

Parts Book

Engine

Overview

This book provides illustrations and parts listings required to properly identify and order replaceable parts on your Sany machine.

If this book becomes damaged, lost or illegible, request a replacement copy from your Sany distributor.

In case you sell this machine, be sure to give this parts book to the new owner.

Improvements in the design may lead to changes in detail which may not be indicated in this book. Always consult your Sany distributor for the latest available information on your equipment or if you have questions regarding information in this book.

Storing this parts book

This publication applies only to this specific machine and should not be used with any other machines.

Always keep this book available for reference.

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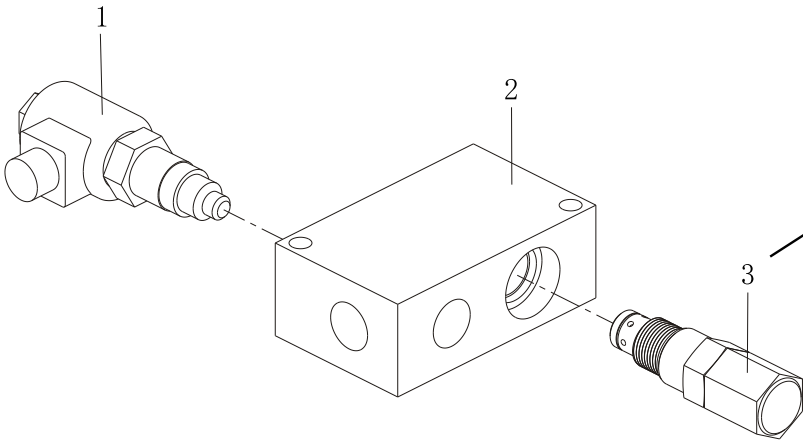
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Sany Group Service Information System

<http://sis.sanygroup.com>

Page header with parts code, and parts description



Line-art illustration with callout numbers

Page footer with page number, chapter title, machine model and product name

Page header with parts code, and parts description

INDEX: that matches
callout numbers on previous
illustration page

SEE PAGE: for page information
of the part or assembly

INDEX	PART NO.	DESCRIPTION	QTY	SEE PAGE
1	B220401000459	Valve Assembly, Solenoid	1	
2	A820103010415	Change Valve Block, Cooling Oil Motor	1	
3	B220400000083	Relief Valve	1	

PART NO.: to be used along
with DESCRIPTION to identify
the part or assembly

DESCRIPTION: to be used
along with PART NO. to
identify the part or assembly

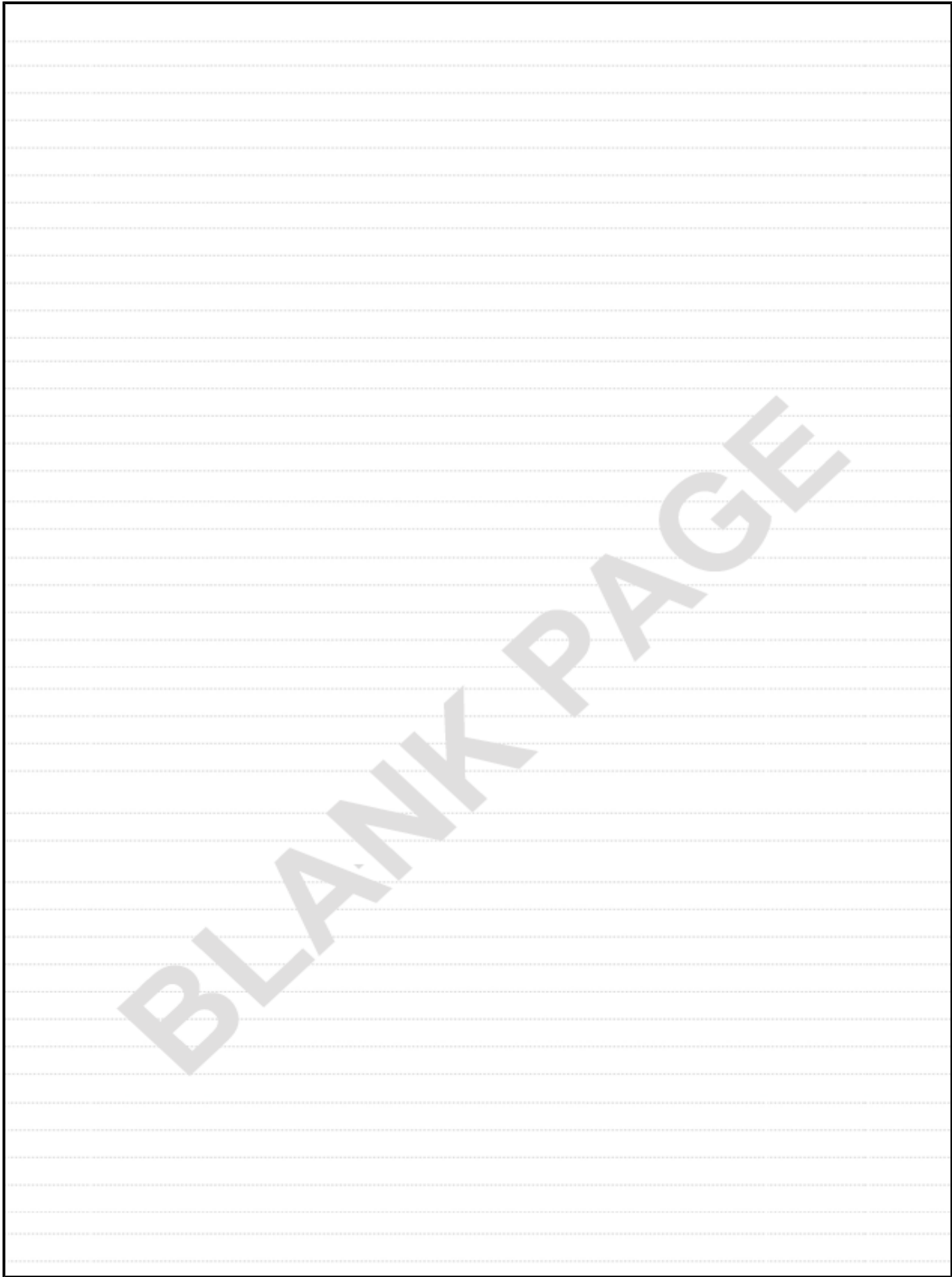
QTY: it indicates the
number of each part
used in this assembly

Page footer with page number, chapter title, machine model and product name

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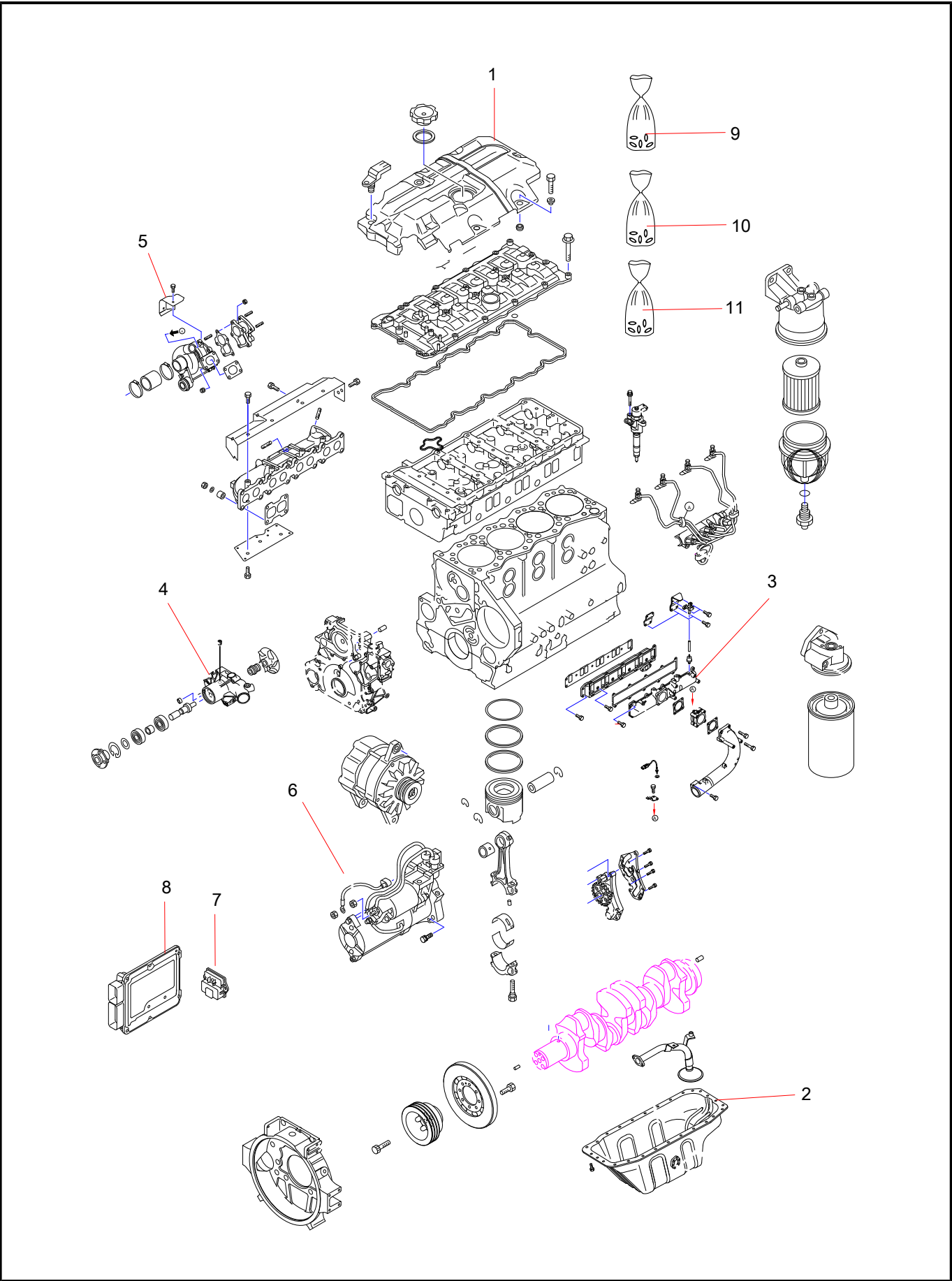
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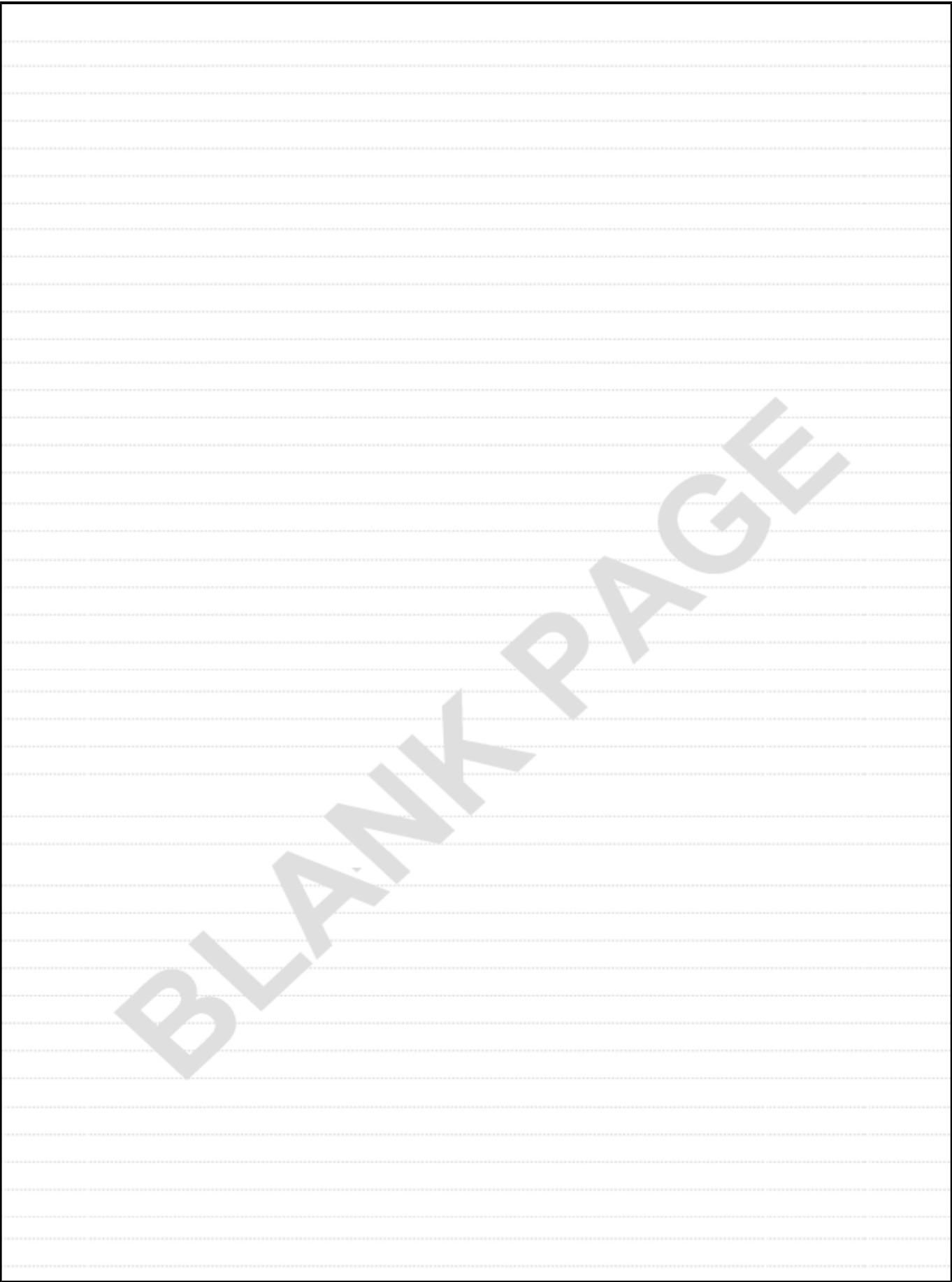


Group 1

Engine

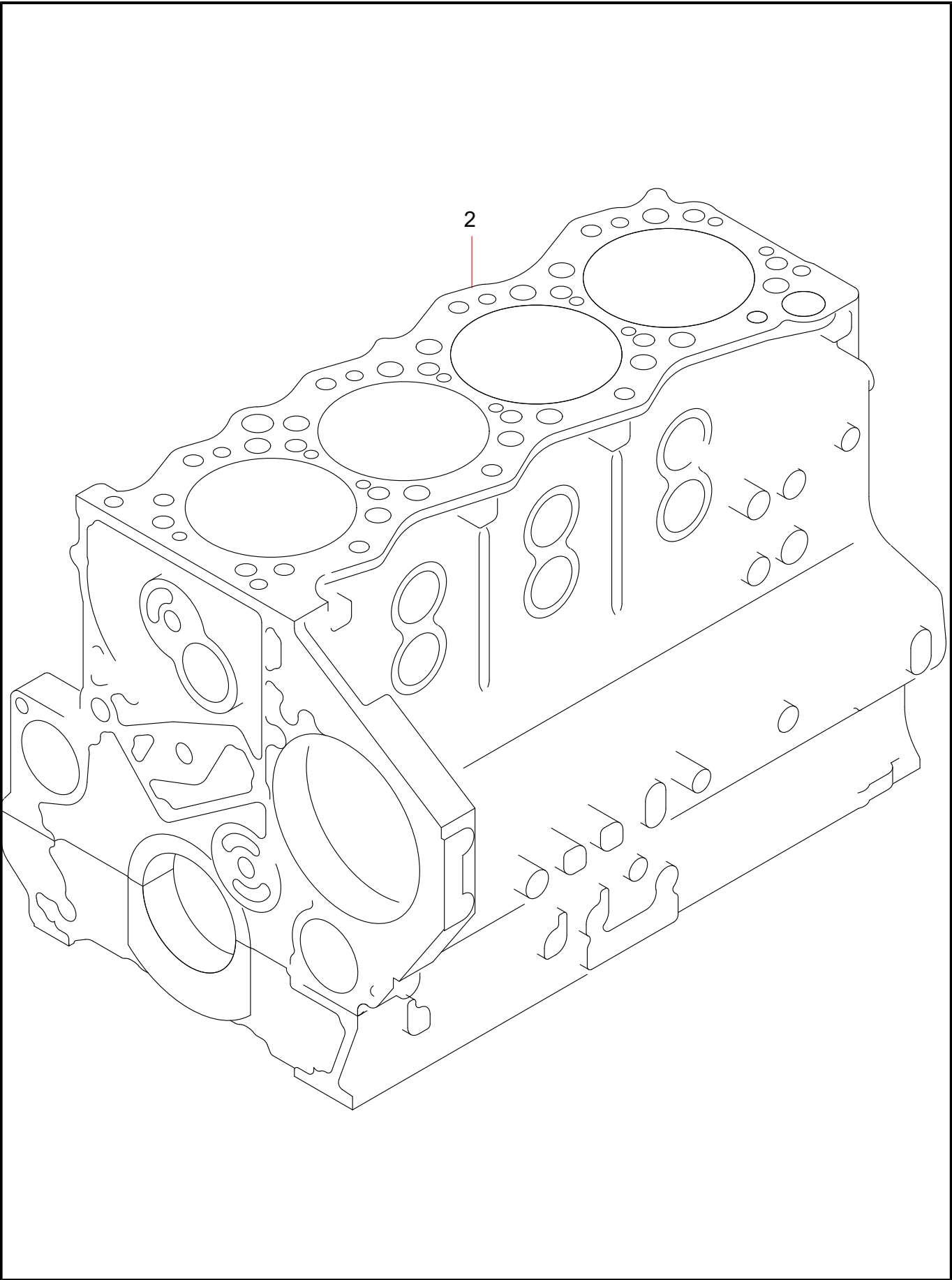


INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
1	60289524	Cylinder Block		1	2-2
2	60289531	Lubrication		1	3-2
3	61005555	Fuel System		1	4-2
4	60289533	Cooling		1	5-2
5	60289534	Intake & Exhaust		1	6-2
6	60289535	Electrical		1	7-2
7	60289327	Drive Unit Magnetic Valve		1	
8	61000349	Control Unit.Crs		1	
9	60288981	Gasket Kit,Eng Overhaul		1	
10	60288982	Gasket Kit,Eng Overhaul		1	
11	60288983	Gasket Kit,Eng Overhaul		1	

