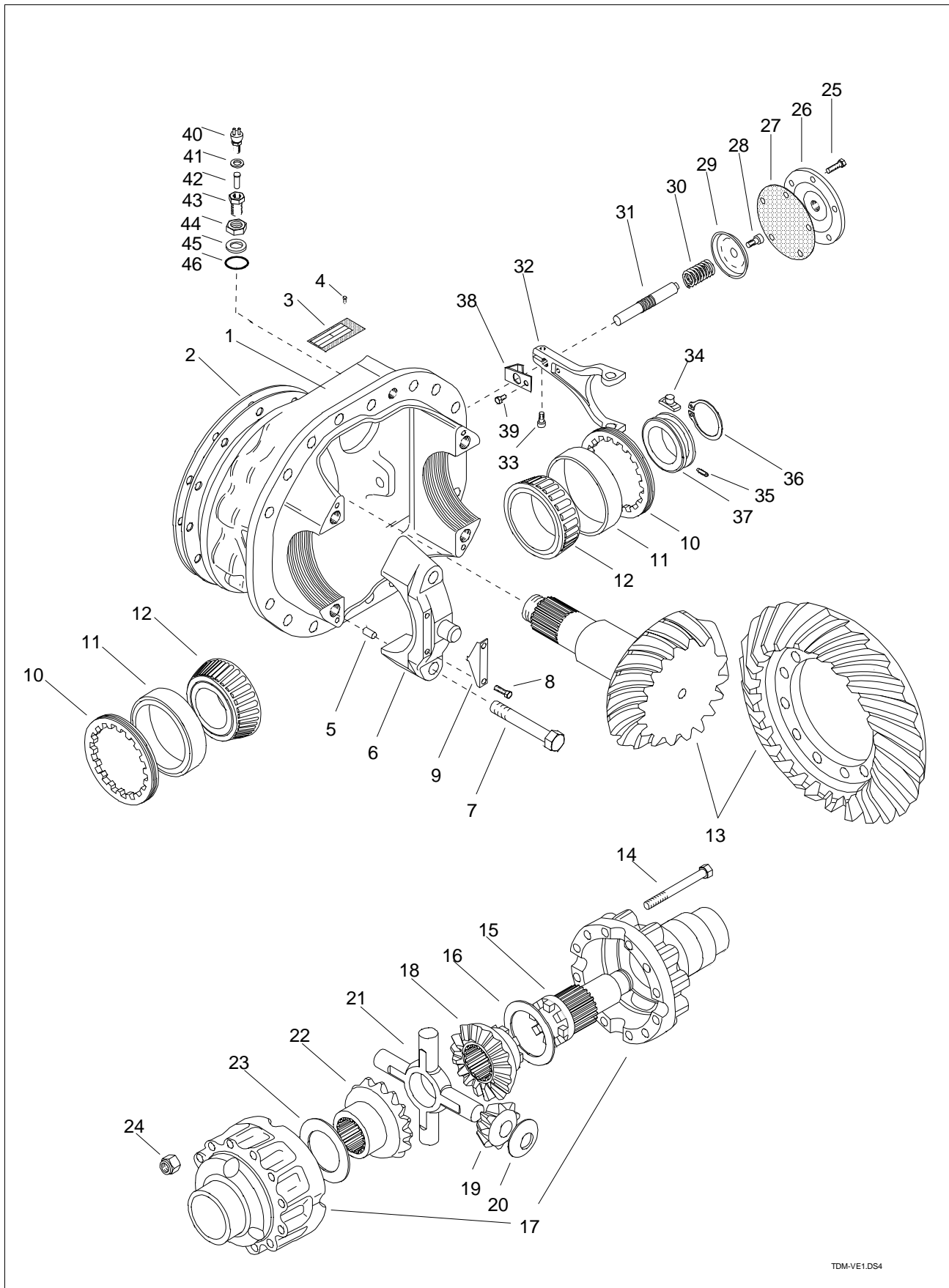


Item	Qty.	Order no.	Description	Note
1	NLA	<b>144-201-5311</b>	Diff. Carrier Assembly	FR 4.68, USE 544-304-4011 (FR4.65)
1	NLA	<b>144-201-5319</b>	Diff. Carrier Assembly	Final Ratio 7.01, USE 544-301-5319
1	NLA	<b>144-201-5321</b>	Diff. Carrier Assembly	Final Ratio 5.56, USE 544-301-5321
1	NLA	<b>144-201-5329</b>	Diff. Carrier Assembly	Final Ratio 6.36, USE 544-301-5329
1	NLA	<b>144-201-5351</b>	Diff. Carrier Assembly	Final Ratio 8.79, USE 544-301-5351
1	NLA	<b>544-201-5381</b>	Diff. Carrier Assembly	Final Ratio 10.55, USE 544-301-5381
1	NLA	<b>544-201-6321</b>	Diff. Carrier Assembly	FR 5.56, Pressure lubrication, USE 544-301-6321
1	NLA	<b>544-201-6329</b>	Diff. Carrier Assembly	FR 6.36 , Pressure lubrication, USE 544-301-6329
1	NLA	<b>544-201-6381</b>	Diff. Carrier Assembly	FR 10.55, Pressure lubrication, USE 544-301-6381
1	NLA	<b>544-301-5311</b>	Diff. Carrier Assembly	Reinforced, FR 4.68, USE 544-304-4011 (FR4.65)
1	1	<b>544-301-5319</b>	Diff. Carrier Assembly	Reinforced, FR 7.01, lock switch "A"
1	1	<b>544-301-5321</b>	Diff. Carrier Assembly	Reinforced, FR 5.56, lock switch "A"
1	1	<b>544-301-5329</b>	Diff. Carrier Assembly	Reinforced, FR 6.36, lock switch "A"
1	1	<b>544-301-5351</b>	Diff. Carrier Assembly	Reinforced, FR 8.79, lock switch "A"
1	1	<b>544-301-6319</b>	Diff. Carrier Assembly	Reinf, FR 7.01, oil pump ver. 1, lock switch "A"
1	1	<b>544-301-6321</b>	Diff. Carrier Assembly	Reinf, FR 5.56, oil pump ver. 1, lock switch "A"
1	1	<b>544-301-6329</b>	Diff. Carrier Assembly	Reinf, FR 6.36, oil pump ver. 1, lock switch "A"
1	NLA	<b>544-301-6411</b>	Diff. Carrier Assembly	Reinf, FR 4.68, oil pump ver. 1, USE 544-308-6611
2	16	<b>90303-16407</b>	Hex Screw	M16x40, 10.9
3	1	<b>543-114-7310</b>	Axle Housing	1880 mm Track, 16 ton
3	1	<b>543-114-7600</b>	Axle Housing	1800 mm Track, 13 ton
3	1	<b>543-114-7610</b>	Axle Housing	2040 mm Track, 16 ton
3	1	<b>543-114-7700</b>	Axle Housing	1800 mm Track, 16 ton
3	1	<b>543-115-1300</b>	Axle Housing	2040 mm Track, 16 ton, Hendrickson RT650
3	1	<b>543-116-0800</b>	Axle Housing	1880 mm Track, 13 ton
3	1	<b>543-116-7400</b>	Axle Housing	1880 track, 16 t, Hendrickson brackets
4	6	<b>90303-18503</b>	Hex Screw	M18x2,5x50
5	1	<b>146-721-5610</b>	Chamber bracket	LH, 17 deg. for 145 mm slack up to No. 20898
5	1	<b>546-721-6510</b>	Chamber bracket	LH, 17 deg. for 165 mm slack since No. 20899
5	1	<b>546-721-6910</b>	Chamber bracket	LH, 13 deg. for 165 mm slack since No. 20899
6	1	<b>146-721-5600</b>	Chamber bracket	RH, 17 deg. for 145 mm slack up to No. 20898
6	1	<b>546-721-6500</b>	Chamber bracket	RH, 17 deg. for 165 mm slack since No. 20899
6	1	<b>546-721-6900</b>	Chamber bracket	RH, 13 deg. for 165 mm slack since No. 20899
7	4	<b>90303-16407</b>	Hex Screw	M16x40, 10.9
7	4	<b>90705-17033</b>	washer	D17/30x3
8	1	<b>144-251-3010</b>	Output Shaft	
9	1	<b>144-287-0310</b>	Spacer ring	D54.6/76.4x21
10	1	<b>91734-40651</b>	Deep groove ball bearing	
11	1	<b>91122-08505</b>	Shaft seal	D85/105x10
12	1	<b>144-321-0010</b>	Seal housing	
13	8	<b>90303-10303</b>	Hex Screw	M10x30
14	1	<b>91121-09001</b>	Seal ring	D90/110x5
15	1	<b>138-917-2410</b>	Output flange	HS1700/1800 D55
15	1	<b>538-967-0110</b>	End Yoke	Output Splined Yoke 1710, spline N55, Z=26
16	1	<b>90705-43069</b>	washer	D43/80x6
17	1	<b>90546-42653</b>	Nut	M42x1.5
18	1	<b>90621-63633</b>	Split pin	6.3x63
19	1	<b>90831-24139</b>	Oil plug	Up to No. 00702, 2/2000
19	1	<b>90873-22109</b>	Oil plug	M22x1.5, since No 00703, 2/2000
19	1	<b>91201-22150</b>	Seal ring	Since No 00703, 2/2000
20	1	<b>179-842-0000</b>	Breather Cover	
21	1	<b>179-841-1000</b>	Breather pipe	
22	1	<b>90621-32253</b>	Split pin	3.2x25
23	2	<b>90111-29054</b>	Rivet	D2.9x5
24	1	<b>143-227-0800</b>	Mounting Plate	
25		<b>95242-06010</b>	Plastic Pipe	Ø9.5/15.5 L=350
26	1	<b>91978-30901</b>	Binding screw	R3/8"/D10



