



HYDRAULIC HAMMER

RAMMER 4099 PRO

Serial No.

4099A1640-UP

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GENUINE RAMMER SPARE PARTS

Rammer genuine spare parts are designed and manufactured by using the latest technological knowledge and engineering skills. Rammer spare parts are made of the best available materials with the most advanced manufacturing techniques.

It is important that you use only genuine Rammer spare parts, to ensure easy operation, maintenance and repair of the product. Please note that eventual warranty claims will be handled only if you have used genuine Rammer parts in your Rammer.

LOCATION OF THE SERIAL NUMBER

It's important to make correct reference to the serial number of the product when ordering spare parts. Identification of serial number is the only proper means of maintaining and identifying parts for a specific product. The location of equipment serial number is pointed in "Operation and maintenance" manual.

SPARE PART ORDERS

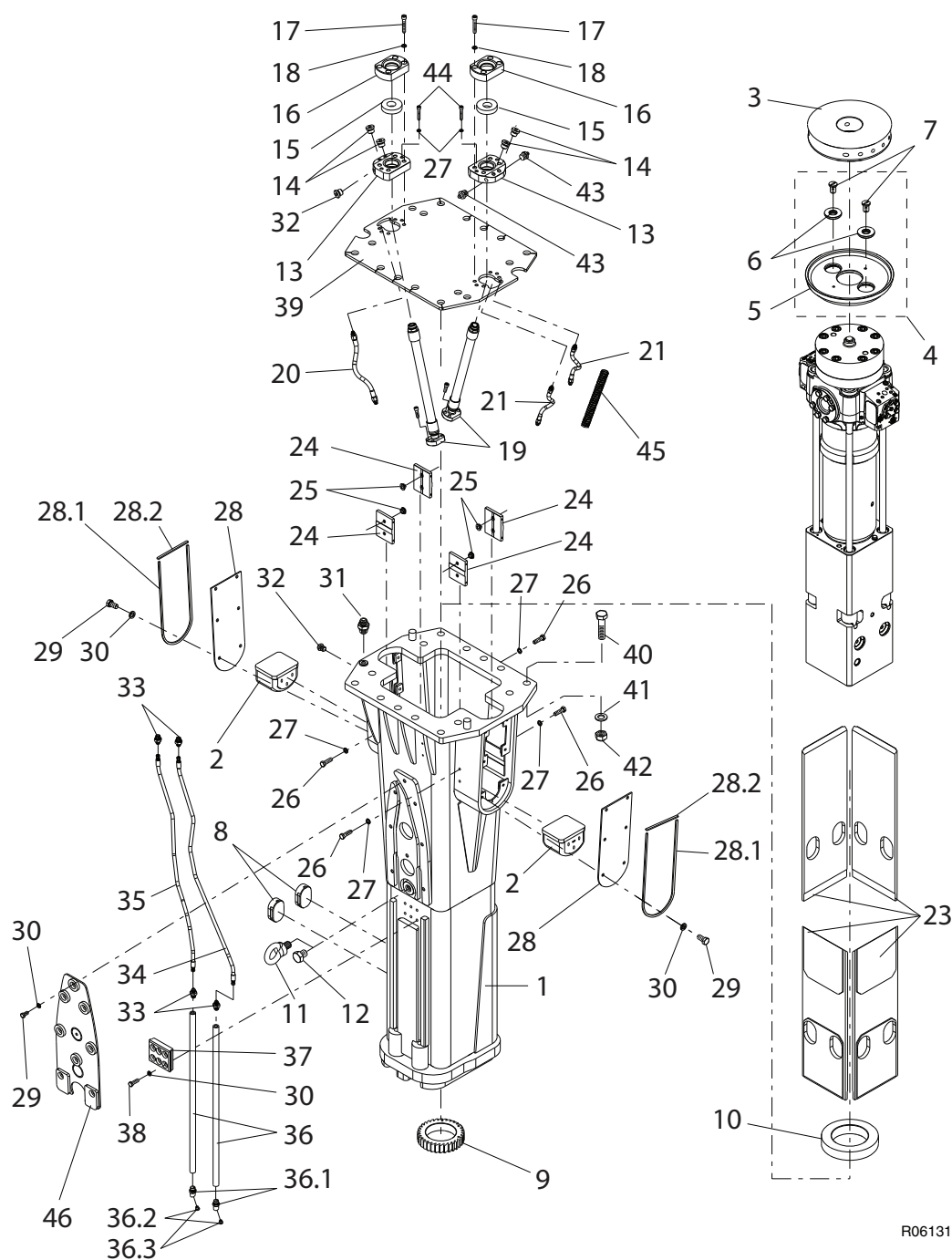
Quick spare part deliveries are secured by exact orders.

Required information:

- Name of customer and contact person
 - Order number (when available)
 - Delivery address
 - Mode of delivery (air mail etc.)
 - Required delivery date
 - Invoicing address
 - Model and serial number of the product
 - Name, number and required amount of spare parts
-

PARTS

1. HOUSING UNIT

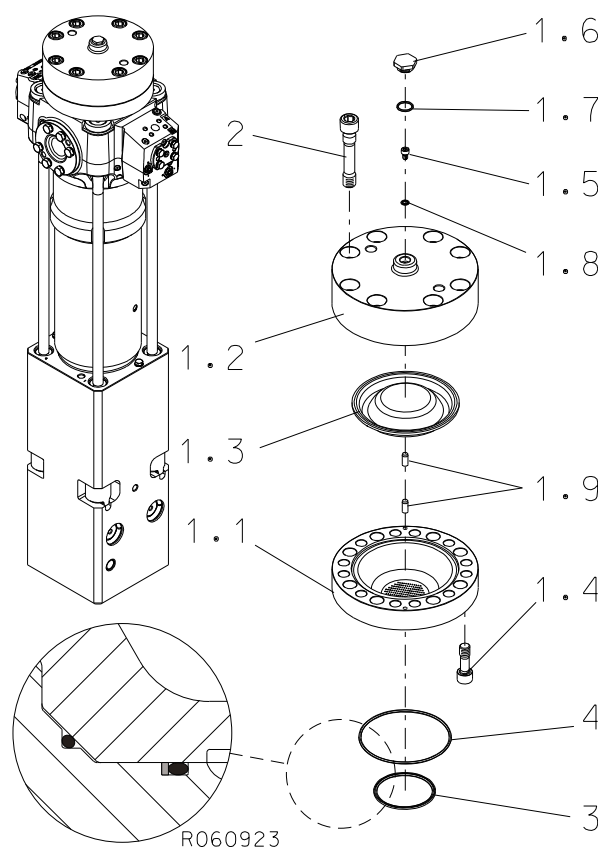


R061319

Item	Description	Part no.	Specification	Note	Qty
1	Housing	172681			1
2	Pad	104068			2
3	Buffer	172138			1
4	Buffer holder (incl. parts 5-7)	172287			1
5	Plate	172155			1
6	Plate	172370			2
7	Screw	172371			2
8	Plug	160576			2