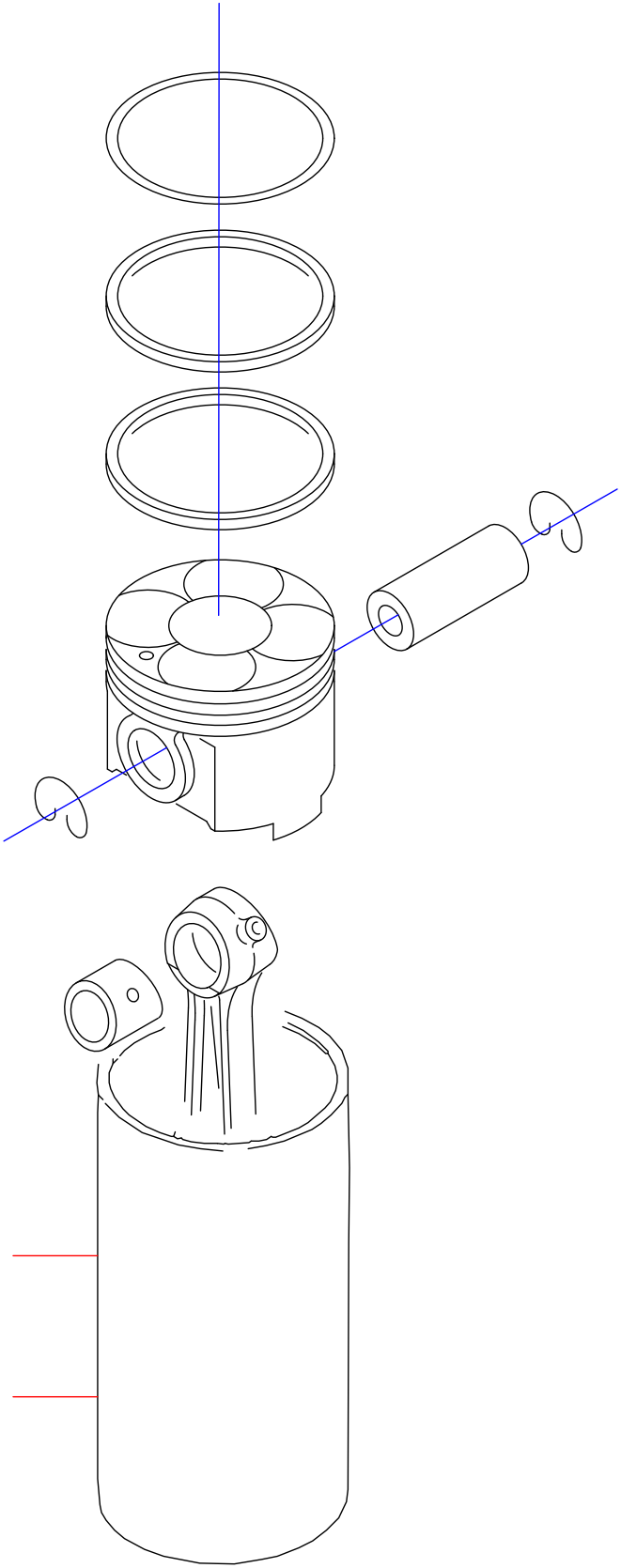


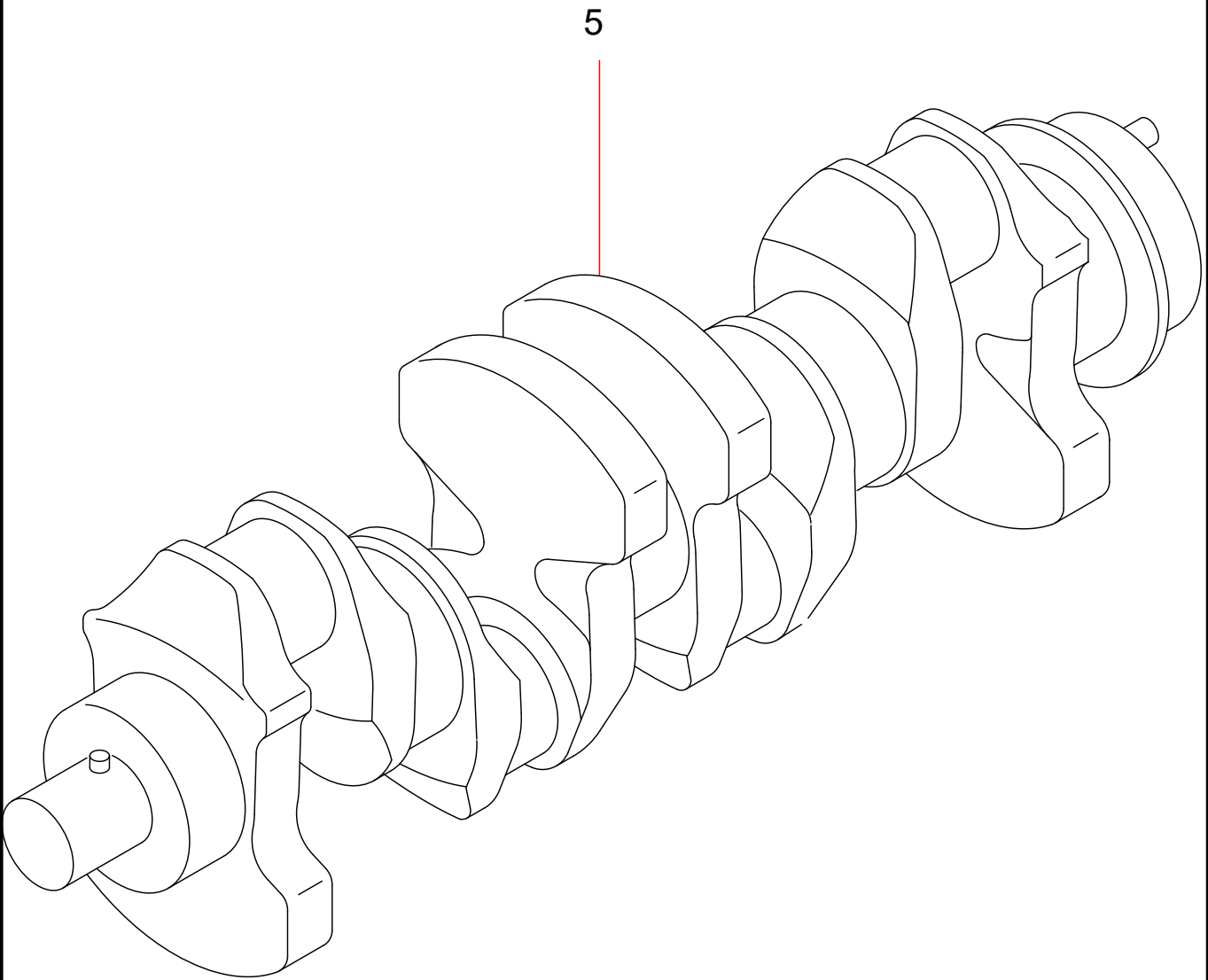
Group 2

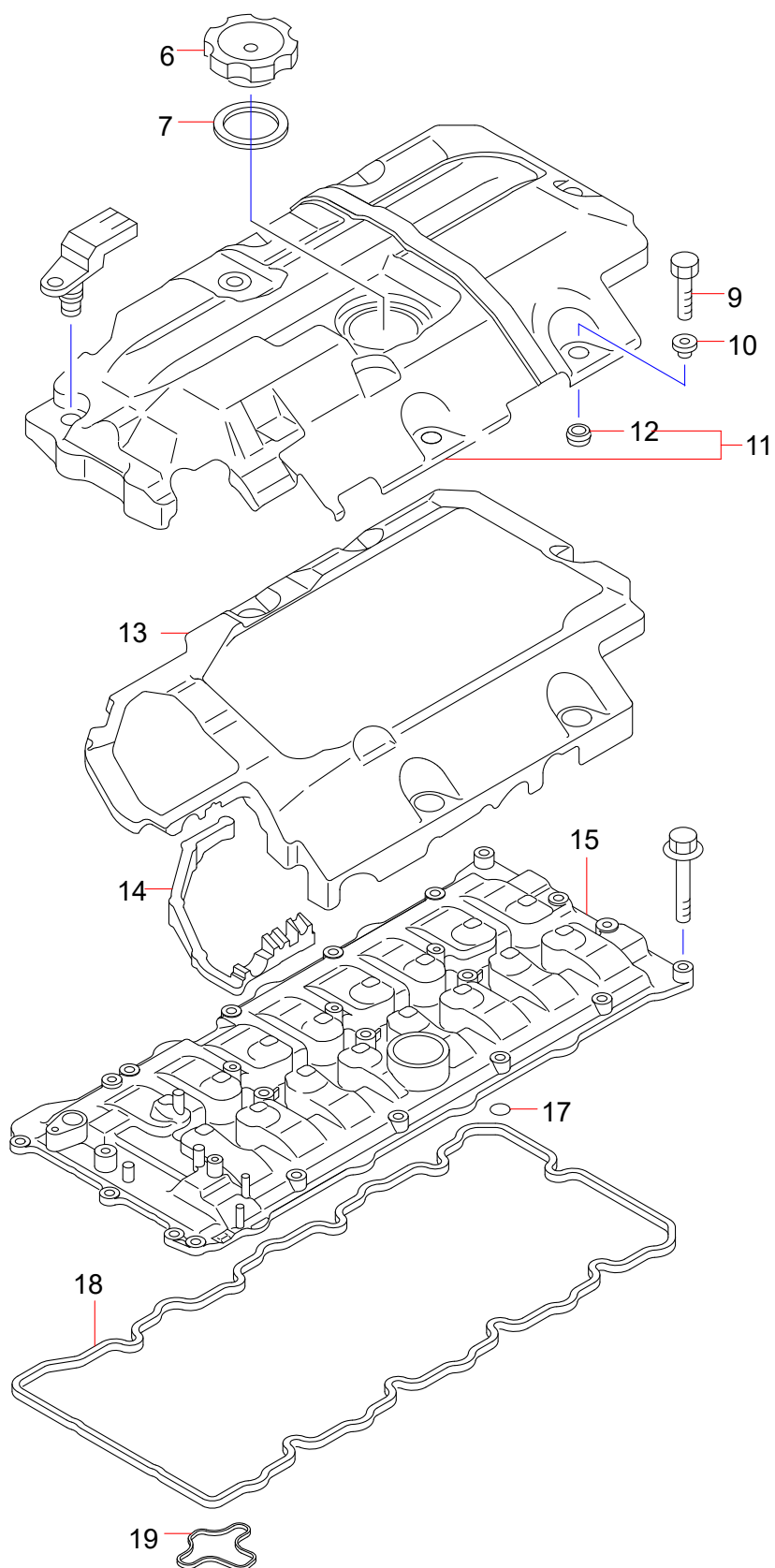
CYLINDER BLOCK



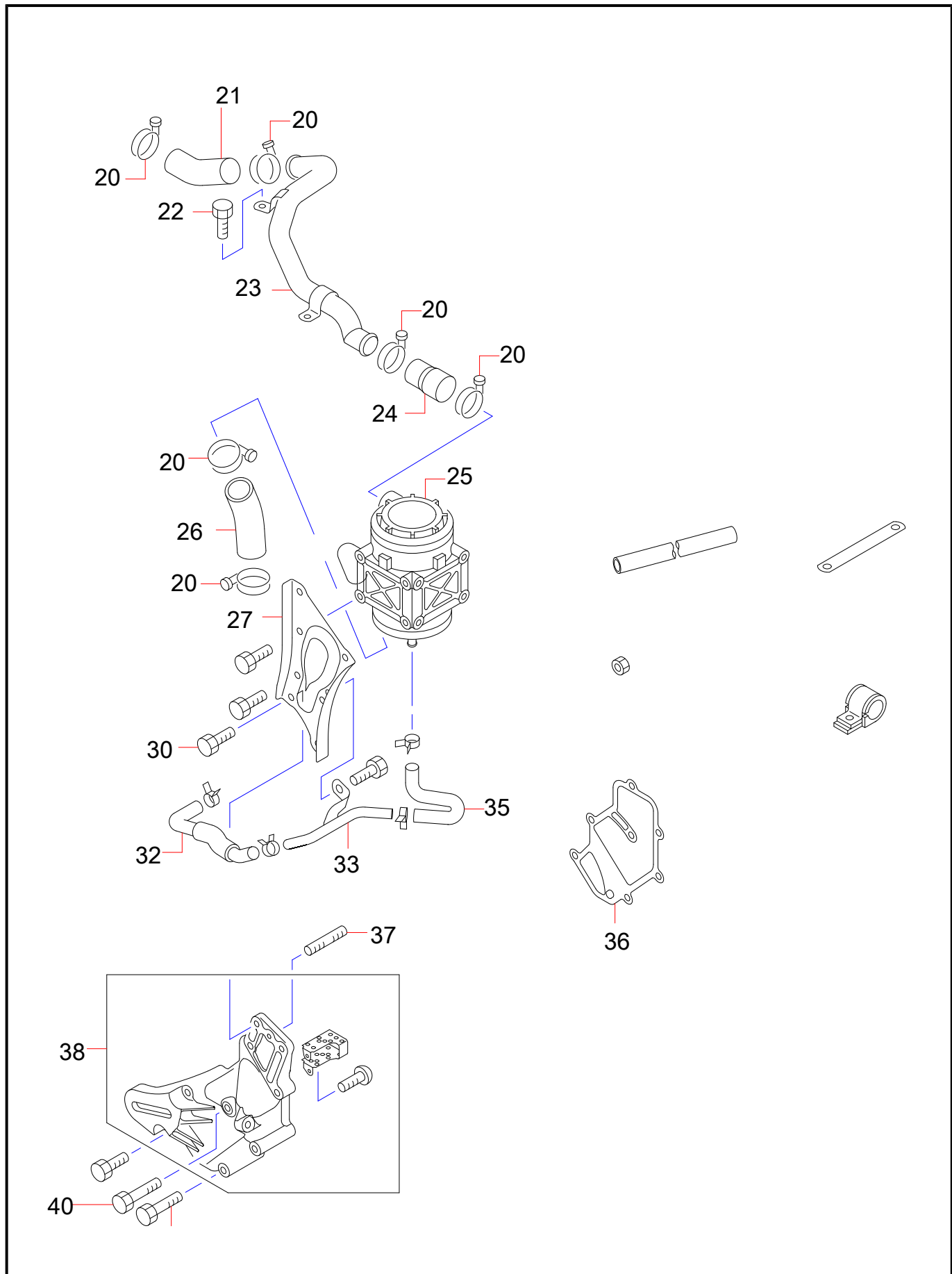
2-2 CYLINDER BLOCK



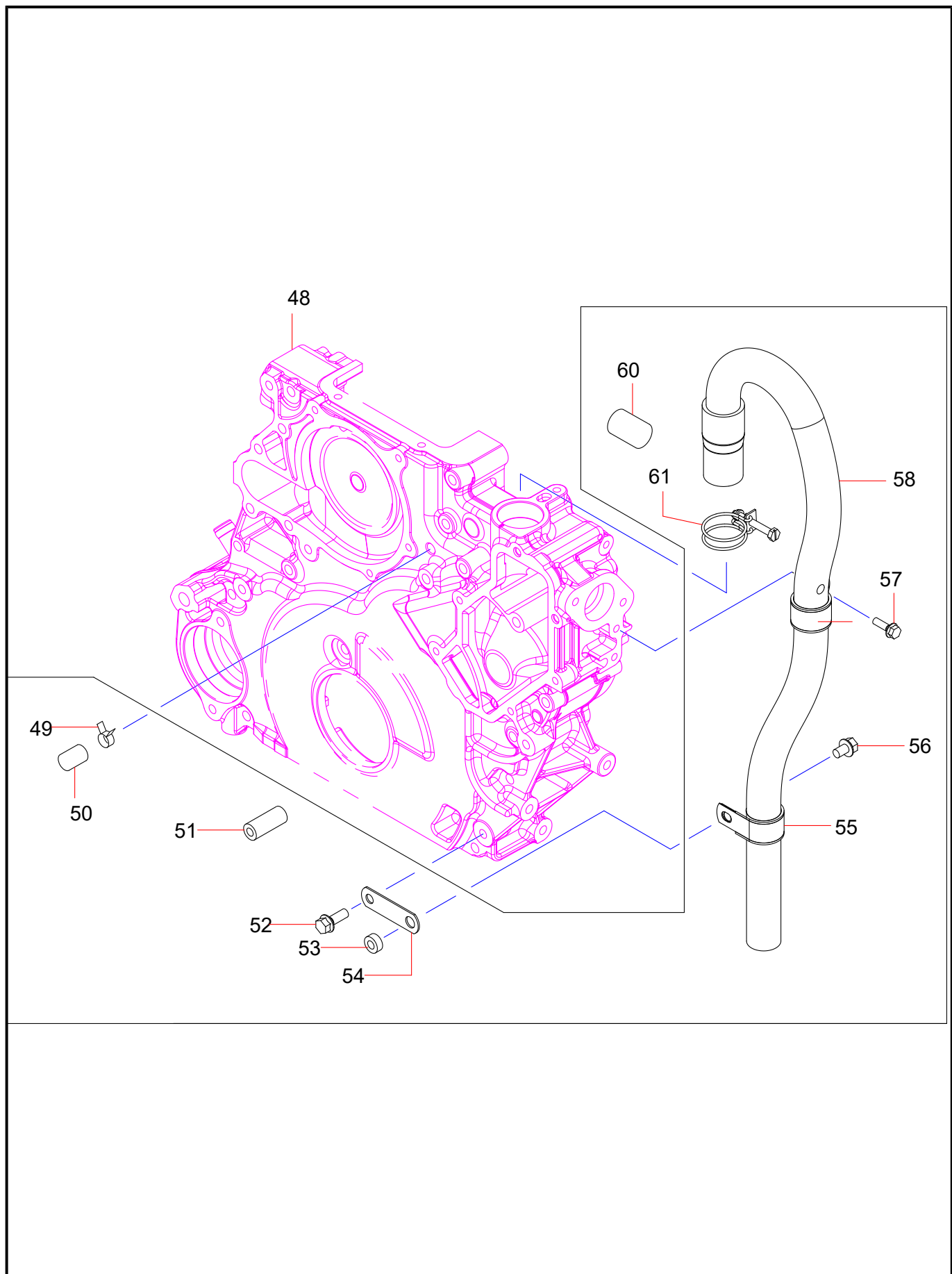




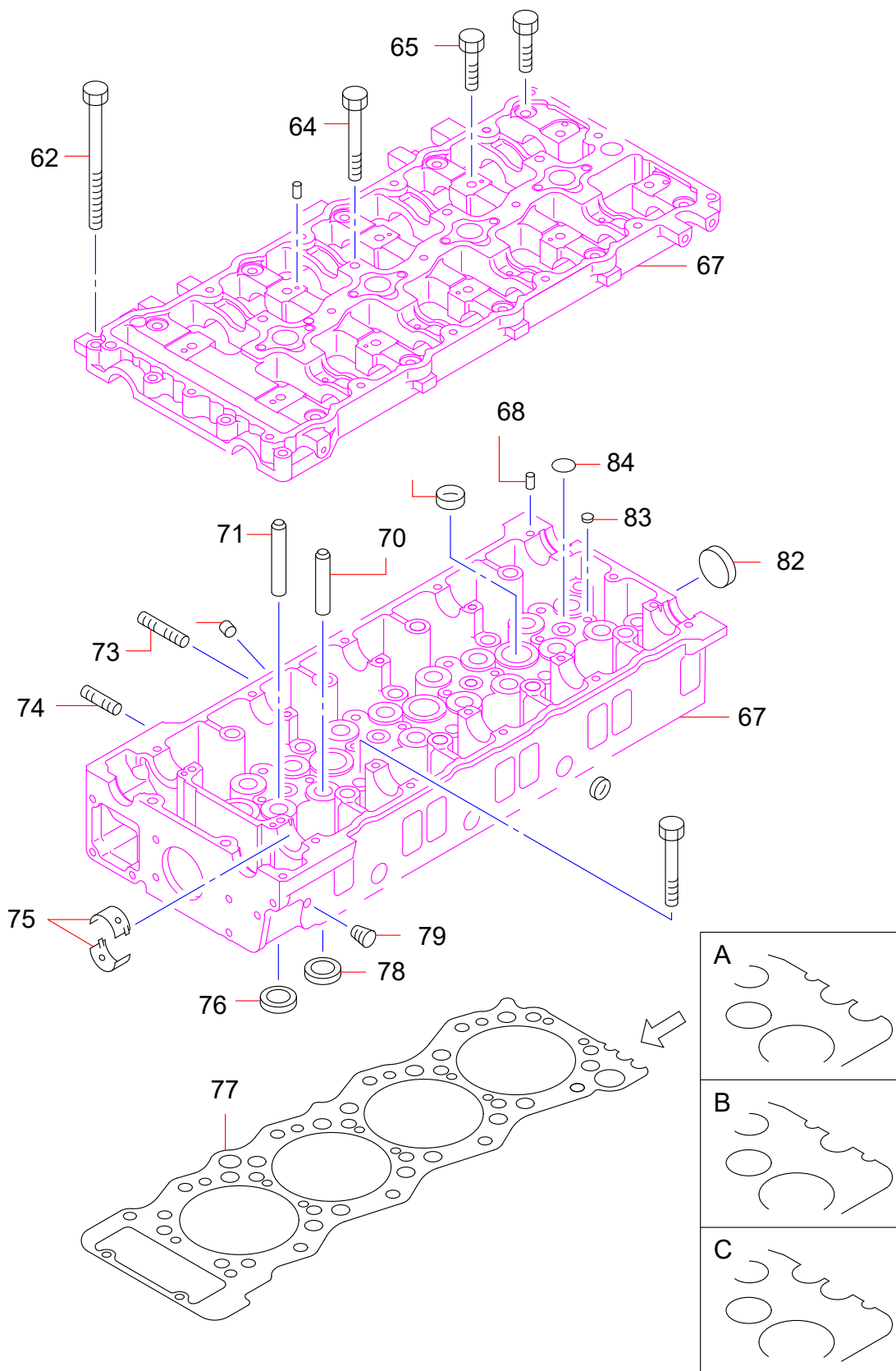
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
6	60289026	Cap Assembly,Eng Oil Filler		1	
7	60288987	Grommet,Rocker Cover		1	
9	60288997	Fixing Bolt		6	
10	60288995	Spacer,Rocker Cover		6	
11	60288991	Housing		1	
12	60288988	Insulator,Rocker Cover Bolt		6	
13	60288989	Gasket, Flat		1	
14	60288990	Pad,Rocker Cover Insulator		1	
15	60288984	Cylinder Head Cover Assembly		1	
17	B230101001769	O-ring		3	
18	60288985	Gasket		1	
19	60288986	Gasket		4	



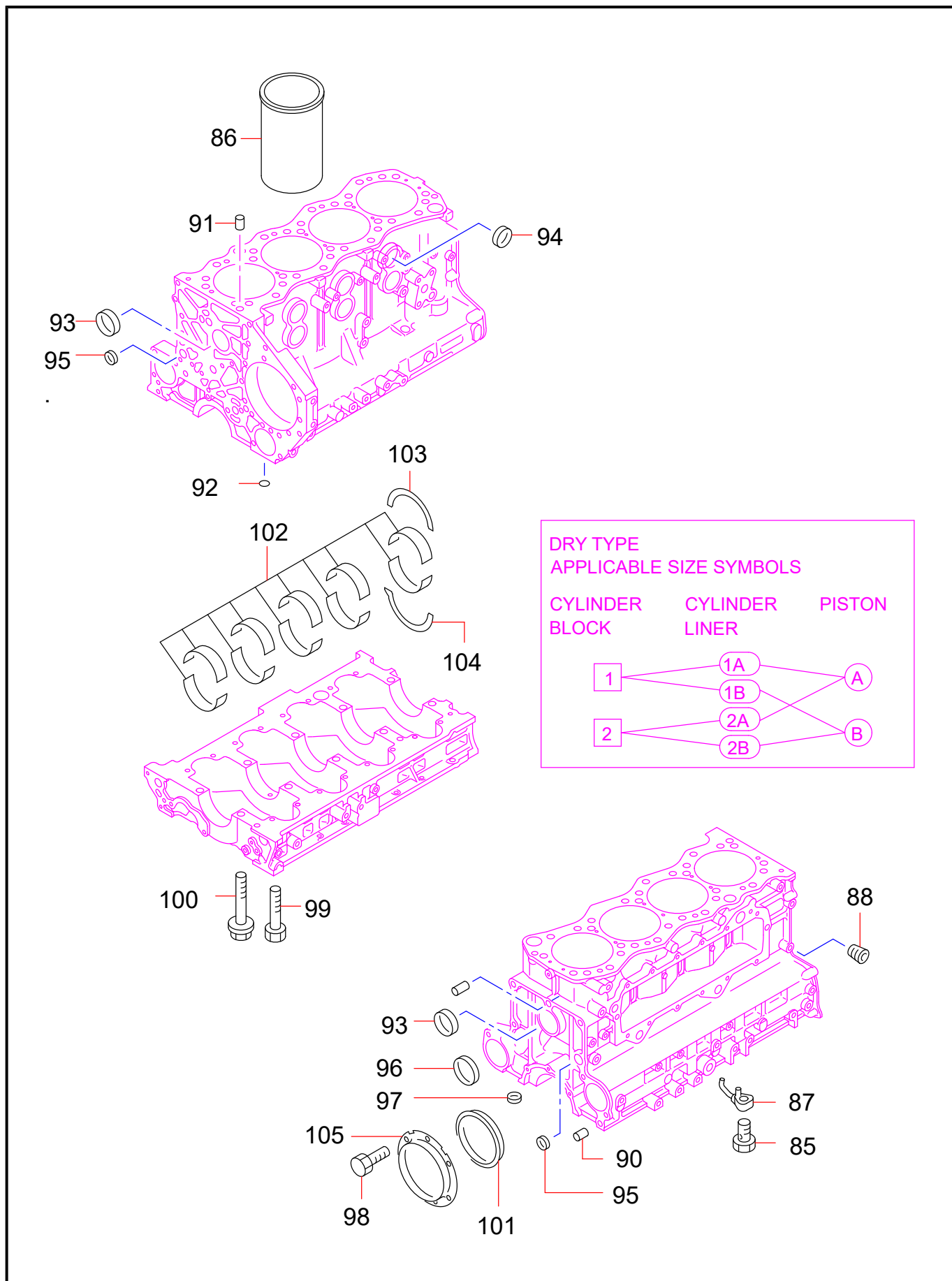
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
20	60289020	Clip,Eng Breather		7	
21	60288993	Hose,Pcv Valve		1	
22	B229900004770	Hollow Bolt Mf140223 with Flange		6	
23	60288994	Pipe,Pcv Valve		1	
24	60288992	Hose,Pcv Valve		1	
25	60289005	Valve,Low Pressure		1	
26	60289009	Pipe		1	
27	60289023	Bracket,Eng Breather		1	
30	60200738	Bolt Flange		1	
32	60289011	Hose		1	
33	60289012	Pipe,Eng Breather		1	
35	60289010	Hose		1	
36	60289019	Gasekt,Eng Breather		1	
37	60289024	Stud,Eng Breather		1	
38	60288998	Pipeline Fixed Support		1	
40	60289016	Bolt,Eng Breather		1	



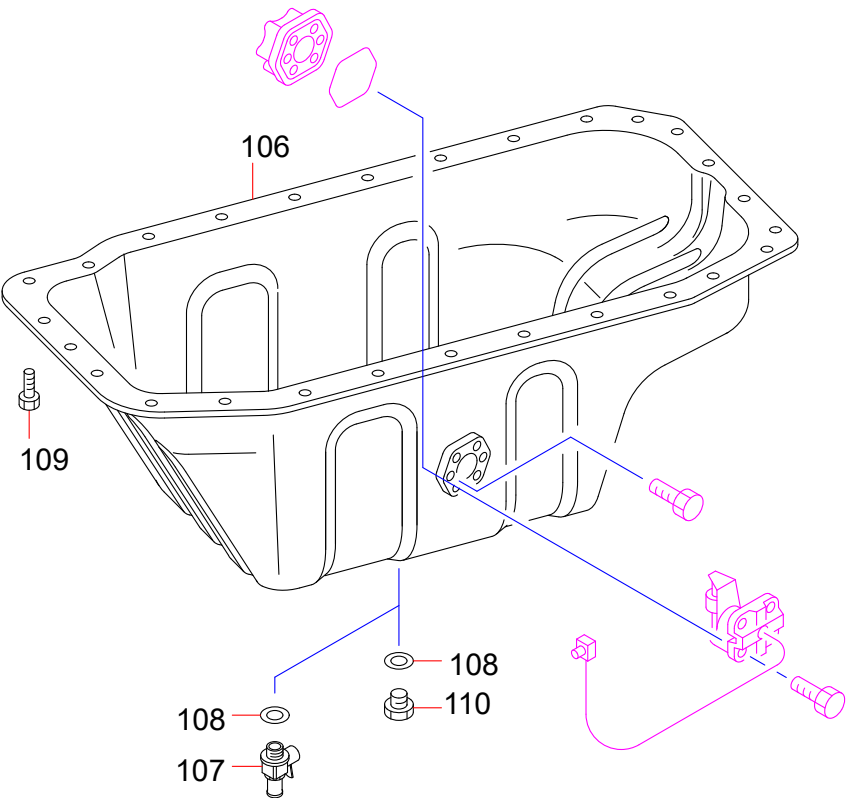
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
49	60247018	Hose Clip		1	
50	60289025	Cap, Timing Gear Case		1	
51	60289018	Spacer, Eng Breather		1	
52	60076696	Bolt(Eng Breather)		5	
53	B229900004834	Nut Mf434104 with Flange		1	
54	60288999	Bracker, Eng Breather Hose		1	
56	60288996	Fixing Bolt		6	
57	60289015	Bolt, Eng Breather		2	
58	60289003	Hose, Eng Breather		1	
60	60289000	Plug/Cover		1	
61	60289021	Clip, Eng Breather		3	



