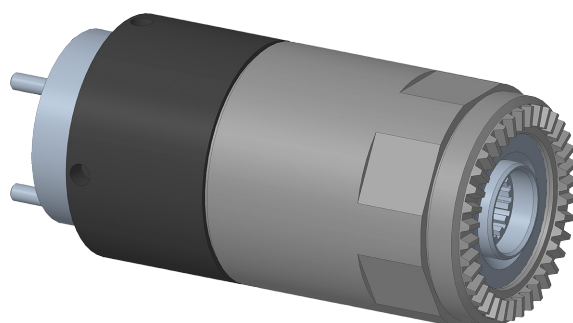




Parts List
P1913E-EN
REV KI 2024-01

(...)B(...)A
Gear BD, BTS, BTi Series



For additional product information visit our website at www.ClecoTools.com

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Trademark

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1 About this Document

This document is intended for qualified employees responsible for installation and maintenance (administrators, installers, maintenance technician, service, operator).
It contains information on using the component.

The original language of this document is German.



Note

Risk of injury/property damage

This document does not provide sufficient information on the replacement/installation of the component in the spindle. Faulty installation can influence the calibration values or the rundown result. Faulty rundown results can lead to injuries and/or material damage.

- Only replace the component after the safety notes in the installation instructions and maintenance instructions have been read and fully understood.



Note

Loss of warranty

Repairs may only be carried out by personnel authorized by Apex Tool Group.

- In case of repair, send the complete component to Sales & Service Center!

Other Documents

Number	Document
P1916E	Assembly Instructions – Fixtured Spindle BTS Series
P1921E	Maintenance instruction – Fixtured Spindle BTS Series

Assembly 1B(...)A

Gear	Order No.	Nm	2	11(3)		12(3)	13
					 [mm]		
1B012A	927346	12	943656PT	936328PT	4.085 – 4.102	922890	924054
1B035A	927344	35	943657PT	936415PT	4.175 – 4.192	923095	924052
1B060A	927345	60	943656PT	936328PT	4.085 – 4.102	922890	924051