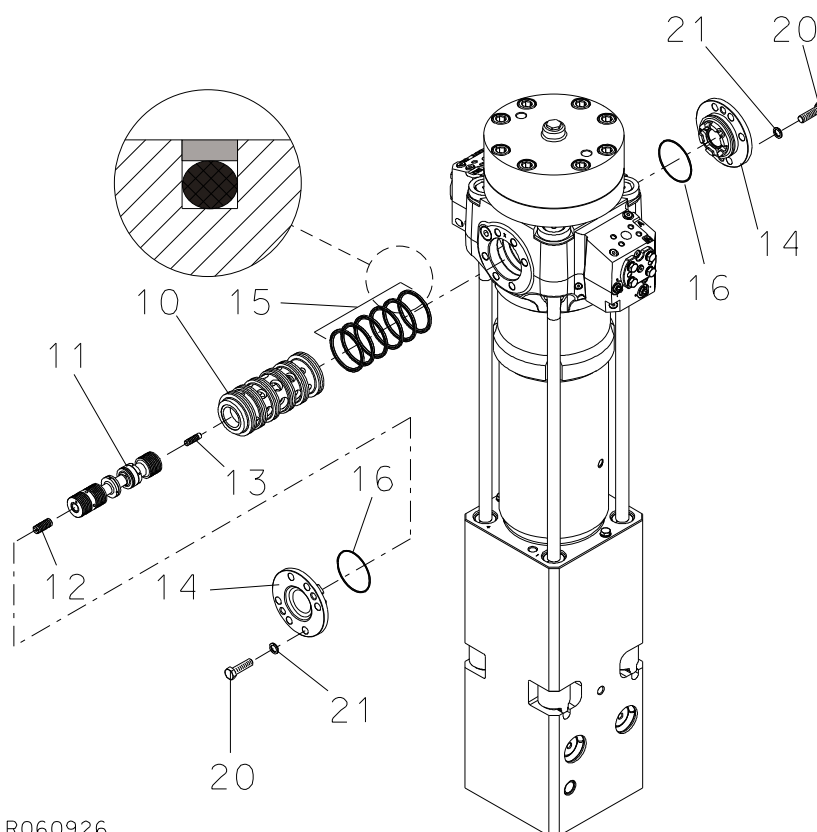
Item	Description	Part no.	Specification	Note	Qty
9	Seal	172706			1
10	Seal	172668			1
11	Lifting eye	901464	M36 DIN 580		1
12	Hex. screw	901465	M36x40-8.8 ISO 4017		1
13	Flange	173275			2
14	Flange plug	90444	BSP 3/8		4
15	Seal	173510			2
16	Cover	173473			2
17	Hex. socket screw	900040	M16x80-8.8 ISO 4762		8
18	Lock washer	90597	M16 NORD-LOCK		8
19	Hose assembly	172755			2
20	Hose assembly	954435	Air hose		1
21	Hose assembly	954436	Grease hoses		2
23	Wear plate	171094			4
24	Guide plate	172686			4
25	Bushing	172678			8
26	Hex. screw	91050	M12x40-8.8 ISO 4017		8
27	Lock washer	91012	M12 NORD-LOCK		12
28	Cover (incl. parts 28.1-28.2)	172796			2
28.1	Seal	954448			1
28.2	Seal	954449			1
29	Hex. screw	90514	M16x30-8.8 ISO 4017		20
30	Lock washer	954382	NLX16 NORD-LOCK		26
31	Connector	950038			1
32	Flange plug	90403	BSP 1/4		1
33	Connector	951204			4
34	Hose assembly	172741			1
35	Hose assembly	172743			1
36	Pipe (incl. parts 36.1-36.2)	172723			2
36.1	Adapter	170210			1
36.2	Nozzle	173241	standard		1
36.3	Nozzle	173289	optional		1
37	Fixing plate	170233			1
38	Hex. screw	900010	M16x50-10.9 ISO 4017		6
39	Top plate	172749			1
40	Hex. screw	90520	M36x140-8.8 ISO 4014		14
41	Washer	90521	37 ISO 7416		14
42	Lock nut	90519	M36-8 DIN 985		14
43	Grease nipple	90200	R1/4		2
44	Hex. socket screw	901902	M12x45-8.8 ISO 4762		4
45	Shield	954451			1
46	Cover	172898			1
200	Label set (incl. part 200.1)	173612			1
200.1	Safety label set	169400	English		1

2. ACCUMULATOR



Item	Description	Part no.	Specification	Note	Qty
1	Accumulator (incl. parts 1.1-1.9)	160006			1
1.1	Accumulator bottom	160018			1
1.2	Accumulator cover	160019			1
1.3	Membrane	172307			1
1.4	Accumulator screw	40528			12
1.5	Filling plug	40368			1
1.6	Shield plug	154015			1
1.7	O-ring	910006	D23	*	1
1.8	Usit-ring	90056	8-13.9-1	*	1
1.9	Parallel pin	90304	10m6x24 ISO 8734		2
2	Accumulator screw	300711			8
3	Seal	40536		*	1
4	O-ring	90076	D229	*	1
	*) Are included in seal set				

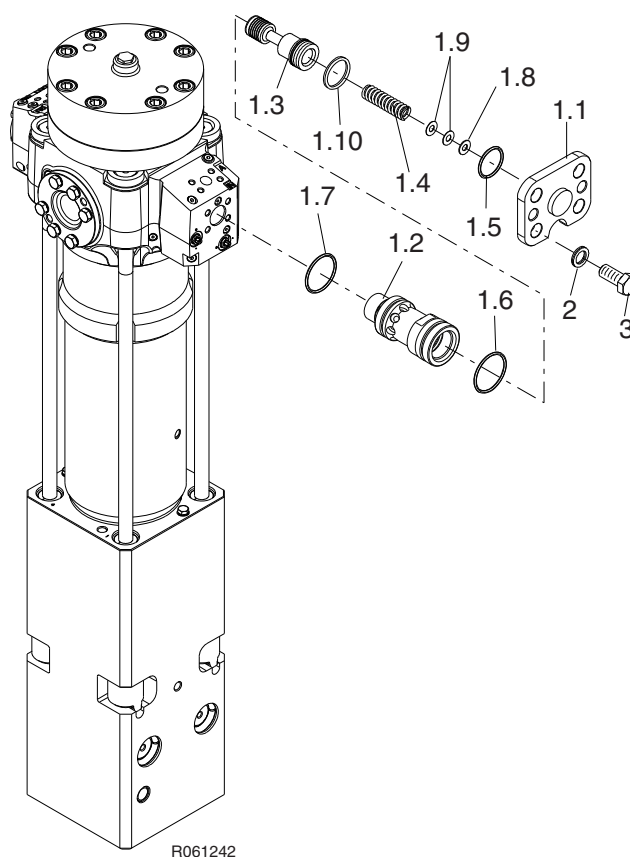
3. MAIN VALVE



R060926

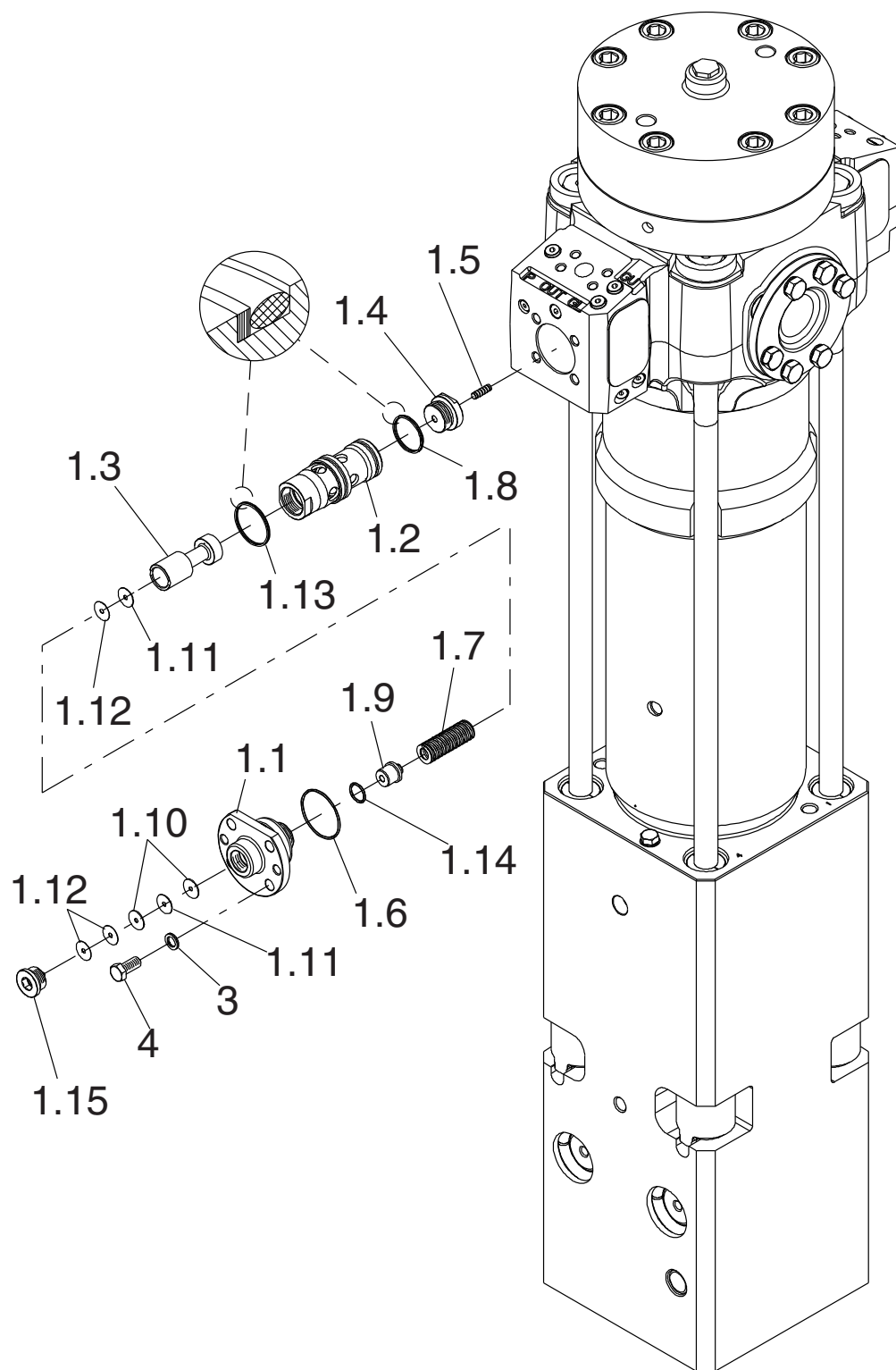
Item	Description	Part no.	Specification	Note	Qty
1	Main valve (incl. parts 10-16)	169987			1
10	Main valve bushing	169988			1
11	Main spool	169989			1
12	Spool	110986			1
13	Spool	110781			1
14	Cover	169990			2
15	Seal	902644	D125	*	6
16	O-ring	90032	D120	*	2
20	Hex. screw	900036	M20x70-10.9 ISO 4014		12
21	Lock washer	91010	M20 NORD-LOCK		12
	*) Are included in seal set				

