



# **N485J-3 Marine Diesel Engine Set Parts Catalogue**

## **N485J-3 船用柴油机组零件图册**

**ZHENJIANG SIYANG DIESEL ENGINE MANUFACTURING CO.,LTD CHINA**

(East China Shipbuilding Institute Factory)

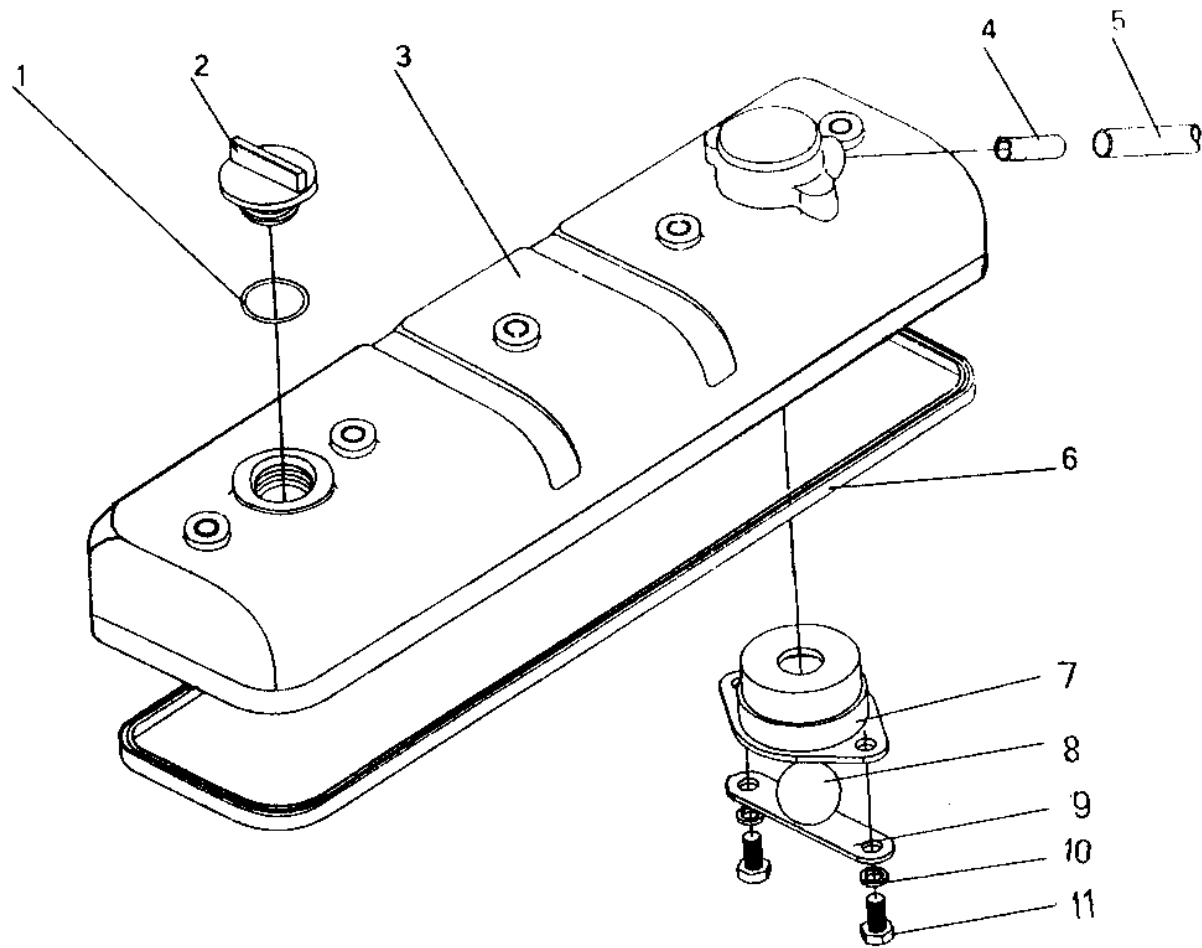
镇江四洋柴油机制造有限公司（原华东船院工厂）

# CONTENTS

1. Cylinder head cover assembly.....	1
2. Cylinder head assembly.....	3
3. Engine block assembly.....	7
4. Timing gear train assembly.....	13
5. Piston and connecting rod assembly.....	15
6. Crankshaft and flywheel assembly.....	17
7. Valve timing mechanism.....	19
8. Water pump assembly.....	22
9. Oil sump assembly.....	25
10. Lubricating oil pump assembly.....	27
11. Fuel system.....	30
12. Lube oil suction strainer.....	33
13. Exhaust pipe and expansion tank assembly.....	35
14. Lube oil filter /Generator /Starting motor.....	37
15. Intake pipe assembly.....	39
16. End Cover assembly.....	41

**Fig. 1 Cylinder Head Cover Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB3452.1-82	“O” Rubber seal washer	1	
2	N85-01002	Oil filler cap	1	
3	N485-01003	Cylinder head cover	1	
4	N85C-01004A	Gas outlet pipe	1	
5	HG4-404-82	Rubber hose $\Phi 10 \times 300$	1	
6	N485-01001	Cylinder head cover sealing ring	1	
7	N485C-01005	Check valve seat	1	
8	GB308-89	Steel ball $\Phi 22$	1	
9	N485C-01006	Baffle	1	
10	GB859-87	Spring washer 6	2	
11	GB65-85	Screw $M6 \times 12$	2	



**Fig.1 Cylinder Head Cover Assembly**

**Fig. 2 Cylinder Head Assembly**

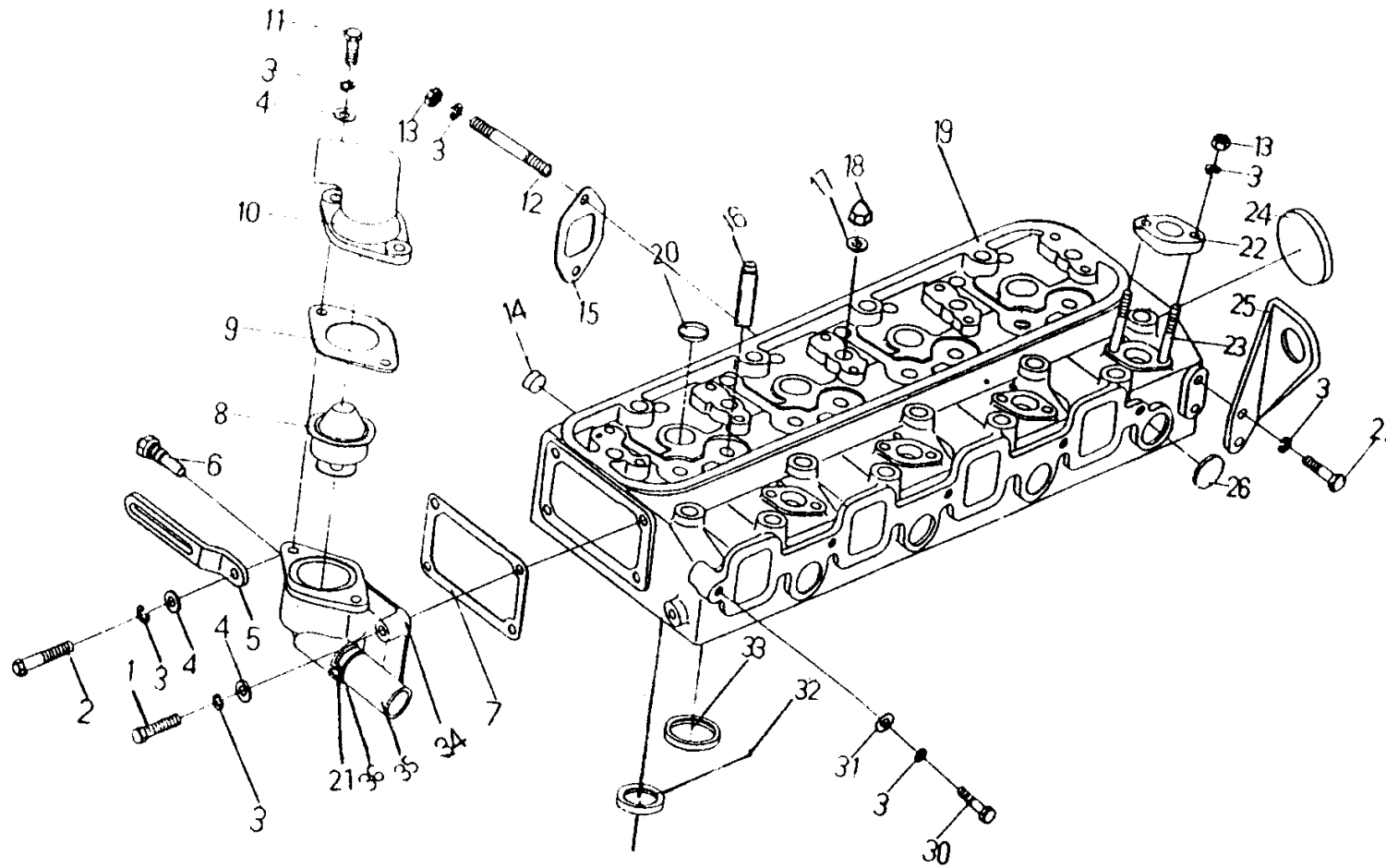
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB5782-86	Bolt M8×35	4	
2	GB5782-86	Bolt M8×45	1	
3	GB859-87	Spring washer 8	46	
4	GB848-85	Plain washer 8	11	
5	N85-17006	Bracing piece	1	
6	WB9311	Water temperature alarming sensor	1	
7	N85-17004	Thermostat housing gasket	1	
8	N85-17003	Thermostat (model 1052A)	1	
9	N85-17002	Thermostat cover gasket	1	
10	N485Q-17001A	Thermostat cover	1	
11	GB5782-86	Bolt M8×22	2	
12	GB899-88	Stud M8×75	8	
13	GB6170-86	Nut M8	18	
14	N85-02101A	Sleeve	4	