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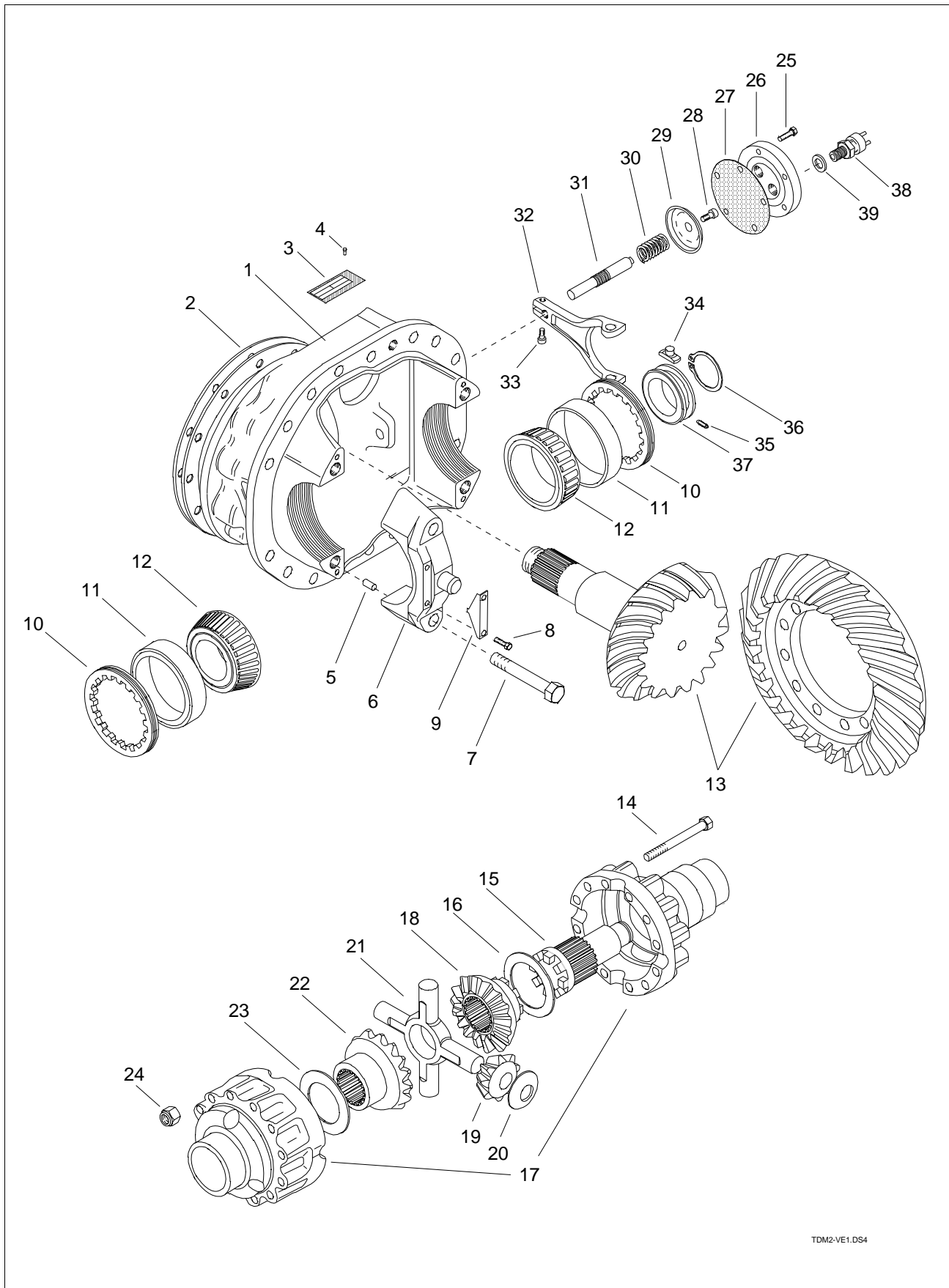
Item	Qty.	Order no.	Description	Note
0,1		<b>N1</b>	Note	Carriers w/reinforced pinion bearing and
0,2		<b>N1</b>	Note	x-lock ind. switch in lock cover (Type "B")
1	1	<b>544-302-4019</b>	Diff. Carrier Assembly	FR 7.01, HS1700/1800, Since No. 133837 (12/03)
1	1	<b>544-302-4021</b>	Diff. Carrier Assembly	FR 5.56, HS1700/1800, Since No. 141115 (04/04)
1	1	<b>544-302-4024</b>	Diff. Carrier Assembly	FR 6.36, Yoke 1710, Since No. 140681 (03/04)
1	1	<b>544-302-4029</b>	Diff. Carrier Assembly	FR 6.36, HS1700/1800, Since No. 132267 (08/03)
1	1	<b>544-302-4051</b>	Diff. Carrier Assembly	FR 8.79, HS1700/1800, Since No. 130276 (02/03)
1	1	<b>544-302-4056</b>	Diff. Carrier Assembly	FR 8.79, Yoke 1710, Since No. 132154 (07/03)
1	1	<b>544-304-4011</b>	Diff. Carrier Assembly	FR 4.65, HS1700/1800, for spare part use
1,1		<b>N1</b>	Note	W/Oil Pump Ver. 2 Since No. 133172 (10/2003)
1,11	1	<b>544-307-8321</b>	Diff. Carrier Assembly	FR 5.56, Oil Pump Ver.2, HS1700/1800
1,11	1	<b>544-307-8329</b>	Diff. Carrier Assembly	FR 6.36, Oil Pump Ver.2 , HS1700/1800
1,11	1	<b>544-308-6611</b>	Diff. Carrier Assembly	FR 4.65, Oil Pump Ver.2, HS1700/1800



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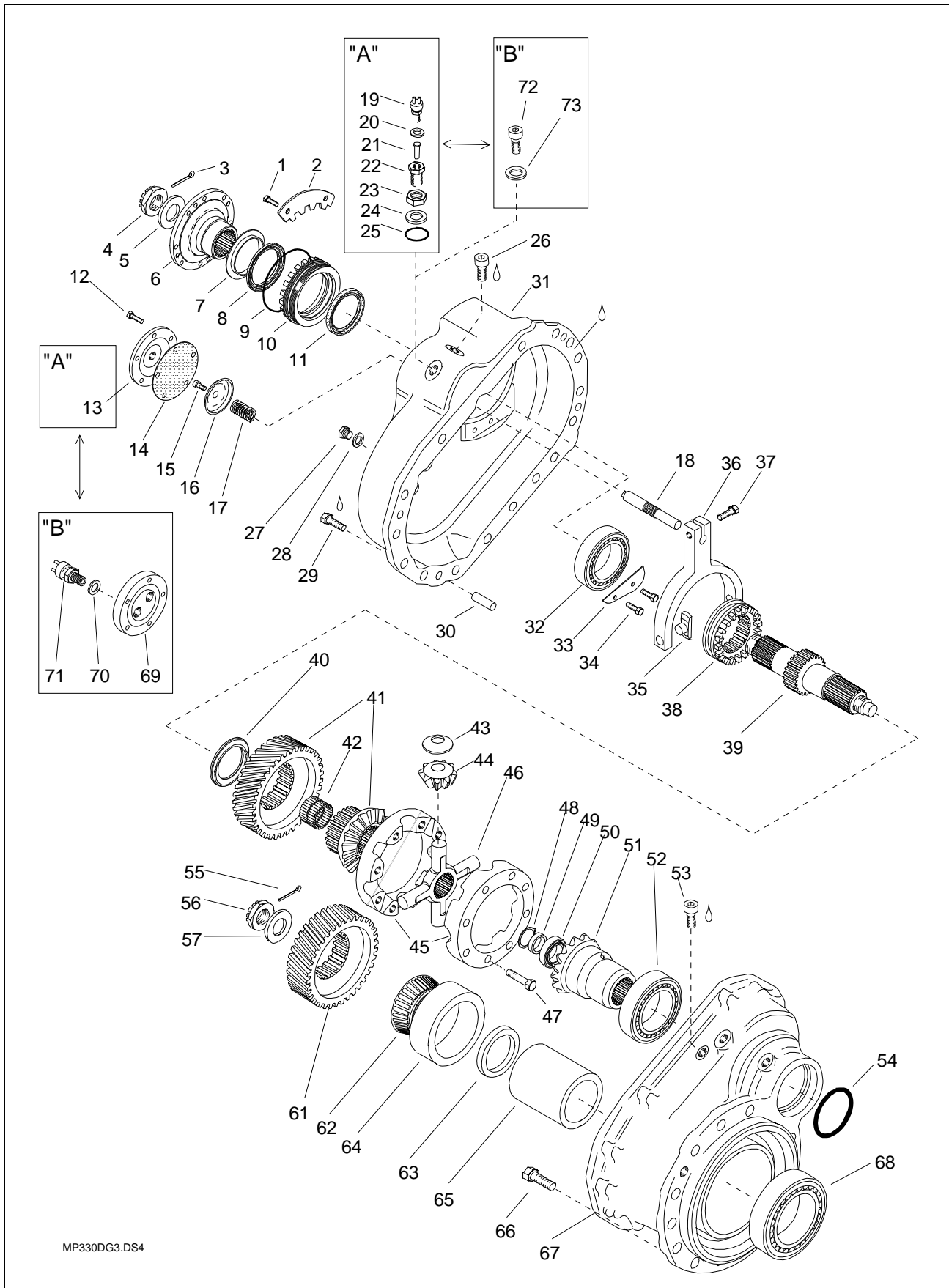