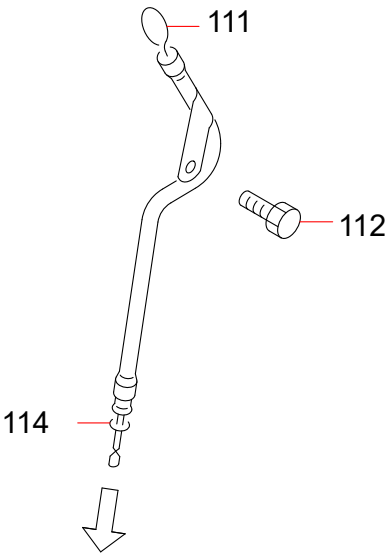
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
62	60289040	Bolt,Cylinder Head		2	
64	60289041	Bolt,Cylinder Head		4	
65	60289042	Bolt,Cylinder Head		10	
67	60288976	Cylinder Head		1	
68	60289038	Bushing,Cylinder Head		2	
70	60289046	Guide,Inlet Valve		8	
71	60289047	Guide,Exhaust Valve		8	
73	60076199	Plug(Cylinder Head)		4	
74	60289030	Stud,Cylinder Head		12	
75	60289043	Bearing,Camshaft		20	
76	60289044	Seat,Exhaust Valve		8	
77	60289027	Cylinder Head Gasket		2	
78	60289045	Seat,Inlet Valve		8	
79	B229900004683	Screw Plug		1	
82	60009165	Seal Ring		1	
83	60289048	Gaseet		8	
84	60289034	O-ring		4	



INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
85	60289049	Check Valve		4	
86	60289050	Liner,Cylinder		4	
87	60289054	Oiljet,Cylinder Block		4	
88	60289033	Plug		2	
90	B229900004699	Cylinder Body Pin Mh007010 Pin		1	
91	B229900004698	Cylinder Body Pin Mf472406 Pin		4	
92	60289055	O-ring,Cylinder Block		2	
93	60289056	Cap,Cylinder Block		2	
94	60289036	Cap,Cylinder Head		5	
95	60289035	Cap,Cylinder Head		2	
96	60289057	Cap,Cylinder Block		2	
97	60289058	Cap,Cylinder Block		1	
98	B229900005037	Cylinder Bolt		7	
99	B229900004978	Bolt Mf140244 with Flange		16	
100	60289039	Bolt,Cylinder Head		10	
101	B230101001777	Rear Oil Seal Seat		1	
102	60289059	Bearing Set,Crankshaft		1	
103	60289064	Plate,Crankshaft Thrust		2	
104	60289068	Plate,Crankshaft Thrust		2	
105	B230199000036	Oil Seal		1	

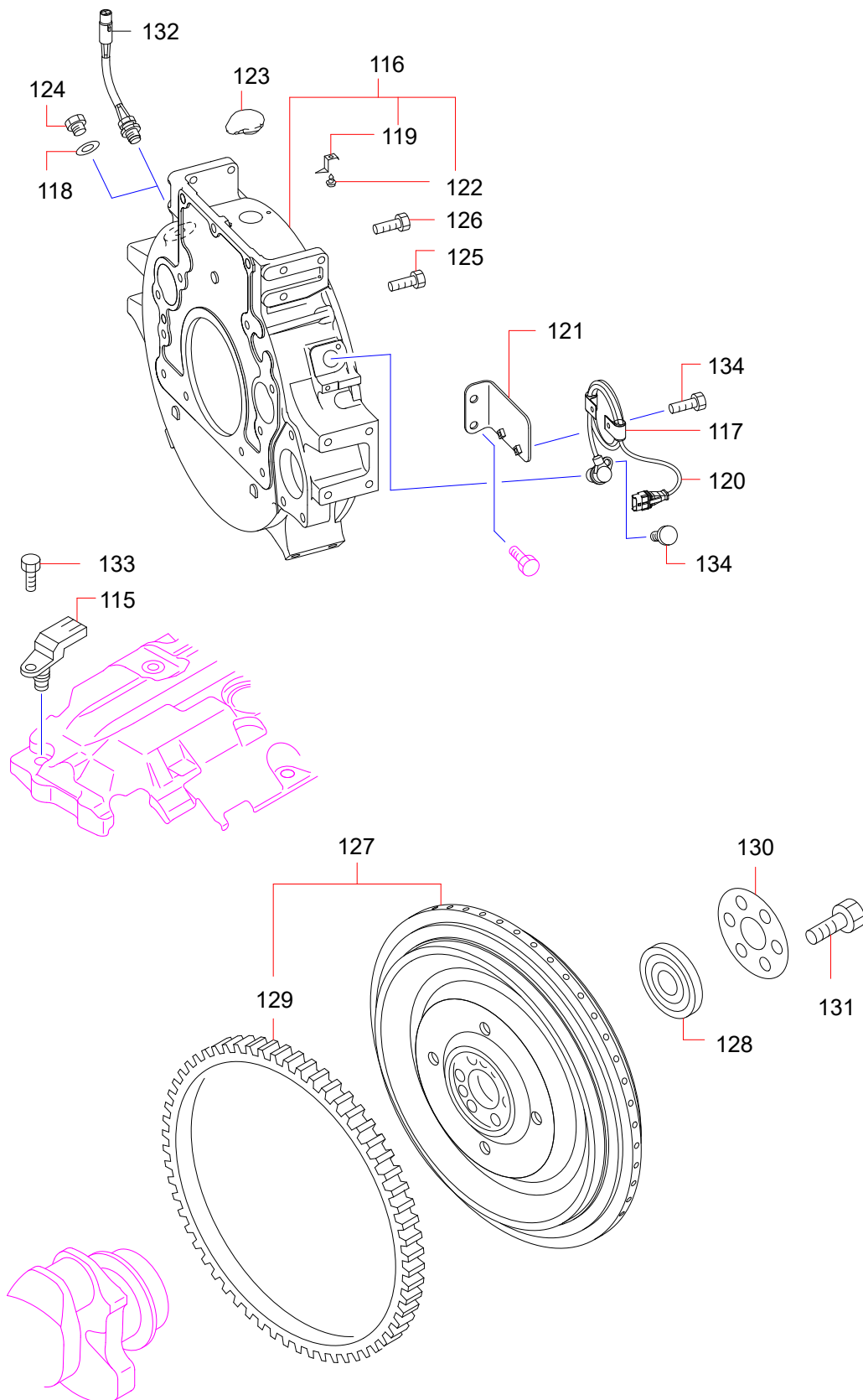


OIL LEVEL GAUGE

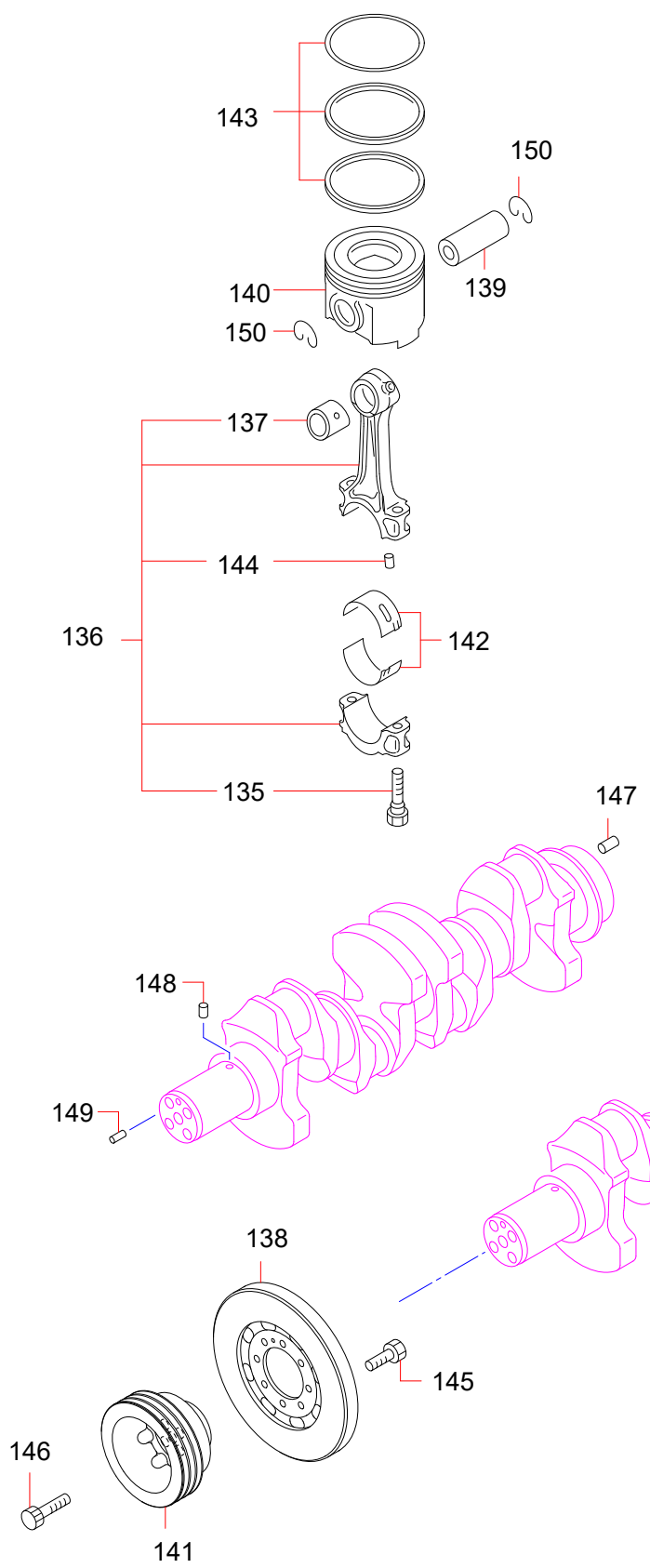


CYLINDER BLOCK

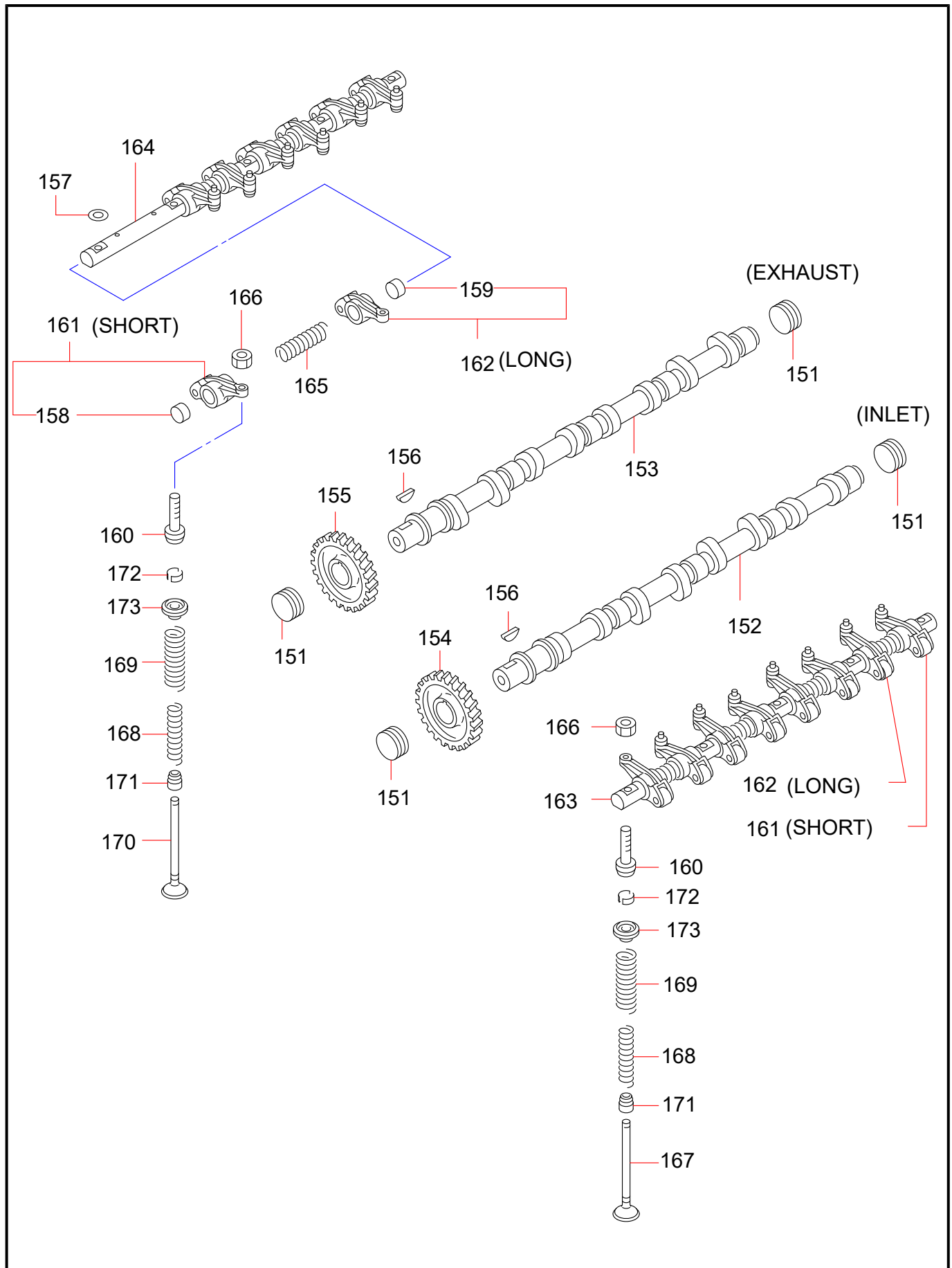
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
106	60289072	Oil Ran,Eng		1	
107	B220401000916	Drain Valve		1	
108	60289075	Gasket,Eng Oil Pan Drain Plug		18	
109	B229900005079	Oil Pan Bolt Mf140224 with Flange		27	
110	60289080	Plug,Eng Oil Pan		1	
111	60289081	Gauge,Eng Oil Level		1	
112	60289083	Guide,Eng Oil Level Gauge		1	
114	60289084	O-ring,Eng Oil Filler		1	



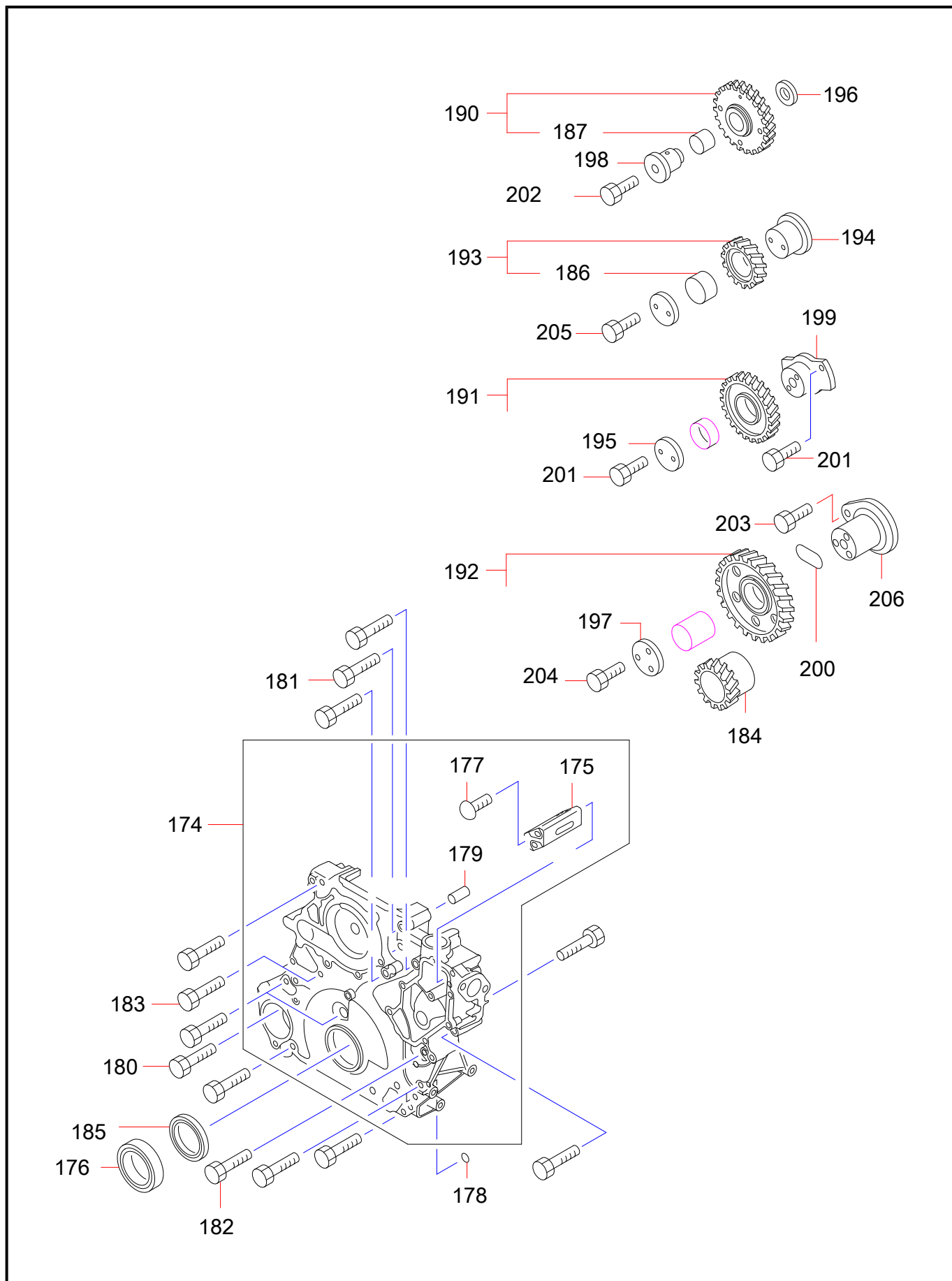
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
115	60289085	Sensor,Rocker Cover Eng Speed		1	
116	60289086	Housing Assembly,Flywheel		1	
117	60289087	Clip,Flywheel Housing		2	
118	60289088	Gakset,Flywheel Housing		1	
119	60289089	Pointer,Flywheel Housing Eng Timing		1	
120	60289090	Sensor,Flywheel Housing Eng Speed		1	
121	60289091	Bracket,Flywheel Housing		1	
122	B229900004791	Screw		1	
123	60289093	Plug,Flywheel Housing		1	
124	60289094	Plug,Flywheel Housing		1	
125	60289095	Bolt,Flywheel Housing		10	
126	60076702	Bolt		2	
127	60289096	Flywheel Assembly		1	
128	60289098	Bearing,Flywheel Drive Pinion		1	
129	60289099	Gear, Ring		1	
130	60289100	Washer,Flywheel		1	
131	60289102	Bolt,Flywheel		6	
132	60289103	Sensor,Eng Speed		1	
133	60076665	Bolt(Injection Pump)		1	
134	B229900004968	Bolt		3	



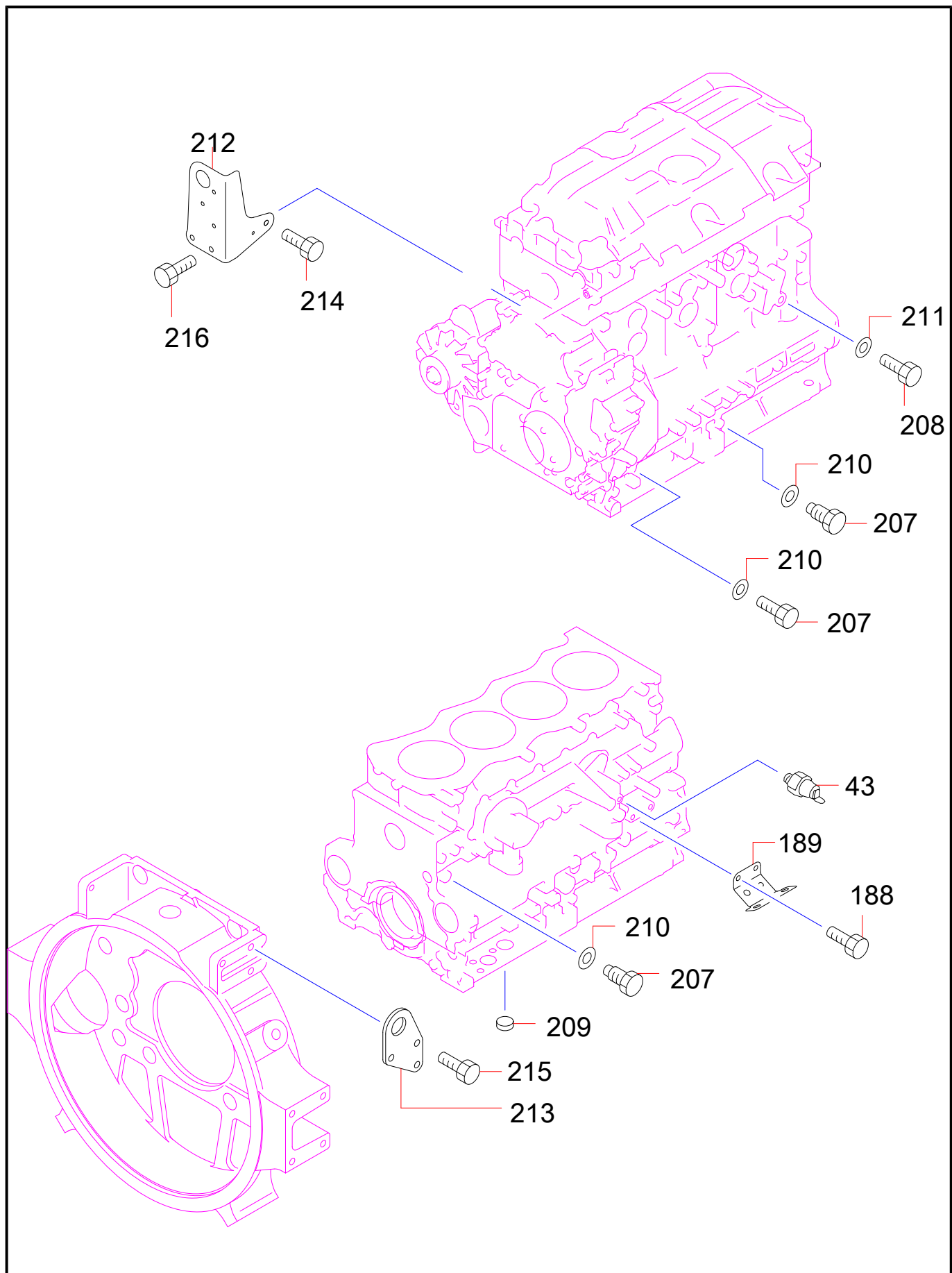
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
135	60289104	Bolt,Connrod		8	
136	60289105	Connecting Rod		4	
137	60289111	Bushing,Connrod		4	
138	60289112	Damper,Crankshaft Torsional		1	
139	60289113	Pin,Piston		4	
140	60289114	Piston		4	
141	60289116	Pulley,Crankshaft		1	
142	60289118	Bearing Set,Connrod		1	
143	60289123	Compression Piston Ring		1	
144	B229900004779	Connecting Rod Pin		8	
145	60289125	Bolt,Torsional Damper		8	
146	60289126	Bolt,Crankshaft Pulley		4	
147	B229900005047	Crane Axle Pin		1	
148	60076747	Pin(Crankshaft)		1	
149	60076762	Pin(Cylinder Block)		1	
150	60289128	Snap Ring,Piston		8	



