

EXCAVATOR MOUNTED MANUAL

SERIAL NUMBER:

HAMMER MODELS:

- 35E
- 40E
- 50E
- 60E
- 70E

2021

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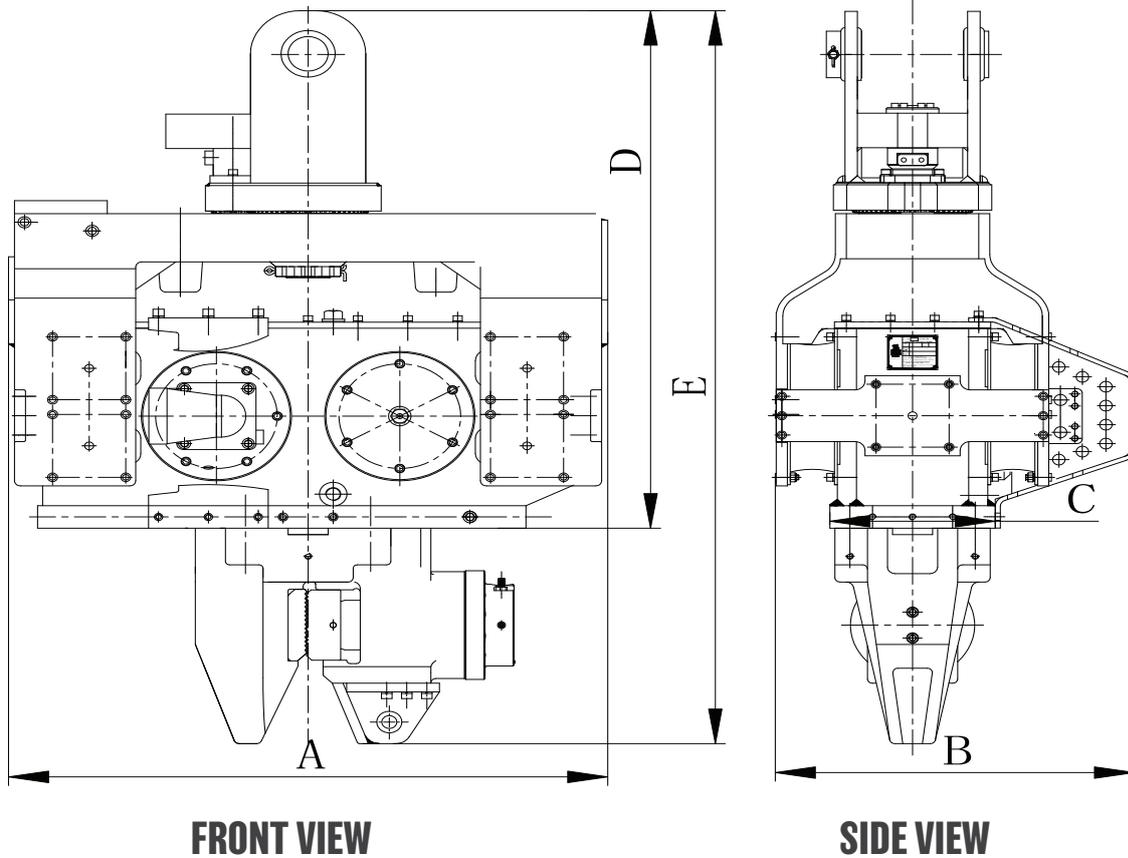
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SPECIFICATIONS

Antaeus Excavator Mounted Model	Unit	35E	40E	50E	60E	70E
Eccentric Moment	Inch Pounds/Kg.m	424/5	521/6	668/7.7	1128/13	1310/15.1
Centrifigal Force	Tons/kN	37/370	41/410	52/527	59/598	69/698
Frequency	Rpm	2600	2500	2500	2050	2050
Amplitide Without Clamp	Inches/Milimeters	0.669/17	0.814/20.7	0.827/21	0.854/21.7	0.898/22.8
Amplitude With Clamp	Inches/Milimeters	0.433/11	0.531/13.5	0.606/15.4	0.527/13.4	0.602/15.3
Clamp Force @ 4,351 Psi/300 Bar	Tons/kN	53/530	53/530	53/530	104/1038	104/1038
Maximum Line Pull Of Suppressor	Tons/kN	12/120	12/120	12/120	19/192	19/192
Maximum Hydraulic Pressure	PSI/Bar	5076/350	4932/340	5076/350	4932/340	4932/350
Maximum Oil Flow	Gallons/Liters Per Minute	41/156	52/200	52/200	60/230	60/230
Suspended Weight Without Clamp	Pounds/Kilogram	2615/1186	5137/2330	6062/2750	6283/2850	6437/2920
Total Suspended Weight With Clamp	Pounds/Kilogram	3452/1566	5975/2710	6900/3130	7605/3450	7540/3420
A Length	Inches/Milimeters	45/1150	45/1150	47/1200	56/1415	56/1415
B Width	Inches/Milimeters	28/700	28.3/720	28.3/720	29/730	29/730
C Throat Width	Inches/Milimeters	12/312	13/320	13/320	13/330	13/330
D Height Without Clamp	Inches/Milimeters	45/1150	45.5/1154	47/1200	54/1365	54/1365
E Height With Sheet Clamp	Inches/Milimeters	65/1650	66/1670	67/1700	81/2080	81/2080



BASIC LAYOUT

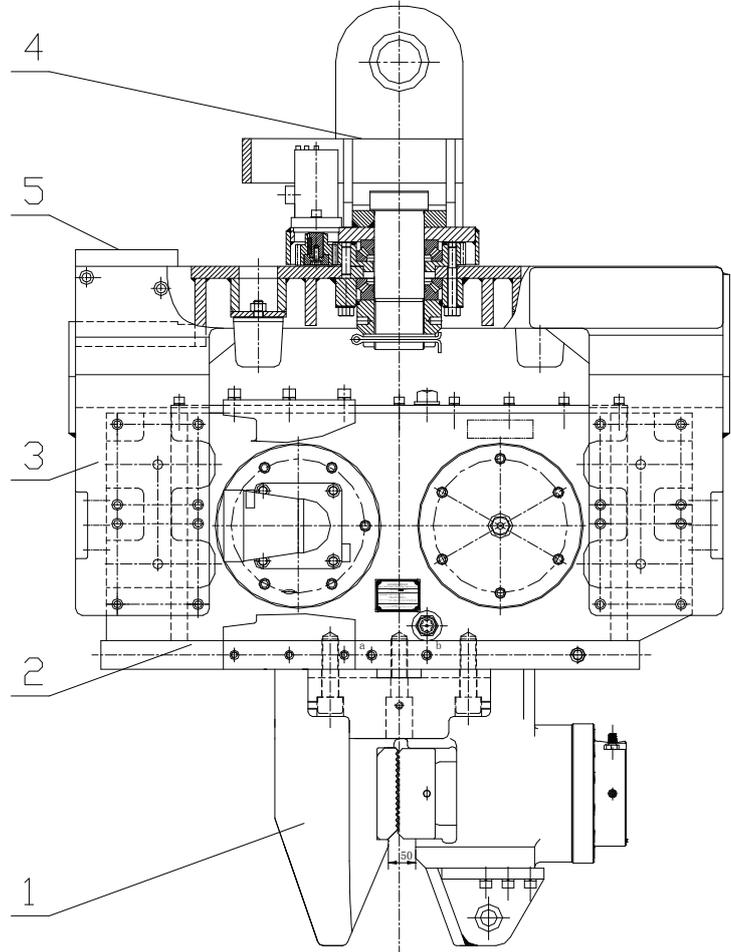
5. 360 DEGREE ROTOR

5. MANIFOLD

3. SUPPRSSOR BRACKET

2. GEARBOX

1. CLAMP



INSTALLATION GUIDE

IN TOTAL THERE ARE 5 HOSES THAT CONNECT TO THE MACHINE FROM THE EXCAVATOR:

[P] HIGH PRESSURE INLET HOSE (FOR THE MAIN MOTOR TO SPIN THE VIBRO)

[T] LOW PRESSURE RETURN OIL

[L] CASE DRAIN LINE [MOTOR COOLING]

[A] ROTOR MOTOR [SPIN CLOCKWISE]

[B] ROTOR MOTOR [SPIN COUNTER CLOCKWISE]

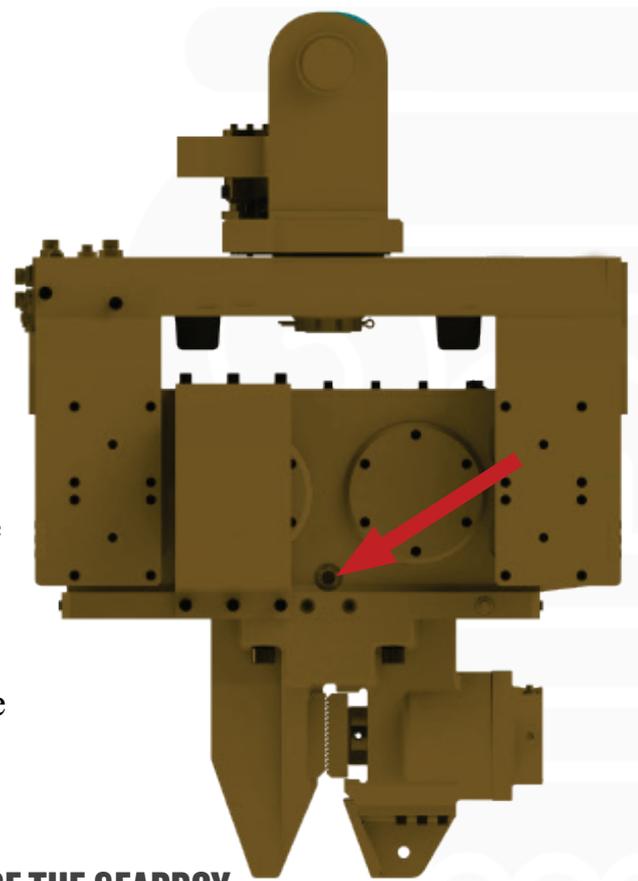
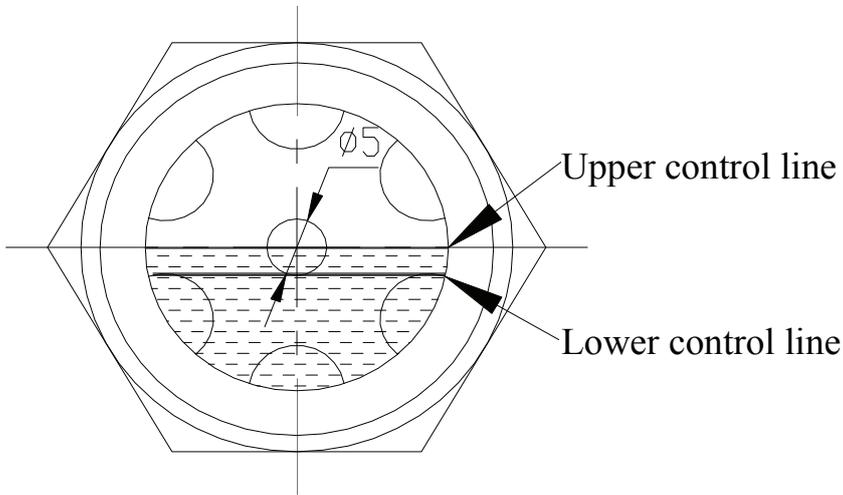
EVERY EXCAVATOR IS SLIGHTLY DIFFERENT, IT'S IMPORTANT TO CONTACT YOUR LOCAL SUPPLIER OR CALL ANTAEUS DIRECT FOR ANY QUESTIONS OR CONCERNS ABOUT HOW TO CONNECT YOUR MACHINE TO YOUR SPECIFIC EXCAVATOR.



BOLT TORQUE CHART

Diameter of thread		Torque value	
inch	mm	N.m	ft-lbs
5/16"-18	7.94	42	30.9
3/8"-16	9.53	70	51.6
7/16"-14	11.11	112	82.6
1/2"-13	12.70	171	126.1
5/8"-11	15.88	324	238.9
3/4"-10	19.05	576	424.8
1"-8	25.40	1479	1090.8
1 1/4"-7	31.75	2028	1495.7
1 1/2"-6	38.10	3682	2715.7
	M8	46	33.9
	M10	89	65.6
	M12	150	110.6
	M16	373	275.1
	M20	727	536.2
	M24	1250	921.9
	M30	1953	1440.4

LUBRICATION



ABOVE IS THE SIGHT GLASS LOCATED ON THE BOTTOM OF THE GEARBOX.

FIRST, HANG THE MACHINE AS LEVEL AS POSSIBLE. THE LUBRICANT LEVEL SHOULD BE AT THE MIDDLE OF THE SIGHT GLASS OR SLIGHTLY BELOW. IT IS VERY IMPORTANT NOT TO OVERFIL THE GEARBOX WITH LUBRICANT AS IT WILL GET VERY HOT MUCH FASTER THAN NORMAL. IF THE OIL LESS THAN 1MM OR .039 INCHES BELOW THE MIDDLE LINE THEN LUBRICANT MUST BE ADDED.

TO FILL THE GEARBOX WITH MORE LUBRICANT REMOVE THE PLUG ON TOP OF THE GEARBOX AND ADD AS NEEDED. TO REMOVE OIL REMOVE THE PLUG AT THE BOTTOM OF THE GEARBOX. IT IS SUGGESTED TO USE SYNTHETIC LUBRICANT FOR MUCH LONGER LIFE AND PERFORMANCE.

RECCOMENDED LUBRICANT IS: MOBIL SH630, CAPACITY IS 3.5L OR .92 GALLONS

REPLACE LUBRICANT FOR THE FIRST TIME AT 200 HOURS, SECOND TIME AT 700 HOURS, THEN ONCE EVERY HALF YEAR . NEVER GO LONGER THAN 1 YEAR. THE LIFE OF YOUR OIL WILL DEPEND A LOT ON HOW HOT YOU ALLOW YOUR MACHINE TO GET, FOR EXTRME CONDITIONS MORE FREQUENT OIL CHANGES MAY BE REQUIRED.