Tab. 2-1

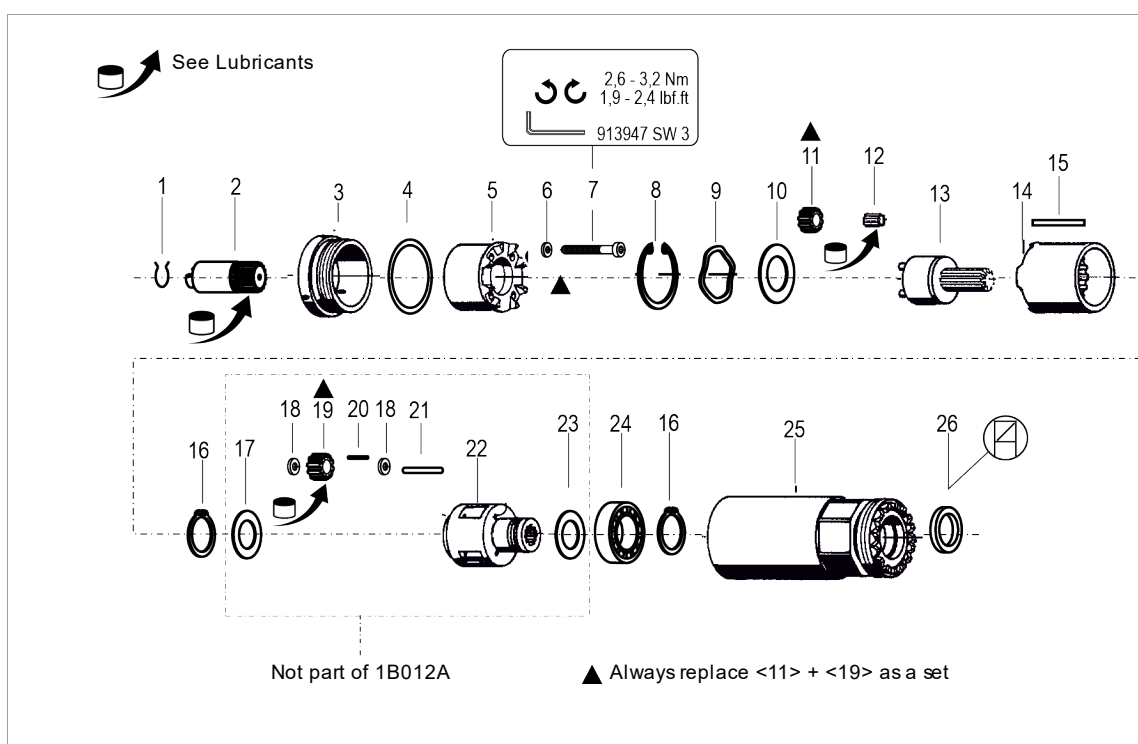


Fig. 2-1: Assembly 1B(...)A

Item	Order No.	Quantity	Description	Dimension
1	942077	1	Circlip	8.0 × 0.8
2	Tab. 2-1	1	Pinion gear asm.	
3	924068	1	Union nut	
4	22598	1	O-Ring	34.65 × 1.78
5	924069	1	Flange	
6	927383	4	Retaining washer	4
7	924076	4	Cylinder screw	M 4 × 30
8	912196	1	Circlip	30.0 × 1.2
9	924075	1	Retaining washer	22.5 × 29.7 × 0.3
10	904013	1	Axial disk	17.0 × 30.0 × 1.0
11	Tab. 2-1	3	Idler gear	
12	Tab. 2-1	3	Needle rim	
13	Tab. 2-1	1	Gear cage asm.	
14	935589	1	Toothed ring	
15	927700	1	Shear key	3.0 × 3.0 × 28.0
16	916272	1	Circlip	17.0 × 1.5
17	935856	1	Washer	
18	935859	6	Washer	4.0 × 8.0 × 1.0
19	916829	3	Idler gear	
20	916849	45	Needle roller	1.0 × 9.8
21	931902	3	Idler gear bolt	3.98 × 19.8
22	935858	1	Gear cage	
23	916805	1	Support washer	17.0 × 24.0 × 1.5
24	927216	1	Ball bearing	17.0 × 30.0 × 7.0
25	935576	1	Gear case	
26	924131	1	Seal shaft	12.0 × 22.0 × 4.0

