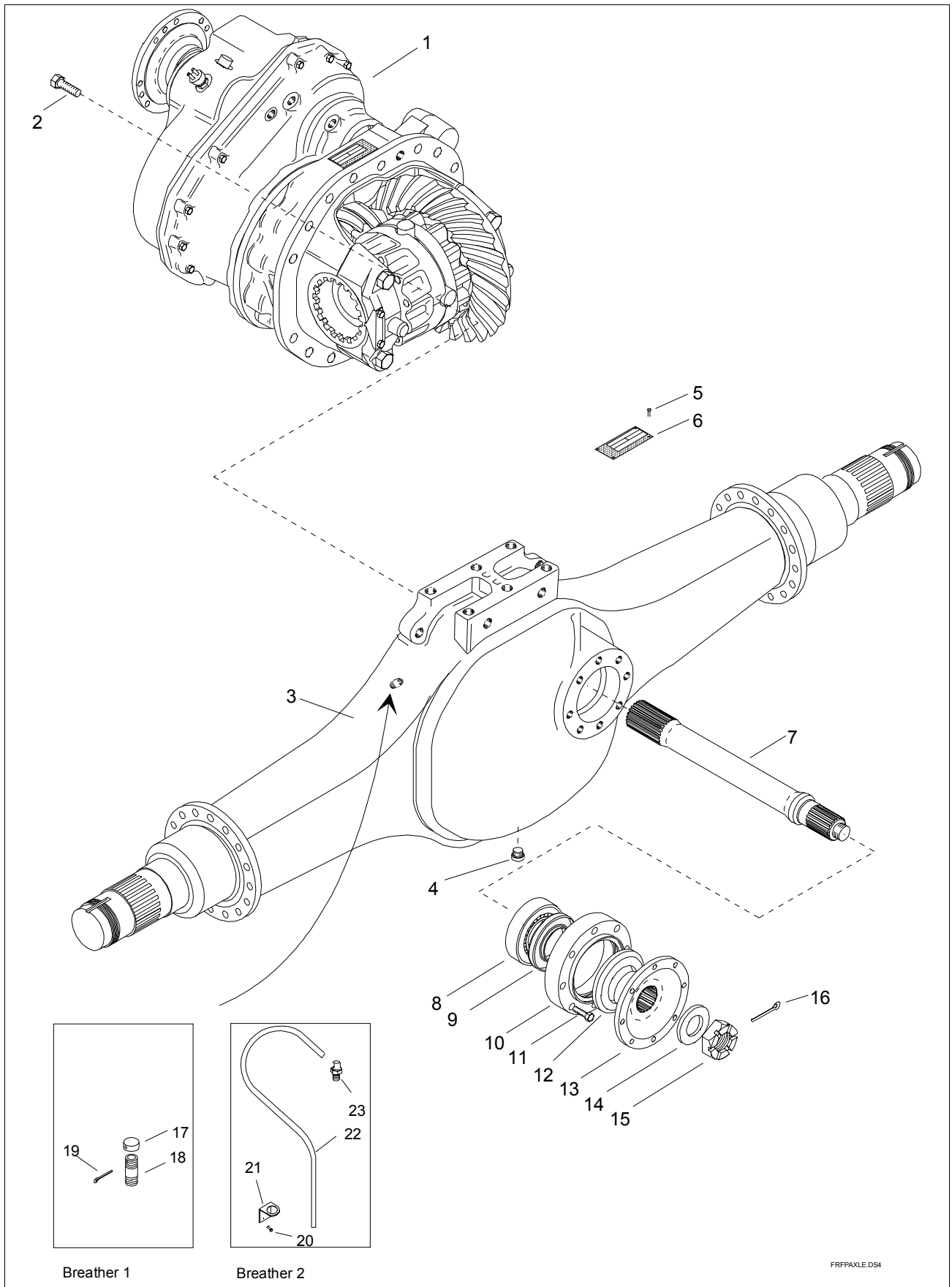


# **SISU AXLES**

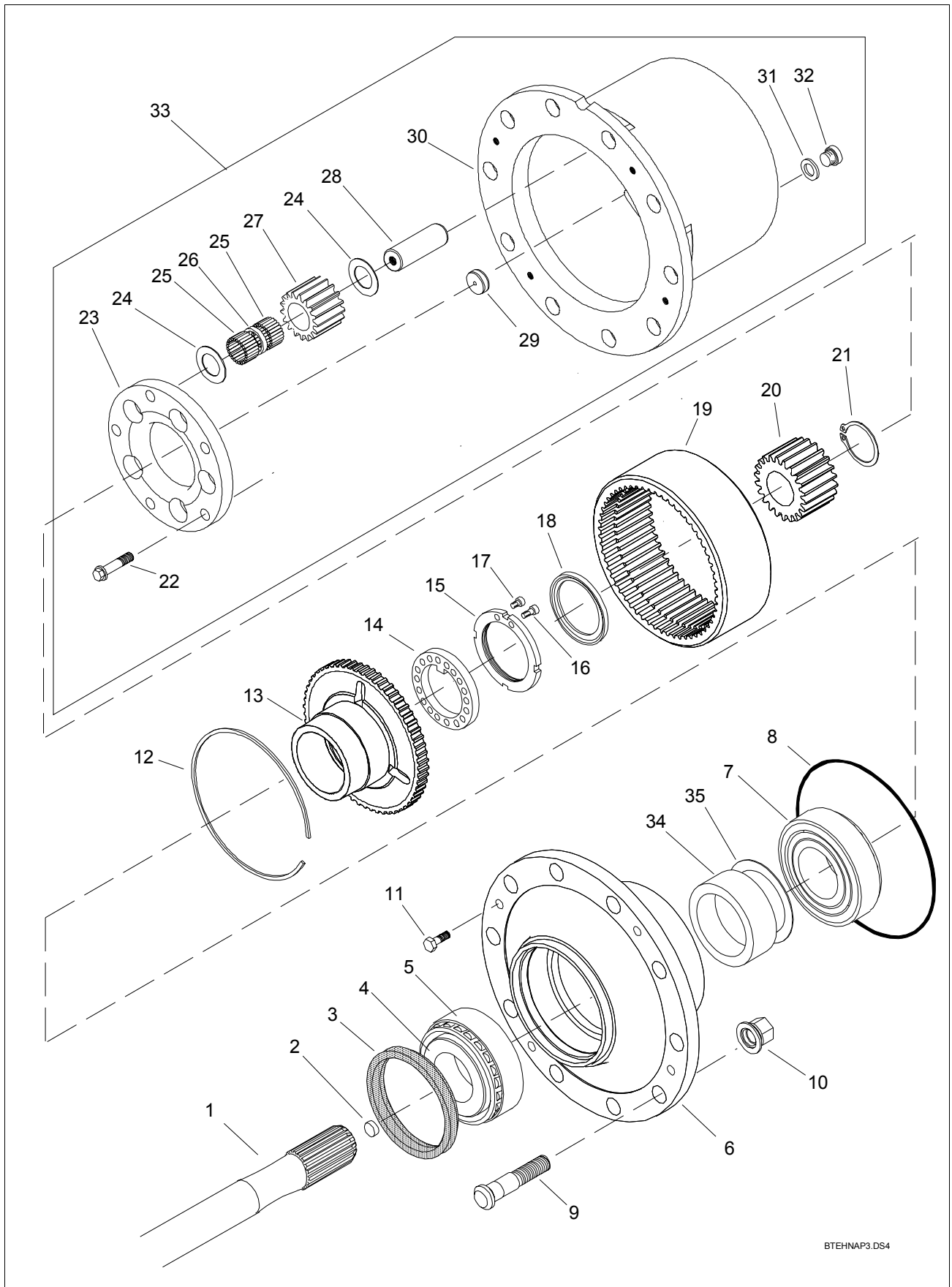
## **SPARE PARTS BOOK**

**Tridem Axle  
FRFP  
FRFP-11-S  
Book No. 202 (9/2002)**

**Sisu Axles, Inc.**  
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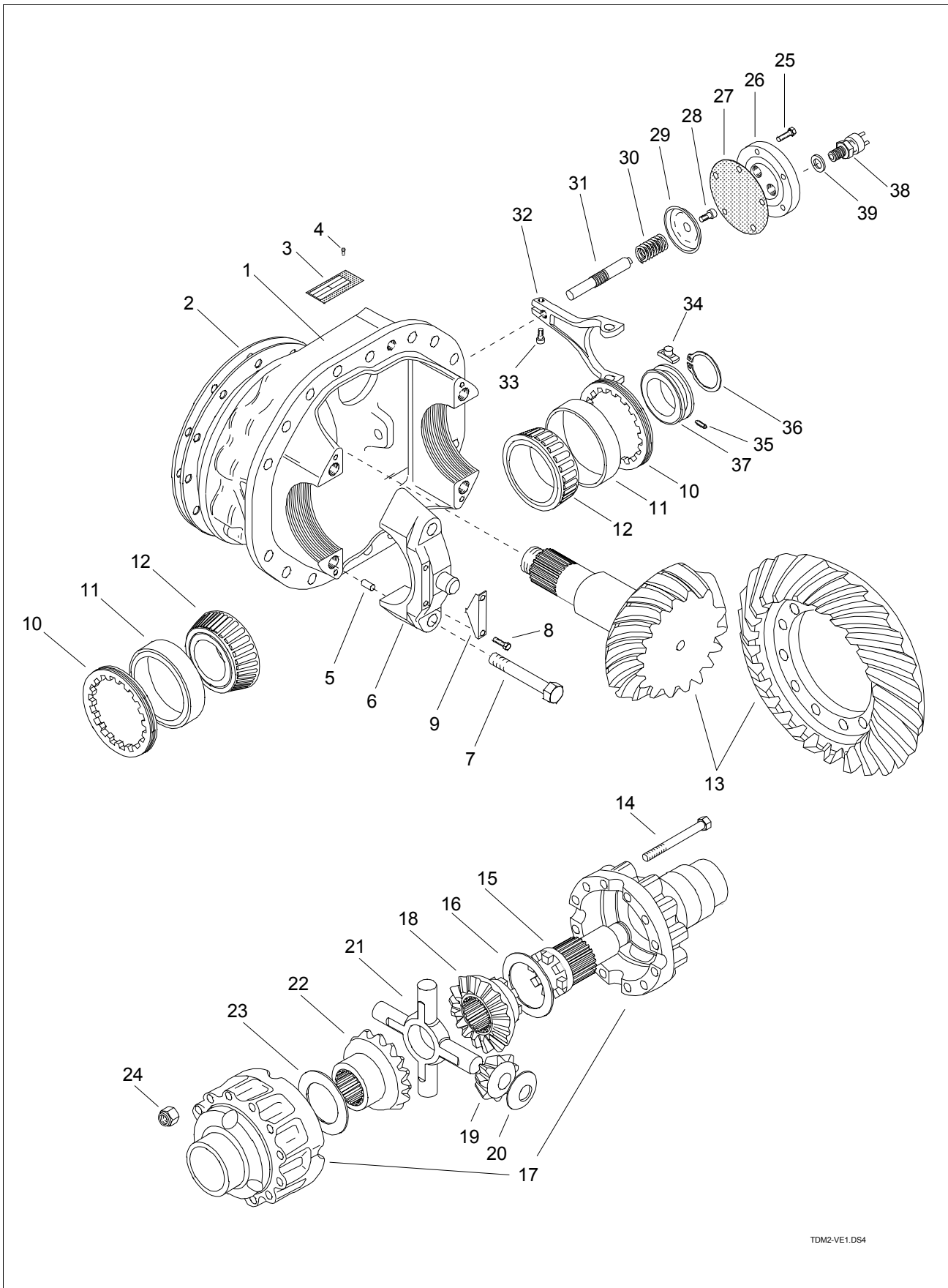


Item	Qty.	Order no.	Description	Note
1	1	<b>544-206-5021</b>	Diff. carrier assembly	FR=5.56, HS1700/1800 & Yoke 1710 flanges
1	1	<b>544-206-5111</b>	Diff. carrier assembly	FR=4.65, HS1700/1800 & Yoke 1710 flanges
2	16	<b>90303-16407</b>	Screw	
3	1	<b>543-116-6200</b>	Axle housing	Track 1960
4	1	<b>90873-22109</b>	Oil plug	M22x1.5, Allen head
4	1	<b>91201-22150</b>	Seal ring	Cu
5	4	<b>90111-29054</b>	Rivet	
6	1	<b>91600-20811</b>	Name plate	
7	1	<b>544-251-3610</b>	Output Shaft	
8	1	<b>91734-40651</b>	S.R.D. Ball bearing	
9	1	<b>91122-08505</b>	Shaft seal	
10	1	<b>544-321-0200</b>	Seal housing	
11	8	<b>590303-10503</b>	Screw	
12	1	<b>91121-09001</b>	Seal ring	
13	1	<b>538-967-0310</b>	Output flange	Yoke 1710
14	1	<b>90705-43069</b>	washer	
15	1	<b>90546-42653</b>	Nut	
16	1	<b>90621-63633</b>	Split pin	
17	1	<b>179-842-0000</b>	Breather Cover	
18	1	<b>179-841-1000</b>	Breather pipe	
19	1	<b>90621-32253</b>	Split pin	
20	2	<b>90111-29054</b>	Rivet	
21	1	<b>143-227-0800</b>	Mounting Plate	
22		<b>95242-06010</b>	Plastic Pipe	
23	1	<b>91978-30901</b>	Binding screw	



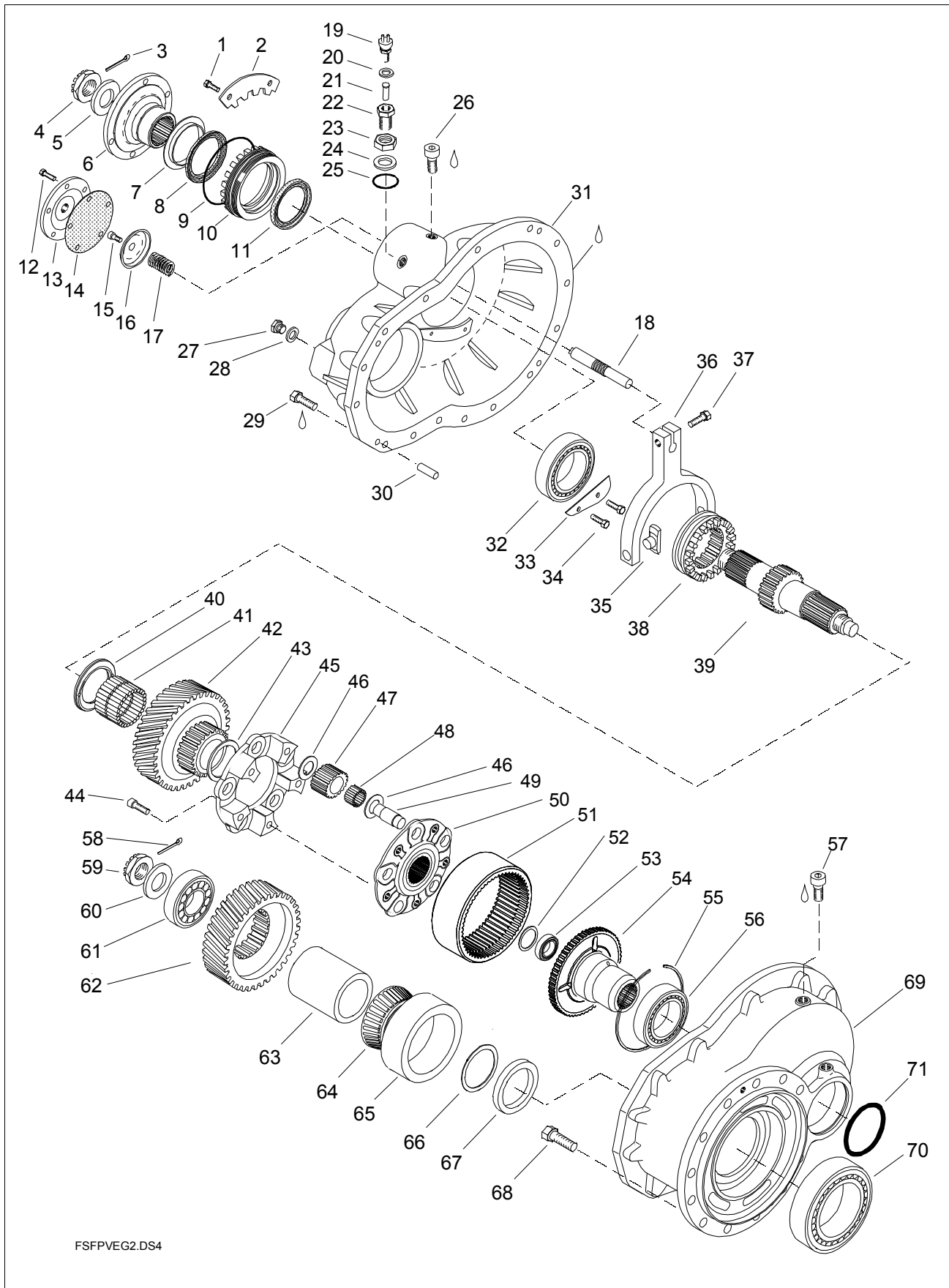
BTEHNAP3.DS4

Item	Qty.	Order no.	Description	Note
1	1	<b>543-511-8000</b>	Axle Shaft	LH, FRMP, W52x2x24, L=1087