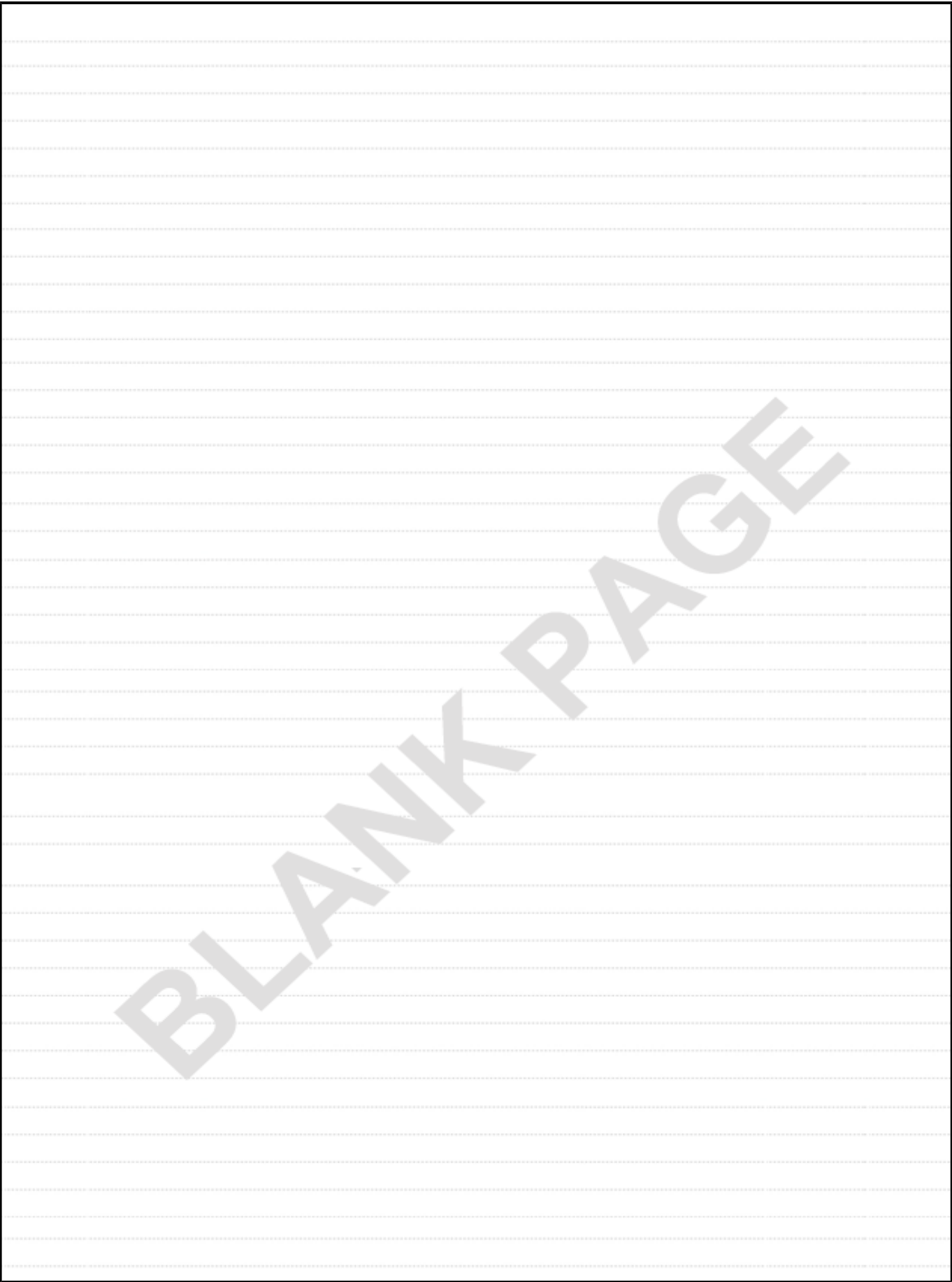
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
151	60289129	Seal,Cylinder Head Camshaft End		4	
152	60289130	Camshaft,Inlet		1	
153	60289131	Camshaft,Exhaust		1	
154	60289132	Gear,Camshaft		1	
155	60289133	Gear,Camshaft		1	
156	60289134	Key,Camshaft		2	
157	60289135	Washer,Valve Gear Train		10	
158	60289136	Bushing,Valve Gear Train		8	
159	60289137	Bushing,Valve Gear Train		8	
160	60289138	Adjuster,Rocker Arm Lash		16	
161	60289139	Rocder Arm,Inlet & Exhaust Valve		8	
162	60289140	Rocder Arm,Inlet & Exhaust Valve		8	
163	60289141	Shaft,Inlet Valve Rocker Arm		1	
164	60289142	Shaft,Inlet Valve Rocker Arm		1	
165	60289143	Spring,Rocker Shaft		8	
166	60289144	Nut,Rocker Arm Adjusting Screwllock		16	
167	60289145	Valve,Inlet		8	
168	60289146	Spring,Valve Inr		16	
169	60289147	Spring,Valve,Otr		16	
170	60289148	Valve,Exhaust		8	
171	60289149	Seal,Valve Stem		16	
172	60289150	Lock,Valve Spring Retainer		32	
173	60289151	Retaner,Powertrad Valve Spring,Upr		16	



INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
174	60289152	Case Assembly, Timing Gear		1	
175	60289154	Plate, Timing Gear Case		1	
176	60289155	Oil Seal, Timing Gear Case		1	
177	60289013	Screw, Eng Breather		2	
178	60289156	O-ring, Timing Gear Case		1	
179	60289157	Pin		2	
180	B229900004974	Bolt Mf140236 with Flange		1	
181	B229900004976	Bolt Mf140240 with Flange		3	
182	60289158	Bolt, Timing Gear Case		4	
183	60289017	Bolt, Eng Breather		8	
184	60289159	Gear, Crankshaft		1	
185	60289160	Oil Slinger, Crankshaft, Fr		1	
186	60289161	Bushing, Timing Gear Train		1	
187	60289162	Bushing, Timing Gear Train		1	
190	60289165	Gear Assembly, Cam Idler		1	
191	60289166	Gear Assembly, Cam Idler 2Nd		1	
192	60289167	Gear Assembly, Injection Pump Idler		1	
193	60289168	Gear Assembly, Cam Idler 3Rd		1	
194	60289169	Shaft, Cam Idler 3Rd Gear		1	
195	60289170	Plate, Cam Idler Gear Thrust		2	
196	60289171	Plate, Cam Idler Gear Thrust		1	
197	60289172	Plate		1	
198	60289173	Shaft, Cam Idler Gear		1	
199	60289174	Shaft, Cam Idler 2Nd Gear		1	
200	60289175	O-ring, Timing Gear Train		1	
201	60289176	Bolt, Timing Gear Train		4	
202	60289177	Bolt, Timing Gear Train		1	
203	B229900004990	Bolt		1	
204	B229900004993	Bolt Ms146021 with Flange		3	
205	60289178	Bolt, Timing Gear Train		2	
206	60289179	Shaft, Injection Pump Idler Gear		1	

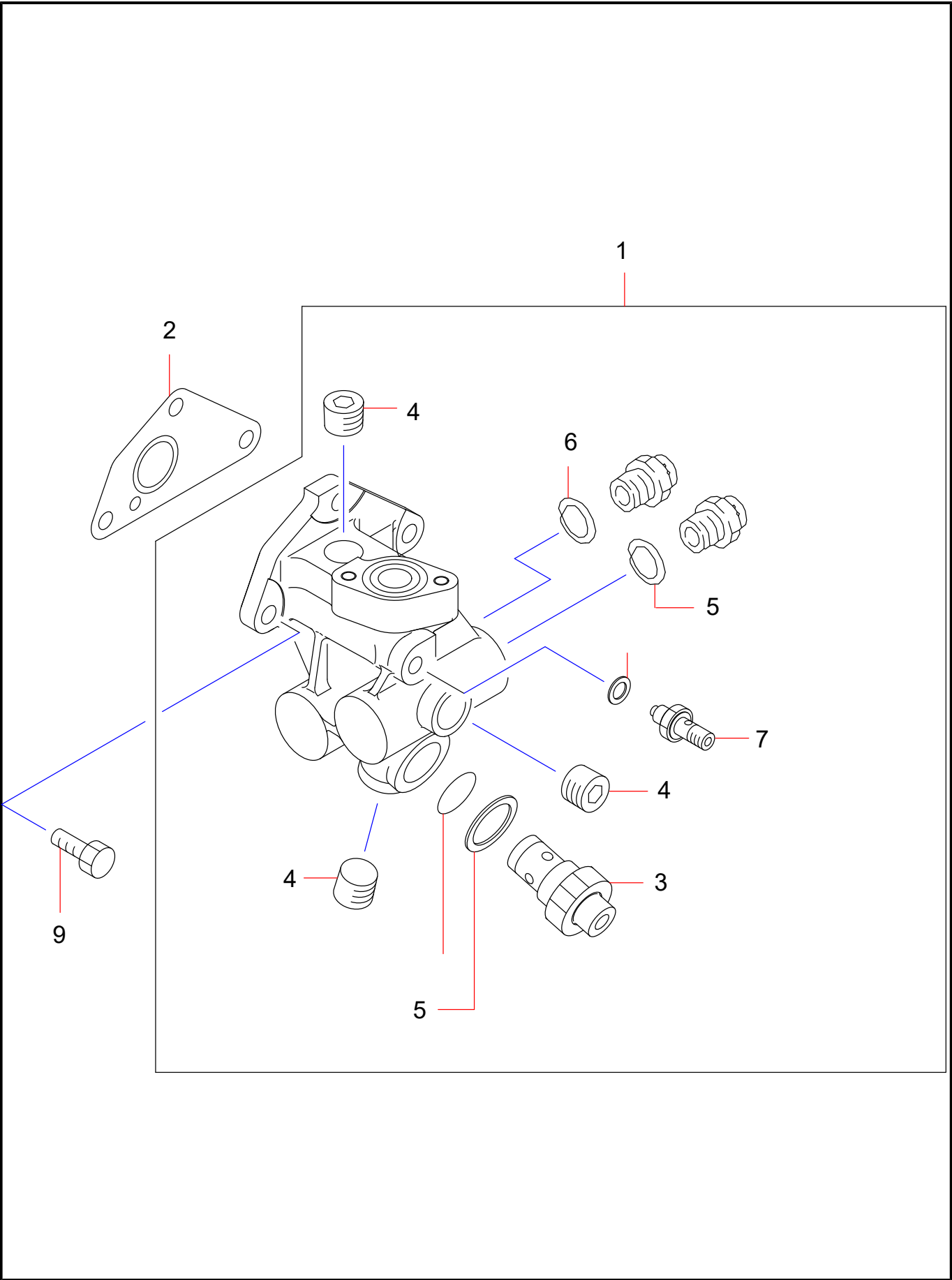


INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
43	60289189	Switch,Eng Oil Pressure		1	
188	B229900004989	Bolt Mh000999 with Flange		2	
189	60289188	Bracket		1	
207	60289180	Screw		3	
208	60289181	Plug,Cylinder Block		1	
209	60289037	Cap,Cylinder Head		1	
210	60289182	Gaseet,Cylinder Block		3	
211	60289183	Gaseet, Cylinder Block		1	
212	60289184	Engine Hanger		1	
213	60289185	Engine Hanger		2	
214	60289186	Bolt		1	
215	60289187	Bolt,Eng Hanger		6	
216	60214555	Flange Bolt		2	

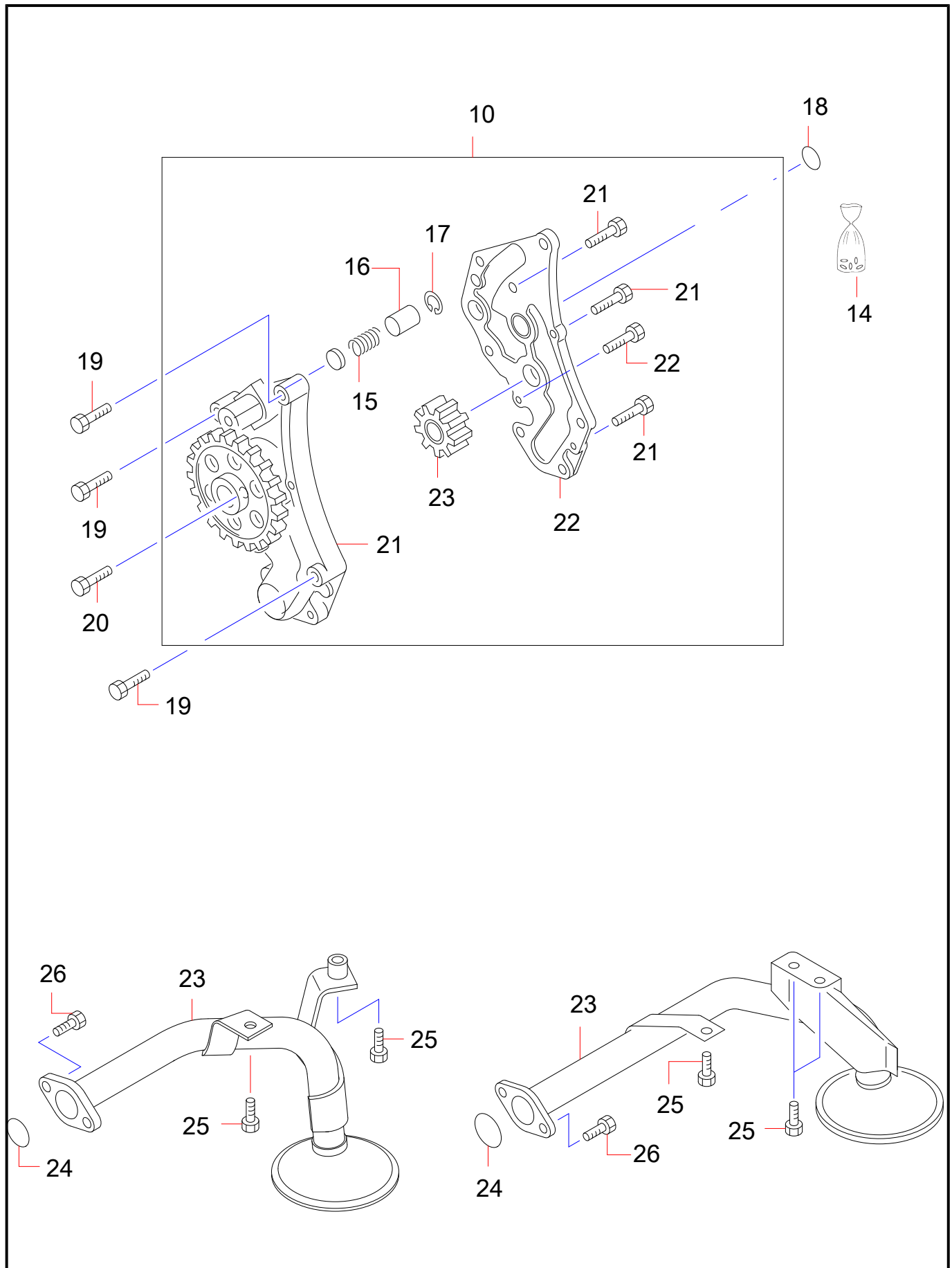


Group 3

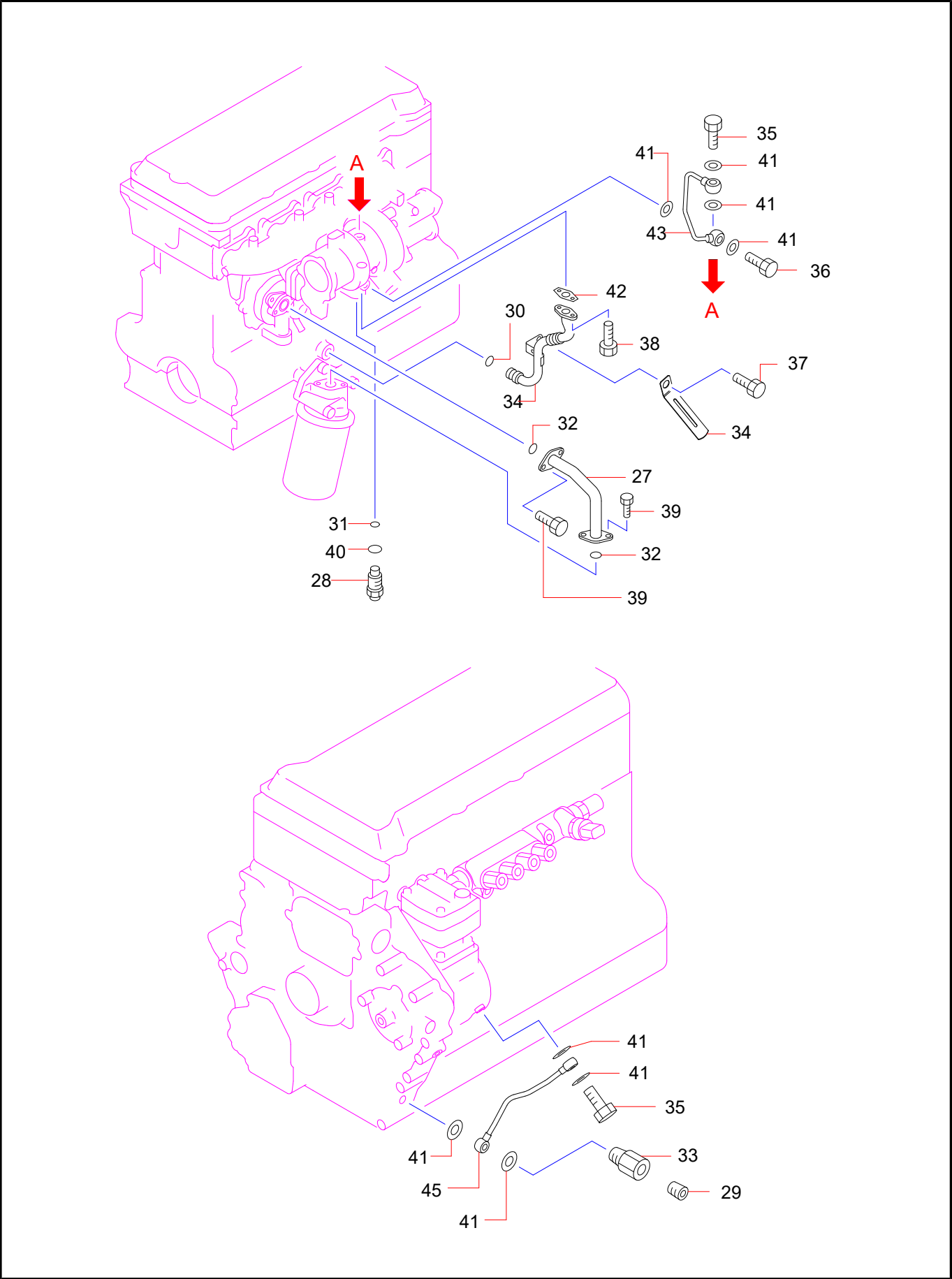
LUBRICATION



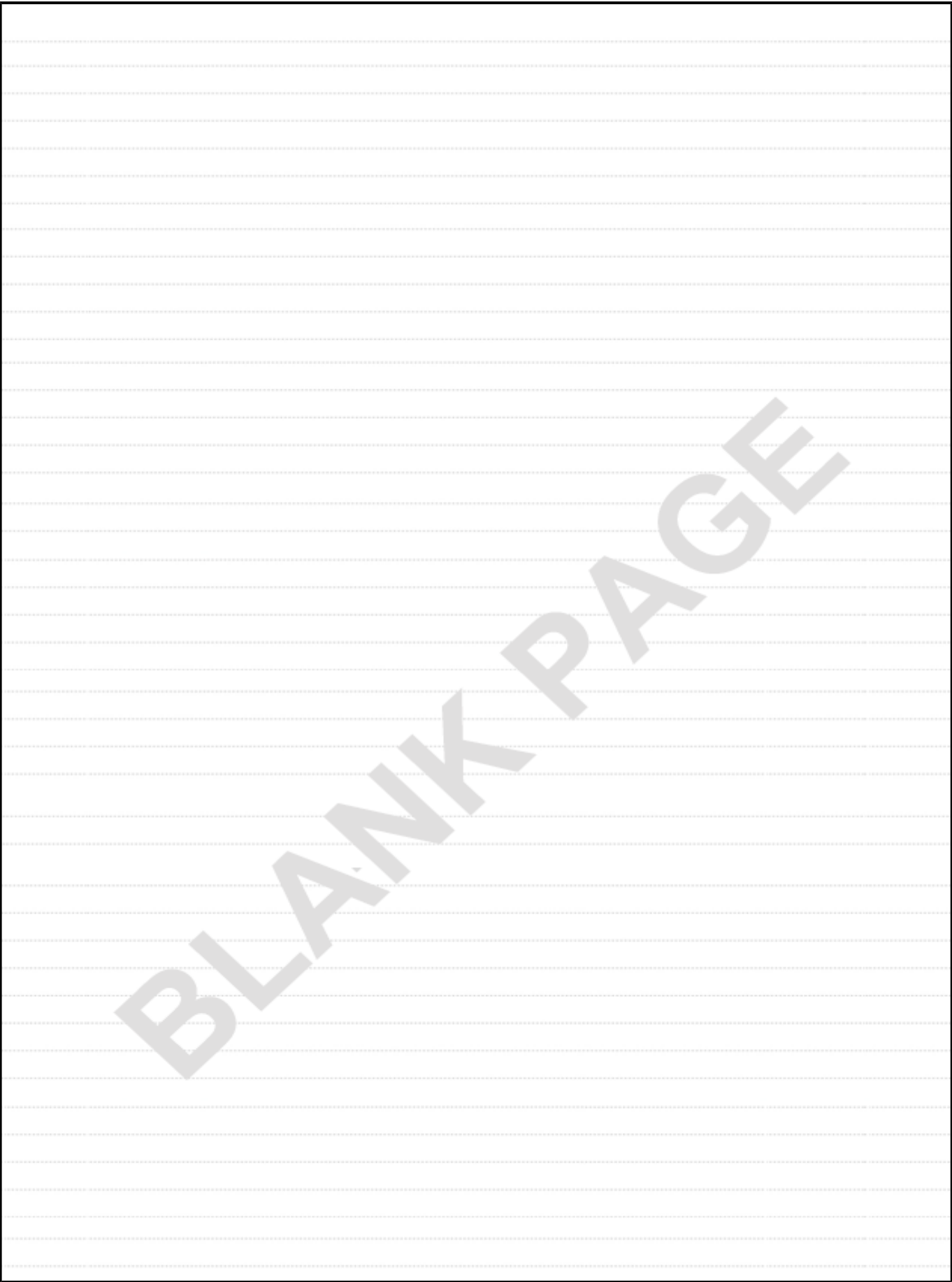
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
1	60289195	Adapter,Oil Filter		1	
2	60289196	Gasket,Oil Filter Head		1	
3	60076229	Valve(Eng Oil Pressure Regulating)		1	
4	60290019	Plug,Oil Filter Inr		3	
6	60076348	Gasket(Oil Filter Inr)		1	
7	60113863	Jiont; Oil Filter Inr		1	
9	60076698	Bolt(Eng Safety Cover)		1	



INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
10	60289190	Oil Pump Assembly,Eng		1	
14	160102050013A002	Water Pump		1	
15	60290024	Spring,Eng Oil Pump Relief Valve		1	
16	B220401001129	Pressure Reducing Valve		1	
17	60290025	Snap Ring,Eng Oil Pump Inr		1	
18	60289194	O-ring,Eng Oil Pump		1	
19	B229900004982	Bolt		3	
20	60290026	Bolt		1	
21	60290027	Bolt,Eng Oil Pump Inr		2	
22	60290028	Bolt,Eng Oil Pump Inr		2	
23	60289191	Strainer,Eng Oil Pan		1	
24	60289193	O-ring,Oilstrainer		1	
25	60289207	Bolt Inlet Manifold No.1		3	
26	60289268	Bolt		2	

