

Service Parts

Engine

Engine Models:

Mitsubishi S16R-PTAA2

Generator Models:

2000 kW

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Introduction

This manual lists service replacement parts for 2000 kW generator sets.

At the time of print this manual applied to the generator set specification (spec) numbers listed in the Specification Number Index. On occasion this manual may apply to specs not listed in the Specification Number Index.

Information in this publication represents data available at the time of print. The generator set manufacturer reserves the right to change this publication and the products represented without notice and without any obligation or liability whatsoever.

This manual includes the following main sections:

Table of Contents. Lists the sections of the manual.

Introduction (and other information sections). Contains introductory material about part numbers, illustrations, and hardware.

Group Parts Lists. Lists the part numbers of parts in the groups.

Number System Significance

This manual uses the following numbering systems:

Group Number. A unique number representing a parts group needed to assemble a generator set function. For example, Group 1 is the Cylinder Head Group.

Part Number. The part number identifies an individual assembly, subassembly, component, or accessory kit.

Illustrations

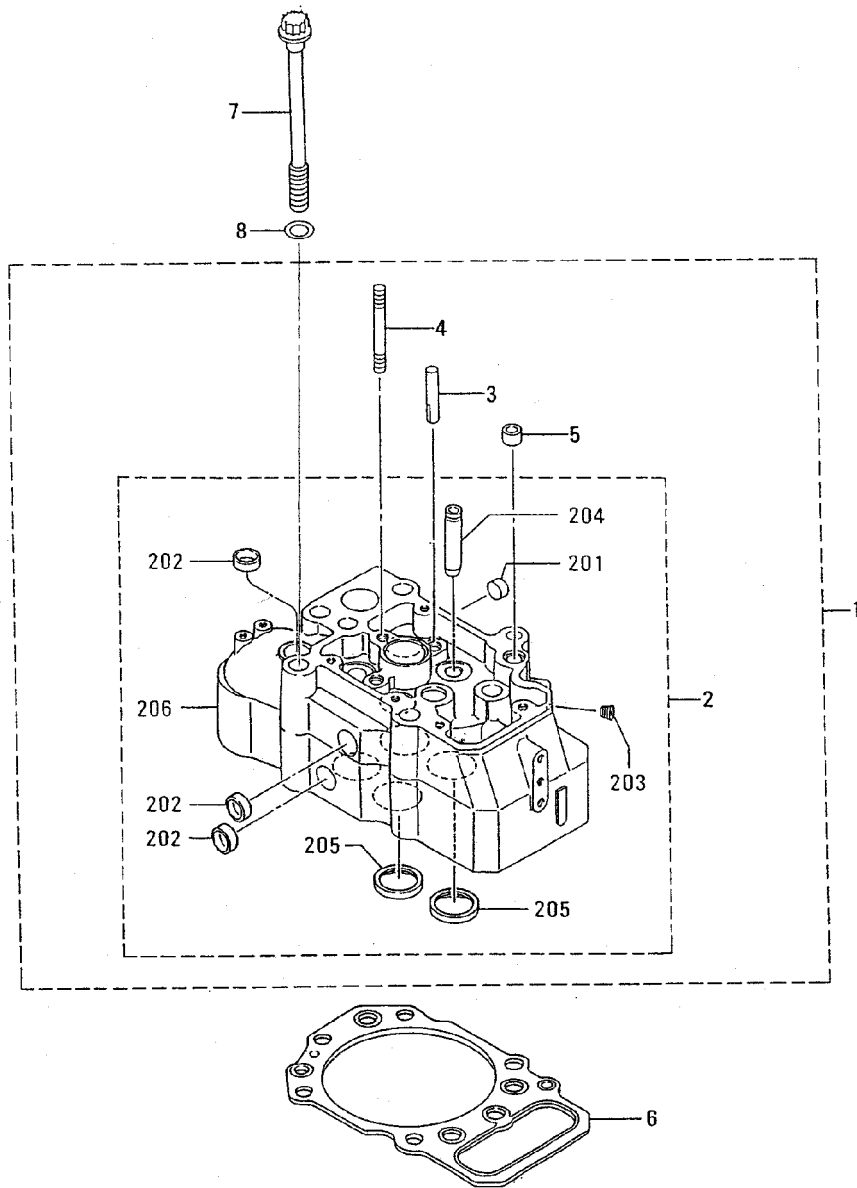
Illustrations (or exploded-view drawings) best representing the widest range of variations accompany most groups in this manual. Illustrations do not depict all details and may not show all parts. Do not use illustrations for assembly or disassembly instructions.

How to Find Part Numbers

Use the following steps to locate a service replacement part.

1. **Identify the group** most likely to include the service part number.
2. **Page forward to locate the group** identified in step 1 or find the appropriate page in the Table of Contents.
3. **Find the part on the illustration** and note the item number of the part or **find the part description in the parts list**.