Item	Qty.	Order no.	Description	Note
1	1	144-210-1911	Differential Carrier	Inc. Bearing Case Halfs
2	ar	144-239-2000	Shim	(1.0 mm)
2	ar	144-239-2001	Shim	(0.5 mm)
2	ar	144-239-2002	Shim	(0.2 mm)
2	ar	144-239-2003	Shim	(0.1 mm)
3	1	591600-20823	Name plate	
4	4	90111-29054	Rivet	D2.9x5
5	4	590604-08141	Pin	Ø8x14
6	2	143-214-2180	Bearing Case Half	Not Serviced Separately
7	4	90301-20377	Hex Screw	M20x130
8	4	90303-08103	Hex Screw	M8x10
9	2	143-227-0610	Lock Washer	
10	2	143-226-0012	Adjusting nut	D149
11	2	090-121-4700	Bearing outer race	
12	2	090-110-9000	Bearing inner race	
13	1	143-240-3311	Ring and pinion gear set	FR 4.68, up to No. 01580 (5/2000)
13	1	143-240-3319	Ring and pinion gear set	FR 7.01, up to No. 11472 (4/2001)
13	1	143-240-3321	Ring and pinion gear set	FR 5.56, up to No. 00143 (1/2001)
13	1	143-240-3329	Ring and pinion gear set	FR 6.36, up to No. 10258 (1/2001)
13	1	143-240-3351	Ring and pinion gear set	FR 8.79, up to No. 130376 (2/2003)
13	1	143-240-3381	Ring and pinion gear set	FR 10.55, up to No. 22982 (11/2002)
13	1	543-240-6111	Ring and pinion gear set	Reinf. FR 4.68, since No. 01581 (5/2000)
13	1	543-240-6119	Ring and pinion gear set	Reinf., 14/27, FR 7.01, since No. 11473 (4/2001)
13	1	543-240-6121	Ring and pinion gear set	Reinf. FR 5.56, since No. 00144 (1/2001)
13	1	543-240-6129	Ring and pinion gear set	Reinf. 16/28, FR 6.36, since No. 10259 (1/2001)
13	1	543-240-6151	Ring and pinion gear set	Reinf. FR 8.79, since No. 130377 (2/2003)
13	1	543-240-6181	Ring and pinion gear set	Reinf. 10/29, FR 10.55, since No. 22983 (11/2002)
14	12	90321-16538	Hex Screw	M16x1.5
15	1	144-341-1700	Sliding Gear	
16	1	090-359-7000	Thrust washer	D97/127x3
17	1	143-310-3811	Diff. case assy	
18	1	143-351-3510	Side gear	D58/Z23
19	4	143-341-0700	Pinion gear	
20	4	143-345-0400	Thrust washer	D29/65x1.5
21	1	143-331-0603	Spider	
22	1	143-351-0900	Side gear	D58/Z23
23	1	090-357-5000	Thrust washer	D75/111x3
24	12	90556-16247	Nut	M16x1.5
25	5	90303-08203	Hex Screw	M8x20
26	1	172-161-0700	Membrane cover	M18x1.5, up to S/N 60200 (2/1996)
26	1	172-161-0701	Membrane cover	M16x1.5, since S/N 60201 (2/1996)
26	1	572-161-1501	Membrane cover	M16x1.5, side connection, since S/N 60201 (2/1996)
27	1	172-351-1202	Membrane	Nitrile-rubber (standard)
27	1	572-351-1204	Membrane	Viton-rubber (optional)
28	1	90319-08206	Screw	M8x20
29	1	172-361-0410	Push plate	D70x12
30	1	097-122-0100	Return spring	D29.5x43
31	1	172-212-1710	Sliding Shaft	D16/20x125
32	1	144-751-1210	Control fork	w/o diff. lock indicator switch
32	1	544-751-1410	Control fork	With diff. lock indicator switch
33	1	90313-06208	Allen Screw	M6x20
34	2	133-348-0710	Sliding shoe	
35	1	90335-05108	Stopping screw	M5x10
36	1	91711-06500	Retainer ring	D65
37	1	144-348-0000	Sliding ring	
38	1	541-812-0200	Guide plate	
39	1	90303-08123	Hex Screw	M8x12
40	1	186-490-0281	Signal Lamp Switch	M12x1.5
41	1	91201-12150	Seal ring	D12/18x1.5
42	1	141-812-0100	Control pin	
43	1	141-812-0000	Binding screw	M12x1.5/M18x1.5
44	1	91842-18243	Lock Nut	M18x1.5
45	1	91838-18010	Pressure ring	Ms DR/R 18x23
46	1	91838-18100	O-ring	Ø16x2.5