1	1	<b>543-511-8010</b>	Axle Shaft	LH, FRFP, W52x2x24, L=1127
1	2	<b>543-511-9310</b>	Axle Shaft	FRDP, W52x2x24, L=1159
1	1	<b>543-511-9400</b>	Axle Shaft	RH, FRMP, W52x2x24, L=1240
1	1	<b>543-511-9900</b>	Axle Shaft	RH, FRFP, W52x2x24, L=1212
2	2	<b>140-125-0100</b>	Thrust pin	
3	2	<b>591122-12702</b>	Shaft seal	127x160, since No. 20577 (4/2002)
3	2	<b>91122-12701</b>	Shaft seal	127x159 (8/1995 -->4/2002)
4	2	<b>090-111-0000</b>	Bearing inner race	
5	2	<b>090-121-5700</b>	Bearing outer race	
6	2	<b>543-411-3510</b>	Wheel hub	With seal 91122-12701
6	2	<b>543-411-3800</b>	Wheel hub	Since No. 20577 (03/2002)
7	2	<b>91744-01201</b>	T. Roller bearing	
8	2	<b>91109-50040</b>	O-ring	D250x4
9	20	<b>140-911-3210</b>	Wheel bolt	L=122
10	20	<b>540-916-1610</b>	Wheel nut	
11	8	<b>90303-10303</b>	Screw	M10x30
12	2	<b>91720-22001</b>	Retainer ring	D220x3
13	2	<b>535-271-0611</b>	Ring gear hub	
14	2	<b>143-418-0510</b>	Lock Washer	
15	2	<b>599-290-8004</b>	Lock Nut	M90x2
16	2	<b>590319-08186</b>	Screw	M8x18
17	2	<b>590319-08126</b>	Screw	M8x12
18	2	<b>090-721-8500</b>	Spacer ring	
19	2	<b>535-261-2110</b>	Ring gear	
20	2	<b>535-211-1300</b>	Sun gear	N52x2x24
21	2	<b>91711-05200</b>	Retainer ring	D52x2
22	10	<b>590169-01670</b>	Screw	
23	2	<b>535-231-1300</b>	Planet carrier	Up to No. 10373 (1/2001)
23	2	<b>535-231-1310</b>	Planet carrier	Since No. 10374 (1/2001)
24	20	<b>590-353-1100</b>	Spacer plate	
25	480	<b>91385-50240</b>	Needle roller	D5x23.8
26	10	<b>590-354-3100</b>	Spacer ring	
27	10	<b>535-241-1310</b>	Planet gear	
