

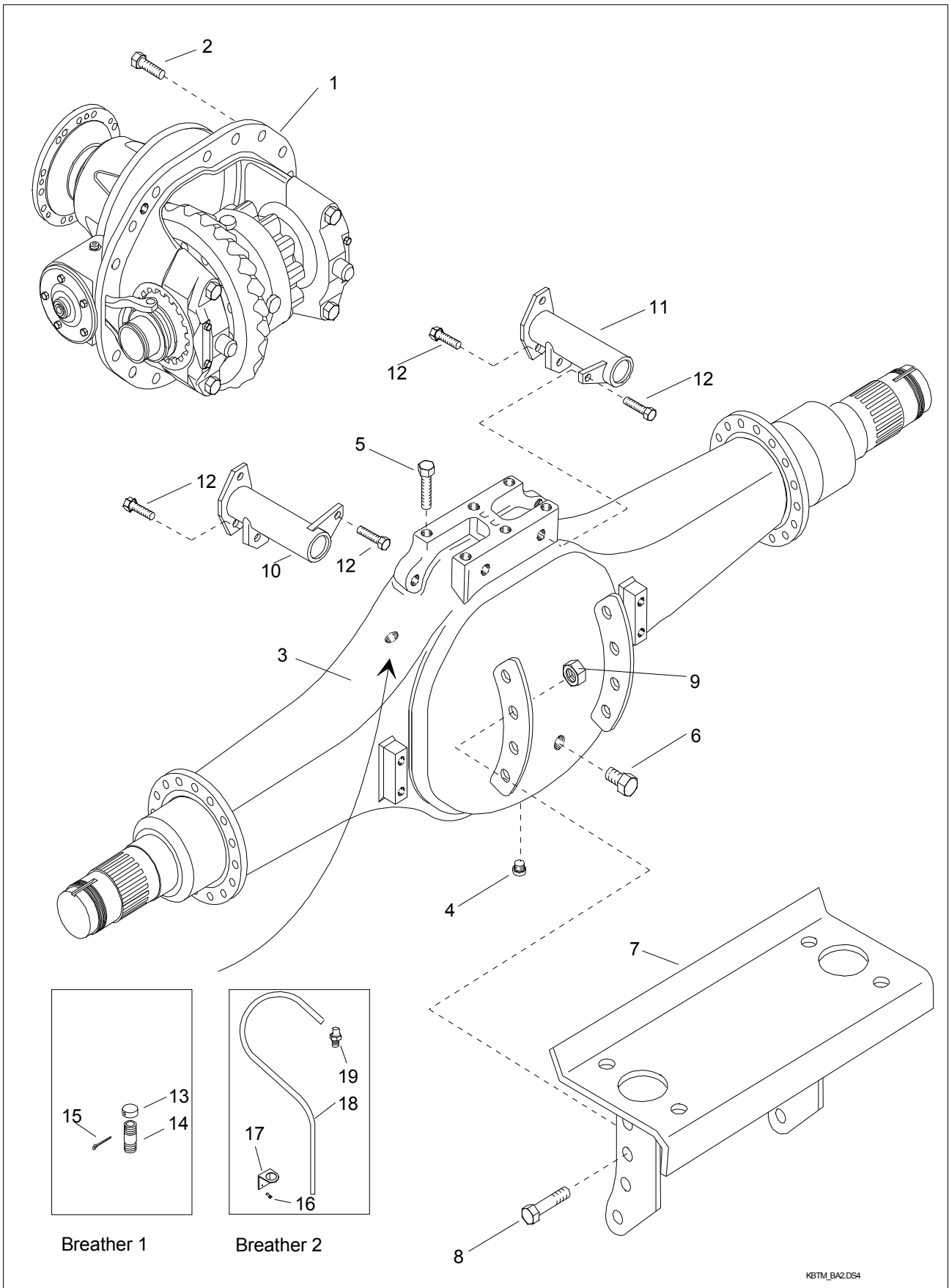
SISU AXLES

SPARE PARTS BOOK

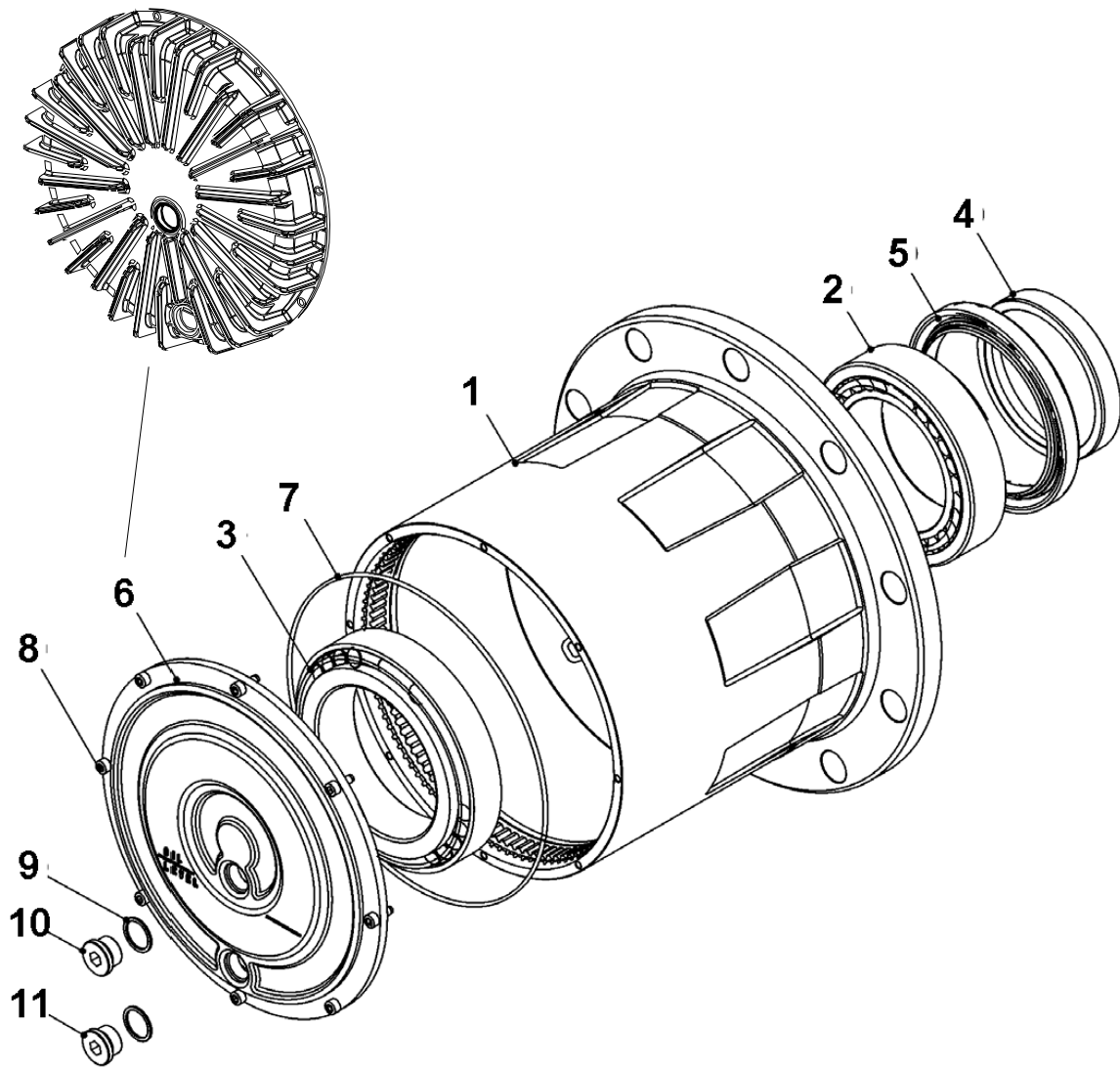
Rear Tandem Axle FRDP-13/16-S

**Since No. 144393 (11/2004)
Book No. 292 (5/2009)**

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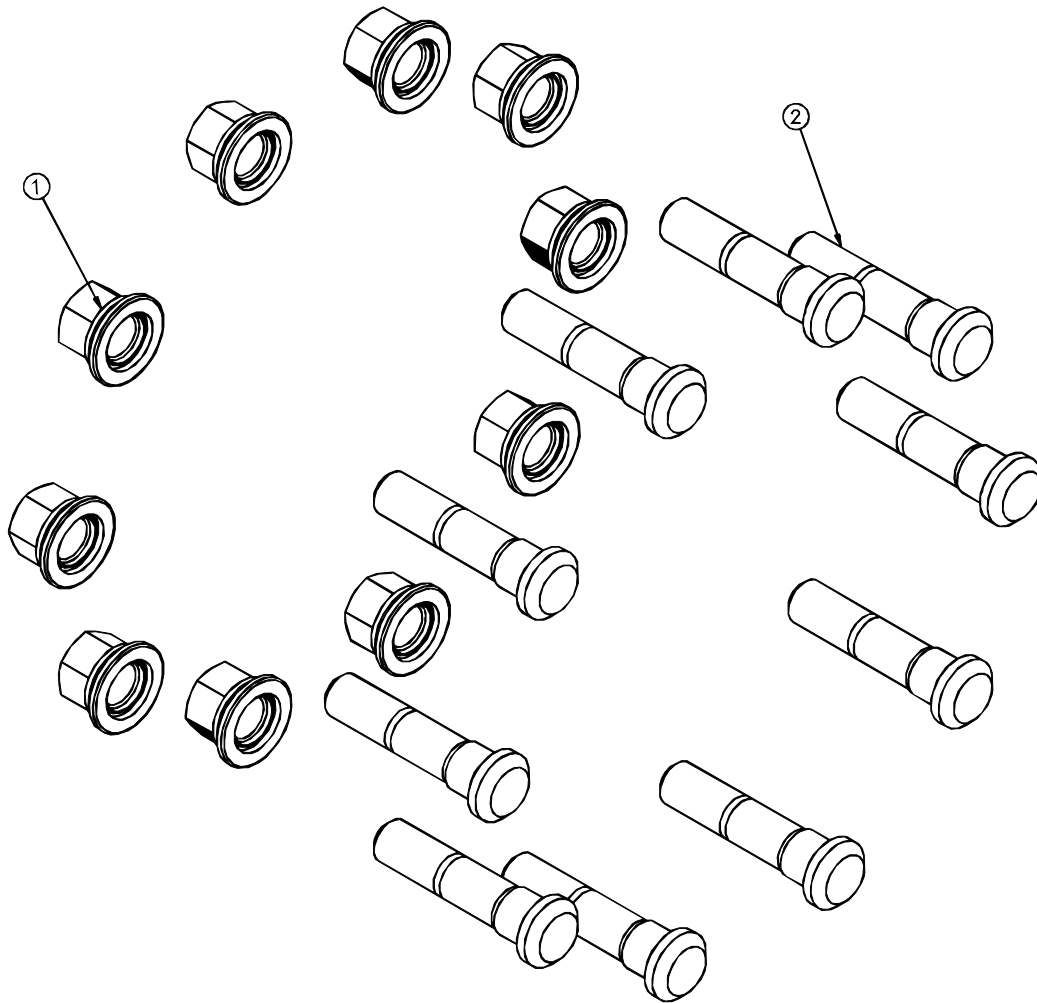