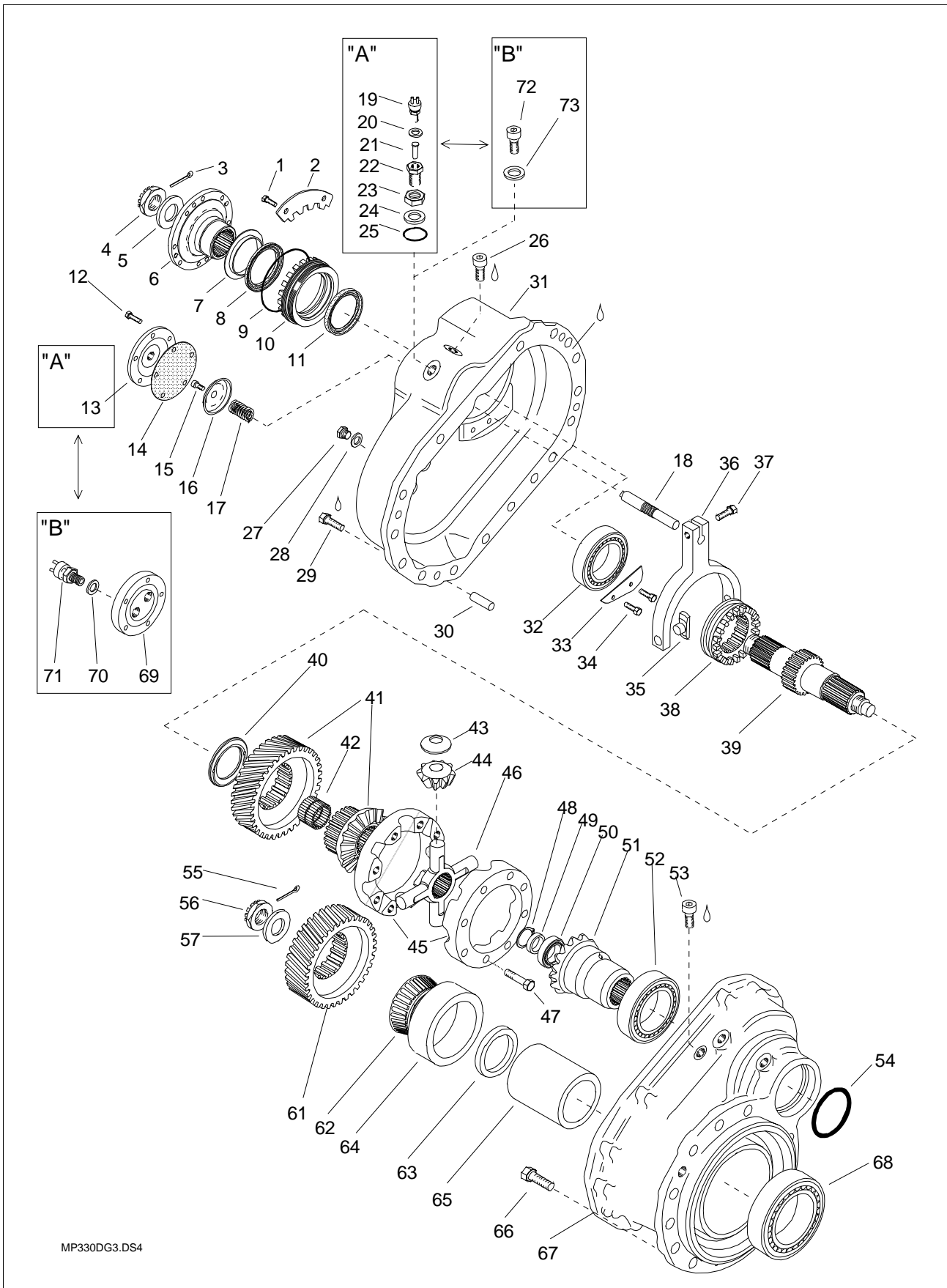
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Item	Qty.	Order no.	Description	Note
1	1	144-210-1911	Differential Carrier	Inc. Bearing Case Halfs
2	ar	144-239-2000	Shim	(1.0 mm)
2	ar	144-239-2001	Shim	(0.5 mm)
2	ar	144-239-2002	Shim	(0.2 mm)
2	ar	144-239-2003	Shim	(0.1 mm)
3	1	91600-20811	Name plate	
4	4	90111-29054	Rivet	D2.9x5
5	4	590604-08141	Pin	Ø8x14
6	2	143-214-2180	Bearing Case Half	Not Serviced Separately
7	4	90301-20377	Hex Screw	M20x130
8	4	90303-08103	Hex Screw	M8x10
9	2	143-227-0610	Lock Washer	
10	2	143-226-0012	Adjusting nut	D149
11	2	090-121-4700	Bearing outer race	
12	2	090-110-9000	Bearing inner race	
13	1	543-240-6111	Ring and pinion gear set	Reinforced, FR 4.09, 4.30 ja 4.68
13	1	543-240-6119	Ring and pinion gear set	Reinforced, 14/27, FR 7.01
13	1	543-240-6121	Ring and pinion gear set	Reinforced, 17/26, FR 5.56
13	1	543-240-6129	Ring and pinion gear set	Reinforced, 16/28, FR 6.36
13	1	543-240-6131	Ring and pinion gear set	Reinforced, 9/31, FR= 12.53
13	1	543-240-6151	Ring and pinion gear set	Reinforced, 12/29, FR 8.79
13	1	543-240-6181	Ring and pinion gear set	Reinforced, 10/29, FR 10.55
13	1	543-240-6311	Ring and pinion gear set	Reinforced, 25/32, FR 4.07, 4.28 & 4.65
14	12	90321-16538	Hex Screw	M16x1.5
15	1	144-341-1700	Sliding Gear	
16	1	090-359-7000	Thrust washer	D97/127x3
17	1	143-310-3811	Diff. case assy	
18	1	143-351-3510	Side gear	D58/Z23
19	4	143-341-0700	Pinion gear	
20	4	143-345-0400	Thrust washer	D29/65x1.5
21	1	143-331-0603	Spider	
22	1	143-351-0900	Side gear	D58/Z23
23	1	090-357-5000	Thrust washer	D75/111x3
24	12	90556-16247	Nut	M16x1.5
25	5	90303-08203	Hex Screw	M8x20
26	1	572-161-1502	Membrane cover	M16x1.5, With signal lamp switch bore
27	1	172-351-1202	Membrane	
28	1	90319-08206	Screw	M8x20
29	1	172-361-0410	Push plate	D70x12
30	1	097-122-0100	Return spring	D29.5x43
31	1	172-212-1710	Sliding Shaft	D16/20x125
32	1	144-751-1210	Control fork	
33	1	90313-06208	Allen Screw	M6x20
34	2	133-348-0710	Sliding shoe	
35	1	90335-05108	Stopping screw	M5x10
36	1	91711-06500	Retainer ring	D65
37	1	144-348-0000	Sliding ring	
38	1	586-490-0381	Signal Lamp Switch	M18x1.5
39	1	91201-18150	Seal ring	D18/22x1.5 Cu