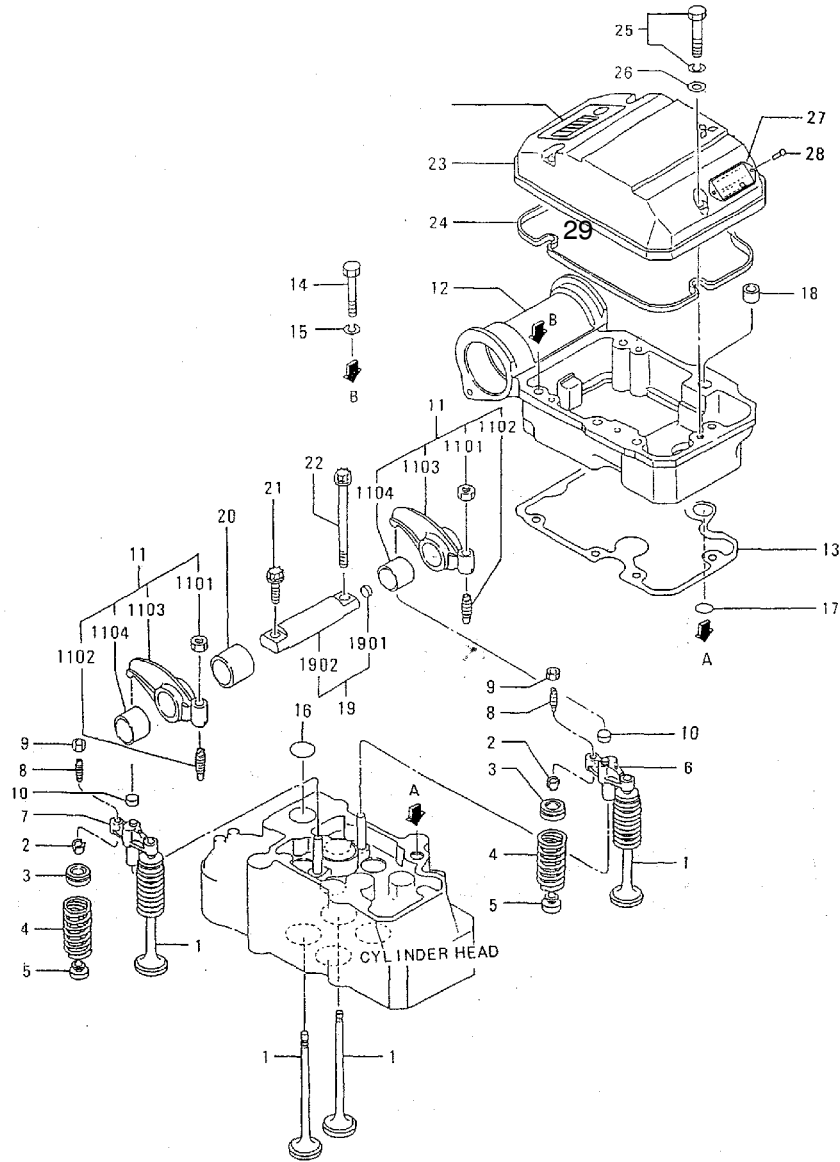
Group 1: Cylinder Head



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Item	Part No.	Description	Qty.
			Var. 1
1	GM21690	Cylinder head assembly	16
2	—	Not sold separately	16
201	GM14490	Cap, sealing	16
202	GM15518	Cap, sealing	112
203	GM15520	Plug, tapered	16
204	GM15590	Guide, valve	64
205	GM15602	Seat, exhaust valve	64
206	—	Not sold separately	16
3	GM14625	Guide	32
4	GM21689	Stud	16
5	GM14916	Pin, dowel	16
6	GM21688	Gasket, cylinder head	16
7	GM14917	Bolt	96
8	GM14628	Washer	96

Group 4: Valve Mechanism and Rocker Cover

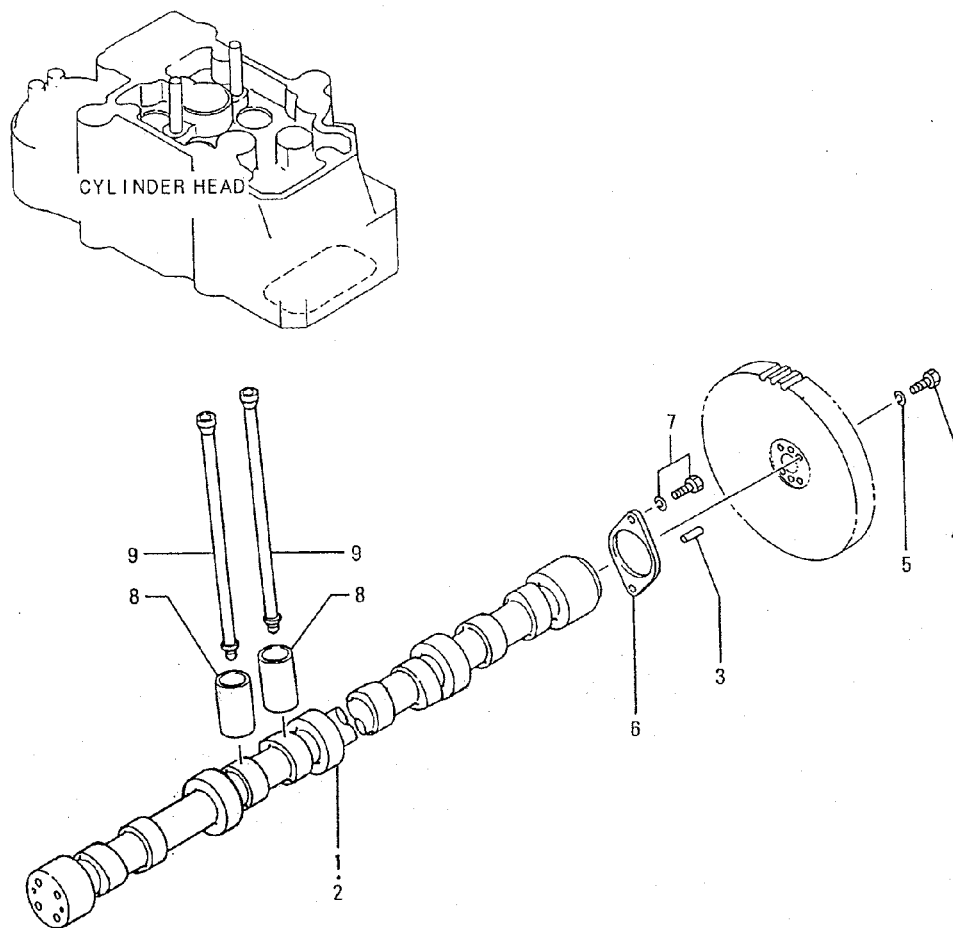


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Item	Part No.	Description	Qty. Var.
1	GM21693	Valve	64
2	GM14570	Cotter	128
3	GM14918	Rotator	64
4	GM15606	Spring, valve	64
5	GM14626	Seal	64
6	GM15607	Bridge	16
7	GM15608	Bridge	16
8	GM14893	Screw	32
9	GM15166	Nut	32
10	GM14557	Cap	32
11	GM21691	Rocker assembly	32
1101	GM15167	Nut	32
1102	GM14892	Screw	32
1103	—	Not sold separately	32
1104	GM15615	Bushing, rocker	32
12	GM15614	Case, rocker	16
13	GM15612	Packing	16
14	GM15959	Bolt	80

Item	Part No.	Description	Qty. Var.
15	GM15180	Washer, spring	80
16	GM15202	O-ring	16
17	GM21611	O-ring	16
18	GM14916	Pin, dowel	16
19	GM21694	Rocker shaft assembly	16
1901	GM14489	Cap, sealing	16
1902	—	Not sold separately	16
20	GM15605	Spacer, rocker	16
21	GM16045	Bolt, flange	16
22	GM15609	Bolt	16
23	GM21692	Cover, rocker	16
24	GM15617	O-ring, rocker cover	16
25	GM22113	Bolt w/washer	48
26	—	Not sold separately	48
27	GM21588	Rivet, screw	2
28	GM21687	Plate, caution	1