Item	Qty.	Order no.	Description	Note
1	1	543-204-3111	Diff. Carrier Assembly	FR 4.65/4.11, HS1700/1800 flange
1	1	543-204-3116	Diff. Carrier Assembly	FR 4.65/4.11, Yoke 1710 flange
1	1	543-204-3139	Diff. Carrier Assembly	FR 4.29/3.79, HS1700/1800 flange
1	1	543-204-3219	Diff. Carrier Assembly	FR 7.01/6.20, HS1700/1800 flange
1	1	543-204-3221	Diff. Carrier Assembly	FR 5.56/4.92, HS1700/1800 flange
1	1	543-204-3224	Diff. Carrier Assembly	FR 6.36, Yoke 1710 flange
1	1	543-204-3229	Diff. Carrier Assembly	FR 6.36/5.63, HS1700/1800 flange
1	1	543-204-3251	Diff. Carrier Assembly	FR 8.79/7.77, HS1700/1800 flange
1	1	543-204-3281	Diff. Carrier Assembly	FR=10.55/9.32, HS1700/1800 flange
2	16	90303-16407	Hex Screw	M16x40, 10.9
3	NLA	543-117-0710	Axle Housing	Track 1880, 13 ton, superseded by 543-117-2110
3	NLA	543-117-0810	Axle Housing	Track 2040, 16 ton, superseded by 543-117-1510
3	NLA	543-117-0910	Axle Housing	Track 1880 mm, 16 ton, superseded by 543-117-2110
3	1	543-117-1010	Axle Housing	Track 1800, 16 ton
3	NLA	543-117-1110	Axle Housing	2040, 16 ton, R650, superseded by 543-117-3810
3	1	543-117-1510	Axle Housing	16 ton, Track 2040, 18 mm
3	1	543-117-2110	Axle Housing	16 ton, Track 1880, 18 mm
3	NLA	543-117-2210	Axle Housing	1880, 16 ton, R650, superseded by 543-117-3710
3	NLA	543-117-2610	Axle Housing	16 ton, 2040, R850, superseded by 543-117-3910
3	1	543-117-3710	Axle Housing	16 ton, Track 1880, R650, 18 mm
3	1	543-117-3810	Axle Housing	16 ton, Track 2040, R650, 18 mm
3	1	543-117-3910	Axle Housing	16 ton, Track 2040, R850, 18 mm
3	1	543-117-4310	Axle Housing	16 ton, Track 1800, R650, 18 mm
3		N1	Note	Bulletin P16003 for compatibility of axle housings
4	1	90873-22109	Oil plug	M22x1.5 - DIN908, Allen head, magnetic
4	1	91201-22150	Seal ring	D22/27x1.5 Cu
5	6	90303-18503	Hex Screw	M18x2,5x50
6	1	90875-16243	Plug	1/2"NPTF
7	1	546-721-7400	Chamber bracket	86 deg. for 165 mm slack adjuster
8	6	90303-14307	Hex Screw	M14x30
9	6	90550-14227	Nut	M14 self locking
10	1	546-721-6910	Chamber bracket	LH, 13 deg. for 165 mm slack adjuster
11	1	546-721-6900	Chamber bracket	RH, 13 deg. for 165 mm slack adjuster
12	4	90303-16407	Hex Screw	M16x40, 10.9
12	4	90705-17033	washer	D17/30x3
13	1	179-842-0000	Breather Cover	
14	1	179-841-1000	Breather pipe	
15	1	90621-32253	Split pin	3.2x25



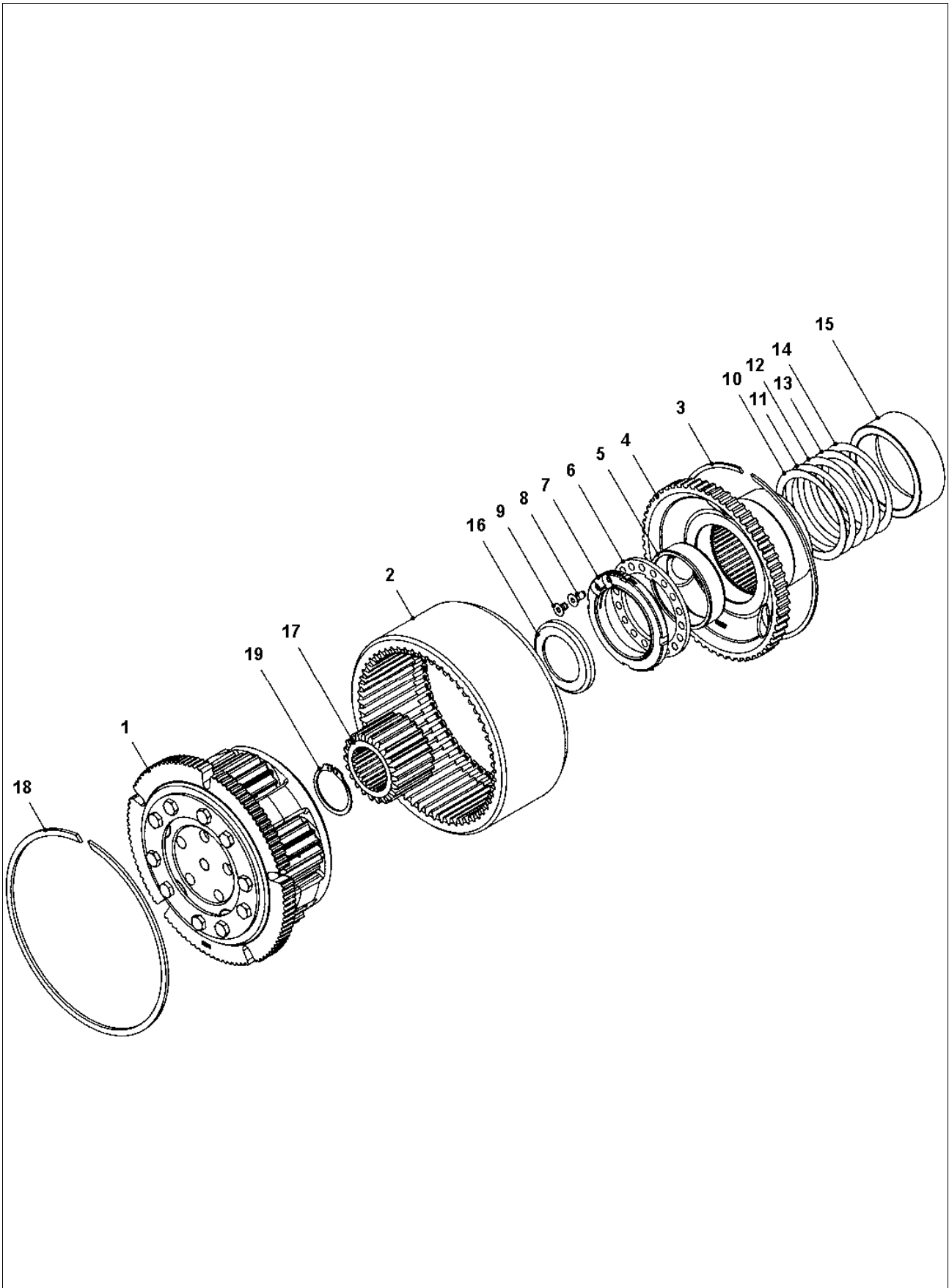
M4018593

Item	Qty.	Order no.	Description	Note
1	2	543-441-1000	Wheel hub	
2	2	91744-01051	T. Roller bearing	
3	2	91744-01201	T. Roller bearing	
4	2	543-415-0600	Spacer ring	D111/127x19
5	2	591122-12702	Shaft seal	D127/160
6	2	541-422-1200	Planetary gear cover	Cast iron
6	2	541-422-1300	Planetary gear cover	Cooled, cast iron, optional
7	2	91109-50030	O-ring	D249.5x3
8	16	90313-06168	Allen Screw	M6x16
9	4	91201-22150	Seal ring	D22/27x1.5 Cu
10	2	90873-22103	Plug	M22x1.5 - DIN908, Allen head
11	2	90873-22109	Oil plug	M22x1.5 - DIN908, Allen head, magnetic