**Fig. 2 Cylinder Head Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
15	N85-02006	Exhaust manifold gasket	4	
16	N85-02105	Valve guide	4	
17	GB97.1-85	Plain washer 8	14	
18	GB923-88	Button head cap nut M8	5	
19	N485-02108	Cylinder head	1	
20	N85-02109	Expansion plug $\Phi 26$	4	
21	N85-08007	Water pipe connector	1	
22	N85-02011	Injector clamping plate	4	Not applicable in direct chamber
23	GB899-88	Stud M8 $\times$ 50	8	
24	N85-02104	Expansion plug $\Phi 55$	1	
25	N85-02004	Hoisting hold	2	
26	N85-02102	Expansion plug $\Phi 20$	4	
27	GB5782-86	Bolt M8 $\times$ 20	4	
30	GB5782-86	Bolt M8 $\times$ 28	5	

**Fig. 2 Cylinder Head Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
31	GB97.1-85	Plain washer 8	14	
32	N85-02106	Exhaust valve seat	4	
33	N85-02107	Intake valve seat	4	
34	N85-17005	Thermostat housing	1	
35	HG4-549-67	Radiator water pipe $\Phi 19 \times \Phi 27 \times 90$	1	
36	Q68026	Clamp $\Phi 26$	1	



**Fig.2 Cylinder Head Assembly**



**Fig. 3 Cylinder Block Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	N485-03101	Engine block	1	
2	N85-03008	Main bearing shell (upper)	5	
3	N85-03006	Main bearing shell (lower)	5	
4	N85-03104	Main bearing cap	4	
5	N85-03106	Main bearing cap bolt	10	
6	N85-03105	Main bearing cap bolt washer	10	
7	N85-03107	Rear main bearing cap	1	
8	N85-03007	Crankshaft thrust plate (lower)	2	
9	N85-03009	Crankshaft thrust plate (upper)	2	
10	GB5782-86	Bolt M8×45	3	
11	GB5782-86	Bolt M8×25	10	
12	GB859-87	Spring washer 8	32	
13	GB848-85	Plain washer 8	30	
14	N85-03020	Lubricating oil filter gasket	1	

**Fig. 3 Cylinder Block Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
15	N85-03200	Water draining cock	1	
16	YB1011	Oil pressure alarming sensor	1	
17	GB119-86	Dowel pin B8×16	2	
18	GB119-86	Dowel pin B10×22	2	
19	N85-03110	Plug	4	
20	N85-03102	Expansion plug Φ30	9	
21	N85-03111	Blocking plug Φ14	5	
22	N85-03109	Camshaft rear bushing	1	
23	N85-03108	Expansion plug	1	
24	N485-03103	Cylinder head gasket	1	
25	N85-03104	Cylinder head bolt washer	18	
26	N85-03015	Cylinder head long bolt	14	
27	N85-03016	Cylinder head short bolt	4	
28	N85-03003	Cylinder liner	4	

**Fig. 3 Cylinder Body Assembly**

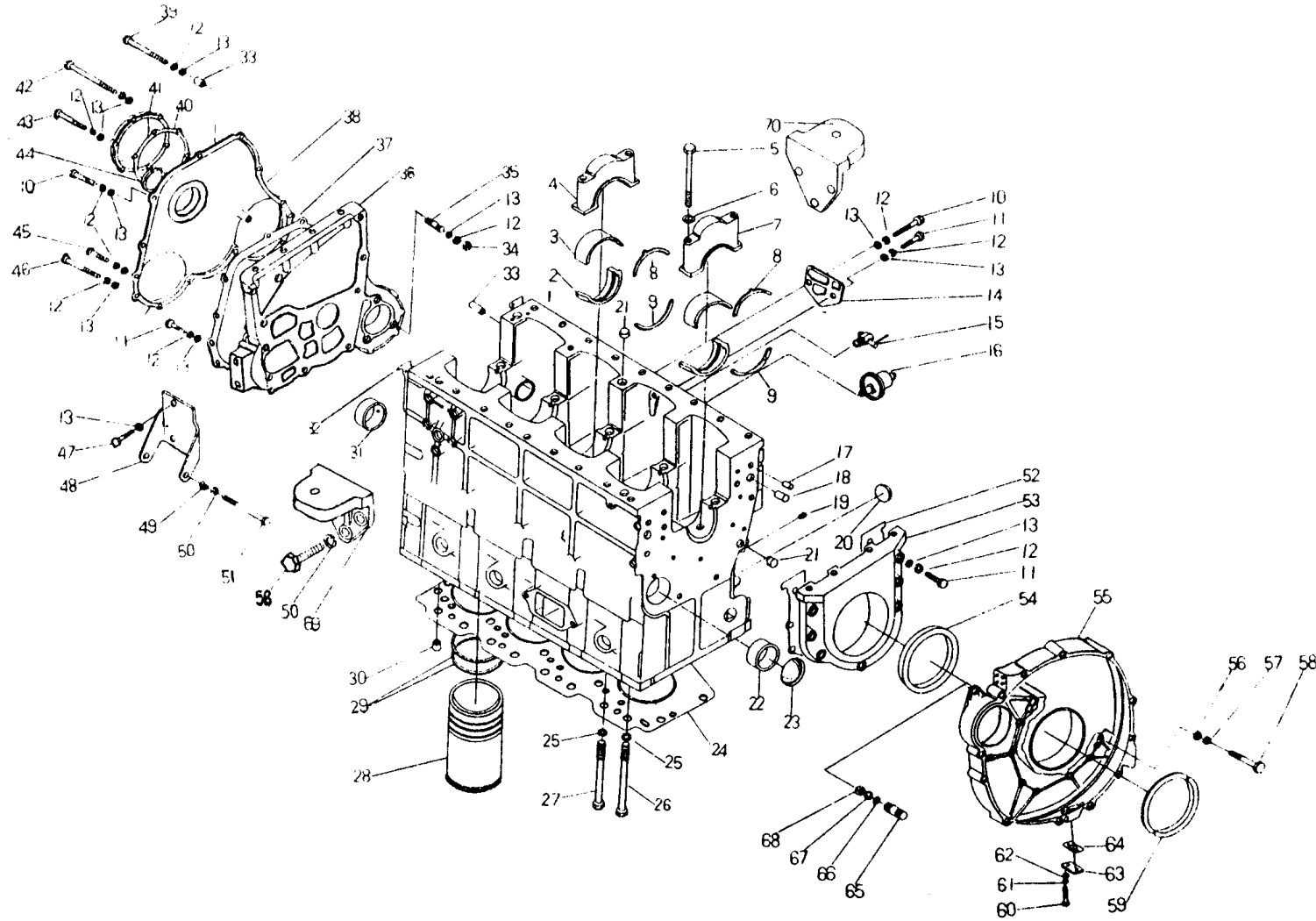
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
29	N85-03002	Water seal ring	8	
30	N85-03017	Cylinder head locating sleeve	2	
31	N85-03103	Camshaft bushing	1	
31	N485-03112	Camshaft middle bushing	1	
32	N85-12001	Gear case gasket	1	
33	N85-03001	Gear case locating sleeve	3	
34	GB6170-86	Nut M8	3	
35	GB898-88	Stud M8×35	3	
36	N85-12002	Gear case	1	
37	N85-12003	Gear case cover gasket	1	
38	N85-12004	Gear case cover	1	
39	GB5782-86	Bolt M8×80	2	
40	N85-12006	Advancer cover gasket	1	
41	N85-12005 (A)	Advancer cover	1	

**Fig. 3 Cylinder Body Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
42	GB5782-86	Bolt M8×85	3	
43	GB5782-86	Bolt M8×50	5	
44	HG4-692-67	Oil seal SG 52×72×12	1	
45	GB5782-86	Bolt M8×30	2	
46	GB5782-86	Bolt M8×65	2	
47	GB5782-86	Bolt M8×20	2	
48	N85-12007	Generator bracket	1	
49	GB6170-86	Nut M10	1	
50	GB93-87	Spring washer 10	1	
51	GB5782-86	Bolt M10×90	1	
52	N85-03005	Rear oil seal cover gasket	1	
53	N85-03010	Rear oil seal cover	1	
54	HG4-692-67	Oil seal SG 85×110×12	1	
55	N485-03012	Flywheel housing	1	

