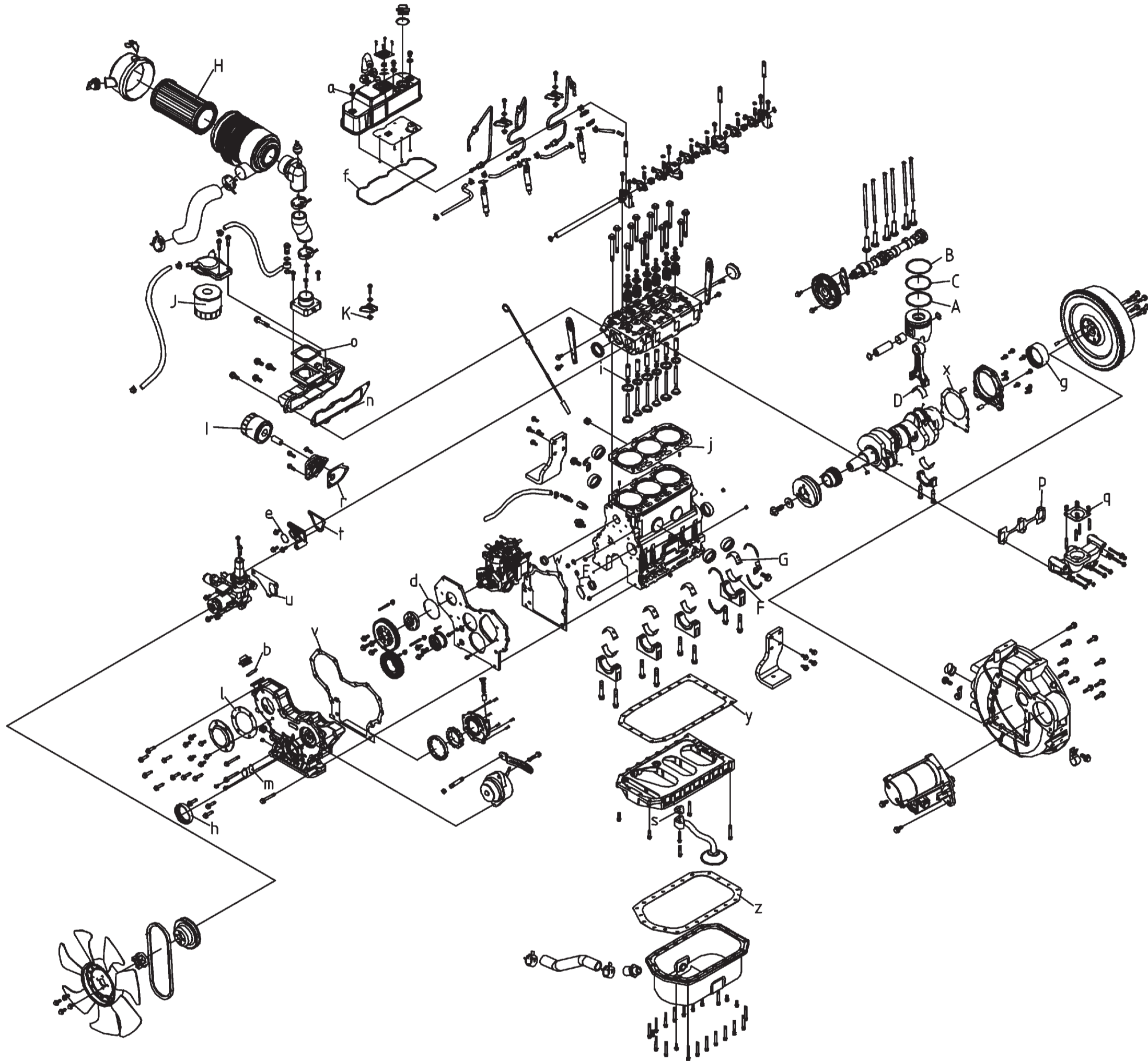


ASSEMBLY AND PART DRAWING

WATER-COOLED DIESEL ENGINE

KD388

KIPOR



Easy Wearing Parts

Ref.No	Part.No	Description	Qty.	Mounted to
A	KD388-04100	Oil Ring Part	3	Piston & Connecting Rod Assem
B	KD388-04001	The 1st Air Ring	3	Piston & Connecting Rod Assem
C	KD388-04002	The 2nd Air Ring	3	Piston & Connecting Rod Assem
D	KD388-04005	Connection Rod Bushing	6	Piston & Connecting Rod Assem
E	KD388-01107	Camshaft bush	1	Housing Assem
F	KD388-01024	Lower Main Bushing	4	Housing Assem
G	KD388-01025	Upper Main Bushing	4	Housing Assem
H	KD388-07300	Air Filter Element Part	1	Inlet System
I	KD388-09300	Oil Filter Part	1	Lubricating System
J	KD388-10320	Fuel Filter Part	1	Fuel supply system
K	KD388-10022	Heat Insulation Sleeve of Fuel Injection Pump	3	Fuel supply system

O-ring Seal

Ref.No	Part.No	Description	Qty.
a	GB/T3452.1-1992	O-ring Seal 11.8X2.65	3
b	GB/T3452.1-1992	O-ring Seal 31.5X3.55	2
c	KD388-01011	O-ring Seal 15.6X2.4	2
d	GB/T3452.1-1992	O-ring Seal 66X3.55	1
e	GB/T3452.1-1992	O-ring Seal 29.7X3	1
f	KD388-03002	Cylinder Cover Seal	1

Oil Seal

Ref.No	Part.No	Description	Qty.
g	KD388-01009	Oil Seal of Flywheel Terminal	1