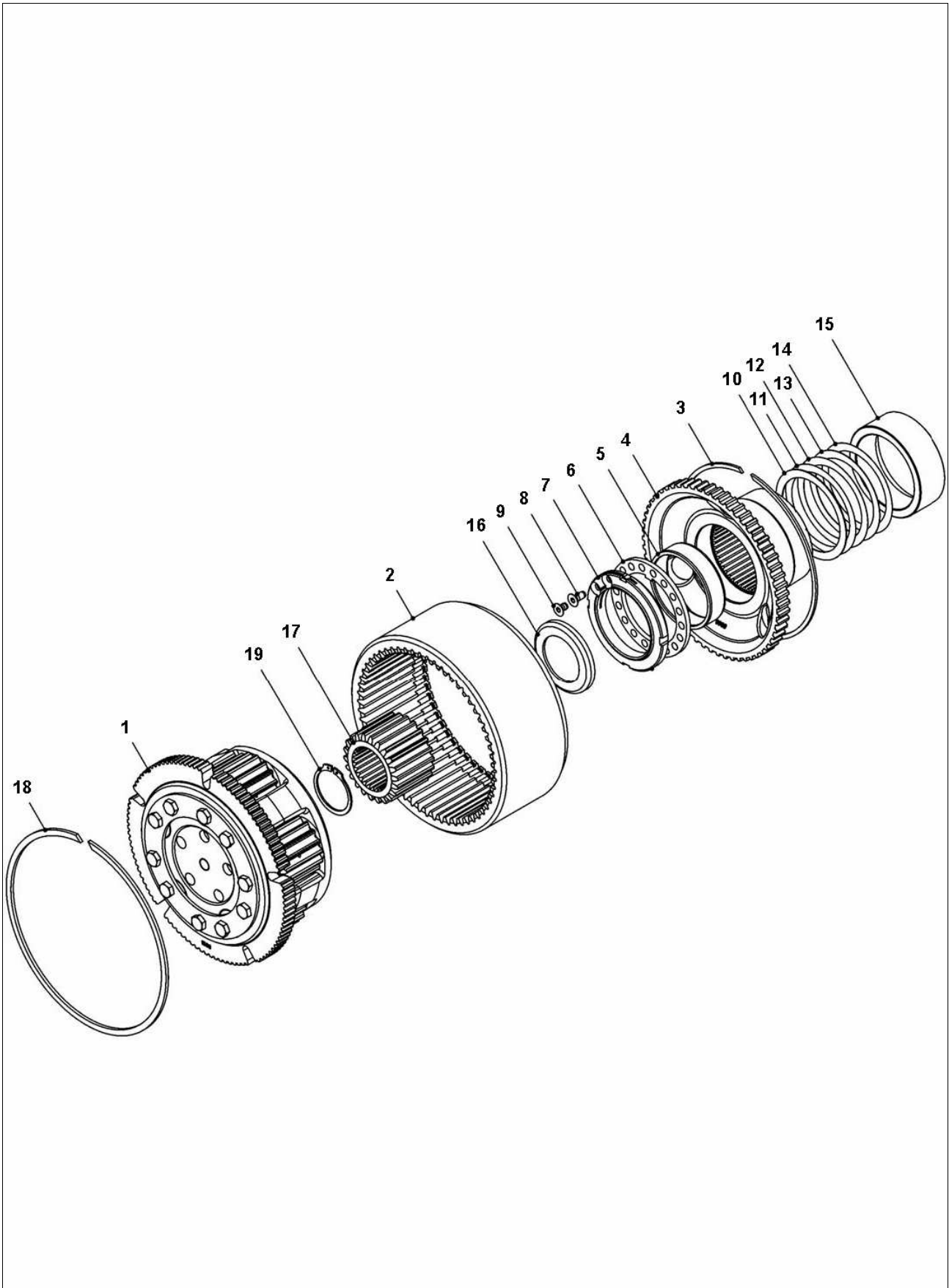


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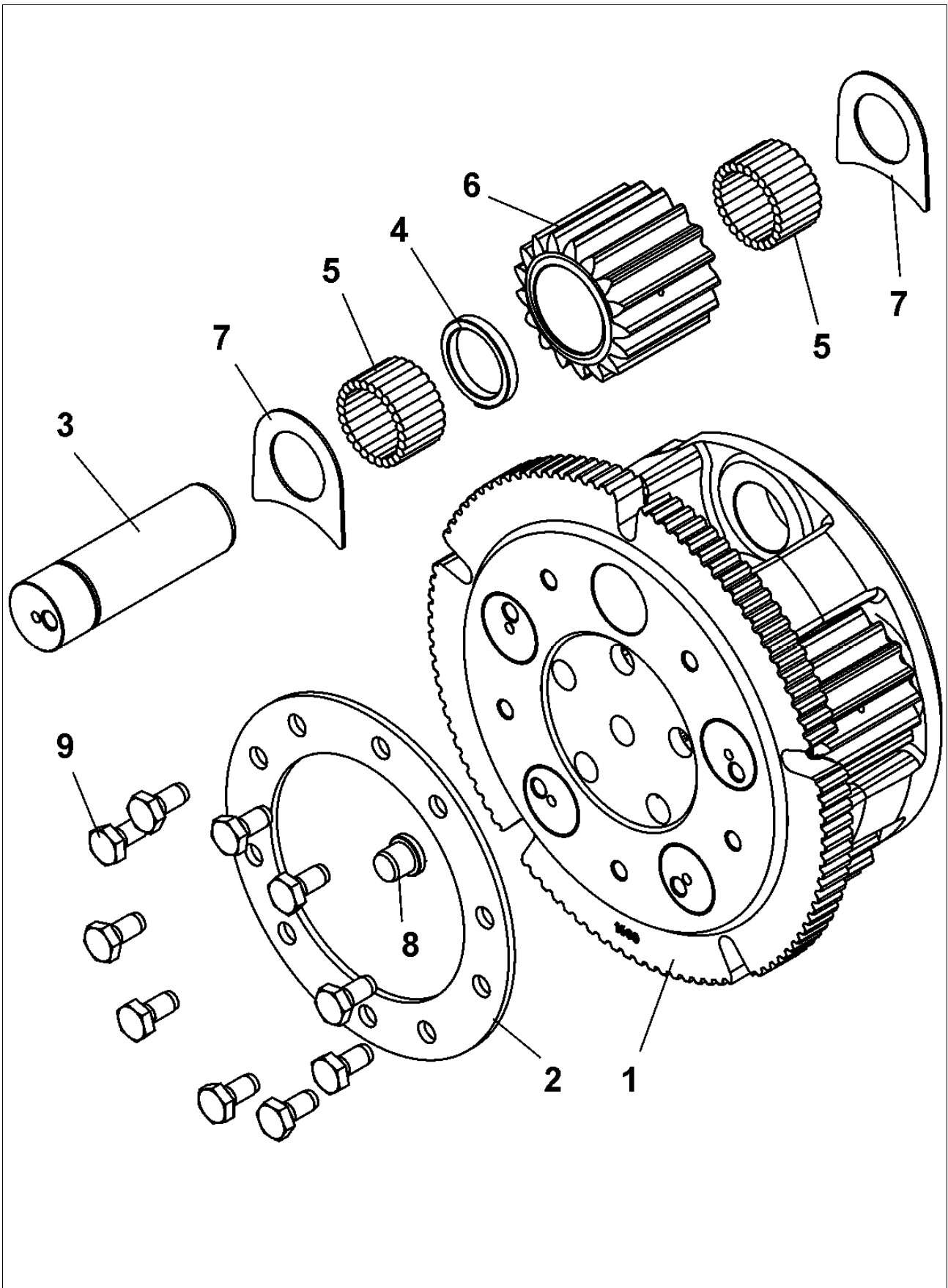
Item	Qty.	Order no.	Description	Note
1	20	540-916-1610	Wheel nut	M22x1.5
2	20	140-911-2700	Wheel bolt	L=113 mm
3	20	140-911-2510	Wheel bolt	L=93 mm
3	20	140-911-2610	Wheel bolt	L=83 mm, 12.9



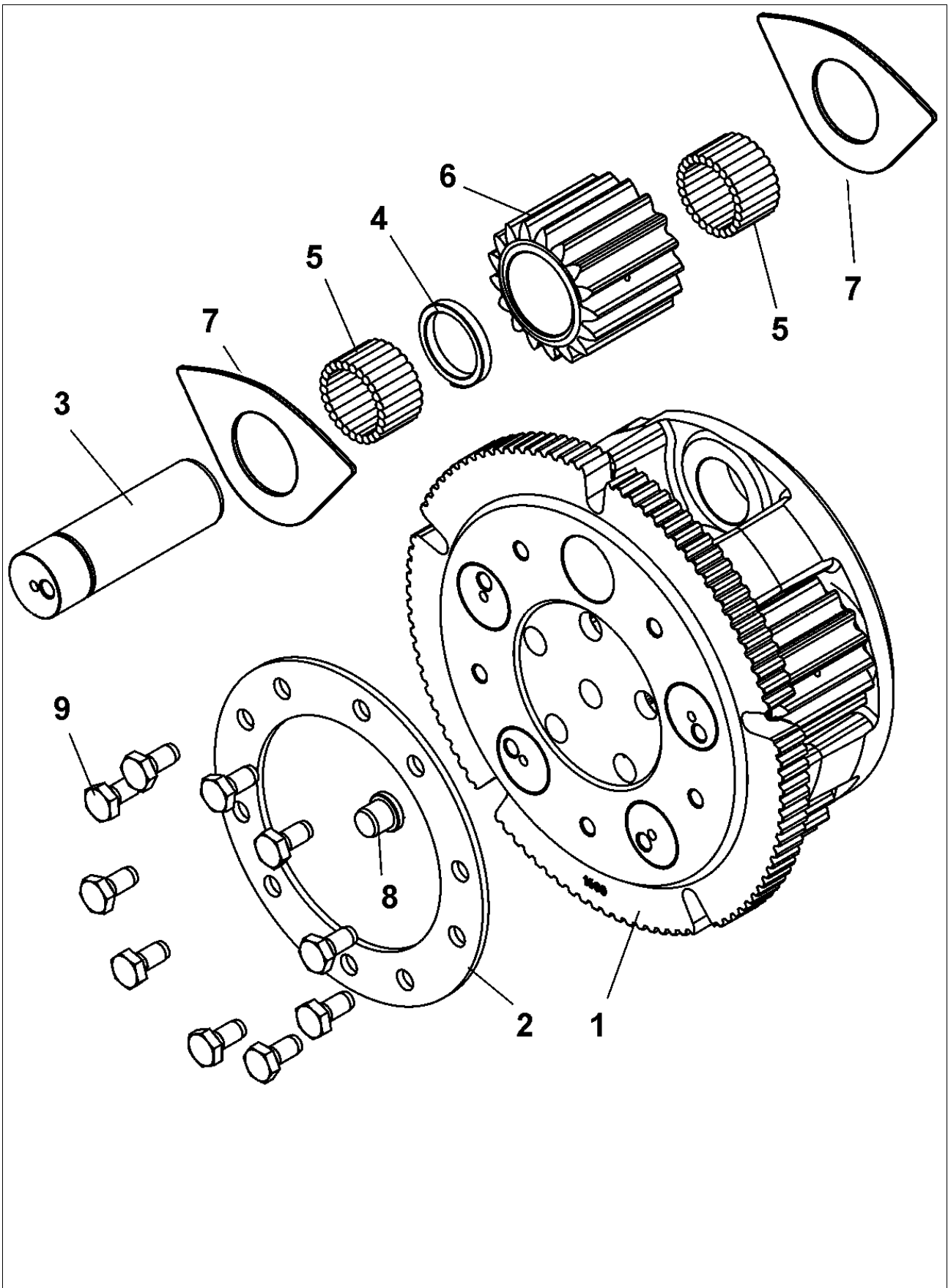
Item	Qty.	Order no.	Description	Note
1	2	541-404-0211	Planetary gear	FR 4.28/4.29/4.65/5.56/6.36/7.01/8.79/10.55
2	2	535-261-2110	Ring gear	i=3.636, z58
3	2	91720-22001	Retainer ring	D220x3
4	2	535-271-0901	Ring gear hub	i=3.636, z58
5	N/A	543-416-0710	Spacer ring	Obsolete
6	2	143-418-0510	Lock plate	S=6 mm, punched
7	2	599-290-8004	Lock Nut	M90x2, s=16 mm
8	2	590319-08186	Allen Screw	M8x18, Cone head
9	2	590319-08126	Allen Screw	M8x12M8x12, Cone head
10	NLA	590731-09510	Shim	s= 0.1 mm
10	NLA	590731-09515	Shim	s= 0.15 mm
11	ar	590731-09520	Shim	s= 0.2 mm
12	ar	590731-09530	Shim	s= 0.3 mm
13	ar	590731-09550	Shim	s= 0.5 mm
14	ar	590732-09510	Shim	s= 1.0 mm
15	2	543-416-0500	Spacer ring	D95/117x42
16	2	090-721-8500	Protective cup	D60/85x10
17	2	535-211-1410	Sun gear	i=3.636, z22, spline N55x26
18	2	91720-26001	Retainer ring	D265x4.2
19	2	591711-05500	Retainer ring	D55x2



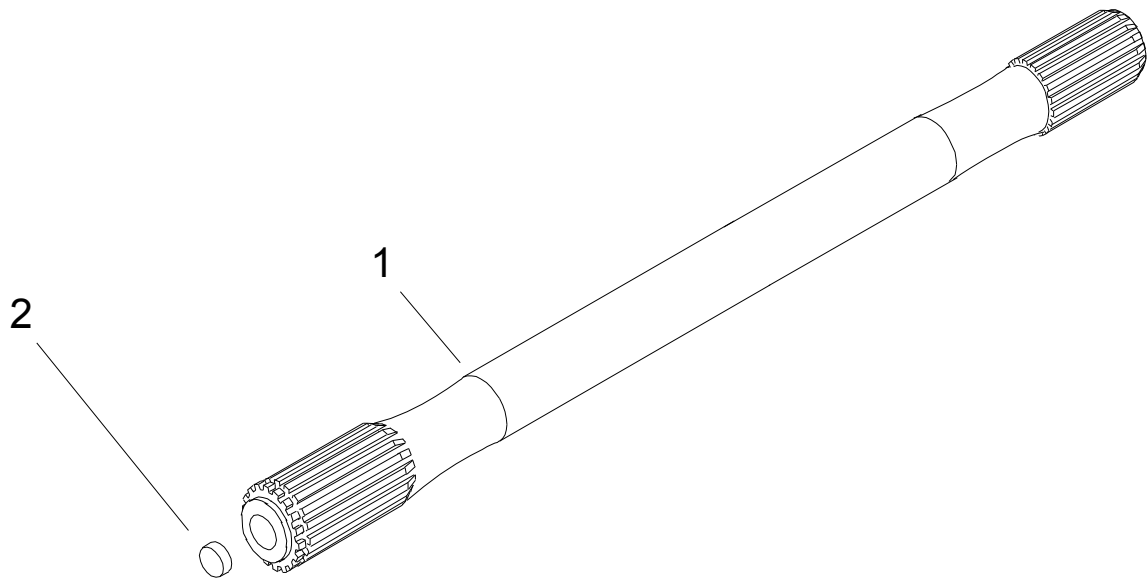
Item	Qty.	Order no.	Description	Note
1	2	541-404-0221	Planetary gear	FR 3.78/3.79/4.11/4.92/5.63/6.20/7.77/9.32
2	2	535-261-2310	Ring gear	i=3.214, z62
3	2	91720-22501	Retainer ring	D225x3
4	2	535-271-0911	Ring gear hub	i=3.214, z62
5	N/A	543-416-0710	Spacer ring	Obsolete
6	2	143-418-0510	Lock plate	S=6 mm, punched
7	2	599-290-8004	Lock Nut	M90x2, s=16 mm
8	2	590319-08186	Allen Screw	M8x18, Cone head
9	2	590319-08126	Allen Screw	M8x12M8x12, Cone head
10	NLA	590731-09510	Shim	s= 0.1 mm
10	NLA	590731-09515	Shim	s= 0.15 mm
11	ar	590731-09520	Shim	s= 0.2 mm
12	ar	590731-09530	Shim	s= 0.3 mm
13	ar	590731-09550	Shim	s= 0.5 mm
14	ar	590732-09510	Shim	s= 1.0 mm
15	2	543-416-0500	Spacer ring	D95/117x42
16	2	090-721-8500	Protective cup	D60/85x10
17	2	535-211-1500	Sun gear	i=3.214, z28, spline N55x26
18	2	91720-26001	Retainer ring	D265x4.2
19	2	591711-05500	Retainer ring	D55x2