4. RAMVALVE



Item	Description	Part no.	Specification	Note	Qty
1	Ramvalve (incl. parts 1.1-1.10)	171029			1
1.1	Cover	172149			1
1.2	Valve housing	172204			1
1.3	Spool	171031			1
1.4	Spring	954342			1
1.5	O-ring	90017	D34	*	1
1.6	O-ring	90031	D46	*	1
1.7	O-ring	90007	D44	*	1
1.8	Shim plate	954349	S=1		X
1.9	Shim plate	954348	S=0.5		X
1.10	Seal	954341	D34	*	1
2	Lock washer	90597	M16 NORD-LOCK		4
3	Hex. screw	90517	M16x35-8.8 ISO 4017		4
	*) Are included in seal set				

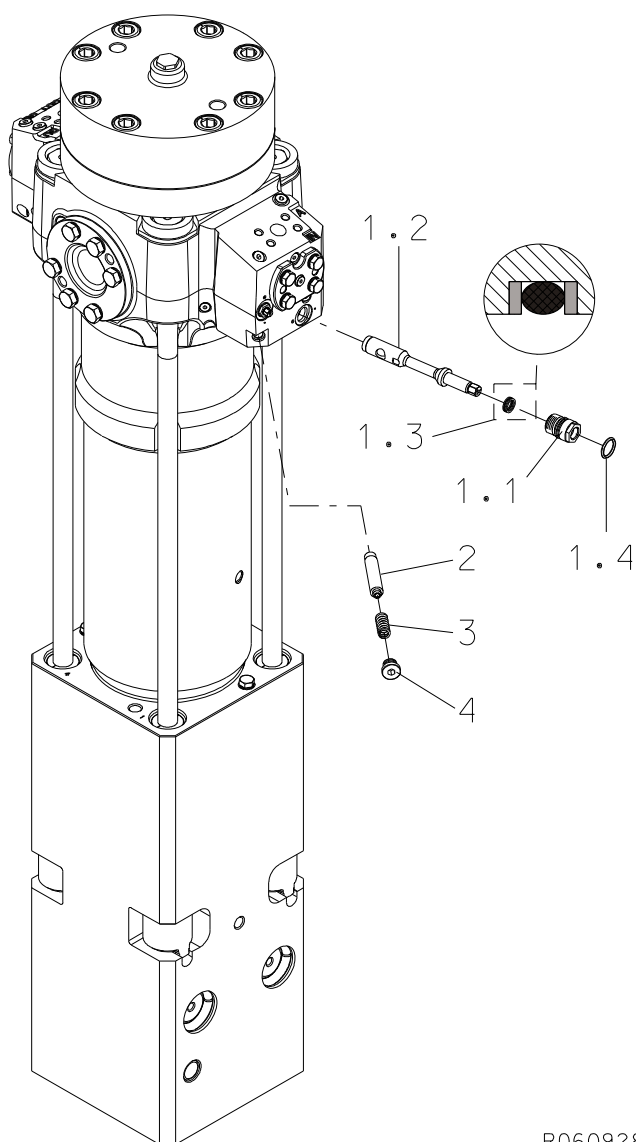
5. PRESSURE CONTROL VALVE



R061340

Item	Description	Part no.	Specification	Note	Qty
1	Pressure control valve (incl. parts 1.1-1.15)	172979			1
1.1	Cover	174151			1
1.2	Valve housing	161982			1
1.3	Spool	161975			1
1.4	Guide	161976			1
1.5	Spool	400582			1
1.6	O-ring	90030	D75	*	1
1.7	Spring	90118			1
1.8	Seal	41374	D55	*	1
1.9	Spring guide	161973			1
1.10	Shim plate	174183	S=0.75		X
1.11	Shim plate	42363	S=1		X
1.12	Shim plate	42362	S=0.5		X
1.13	Seal	40533	D65	*	1
1.14	O-ring	90015	D26	*	1
1.15	Plug	161981			1
3	Lock washer	90597	M16 NORD-LOCK		4
4	Hex. screw	90517	M16x35-8.8 ISO 4017		4
	*) Are included in seal set				

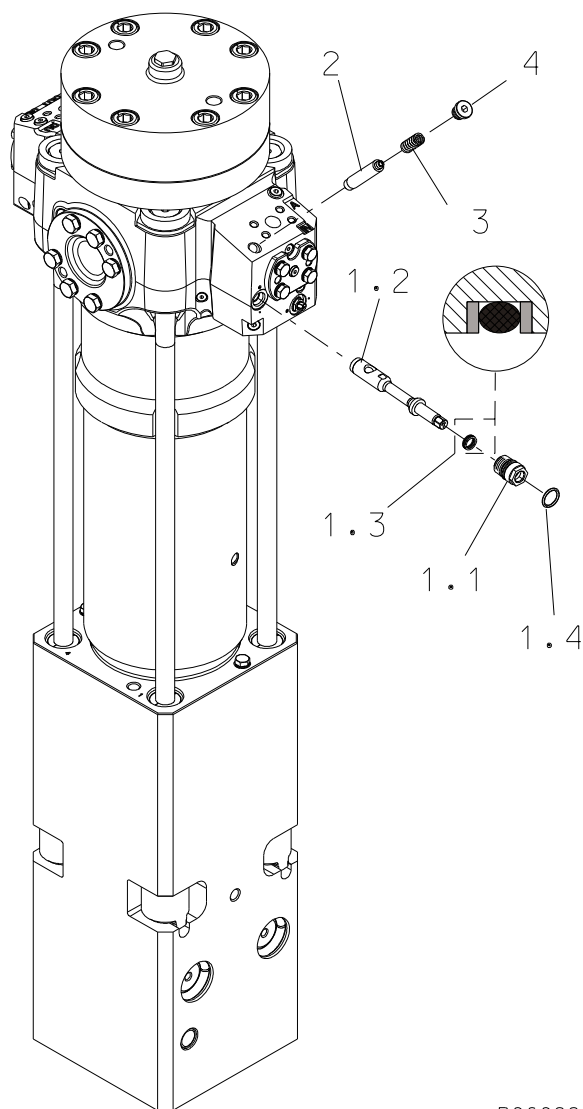
6. IDLE SELECTOR



R060928

Item	Description	Part no.	Specification	Note	Qty
1	Valve (incl. parts 1.1-1.4)	163445			1
1.1	Cover	156729			1
1.2	Spool	163446			1
1.3	Seal	112835	D13	*	1
1.4	O-ring	90001	D20	*	1
2	Pin	161414			1
3	Spring	951797	Danly 9-1006-11		1
4	Flange plug	90444	BSP 3/8		1
	*) Are included in seal set				