h	KD388-01003	Oil Seal of Gear Chamber	1
i	KD388-02005	Oil Seal of Valve Guide Pipe	6

Gasket

Ref.No	Part.No	Description	Qty.
j	KD388-01200	Cylinder Cover Gasket Part	1
l	KD388-01005	Fuel Injection Pump Cover Plate Gasket	1
m	KD388-01045	Cover Plate Gasket	1
n	KD388-07002	Inlet Pipe Gasket	1
o	KD388-07003	Inlet Connection Pipe Flange Gasket	1
p	KD388-08002	Exhaust Pipe Gasket	1
q	KD388-08003	Outlet Pipe Gasket	1
r	KD388-09002	Oil Filter Seat Gasket	1
s	KD388-09004	Rough Filter Gasket	1
t	KD388-17002	Water Outlet Seat Gasket	1
u	KD388-17003	Water Pump Gasket	1
v	KD388-01047	Gear Chamber Gasket	1
w	KD388-01046	Gear Chamber Cover Plate Gasket	1
x	KD388-01051	Rear Oil Seal Seat Gasket	1
y	KD388-01049	Crankcase Oil Tray Retaining Plate Gasket	1
z	KD388-01048	Crankcase Oil Tray Gasket	1

Tighten Torque for Main Bolts and Nuts (Unit: N · m)

Ref.No	Description	Moment
①	Main Bearing Bolt	115-125
②	Cylinder Cover Bolt	75-85
③	Tighten Bolt for Valve Rocker Arm Seat	20-26
④	Connection Rod Bolt	55-65
⑤	Flywheel Bolt	65-75
⑥	Crankshaft Belt Pulley Bolt	170-190
⑦	Tighten Bolt for Camshaft Thrust Plate	20-23

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Fuel System (KD388-10000)
Fuel System (KD388-b-10000)