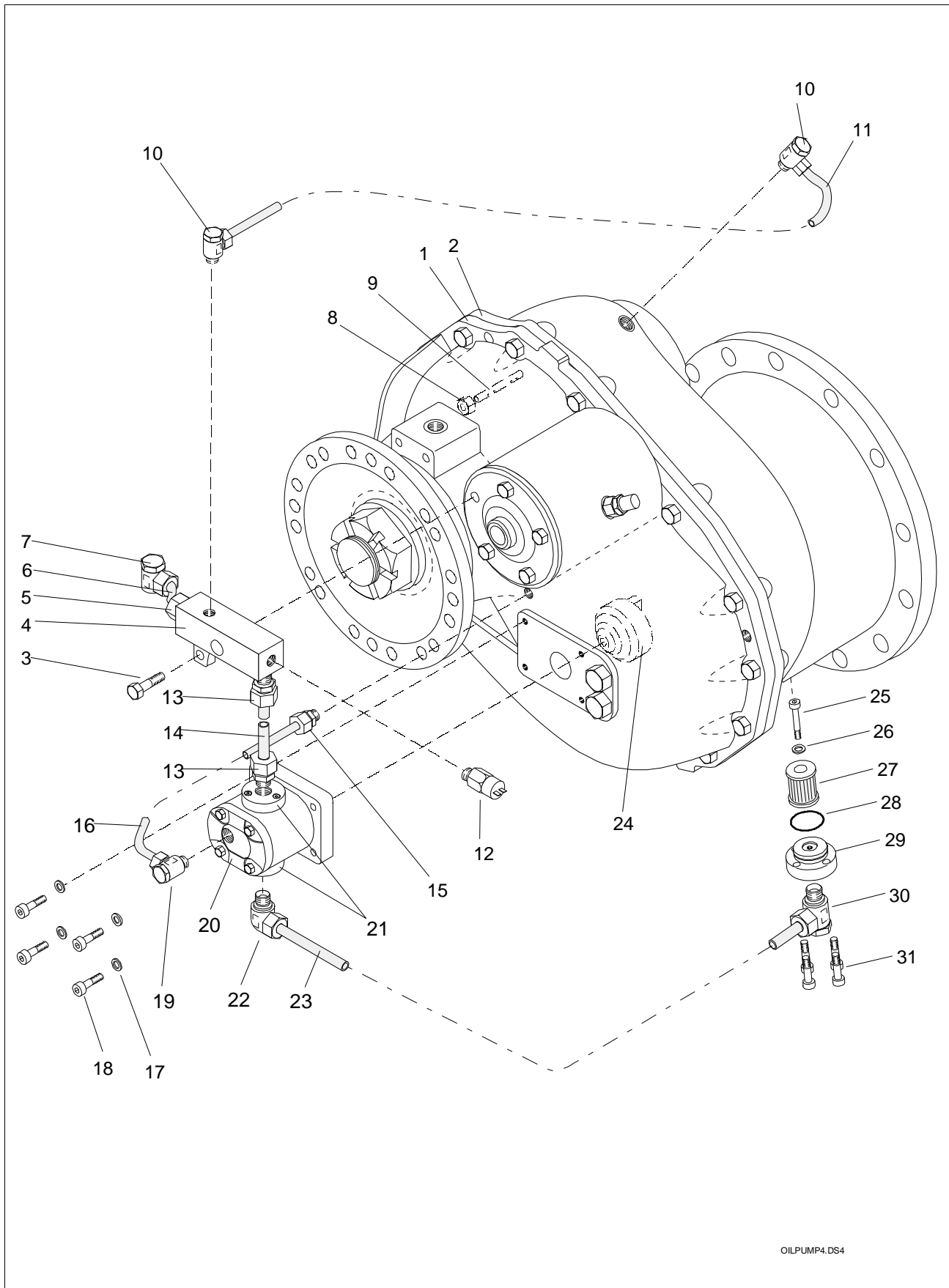


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Item	Qty.	Order no.	Description	Note
1	2	90303-08203	Hex Screw	M8x20
2	1	143-227-0710	Lock Washer	
3	1	90621-63633	Split pin	6.3x63
4	1	90546-42653	Nut	M42x1.5
5	1	90705-43069	washer	D43/80x6
6	1	138-918-0400	Flange	HS1700-1800
6	1	538-967-0100	End Yoke	Input Splined Yoke 1710, spline N65, Z=24
7	1	090-711-9010	Shield	
8	1	090-400-9500	V-ring	VS-95
9	1	91101-39530	O-ring	D139.5x3
10	1	143-226-1200	Adjusting nut	
11	1	91122-08505	Shaft seal	D85/105x10
12	5	90303-08203	Hex Screw	M8x20
13	1	172-161-0700	Membrane cover	M18x1.5, up to S/N 60200 (2/1996)
13	1	172-161-0701	Membrane cover	M16x1.5, since S/N 60201 (2/1996)
14	1	172-351-1202	Membrane	
15	1	90319-08206	Screw	M8x20
16	1	172-361-0410	Push plate	D70x12
17	1	097-122-0100	Return spring	D29.5x43
18	1	172-212-1710	Sliding Shaft	D16/20x125
19	1	186-490-0281	Signal Lamp Switch	M12x1.5
20	1	91201-12150	Seal ring	D12/18x1.5
21	1	141-812-0100	Control pin	D8/10x26
22	1	141-812-0000	Binding screw	M12x1.5/M18x1.5
23	1	91842-18243	Lock Nut	M18x1.5
24	1	91838-18010	Pressure ring	Ms DR/R 18x23
25	1	91838-18100	O-ring	Ø16x2.5
26	1	90873-10053	Plug screw	M10x1, Allen head
27	2	90871-22193	Plug screw	1 pc since serial No. 02040, 7/2000
28	2	91201-22150	Seal ring	1 pc since serial No. 02040, 7/2000
29	16	90303-12308	Hex Screw	M12x30
30	2	90604-10201	Cotter Pin	D10x20
31	1	144-221-0600	Diff. Carrier Cover	Without Pressure Lubrication
32	1	91744-00704	T. Roller bearing	
33	1	146-167-1000	Oil Plate	Up to ser. No. 61919 (8/96)
33	1	546-167-1101	Oil Plate	Supersedes: 146-167-1010 ja 546-167-1100
34	2	90303-08203	Hex Screw	1 piece up to ser. No. 61919 (8/96)
35	2	133-348-1701	Sliding shoe	
36	1	144-751-1300	Control fork	
37	1	90313-08208	Allen Screw	M8x20
38	1	144-274-0710	Sliding ring	
39	NLA	144-251-1910	Intermediate Shaft	Up to No. 44081, use 144-251-3000 & related parts
39	1	144-251-3300	Intermediate Shaft	Suits only w/items 143-331-1900 & 91711-05600
40	1	144-282-0013	Thrust washer	D64/99x6
41	1	144-269-0600	Gear Assembly	Final Ratios 4.68 & over
41	1	144-269-0610	Gear Assembly	Final Ratio 4.09
41	1	144-269-0710	Gear Assembly	Final Ratio 4.30
42	1	91738-40621	Needle bush	
43	4	143-345-0400	Thrust washer	D29/65x1.5
44	4	143-341-0700	Pinion gear	
45	1	143-310-3611	Diff. case assy	
46	NLA	143-331-1611	Spider	Up to No. 44081, use 143-331-1900 & related parts
46	1	143-331-1900	Spider	Suits only w/items 144-251-3300 & 91711-05600
47	8	90301-12703	Hex Screw	M12x70
48	1	91711-05200	Retainer ring	Only for axles up to No. 44081 (10/1994)
48	1	91711-05600	Retainer ring	Suits only w/items 144-251-3300 & 143-331-1900
49	ar	90731-03510	Shim	(0.1 mm)
49	ar	90731-03520	Shim	(0.2 mm)
49	ar	90731-03550	Shim	(0.5 mm)
49	ar	90732-03510	Shim	(1.0 mm)
50	1	91744-00351	T. Roller bearing	