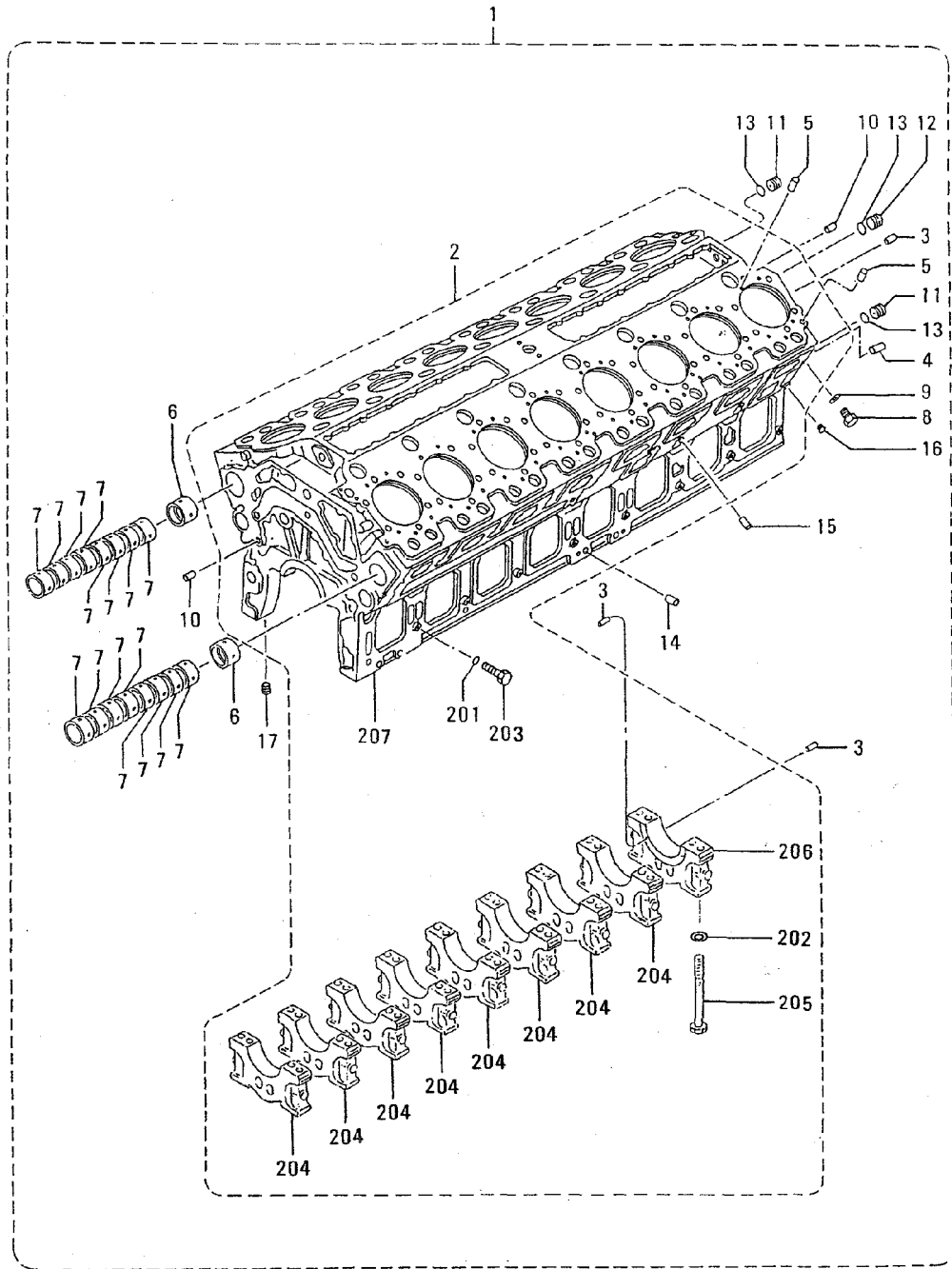
Group 5: Camshaft



6131_5

Item	Part No.	Description	Qty.
			Var. 1
1	GM21925	Camshaft, right side	1
2	GM21926	Camshaft, left side	1
3	GM15187	Pin	4
4	GM15118	Bolt	8
5	GM21715	Washer	8
6	GM15618	Plate, cam thrust	2
7	GM15151	Bolt	4
8	GM15621	Tappet	32
9	GM22915	Rod, push	32

Group 7.1: Crankcase Assembly

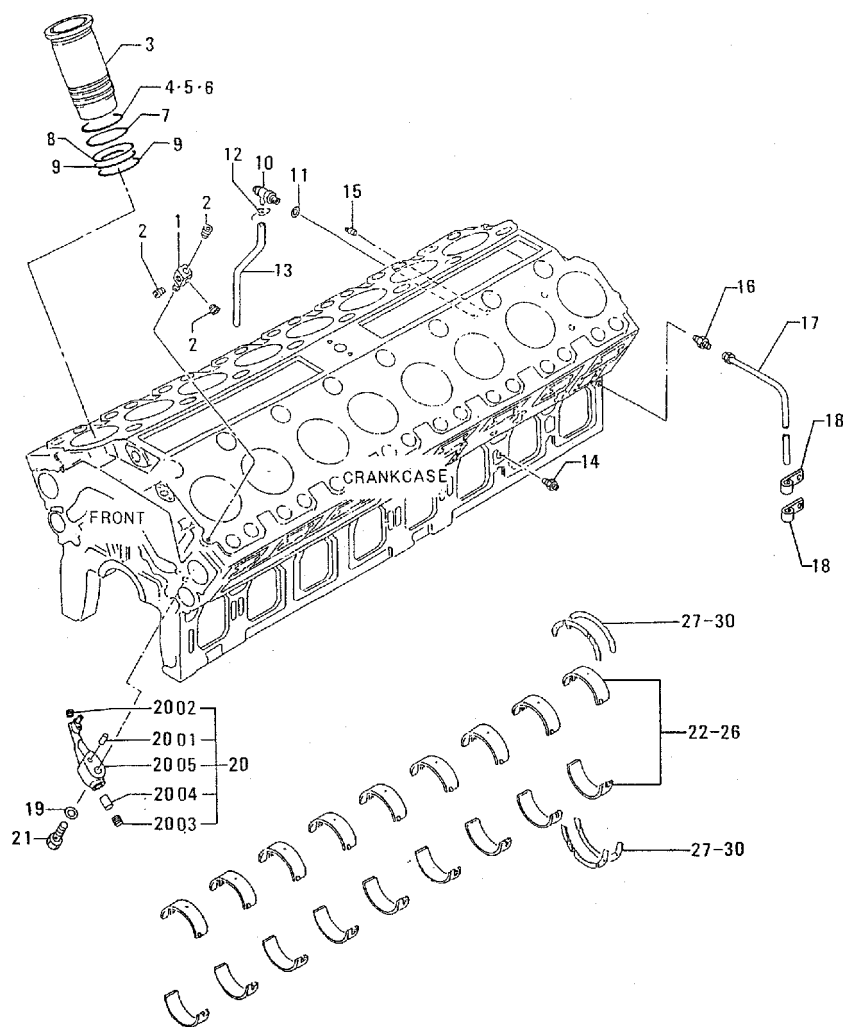


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Item	Part No.	Description	Qty. Var.
1	GM21928	Crankcase assembly	1
2	—	Not sold separately	1
3	GM21746	Pin, dowel	6
4	GM22125	Pin, dowel	2
5	GM14563	Pin, dowel	32
6	GM15625	Bushing, cam	2
7	GM15625	Bushing, cam	16
8	GM15627	Bolt set	18
9	GM14529	Washer, sealing	18
10	GM14562	Pin, dowel	4
11	GM15622	Plate, nozzle	2
12	GM14610	Plate	1

Item	Part No.	Description	Qty. Var.
13	GM14511	O-ring	3
14	GM15190	Pin, dowel	8
15	GM15187	Pin	4
16	GM14496	Plug, tapered	2
17	GM14497	Plug, tapered	1
201	GM14508	O-ring	18
202	GM14571	Washer	36
203	GM21745	Bolt, cap side	18
204	—	Not sold separately	8
205	GM21748	Bolt, bearing cap	36
206	—	Not sold separately	1
207	—	Not sold separately	1