No.	Part No	Description	Qty.
1	GB/T29.2-1988	Screw M4X14	4
2	KD388-10941	Clamp Plate I	2
3	KD388-10942	Clamp Plate II	2
4	KD388-10703	Oil Return Pipe Plug	1
5	KD388-10705	Oil Return Pipe V	1
6	KD388-10702	Oil Return Pipe VI	2
7	KD388-10701	Oil Return Pipe III	1
8	GB/T3452.1-1992	O-ring Seal Washer 66X3.55	1
9	GB/T6177.1-2000	Nut M8	3
10	GB/T898-1988	Stud AM8X25	3
11	GB/T9074.17-1988	Bolt Subassembly M8X20	4
12	KD388-10016	Driving Gear of Fuel Injection Pump	1
13	KD388-10023a	3PL Pump Connection Flange	4
13-1	KD388-b-100233PL	3PL Pump Connection Flange	1
14	KD388-01504	Pipe Clamp 12	3
15	KD388-10008	Fuel Filter Inlet Pipe	1
16	KD388-10310	Fuel Filter Seat Part	1

No.	Part No	Description	Qty.
17	KD388-10320	Fuel Filter Part	1
18	GB/T9074.17-1988	Bolt Subassembly M8X30	2
19	KD388-10600	Fuel Injection Pump Inlet Pipe Part	1
19-1	KD388-b-10600	Fuel Injection Pump Inlet Pipe Part	1
20	KD388-10014	Pipe Connector Bolt M12	1
21	GB/T638-2000	Seal Washer 12	2
22	GB/T5789-1986	Bolt M8	3
23	KD388-10021	Pressing Plate Washer	3
24	KD388-10019	Pressing Plate of Fuel Injector	3
25	KD388-10022	Heat Insulation Sleeve of Fuel Injector	3
26	KD388-10930	High-pressure Oil Pipe Subassembly of the 3rd Cylinder 1	1
26-1	KD388-b-10930	High-pressure Oil Pipe Subassembly of the 3rd Cylinder 1	1
27	KD388-10920	High-pressure Oil Pipe Subassembly of the 2nd Cylinder 1	1
27-1	KD388-b-10920	High-pressure Oil Pipe Subassembly of the 2nd Cylinder 1	1
28	KD388-10910	High-pressure Oil Pipe Subassembly of the 1st Cylinder 1	1
28-1	KD388-b-10910	High-pressure Oil Pipe Subassembly of the 1st Cylinder 1	1
29	KD388-10704	Pipe Clamp 9	7
30	KD388-10011	Oil Return Pipe II	1
31	KD388-b-10011	Oil Supplying Pump Inlet Pipe Part	1

Crankshaft Flywheel Assembly(KD388-05000)

No.	Part No	Description	Qty.
1	KD388-05007	Flywheel Bolt M10	6
2	KD388-05100	Flywheel Part	1
3	KD388-05001	Crankshaft	1
4	KD388-05003	Flat Key 7X7X16	1
5	KD388-05002	Crankshaft Gear	1
6	KD388-05004	Belt Pulley and Balance Block	1
7	KD388-05006	Pressing Plate	1
8	KD388-05005	Bolt M14X1.5X30	1
9	GB/T879.1-2000	Pin 3X10	1
10	GB/T308-2002	Steel Ball 1/4"	3
11	GB/T119.2-2000	Pin 8X18	1

Inlet System(KD388-07000)

No.	Part No	Description	Qty.
1	KD388-07202	Air Filter Shell Cover	1
2	KD388-07300	Air Filter Element Part	1
3	KD388-07201	Air Filter Shell	1
4	KD388-07007	Inlet Pressure Sensor	1
5	KD388-07203	Movable Connection Pipe	1
6	QC/T619-1999	B-style Ring Hoop 70	4
7	KD388-07006	Outlet Hose of Air Filter φ50Xφ60	1
8	GB/T5789-1986	Bolt M8X35	4
9	KD388-07100	Inlet Connection Pipe Flange Part	1
10	KD388-07003	Inlet Connection Pipe Flange Gasket	1
11	KD388-07001	Inlet Pipe	1
12	KD388-07002	Inlet Pipe Gasket	1
13	GB/T5789-1986	Bolt M8X80	1
14	GB/T5789-1986	Bolt M8X20	4
15	KD388-07005	Inlet Hose of Air Filter φ50Xφ60	1
16	KD388-07204	Installation Bracket	1
17	KD388-07205	Dust Exhaust Port	2
18	KM2V80-07210	Lock Catch Part	1