Tab. 2-2

Assembly 2B(...)A

Gear	Order No.	Nm
2B110A	935548	110
2B200A	935549	200

Tab. 3-1

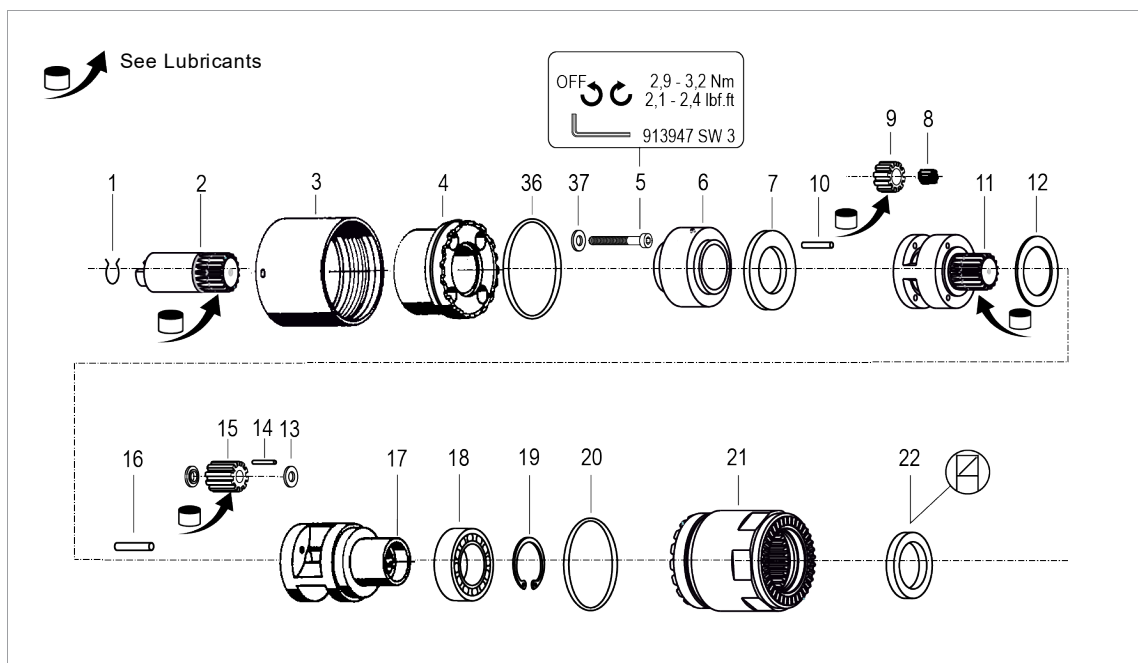


Fig. 3-1: Assembly 2B110A

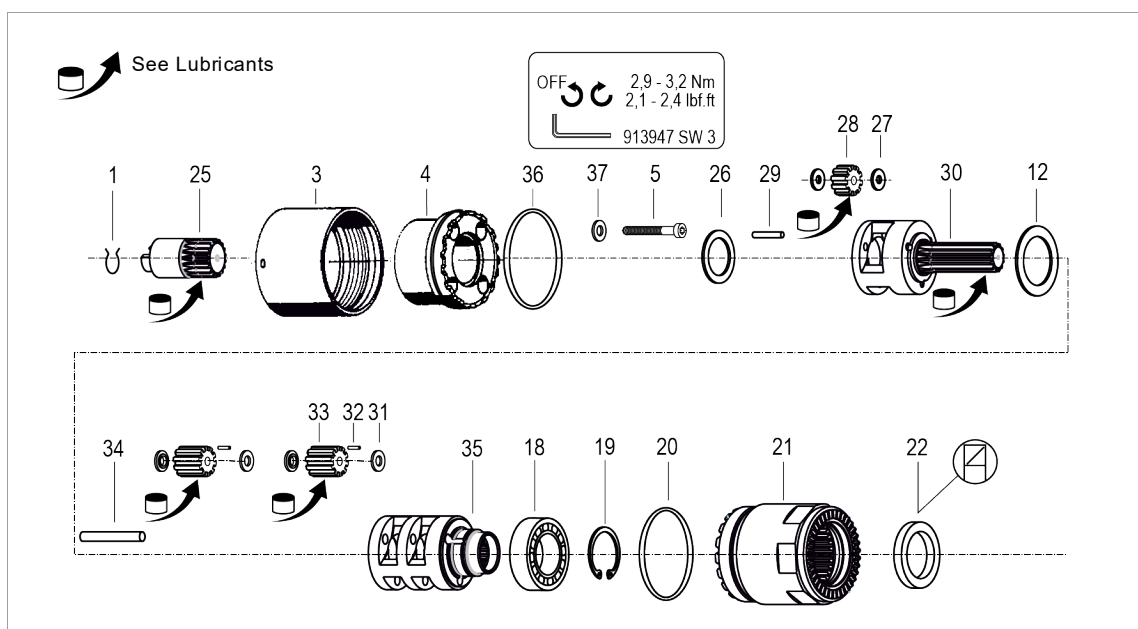


Fig. 3-2: Assembly 2B200A

Item	Order No.	Quantity	Name	Dimension
1	923424	1	Circlip	10.0 × 0.8 AR
2	942038PT	1	Pinion gear asm.	
3	923420	1	Union nurt	
4	923422	1	Flange	
5	901978	4	Cylinder screw	M4 × 30
6	935896	1	Sleeve asm.	
7	927877	1	Support washer	28.0 × 40.0 × 2.0
8	923095	3	Needle rim	3.0 × 5.0 × 7.0
9	935504	3	Idler gear	
10	935551	3	Needle roller	3.0 × 17.0
11	935519	1	Gear cage asm.	
12	935537	1	Shim riong	26.0 × 37. × 1.5
13	935558	6	Washer	4.0 × 6.0 × 1.0
14	932147	36	Needle roller	1.5 × 7.8
15	935508	3	Idler gear	
16	935857	3	Idler gear bolt	4.33 × 21.8
17	935527	1	Gear cage asm.	
18	922563	1	Ball bearing	25. × 37. × 7.0
19	914957	1	Circlip	25.0 × 1.2 AR
20	915126	1	O-Ring	46.0 × 1.5
21	935513	1	Gear case	
22	935789	1	Seal shaft	22.0 × 35.0 × 5.0
25	943660PT	1	Pinion gear asm.	
26	923435	1	Support washer	20.0 × 28.0 × 2.0
27	935838	6	Washer	
28	935539	3	Idler gear asm.	
29	923120	3	Needle roller	4.0 × 21.8
30	935520	1	Gear cage asm.	
31	935559	12	Washer	
32	932147	84	Needle roller	1.5 × 7.8
33	935523	6	Idler gear	
34	935540	3	Needle roller	5.29 × 42.0
35	935528	1	Gear cage asm.	
36	915126	1	O-Ring	46.0 × 1.5
37	927383	4	Retaining washer	4

Tab. 3-2

Assembly 3B(...)A

Gear	Order No.	Nm
3B300A	935590	300

Tab. 4-1

Different mounting!