Group 7.2: Crankcase Bearings



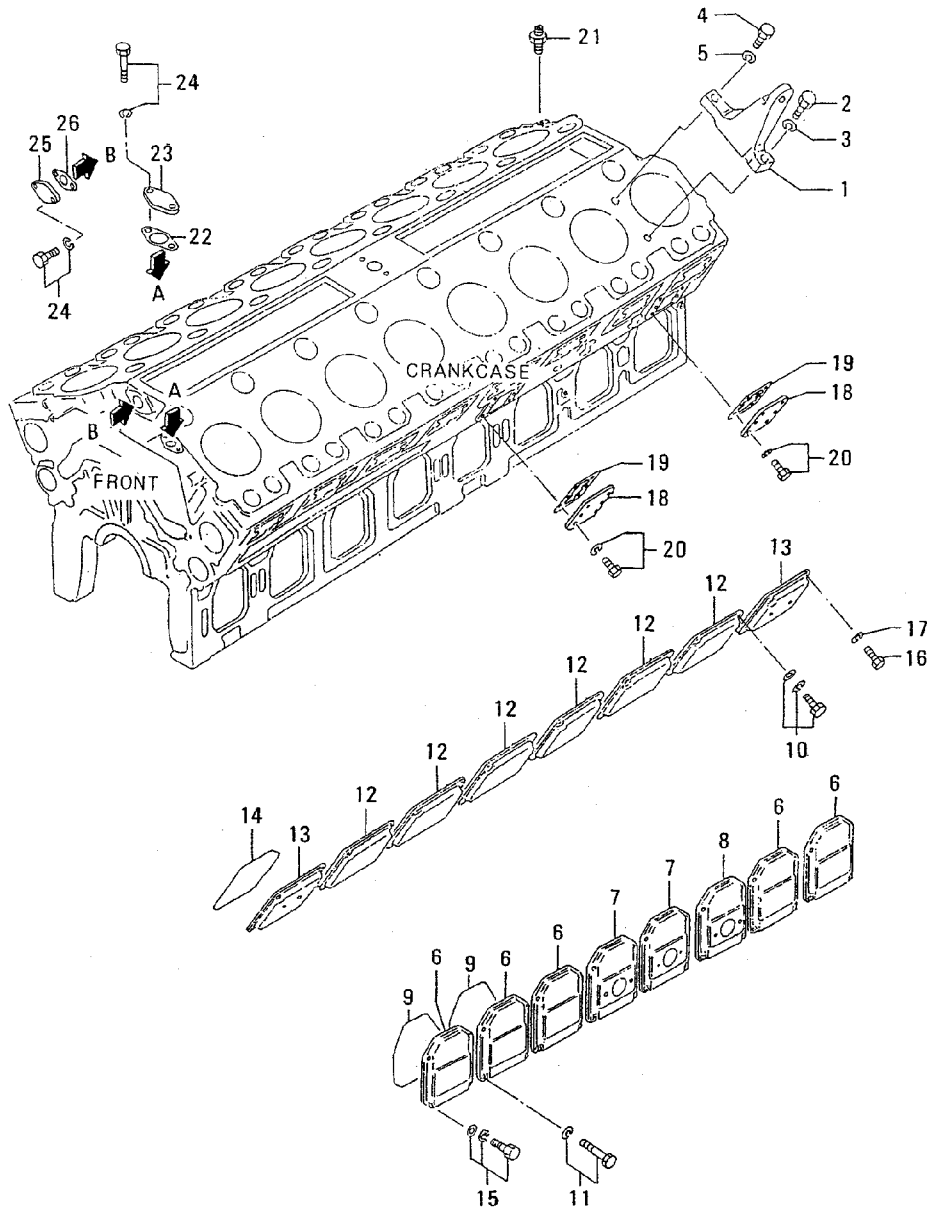
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Item	Part No.	Description	Qty. Var.
1	GM21832	Connector	1
2	GM15246	Plug, tapered	3
3	GM21701	Liner, cylinder	16
4	GM21695	Ring, liner, 1.00 mm	AR
5	GM21696	Ring, liner, 0.05 mm	AR
6	GM21697	Ring, liner, 0.15 mm	AR
7	GM15641	O-ring, liner	16
8	GM15591	O-ring, liner	16
9	GM15592	O-ring, liner	32
10	GM14622	Cock, drain	2
11	GM14532	Washer, sealing	2
12	GM14558	Clamp	2
13	GM14620	Pipe, drain	2
14	GM16029	Connector	2
15	GM15246	Plug, tapered	1
16	GM15230	Connector	1
17	GM22031	Pipe	1
18	GM15082	Clip	2

Item	Part No.	Description	Qty. Var.
19	GM14887	Washer	16
20	GM21749	Nozzle assembly	16
21	GM21747	Eyebolt	16
22	GM21751	Bearing set, standard	9
23	GM21752	Bearing set, 0.25 undersize	9
24	GM21753	Bearing set, 0.50 undersize	9
25	GM21754	Bearing set, 0.75 undersize	9
26	GM21755	Bearing set, 1.00 undersize	9
27	GM21756	Bearing, thrust, standard	4
28	GM21757	Bearing, thrust, 0.25 oversize	4
29	GM21758	Bearing, thrust, 0.50 oversize	4
30	GM21759	Bearing, thrust, 0.75 oversize	4
2001	GM22124	Pin, dowel	16
2002	GM21629	Screw, set	16
2003	GM21630	Screw, set	16
2004	GM21654	Valve, check	16
2005	—	Not sold separately	16