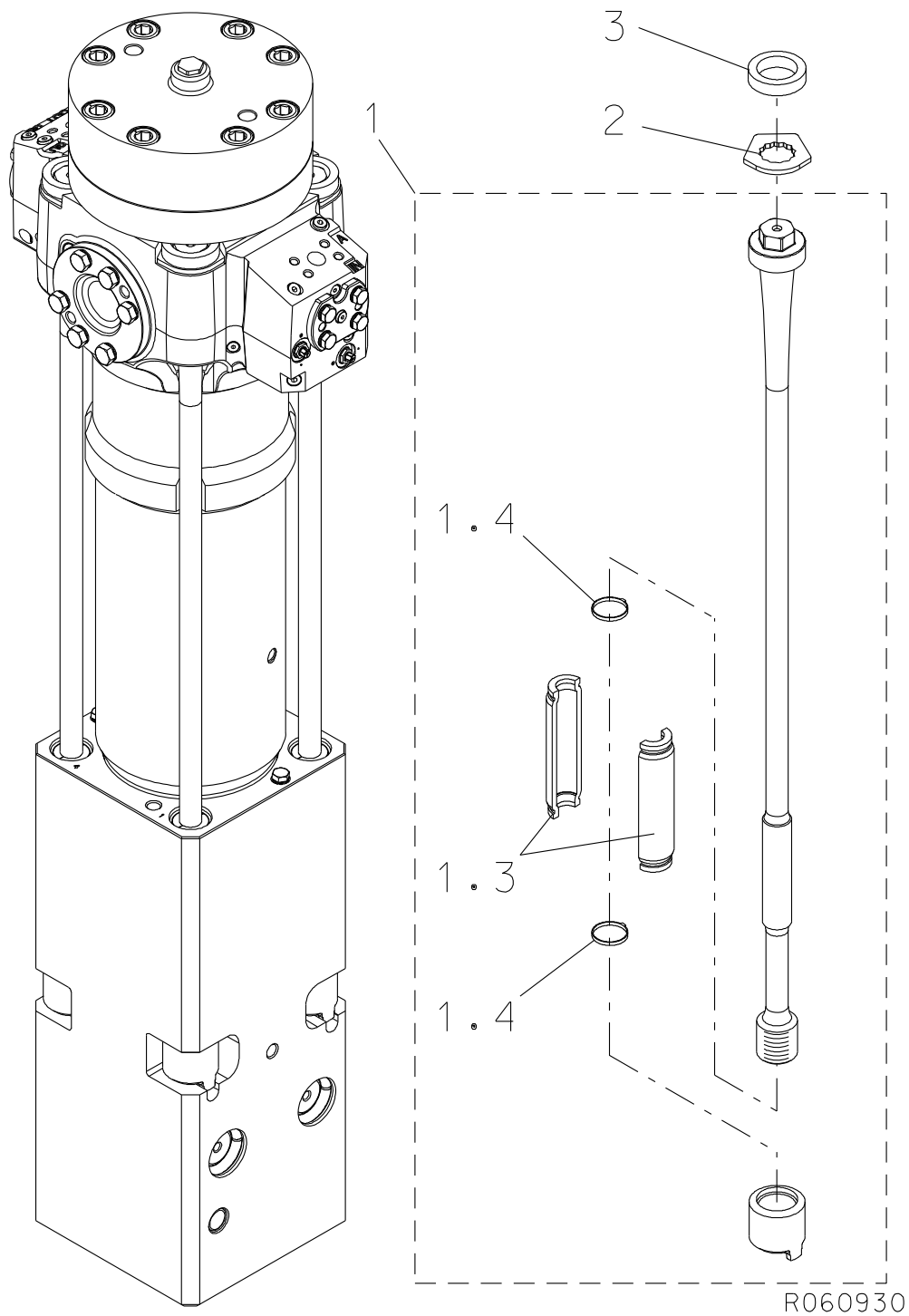
7. STROKE SELECTOR VALVE



R060927

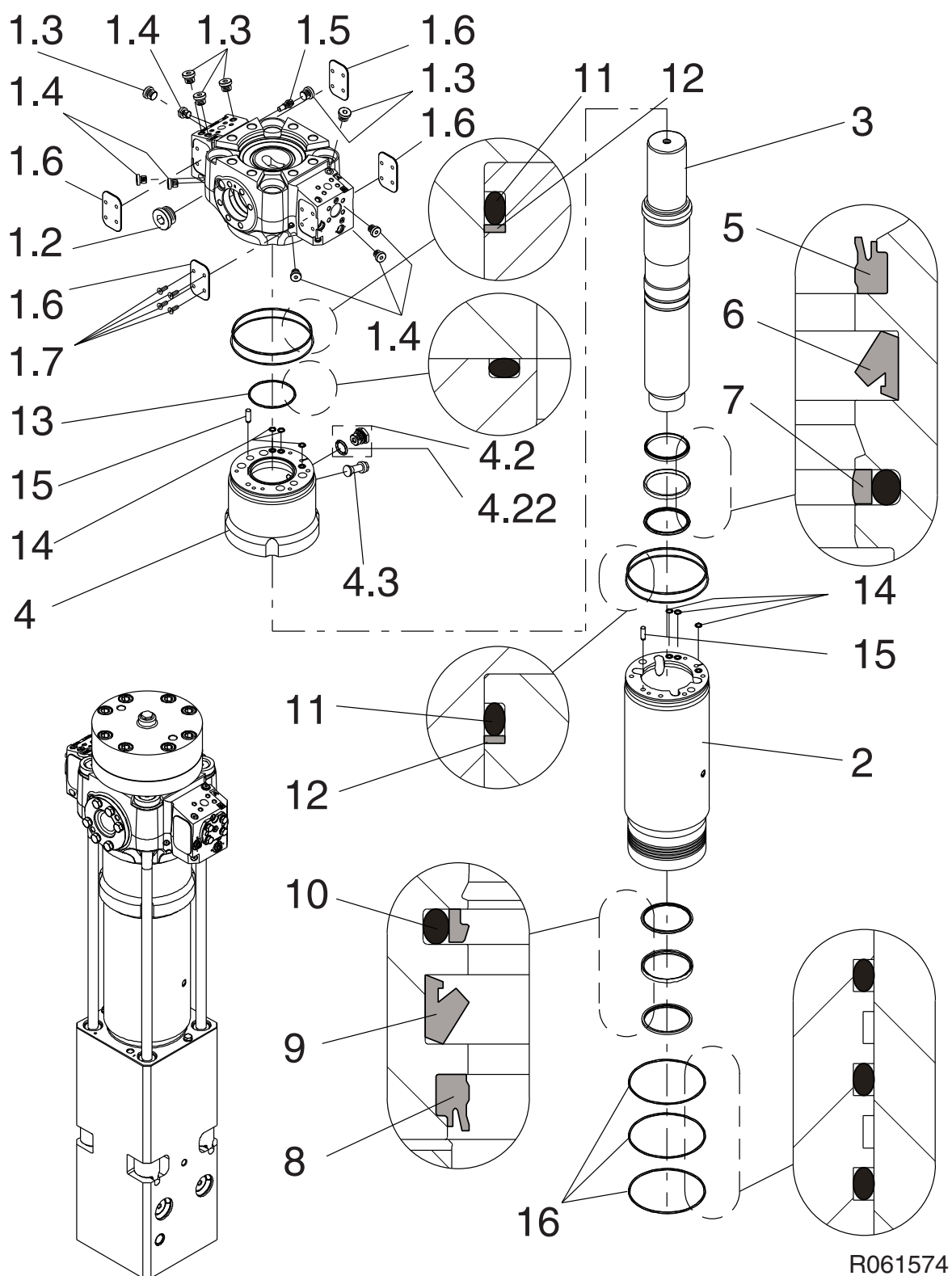
Item	Description	Part no.	Specification	Note	Qty
1	Valve (incl. parts 1.1-1.4)	163445			1
1.1	Cover	156729			1
1.2	Spool	163446			1
1.3	Seal	112835	D13	*	1
1.4	O-ring	90001	D20	*	1
2	Pin	161414			1
3	Spring	951797	Danly 9-1006-11		1
4	Flange plug	90444	BSP 3/8		1
	*) Are included in seal set				