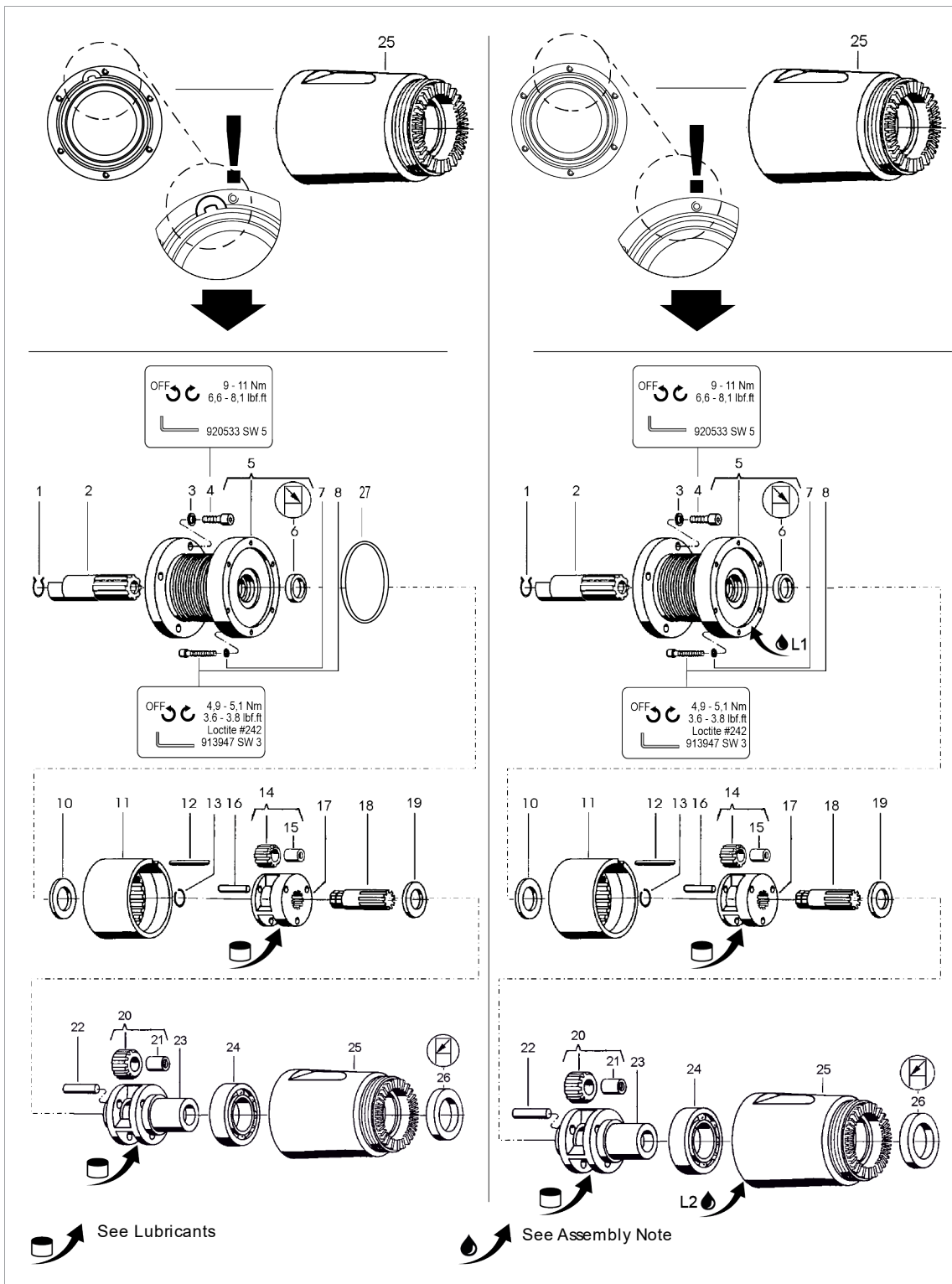


Fig. 4-1: Assembly 3B300A

Item	Order No.	Quantity	Name	Dimension
1	924134	1	Circlip	13.4 × 0.8
2	935901	1	Pinion gear	
3	910521	4	Retaining washer	6,4
4	900006	4	Cylinder screw	M6 × 16
5	935902	1	Flange asm.	
6	925954	1	Seal shaft	22. 0 × 32.0 × 4.0
7	927383	6	Retaining washer	4
8	937837PT	6	Cylinder screw	M4 × 22 (12.9)
10	935904	1	Axial disk	25.0 × 36.5 × 2.38
11	935582	1	Toothed ring	
12	902468	1	Shear key	5.0 × 5.0 × 32.0
13	3279B	1	Circlip	11.89 × 1.09
14	507426	3	Idler gear asm.	
15	800190	3	Needle sleeve	4.76 × 8.73 × 9.53
16	927599	3	Bolt	
17	928037	1	Gear cage	
18	935577	1	Pinion gear	
19	918069	1	Axial disk	16.0 × 28.0 × 2.75
20	935580	3	Idler gear asm.	
21	102440	3	Needle sleeve	7.94 × 12.70 × 14.28
22	926734	3	Idler gear bolt	
23	935578	1	Gear cage asm.	
24	920528	1	Ball bearing	30.0 × 55.0 × 13.0
25	926774	1	Gear case	
26	927597	1	Seal shaft	30.0 × 47.0 × 7.0
27	937730PT	1	O-Ring	66 × 1.5

Tab. 4-2

Assembly 4B(...)A

Gear	Order No.	Nm	11	13	19	21(3)	24	27	34(3)	38
4B660A	935781	660	929479	3279B	929473	929472	927958	914939	914441	914426
4B500A	935780	500	929558	902034	929527	925064	929524	929522	929523	929476
4B360A	929541	360			929560	925062	929525	914939	914441	914426