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Group 7.3: Crankcase Covers

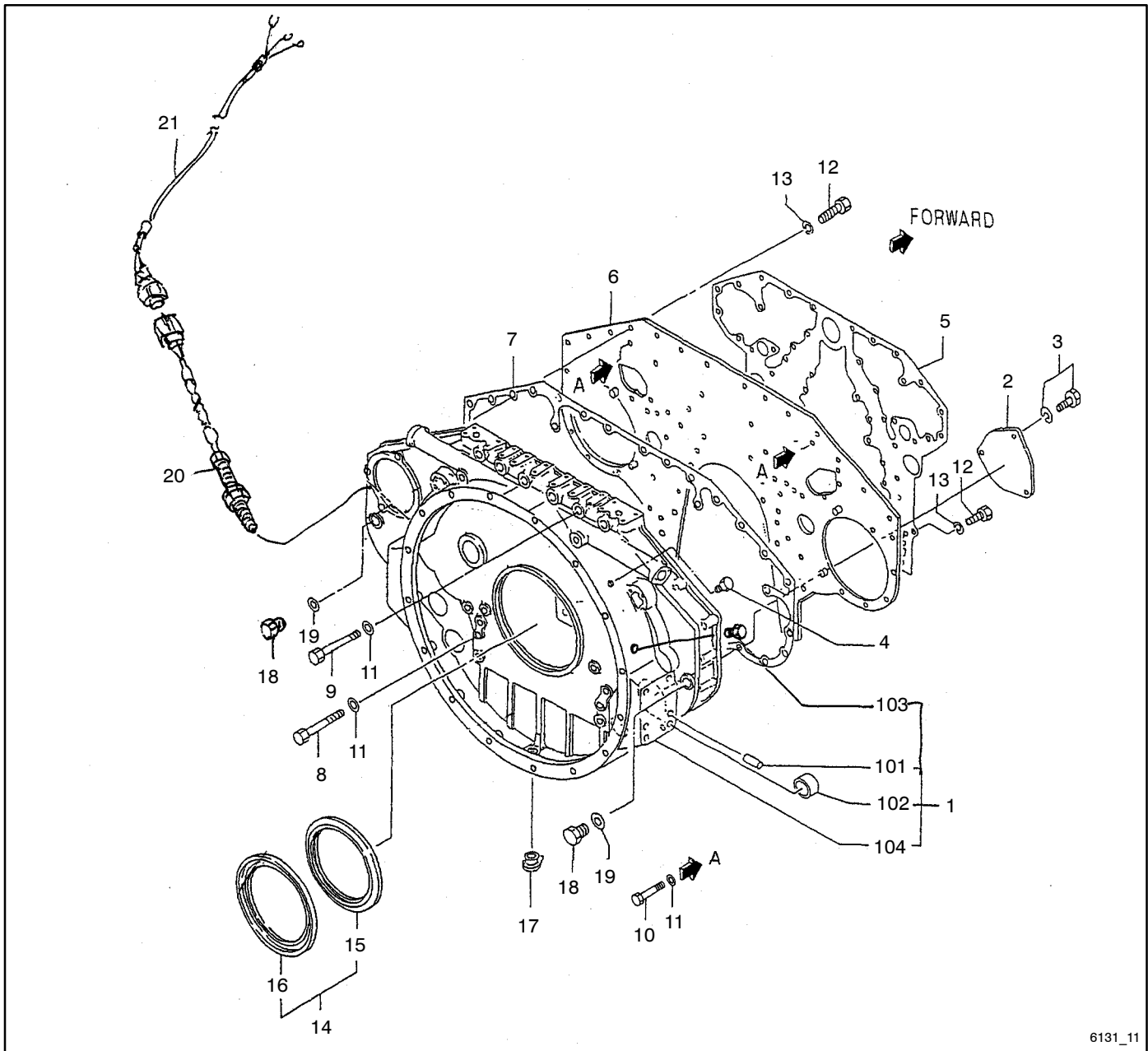


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Item	Part No.	Description	Qty.
			Var.
1	GM21750	Hanger	4
2	GM15125	Bolt	4
3	GM15184	Washer, spring	4
4	GM22099	Bolt	4
5	GM22120	Washer, spring	4
5	GM15182	Washer, spring	4
6	GM21699	Cover, side	13
7	GM21700	Cover, side	2
8	GM21930	Cover, side	1
9	GM15642	O-ring	16
10	GM15157	Bolt	58
11	GM22109	Bolt	6
12	GM21702	Cover, cam room	13
13	GM21703	Cover, cam room	3
14	GM15643	O-ring	16

Item	Part No.	Description	Qty.
			Var.
15	GM15157	Bolt	60
16	GM15115	Bolt	4
17	GM15180	Washer, spring	4
18	GM21927	Cover	4
19	GM21929	Packing	4
20	GM15150	Bolt	24
21	GM15150	Bolt	1
22	GM21667	Packing	2
23	GM14895	Cover	2
24	GM15151	Bolt	8
25	GM21698	Cover	2
26	GM21730	Gasket	2

Group 11: Timing Gear Case

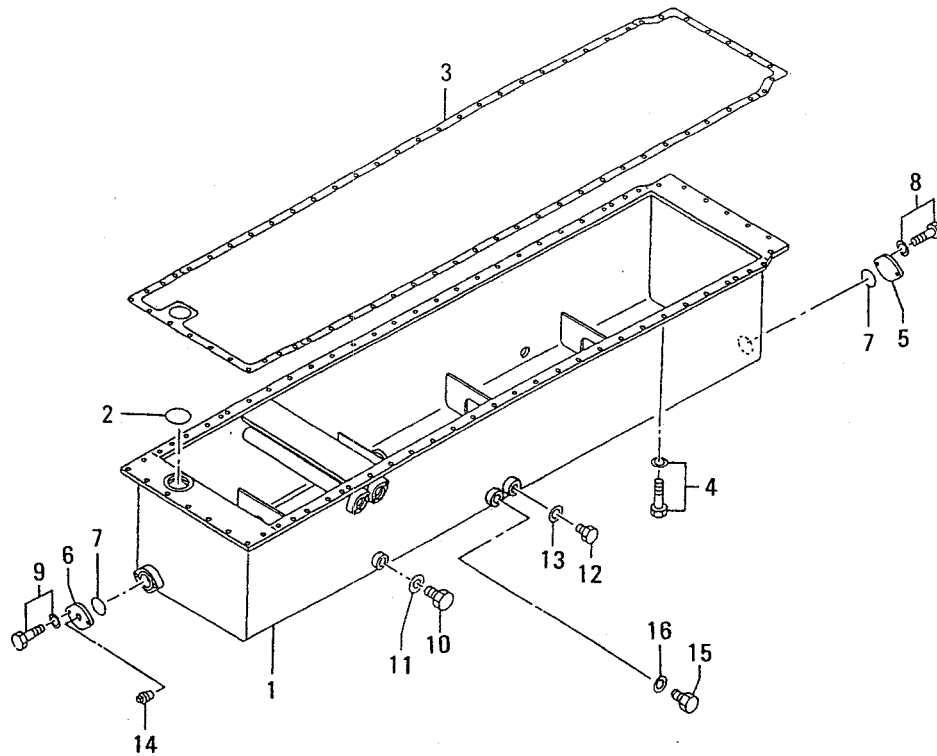


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Item	Part No.	Description	Qty.
			Var.
1	GM21765	Timing case assembly	1
101	GM22123	Pin, dowel	4
102	GM14521	Bushing	1
103	GM14901	Plug	1
104	—	Not sold separately	1
2	GM21912	Cover	1
3	GM15149	Bolt w/washer	1
4	GM14901	Plug	1
5	GM21761	Gasket	1
6	GM21764	Plate, rear	1
7	GM21763	Gasket	1
8	GM21635	Bolt	10

Item	Part No.	Description	Qty.
			Var.
9	GM21634	Bolt	6
10	GM15123	Bolt	2
11	GM14559	Washer	18
12	GM15107	Bolt	34
13	GM15180	Washer, spring	34
14	GM21760	Oil seal assembly, rear	1
15	GM21683	Slinger	1
16	GM14958	Seal, oil	1
17	GM14459	Plug	1
18	GM15239	Plug, drain	2
19	GM14532	Washer, sealing	2
20	GM21600	Pickup	1
21	GM21599	Cable, pickup	1