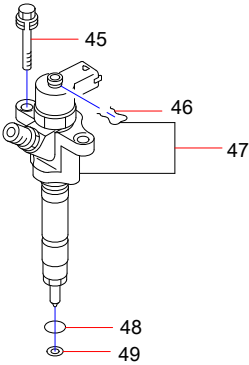
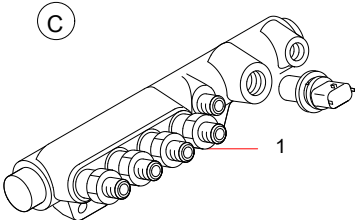
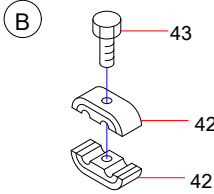
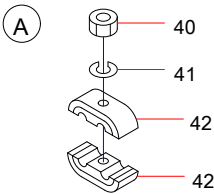
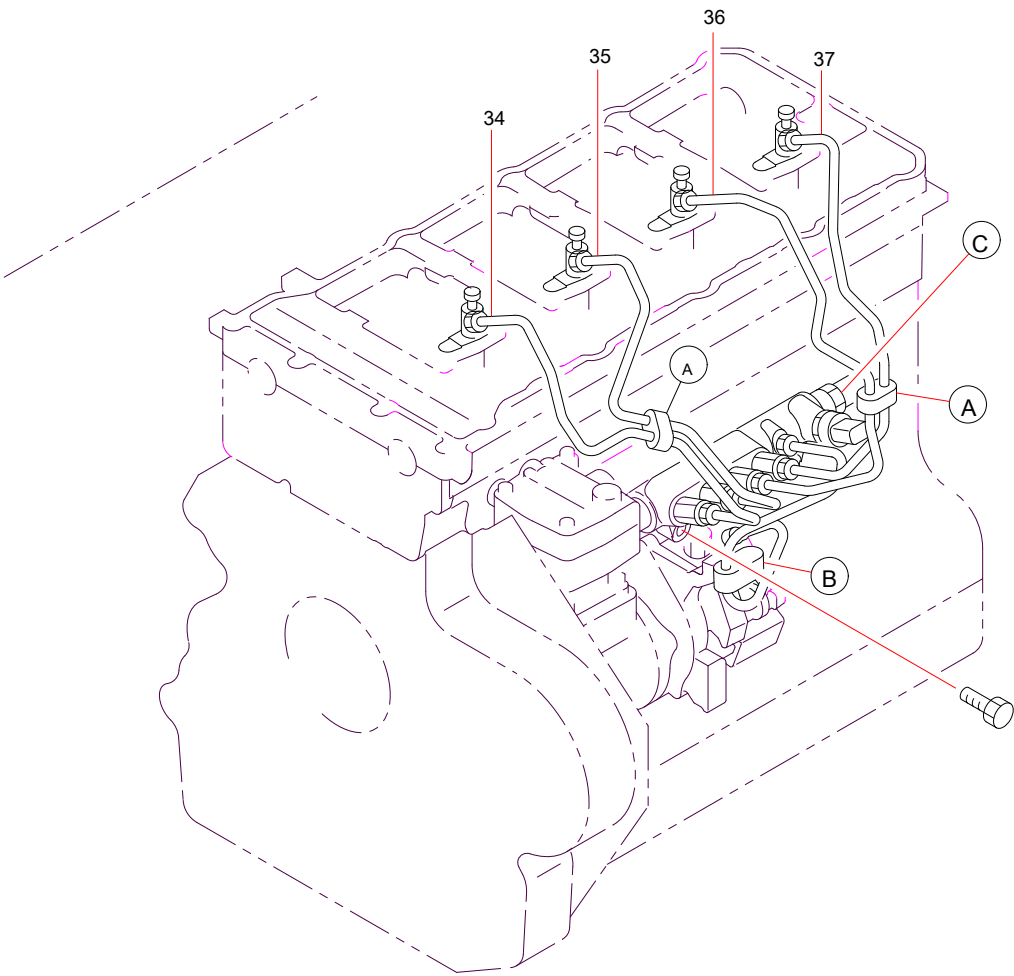


INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
27	60289343	Tube,By-pass Oil Felter Feed		1	
28	60289344	Valve,Eng Oil Pressure Regulating		1	
29	60289033	Plug		1	
30	60289345	O-ring,Eng Oil Line		1	
31	60289346	O-ring,Eng Oil Line		1	
32	60289347	O-ring,Eng Oil Line		1	
33	60289348	Joint,Eng Oil Line		1	
34	60289349	Clamp,Eng Oil Line		1	
35	60289350	Eyebolt,Eng Oil Line		2	
36	60289351	Eyebolt,Eng Oil Line		1	
37	60290029	Bolt,Eng Oil Line		1	
38	60289352	Bolt		1	
39	60290030	Bolt,Eng Oil Line		4	
40	60289353	Gasket,Eng Oil Line		1	
41	60289182	Gaseet,Cylinder Block		8	
42	60289354	Gasket,T/C Oil Return Tube		1	
43	60289355	Tube,T/C Oil Feed		1	
44	60289356	Tube,T/C Oil Return		1	
45	60289357	Tube,Air Compressor Oil Feed		1	

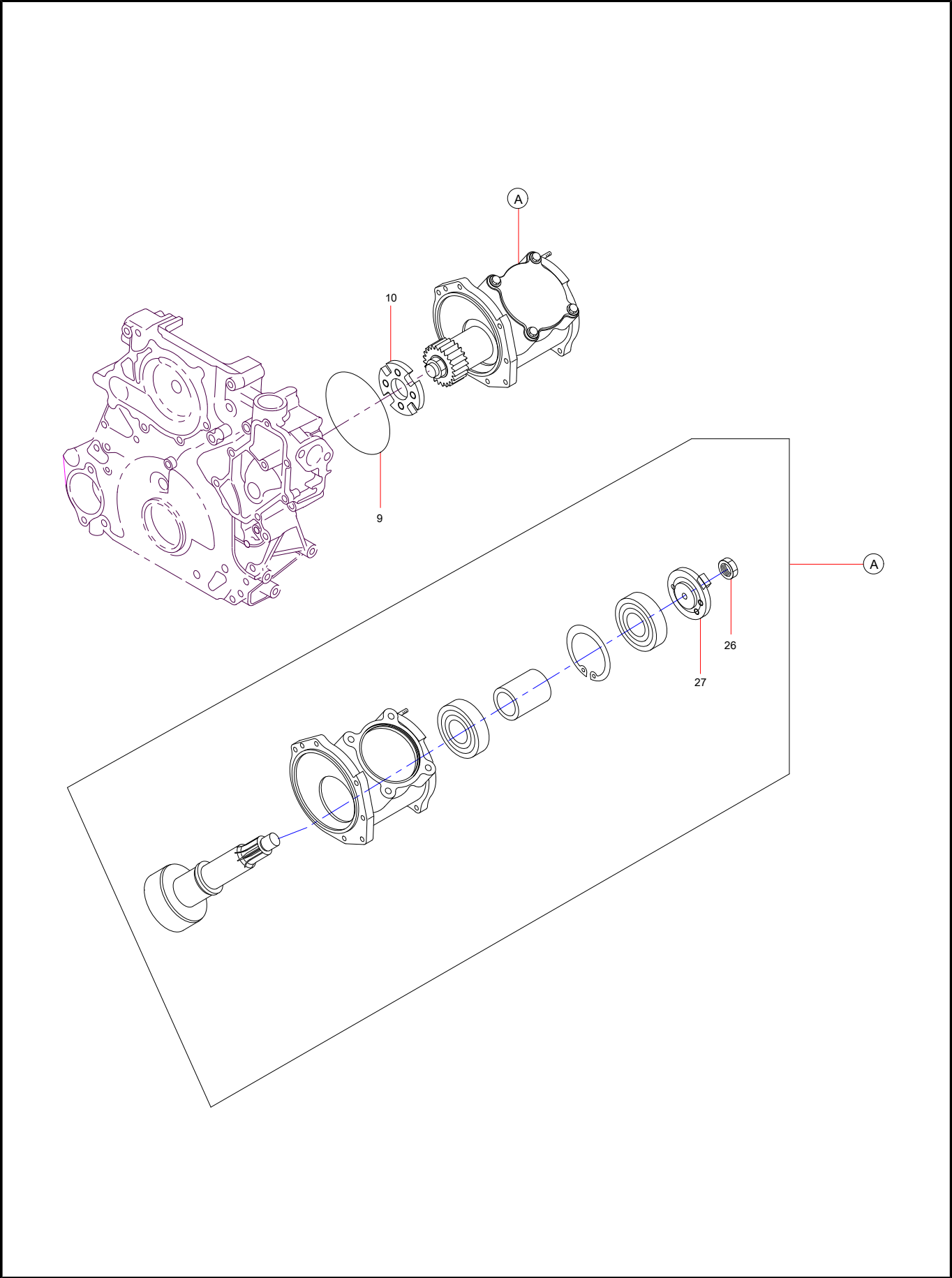


Group 4

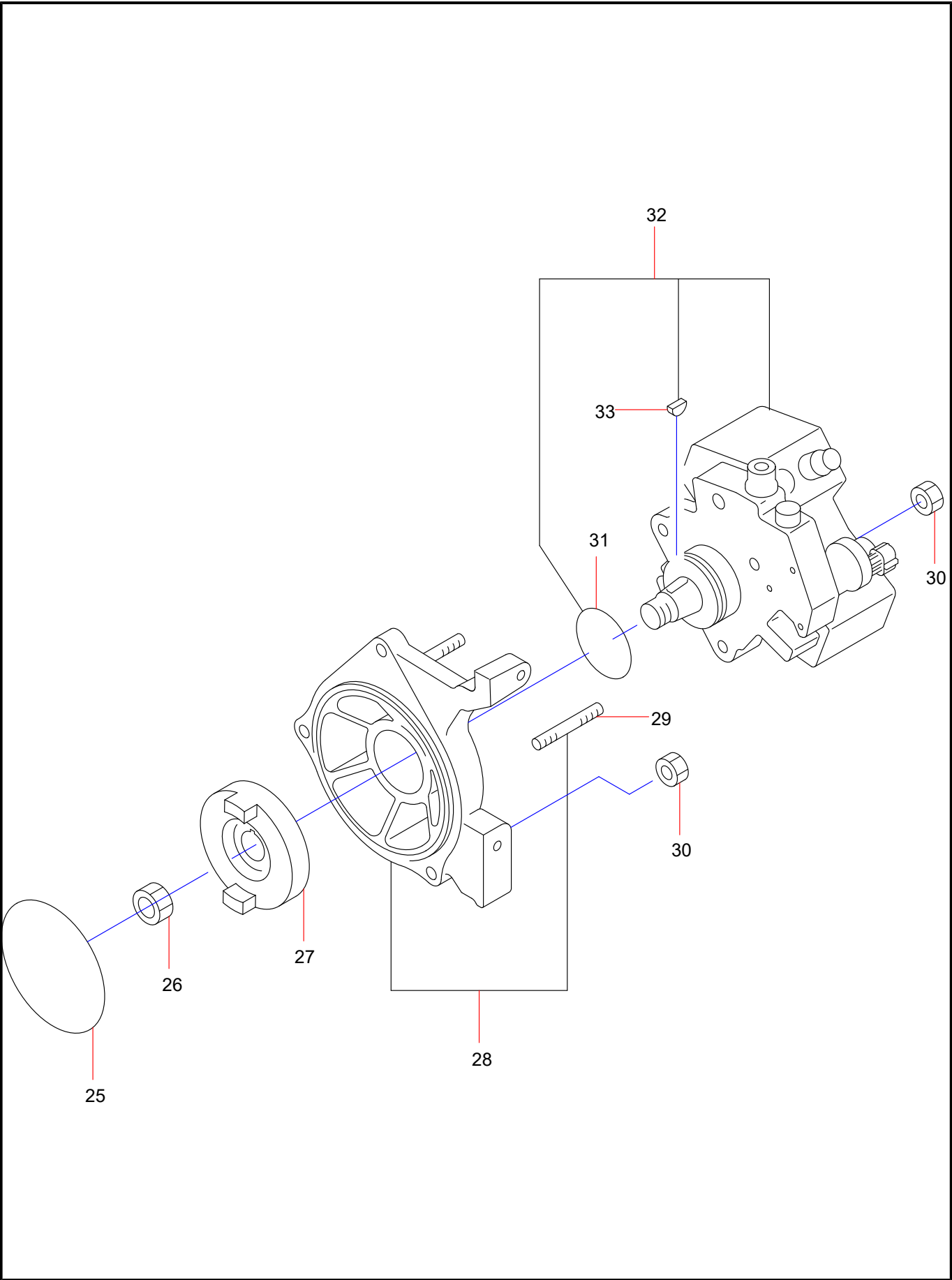
Fuel system



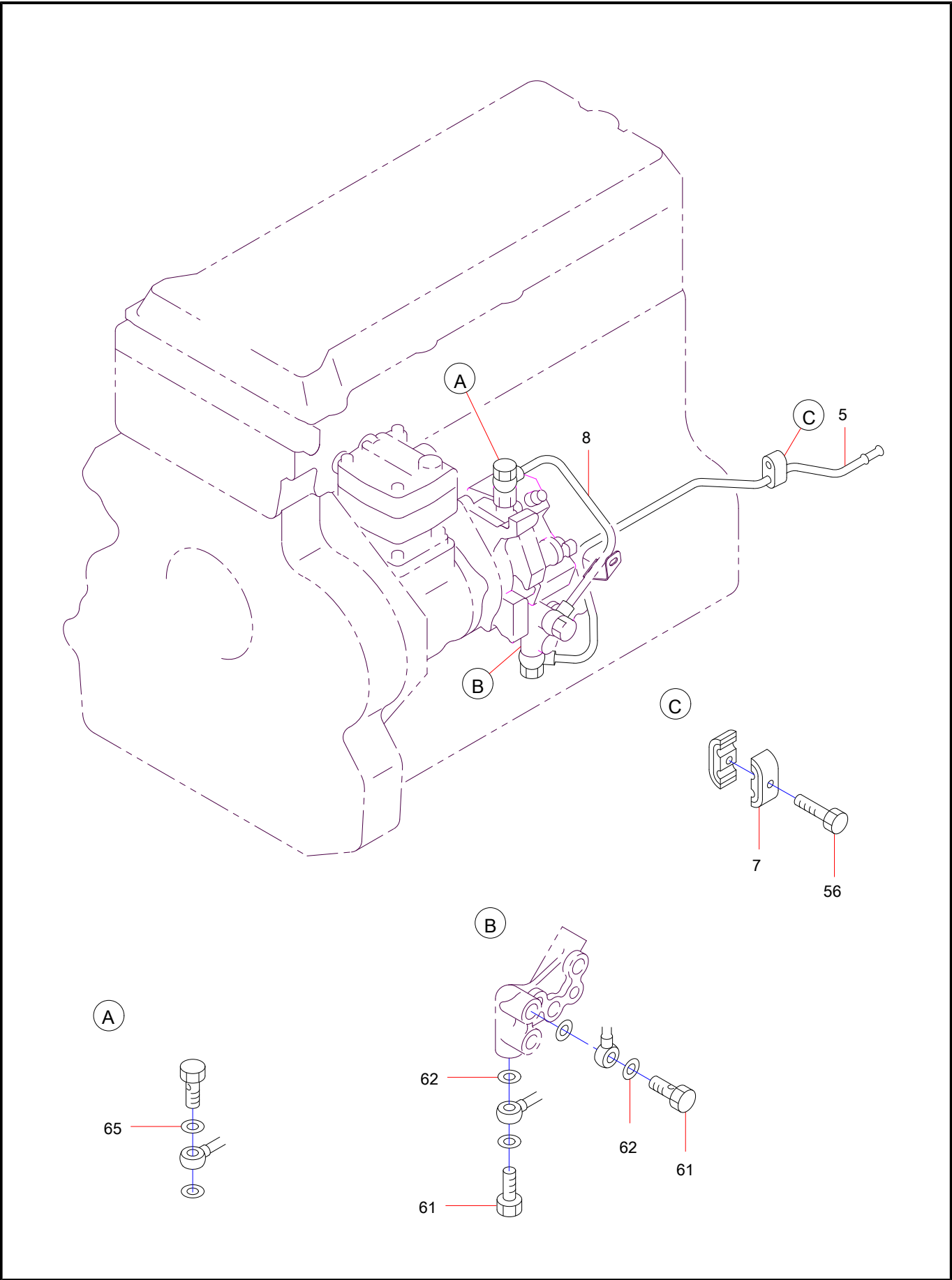
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
1	60289446	Rail assy,fuel injection		1	
34	61005556	Fuel Pipe		1	
35	61005557	Fuel Pipe		1	
36	61005558	Fuel Pipe		1	
37	61005559	Fuel Pipe		1	
40	60289443	Nut,Fuel Injection Tube		2	
41	60289439	Washer,Fuel Injection Tube		2	
42	60289444	Clamp,Fuel Injection Tube		6	
43	60289445	Bolt,Fuel Injection Tube		1	
45	60289442	Bolt,Fuel Injection Nozzle		8	
46	60289440	Ring, Retainer		4	
47	60289447	Injector Assembly,Fuel		4	
48	60289441	O-ring , Fuel Injection Nozzle		4	
49	60289433	Gasket,Fuel Injection Nozzle		4	



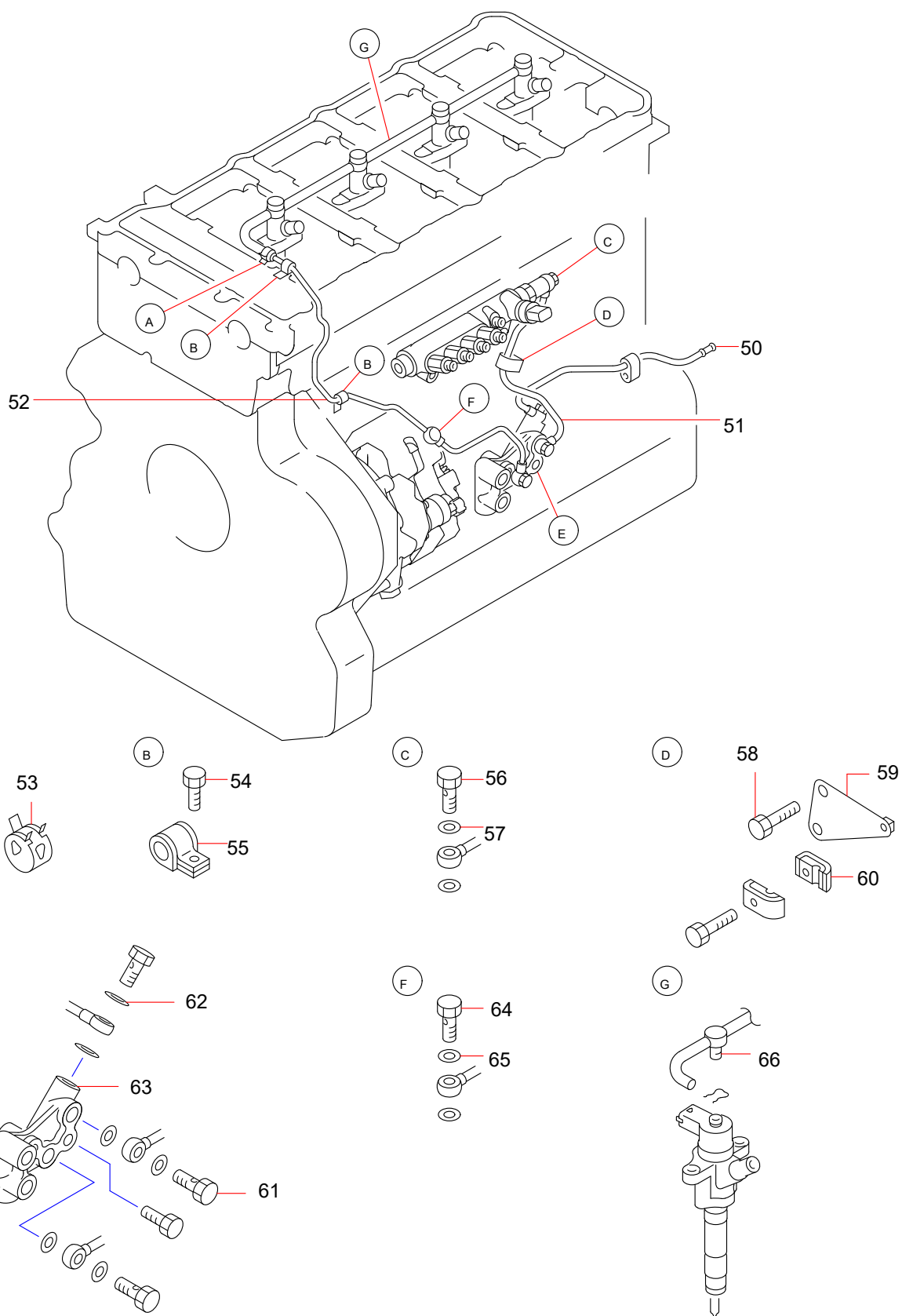
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
9	60289424	O-ring , Injection Pump		1	
10	60289415	Disc,Injection Pump Drive		1	
26	60289426	Nut,Injection Pump		1	
27	60289414	Coupling,Injection Pump		1	



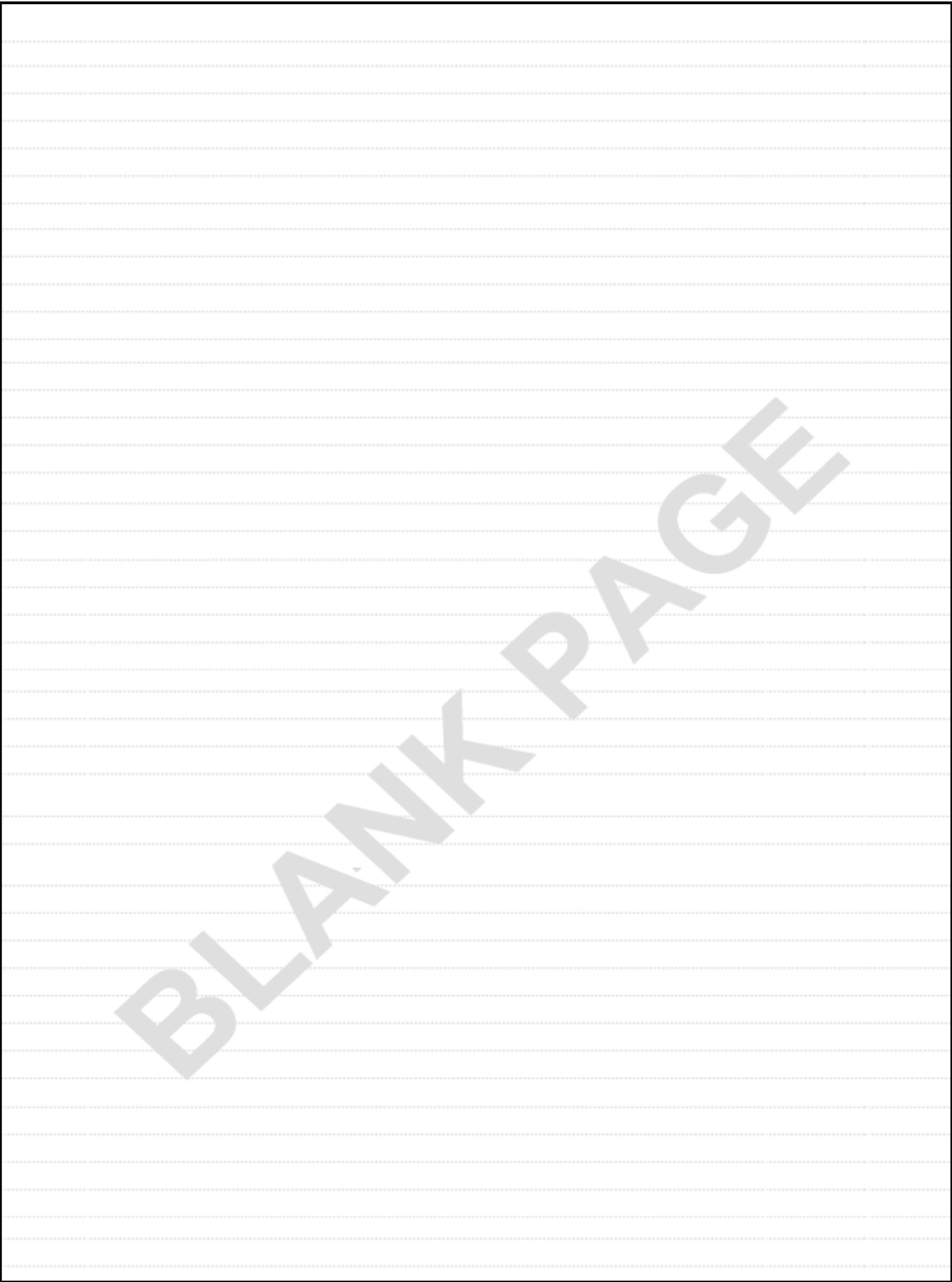
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
25	60289422	O-ring		1	
26	60289426	Nut,Injection Pump		1	
27	60289414	Coupling,Injection Pump		1	
28	60289417	Plate Assembly,Injection Pump Flange		1	
29	60289420	Stud,Injection Pump Governor		3	
30	B229900004834	Nut Mf434104 with Flange		8	
31	60289423	O-ring		1	
32	60289410	Pump Assembly,Fuel Injection		1	
33	60289427	Key,Injection Pump		1	



INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
5	60289407	Tube,Fuel Pump Suction		1	
7	60289403	Clamp,Fuel Filter		1	
8	60289408	Tube,Fuel Pump Suction		1	
56	60289404	Bolt,fuel filter		1	
61	60289405	Eyebolt,Fuel Filter		3	
62	60289400	Eyebolt,Fuel Filter		4	
65	60289401	Eyebolt,Fuel Filter		2	

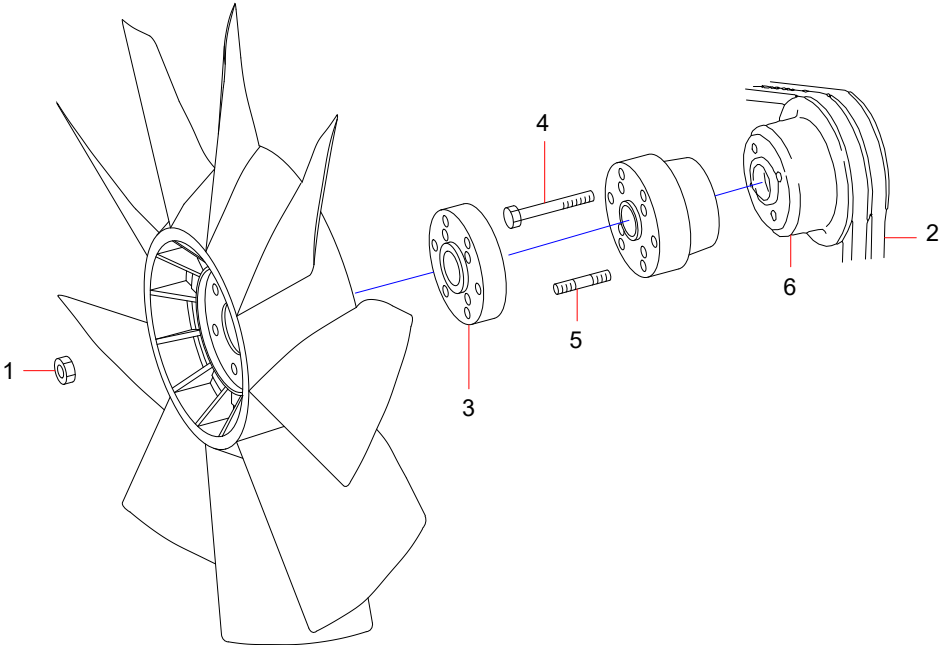


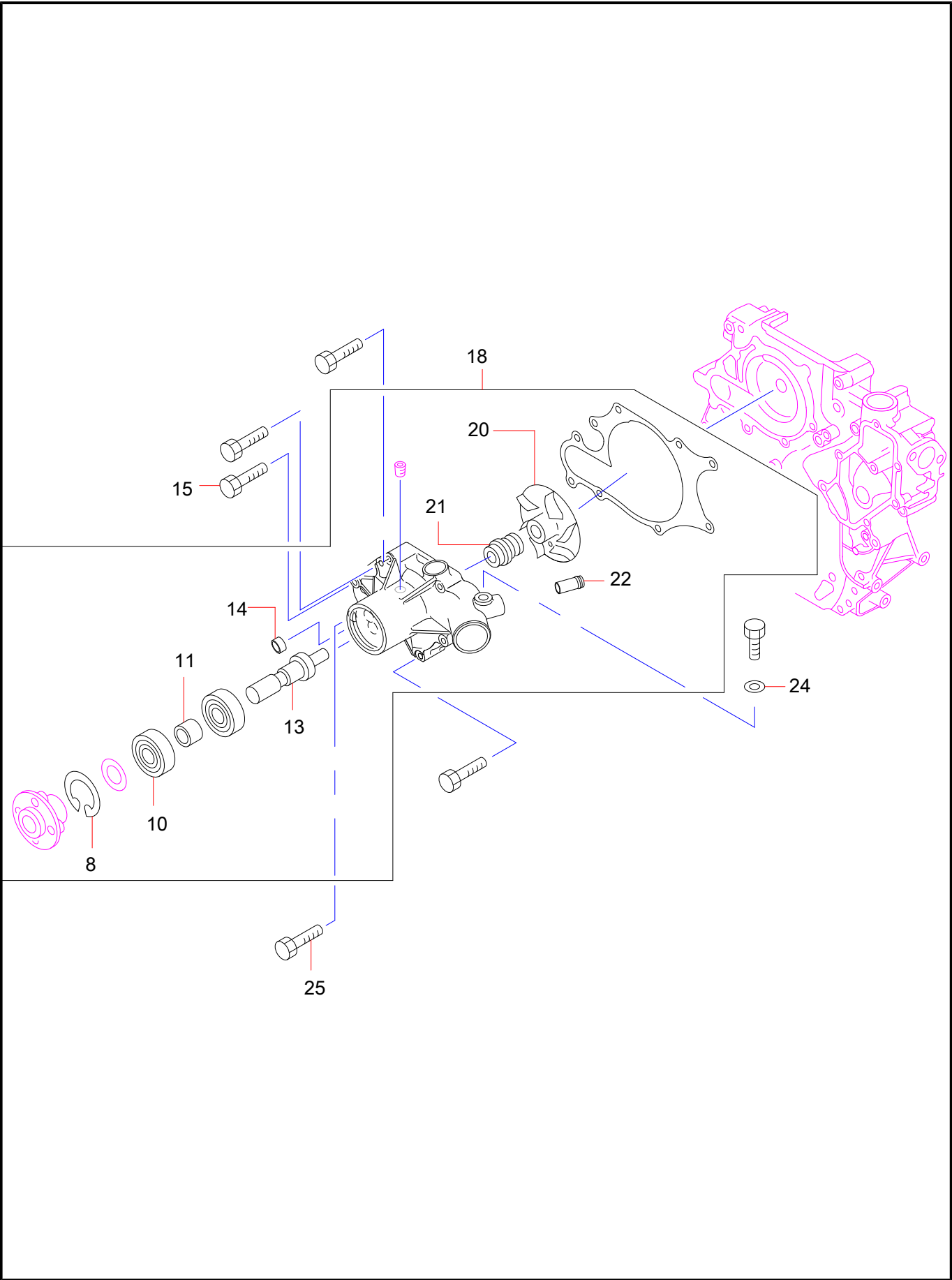
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
50	60289460	Tube,Injection Pump Fuel Return		1	
51	61005561	Fuel Pipe		1	
52	60289462	Tube,Injection Pump Fuel Return		1	
53	60289452	Clip,Fuel Return Line		1	
54	60289454	Bolt		2	
55	60289451	Clip,Fuel Return Line		1	
56	60289404	Bolt,fuel filter		1	
57	60289450	Gasket,Fuel Return Line		2	
58	60289455	Bolt,Fuel Return Line		1	
59	60289453	Bracket,Fuel Return Line		1	
60	60290077	Clamp,Fuel Return Line		1	
61	60289405	Eyebolt,Fuel Filter		3	
62	60289400	Eyebolt,Fuel Filter		4	
63	60289449	Adapter,Fuel Return Tube		1	
64	60289458	Eyebolt,Fuel Return Line		1	
65	60289401	Eyebolt,Fuel Filter		2	
66	60289459	Hose , Fuel Injection Nozzle Fuel Return		1	



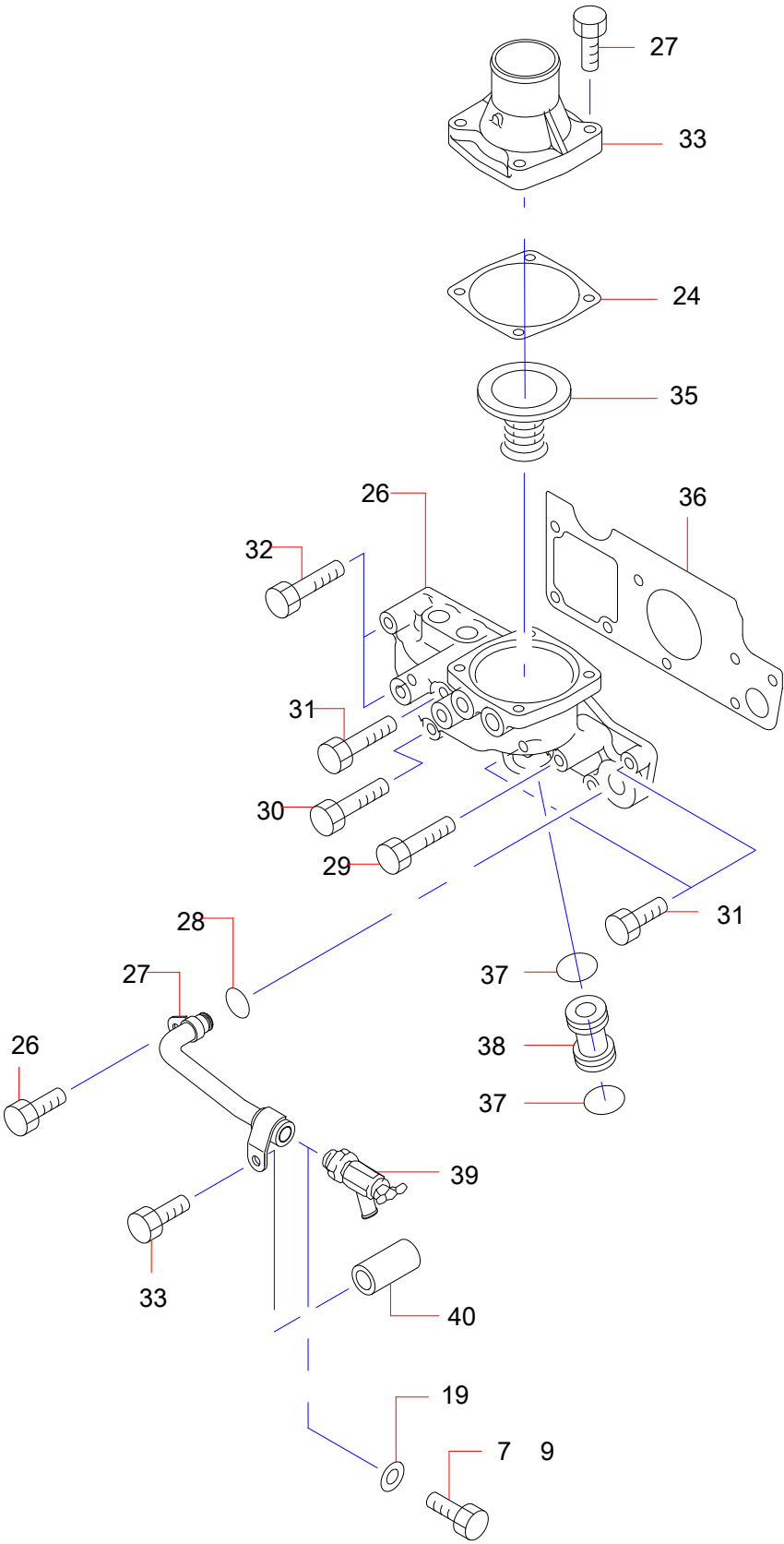
Group 5

COOLING

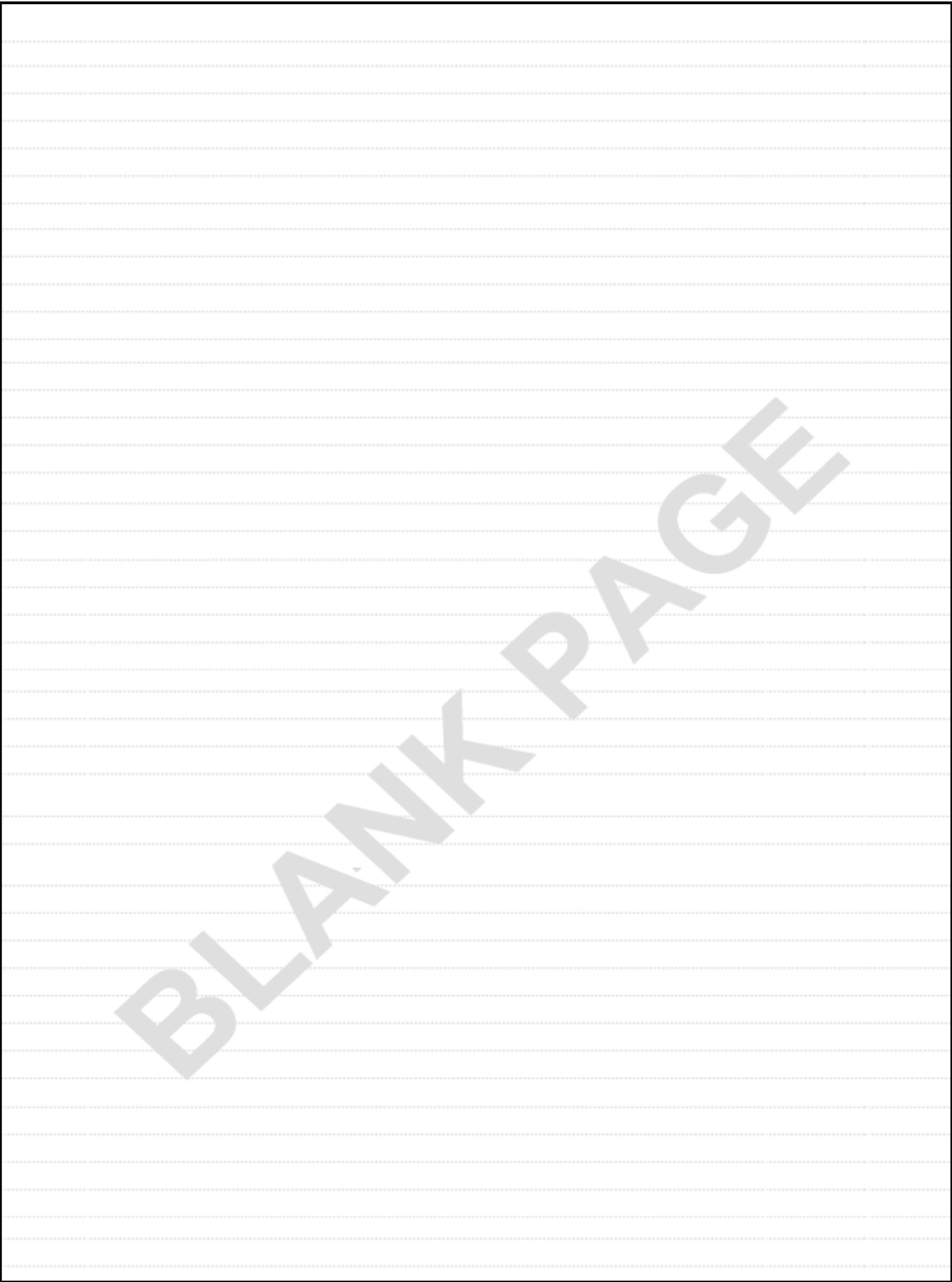




INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
8	60289490	Snap Ring,Water Pump Inr		1	
10	60289474	Braring,Water Pump		1	
11	60290075	Spacer,Water Pump Inr		1	
13	60289484	Shaft,Water Pump		1	
14	60289477	Cap,Water Pump		1	
15	60289488	Bolt,Water Pump		1	
18	60289472	Water Pump Assembly		1	
20	60289480	Impeller,Water Pump		1	
21	B229900003886	Water Seal		1	
22	60289478	Gasket,Water Pump		1	
24	60247021	Drain Plug		1	
25	60289487	Bolt,Water Pump		1	

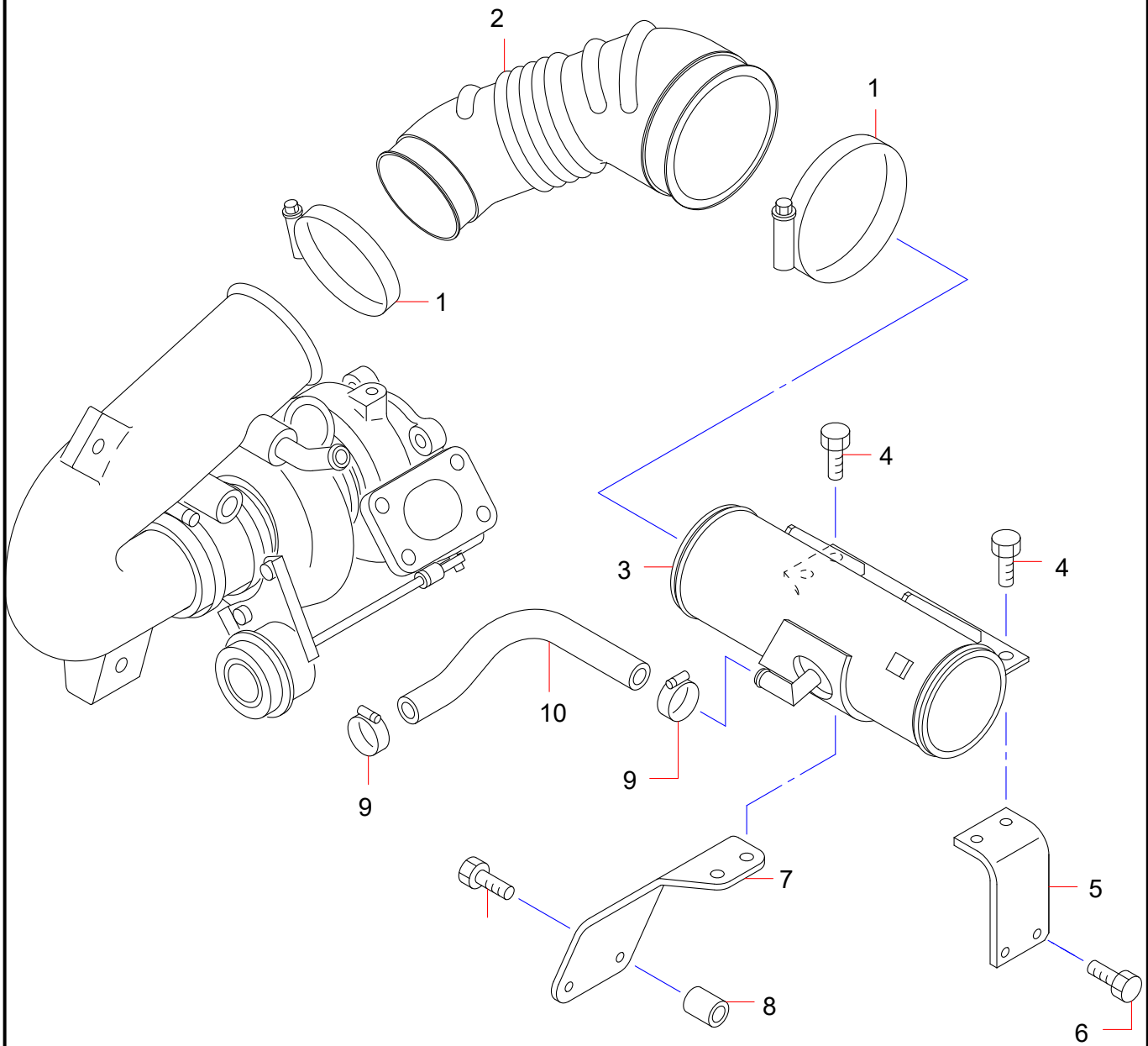


INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
7	60289506	Bolt		1	
9	60289094	Plug,Flywheel Housing		1	
19	60289088	Gakset,Flywheel Housing		1	
24	60247021	Drain Plug		1	
26	60289504	Bolt,Thermostat		1	
27	60289520	Pipe,Heater Water		2	
28	60289492	O-ring , Water Heater		1	
29	60289017	Bolt,Eng Breather		2	
30	B229900004974	Bolt Mf140236 with Flange		1	
31	B229900004973	Bolt Mf140229 with Flange		2	
32	60289494	Case,Thermostat		1	
33	60289496	Cover,Thermostat Case		1	
35	60289498	Thermostat		1	
36	60289497	Gasket,Thermostat Case to Cylinder Head		1	
37	60289516	O-ring , Cooling Water Line		2	
38	60289500	Pipe,Thermostat Water By-pass		1	
39	60289495	Cock,Thermostat Case to Heater Water		1	
40	60289018	Spacer,Eng Breather		1	