**Fig. 3 Cylinder Body Assembly**

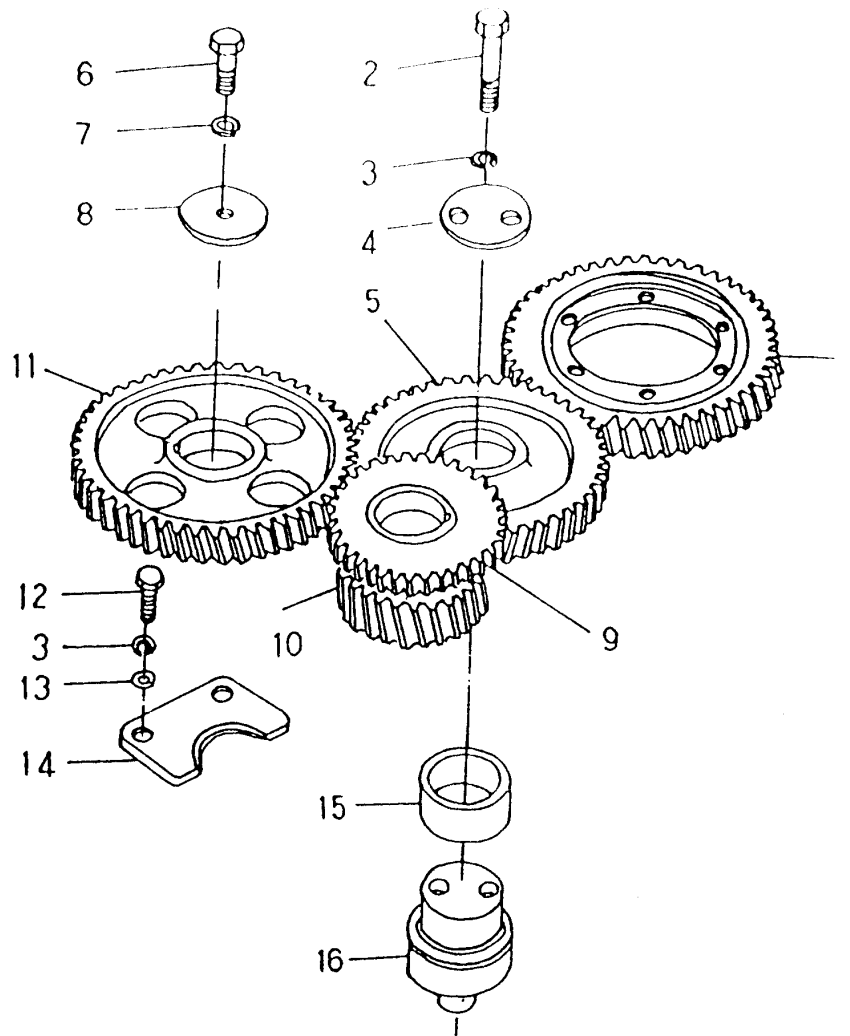
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
56	GB848-85	Plain washer 10	8	
57	GB859-87	Spring washer 10	8	
58	GB5782-86	Bolt M10×30	8	
59	N85-03011	Flywheel housing seal ring	1	
60	GB5782-86	Bolt M6×12	2	
61	GB93-87	Spring washer 6	2	
62	GB97.1-85	Plain washer 6	2	
63	N85-03019	Inspecting hole cover	1	
64	N85-03018	Inspecting hole cover gasket	1	
65	GB898-86	Stud M12×30	2	
66	GB848-85	Plain washer 12	2	
67	GB859-87	Spring washer 12	2	
68	GB6170-86	Nut M12	2	
69	N485-03102B	Engine front support	2	
70	N485-03103B	Engine rear support	2	



**Fig.3 Engine Block Assembly**

**Fig. 4 Timing Gear Train Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	N85-04001	Injecting pump timing gear	1	
2	GB5782-86	Bolt M8×50	2	
3	GB859-87	Spring washer 8	4	
4	N85-04003	Timing idle gear retainer	1	
5	N85-04005	Timing idle gear	1	
6	GB5782-86	Bolt M12×30	1	
7	GB859-87	Spring washer 12	1	
8	N85-04009	Camshaft timing gear retainer	1	
9	N85-04001	Lubricating oil pump driving gear	1	
10	N85-04006	Crankshaft timing gear	1	
11	N85-04007	Camshaft timing gear	1	
12	GB5782-86	Bolt M8×16	2	
13	GB97.1-85	Plain washer 8	2	
14	N85-04008	Camshaft retainer	1	
15	N85-04002	Timing idle gear bushing	1	
16	N85-04004	Timing idle gear shaft	1	

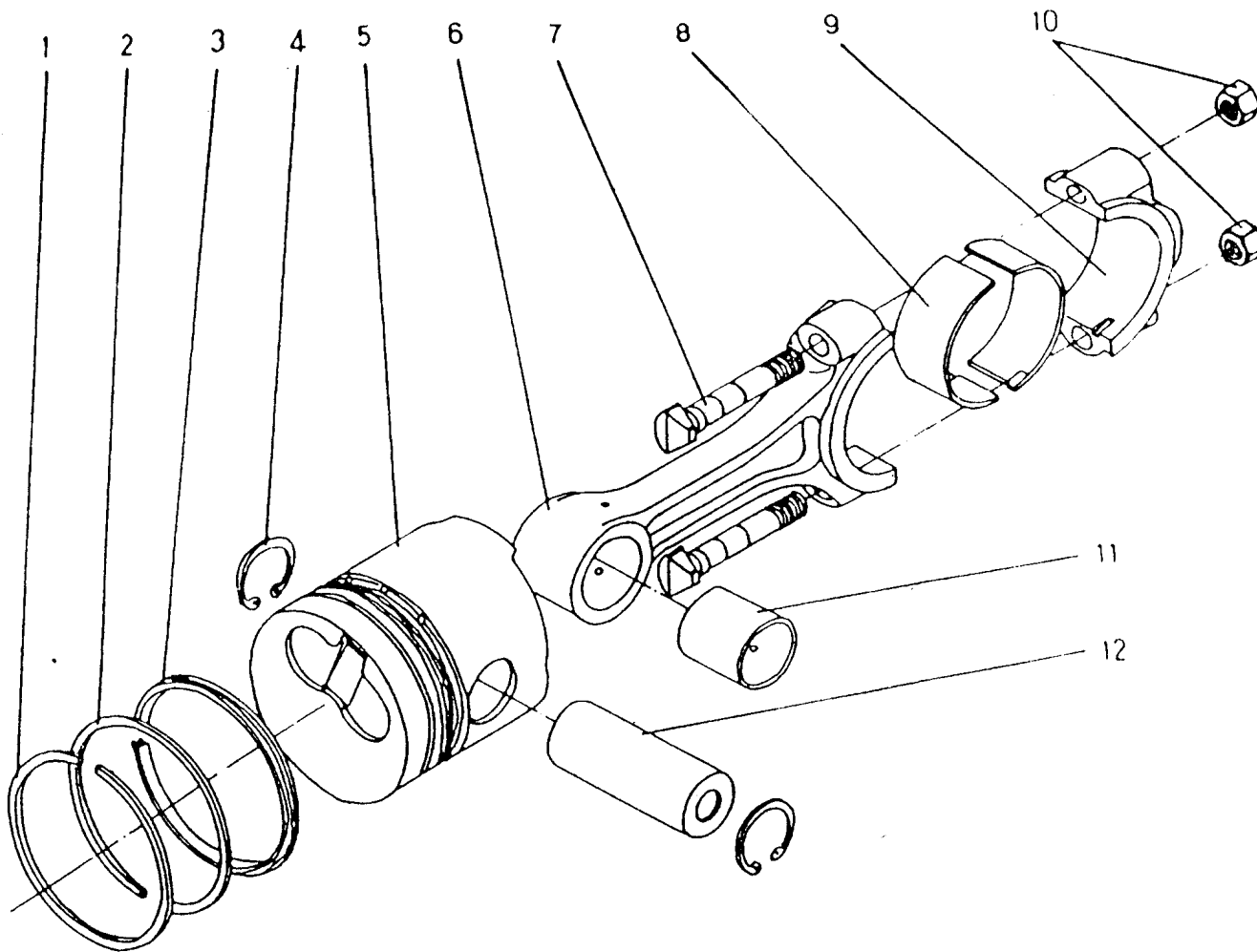


**Fig.4 Timing Gear Train Assembly**



**Fig. 5 Piston and Connecting Rod Assembly**

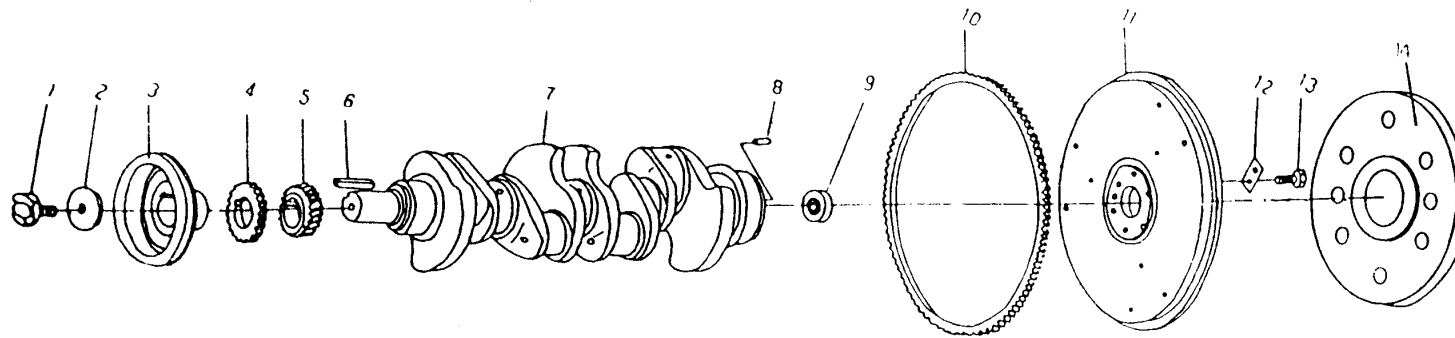
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	N85-05002	1 <sup>st</sup> piston ring	4	
2	N85-05003	2 <sup>nd</sup> piston ring	4	
3	N85-05100	Oil ring	4	
4	GB893.2-86	Circlip 28	8	
5	N85-05001	Piston	4	
6	N85-05201	Connecting rod	4	
7	N85-05203	Connecting rod bolt	8	
8	N85-05005	Connecting rod bearing shell	8	
9	N85-05204	Connecting rod cap	4	
10	N85-05205	Connecting rod nut	8	
11	N85-05202	Connecting rod bushing	4	
12	N85-05004	Piston pin	4	