THE MOVABLE JAW WILL REQUIRE GREASE REGULARLY, IT IS RECCOMEND TO ADD GREASE EVERY DAY OR BEFORE USE.

THE ROTARY WILL ALSO REQUIRE REGULAR GREASE, GREASE NIPPLES CAN BE FOUND ON TOP OF THE SPINDLE

PREVENTATIVE MAINTENANCE

PREVENTATIVE MAINTENANCE CAN ENSURE THE LONGEST POSSIBLE LIFE OF THE MACHINE AND PREVENT UNWANTED FAILURES. THE NORMAL MAINTENANCE INCLUDES PERIODICALLY CHECKING LUBRICANT AND THE MOVING COMPONENTS OF THE MACHINE.

DAILY MAINTENANCE:

- 1) VISUALLY CHECK THAT ALL COMPONENTS, BOLTS, WASHERS, HOSES, AND FITTINGS ARE NOT DAMAGED OR MISSING.**
- 2) MAKE SURE ALL BOLTS ARE TIGHT (CONSTANT VIBRATION OF NORMAL PILE DRIVING USE CAN LOOSEN BOLTS OVER TIME, IT'S IMPORTANT TO MAKE SURE THEY ARE TIGHT)**
- 3) CHECK FOR ANY OIL LEAKS OR LOOSE HOSE FITTINGS. IT IS RECCOMEND YOU KEEP THE MACHINE AS CLEAN AS POSSIBLE SO VISUAL INSPECTION OF OIL LEAKS BECOMES EASIER.**
- 4) CHECK THE GEARBOX OIL LEVEL AND MAKER SURE IT'S CORRECT (SEE PREVIOUS PAGE)**
- 5) ADD GREASE TO THE MOVABLE JAW AND ROTOR ON TOP**
- 6) CHECK FOR JAW WEAR AND MAKE SURE THE JAWS HAVE TEETH THAT ARE NOT FLAT**
- 7) CHECK THE ELASTOMERS FOR ANY CRACKS OR BREAKAGE**

WEEKLY MAINTENANCE:

- 1) MAKE SURE ALL BOLT ARE TORQUED TO THE CORRECT SPEC (SEE CHART)**
- 2) IF YOU ARE USING A GOOSE ARM, ADD GREASE TO THE PIN SHAFT**
- 3) CHECK THE BREATHER VALVE OF THE GEARBOX AND CLEAN IT**

TROUBLESHOOTING

OIL LEAKS:

- CHECK TIGHTNESS OF ALL FITTINGS**
- CHECK FOR ANY DAMAGED SEALS**
- CHECK FOR BROKEN HOSE LINES**

NO HYDRAULIC PRESSURE:

- CHECK THE OIL LEVEL OF MAIN TANK, MAKE SURE IT IS NOT TOO LOW FOR PUMP INLETS**
- CHECK IF OIL FILTER IS BLOCKED**
- CHECK RELIEF VALVE, IT MAY BE STUCK AND REQUIRE CLEANING OR REPLACEMENT**
- CHECK IF CYLINDER SEAL HAS BEEN DAMAGED**
- CHECK IF MAGNETIC COIL IS POWERED**

STRANGE NOISES:

- CHECK IF AIR IS IN THE SYSTEM**
- CHECK IF THE OIL FILTER IS BLOCKED**
- CHECK IF MAIN HDRAULIC TANK IS TOO LOW**
- CHECK IF OIL VISCOSITY IS TOO HIGH WHICH CAN CAUSE WHITE BUBBLES IN THE SIGHTGLASS**
- CHECK IF OIL PUMPS HAVE BECOME DAMAGED**

EXESSION OIL HEAT:

- CHECK OIL COOLIGN SYSTEM**
- THE AMBIENT TEMPERATURE MAY BE TOO HIGH**
- YOU MAY BE RUNNING THE MACHIEEN FOR TOO LONG**
- YOU MAY BE RUNNING OVER RELIEF VALVE FOR TOO LONG**
- CHECK IF OIL RETURN FILTER IS BLOCKED**

CLAMP IS NOT GETTING ENOUGH PRESSURE:

- SYSTEM PRESSURE MAY BE SET TOO LOW**
- SEALS IN THE CLAMP CYLINDER MAY BE LEAKING**
- INNER WALL OF CYLINDER MAYBE DAMAGED**
- CLAMP CYLIDNER MAY BE STUCK**
- *MOST DAMAGE TO CLAMPS ARE CAUSED BY PILE DRIVING WITH THE CLAMP OPEN.**

TROUBLESHOOTING

VIBRATORY HAMMER IS GETTING TOO HOT:

CHECK THE GEARBOX OIL LEVEL AND MAKE SURE IT IS NOT OVERFILLED

CHECK FOR EXCESSIVE HYDRAULIC FLOW TO THE GEARBOX

AMBIENT TEMPERATURE MAY BE TOO HIGH

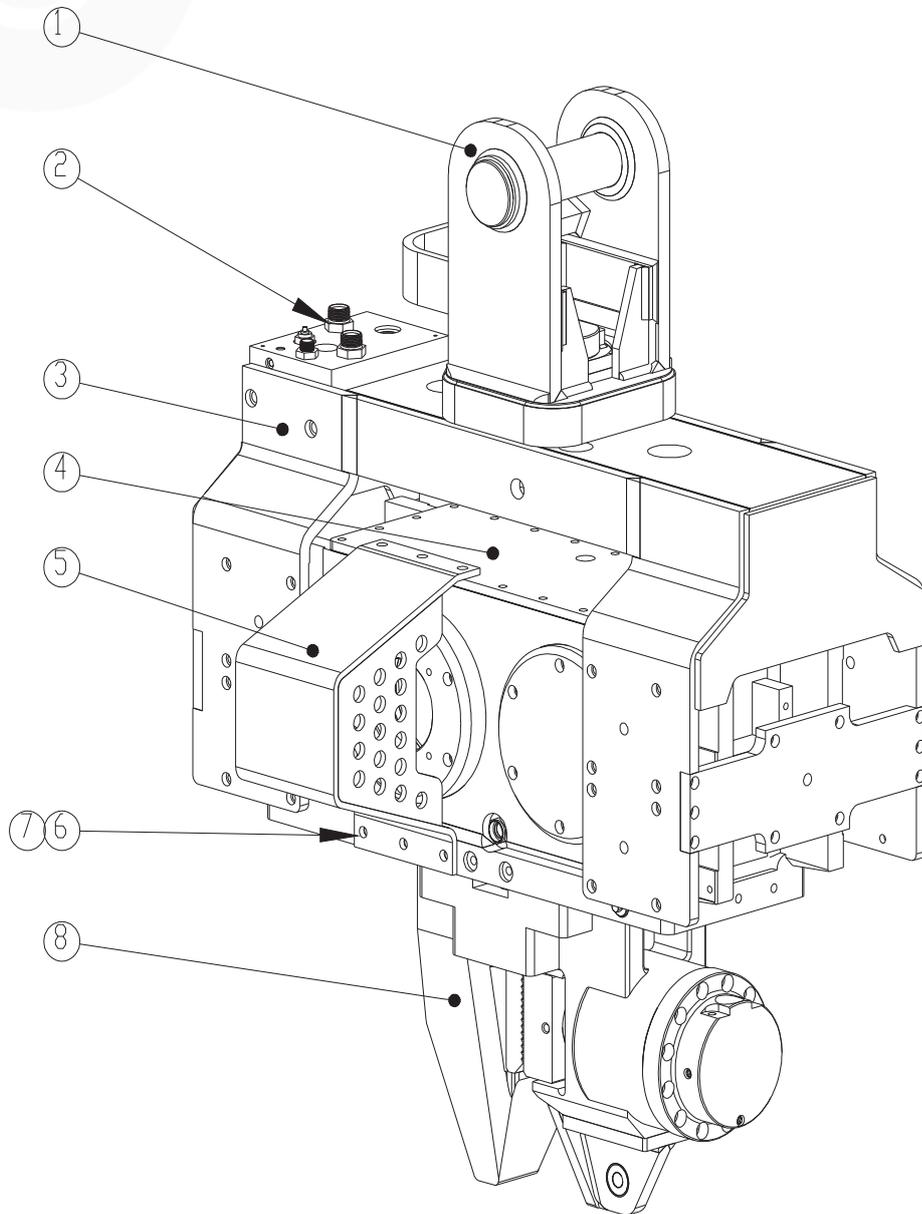
RUNNING TIME MAY BE TOO LONG

CHECK IF ALL BEARINGS ARE THE SAME TEMPERATURE, IF ONE BEARING IS MUCH HOTTER THAN THE OTHERS THEN IT COULD BE DAMAGED.

CALL YOUR LOCAL SERVICE CENTER FOR ANY UNSOLVED ISSUES.

OPERATION GUIDE

- 1) MAKE SURE ALL MAINTENANCE CHECKS ARE PREFORMED BEFORE OPERATING EQUIPMENT**
- 2) MAKE SURE PROPER PRESSUR IS ON CLAMPS BEFORE VIBRATING**
- 3) KEEP PILE VERTICAL BEFORE VIBRATING**
- 4) LET HAMMER COME UP TO SPEED BEFORE APPLYING FORCE FROM THE EXCACATOR**
- 5) KEEP PERSONEL AWAY FROM THE PILE**
- 6) OBSERVE PRESSURE GAUGES AND BE OBSERVANT FOR ANY ABNORMALITIES**
- 7) STOP MACHINE IF ANY VISUAL OIL IS LEAKING**
- 8) HYDRAULIC OIL TEMP SHOULD REMAIN BELOW 70C OR 158F**



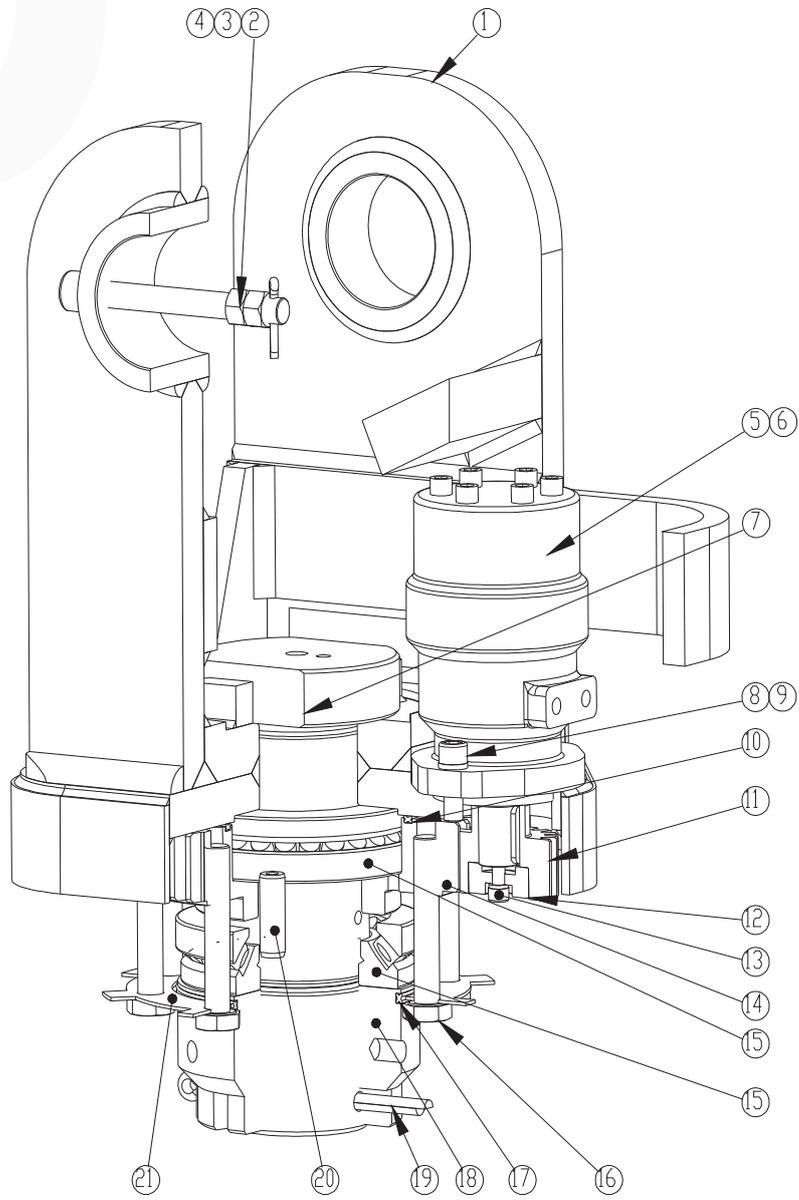
35E / 40E / 50E Vibratory hammer components

exploded view

PARTS BOOK

SV35-50E HYDRAULIC VIBRATORY HAMMER COMPONENT LIST

Item	Model	Code number	Description	Qty.	Remark
1	35E	SV40SD.4	Rotary mechanism	1	
2	40E 50E	SV40SD.5	Hydraulic system	1	
3	35E	SV35LD.2	Absorber frame	1	
	40E	SV40LD.2			
	50E	SV50LD.2			
4	35E	SV35LD.1	Gear box	1	
	40E	SV40LD.1			
	50E	SV50LD.1			
5	35E	SV35LD-2	Motor cover	1	
	40E	SV40LD-2			
	50E	SV50LD-2			
6	35E 40E 50E	GB70-85	Socket head cap screw M16×35	3	
7		GB93-87	Spring washer 16	3	
8		SV50SD.1	Clamping device	1	