Item	Qty.	Order no.	Description	Note
1	1	541-441-1600	Planet carrier	i=3.636, c.d.=75
2	1	535-259-0311	Lock plate	D126/184x4
3	5	535-251-1710	Planet gear shaft	i=3.636, D34.75/35
4	5	090-353-5000	Spacer ring	D35/44x6.2
5	260	090-005-0530	Needle roller	D4.762x28.5
6	5	535-241-1510	Planet gear	Z17, D44.3/75
7	10	590-353-1400	Thrust washer	D34.9x1.5
8	1	141-581-0001	Counter Piece	D15/20x17
9	10	90303-10203	Hex Screw	M10 x 20 - DIN 933 - 8.8

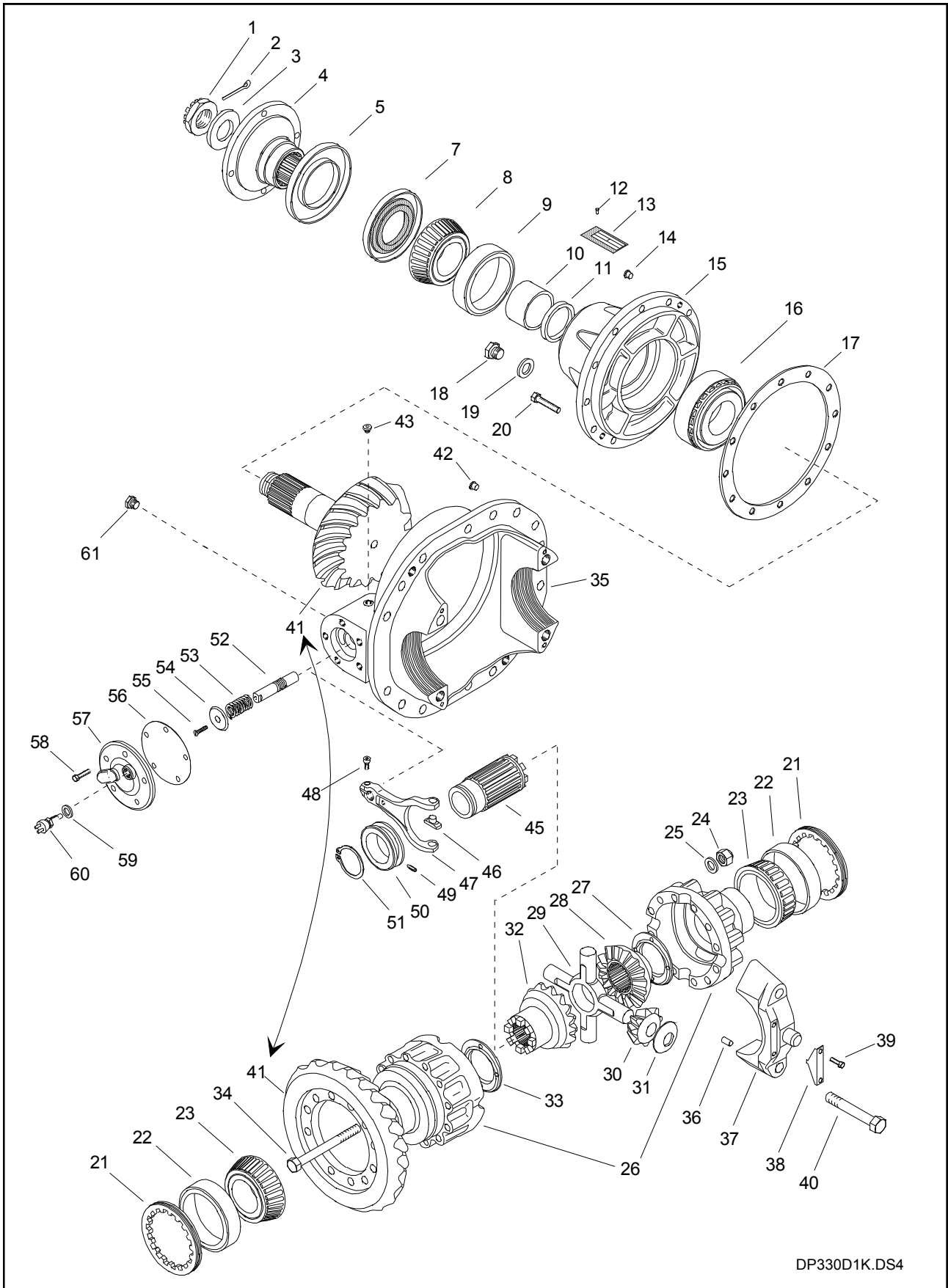


Item	Qty.	Order no.	Description	Note
1	1	541-441-1610	Planet carrier	i=3.214, c.d.=80
2	1	535-259-0311	Lock plate	D126/184x4
3	5	535-251-1700	Planet gear shaft	i=3.214, D30.2/35
4	5	590-354-3300	Spacer ring	D30.35/38.5x6.2
5	230	090-005-0530	Needle roller	D4.762x28.5
6	5	535-241-1600	Planet gear	Z17, D39.75/69
7	10	590-353-1410	Thrust washer	D30.4x1.5
8	1	141-581-0001	Counter Piece	D15/20x17
9	10	90303-10203	Hex Screw	M10 x 20 - DIN 933 - 8.8



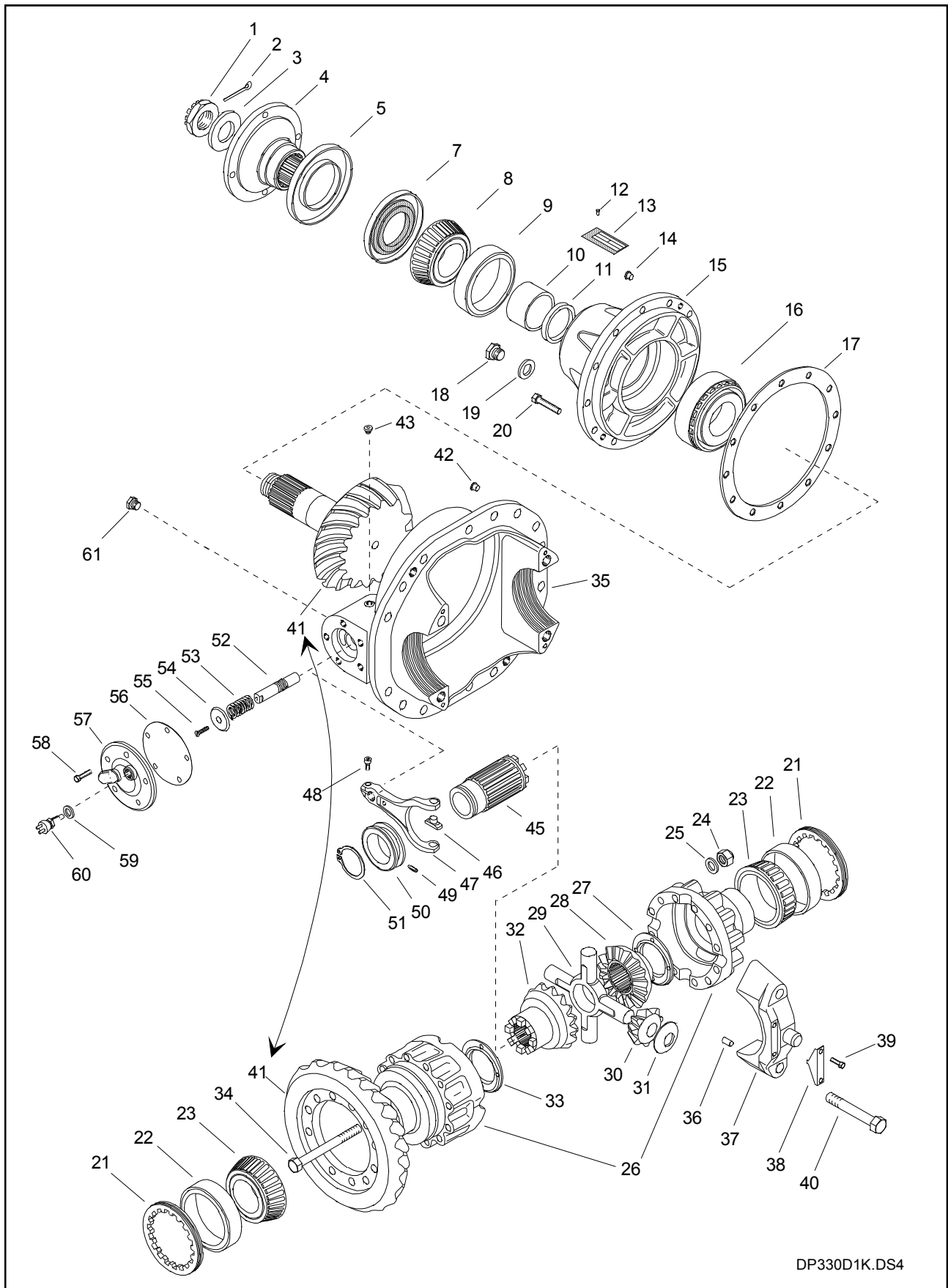
M306-096.DS4

Item	Qty.	Order no.	Description	Note
1	1	543-512-0201	Axle Shaft	RH, L=1085, Track 1800
1	1	543-512-0201	Axle Shaft	RH, L=1085, Track 1880
1	1	543-512-0202	Axle Shaft	LH, L=1130, Track 1800
1	1	543-512-0203	Axle Shaft	RH, L=1170, Track 2040
1	1	543-512-0203	Axle Shaft	LH, L=1170, Track 1880
1	1	543-512-0204	Axle Shaft	LH, L=1280, Track 2040
2	2	140-125-0100	Thrust pin	D25