28	10	<b>535-251-1400</b>	Planet gear shaft	Up to No. 10373 (1/2001)
28	10	<b>535-251-1410</b>	Planet gear shaft	Since No. 10374 (1/2001)
29	2	<b>540-125-0310</b>	Thrust pin	
30	2	<b>541-471-0301</b>	Hub Housing	
31	2	<b>91201-22150</b>	Seal ring	D22/27x1.5 Cu
32	2	<b>90871-22193</b>	Plug screw	M22x1.5, hex head
33	2	<b>541-404-0151</b>	Planetary gear	
34	2	<b>543-416-0400</b>	Spacer ring	L=44 mm
35	ar	<b>590731-09510</b>	Shim	s= 0.1 mm
35	ar	<b>590731-09515</b>	Shim	s= 0.15 mm
35	ar	<b>590731-09520</b>	Shim	s= 0.2 mm
35	ar	<b>590731-09550</b>	Shim	s= 0.5 mm



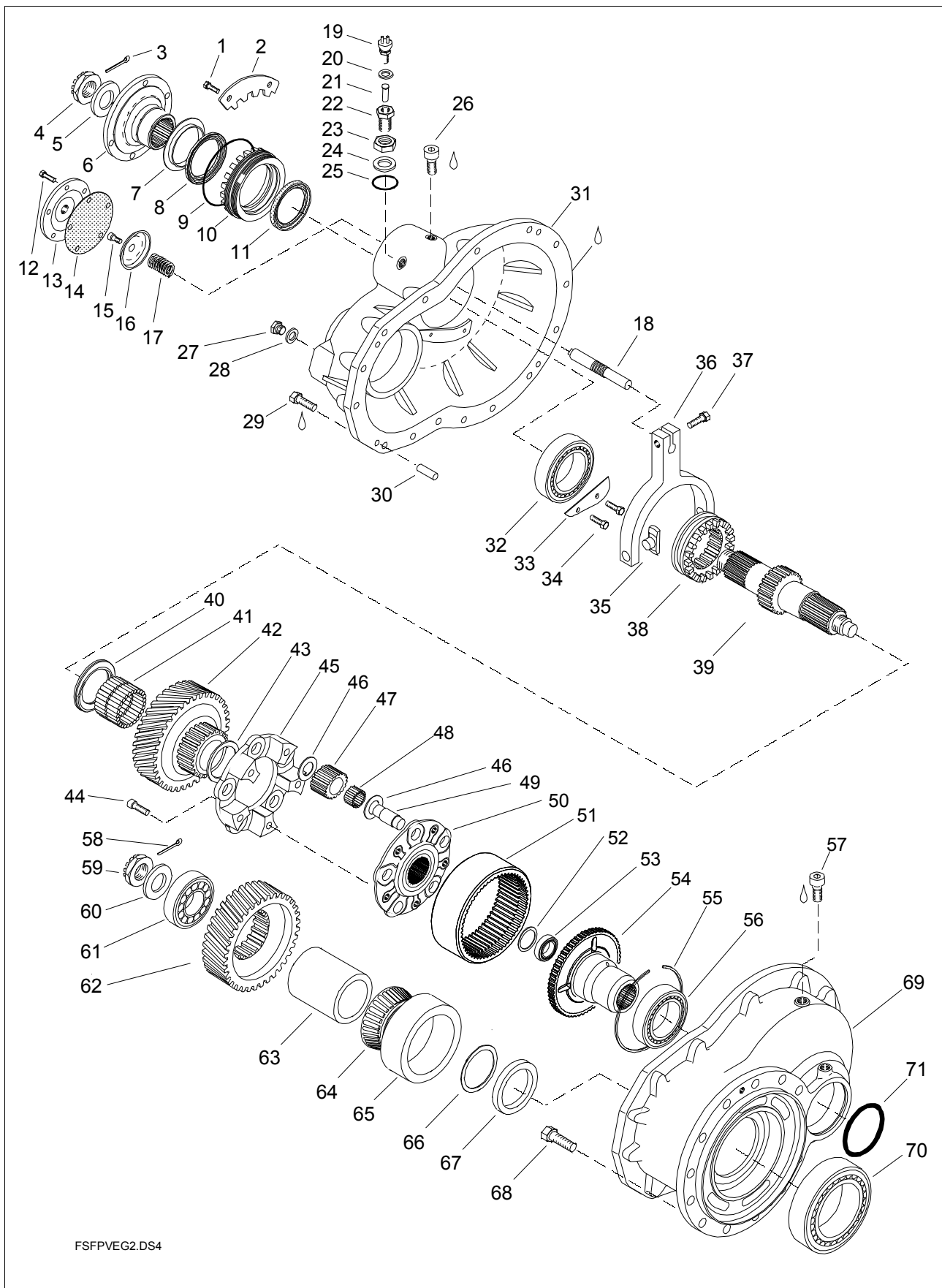
TDM2-VE1.DS4

Item	Qty.	Order no.	Description	Note
1	1	<b>144-210-1911</b>	Differential Carrier Housin	Inc. Bearing Case Halfs
2	ar	<b>144-239-2000</b>	Shim	(1.0 mm)
2	ar	<b>144-239-2001</b>	Shim	(0.5 mm)
2	ar	<b>144-239-2002</b>	Shim	(0.2 mm)
2	ar	<b>144-239-2003</b>	Shim	(0.1 mm)
3	1	<b>91600-20811</b>	Name plate	
4	4	<b>90111-29054</b>	Rivet	
5	4	<b>590604-08141</b>	Pin	Ø8x14
6	2	<b>143-214-2180</b>	Bearing Case Half	Not Serviced Separately
7	4	<b>90301-20377</b>	Screw	
8	4	<b>90303-08103</b>	Screw	M8x10
9	2	<b>143-227-0610</b>	Lock Washer	
10	2	<b>143-226-0012</b>	Adjusting nut	
11	2	<b>090-121-4700</b>	Bearing outer race	
12	2	<b>090-110-9000</b>	Bearing inner race	
13	1	<b>543-240-3421</b>	Ring and pinion gear set	17/26, Final Ratio 5.56
13	1	<b>543-240-3429</b>	Ring and pinion gear set	16/28, FR 6.36
13	1	<b>543-240-6411</b>	Ring and pinion gear set	25/32, FR 4.65
14	12	<b>90321-16538</b>	Screw	