**Fig.5 Piston and Connreting Rod Assembly**

**Fig. 6 Crankshaft and Flywheel Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	N85-06003	Starting jaw	1	
2	N85-06002	Starting jaw washer	1	
3	N485-06001	Crankshaft pulley	1	
4	N85-04010	Lubricating oil pump driving gear	1	
5	N85-04006	Crankshaft timing gear	1	
6	GB1096-79	Flat key C10×6.3	1	
7	N485-06004	Crankshaft	1	
8	GB119-86	Cylinder pin B10×20	1	
9	GB276-64	Single row radial ball bearing 203	1	
10	N485-06102	Flywheel ring gear	1	
11	N485-06101	Flywheel	1	
12	N85-06005	Flywheel bolt gasket	3	
13	N85-06006	Flywheel bolt	6	
14	N85C-06103 (D)	Coupling flange	1	



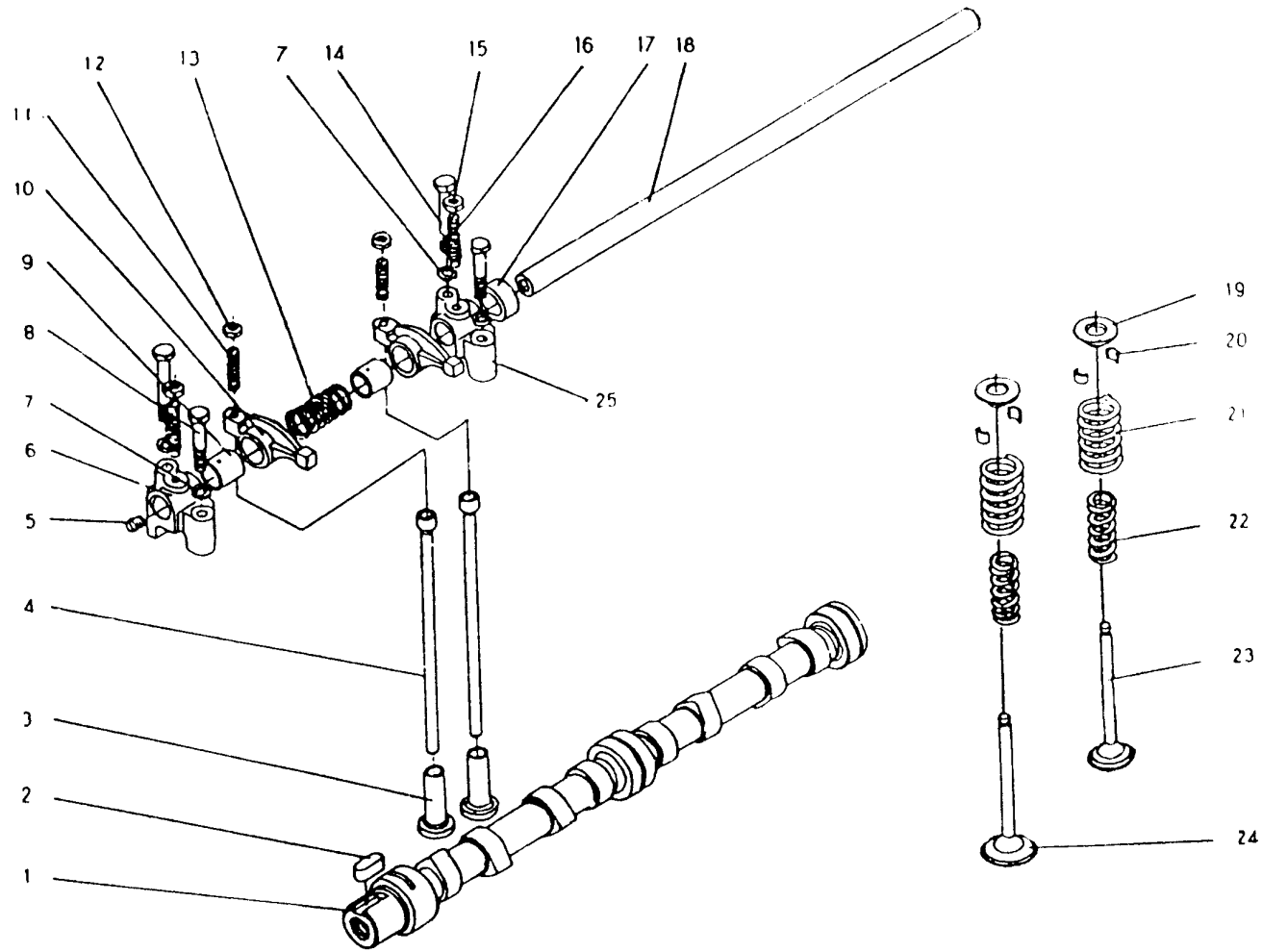
**Fig.6 Crankshaft and Flywheel Assembly**

**Fig. 7 Valve Timing Mechanism**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	N485-07001	Camshaft	1	
2	GB1096-79	Flat key C10×25	1	
3	N85-07003	Valve tappet	8	
4	N85-07002	Valve push rod	8	
5	GB73-85	Tightening screw M10×1×10	2	
6	N85-02201	Front rocker arm support	1	
7	GB859-87	Spring washer 8	10	
8	GB5782-86	Bolt M8×45	5	
9	N85-02212	Valve rocker arm bushing	8	
10	N85-02211	Valve rocker arm	8	
11	N85-02202	Valve clearance adjusting screw	8	
12	N85-02203	Valve clearance adjusting nut	8	
13	N85-02205	Valve rocker arm spring	4	
14	GB5782-86	Bolt M8×60	5	

**Fig. 7 Valve Timing Mechanism**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
15	GB6170-86	Nut M8	5	
16	GB79-85	Tightening screw M8×45	5	
17	N85-02206	Rocker arm shaft bushing	3	
18	N485-02207	Rocker arm shaft	1	
19	N85-02201	Valve spring seat(upper)	8	
20	N85-02202	Valve collet	16	
21	N85-02203(1)	Valve outer spring	8	
22	N85-02003(2)	Valve inner spring	8	
23	N85-02009	Exhaust valve	4	
24	N85-02008	Intake valve	4	
25	N85-02204	Rocker arm support	4	



**Fig.7 Valve Timing Mechanism**

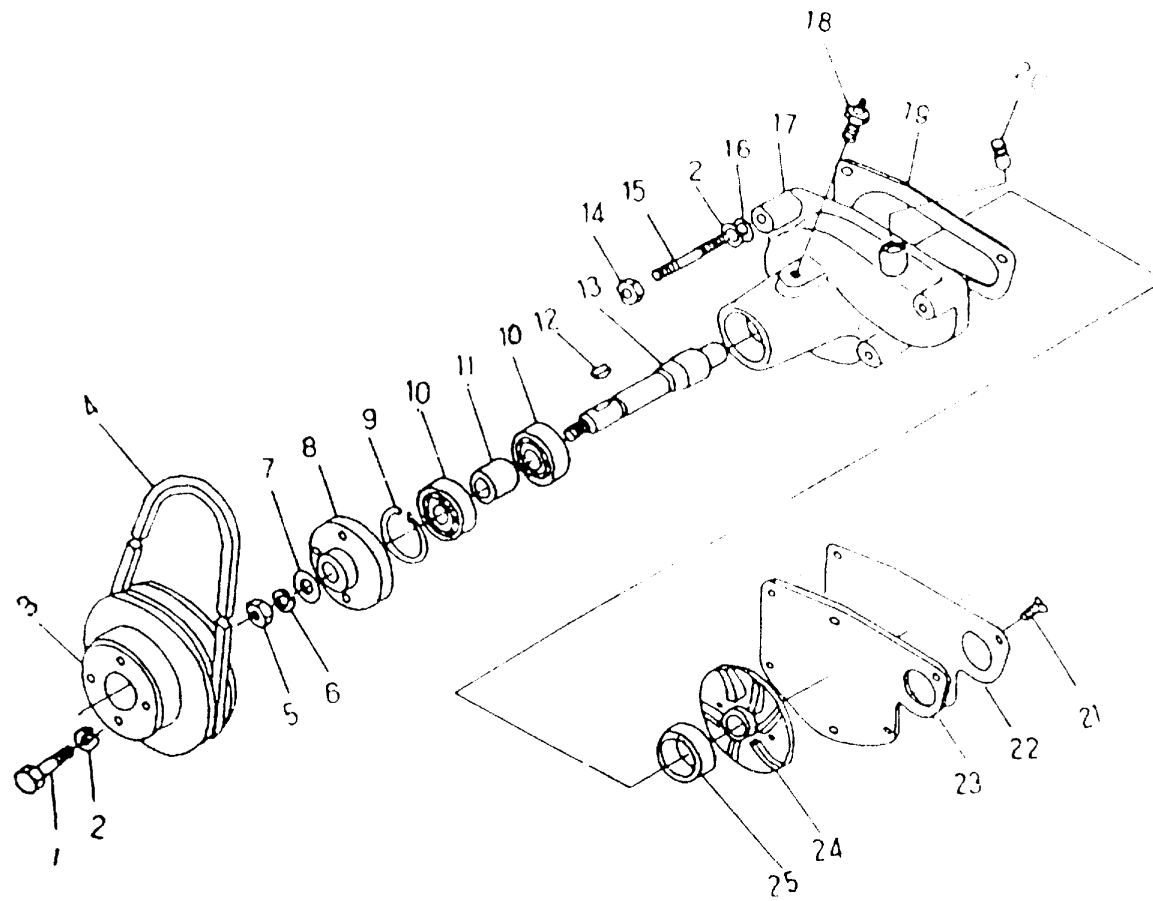
**Fig. 8 Water Pump Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB5872-86	Bolt M8×20	4	
2	GB859-87	Spring washer 8	8	
3	N85-08011(1)	Water pump pulley	1	
4	15A-1020	V-belt	1	
5	GB6170-86	Nut M10	1	
6	GB93-87	Spring washer 10	1	
7	GB97.1-85	Plain washer 10	1	
8	N85-08012	Water pump pulley housing	1	
9	GB893.2-86	Circlip 35	1	
10	GB278-89	Bearing 60202	2	
11	N85-08002	Bearing spacing sleeve	1	
12	GB1099-79	Woodruff key 4×16	1	
13	N85-08006	Water pump shaft	1	
14	GB6170-86	Nut M8	4	