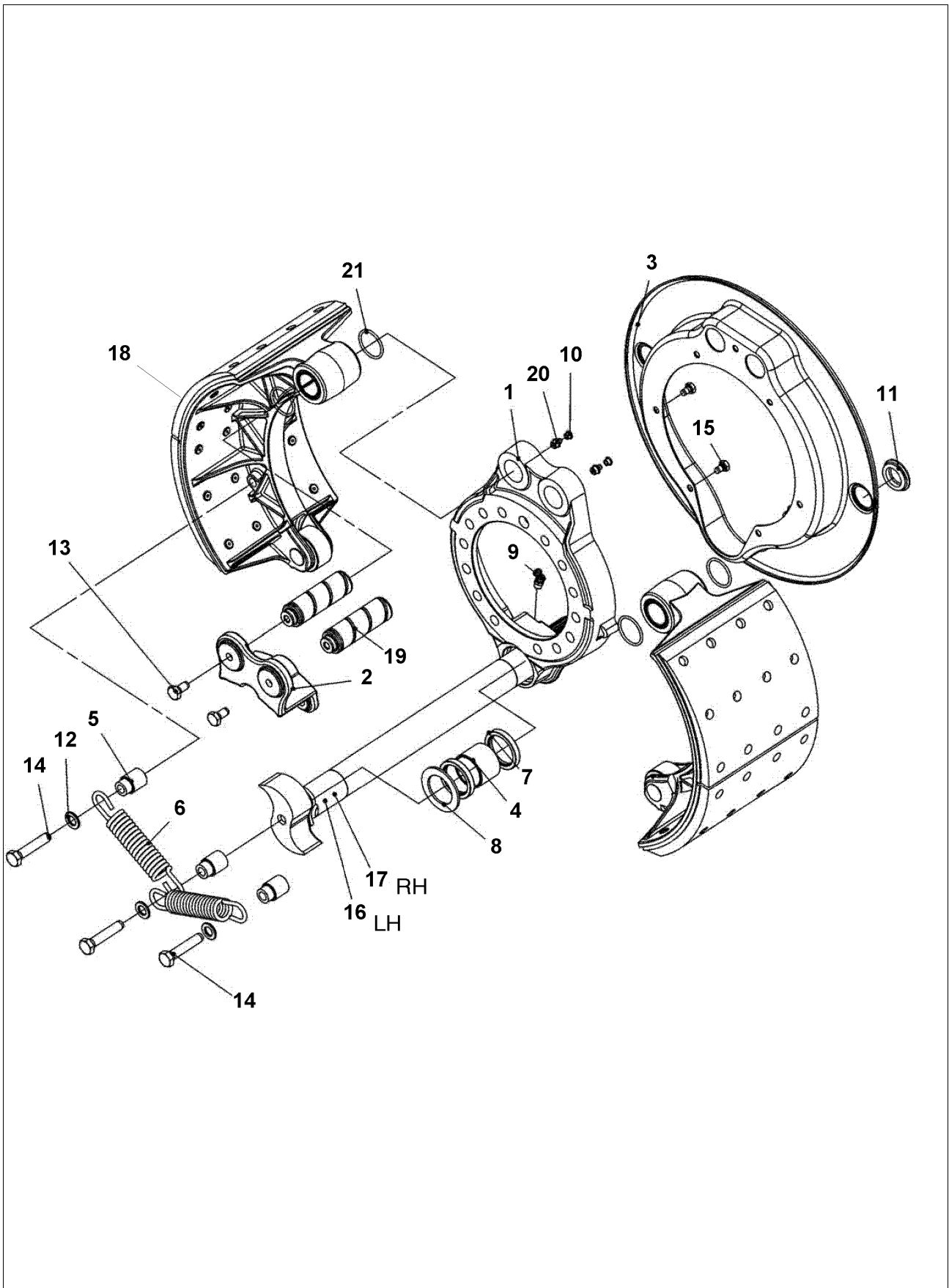
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Item	Qty.	Order no.	Description	Note
1	1	90546-42653	Nut	M42x1.5
2	1	90621-63633	Split pin	6.3x63
3	1	90705-43069	washer	D43/80x6
4	1	138-918-0400	Flange	HS1700-1800
4	1	138-918-0401	Flange	ISO 8667 - T180
4	1	538-967-0100	End Yoke	Input Splined Yoke 1710
5	1	090-711-9000	Shield	
7	1	591122-08508	Shaft seal	D85/140x13/20
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		0		Not installed
26	1	543-310-4811	Diff. case assy	
27	1	090-357-5000	Thrust washer	D75/111x3
28	1	543-351-4210	Side gear	D55/Z26
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	543-351-4310	Side gear	D55/Z26
33	1	090-359-7000	Thrust washer	D97/127x3
34	12	599-116-3250	Hex Screw	M16x1.5, L= 207, 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 plate	
39	4	90303-08163	Screw	M8x16
40	4	90301-20377	Hex Screw	M20x130
41	1	143-240-1819	Ring and pinion gear set	14/27, FR 7.01 (FR 6.20 w/3.214 hub reduction)
41	1	143-240-1821	Ring and pinion gear set	17/26, FR 5.56 (FR 4.92 w/3.214 hub reduction)
41	1	143-240-1829	Ring and pinion gear set	16/28, FR 6.36 (FR 5.63 w/3.214 hub reduction)
41	1	143-240-1851	Ring and pinion gear set	12/29, FR 8.79 (FR 7.77 w/3.214 hub reduction)
41	1	143-240-1881	Ring and pinion gear set	10/29, FR 10.55 (FR 9.32 w/3.214 hub reduction)
41	1	143-240-1891	Ring and pinion gear set	9/31, FR= 12.53 (FR 11.07 w/3.214 hub reduction)
41	1	543-240-7111	Ring and pinion gear set	25/32, FR 4.65 (FR 4.11 w/3.214 hub reduction)
41	1	543-240-7139	Ring and pinion gear set	28/33, FR 4.29 (FR 3.79 w/3.214 hub reduction)
42	2	91425-13120	Shield plug	

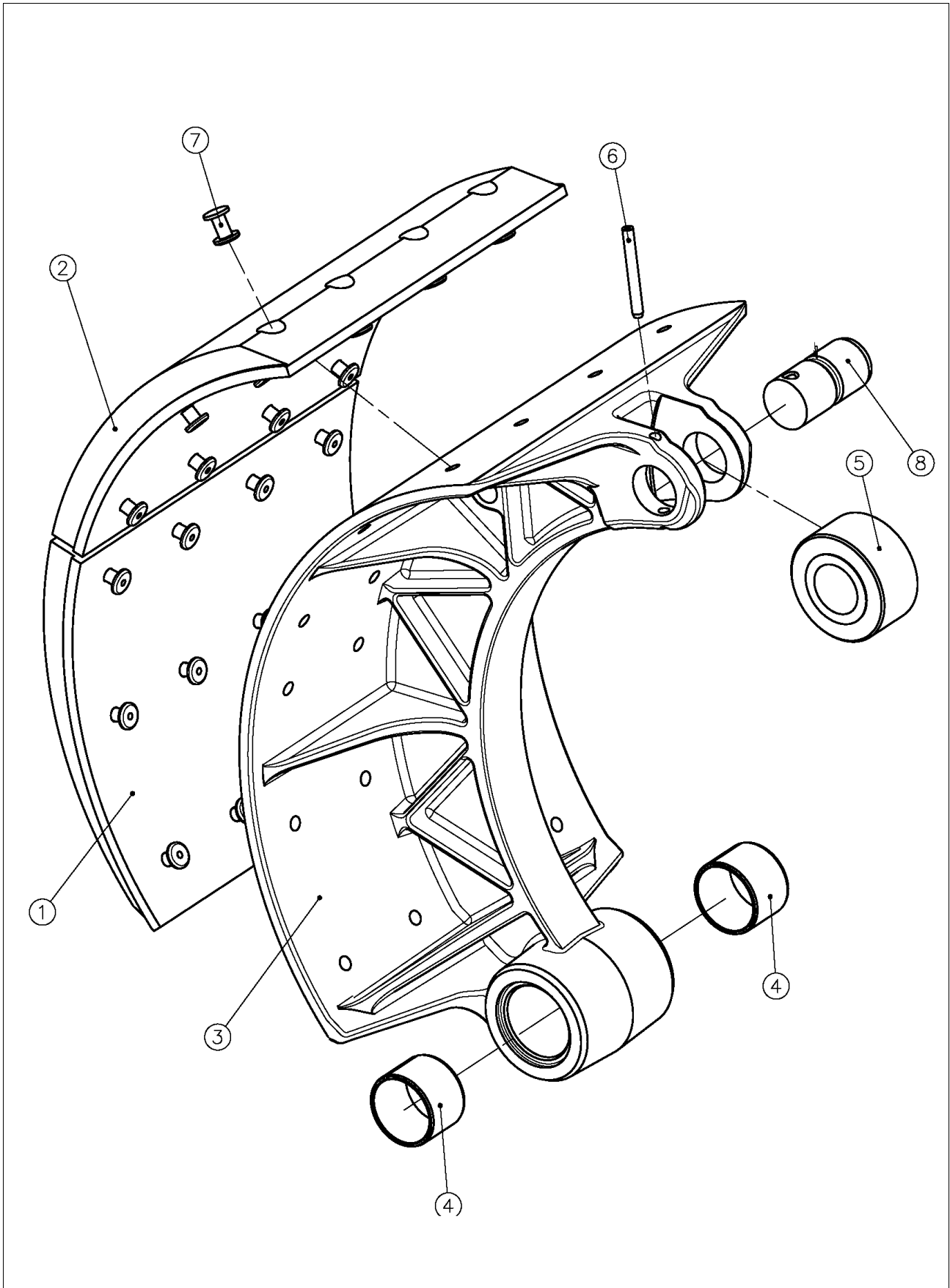


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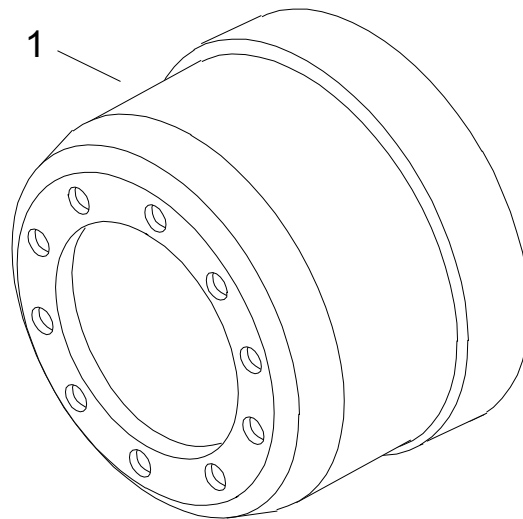
Item	Qty.	Order no.	Description	Note
43	1	90871-10143	Plug screw	M10x1, hex head 14 mm
45	1	144-341-1700	Sliding Gear	
46	2	133-348-0710	Sliding shoe	
47	1	144-751-1210	Control fork	
48	1	90313-06208	Allen Screw	M6x20
49	1	90335-05108	Stopping screw	M5x10
50	1	144-348-0000	Sliding ring	
51	1	91711-06500	Retainer ring	D65
52	1	172-212-1710	Sliding Shaft	
53	1	097-122-0100	Return spring	
54	1	172-361-0410	Push plate	
55	1	90319-08206	Screw	M8x20
56	1	172-351-1202	Membrane	
57	1	572-161-1502	Membrane cover	For Signal Lamp Switch Option
58	5	90303-08203	Hex Screw	M8x20
59	1	91201-18150	Seal ring	D18/22x1.5 Cu
60	1	586-490-0381	Signal Lamp Switch	M18x1.5
61	1	90871-18173	Plug screw	M18x1.5
61	1	91201-18150	Seal ring	D18/22x1.5 Cu



Item	Qty.	Order no.	Description	Note
1	2	146-111-2610	Brake Bracket	
2	2	146-331-0400	Anchor support	
3	2	146-131-2210	Dust Shield	210 mm
4	2	590-314-2062	Sleeve	D42/48x36
5	6	599-601-8900	Bush	D12/20/25x36
6	4	92052-30002	Return spring	D30x165.5
7	4	91122-04201	Shaft seal	D42/55x8
8	2	91726-43065	Support ring	D43/65x3
9	2	91402-10453	Grease nipple	M10x1, 45°
10	6	91421-06060	Shield hat	
11	4	095-553-2000	Shield plug	D33/44
12	6	90705-13023	washer	D13/24x2.5
13	4	90303-10203	Hex Screw	M10 x 20 - DIN 933 - 8.8
14	6	90303-12603	Hex Screw	M12x60
15	14	90303-08123	Hex Screw	M8x12
16	1	146-213-0400	S-cam shaft	RH, L=550, 1800 mm Track
16	1	146-213-0600	S-cam shaft	RH, L=590, 1880 mm Track
16	1	146-213-0800	S-cam shaft	RH, L=670, 2040 mm Track
17	1	146-213-0500	S-cam shaft	LH, L=550, 1800 mm Track
17	1	146-213-0700	S-cam shaft	LH, L=590, 1880 mm Track
17	1	146-213-0900	S-cam shaft	LH, L=670, 2040 mm Track
18	4	546-306-0083	Brake shoe assy	210mm, Beral1561
19	4	146-341-1200	Anchor bolt	With grease nipple
20	4	91402-10003	Grease nipple	M10x1, Straight
21	8	91106-36212	O-ring	D36,2x3 Viton