Tab. 5-1

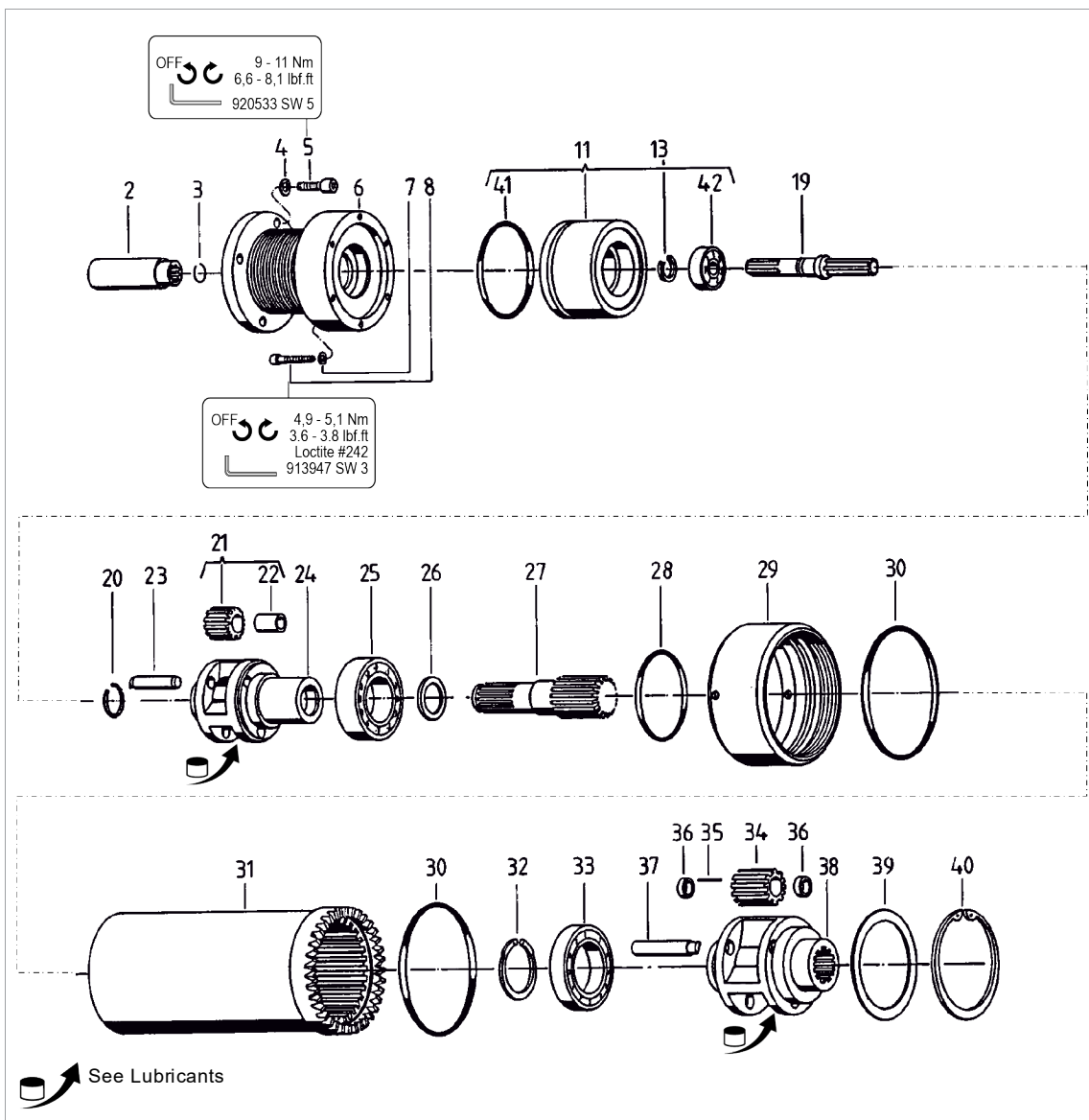


Fig. 5-1: Assembly 4B360A / 4B500A

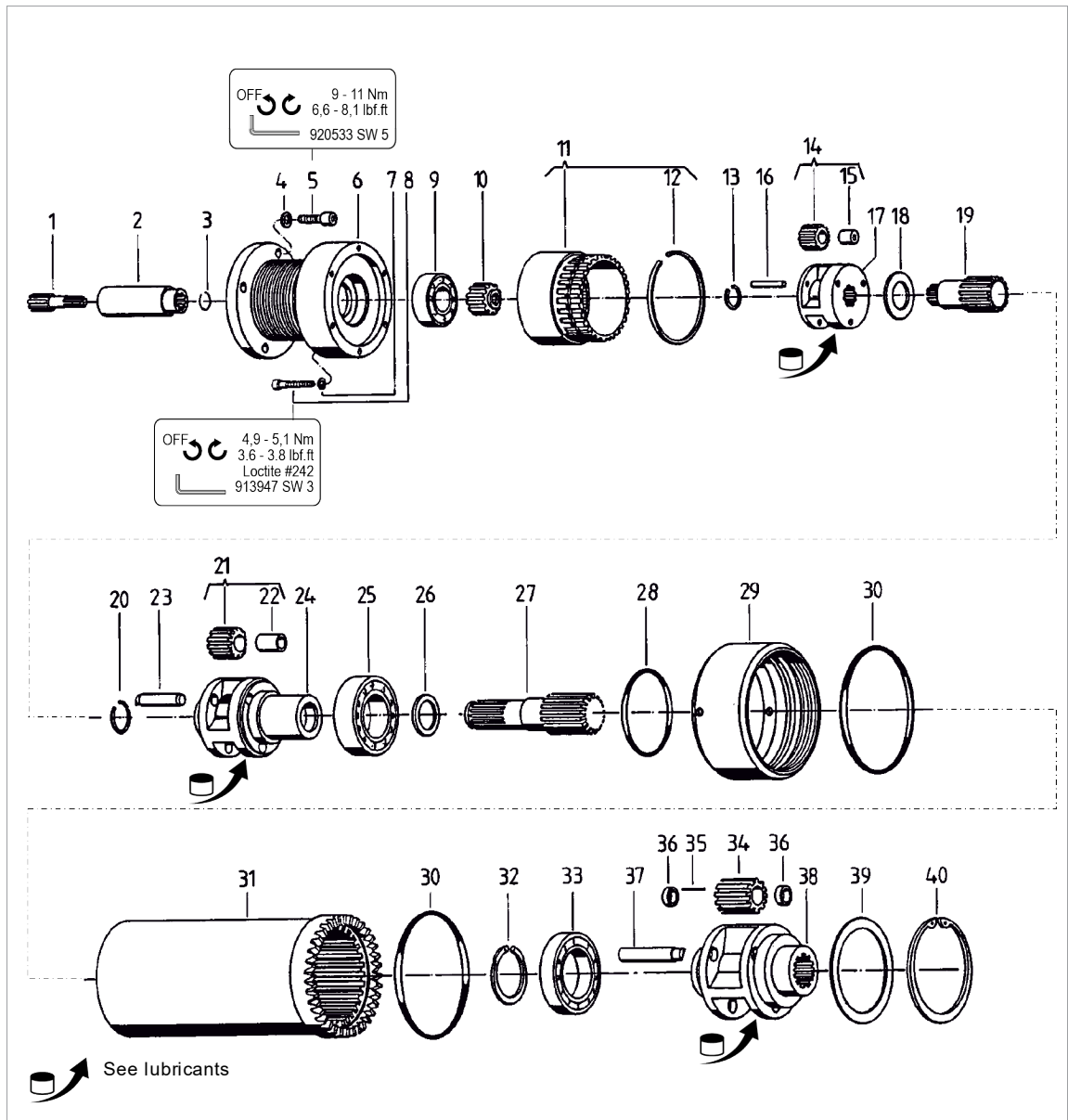


Fig. 5-2: Assembly 4B660A

Item	Order No.	Quantity	Name	Dimension
1	929439	1	Pinion gear	
2	929440	1	Adaption	
3	922896	1	Retaining ring	11 × 1.0
4	910521	4	Retaining washer	6.4
5	900006	4	Cylinder screw	M6 × 16
6	929437	1	Flange	
7	927383	6	Retaining washer	4
8	910117	6	Cylinder screw	M4 × 22
9	924074	1	Ball bearing	17.0 × 35.0 × 10.0
10	922019	1	Pinion gear	
11	Tab. 5-1	1	Toothed ring asm.	
12	929480	1	Retaining ring	60.0 × 1.5
13	Tab. 5-1	1	Circlip	
14	507426	3	Idler gear asm.	
15	800190	3	Needle sleeve	4.76 × 8.73 × 9.53
16	927599	3	Bolt	
17	928037	1	Gear cage	
18	911115	1	Axial disk	19.05 × 31.75 × 2.38
19	Tab. 5-1	1	Pinion gear	
20	910183	1	Retaining ring	18.0 × 1.6
21	Tab. 5-1	3	Idler gear asm.	
22	102440	3	Needle sleeve	7.94 × 12.70 × 14.28
23	926734	3	Idler gear bolt	
24	Tab. 5-1	1	Gear cage	
25	920528	1	Ball bearing	30.0 × 55.0 × 13.0
26	923435	1	Support washer	20.0 × 28.0 × 2.0