Cylinder Cover Assembly (KD388-02000)

No.	Part No	Description	Qty.
1	KD388-02106	Bowled Plug 40	2
2	KD388-02101	Cylinder Cover	1
3	KD388-02102	Exhaust Valve Guide Pipe	3
4	KD388-02104	Exhaust Valve Seat	3
5	KD388-02007	Exhaust Valve	3
6	KD388-02006	Inlet Valve	3
7	KD388-02105	Inlet Valve Seat	3
8	KD388-02005	Oil Seal of Valve Guide Pipe	6
9	KD388-02103	Inlet Valve Guide Pipe	3
10	KD388-02004	Valve Spring	6
11	KD388-02003	Valve Spring Seat	6
12	KD388-02002	Valve Lock Catch	12
13	KD388-02001	Valve Adjusting Gasket	6
14	KD388-02008	Rear Hanging Board of Diesel Engine	1
15	GB/T5789-1986	Bolt M8X16	4
16	KD388-02205	Rocker Arm	1
17	KD388-02207	Valve Clearance Adjusting Screw	6
18	KD388-02208	Valve Clearance Adjusting Locking Nut	6
19	KD388-02211	Inlet Valve Rocker Arm	3
20	KD388-02212	Exhaust Valve Rocker Arm	3
21	KD388-02209	Zero Length Threaded Stud	3
22	KD388-02206	Bowled Plug 10	2
23	KD388-02201	Two-terminal Rocker Arm Seat	2
24	KD388-02202	Middle Rocker Arm Seat	2
25	KD388-02204	Rocker Arm Spring	3
26	GB/T5789-1986	Bolt M8X25	2
27	GB/T5789-1986	Bolt M8X50	6
28	KD388-02009	Front Hanging Board of Diesel Engine	1

Cylinder Cover Assembly (KD388-0300)

No.	Part No	Description	Qty.
1	KD493-1014201	Seal Cover	1
2	KD493-1014204	Spring	1
3	KD493-1014203	Spring End Cover	1
4	KD493-1014202	Seal Gasket of Seal Cover	1
5	KD388-03003	Nut Head 1	3
6	KD388-03001a	Cylinder Cover	1
7	KD388-03100	Welding Part of Respirator Clapboard	1
8	KD388-03002a	Cylinder Cover Seal	1
9	GB/T818-1985	Screw M5X10	4
10	GB/T3452.1-1992	O-ring Seal 11.8X2.65	3
11	KD388-03013	Pipe Clamp 22	2
12	KD388-03012	Respirator Hose φ17Xφ24	1
13	GB/T818-1985	Screw M5X10	4
14	GB/T3452.1-1992	O-ring Seal 31.5X3.55	1
15	KD388-01006	Oil Filling Port Cover	1

Lubrication System (KD388-09000)

No.	Part No	Description	Qty.
1	KD388-09500	Oil Ruler Part	1
2	KD388-09007	Oil Ruler Sleeve Pipe	1
3	KD388-09002	Oil Filter Seat Gasket	1
4	KD388-09001	Oil Filter Seat	1
5	GB/T5789-1986	Bolt M8X20	3
6	KD388-09003	Threaded Sleeve	1
7	KD388-09300	Oil Filter Part	1
8	KD388-09008	Oil Draining Hose	1
9	KD388-09206	Pressure Limitation Valve Screw Plug	1
10	KD388-09205	Pressure Limitation Valve Spring	1
11	KD388-09204	Pressure Limitation Valve Plunger	1
12	KD388-09202	Outer Rotor	1
13	KD388-09201	Inner Rotor	1
14	KD388-09203	Oil Pump Cover Plate	1
15	GB/T819.1-2000	Screw M6X16	6
16	GB/T619-1999	B-Style Ring Hoop 45	2
17	KD388-09004	Rough Filter Gasket	1
18	GB/T5789-1986	Bolt M8X35	2
19	KD388-09100	Oil Rough Filter Part	1