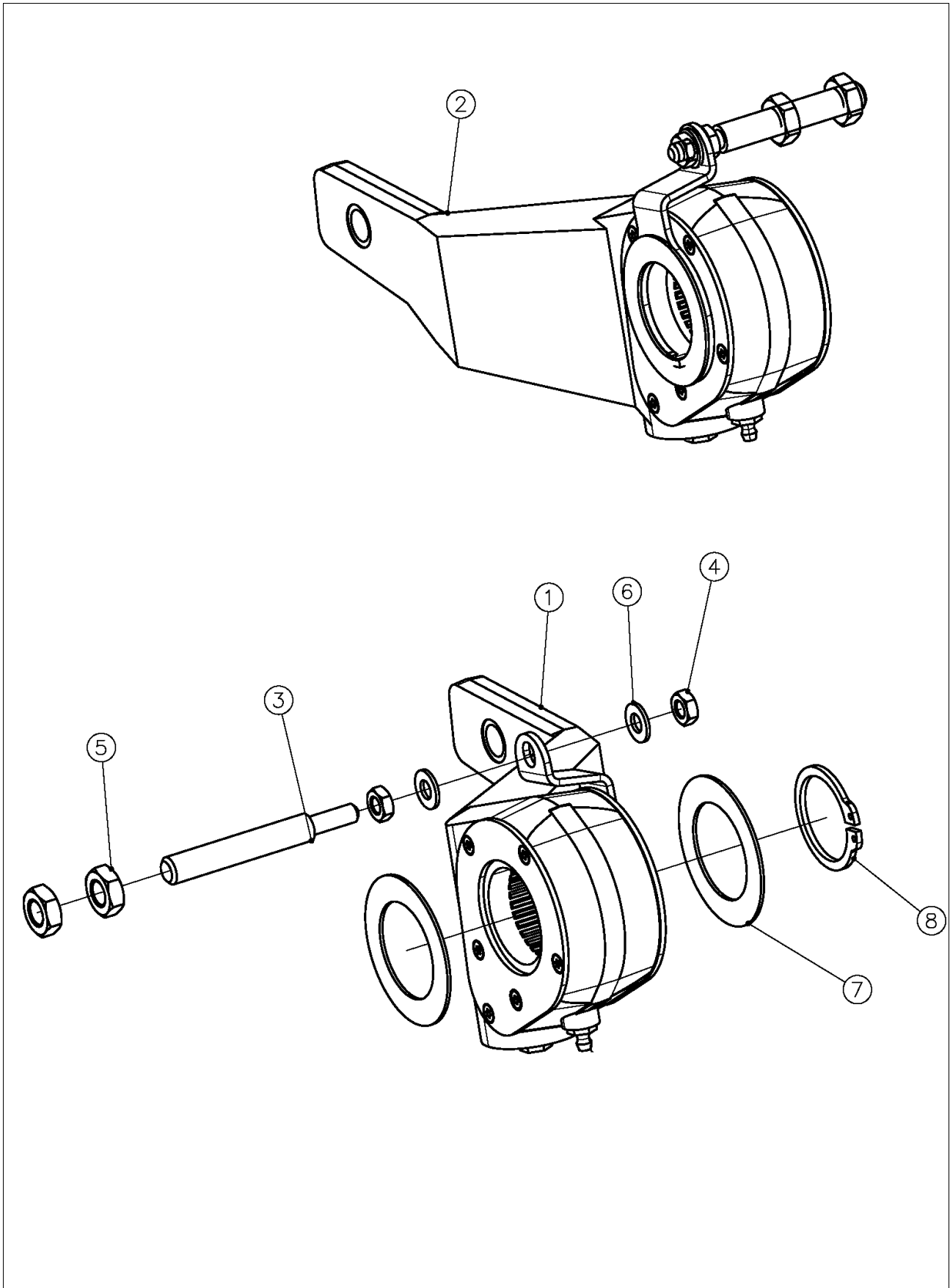


Item	Qty.	Order no.	Description	Note
1,2	ar	546-360-3113	Brake lining set	210mm, Beral1561, for one wheel
3	1	146-351-4100	Brake shoe	210 mm, o-ring sealing
4	2	590-313-2091	Sleeve	D32/36x25
5	1	146-371-0700	Roller	D25/54x28
6	1	90602-05450	Spring cotter	D5x40
7	24	91501-00819	Rivet	Included in lining set (pos1,2)
8	1	146-373-0201	Pin	D25x50

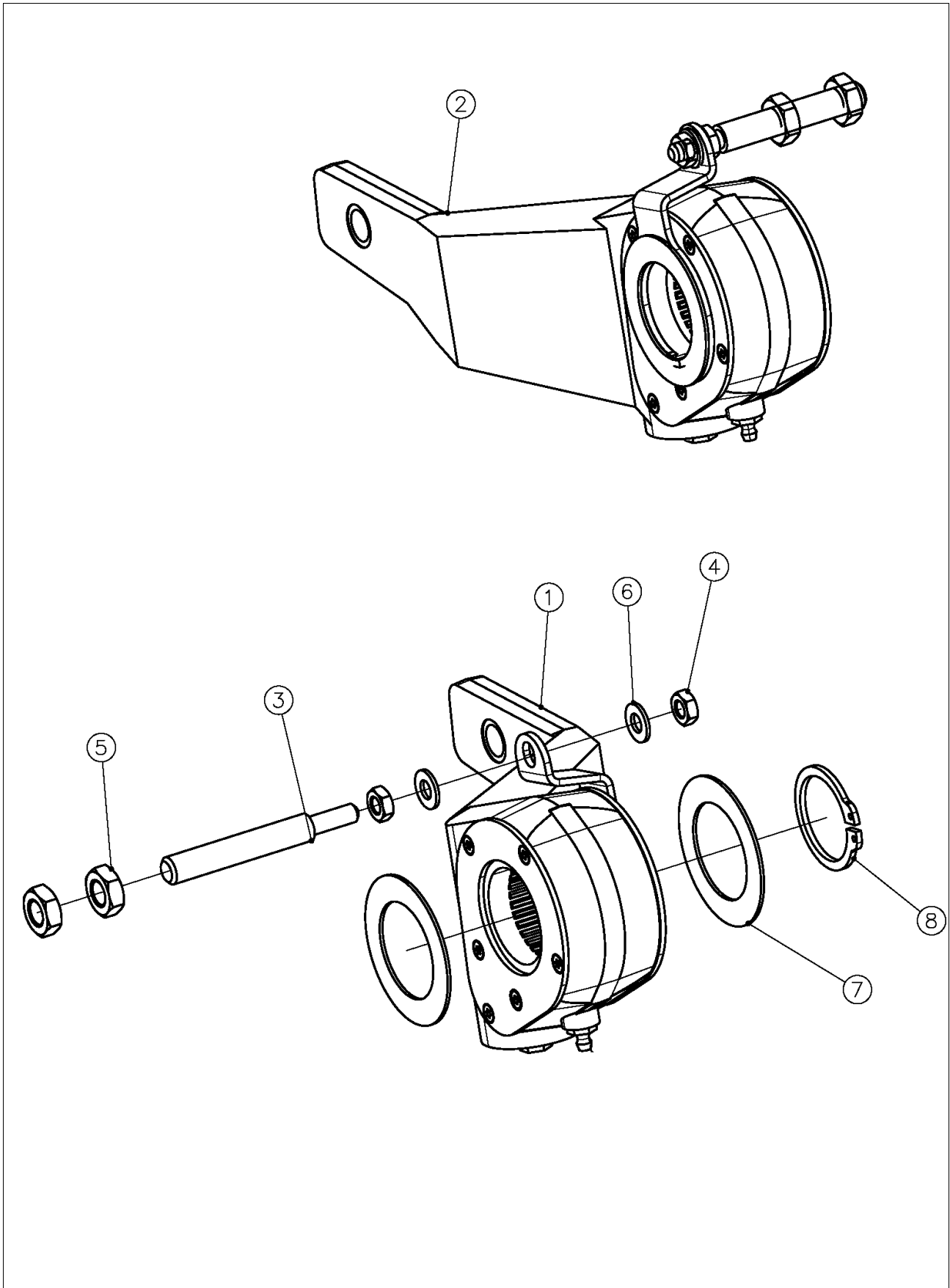


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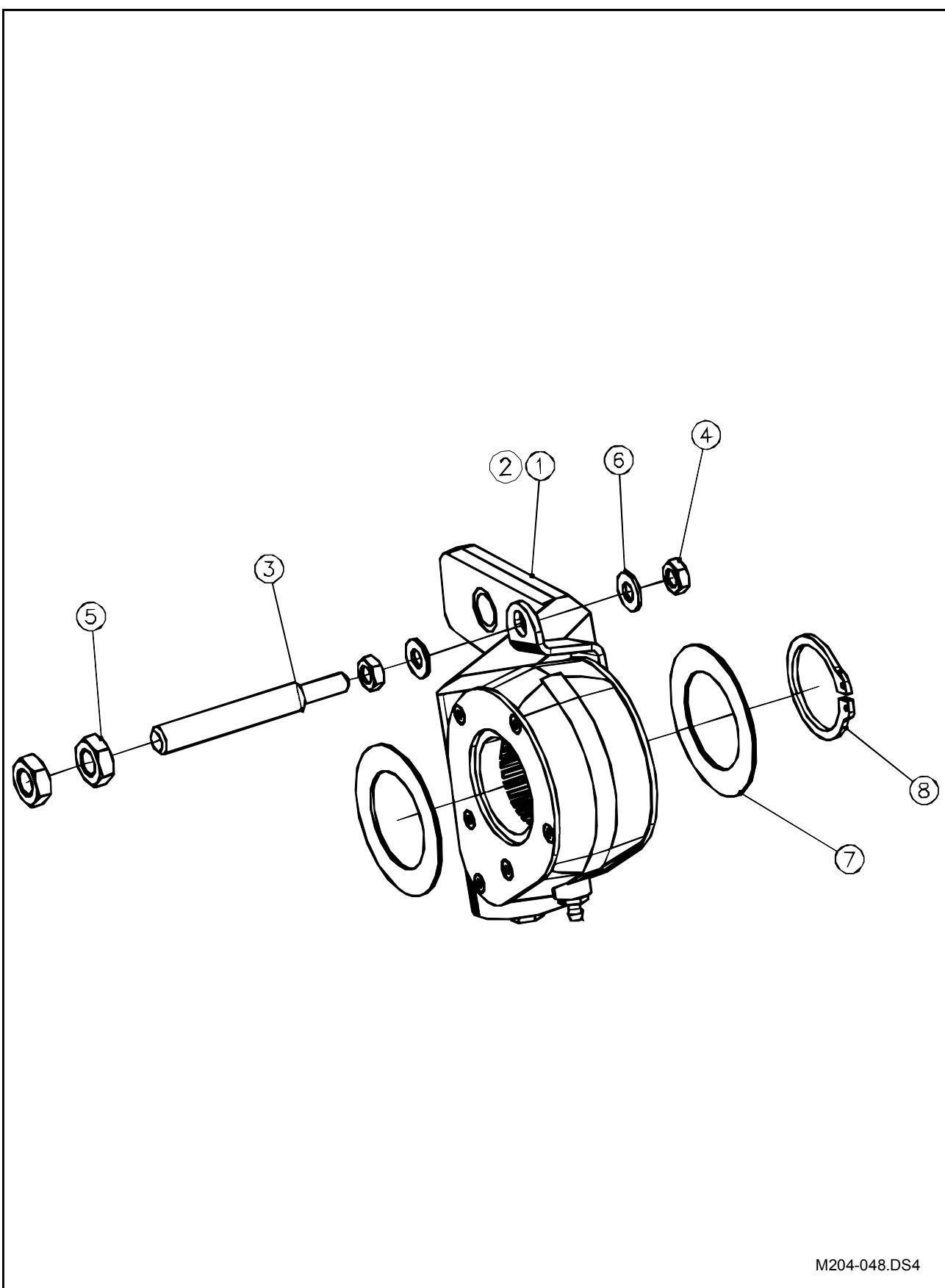
Item	Qty.	Order no.	Description	Note
0	0	0		
1	2	146-311-7910	Brake drum	