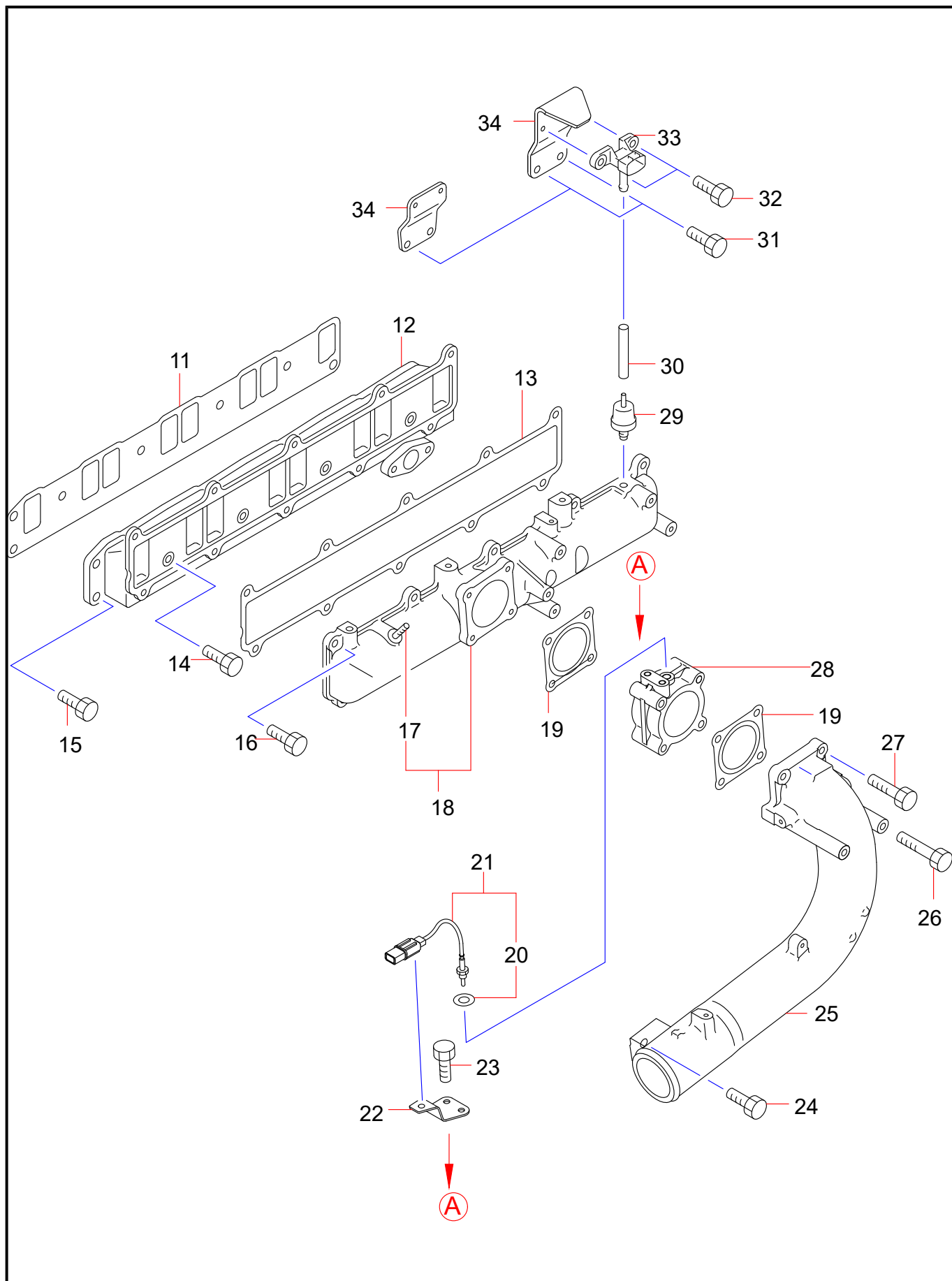


Group 6

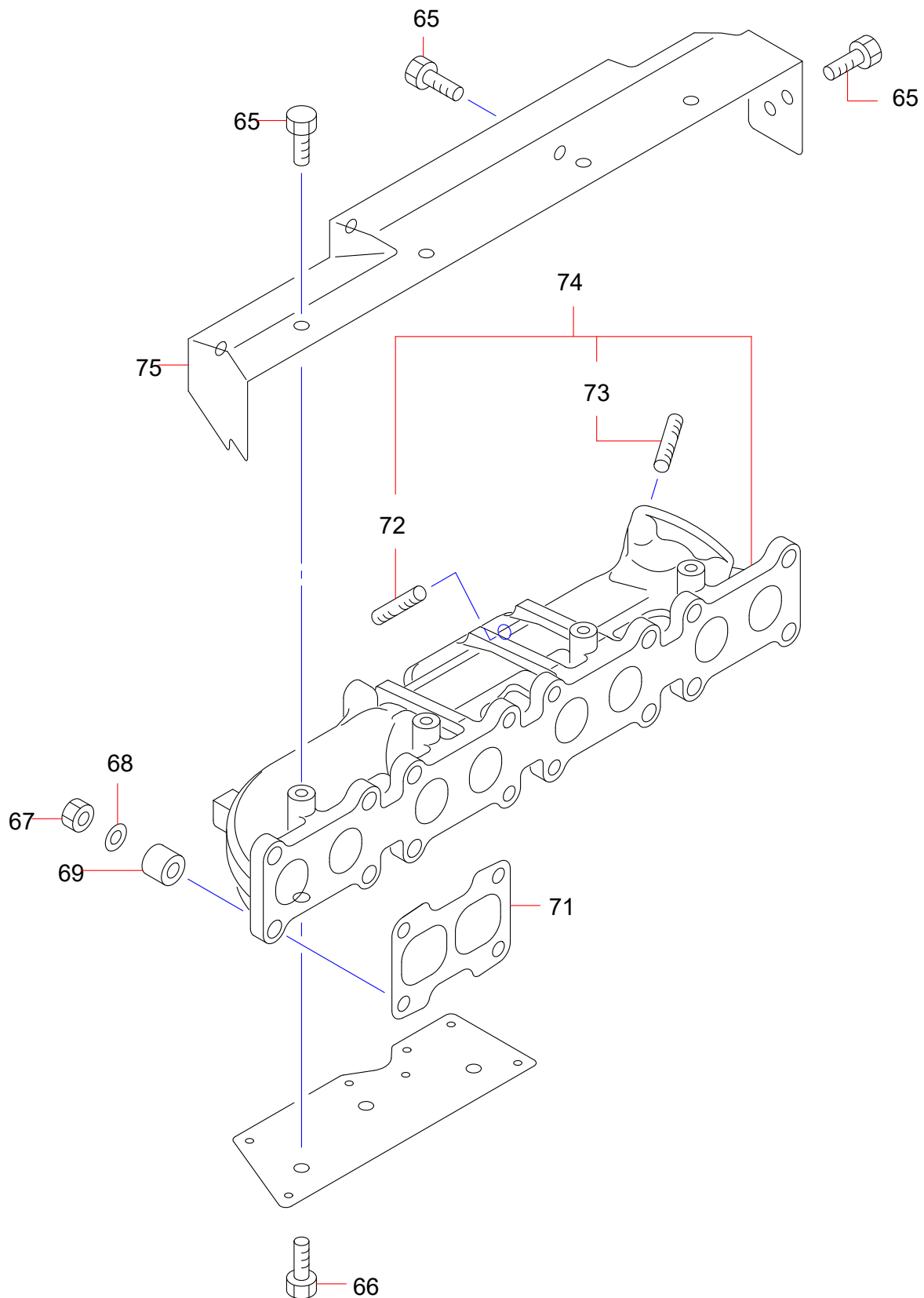
INTAKE & EXHAUST



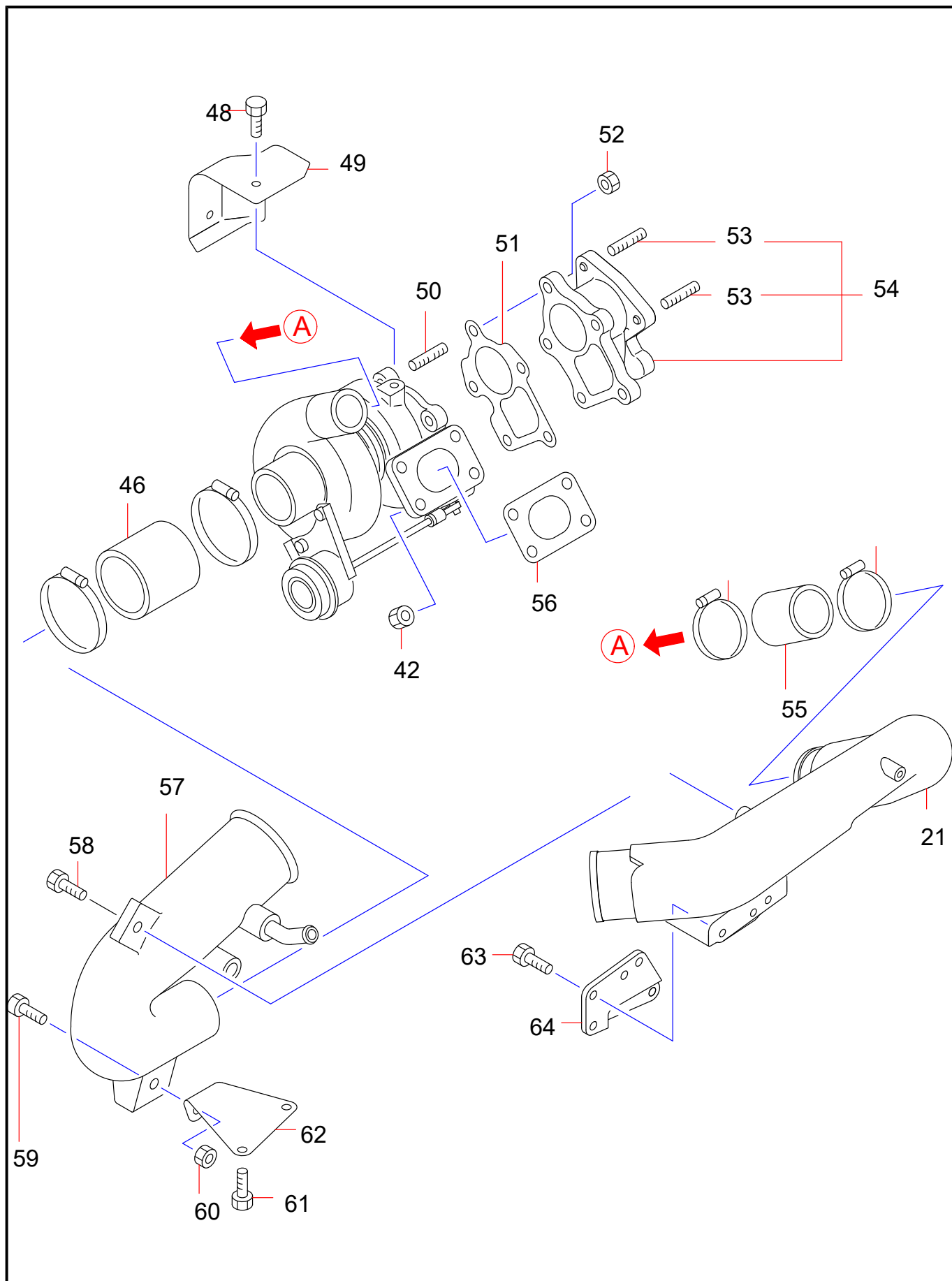
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
1	B229900002685	Pipe Clamp		2	
2	60290091	Hose,Eng Air Intake Line		1	
3	60290092	Pipe,Eng Air Intake		1	
4	60290093	Bolt,Eng Air Intake Line		2	
5	60290094	Bracket,Air Cleaner		1	
7	60290095	Bracket,Air Cleaner		1	
8	60289266	Spacer Egr Equip		1	
9	60290096	Clamp,Air Compressor		2	
10	60290097	Hose,Air Compressor Suction		1	



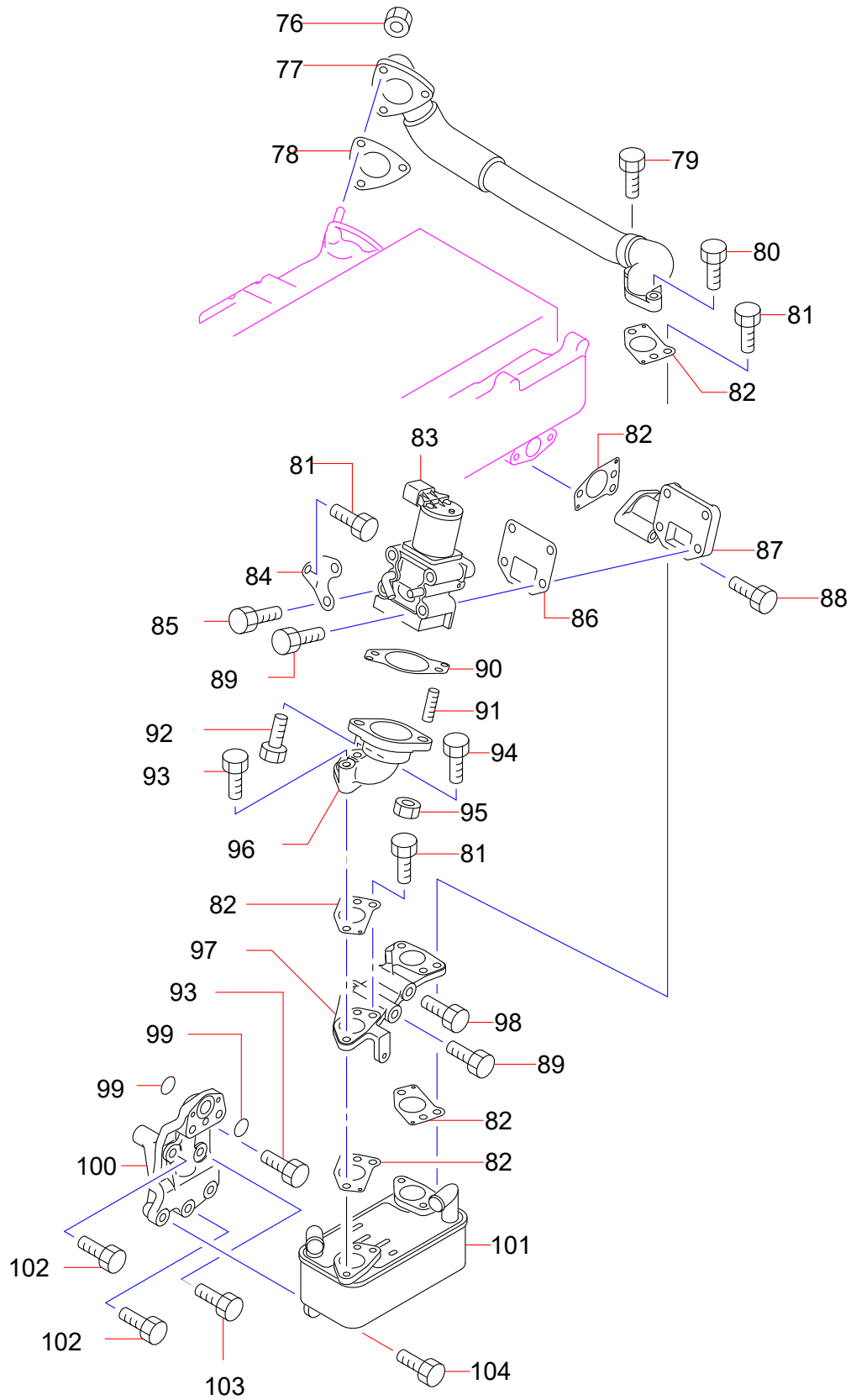
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
11	60289203	Gasket Inlet Manifold		1	
12	60289200	Manifold Inlet		1	
13	60289204	Gasket Inlet Manifold Cover		1	
14	60289209	Bolt Inlet Manifold No.1		4	
15	60289205	Bolt Inlet Manifold No.1		3	
16	60288997	Fixing Bolt		10	
17	60289211	Stud Inlet Manifold		2	
18	60289201	Manifold Inlet		1	
19	60289197	Gasket Eng Air Intake Pipe		2	
20	60289213	Gasket Inter Cooler Air Temperature		1	
21	60289214	Sensor Inter Cooler Air Temperature		1	
22	60289198	Bracket Eng Air Intake Pipe		1	
23	60289207	Bolt Inlet Manifold No.1		2	
24	60289210	Bolt Inlet Manifold No.1		1	
25	60289202	Coupling Inlet Manifold		1	
26	60289206	Bolt Inlet Manifold No.1		2	
27	B229900004976	Bolt Mf140240 with Flange		2	
28	60289199	Pipe Eng Air Intake		1	
29	60289217	Filter Boost Sensor		1	
30	60289212	Hose Inlet Manifold		1	
31	60289208	Bolt Inlet Manifold No.1		2	
32	60076665	Bolt(Injection Pump)		2	
33	60289220	Pressure Sensor Connector		1	
34	60289218	Bracket Boost Sensor		2	



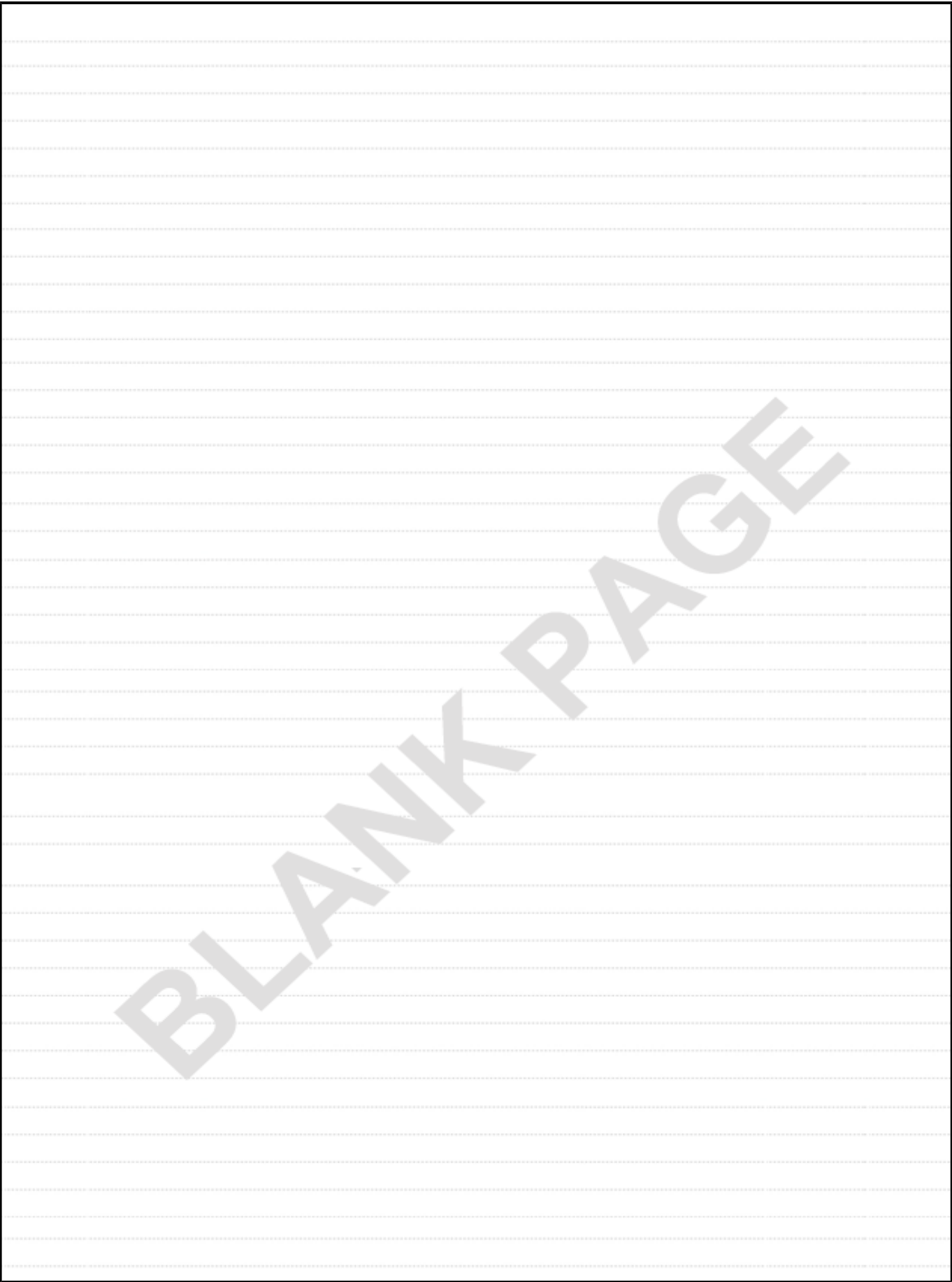
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
65	60289246	Hose T/C		1	
66	60289248	Gasket T/C		1	
67	60289231	Pipe Eng Air Intake		2	
68	60289250	Bolt T/C		1	
69	60290033	Bolt,T/C		1	
71	60289249	Bolt T/C		2	
72	60289237	Bracket T/C Air Pipe		1	
73	B229900005079	Oil Pan Bolt Mf140224 with Flange		4	
74	60290034	Bracket,T/C Air Pipe		1	
75	60289241	Pipe T/C to Inlet Mainfold		1	



INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
46	60289223	Insulator Exhaust Manifold Heat		1	
48	60289225	Washer Exhaust Manifold		4	
49	60289228	Spacer Exhaust Manifold		12	
50	60289224	Insulator Exhaust Manifold Heat		1	
51	60289222	Gasket Exhaust Manifold		4	
52	60289227	Stud Exhaust Manifold		4	
53	60289226	Stud Exhaust Manifold		3	
54	60289221	Manifold Exhaust		1	
55	60289251	Clamp T/C		4	
56	60289247	Hose T/C		1	
57	60289234	Turbocharger Assembly		1	
58	60289230	Bolt Exhaust Manifold		2	
59	60289238	Cover T/C		1	
60	60290031	Stud,T/C		5	
61	60289239	Gasket T/C Exhaust Gas Inlet Hole		1	
62	60289229	Nut Exhaust Manifold		9	
63	60290032	Stud,T/C		3	
64	60289240	Pipe T/C to Exhaust Pipe		1	

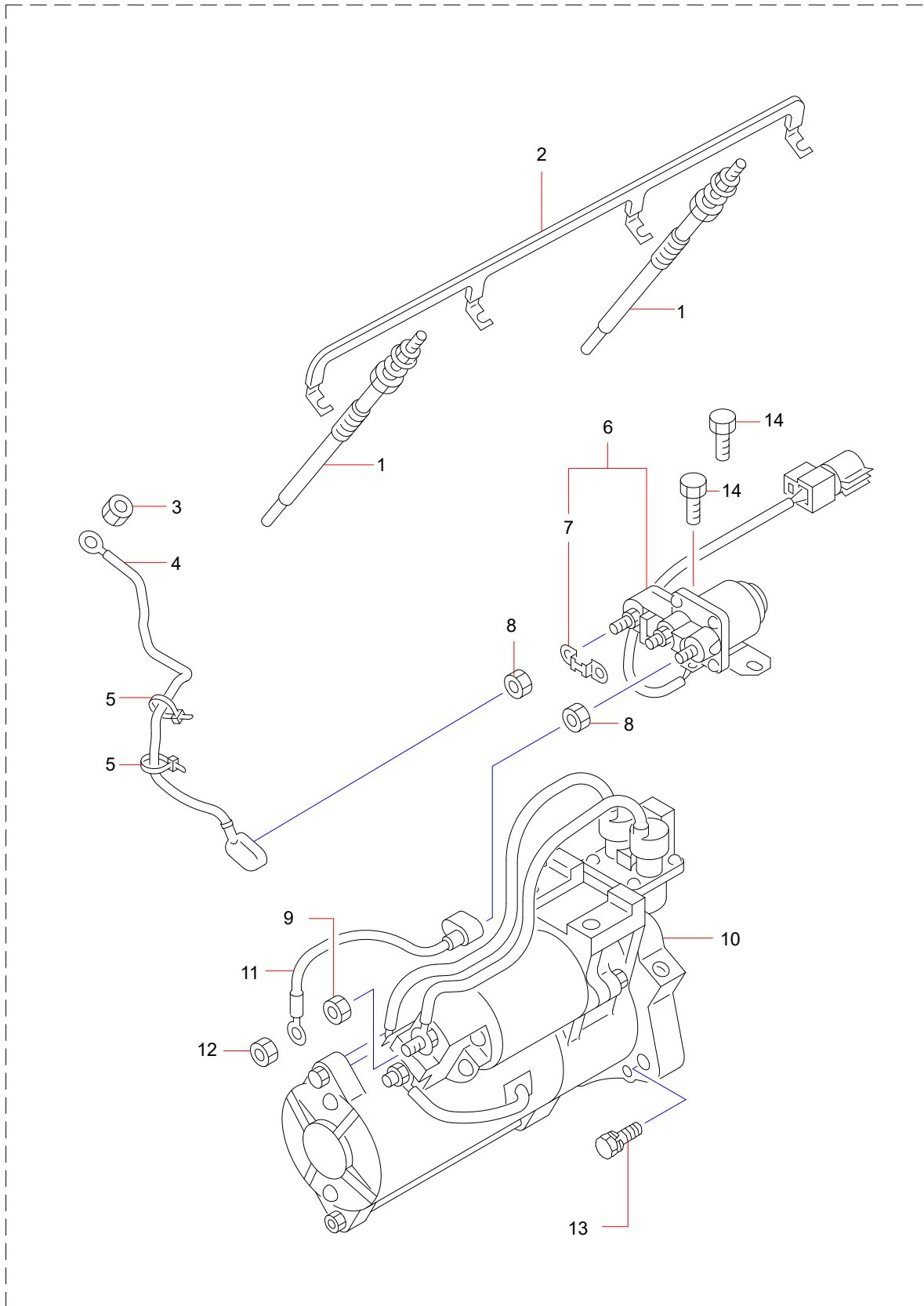


INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
76	60289267	Nut Egr Equip		3	
77	60289262	Pipe Egr Valve		1	
78	60289260	Gasket Egr Pipe		1	
79	60289041	Bolt,Cylinder Head		1	
80	60200738	Bolt Flange		1	
81	B229900004971	Bolt Mf140225 with Flange		3	
82	60289259	Gasket Egr Pipe		5	
83	60289253	Valve Egr		1	
84	60289261	Pipe Egr Valve		1	
85	60289274	Bolt Egr Equip		2	
86	60289257	Gasket Egr Pipe		1	
87	60289264	Pipe Egr Valve		1	
88	60289269	Bolt		2	
89	60289273	Bolt Egr Equip		3	
90	60289258	Gasket EGR pipe		1	
91	60289265	Stud Egr Equip		1	
92	60289275	Bolt		1	
93	B229900004974	Bolt Mf140236 with Flange		2	
94	B229900004771	Hollow Bolt Mf140229 with Flange		1	
95	B229900004835	Nut Mf434105 with Flange		1	
96	60289263	Pipe Egr Valve		1	
97	60289256	Bracket Egr Cooler		1	
98	60289271	Bolt Egr Equip		1	
99	60290038	O-ring,Emission Vacuum Control Equip		2	
100	60289255	Bracket Egr Cooler		1	
101	60289254	Cooler Egr		1	
102	60289272	Bolt Egr Equip		2	
103	60076700	Bolt(Inlet Manifold)		1	
104	60289270	Bolt Egr Equip		2	