**Fig. 8 Water Pump Assembly**

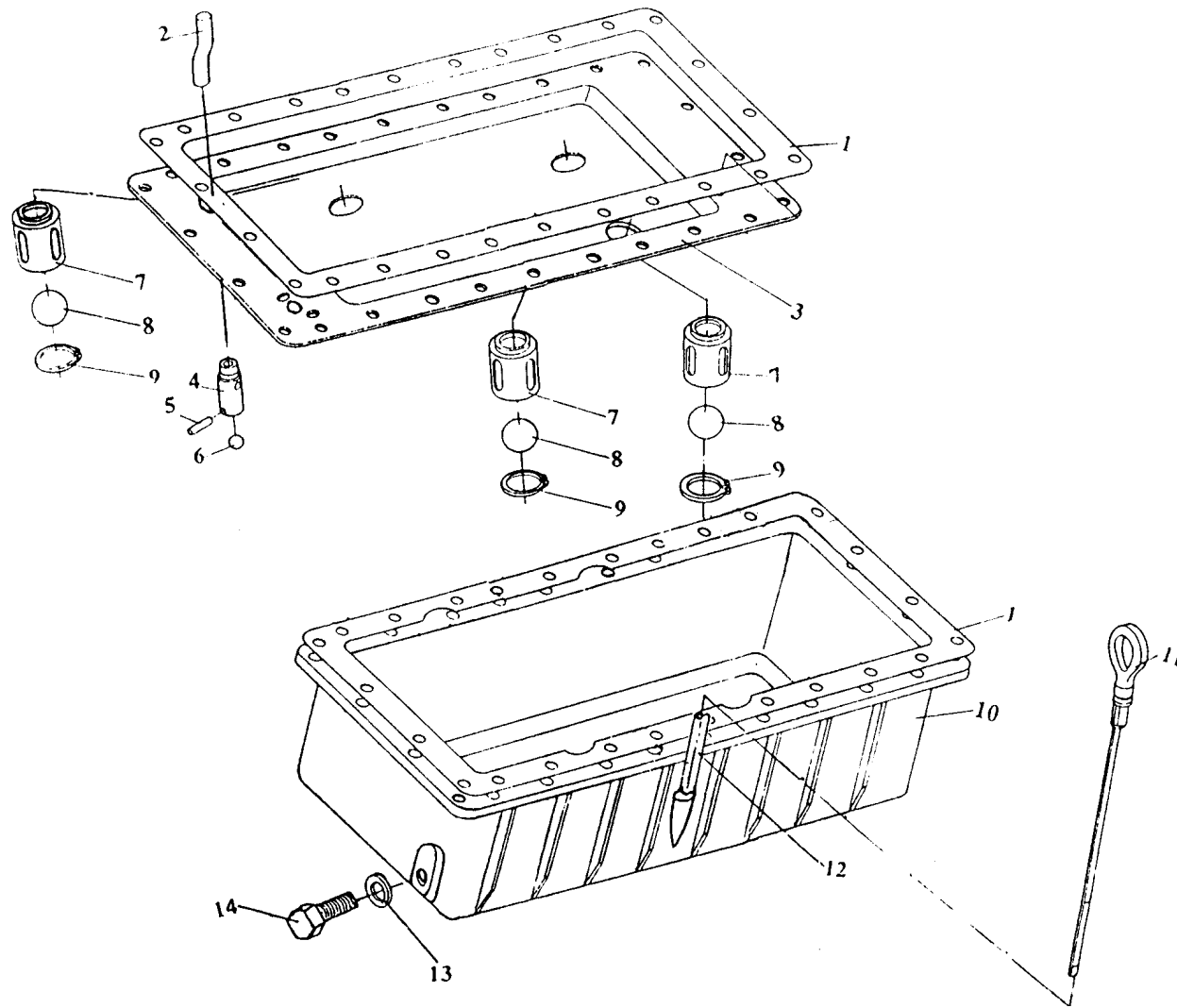
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
15	GB898-88	Stud M8×45	4	
16	GB848-85	Plain washer 8	4	
17	N85-08004	Water pump housing	1	
18	GB1152-79	Oil cup M8×1	1	
19	N85-08010	Water pump gasket	1	
20	N85-08007	Water pipe connector	1	
21	GB68-85	Countersunk head bolt M6×16	2	
22	N85-08008	Water pump adapter gasket	1	
23	N85-08009	Water pump adapter	1	
24	N85-08005	Water pump impeller	1	
25	N85-08003	Water seal ring II F-12	1	



**Fig.8 Water Pump Assembly**

**Fig. 9 Oil Sump Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	N485C-11006	Oil sump gasket	2	
2	380C3-01702	Breather pipe	1	
3	N485C-11005	Oil sump partition	1	
4	380C3-01703	Breather valve seat	1	
5	GB91-76	Pin 3 × 20	1	
6	GB308-89	Steel ball Φ 12	1	
7	2C3-F08501	Check valve housing	3	
8	GB308-89	Steel ball Φ 32	3	
9	GB893-76	Check ring 35	3	
10	N485C-11004	Oil sump	1	
11	N85C-11009	Dipstick	1	
12	N85C-11010	Dipstick pipe	1	
13	A-10706	Plain washer	1	
14	A-20402	Oil outlet screw	1	