Item	Qty.	Order no.	Description	Note
1	NLA	546-530-2012	Slack adjuster	RH, 165 mm, offset 75
2	NLA	546-530-2022	Slack adjuster	LH, 165 mm, offset 75
3	2	90177-01203	Stud bolt	M12/M8, L=94
4	4	90502-08133	Nut	M8
5	4	90502-12193	Nut	M12
6	4	90705-08423	washer	D8.4/17x1.6
7	4	090-354-3030	Spacer plate	D43/66x1.5
8	2	91712-04000	Retainer ring	D40x2.5

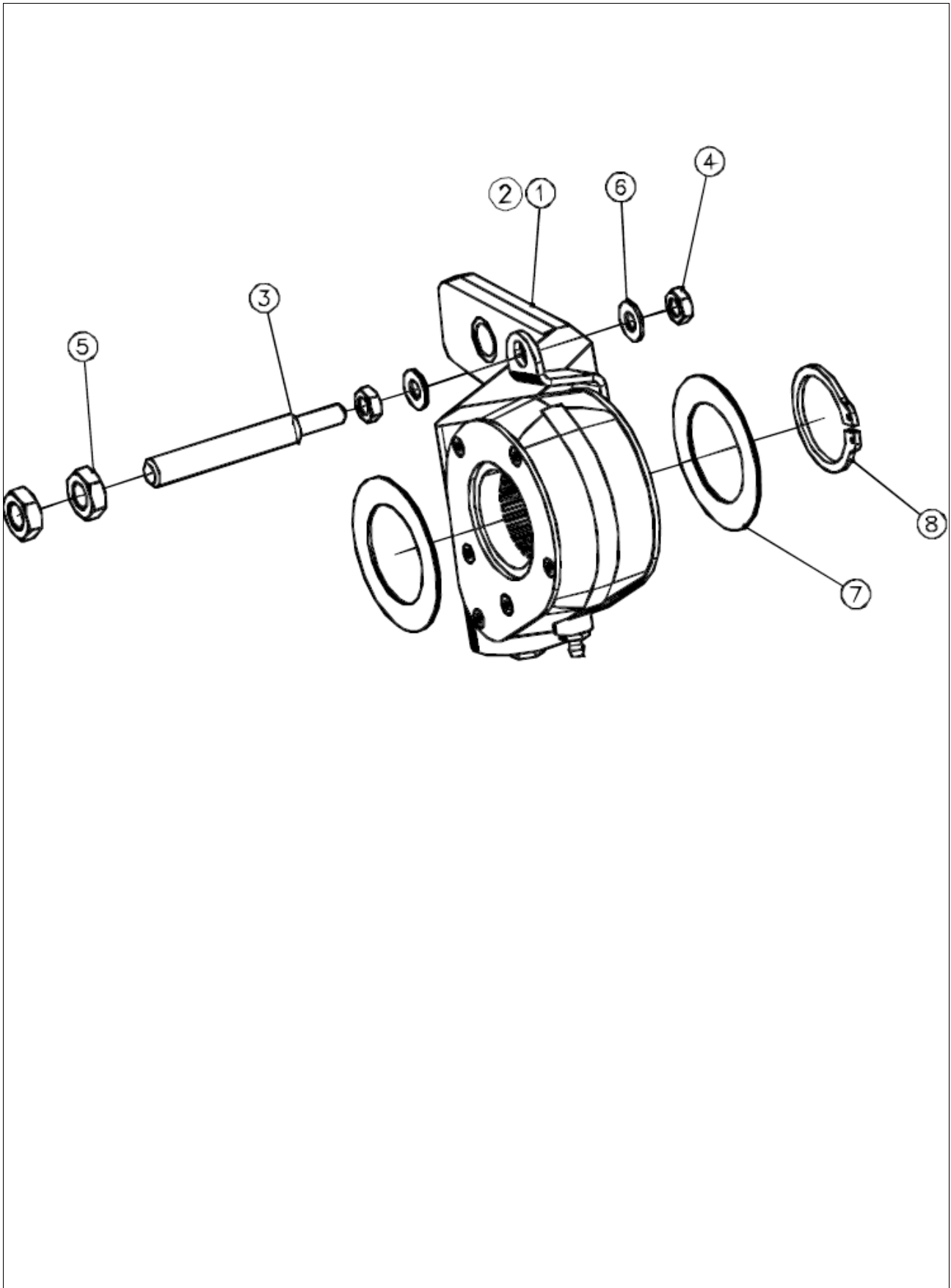


Item	Qty.	Order no.	Description	Note
1	1	546-530-2011	Slack adjuster	LH, L=165, offset 75, DIN
2	1	546-530-2021	Slack adjuster	RH, L=165, offset 75, DIN
3	2	90177-01203	Stud bolt	M12/M8, L=94
4	4	90502-08133	Nut	M8
5	4	90502-12193	Nut	M12
6	4	90705-08423	washer	D8.4/17x1.6
7	4	91726-43065	Support ring	D43/65x3
8	2	91712-04000	Retainer ring	D40x2.5

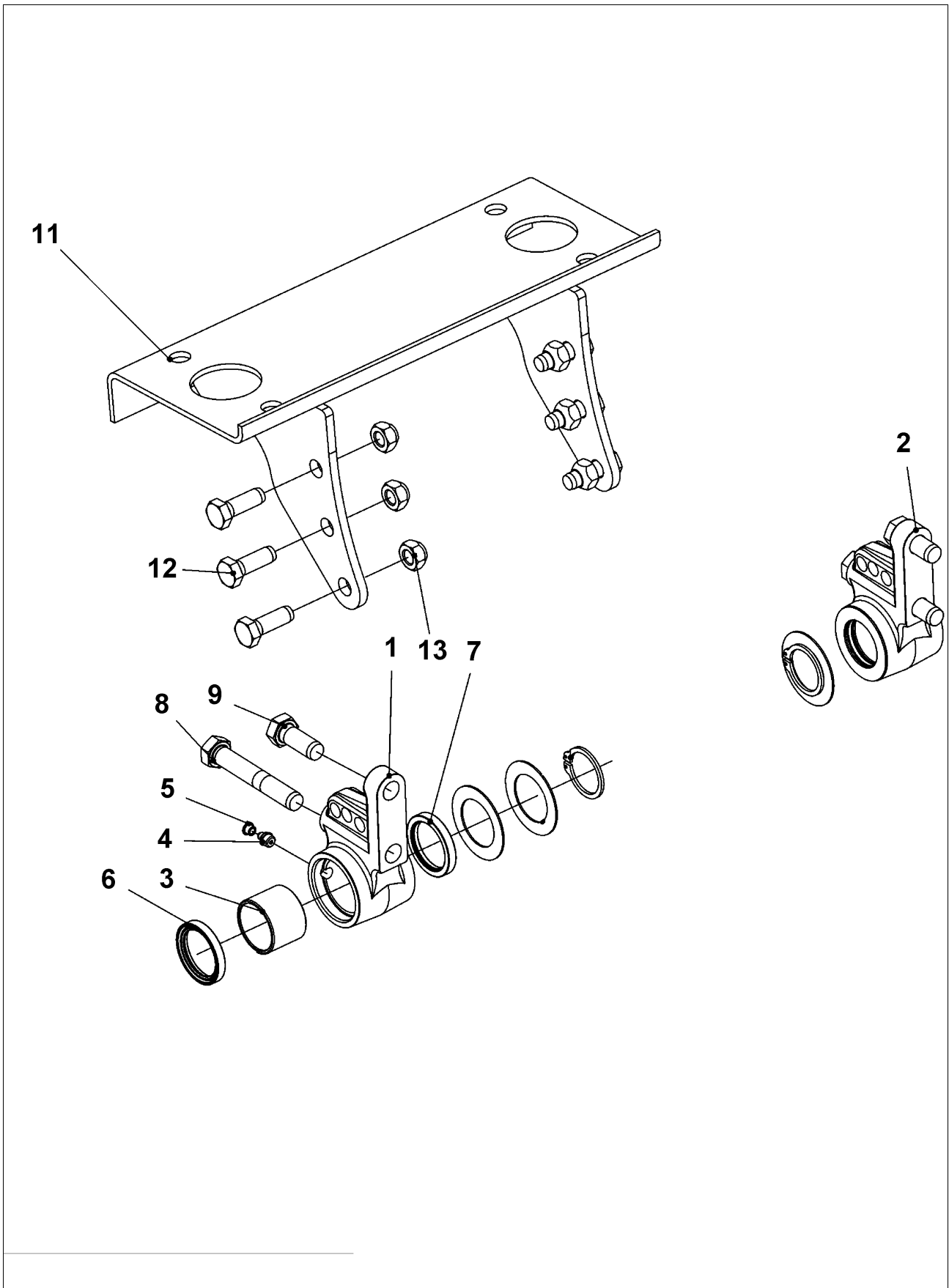


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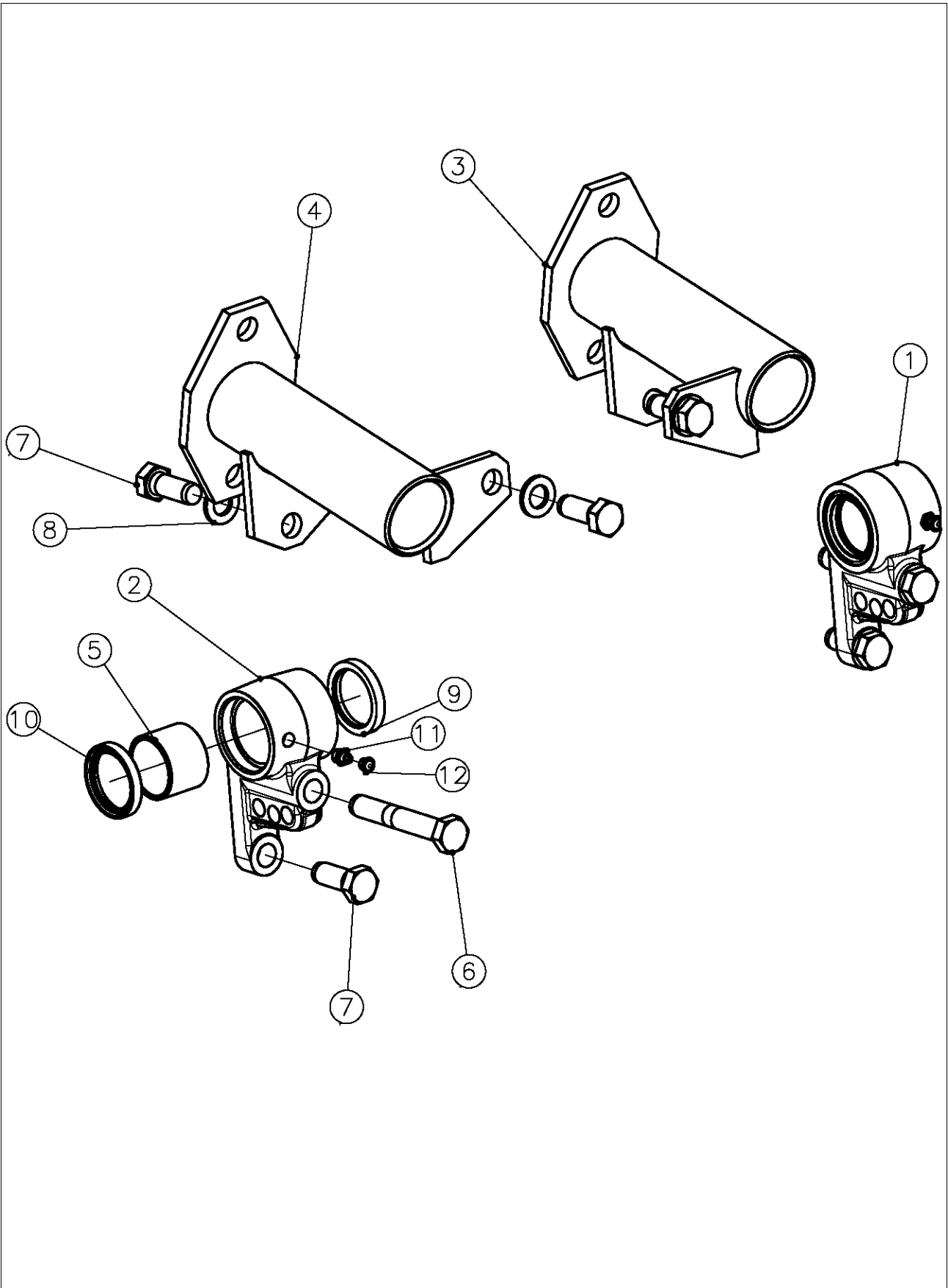
Item	Qty.	Order no.	Description	Note
1	NLA	546-530-3112	Slack adjuster	RH, 165 mm, offset 60, superceded by 546-530-3121
2	NLA	546-530-3122	Slack adjuster	LH, 165 mm, offset 60, superceded by 546-530-3111
3	2	90177-01203	Stud bolt	M12/M8, L=94
4	4	90502-08133	Nut	M8
5	4	90502-12193	Nut	M12
6	4	90705-08423	washer	D8.4/17x1.6
7	4	090-354-3030	Spacer plate	D43/66x1.5
8	2	91712-04000	Retainer ring	D40x2.5