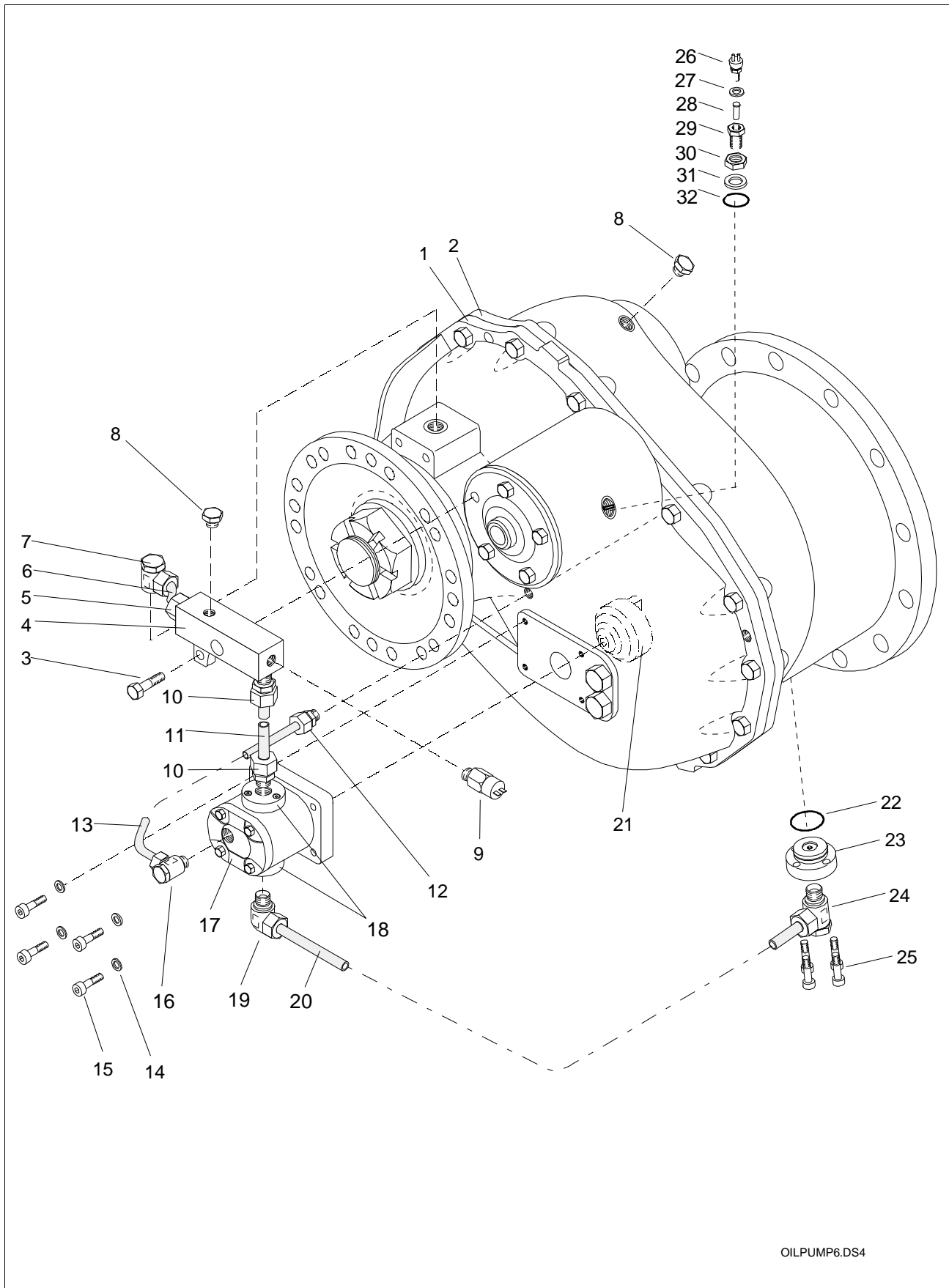


Item	Qty.	Order no.	Description	Note
51	1	<b>143-351-3700</b>	Side gear	
52	1	<b>91744-00951</b>	T. Roller bearing	
53	1	<b>90873-10053</b>	Plug screw	M10x1, Allen head
54	1	<b>591106-99532</b>	O-ring	D99.5x3
55	1	<b>90621-63633</b>	Split pin	D6.3x63
56	1	<b>90546-42653</b>	Nut	M42x1.5
57	1	<b>90705-43069</b>	washer	D43/80x6
58	3	<b>90318-08163</b>	Screw	Up to ser. No. 61919 (8/96)
59	3	<b>90705-08423</b>	washer	Up to ser. No. 61919 (8/96)
60	1	<b>146-167-0910</b>	Oil trough	Up to ser. No. 61919 (8/96)
61	1	<b>144-261-1900</b>	Gear	Final Ratio 4.68 & over
61	1	<b>144-261-1910</b>	Gear	Final Ratio 4.09
61	1	<b>144-261-2010</b>	Gear	Final Ratio 4.30
61	1	<b>544-261-3000</b>	Gear	For reinforced pinion, FR 4.30
61	1	<b>544-261-3010</b>	Gear	For reinforced pinion, FR 4.68 and up
61	1	<b>544-261-3100</b>	Gear	For reinforced pinion, FR 4.09
62	1	<b>090-110-6740</b>	Bearing inner race	
62	1	<b>591744-10754</b>	Bearing inner race	For reinforced pinion
63	ar	<b>099-516-7000</b>	Shim	(0.1 mm)
63	ar	<b>099-516-7001</b>	Shim	(0.3 mm)
63	ar	<b>099-516-7002</b>	Shim	(0.5 mm)
63	ar	<b>099-516-7003</b>	Shim	(0.25 mm)
63	ar	<b>590731-07510</b>	Shim	For reinforced pinion, s=0.10 mm
63	ar	<b>590731-07530</b>	Shim	For reinforced pinion, s=0.30 mm
63	ar	<b>590731-07550</b>	Shim	For reinforced pinion, s=0.50 mm
64	1	<b>090-121-3700</b>	Bearing outer race	
64	1	<b>591744-21451</b>	Bearing outer race	For reinforced pinion
65	ar	<b>143-261-0700</b>	Spacer ring	L=94.20 mm
65	ar	<b>143-261-0701</b>	Spacer ring	L=94.15 mm
65	ar	<b>143-261-0702</b>	Spacer ring	L=94.18 mm
65	ar	<b>143-261-0703</b>	Spacer ring	L=94.12 mm
65	ar	<b>543-261-1300</b>	Spacer ring	For reinforced pinion, L=89.00 mm
65	ar	<b>543-261-1301</b>	Spacer ring	For reinforced pinion, L=89.02 mm
65	ar	<b>543-261-1302</b>	Spacer ring	For reinforced pinion, L=89.05 mm
65	ar	<b>543-261-1303</b>	Spacer ring	For reinforced pinion, L=89.08 mm
66	12	<b>90303-16407</b>	Hex Screw	M16x40, 10.9
67	1	<b>144-211-1300</b>	Diff. Carrier Housing	Without Pressure Lubrication
67	1	<b>544-211-1900</b>	Diff. Carrier Housing	For reinforced pinion, w/o oil pump
68	1	<b>591744-00760</b>	T. Roller bearing	For reinforced pinion
68	1	<b>91744-00681</b>	T. Roller bearing	
69	1	<b>572-161-1502</b>	Membrane cover	For use with signal lamp switch
70	1	<b>91201-18150</b>	Seal ring	D18/22x1.5 Cu
71	1	<b>586-490-0381</b>	Signal Lamp Switch	M18x1.5
72	1	<b>91201-18150</b>	Seal ring	D18/22x1.5 Cu
73	1	<b>90871-18173</b>	Plug screw	M18x1.5

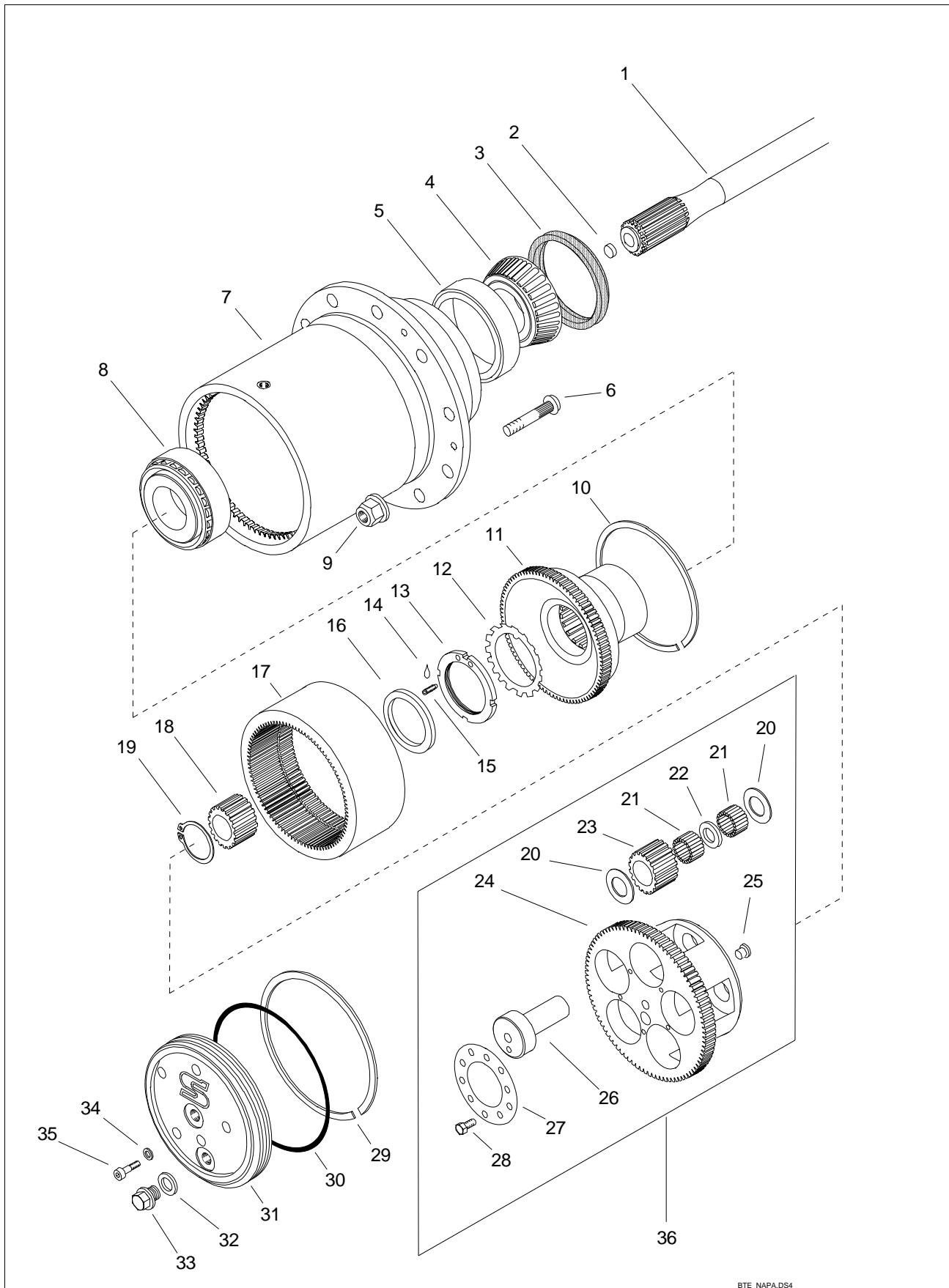




Item	Qty.	Order no.	Description	Note
1	1	<b>144-221-0610</b>	Diff. Carrier Cover	With oil pump
2	1	<b>144-211-1310</b>	Diff. Carrier Housing	With Oil Pump
2	1	<b>544-211-1910</b>	Diff. Carrier Housing	For reinforced pinion, with oil pump
3	1	<b>90303-08303</b>	Hex Screw	With oil pump
4	1	<b>544-371-0000</b>	By-pass manifold	
5	1	<b>591951-61014</b>	Fitting	M14x1.5, 10 mm
6	1	<b>579-615-0100</b>	Pipe	Dia 10 mm
7	1	<b>591952-31008</b>	Fitting	R1/4", 10 mm
8	1	<b>591951-60610</b>	Fitting	
9	1	<b>579-615-0200</b>	Nozzle pipe	
10	2	<b>591952-40610</b>	Fitting	M10x1, D6
11	1	<b>579-615-0110</b>	Pipe	
12	1	<b>586-340-0001</b>	Pressure switch	
12	1	<b>91201-14150</b>	Seal ring	D14/18x1.5 Cu
13	2	<b>591951-51212</b>	Fitting	R3/8", 12 mm
14	1	<b>579-615-0010</b>	Pipe	Dia 12 mm
15	1	<b>91950-11010</b>	Pipe joint	M10x1, 6 mm
16	1	<b>579-615-0210</b>	Pipe	Dia 6 mm
17	4	<b>90705-06423</b>	washer	D6.4/12.5x1.6
18	4	<b>90313-06208</b>	Allen Screw	M6x20
19	1	<b>591952-10604</b>	Fitting	R1/8", 6 mm
20	1	<b>573-010-0001</b>	Pump unit	
21	2	<b>573-190-0001</b>	Spacer flange	incl. screws
22	1	<b>591952-11212</b>	Fitting	R3/8", 12mm
23	1	<b>579-615-0000</b>	Pipe	
24	1	<b>544-361-0000</b>	Shaft coupling	
25	1	<b>590311-05603</b>	Allen Screw	M5x60
26	1	<b>590705-05313</b>	washer	D5.3/10x1
27	1	<b>569-630-0001</b>	Suction filter	incl. seal
28	1	<b>591100-37020</b>	O-ring	D37x2
29	1	<b>544-741-0000</b>	Filter holder	
30	1	<b>591952-31212</b>	Fitting	R3/8", 12mm
31	4	<b>90313-06208</b>	Allen Screw	M6x20