8. TIE RODS



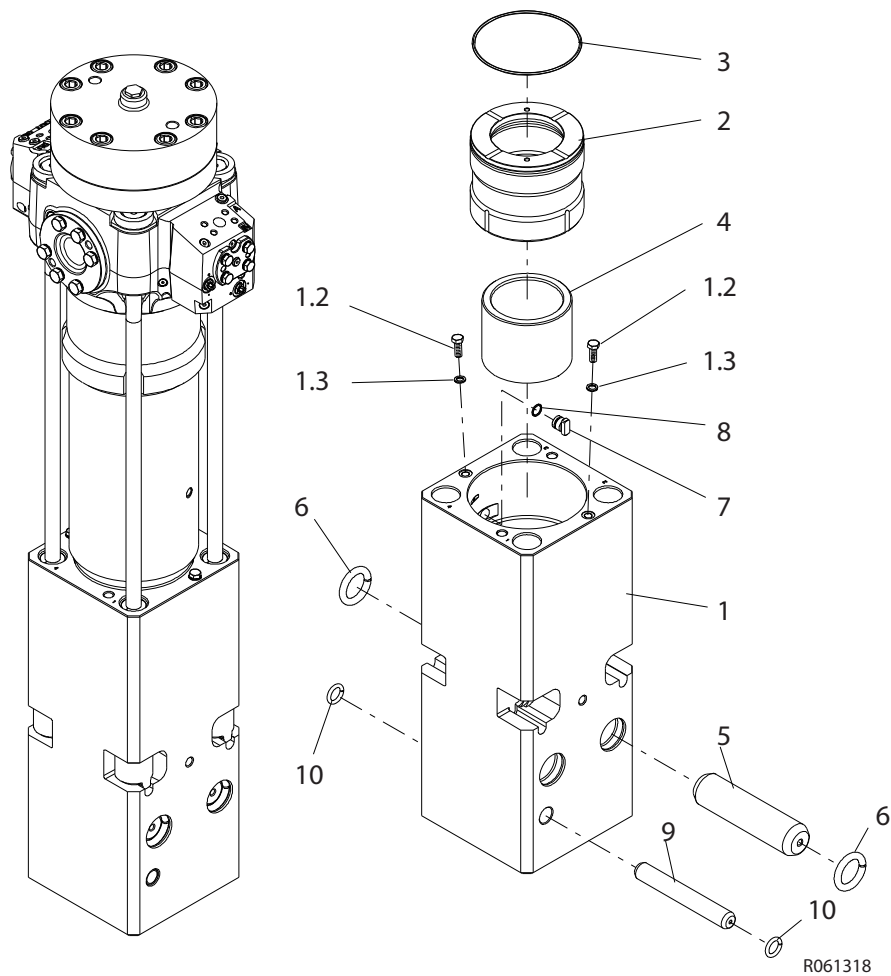
Item	Description	Part no.	Specification	Note	Qty
1	Tie rod (incl. parts 1.3-1.4)	163002			4
1.3	Vibration dampening element	155555			2
1.4	Cable tie	952009			2
2	Lock plate	101449			4
3	Rubber ring	40586			4

9. BODY PARTS



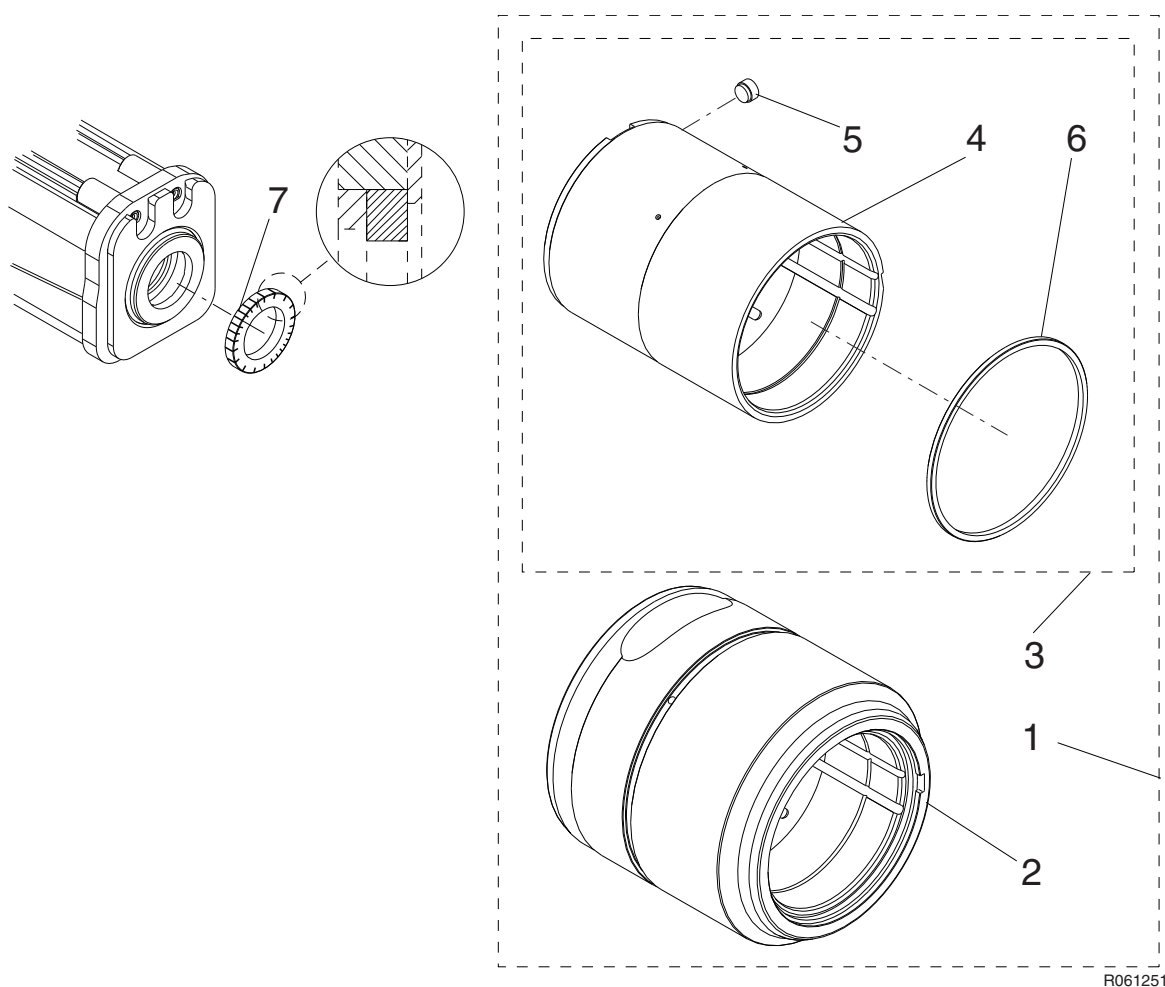
Item	Description	Part no.	Specification	Note	Qty
1	Valve body (incl. parts 1.2-1.7)	172693			1
1.2	Flange plug	90410	R1		1
1.3	Flange plug	90444	R3/8		6
1.4	Flange plug	90403	R1/4		6
1.5	Nozzle	159795			1
1.6	Shoulder plate	172703			4
1.7	Hex. socket screw	955186	M6x12-10.9 DIN 7991		16
2	Cylinder	160002			1
3	Piston	172695			1
4	Seal carrier (incl. parts 4.2-4.4)	163000			1
4.2	Breather (incl. part 4.22)	101700			1
4.22	O-ring	901173	D27	*	1
4.3	Plug	173557			1
5	Wiper	952371	D142	*	1
6	Seal	952373		*	1
7	Seal	111871		*	1
8	Wiper	952370	D160	*	1
9	Seal	903066		*	1
10	Seal	952372		*	1
11	O-ring	910015	D269	*	2
12	Supporting ring	953266	D280	*	2
13	O-ring	94102	D154	*	1
14	O-ring	901124	D17	*	6
15	Parallel pin	90317	16m6x50 ISO 8734		2
16	O-ring	90034	D259	*	3
	*) Are included in seal set				