15	1	<b>144-341-1700</b>	Sliding Gear	
16	1	<b>090-359-7000</b>	Thrust washer	
17	1	<b>143-310-3811</b>	Diff. case assy	
18	1	<b>143-351-3910</b>	Side gear	N52x2x24
19	4	<b>143-341-0700</b>	Pinion gear	
20	4	<b>143-345-0400</b>	Thrust washer	
21	1	<b>143-331-0603</b>	Spider	
22	1	<b>543-351-4300</b>	Side gear	N52x2x24
23	1	<b>090-357-5000</b>	Thrust washer	
24	12	<b>90556-16247</b>	Nut	
25	5	<b>90303-08203</b>	Screw	M8x20
25	5	<b>90303-08303</b>	Screw	M8x30, only for cover -1510
26	1	<b>172-161-0701</b>	Membrane cover	Connection M16x1.5
26	1	<b>572-161-1502</b>	Membrane cover	With Signal Lamp Switch, sub. for 572-161-1510
26	1	<b>572-161-1510</b>	Membrane cover	NLA, replaced by 572-161-1502
27	1	<b>172-351-1202</b>	Membrane	
28	1	<b>90319-08206</b>	Screw	
29	1	<b>172-361-0410</b>	Push plate	
30	1	<b>097-122-0100</b>	Return spring	
31	1	<b>172-212-1710</b>	Sliding Shaft	
32	1	<b>144-751-1210</b>	Control fork	
33	1	<b>90313-06208</b>	Screw	
34	2	<b>133-348-0710</b>	Sliding shoe	
35	1	<b>90335-05108</b>	Stopping screw	
36	1	<b>91711-06500</b>	Retainer ring	
37	1	<b>144-348-0000</b>	Sliding ring	
38	1	<b>586-490-0381</b>	Signal Lamp Switch	
39	1	<b>91201-18150</b>	Seal ring	

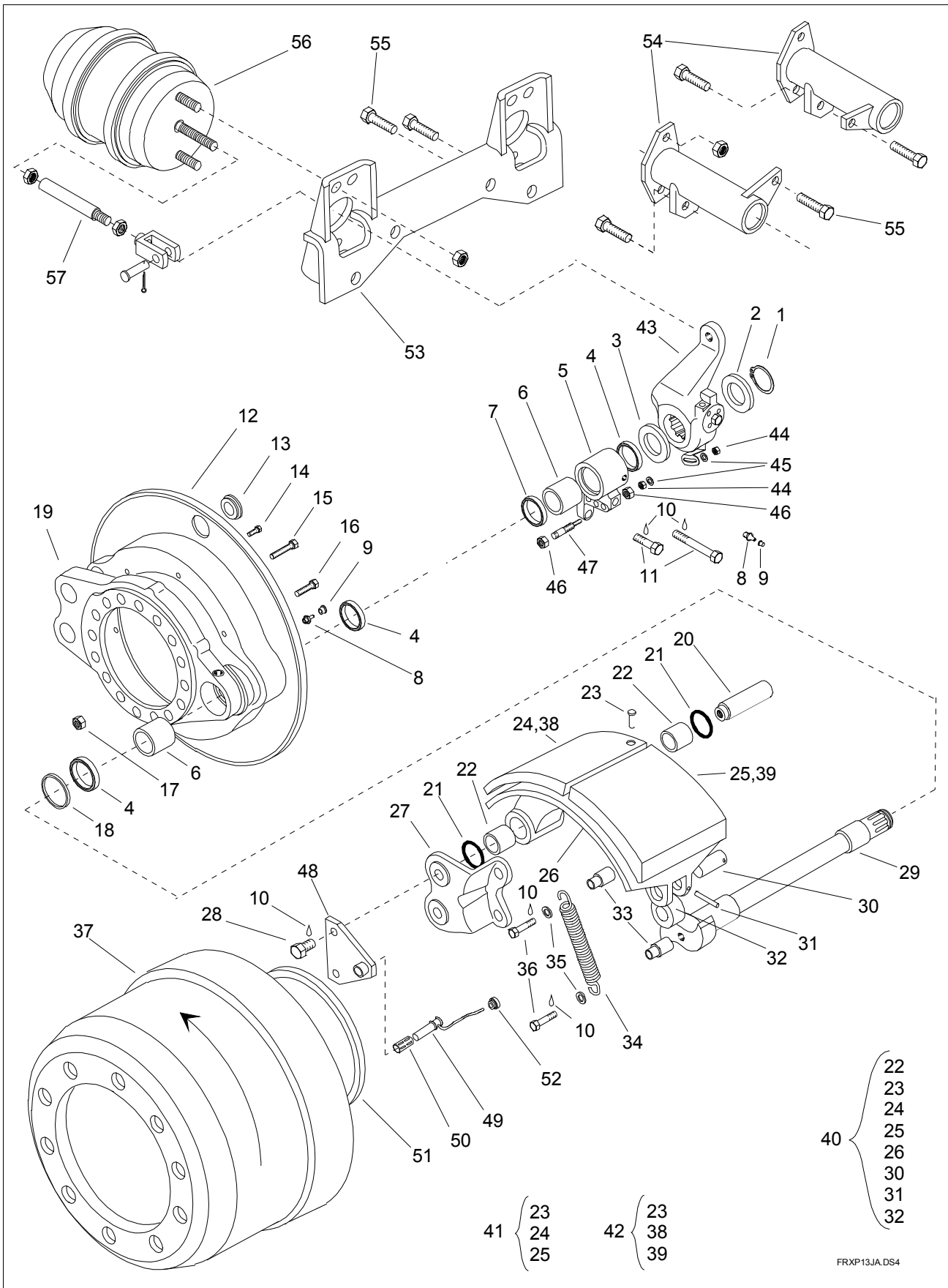




Item	Qty.	Order no.	Description	Note
1	2	<b>90303-08203</b>	Screw	
2	1	<b>143-227-0710</b>	Lock Washer	
3	1	<b>90621-63633</b>	Split pin	
4	1	<b>90546-42653</b>	Nut	
5	1	<b>90705-43069</b>	washer	
6	1	<b>538-918-0500</b>	Input flange	ISO 8667 - T180
6	1	<b>538-918-0700</b>	Input flange	HS 1700/1800