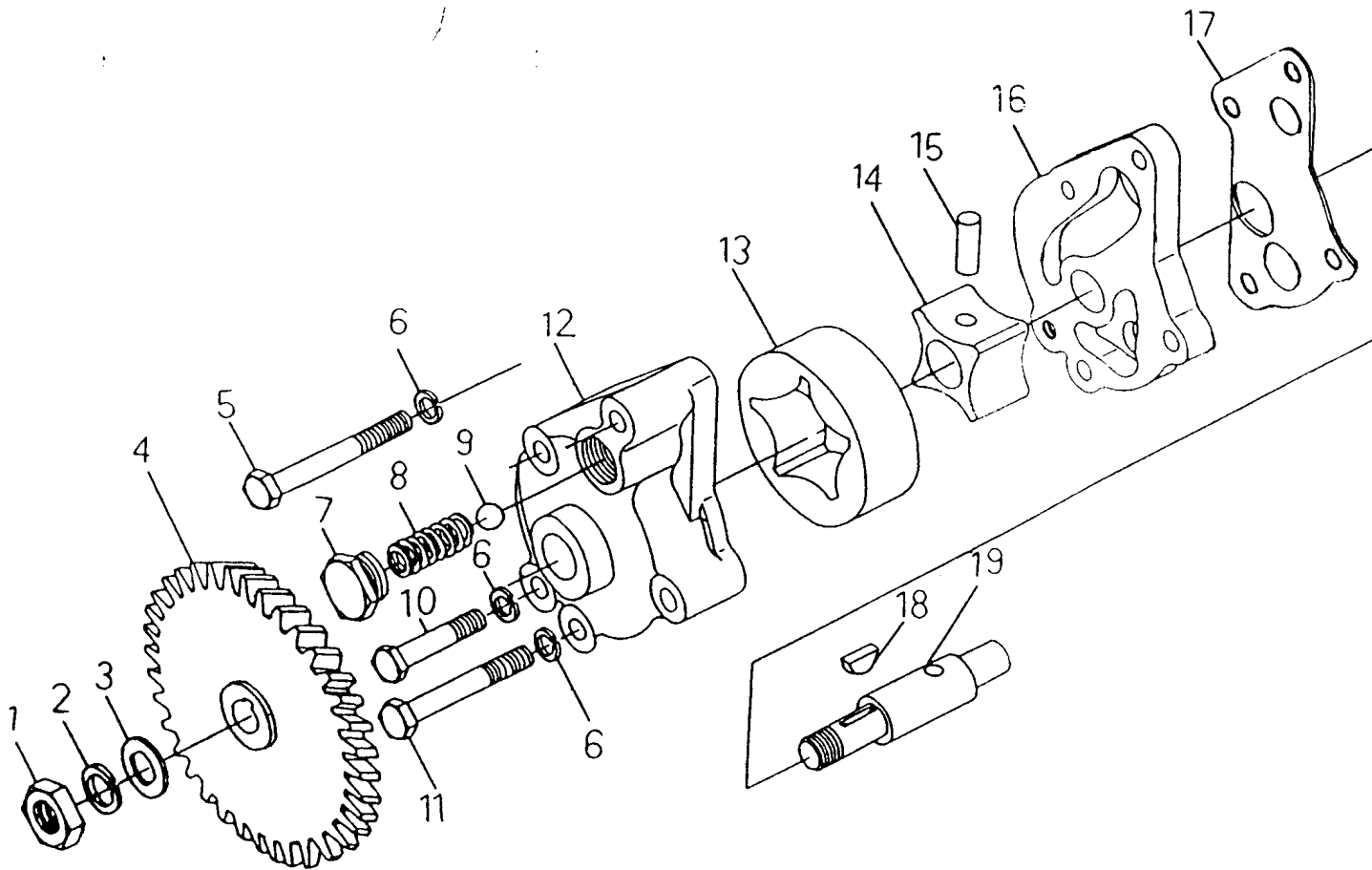
**Fig.9 Oil Sump Assembly**

**Fig. 10 Lubricating Oil Pump Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB6172-86	Nut M10	1	
2	GB59-87	Spring washer 10	1	
3	GB848-85	Plain washer 10	1	
4	N85-13007	Oil pump gear	1	
5	GB5782-86	Bolt M6×55	1	
6	GB859-87	Spring washer 6	5	
7	N85-13006	Pressure_limiting plug	1	
8	N85-13005	Pressure_limiting spring	1	
9	GB308-89	Steel ball Φ10	1	
10	GB5782-86	Bolt M6×35	1	
11	GB5782-86	Bolt M6×50	3	
12	N485-13001	Oil pump body	1	
13	N485-13004	Outer rotor	1	
14	N485-13102	Inner rotor	1	

**Fig. 10 Lubricating Oil Pump Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
15	GB119-86	Pin $A5 \times 18$	1	
16	N85-13002	Oil pump cover	1	
17	N85-13003	Oil pump shim	1	
18	GB1098-79	Key $3 \times 5 \times 13$	1	
19	N485-13101	Oil pump shaft	1	



**Fig.10 Lubrication Oil Pump Assembly**

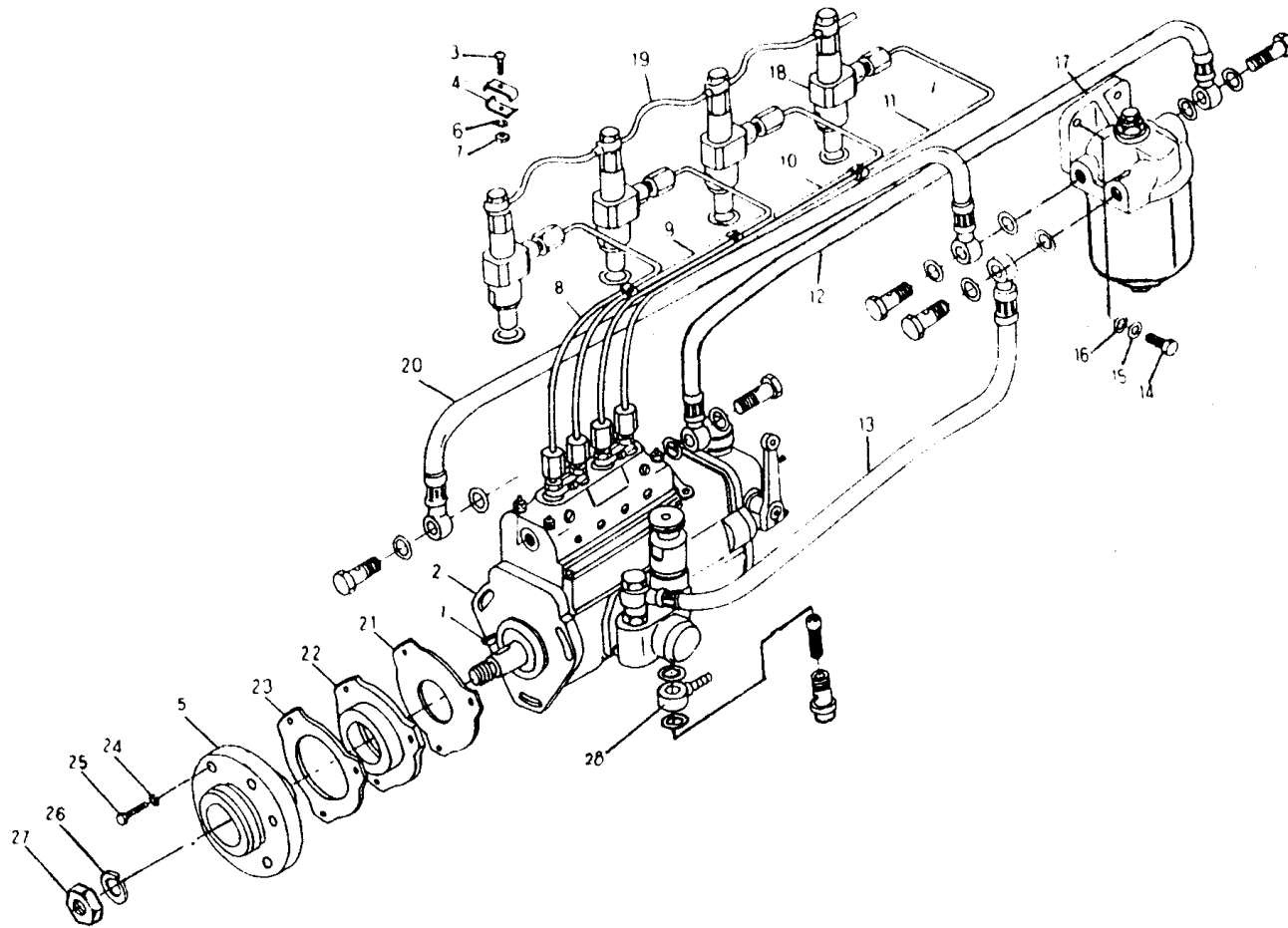
**Fig. 11 Fuel System**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB1099-79	Woodruff 3 × 16	1	
2	N485-18001	Injection pump	1	
3	GB65-85	Button head cap bolt M5 × 20	2	
4	N85-14001	Fuel pipe clip (A)	4	
5	N85-18005	Injection pump timing gear adapter	1	
6	GB859-87	Spring washer 5	2	
7	GB6170-86	Nut M5	2	
8	N485-14100	1 <sup>st</sup> cylinder high pressure fuel pipe	1	
9	N485-14200	2 <sup>nd</sup> cylinder high pressure fuel pipe	1	
10	N485-14300	3 <sup>rd</sup> cylinder high pressure fuel pipe	1	
11	N485-14400	4 <sup>th</sup> cylinder high pressure fuel pipe	1	
12	N485-15300	Fuel filter outlet pipe	1	
13	N485-15400	Fuel feed pump outlet pipe	1	
15	GB859-87	Spring washer 8	2	