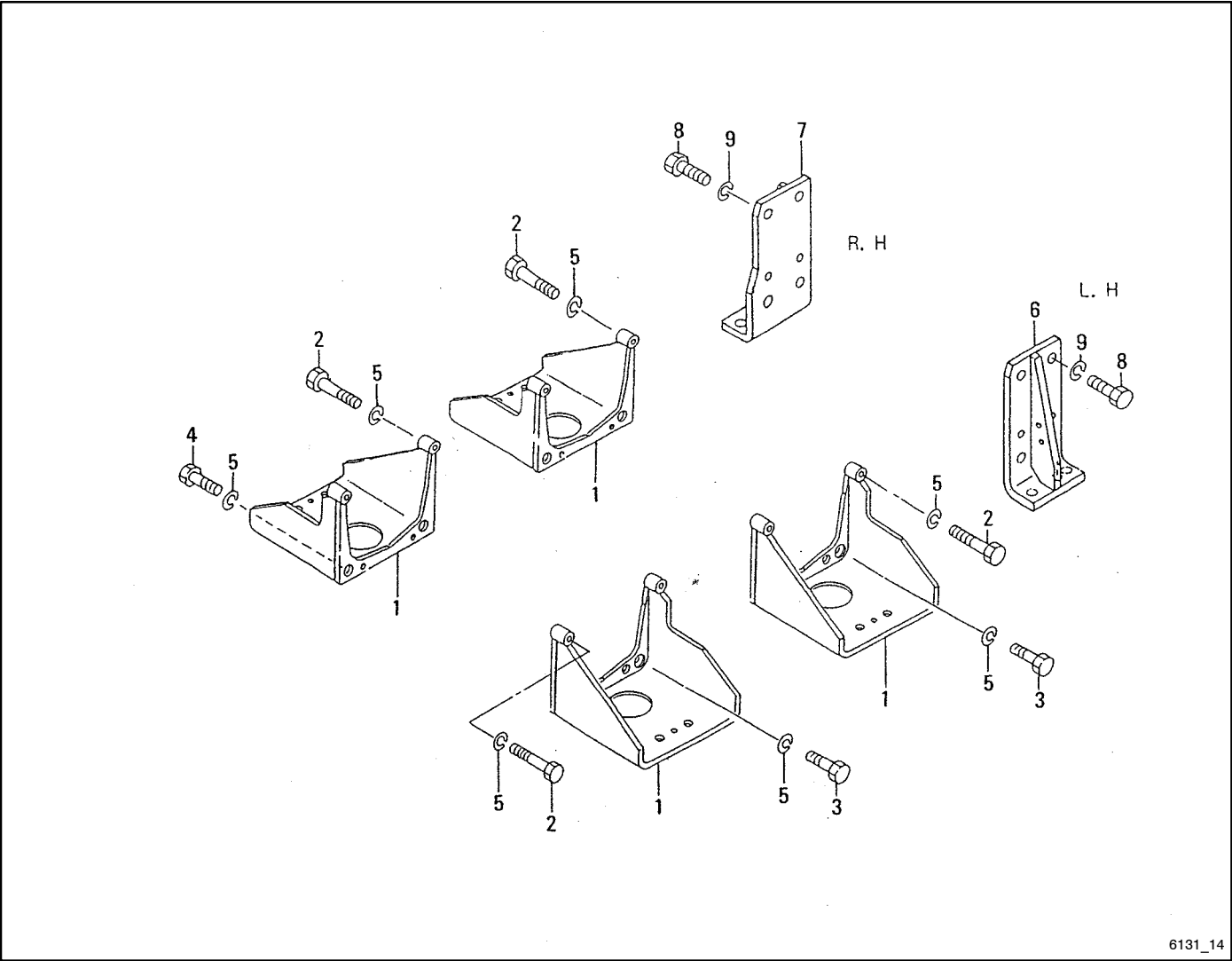
Group 13: Oil Pan



6131_13

Item	Part No.	Description	Qty.
			Var. 1
1	GM21932	Pan, oil	1
2	GM14519	O-ring	1
3	GM21931	Packing	1
4	GM15152	Bolt	66
5	GM14627	Cover	1
6	GM22028	Flange	1
7	GM14517	O-ring	2
8	GM15150	Bolt	2
9	GM15151	Bolt	2
10	GM15241	Plug, drain	2
11	GM14534	Washer, sealing	2
12	GM15239	Plug, drain	1
13	GM14532	Washer, sealing	1
14	GM22128	Plug, tapered	1
15	GM15238	Plug, screw	1
16	GM14531	Washer, sealing	1

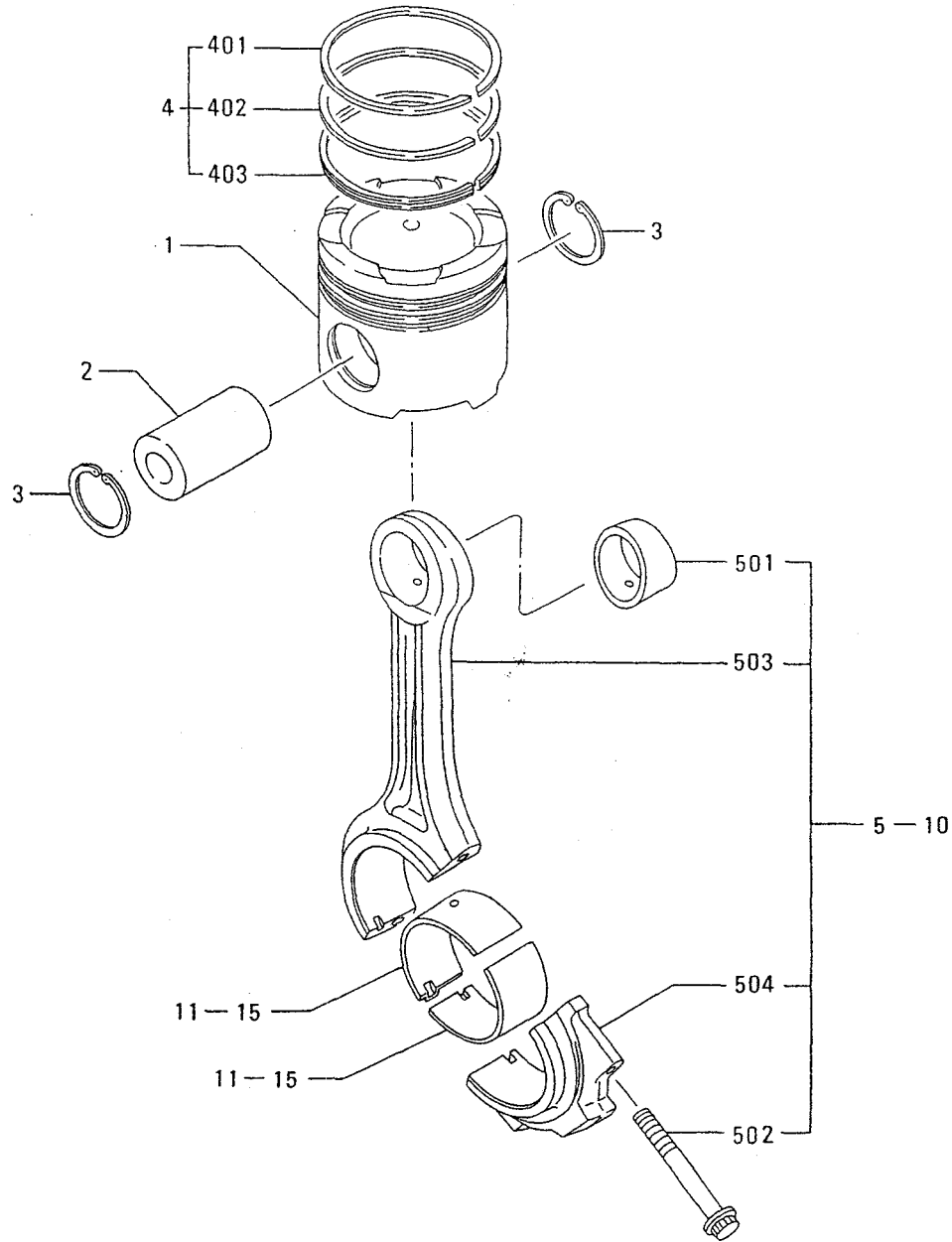
Group 14: Engine Mounting



6131_14

Item	Part No.	Description	Qty.
			Var. 1
1	GM21767	Bracket, mounting	4
2	GM22103	Bolt	8
3	GM22102	Bolt	7
4	GM22101	Bolt	1
5	GM15184	Washer, spring	16
6	GM21768	Bracket, mounting	1
7	GM21766	Bracket, mounting	1
8	GM22102	Bolt	8
9	GM15184	Washer, spring	8