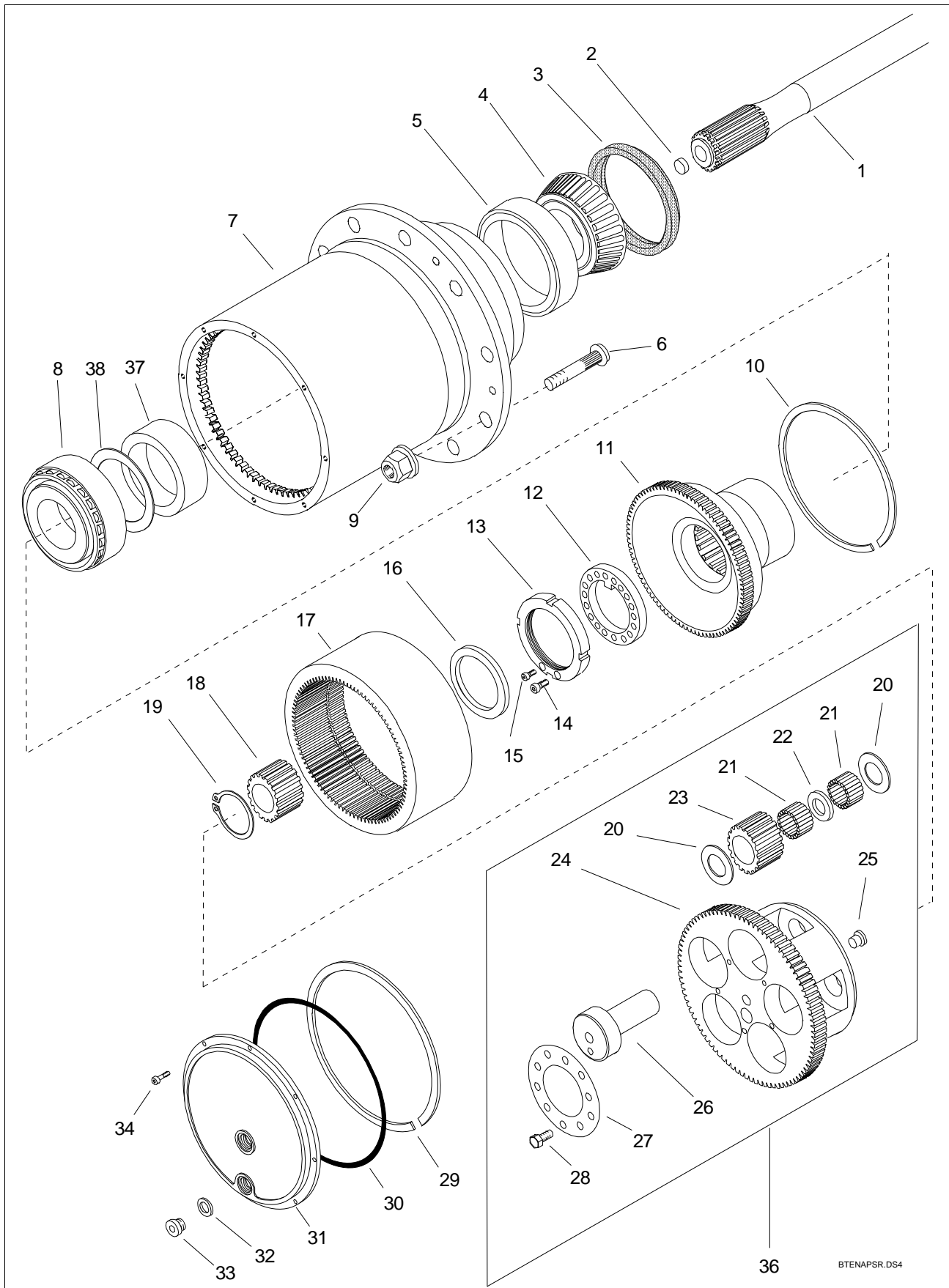


Item	Qty.	Order no.	Description	Note
1	1	<b>144-221-0610</b>	Diff. Carrier Cover	With Pressure Lubrication
2	1	<b>544-211-1910</b>	Diff. Carrier Housing	For reinforced pinion, with oil pump
3	1	<b>90303-08303</b>	Hex Screw	With oil pump
4	1	<b>544-371-0000</b>	By-pass manifold	
5	1	<b>591951-61014</b>	Fitting	M14x1.5, 10 mm
6	1	<b>579-615-0100</b>	Pipe	Dia 10 mm
7	1	<b>591952-31008</b>	Fitting	R1/4", 10 mm
8	2	<b>90871-10143</b>	Plug screw	M10x1, hex head 14 mm
9	1	<b>586-340-0001</b>	Pressure switch	
9	1	<b>91201-14150</b>	Seal ring	Cu 14x1.5
10	2	<b>591951-51212</b>	Fitting	R3/8", 12 mm
11	1	<b>579-615-0010</b>	Pipe	Dia 12 mm
12	1	<b>91950-11010</b>	Pipe joint	M10x1, 6 mm
13	1	<b>579-615-0210</b>	Pipe	Dia 6 mm
14	4	<b>90705-06423</b>	washer	D6.4/12.5x1.6
15	4	<b>90313-06208</b>	Allen Screw	M6x20
16	1	<b>591952-10604</b>	Fitting	R1/8", 6 mm
17	1	<b>573-010-0001</b>	Pump unit	
18	2	<b>573-190-0001</b>	Spacer flange	incl. screws
19	1	<b>591952-11538</b>	Fitting	R3/8", 15 mm
20	1	<b>579-615-0910</b>	Pipe	Dia 15 mm
21	1	<b>544-361-0000</b>	Shaft coupling	
22	1	<b>591100-37020</b>	O-ring	37x2
23	1	<b>544-741-0010</b>	Flange	
24	1	<b>591952-31512</b>	Fitting	R1/2", 15 mm
25	4	<b>90313-06208</b>	Allen Screw	M6x20
26	1	<b>186-490-0281</b>	Signal Lamp Switch	M12x1.5
27	1	<b>91201-12150</b>	Seal ring	D12/18x1.5
28	1	<b>141-812-0100</b>	Control pin	D8/10x26
29	1	<b>141-812-0000</b>	Binding screw	M12x1.5/M18x1.5
30	1	<b>91842-18243</b>	Lock Nut	M18x1.5
31	1	<b>91838-18010</b>	Pressure ring	Ms DR/R 18x23
32	1	<b>91838-18100</b>	O-ring	Ø16x2.5