7	1	<b>090-711-9010</b>	Shield	
8	1	<b>090-400-9500</b>	Shaft seal	
9	1	<b>91101-39530</b>	O-ring	
10	1	<b>143-226-1200</b>	Adjusting nut	
11	1	<b>91122-08505</b>	Shaft seal	
12	5	<b>90303-08203</b>	Screw	M8x20
13	1	<b>172-161-0701</b>	Membrane cover	M16x1.5
14	1	<b>172-351-1202</b>	Membrane	
15	1	<b>90319-08206</b>	Screw	
16	1	<b>172-361-0410</b>	Push plate	
17	1	<b>097-122-0100</b>	Return spring	
18	1	<b>172-212-1710</b>	Sliding Shaft	
19	1	<b>186-490-0281</b>	Signal Lamp Switch	
20	1	<b>91201-12150</b>	Seal ring	
21	1	<b>141-812-0100</b>	Control pin	
22	1	<b>141-812-0000</b>	Binding screw	
23	1	<b>91842-18243</b>	Lock Nut	
24	1	<b>91838-18010</b>	Pressure ring	
25	1	<b>91838-18100</b>	O-ring	
26	1	<b>90873-10053</b>	Plug screw	M10x1, Allen head
27	2	<b>90871-22193</b>	Plug screw	M22x1.5, hex head
28	2	<b>91201-22150</b>	Seal ring	Cu
29	16	<b>90303-12308</b>	Screw	
30	2	<b>90604-10201</b>	Cotter Pin	
31	1	<b>544-221-0700</b>	Housing	w/o pressure lubrication
32	1	<b>91744-00704</b>	T. Roller bearing	
33	1	<b>546-167-1101</b>	Oil Plate	Supersedes: 146-167-1010 ja 546-167-1100
34	2	<b>90303-08203</b>	Screw	M8x20
35	2	<b>133-348-1701</b>	Sliding shoe	
36	1	<b>144-751-1300</b>	Control fork	
37	1	<b>90313-08208</b>	Screw	
38	1	<b>544-274-0800</b>	Sliding Ring	
39	1	<b>544-251-3600</b>	Input Shaft	
40	1	<b>544-282-0100</b>	Spacer ring	
41	1	<b>591738-40751</b>	Needle bush	
42	1	<b>544-269-0910</b>	Gear Assembly	FR 4,65 and up
42	1	<b>544-269-1310</b>	Gear Assembly	FR 4,28
43	1	<b>544-282-0210</b>	Spacer ring	
44	5	<b>90311-16508</b>	Screw	