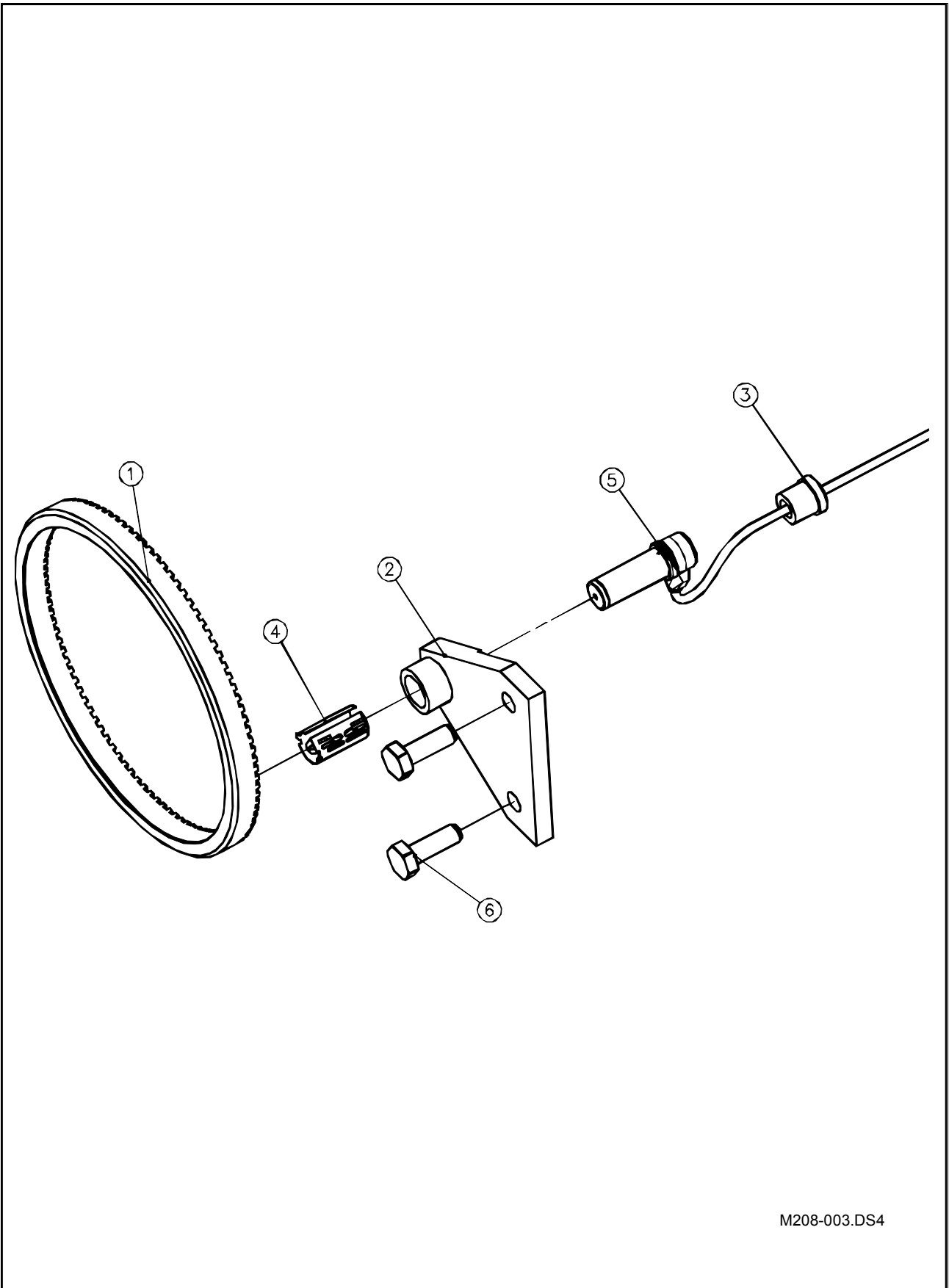
Item	Qty.	Order no.	Description	Note
1	1	546-530-3111	Slack adjuster	LH, 165 mm, offset 56
2	1	546-530-3121	Slack adjuster	RH, 165 mm, offset 56
3	2	90177-01203	Stud bolt	M12/M8, L=94
4	4	90502-08133	Nut	M8
5	4	90502-12193	Nut	M12
6	4	90705-08423	washer	D8.4/17x1.6
7	4	91726-43065	Support ring	D43/65x3
8	2	91712-04000	Retainer ring	D40x2.5



Item	Qty.	Order no.	Description	Note
1	1	146-224-2400	Bearing housing	RH
2	1	146-224-2310	Bearing housing	LH
3	2	590-314-2062	Sleeve	D42/48x36
4	2	91402-10003	Grease nipple	M10x1, Straight
5	2	91421-06060	Shield hat	
6	2	91122-04202	Shaft seal	D42/55x7
6	2	91720-05500	Retainer ring	D55x1.5, since S/N 164224 (9/2006)
7	2	91122-04201	Shaft seal	D42/55x8
8	2	90301-16117	Hex Screw	M16x100, 10.9
9	2	90303-16407	Hex Screw	M16x40, 10.9
11	1	546-721-7400	Chamber bracket	86 deg. for 165 mm slack adjuster w/75 mm offset
12	6	90303-14407	Hex Screw	M14x40
13	6	90550-14227	Nut	M14 self locking

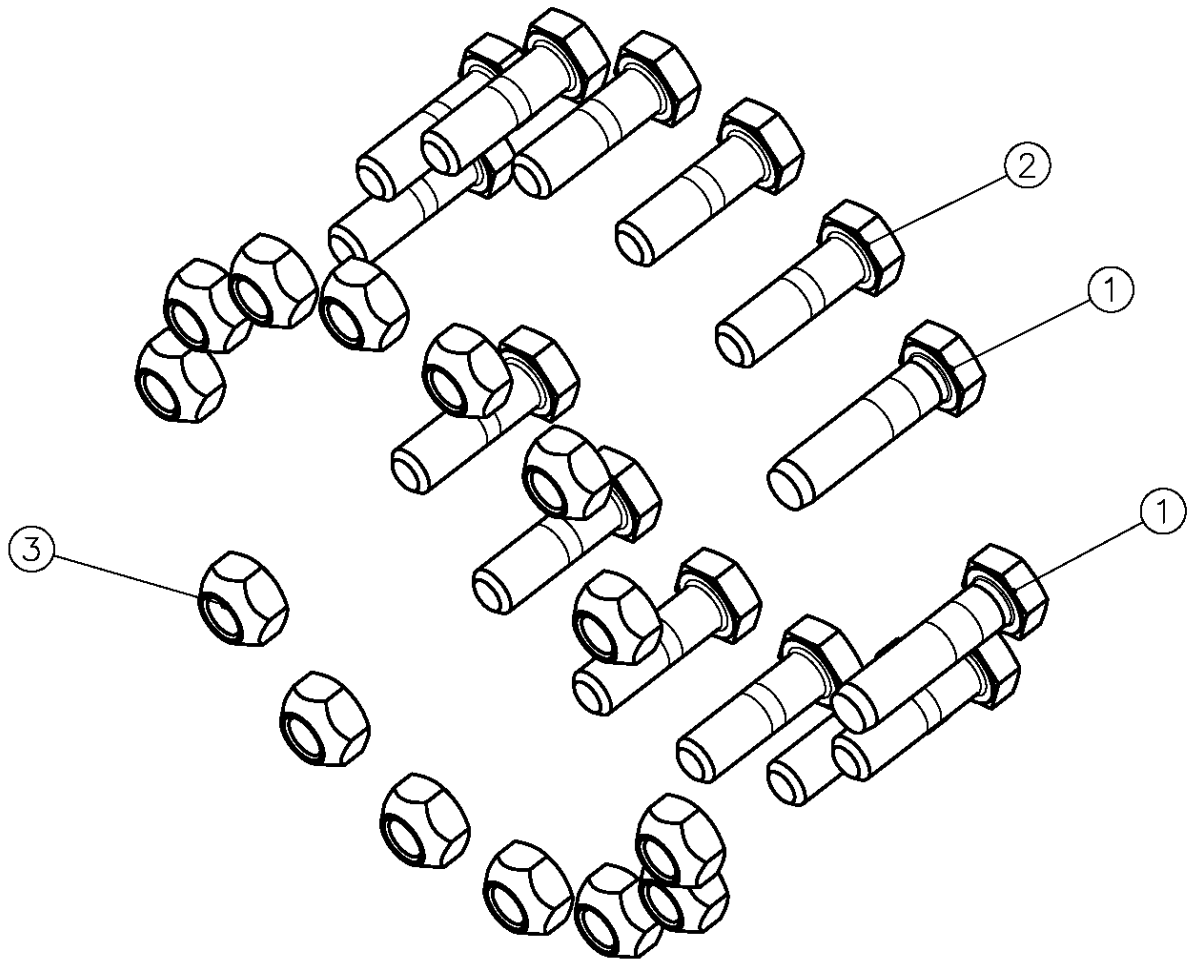


Item	Qty.	Order no.	Description	Note
1	1	146-224-2310	Bearing housing	RH
2	1	146-224-2400	Bearing housing	LH
3	1	546-721-6900	Chamber bracket	RH, 13 deg. for 165 mm slack w/60 mm offset
4	1	546-721-6910	Chamber bracket	LH, 13 deg. for 165 mm slack w/60 mm offset
5	2	590-314-2062	Sleeve	D42/48x36
6	2	90301-16117	Hex Screw	M16x100, 10.9
7	6	90303-16407	Hex Screw	M16x40, 10.9
8	4	90705-17033	washer	D17/30x3
9	2	91122-04201	Shaft seal	D42/55x8
10	2	91122-04202	Shaft seal	D42/55x7
10	2	91720-05500	Retainer ring	D55x1.5, since S/N 164224 (9/2006)
11	2	91402-10003	Grease nipple	M10x1, Straight
12	2	91421-06060	Shield hat	



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Item	Qty.	Order no.	Description	Note
1	2	189-291-0000	Ring gear	ABS, 100 Splines
2	2	189-931-0900	Bracket	
3	2	592235-17101	Rubber bushing	D10/17, for Knorr sensor
4	2	189-295-0000	Bush	Wabco 899 760 510
5	2	589-250-0081	Sensor	Knorr, protected wire
6	4	90303-10303	Hex Screw	M10x30



Item	Qty.	Order no.	Description	Note
1	4	90301-14558	Hex Screw	M14x55
2	24	90169-01401	Hex Screw	M14x45
3	28	90550-14227	Nut	M14 self locking