**Fig. 11 Fuel System**

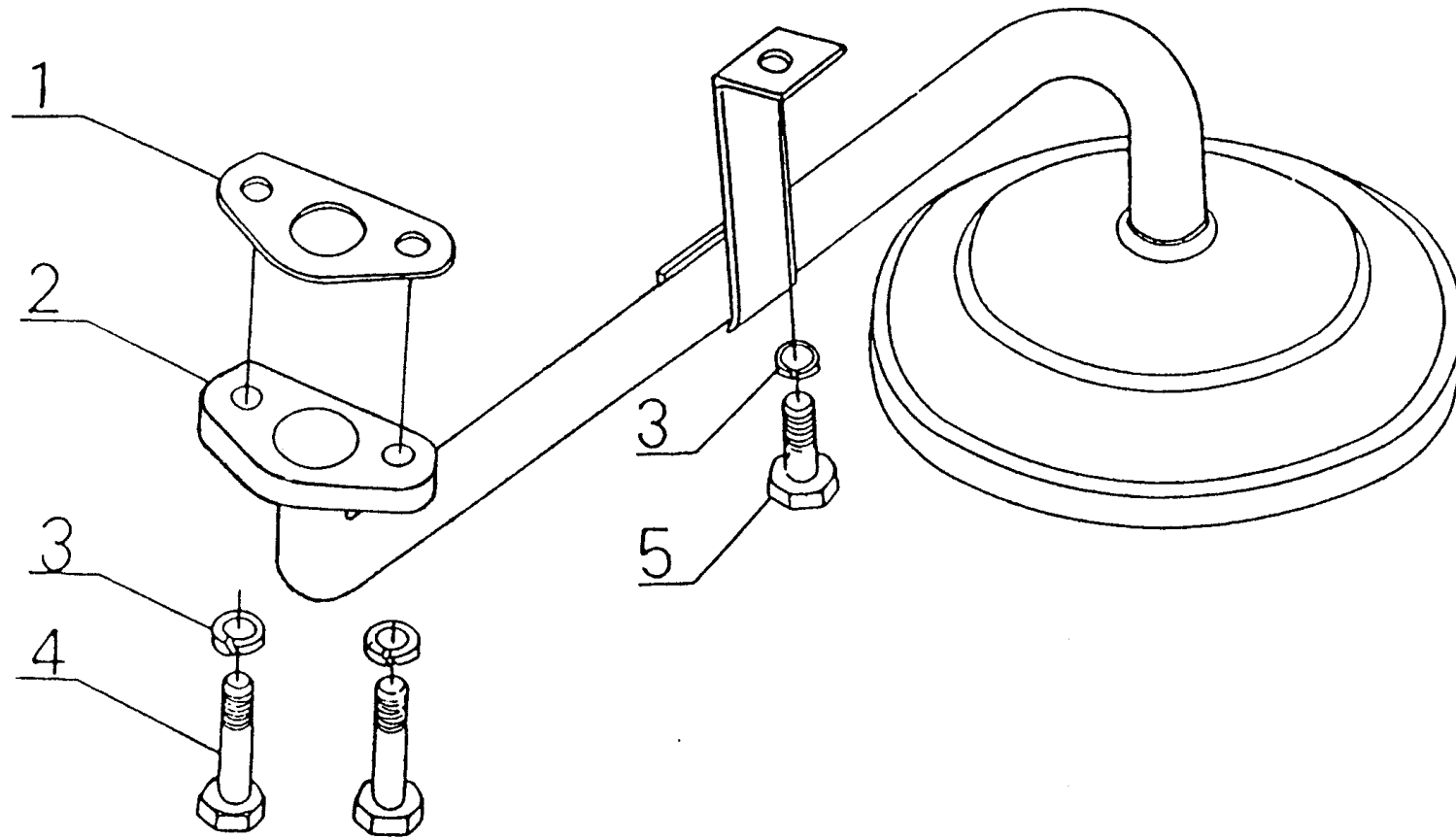
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
16	GB848-85	Plain washer 8	2	
17	N485-28000	Fuel filter	1	
18	N85-25000	Injector	4	
19	N485-15100(A)	Injector fuel return pipe	1	
20	N485-15200	Injection pump fuel return pipe	1	
21	N485-18002	Fuel pump flange gasket	1	
22	N485-18003	Injection pump end cover	1	
23	N485-18004	Injection pump adapter gasket	1	
24	GB93-87	Spring washer 6	6	
25	GB5782-86	Bolt M6×16	6	
26	GB93-87	Spring washer 12	1	
27	GB6170-86	Nut M12	1	
28	N85-15500	Fuel feed pump inlet connector	1	



**Fig.11 Furl System**

**Fig. 12 Lube Oil Suction Strainer**

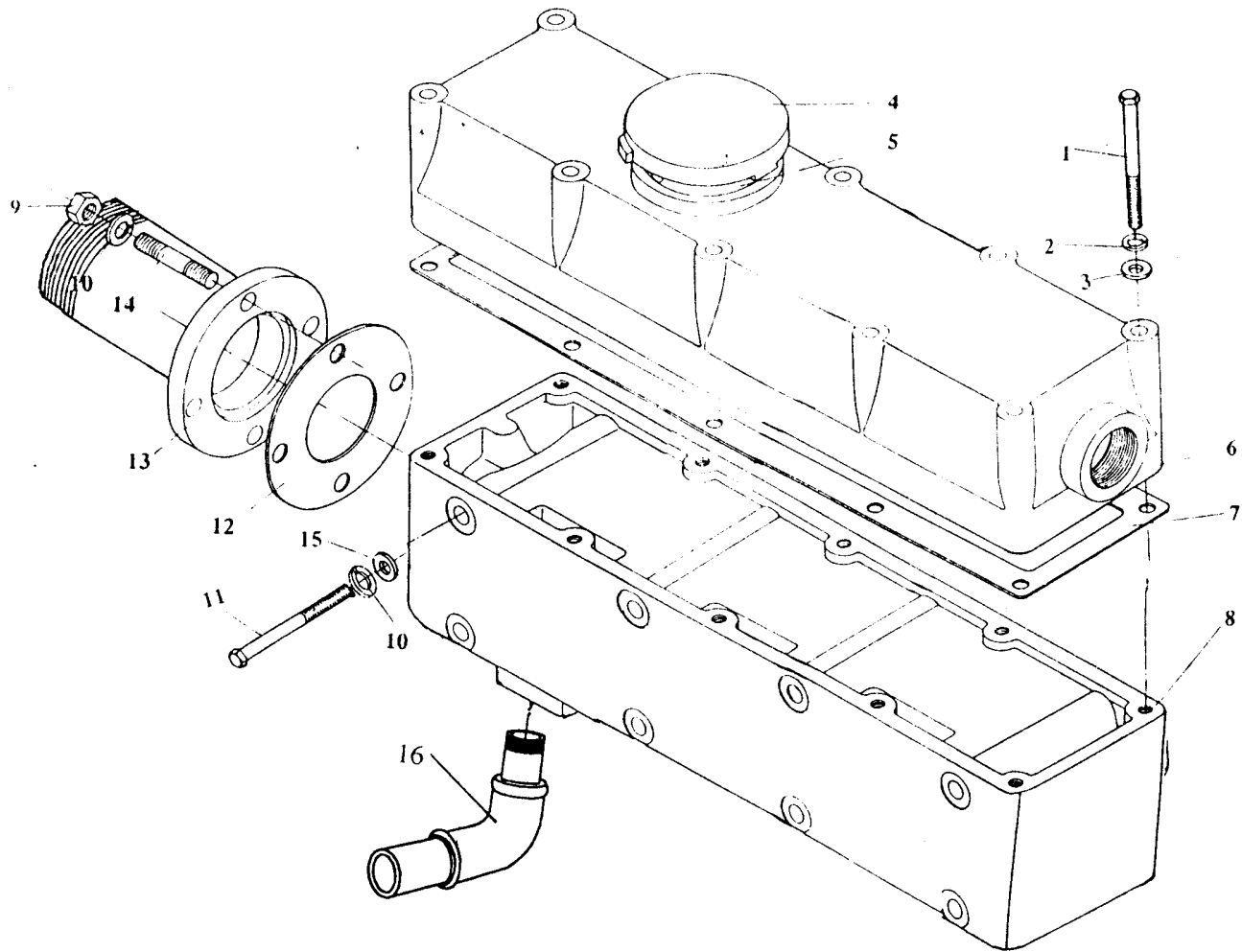
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	N85C-11022	Gasket	1	
2	N85C-11021	Oil inlet flange	1	
3	GB859-87	Spring washer 6	3	
4	GB5782-86	Bolt M6×35	2	
5	GB5782-86	Bolt M6×12	1	



**Fig.6 Lube Oil Suction Strainer**

**Fig. 13 Exhaust Pipe and Expansion Tank Assembly**

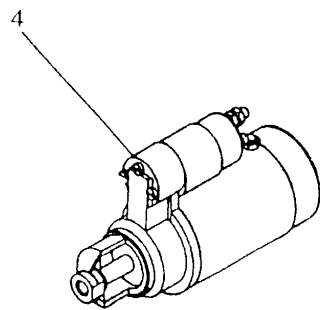
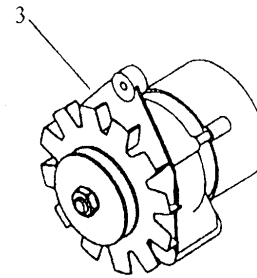
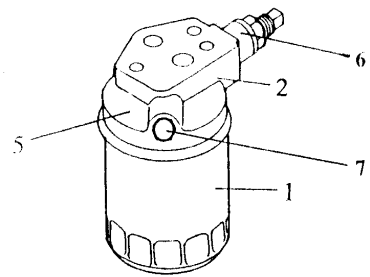
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB5782-86	Bolt M6×84	10	
2	GB93-87	Spring washer 6	10	
3	GB97.1-85	Plain washer 6	10	
4		Complex radiator cover	1	
5		Complex radiator cover seat	1	
6	N485C-10002(A)	Expansion radiator	1	
7	N485C-10007	Gasket	1	
8	N485C-10001(A)	Exhaust pipe body	1	
9	GB6170-86	Nut M8	4	
10	GB93-87	Spring washer 8	4	
11	GB5872-86	Bolt M8×112	8	
12	N485C-10003	Gasket	1	
13	N485C-10004	Exhaust flange pipe	1	
14	GB899-88	Stud M8×20	4	
15	GB97.1-85	Plain washer 8	8	
16	Z380-17006	Outlet pipe connector	1	



**Fig.13 Exhaust Pipe and Expansion Assembly**

**Fig. 14 Lube oil filter /Generator /Starting motor**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	JX0706P1	Oil filter	1	
2	380C3-09301	Filter seat	1	
3	JFW17C3	Generator	1	
4	QD138	Starting motor	1	
5	YZ90ZH6	Lube cooler	1	
6		Pressure adjusting screw set J0810	1	
7	GB77-85	Setting screw M12×12	1	Or GB73-85