27	Tab. 5-1	1	Pinion gear	
28	927817	1	O-Ring	58.4 × 1.3
29	926812	1	Union nut	
30	926859	1	O-Ring	84.0 × 2.0
31	935782	1	Gear case	
32	910405	1	Circlip	35.0 × 1.5
33	912075	1	Ball bearing	35.0 × 55.0 × 10.0
34	Tab. 5-1	3	Idler gear	
35	914450	72	Needle roller	1.5 × 15.8
36	914434	3	Ring	
37	914442	3	Idler gear bolt	
38	Tab. 5-1	1	Gear cage	
39	928100	1	Washer	58.0 × 73.0 × 0.8

Item	Order No.	Quantity	Name	Dimension
40	917824	1	Circlip	72.0 × 2.5
41	923560	1	O-Ring	60.0 × 2.0
42	910567	1	Ball bearing	12.0 × 28.0 × 8.0

6 Assembly Note

Lubricant

Greasing Point	Order No.	Packaging Unit [kg]	Designation DIN 51502 / ISO 3498	KLÜBER LUBRICATION
	933027	1	KP1K	Microlube GL261 ¹

Surface Seal

1. Apply activator.
L1: Loctite #7649, Order no. 931320PT.
2. Allow to flash off for 2 minutes.
L2: Loctite #573, Order no. 915183PT.
3. Apply adhesive.
4. Assemble parts.
5. Before commissioning wait 12 hours.

¹ Initial lubricationApex Tool Group

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