10. FRONT HEAD



Item	Description	Part no.	Specification	Note	Qty
1	Front head (incl. parts 1.2-1.3)	173681			1
1.2	Hex. screw	900051	M16x40-12.9 ISO 4017		2
1.3	Lock washer	90597	M16 NORD-LOCK		2
2	Thrust ring	160010			1
3	O-ring	90003	D239	*	1
4	Upper tool bushing	160009			1
5	Tool retaining pin	160020			2
6	Ring	160482			4
7	Wedge	40110			1
8	O-ring	90000	D24	*	1
9	Retaining pin	173682			1
10	Rubber ring	173686		*	2
	*) Are included in seal set				

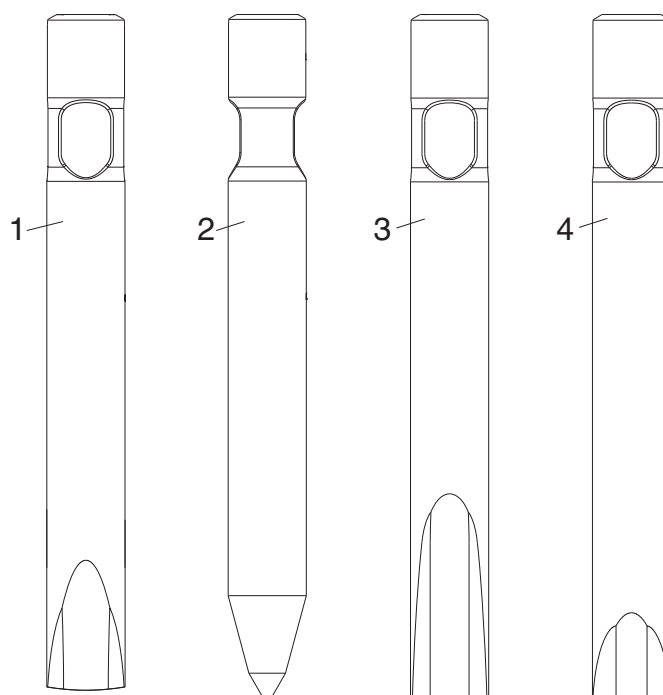
11. LOWER TOOL BUSHING



R061251

Item	Description	Part no.	Specification	Note	Qty
1	TS bushing kit (incl. part 2-6)	K10BRONZ E4099			1
2	Lower tool bushing	N/A			1
3	Bronze insert kit (incl. parts 4-6)	K20BRONZ E4099			1
4	Bronze insert	N/A			1
5	Guide	171610			1
6	Locking ring	172208			1
7	Tool seal	172706			1

12. TOOL

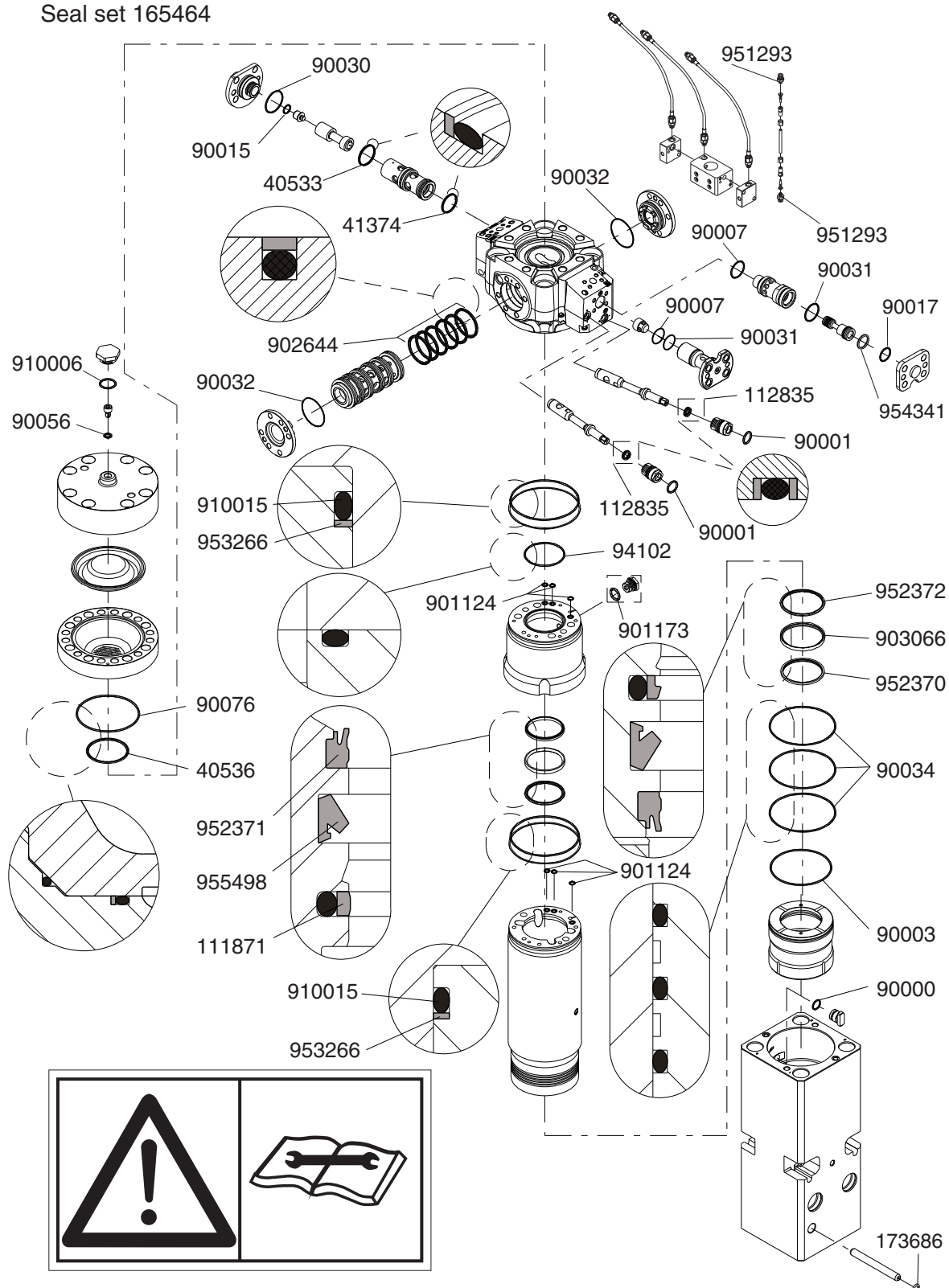


R061252

Item	Description	Part no.	Specification	Note	Qty
1	Chisel, for tunneling and primary breaking	991Z1	L = 1450 mm, W = 226 kg, D = 166 mm		1
2	Moil point, for tunneling and primary breaking	993Z1	L = 1450 mm, W = 220 kg, D = 166 mm		1
3	Hard Rock Chisel, for tunneling and primary breaking	991A2Z1	L = 1450 mm, W = 215 kg, D = 166 mm		1
4	Limestone Chisel, for tunneling and primary breaking	991F3Z1	L = 1450 mm, W = 231 kg, D = 166 mm		1