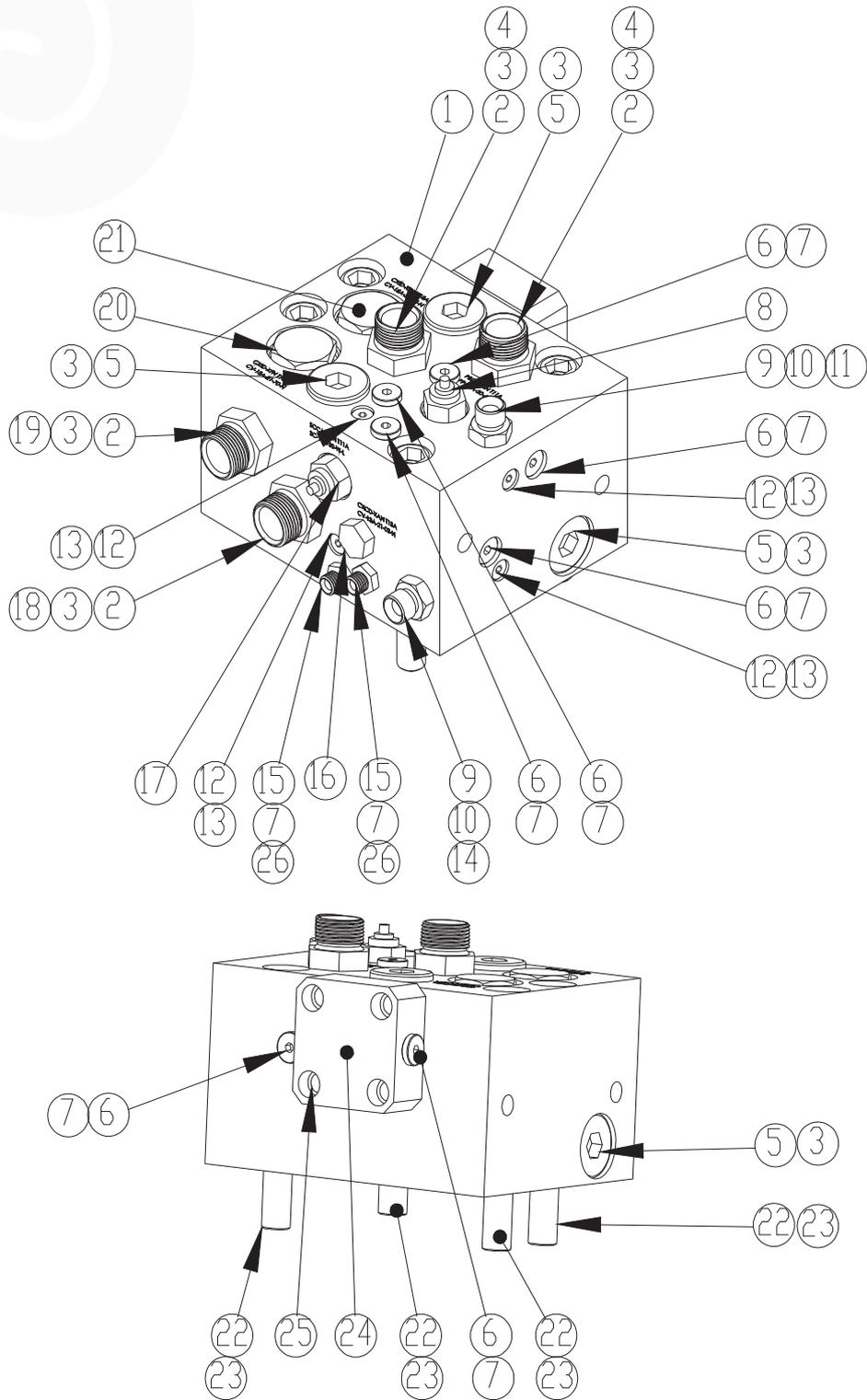


SV40SD.4 Rotary mechanism exploded view

LIST

Item	Model	Code number	Description	Qty.	Remark
1	35E 40E 50E	SV40SD.4.1	Rotary bracket	1	
2		GB91-86	Cotter pin $\Phi 5 \times 30$	1	
3		GB/T6170-2000	Hex nut M12	2	
4		GB70-85	Socket head cap screw M12 \times 140	1	
5		BG1E200,2AR08CL250N	Hydraulic motor	1	204010207
6		GB1096-79	Key stock A8 \times 30	1	
7		SV40SD.4-4	Spindle	1	
8		GB70-85	Socket head cap screw M12 \times 35	2	
9		GB93-87	Spring washer 12	2	
10		GB/T3452.1-2005	O ring 160 \times 5.3	1	
11		SV40SD.4-2	Small gear	1	
12		SV40SD.4-1	Pressing plate	1	
13		GB70-85	Socket head cap screw M8 \times 25	1	
14		SV40SD.4-3	Big gear	1	
15		GB/T5859-94	Thrust self-aligning roller bearing 29318	2	
16		GB/T1228-1991	Hexagon bolt M16 \times 100	8	
17		GB/T3452.1-2005	O ring 145 \times 5.3	1	
18		SV40SD.4-5	Locknut	1	
19		GB91-86	Cotter pin $\Phi 10 \times 160$	1	
20		GB/T119.2-2000	Positioning pin $\Phi 16 \times 50$	2	
21		SV40SD.4-10	Lock washer	1	