45	1	<b>535-231-1400</b>	Planet carrier	
46	10	<b>590-354-3210</b>	Spacer ring	
47	5	<b>535-241-1400</b>	Planet gear	
48	5	<b>591738-40321</b>	Needle bush	
49	5	<b>535-251-1500</b>	Planet gear shaft	
50	1	<b>541-441-1300</b>	Planet carrier	



Item	Qty.	Order no.	Description	Note
51	1	<b>535-261-2200</b>	Ring gear	
52	ar	<b>90731-03510</b>	Shim	(0.1 mm)
52	ar	<b>90731-03520</b>	Shim	(0.2 mm)
52	ar	<b>90731-03550</b>	Shim	(0.5 mm)
52	ar	<b>90732-03510</b>	Shim	(1.0 mm)
53	1	<b>591744-00352</b>	T. Roller bearing	
54	1	<b>535-271-0700</b>	Ring gear hub	
55	1	<b>591720-25001</b>	Retainer ring	
56	1	<b>91744-00951</b>	T. Roller bearing	
57	1	<b>90873-10053</b>	Plug screw	
58	1	<b>90621-63633</b>	Split pin	
59	1	<b>90546-42653</b>	Nut	
60	1	<b>90705-43069</b>	washer	
61	1	<b>591736-30553</b>	Roller bearing	
62	1	<b>544-261-2200</b>	Gear	FR 4.65 and up
62	1	<b>544-261-3300</b>	Gear	FR 4.28
63	1	<b>543-261-1200</b>	Spacer ring	
64	1	<b>090-110-6740</b>	Bearing inner race	
65	1	<b>090-121-3700</b>	Bearing outer race	
66	ar	<b>099-516-7000</b>	Shim	(0.1 mm)
66	ar	<b>099-516-7001</b>	Shim	(0.3 mm)
66	ar	<b>099-516-7002</b>	Shim	(0.5 mm)
66	ar	<b>099-516-7003</b>	Shim	(0.25 mm)
67	ar	<b>599-557-1050</b>	Spacer ring	L=18.40
67	ar	<b>599-557-1052</b>	Spacer ring	L=18.44
67	ar	<b>599-557-1054</b>	Spacer ring	L=18.48
68	12	<b>90303-16407</b>	Screw	
69	1	<b>544-211-1600</b>	Housing	w/o pressure lubrication
70	1	<b>91744-00681</b>	T. Roller bearing	
71	1	<b>591106-99532</b>	O-ring	



Item	Qty.	Order no.	Description	Note