13. SEAL SET

Seal set 165464

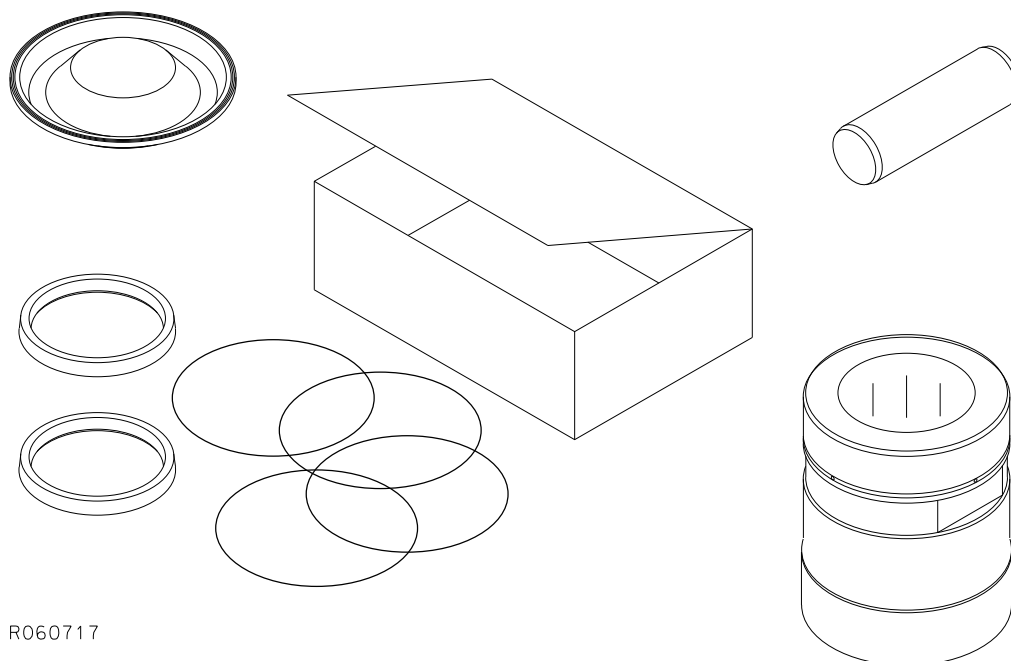


This summary only indicates the position of the seals. It must NOT be used as assembly instruction. Read the service manual. Notice! Assembly must be performed by qualified service personnel only.

R060935

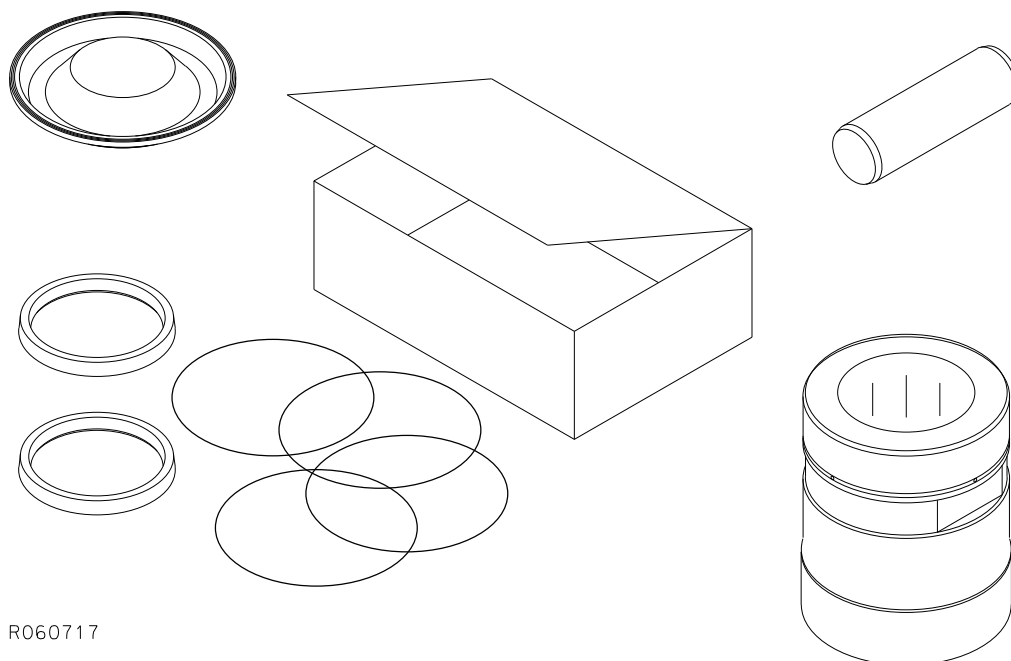
Item	Description	Part no.	Specification	Note	Qty
Kit	Seal set (incl. parts 1-32)	165464			1
1	O-ring	90031	D46		1
2	O-ring	90007	D44		1
3	O-ring	951293	D9		6
4	Seal	902644	D125		6
5	O-ring	90032	D120		2
6	Seal	112835	D13		2
7	O-ring	90001	D20		2
8	O-ring	90030	D75		1
9	Seal	41374	D55		1
10	Seal	40533	D65		1
11	O-ring	90015	D26		1
12	O-ring	910006	D23		1
13	Usit-ring	90056	8-13.9-1		1
14	Seal	40536			1
15	O-ring	90076	D229		1
16	O-ring	901173	D27		1
17	Wiper	952371	D142		1
18	Seal	955498			1
19	Seal	111871			1
20	Wiper	952370	D160		1
21	Seal	903066			1
22	Seal	952372			1
23	O-ring	910015	D269		2
24	Supporting ring	953266	D280		2
25	O-ring	94102	D154		1
26	O-ring	901124	D17		6
27	O-ring	90003	D239		1
28	O-ring	90000	D24		1
29	O-ring	90034	D259		3
30	O-ring	90017	D34		1
31	Seal	954341	D34		1
32	Rubber ring	173686			2

14. SERVICE KIT 1



Item	Description	Part no.	Specification	Note	Qty
Kit	Service kit (incl. parts 1 - 4)	K104099			1
1	Membrane	172307			1
2	Tool retaining pin	160020			2
3	Bronze insert kit	K20BRONZ E4099			1
4	Seal set	165464			1

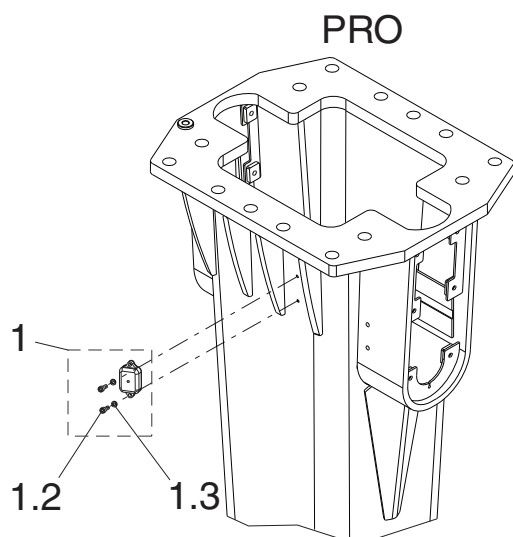
15. SERVICE KIT 2



R060717

Item	Description	Part no.	Specification	Note	Qty
Kit	Service kit (incl. parts 1 - 4)	K204099			1
1	Pad	104068			2
2	Buffer	172138			1
3	Wear plate	171094			4
4	Upper tool bushing	160009			1

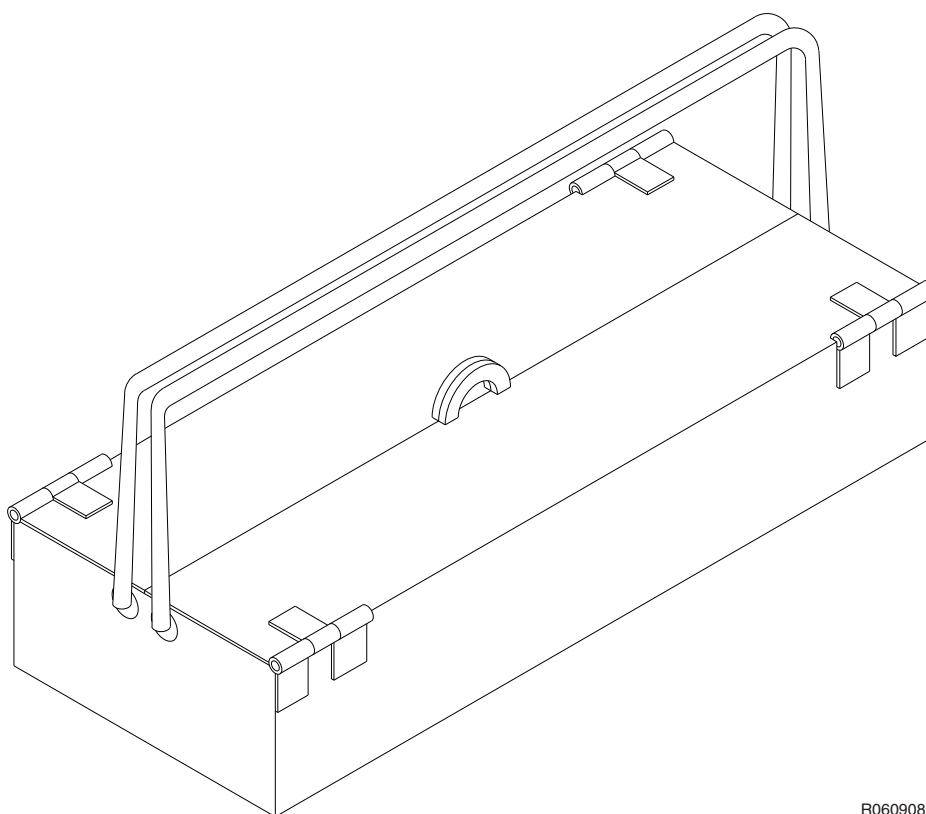
16. RAMDATA II SERVICE INDICATOR



R061255

Item	Description	Part no.	Specification	Note	Qty
1	Ramdata II service indicator (incl. parts 1.2-1.3)	159143			1
1.2	Hex. socket screw	91020	M8x25- 8.8 ISO 4762		2
1.3	Lock washer	91011	M8 NORD-LOCK		2