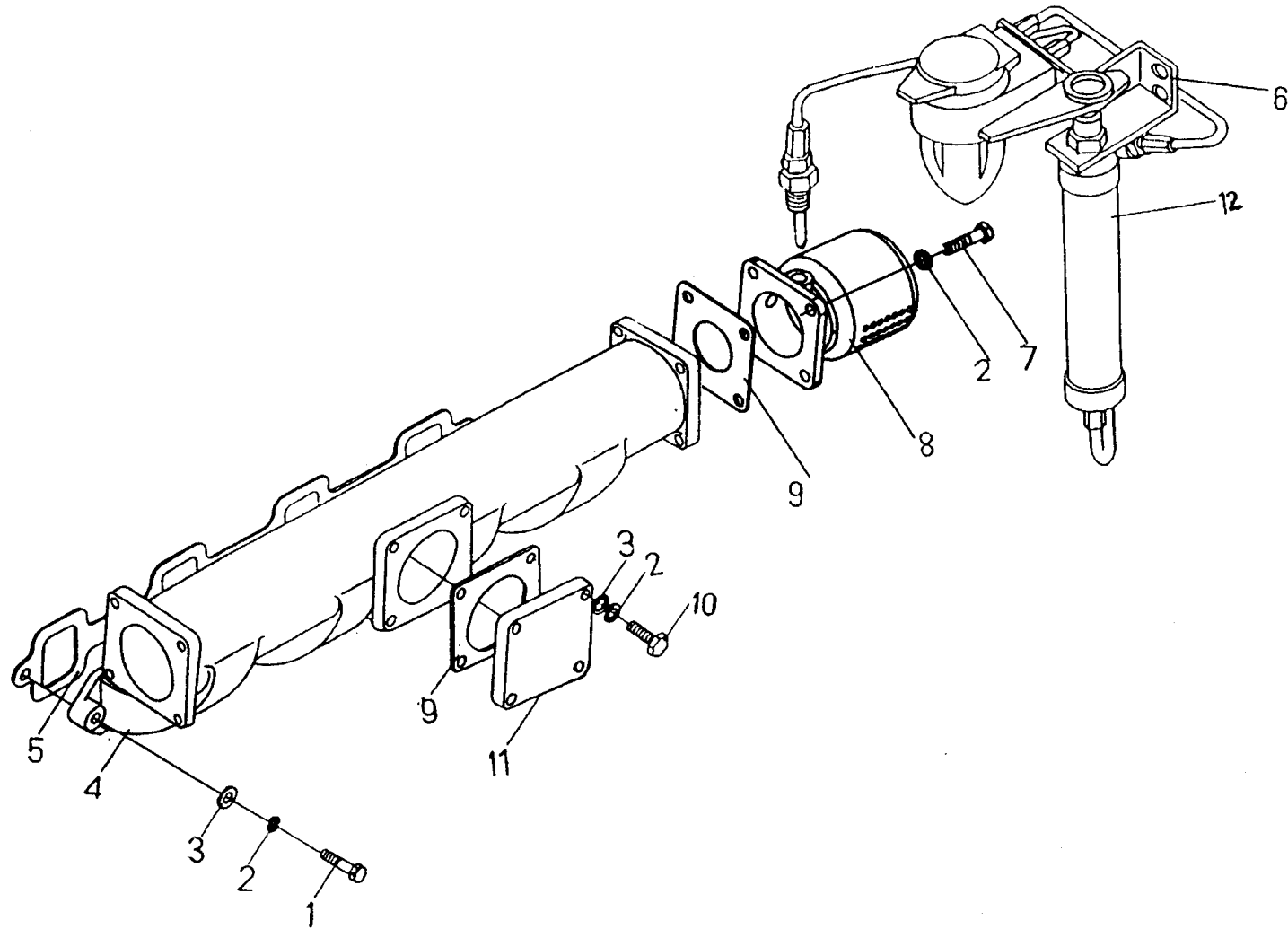


**Fig.14 Lube Oil Filter/Generator/Starting Motor**



**Fig. 15 Intake Pipe Assembly**

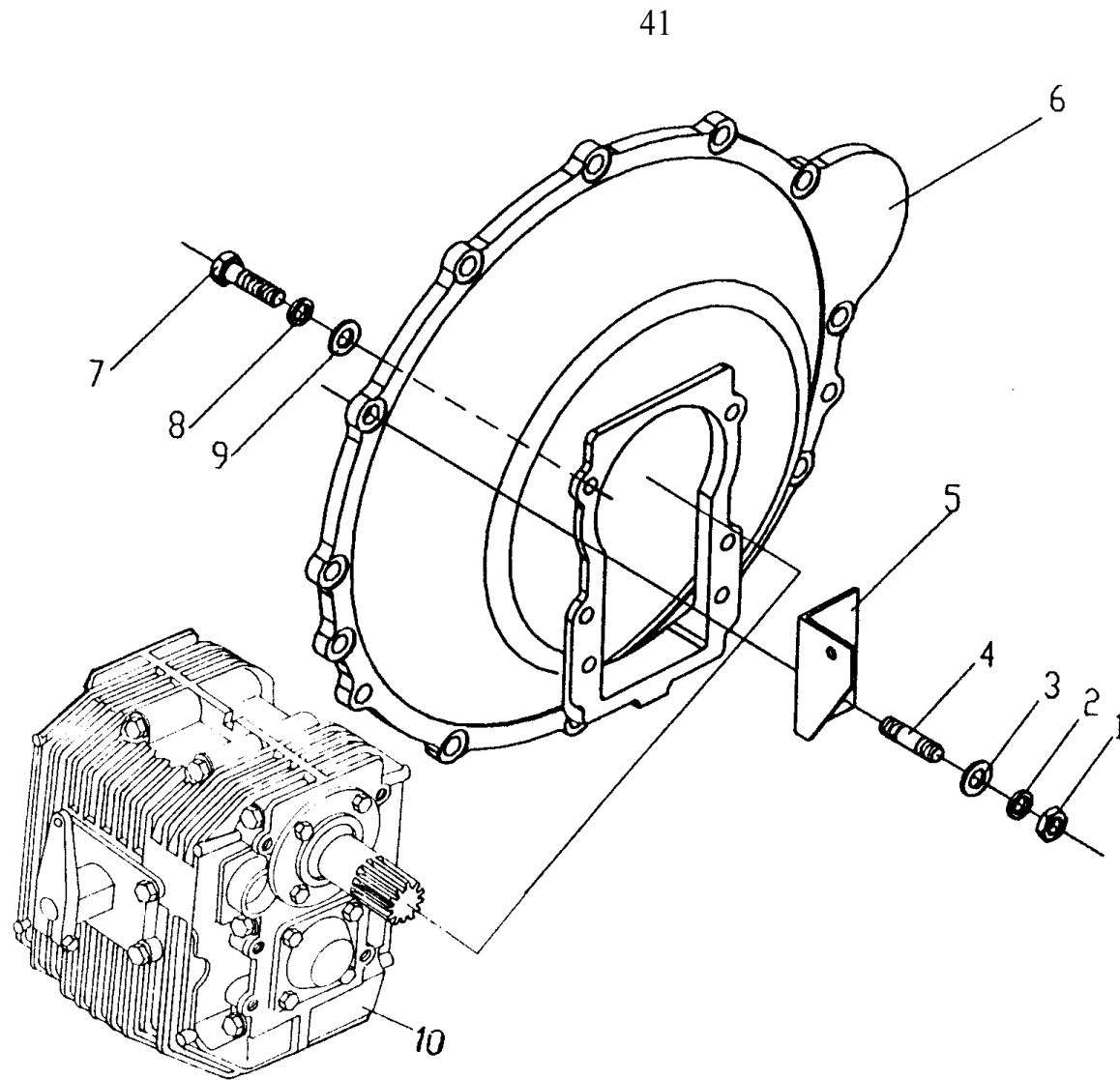
Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB5782-86	Screw M8×28	5	
2	GB859-87	Spring washer 8	17	
3	GB848-85	Plain washer 8	17	
4	N485C-10100 (A)	Intake pipe	1	
5	N485-02005	Intake pipe gasket	1	
6	N485C-01101	Cold starting filler bracket	1	
7	GB5783-86	Screw M8×28	4	
8	N85C-09003	Intake pipe mouth	1	
9	N485-09006	Gasket	3	
10	GB5782-86	Screw M8×16	8	
11	N485-09005	Cover	2	
12	FJ-30	Cold starting liquid filler	1	



**Fig.15 Intake Pipe Assembly**

**Fig. 16 End Cover Assembly**

Series No.	Parts No. Or Specification	Parts Description	Quantity	Remarks
1	GB52-76	Nut M10	12	
2	GB848-85	Plain washer 10	12	
3	GB93-76	Spring washer 10	12	
4	GB898-88	Stud M10×30	12	
5	380C3-01805	Bracket	1	
6	N85C-03103A	End cover	1	ZF25M Vs N85C-03103B
7	GB898-88	Stud M8×25	6	ZF25M Vs Stud M10×30
8	GB848-85	Plain washer 8	6	ZF25M Vs Plain Washer 10
9	GB93-76	Spring washer 8	6	ZF25M Vs Spring Washer 10
10	ZF25M	Reduction gearbox	1	ZF25M



**Fig.16 End Cover Assembly**

Address: No.2 Mengxi road , zhenjiang City Jiangsu,China

Post code: 212003

Tel: (+86) 511-84401263, 8 4401256

Fax: (+86) 511-8 4427291

Email: sales@siyangengine.com

Http: www.siyangengine.com

地址：中国 江苏省镇江市梦溪路 2 号

邮编：212003

电话：(+86) 511-84401263, 84401256

传真：(+86) 511-84427291

电子邮件：sale@siyangengine.com

网址：www.siyangengine.com