1	2	<b>91712-04000</b>	Retainer ring	D40x2.5
2,3	4	<b>91726-43065</b>	Support ring	D43/65x3
4	6	<b>91122-04201</b>	Shaft seal	D42/55x8
5	1	<b>146-224-2310</b>	Bearing housing	RH
5	1	<b>146-224-2400</b>	Bearing housing	LH
6	4	<b>590-314-2062</b>	Sleeve	
7	2	<b>91122-04202</b>	Shaft seal	D42/55x7
8	4	<b>91402-10003</b>	Grease nipple	M10x1, Straight
9	4	<b>91421-06060</b>	Shield hat	
10		<b>95752-10010</b>	Loctite	
11	2	<b>90301-16117</b>	Screw	M16x100
11	2	<b>90303-16407</b>	Screw	M16x40
12	2	<b>146-131-2210</b>	Dust Shield	210 mm
13	4	<b>095-553-2000</b>	Shield plug	
14	14	<b>90303-08123</b>	Screw	M8x12
15	24	<b>90169-01401</b>	Screw	M14x45
16	4	<b>90301-14558</b>	Screw	M14x55
17	28	<b>90550-14227</b>	Nut	M14 self locking
18	2	<b>91726-43065</b>	Support ring	D43/65x3
19	2	<b>146-111-2610</b>	Brake Bracket	
20	4	<b>146-341-1210</b>	Anchor bolt	
21	8	<b>91106-36212</b>	O-ring	D36,2x3 Viton
22	8	<b>590-313-2091</b>	Sleeve	
23	96	<b>91501-00819</b>	Rivet	
26	4	<b>146-351-4100</b>	Brake shoe	210 mm
27	2	<b>146-331-0400</b>	Anchor support	
28	4	<b>90303-10203</b>	Screw	M10x20, Without ABS
28	4	<b>90303-10303</b>	Screw	M10x30, With ABS
29	1	<b>146-213-1000</b>	S-cam shaft	RH, L=629.5 mm, FRFP
29	1	<b>146-213-1100</b>	S-cam shaft	LH, L=629.5 mm, FRFP
29	1	<b>546-213-2000</b>	S-cam shaft	RH, L=604.5 mm, FRMP & FRDP
29	1	<b>546-213-2100</b>	S-cam shaft	LH, L=604.5 mm, FRMP & FRDP
30	4	<b>146-373-0201</b>	Pin	
31	4	<b>90602-05450</b>	Spring cotter	D5x40
32	4	<b>146-371-0700</b>	Roller	
33	6	<b>599-601-8900</b>	Bush	