PARTS BOOK

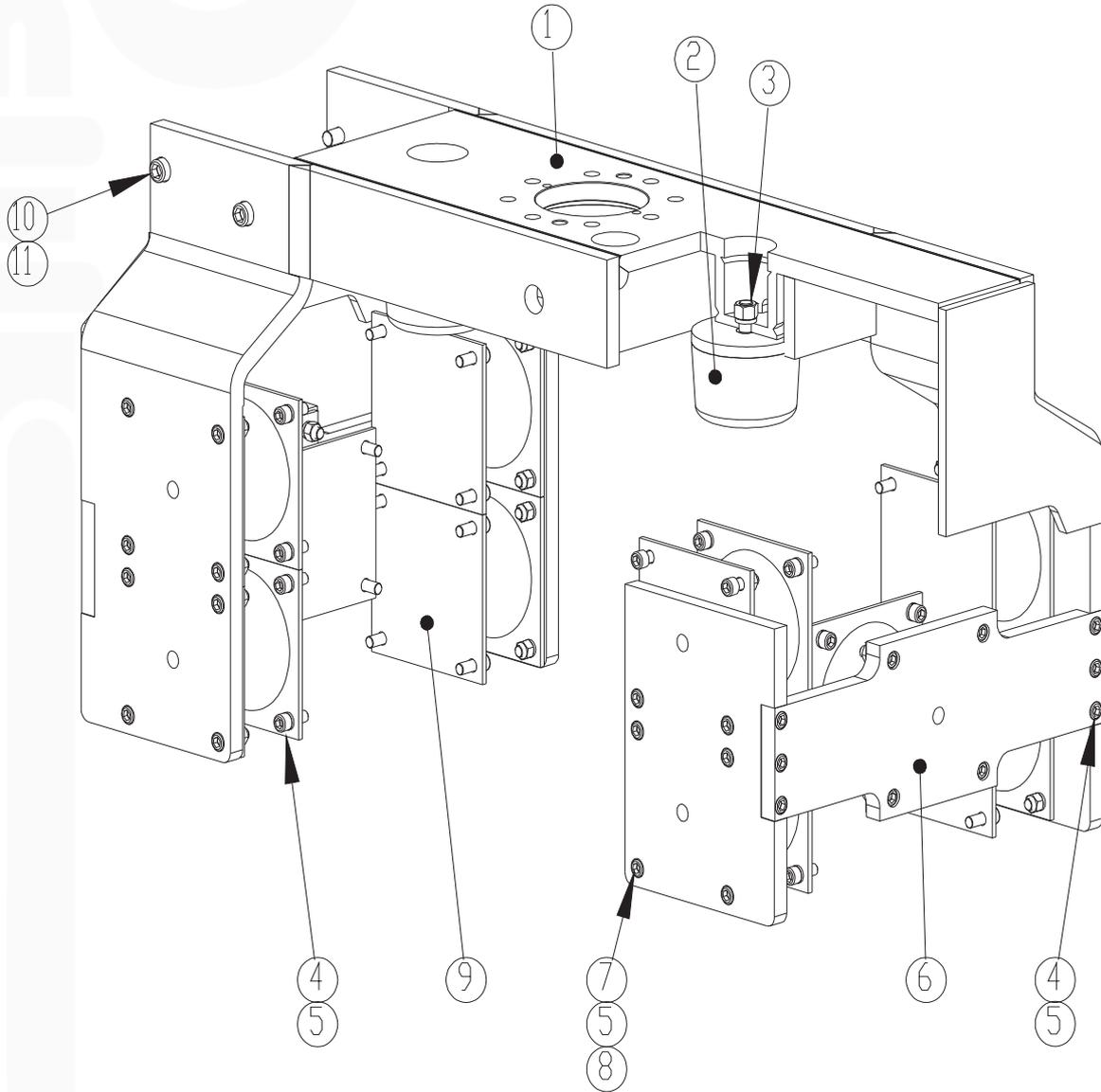


Hydraulic system assembly exploded

view

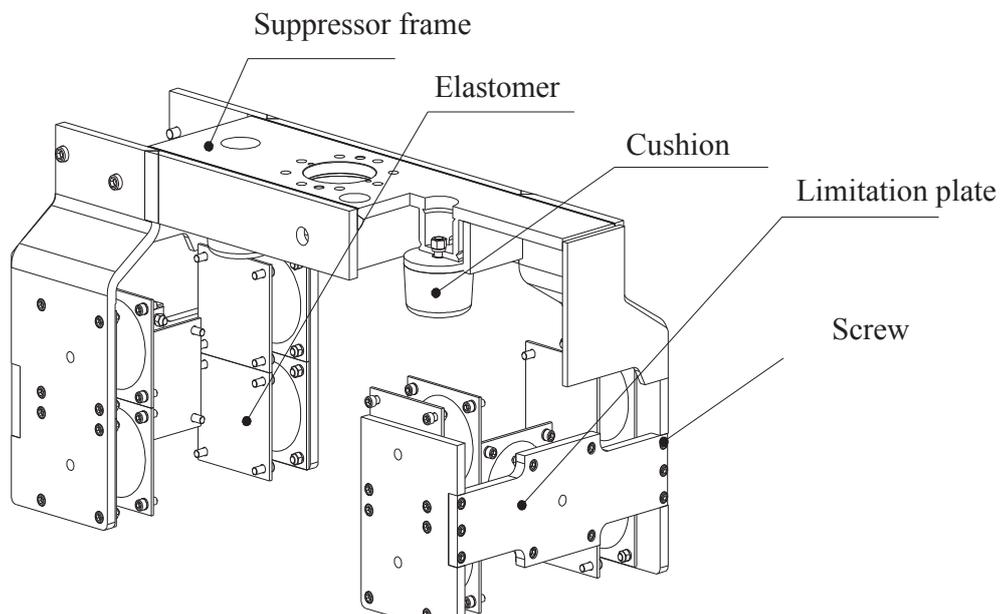
Item	Model	Code number	Description	Qty.	Remark
1	35E 40E 50E	SV40SD.5.1-1B	Valve	1	
2		1B-16	Connector G1"	4	
3		JB982-77	Compound gasket Φ 33	7	
4		29611-16-16 \times 4SC \times 2000	Double straight tubing	2	
5		4BN-16	British pipe plug G1"	3	
6		4BN-04	British pipe plug G1/4"	7	
7		JB982-77	Compound gasket Φ 14	9	
8		PBDB-LAN(PP-11A-30-A-L)	Pressure reducing valve	1	
9		1B-08	Connector G1/2"	2	
10		JB982-77	Compound gasket Φ 22	2	
11		29611-08-08 \times 4SC \times 2000	Double straight tubing	1	
12		4BN-02	British pipe Hexagon pipe plug G1/8"	4	
13		JB982-77	Compound gasket Φ 10	4	
14		29691-08-08 \times R12 \times 950V0/SS X	Double curved tubing	1	
15		1B-04	Connector G1/4"	2	
16		CXCD-XAN(CV-13A-21-03- N)	Check valve	1	
17		SCCA-LWN(SC-11A-30-W- L)	Direct acting type stop-check valve	1	
18		29691-16-16/87692-16-16 \times 4 SC \times 1130+FS-16	Suction flange Single curved tubing	1	
19		29691-16-16/87692-16-16 \times 4 SC \times 1230+FS-16	Suction flange Single curved tubing	1	
20		CXID-XFN(CV-18A-21-70- N)	Check valve	1	
21		CXID-XDN(CV-18A-21-35 -N)	Check valve	1	
22		GB/T 70-85	Socket head cap screw M20 \times 150	4	
23		GB/T 93-87	Spring washer 20	4	
24		HHP5D.3-4	Control plate	1	
25		GB/T 70-85	Socket head cap screw M12 \times 45	4	
26		29691-04-04 \times 4SC \times 800 V180/SSY	Double curved tubing	2	