Group 17: Piston and Connecting Rod

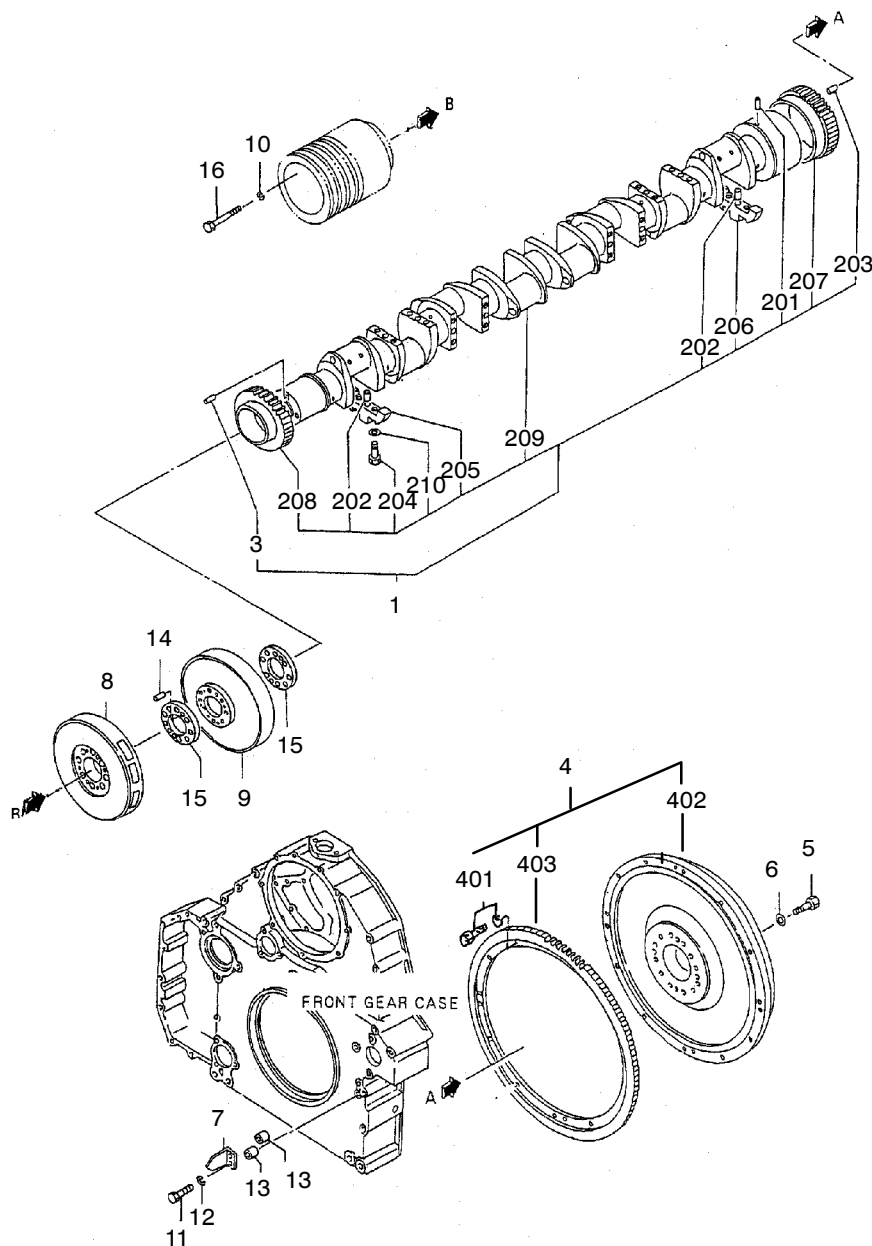


6131_17

Item	Part No.	Description	Qty. Var. 1
1	GM21704	Piston	16
2	GM21706	Pin, piston	16
3	GM16019	Ring, snap	32
4	GM21705	Ring set, piston	16
401	—	Not sold separately	16
402	—	Not sold separately	16
403	—	Not sold separately	16
5	GM21770	Connecting rod assembly, standard	16
501	GM21707	Bushing, connecting rod	16
502	GM21713	Bolt, connecting rod	32
503	—	Not sold separately	16
504	GM21769	Cap, connecting rod	16

Item	Part No.	Description	Qty. Var. 1
6	GM21771	Connecting rod assembly, 13.75 kg	16
7	GM21772	Connecting rod assembly, 13.90 kg	16
8	GM21773	Connecting rod assembly, 14.05 kg	16
9	GM21774	Connecting rod assembly, 14.20 kg	16
10	GM21775	Connecting rod assembly, 14.35 kg	16
11	GM21708	Bearing, connecting rod, standard	32
12	GM21709	Bearing, connecting rod, .25 undersized	32
13	GM21710	Bearing, connecting rod, .50 undersized	32
14	GM21711	Bearing, connecting rod, .75 undersized	32
15	GM21712	Bearing, connecting rod, 1.00 undersized	32