34	4	<b>92052-30002</b>	Return spring	
35	6	<b>90705-13023</b>	washer	D13/24x2.5
36	6	<b>90303-12603</b>	Screw	M12x60
37	2	<b>146-311-7900</b>	Brake drum	
40	4	<b>546-306-0083</b>	Brake shoe assy	210mm, Beral1561
41	ar	<b>546-360-3113</b>	Brake lining set	210mm, Beral1561, for one wheel
43	1	<b>146-530-1011</b>	Slack adjuster	RH, R145, offset 56
43	1	<b>146-530-1021</b>	Slack adjuster	LH, R145, offset 56
43	1	<b>546-530-3111</b>	Slack adjuster	LH, 165 mm, offset 56, FRFP
43	1	<b>546-530-3121</b>	Slack adjuster	RH, 165 mm, offset 56, FRFP
43	1	<b>546-530-3411</b>	Slack adjuster	RH, R165, offset 75, FRMP & FRDP
43	1	<b>546-530-3421</b>	Slack adjuster	LH, R165, offset 75, FRMP & FRDP
44	4	<b>90502-08133</b>	Nut	M8
45	4	<b>90705-08423</b>	washer	D8.4/17x1.6
46	4	<b>90502-12193</b>	Nut	M12
47	2	<b>90177-01203</b>	Stud bolt	M12/M8
48	2	<b>189-931-0900</b>	Bracket	ABS
49	2	<b>189-250-0071</b>	Sensor	ABS
50	2	<b>189-295-0000</b>	Bush	ABS
51	2	<b>189-291-0000</b>	Ring gear	100 Teeth, ABS
52	2	<b>592235-17041</b>	Rubber bushing	D4/17
53	1	<b>546-721-6600</b>	Chamber bracket	20 deg., c/c 340, 145 mm, FRFP
53	1	<b>546-721-6800</b>	Chamber bracket	17 deg., c/c 390, 145 mm, FRMP & FRDP
54	1	<b>546-721-6500</b>	Chamber bracket	RH, 17 deg. for 165 mm slack adjuster
54	1	<b>546-721-6510</b>	Chamber bracket	LH, 17 deg. for 165 mm slack adjuster
54	1	<b>546-721-6900</b>	Chamber bracket	RH, 13 deg. for 165 mm slack adjuster
54	1	<b>546-721-6910</b>	Chamber bracket	LH, 13 deg. for 165 mm slack adjuster
55	4	<b>90303-16407</b>	Screw	M16x40, 10.9