PARTS BOOK

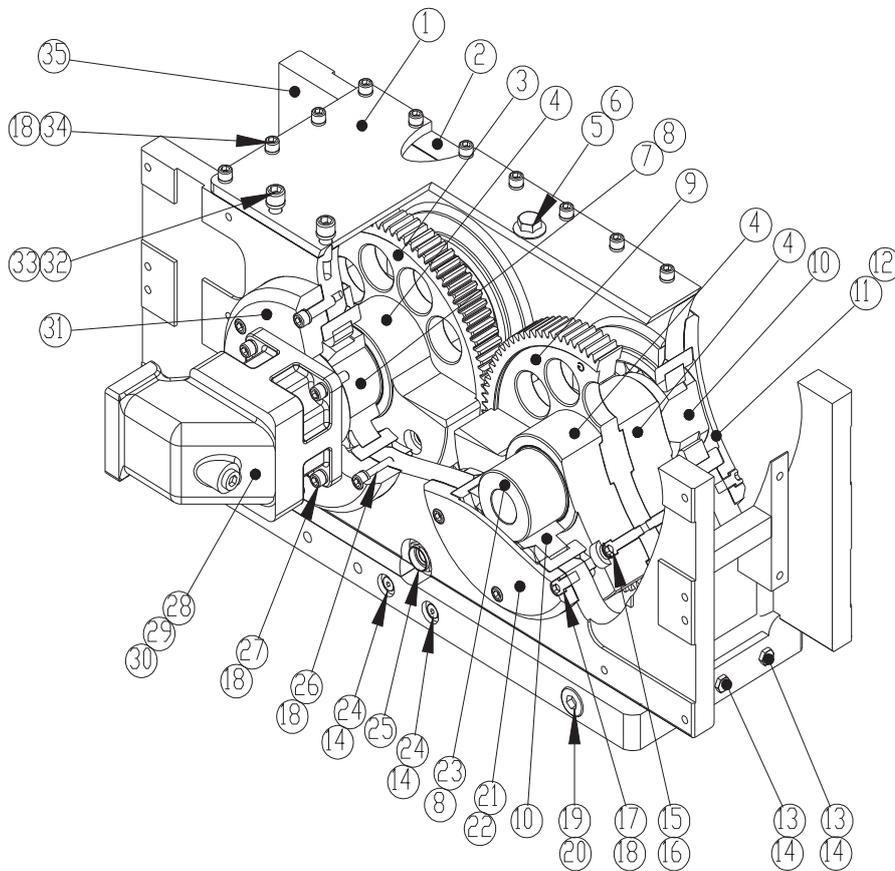
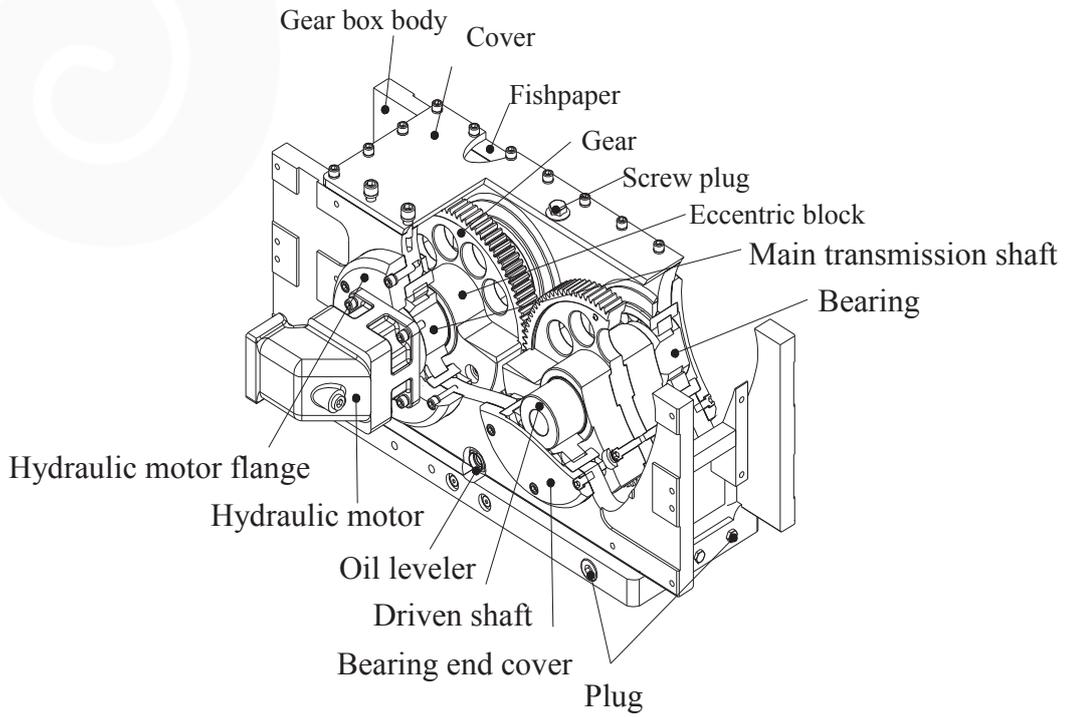


Absorber frame assembly exploded view

Item	Model	Code number	Description	Qty.	Remark
1	35E	SV35LD.2	Absorber frame	1	
	40E	SV40LD.2			
	50E	SV50LD.2			
2		SV40LD-3	Cushion	2	
3	35E	GB6170-86	Hex nut M16	2	
4	40E	GB70-85	Socket head cap screw M12×30	52	
5	50E				
		GB93-87	Spring washer 12	92	
6	35E	SV35LD-1	Limitation plate	2	
	40E	SV40LD-1			
	50E	SV50LD-1			
7	35E	GB70-85	Socket head cap screw M12×45	32	
	40E			40	
	50E				
8	35E	GB6170-86	Hex nut M12	32	
	40E			40	
	50E				
9	35E	146×146	Elastomer	8	
	40E			10	
	50E				
10	35E	GB70-85	Socket head cap screw M16×50	4	
	40E				
11	50E	GB93-87	Spring washer 16	4	