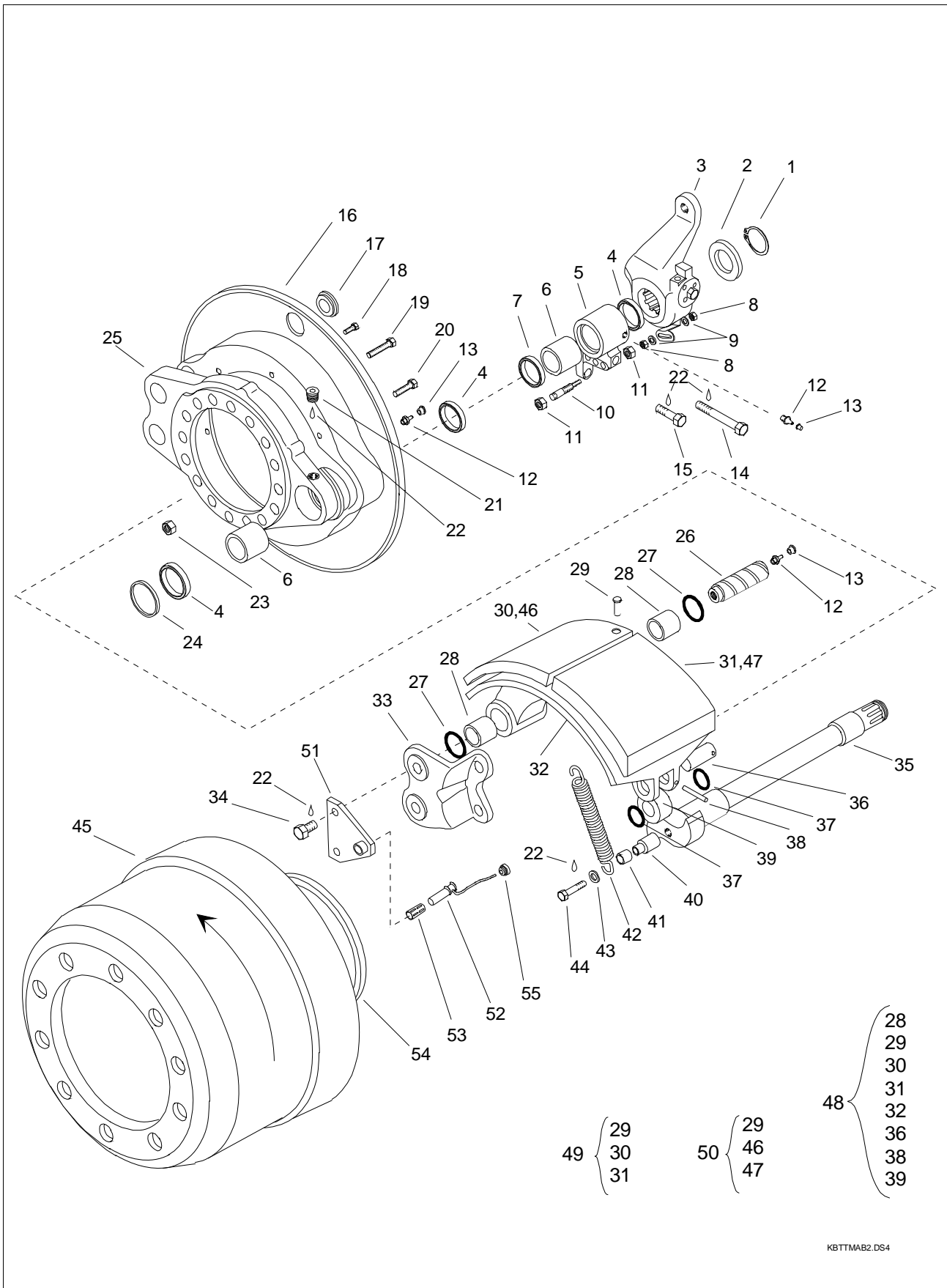
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Item	Qty.	Order no.	Description	Note
0,1		<b>N1</b>	Note	Axle Shaft Spline D58/ Z23
1	1	<b>143-511-5400</b>	Axle Shaft	LH, L=1049, Track 1800
1	1	<b>143-511-5410</b>	Axle Shaft	RH, L = 1137, Track 1800
1	1	<b>143-511-6000</b>	Axle Shaft	LH, L=1089, Track 1880
1	1	<b>143-511-6010</b>	Axle Shaft	LH, L=1177, Track 2040
1	1	<b>143-511-6010</b>	Axle Shaft	RH, L=1177, Track 1880
1	1	<b>143-511-6300</b>	Axle Shaft	RH, L=1257, Track 2040
2	2	<b>140-125-0100</b>	Thrust pin	D25
3	2	<b>91122-12103</b>	Shaft seal	D121.06x160.43, up to ser. No. 53334
4	2	<b>090-111-0000</b>	Bearing inner race	
5	2	<b>090-121-5700</b>	Bearing outer race	
6	20	<b>140-911-2700</b>	Wheel bolt	L=113 mm
7	2	<b>143-441-0200</b>	Wheel hub	With steel rims up to S/N 53334
7	2	<b>543-441-0510</b>	Wheel hub	With Al. rims up to S/N 53334
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	
12	2	<b>099-459-0000</b>	Lock washer	
13	2	<b>099-290-8003</b>	Lock Nut	
14		<b>95752-10010</b>	Thread locking compound	
15	4	<b>90319-06106</b>	Lock Screw	M6x10
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>141-422-0600</b>	Planetary gear cover	up to ser. No. 53334
32	4	<b>91201-22152</b>	Seal ring	D22/27x1.5 Al
33	4	<b>90873-22103</b>	Plug	M22x1.5 - DIN908, Allen head
34	10	<b>91208-08002</b>	Seal ring	up to ser. No. 53334
35	10	<b>90311-08308</b>	Screw	up to ser. No. 53334
36	2	<b>141-404-0100</b>	Planetary gear	



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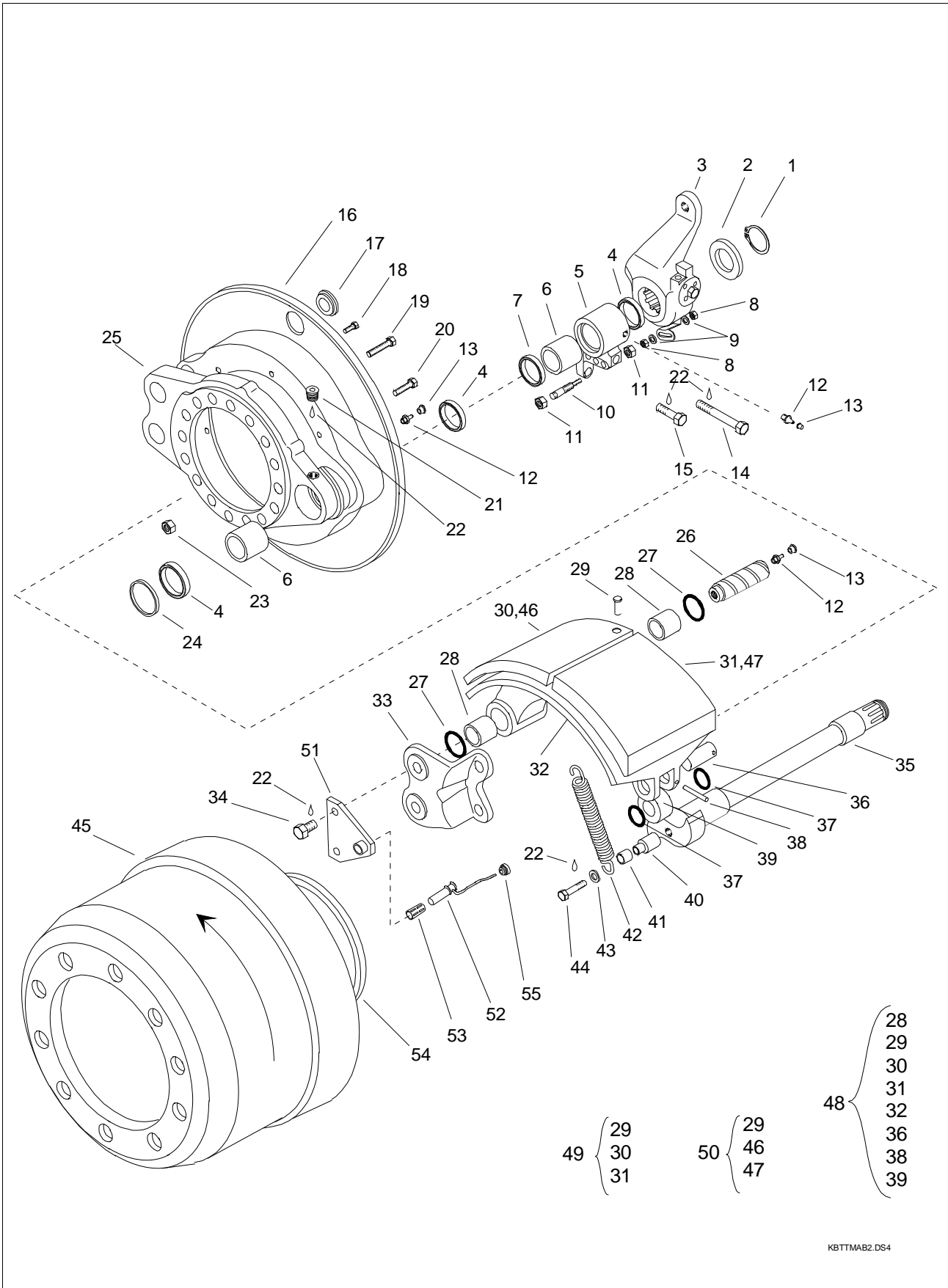
Item	Qty.	Order no.	Description	Note
0,1		<b>N1</b>	Note	Axle Shaft Spline D58/ Z23
1	2	<b>143-511-0210</b>	Axle Shaft	L=1097, FRDP, 1800 mm Track
1	1	<b>143-511-5400</b>	Axle Shaft	LH, L=1049, FRMP&FRFP, 1800 mm Track
1	2	<b>143-511-5410</b>	Axle Shaft	L=1137, FRDP, 1880 mm Track
1	1	<b>143-511-5410</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



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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, up to No. 20898 (4/2002)
3	1	146-530-1021	Slack adjuster	LH, 145 mm, up to No. 20898 (4/2002)
3	1	546-530-3111	Slack adjuster	LH, 165 mm, since No. 20899 (4/2002)
3	1	546-530-3121	Slack adjuster	RH, 165 mm, since No. 20899 (4/2002)
4	6	91122-04201	Shaft seal	D42/55x8
5	1	146-224-2310	Bearing housing	RH
5	1	146-224-2400	Bearing housing	LH
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	4/8	91402-10003	Grease nipple	M10x1, Straight
13	4/8	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	
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, with o-rings
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	
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	
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
46		146-392-6306	Brake lining (over size)	Not serviced separately
47		146-392-6206	Brake lining (over size)	Not serviced separately
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



KBTTMAB2.DS4

Item	Qty.	Order no.	Description	Note
34	4	<b>90303-10303</b>	Hex Screw	M10x30
51	2	<b>189-931-0900</b>	Bracket	
52	2	<b>189-250-0071</b>	Sensor	Wabco, cable 1m, up tp No. 133697 (12/2003)
52	2	<b>589-250-0081</b>	Sensor	Knorr, cable 2m, since No. 133698 (12/2003)
53	2	<b>189-295-0000</b>	Bush	
54	2	<b>189-291-0000</b>	Ring gear	100 Teeth, ABS
55	2	<b>592235-17041</b>	Rubber bushing	D4/17, for Wabco sensor
55	2	<b>592235-17101</b>	Rubber bushing	D10/17, for Knorr sensor