Exhaust System(KD388-08000)

No.	Part No	Description	Qty.
1	KD388-08001	Exhaust Pipe	1
2	KD388-08002	Exhaust Pipe Gasket	1
3	KD388-08003	Outlet Pipe Gasket	1
4	GB/T5789-1986	Bolt AM8X80XA2-70	4
5	GB/T898-1988	Stud AM8X20XA2-70	4
6	GB/T898-1988	Stud AM8X80XA2-70	2
7	GB/T6177.1-2000	Nut M8XA2-70	6
8	GB/T93-1987	Gasket 8	10

Cooling System (KD388-17000)

No.	Part No	Description	Qty.
1	KD388-17002	Water Outlet Seat Gasket	1
2	KD388-17001	Water Outlet Seat	1
3	GB/T3452.1-1992	O-ring Seal φ29.7X3	1
4	GB/T5789-1986	Bolt M8	3
5	KD388-17003	Water Pump Gasket	1
6	KD388-17100	Water Pump-Thermostat Assembly	1
7	KD388-17004	Water Pump Bolt Pulley	1
8	KD388-17006	Fan Gasket	1
9	GB/T13352-1992	Automobile V Strip	1
10	KD388-17200	Fan Blade Part	1
11	GB/T5789-1986	Bolt M6X40	4
12	GB/T5789-1986	Bolt M8X60	3
13	GB/T5789-1986	Bolt M8X20	2

Cylinder Block Assembly(KD388-01000)

Cylinder Block Assembly (KD388-b-01000)

No.	Part No	Description	Qty.
1	KD388-01009	Oil Seal of Flywheel Terminal	1
2	GB/T5789-1986	Bolt M8X30	9
3	KD388-01008	Oil Seal Seat of Flywheel Terminal	1
4	KD388-01013	Inner Hexagonal Plug Screw R 1/4"	3
5	KD388-01101	Cylinder Block	1
6	KD388-01026	Upper Thrust Sheet	2
7	KD388-01031	Pressing Wire Hook φ10.5	2
8	KD388-01027	Lower Thrust Sheet	2
9	KD388-01102	Main Bearing Cover of Flywheel Terminal	1
10	KD388-01103	Middle Main Bearing Cover I	1
11	KD388-01104	Middle Main Bearing Cover II	1
12	KD388-01105	Main Bearing Cover of Gear Chamber Terminal	1
13	KD388-01036	Left Chassis of Diesel Engine	1
14	GB/T9074.17-2000	Bolt Subassembly M10X30	8
15	KD388-01049	Crankcase Oil Tray Retaining Plate Gasket	1
16	KD388-01038	Crankcase Oil Tray Retaining Plate	1
17	GB/T5789-1986	Bolt M8X45	20
18	KD388-01048	Crankcase Oil Tray Gasket	1
19	KD388-01039	Crankcase Oil Tray	1
20	GB/T5789-1986	Bolt M8X12	4
21	KD388-01041	Oil Draining Pipe Connector	1
22	GB/T5789-1986	Bolt M8X25	2
23	KD388-01106	Main Bearing Cover Bolt M12X1.5X73	8
24	KD388-01024	Lower Main Bushing	4
25	KD388-01025	Upper Main Bushing	4
26	KD388-01107	Camshaft Bush	1
27	KD388-01108	Plug Sheet 50	1
28	KD388-01028	Location Pin Cover	2
29	KD388-01046	Gear Chamber Cover Plate Gasket	1
30	KD388-01001a	Gear Chamber Plate	1
31	KD388-b-01001	Gear Chamber Plate	1
31-1	GB/T5789-1986	Bolt M8X16	3
32	KD388-01047	Gear Chamber Gasket	1
33	KD388-01002	Gear Chamber Cover	1
34	KD388-01045	Cover Plate Gasket	1
35	KD388-01044	Flange Cover Plate	1
36	GB/T5789-1986	Bolt M8X90	3
37	GB/T5789-1986	Bolt M6X12	2