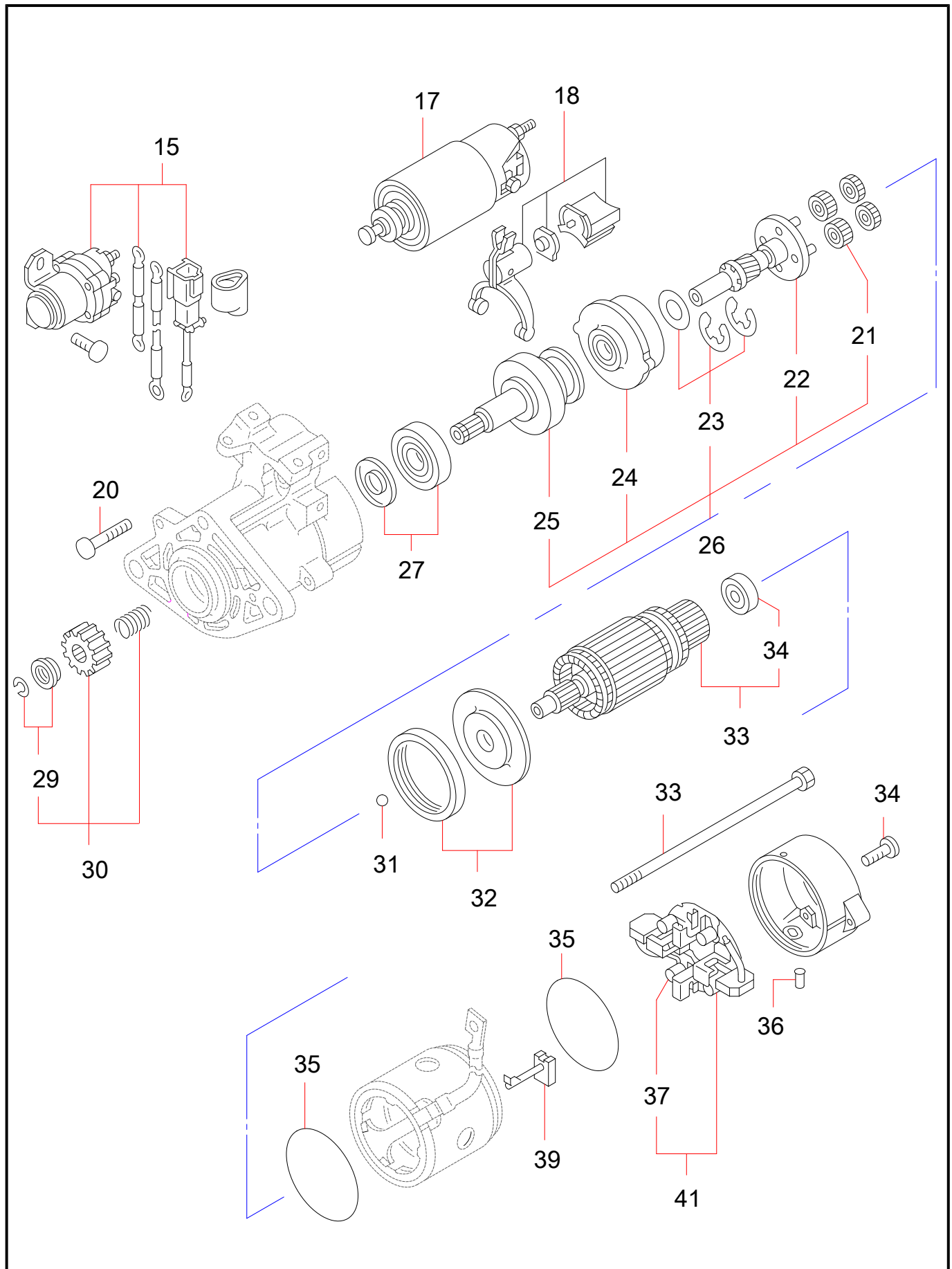


Group 7

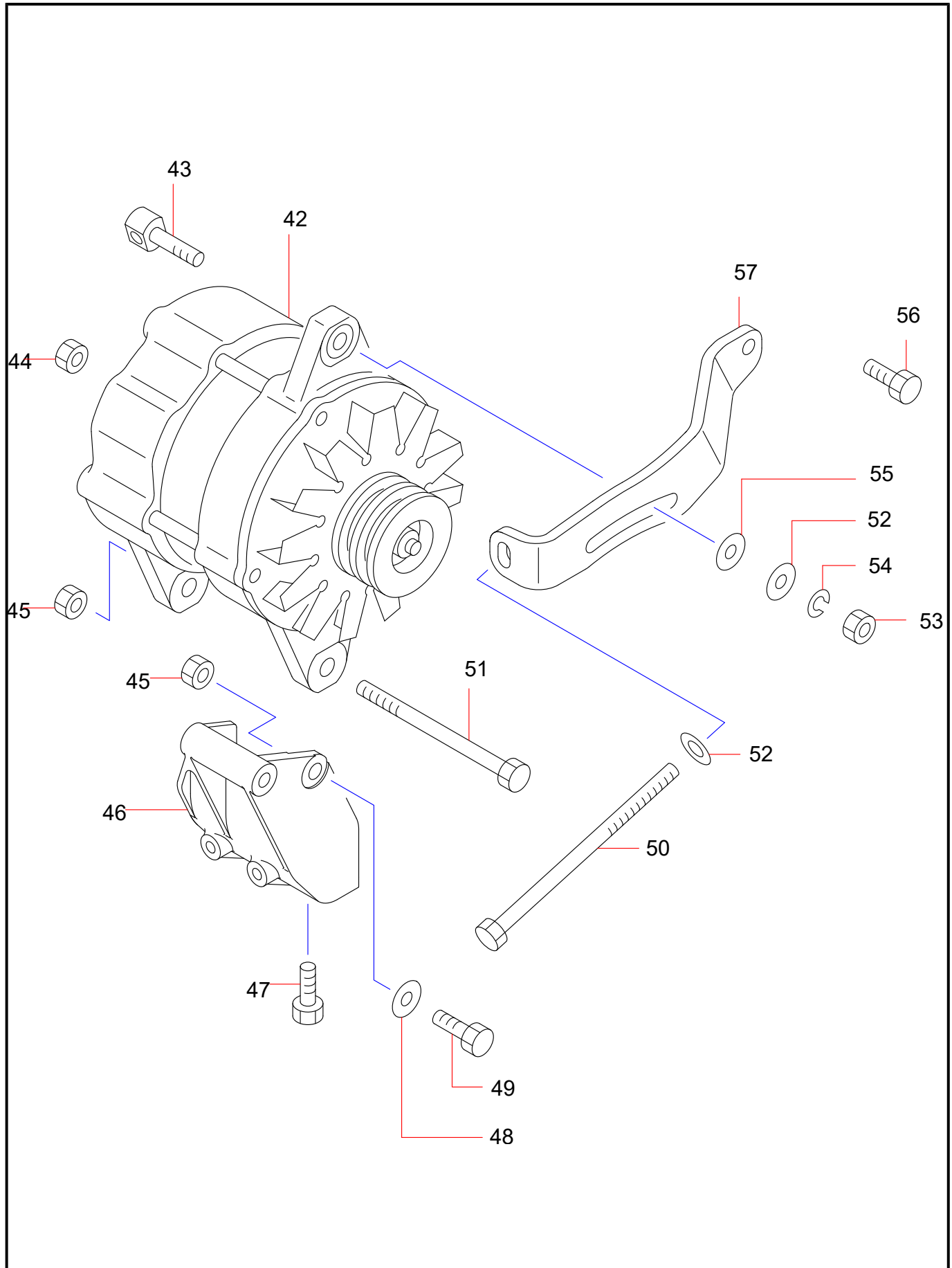
ELECTRICAL



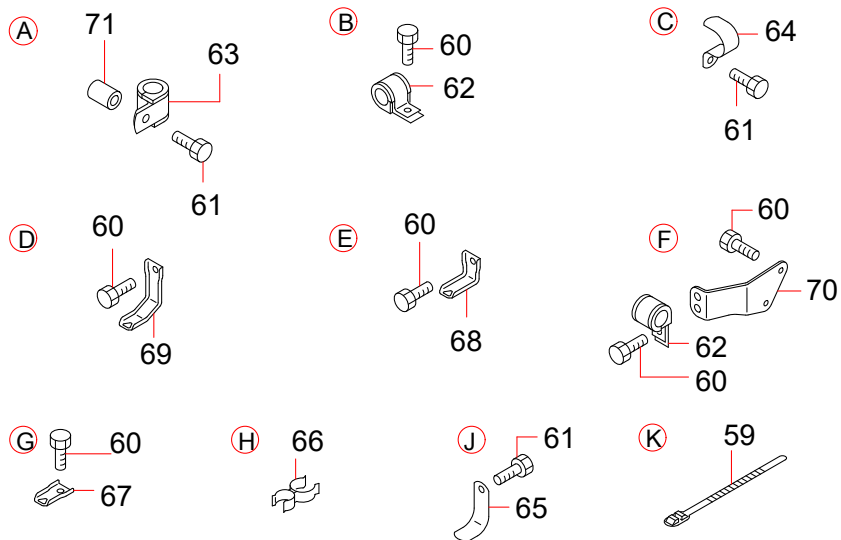
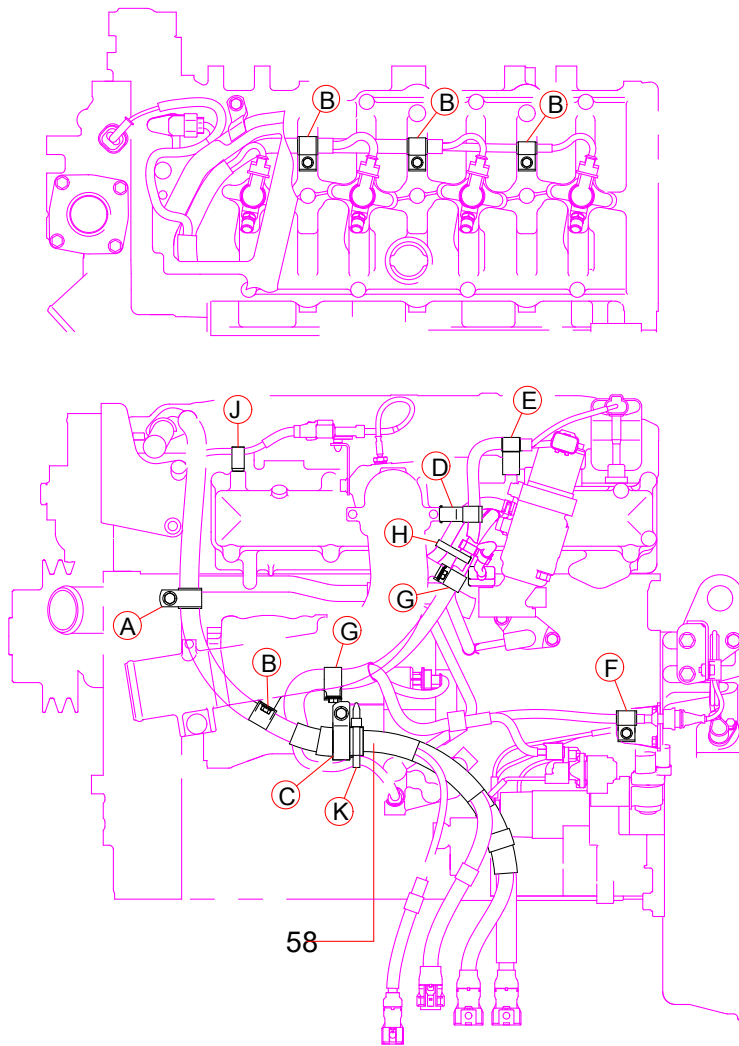
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
1	60290069	Glow Plug		4	
2	60290066	Plate,Glow Plug Connecting		1	
3	60289301	Nut		1	
4	60290068	Harness,Glow Plug Control Relay		1	
5	60289299	Ribbon		2	
6	60289298	Relay Glow Plug Control		1	
7	60289294	Fuse Intake Air Heater Inr		1	
8	60289302	Nut		2	
9	60290065	Nut		1	
10	60289295	Starter Assembly		1	
11	60290067	Harness,Glow Plug Control Relay		1	
12	B229900004834	Nut Mf434104 with Flange		1	
13	60076702	Bolt		3	
14	B229900004989	Bolt Mh000999 with Flange		2	



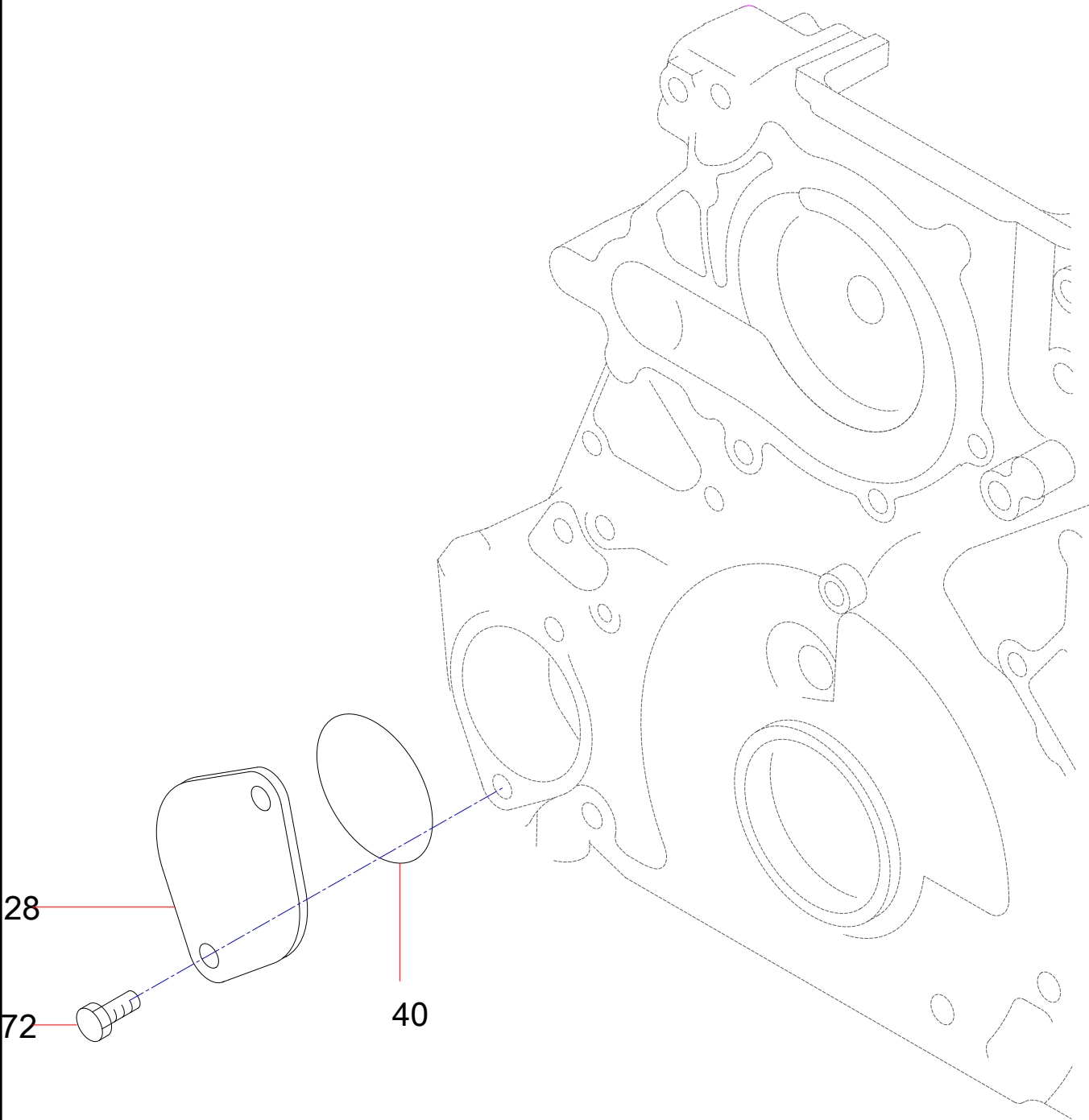
INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
15	60290060	Switch Kit, Starter Magnetic		1	
17	60290059	Switch Kit, Starter Magnetic		1	
18	60290053	Lever Kit, Starter Pinion Shift		1	
20	60290063	Screw, Starter Inr		1	
21	60290051	Gear, Starter Reduction Pinion		4	
22	60290049	Gear, Starter Reduction		1	
23	60290061	Washer Set , Starter Gear Shaft		1	
24	60290050	Gear, Starter Reduction Internal		1	
25	60290047	Clutch, Starter Overrunning		1	
26	60290046	Clutch Kit, Starter Pinion & Reduction		1	
27	60290040	Bearing & Sleeve Kit, Starter		1	
29	60290057	Stopper Kit, Starter Pinion		1	
30	60290054	Pinion Kit, Starter		1	
31	60076510	Ball(Starter Inr)		1	
32	60290055	Gasket Set, Starter Yoke		1	
33	60076643	Bolt Set(Starter)		1	
34	60290041	Bearing, Starter Armature		1	
35	60290048	Gasket, Starter Inr		2	
36	60076184	Grommet(Starter Inr)		1	
37	60290056	Spring, Starter Brush		4	
39	60290044	Brush, Starter		1	
41	60290052	Holder Assembly, Starter Brush		1	

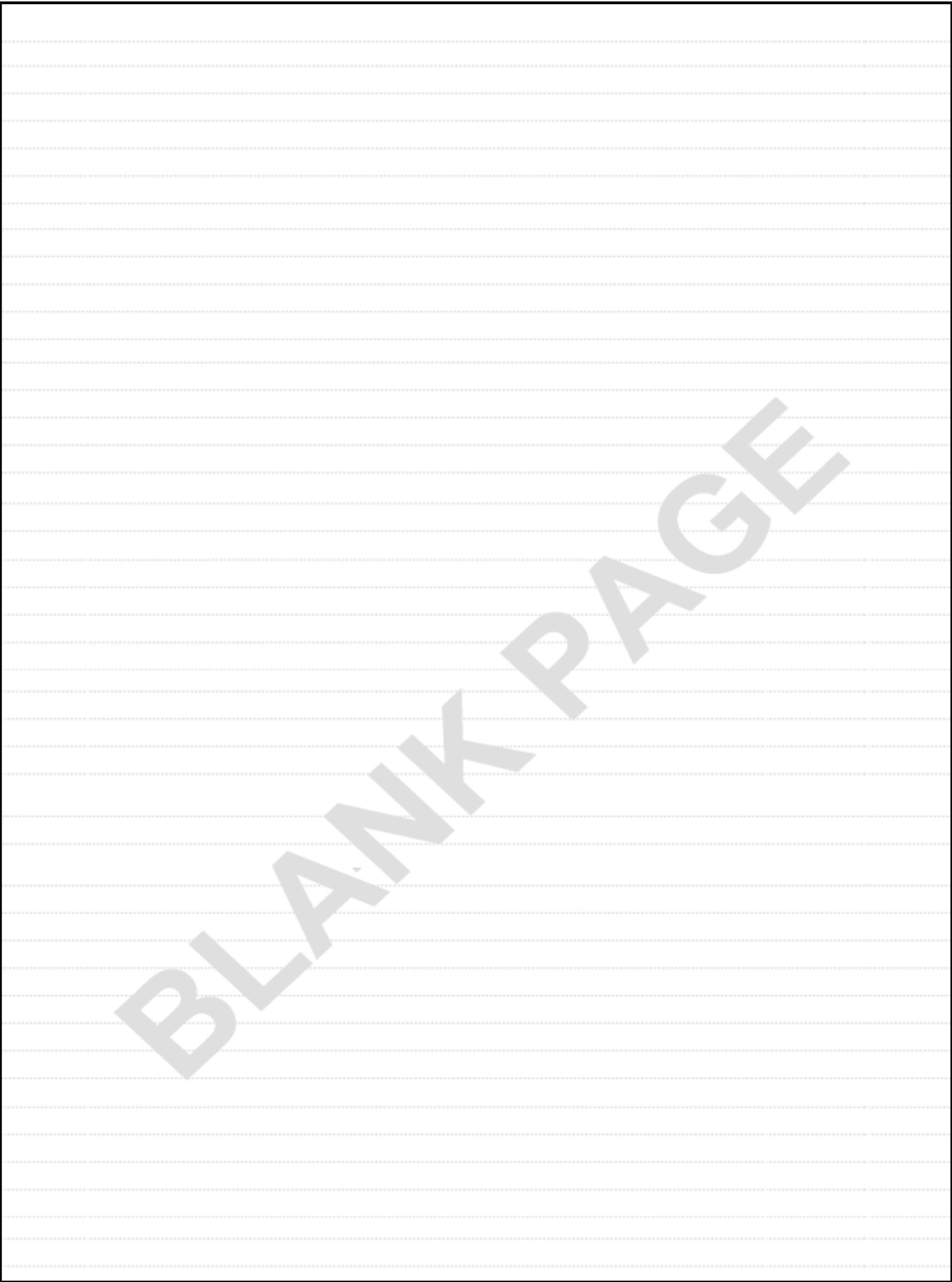


INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
42	60289303	Alternator Assembly		2	
43	60289307	Shaft Alternator Adjusting		2	
44	60289313	Nut		1	
45	60289314	Nut Alternator		2	
46	60289306	Brace Alternator Mounting		1	
47	60289205	Bolt Inlet Manifold No.1		2	
48	60290311	Washer		1	
49	60289315	Bolt		1	
50	B229900004961	Bolt Me162458 with Flange		2	
51	60289317	Bolt Alternator		1	
52	B229900004643	Washer		2	
53	60077482	Nut(Valve Gear Train)		1	
54	B229900004512	Spring Pad		1	
55	60290312	Washer		1	
56	60289316	Bolt		1	
57	60289305	Brace Alternator Adjusting		1	



INDEX	PART NO.	DESCRIPTION	Remark	QTY	SEE PAGE
58	60289277	Harness Eng		1	
59	60289999	Band , Eng Wiring		1	
60	60289279	Bolt Eng Wiring		10	
61	60289015	Bolt,Eng Breather		4	
62	60289087	Clip,Flywheel Housing		5	
63	60289284	Clip Eng Wiring		1	
64	60289285	Clip Eng Wiring		1	
65	60289349	Clamp,Eng Oil Line		1	
66	60289286	Clip Eng Wiring		1	
67	60289287	Stay Eng Wiring		2	
68	60289288	Stay Eng Wiring		1	
69	60289289	Stay Eng Wiring		1	
70	60289290	Stay Eng Wiring		1	
71	60289291	Spacer Eng Wiring		1	





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