PARTS BOOK

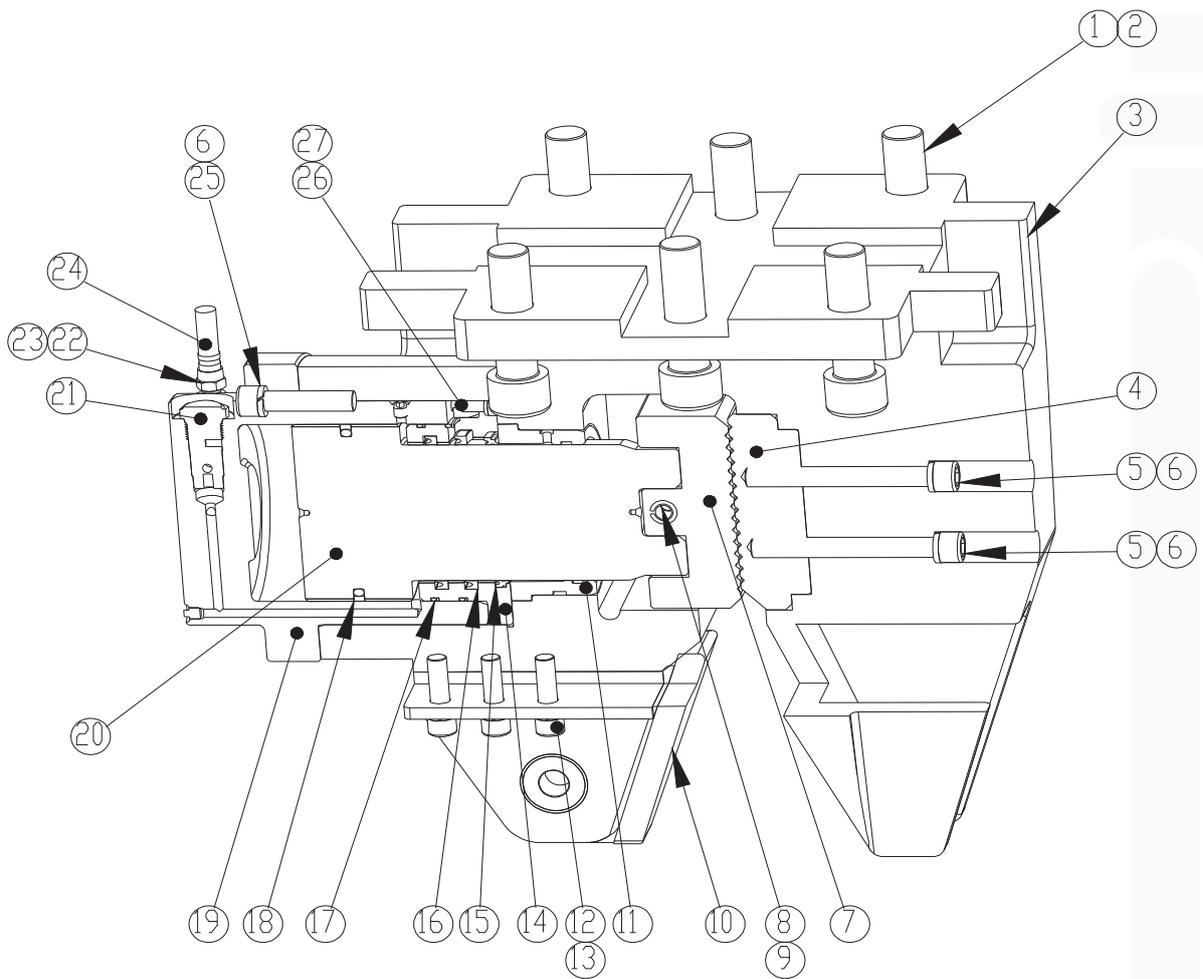


Item	Model	Code number	Description	Qty.	Remark
1	35E	SV35LD.1-1	Cover	1	
	40E	SV40LD.1-1			
	50E	SV50LD.1-1			
2	35E		Fishpaper-0.7×758×262	1	
	40E		Fishpaper-0.7×758×290		
	50E		Fishpaper-0.7×826×300		
3	35E	SV35LD.1-4	Gear I	1	
	40E	SV40SD.2-3			
	50E	SV50LD.1-4			
4	35E	SV35LD.1-3	Eccentric block	4	
	40E	SV40SD.2-2			
	50E	SV50LD.1-3			
5	35E	JB/ZQ4450-86	Screw plug M33×2	1	
6	40E	JB982-77	Compound gasket 33		
	50E				
7	35E	SV35LD.1-9	Main transmission shaft	1	
	40E	SV40SD.2-4			
	50E	SV50LD.1-7			
8	35E	GB1096-79	Key stock A25×145	2	
	40E		Key stock A28×170		
	50E		Key stock A28×180		
9	35E	SV35LD.1-5	Gear II	1	
	40E	SV40SD.2-11			
	50E	SV50LD.1-5			
10	35E	GB283-94	Bearing NJ2317E/C4	4	FAG
	40E		Bearing NJ2319E/C4		
	50E				
11	35E		Fishpaper Φ270×185×0.7	4	
	40E		Fishpaper Φ290×210×0.7		
	50E				
12	35E	SV35LD.1-2	Bearing end cover I	2	
	40E	SV40SD.2-1			
	50E				
13	35E	4B-04	Hexagonal pipe plug G1/4"	6	
40E					
14	50E	JB982-77	Compound gasketΦ14	8	
15	35E	GB70-85	Socket head screw M12×40	8	
	40E		Socket head screw M12×50		
	50E		Socket head screw M16×60		

GEAR BOX COMPONENT LIST

Item	Model	Code number	Description	Qty.	Remark
16	35E	GB893.1-86	Hole spring collar 20	8	
	40E				
	50E		Hole spring collar 26		
17	35E	GB70-85	Socket head screwM12×25	18	
	40E				
	50E		Socket head screwM12×30		
18	35E/40E /50E	GB93-86	Spring washer 12	47	
19	35E	4HN-27	Metric hexagon socket plug M27×2	1	
	40E				
20	50E	JB982-77	Compound gasketΦ27	1	
21	35E	SV35LD.1-7	Bearing end cover II	1	
	40E	SV40SD.2-6			
	50E				
22	35E/40E /50E	SV40SD.2-8	Air plug	1	
23	35E	SV35LD.1-6	Driven shaft	1	
	40E	SV40SD.2-7			
	50E	SV50LD.1-6			
24		4BN-04	Hexagon pipe plug G1/4"	2	
25	35E	SV40SD.2-10	Oil leveler	1	
26	40E	GB70-85	Socket head screw M12×50	6	
27	50E	GB70-85	Socket head screw M12×45	4	
28	35E	F12-060-MF-IH-D-000-000-0	Hydraulic motor	1	
	40E	F12-080-MF-IH-D-000-000-0			
	50E				
29	35E	JB978-77	Hinged joint M22×1.5	1	
30	40E	JB982-77	Compound gasket Φ22	2	
	50E				
31	35E	SV35LD.1-8	Hydraulic motor flange	1	
	40E	SV40SD.2-5			
	50E				
32	35E	GB70-85	Socket head screw M16×50	3	
33	40E	GB93-86	Spring washer 16	3	
34	50E	GB70-85	Socket head screw M12×30	19	
35	35E	SV35LD.1.1	Gear box body	1	
	40E	SV40SD.1.1			
	50E	SV50LD.1.1A			

PARTS BOOK



Clamping device exploded view

CLAMPING DEVICE COMPONENT LIST

Item	Model	Code number	Description	Qty.	Remark
1	35E 40E 50E	GB/T78-2000	Inner hexagon end set screw M16×16	6	
2		GB70-85	Socket head screw M30×100	6	
3		SV50SD.1-5A	Clamping device housing	1	
4		SV50SD.1-4A	Fixed jaw	1	
5		GB70-85	Socket head screw M16×140	2	
6		GB93-87	Spring washer 16	14	
7		SV50SD.1-3A	Movable jaw	1	
8		GB/T879-1986	Elastic pin 8×80	2	
9			Elastic pin 12×160	1	
10		SV50SD.1-2A	Lifting eye	1	
11		SV50SD.1-1A	Steel bushing	1	
12		GB70-85	Socket head screw M14×50	6	
13		GB93-87	Spring washer 14	6	
14		SV50SD.1.1-3	Guide sleeve	1	
15		C452-7602 Φ115×Φ127.2×8.1	Dust ring	2	
16		H601 Φ115×Φ130×8.9	U-seal	2	
17		C663-22 Φ144.6×Φ150×1.4	Retainer ring metric O ring slot	2	
		OR-NBR70 142.47×3.53	For O-ring	2	
18		C345-6402 Φ150×Φ129×8.1	Two-way piston seal	1	
19		SV50SD.1.1-1	Cylinder body	1	
20		SV50SD.1.1-2A	Piston	1	
21		CPH124P	Check valve	1	
22		1B-04	Connector G1/4"	2	
23		JB982-77	Compound gasketΦ14	2	
24		29611-04-04/29691-04-04 ×4SC×300	Single curved tube	2	
25		GB70-85	Socket head screw M16×70	12	
26		GB/T70.1-2000	Hexagon socket head cap screw M10×20	12	
27	GB93-87	Spring washer 10	12		