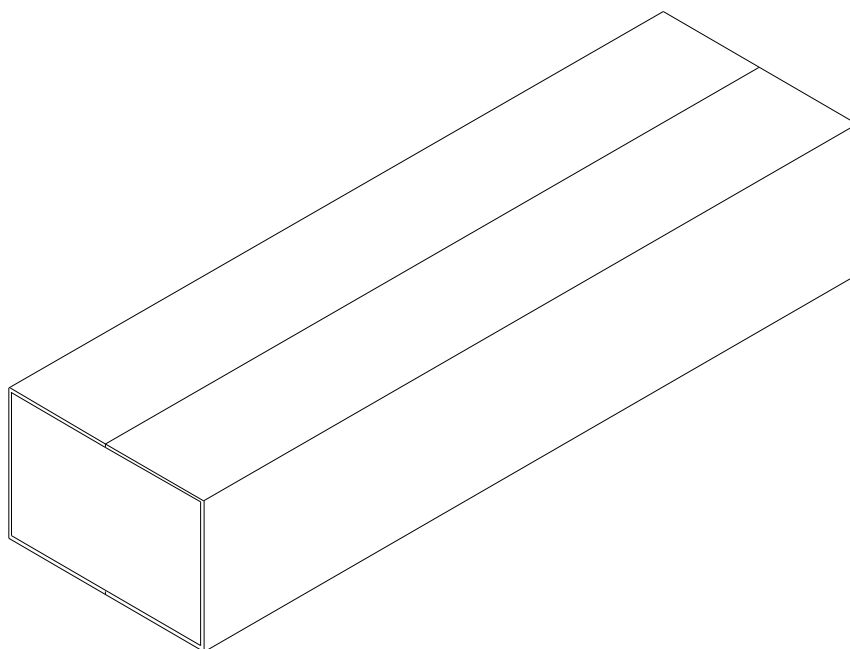
17. TOOL BOX PRO



R060908

Item	Description	Part no.	Specification	Note	Qty
Kit	Tool box PRO (incl. parts 1-10)	173750			1
1	Tool box	N/A			1
2	Grease gun	90202			1
3	Tool grease	902045			1
4	Puller	150020			1
5	Screwdriver	N/A	6x150		1
6	Combination spanner	N/A	12		1
7	Flange plug	90444	R3/8		3
8	Double open-end spanner	N/A	24/27		1
9	Safety glasses	N/A			1
10	Hex. socket	N/A	13 (1/4)		1

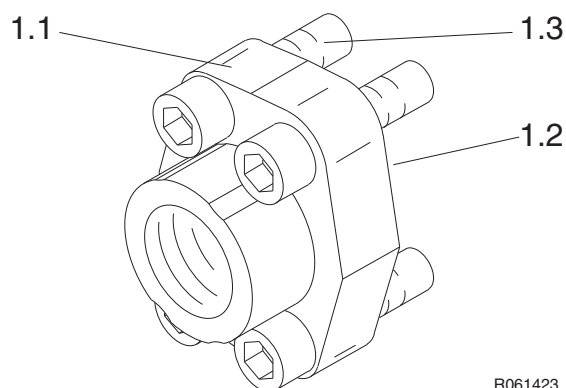
18. TOOL BOX TS2



R061320

Item	Description	Part no.	Specification	Note	Qty
Kit	Tool box TS2 (incl. parts 1-4)	173752			1
1	Cardboard box	N/A			1
2	Safety glasses	N/A			1
3	Slide hammer kit	169925			1
4	Cutting tool kit	173636			1

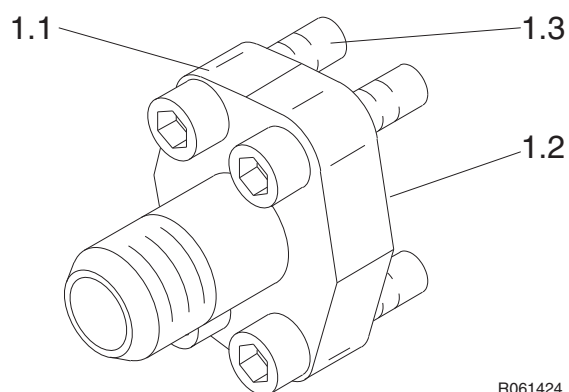
19. COUPLING SET



R061423

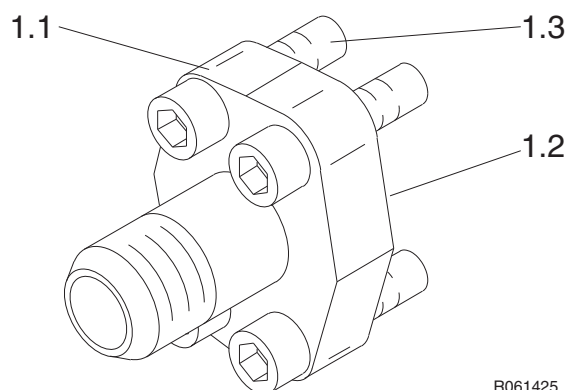
Item	Description	Part no.	Specification	Note	Qty
1	Coupling set (incl. parts 1.1-1.3)	400587			1
1.1	Flange	90531	SAE 1 1/4 6000 psi - BSP 1 1/4 FEMALE		2
1.2	O-ring	90009			2
1.3	Hexagon socket screw	90593	M14x45-8.8 ISO 4762		8

20. COUPLING SET



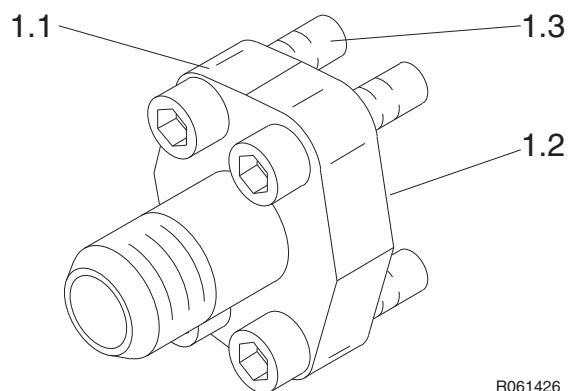
Item	Description	Part no.	Specification	Note	Qty
1	Coupling set (incl. parts 1.1-1.3)	400599			1
1.1	Flange	915069	SAE 1 1/4 6000 psi - JIC 20, 1 5/8-12 MALE		2
1.2	O-ring	90009			2
1.3	Hexagon socket screw	90593	M14x45-8.8 ISO 4762		8

21. COUPLING SET



Item	Description	Part no.	Specification	Note	Qty
1	Coupling set (incl. parts 1.1-1.3)	400591			1
1.1	Flange	915055	SAE 1 1/4 6000 psi - JIS 30° BSP 1 1/4 MALE		2
1.2	O-ring	90009			2
1.3	Hexagon socket screw	90593	M14x45-8.8 ISO 4762		8

22. COUPLING SET



R061426

Item	Description	Part no.	Specification	Note	Qty
1	Coupling set (incl. parts 1.1-1.3)	400590			1
1.1	Flange	915071	SAE 1 1/4 6000 psi - M52x2 MALE		2
1.2	O-ring	90009			2
1.3	Hexagon socket screw	90593	M14x45-8.8 ISO 4762		8



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