No.	Part No	Description	Qty.
38	GB/T5789-1986	Bolt M8X55	11
39	KD388-01003	Gear Chamber Oil Seal	1
40	GB/T5789-1986	Bolt M8X16	6
41	KD388-01004	Fuel Injection Pump Cover Plate	1
42	KD388-01042	Inner Hexagonal Bolt R 3/8"	1
43	KD388-01005	Fuel Injection Pump Cover Plate Gasket	1
44	KD388-01043	Inner Hexagonal Bolt R 1/2"	1
45	GB/T3452.1-1992	O-ring Washer 31.5X3.55	1
46	KD388-01006	Oil Filling Port Cover	1
47	KD388-01300	Idle Gear Part	1
48	GB/T5789-1986	Bolt M8X40	3
49	KD388-01007	Idle Gear Seat	1
50	KD388-01011	O-ring Washer 15.6X2.4	2
51	KM376QC-1002004	Bowled Plug 30	6
52	KD388-01012	Inner Hexagonal Screw Plug R 1/8"	1
53	KM493-1002101	Bowled Plug 12	2
54	KM376QC-1002014	Oil Pressure Sensor	1
55	KD388-01501	Cooling Liquid Draining Seat	1
56	KD388-01505	Liquid Draining Screw Plug	1
57	KD388-01502	Pipe Connector	1
58	KD388-01504	Pipe Clamp 12	1
59	KD388-01503	Oil Draining Hose	1
60	KD388-01037	Right Chassis of Diesel Engine	1
61	KD388-01029	Inner Squared Screw Plug R 1"	2
62	KD388-01023	Cylinder Cover Bolt M10X1.25X98	14
63	KD388-01200a	Cylinder Cover Gasket Part	1
64	GB/T879.1-2000	Pin 6X12	2
65	KD388-01051	Rear Oil Seal Seat Gasket	1
66	GB/T119.2-2000	Pin 8X18	4
67	GB/T5783-2000	Bolt M10X25	10
68	KD388-01016	Flywheel Cover	1
68-1	KD388-a-01016	Flywheel Cover	1
69	KD388-01017	Dead point Viewpoint Hole Cover	1
70	KD388-01033	Wiring Clip Box Pluboard	1
71	KD388-01032	Wiring Clip Plate	1
72	GB/T5783-1986	Bolt M10X16	7

Piston Connection Rod Assembly (KD388-04000)

No.	Part No	Description	Qty.
1	KD388-04001	The 1st Air Ring	3
2	KD388-04002	The 2nd Air Ring	3
3	KD388-04100	Oil Ring Part	3
4	GB/T893.1-1986	Retaining Ring 26	6
5	KD388-04003	Piston	3
6	KD388-04202	Connection Rod	3
7	KD388-04005	Connection Rod Bushing	6
8	KD388-04203	Connection Rod Cover	3
9	KD388-04204	Connection Rod Bolt	6
10	KD388-04201	Connection Rod Bush	3
11	KD388-04004	Piiston Pin	3

Fuel Injection Pump Assembly (KD388-12000)

No.	Part No	Description	Qty.
1	KD388-12000	Fuel Injection Pump Assembly	1

Fuel Injection Pump Assembly (KD388-d-12000)

No.	Part No	Description	Qty.
1	KD388-b-12102	Operation Level of Accelerator	1
2	GB/T97.1-2002	Washer 5	1
3	GB/T91-2000	Cotter Pin 1.2X10	1
4	GB/T6177.1-200		