Group 20: Crankshaft, Flywheel, and Damper

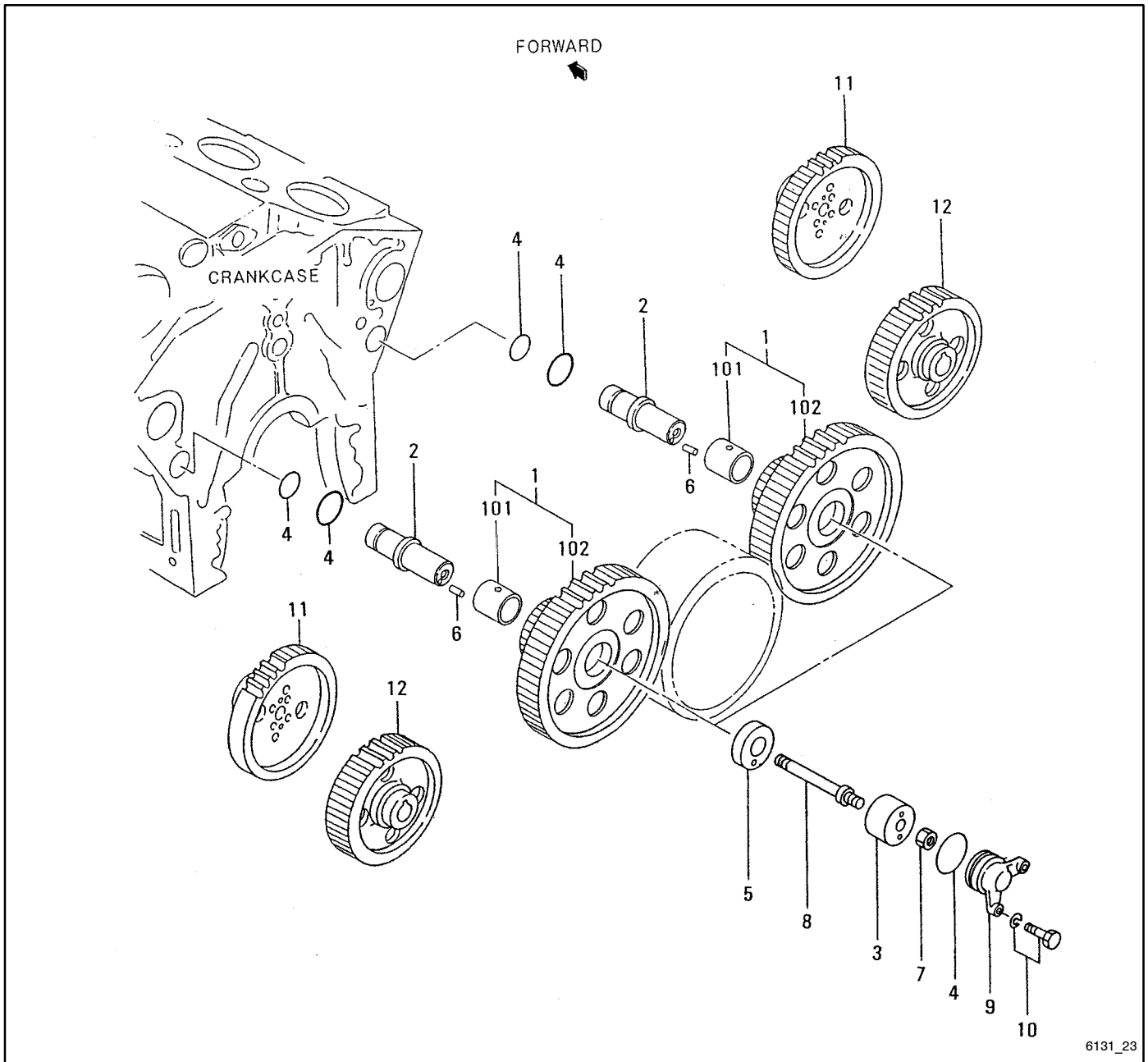


6131_20

Item	Part No.	Description	Qty.
			Var. 1
1	GM21933	Crankshaft assembly	1
201	GM15185	Pin, dowel	1
202	GM15190	Pin, dowel	16
203	GM21666	Pin, dowel	2
204	GM21684	Bolt	32
205	GM21685	Weight, balance	15
206	GM21776	Weight, balance	1
207	GM21783	Gear	1
208	GM14965	Gear	1
209	—	Not sold separately	1
210	GM14628	Washer	32
3	GM14987	Pin, dowel	2
4	GM21778	Flywheel assembly	1
401	GM15145	Bolt	12
402	—	Not sold separately	

Item	Part No.	Description	Qty.
			Var. 1
403	GM21779	Gear, ring	1
5	GM15966	Bolt	12
6	GM14628	Washer	12
7	GM14960	Pointer	1
8	GM21934	Damper assembly, front	1
9	GM14961	Damper assembly	1
10	GM14628	Washer	8
11	GM15114	Bolt	2
12	GM15180	Washer, spring	2
13	GM14993	Boss	2
14	GM15190	Pin, dowel	2
15	GM14962	Spacer, damper	2
16	GM14551	Bolt	8

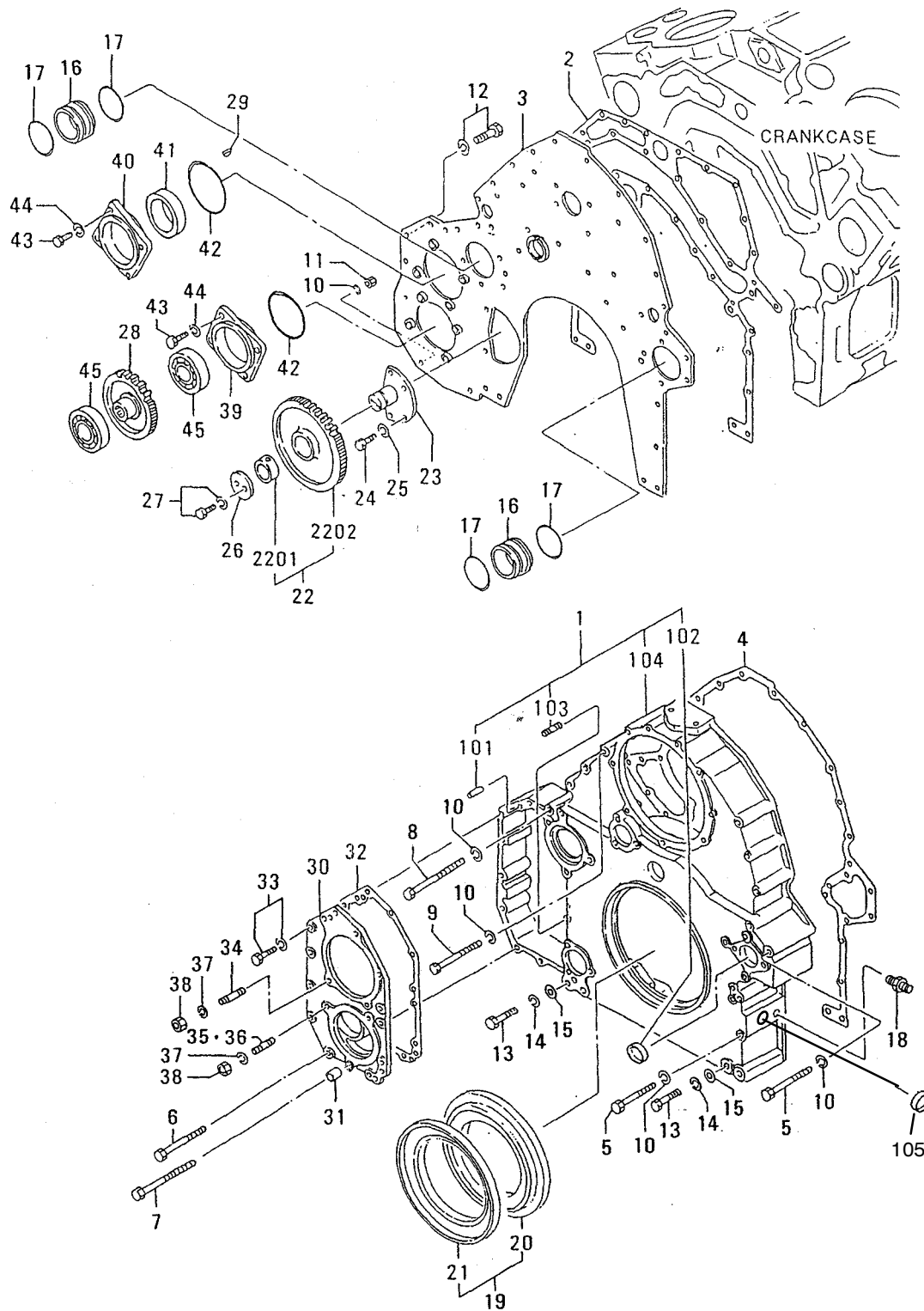
Group 23: Timing Gear



6131_23

Item	Part No.	Description	Qty. Var. 1
1	GM21788	Idler gear assembly	2
101	GM21786	Bushing	2
102	—	Not sold separately	2
2	GM21781	Shaft, idler	2
3	GM21782	Collar	2
4	GM14517	O-ring	6
5	GM21780	Plate, thrust	2
6	GM22125	Pin, dowel	2
7	GM22117	Nut, jam	2
8	GM21787	Bolt, idler	2
9	GM14963	Cover	2
10	GM15151	Bolt	4
11	GM21784	Gear, camshaft	2
12	GM21785	Gear, injection pump	2

Group 25.1: Accessory Drive, Front

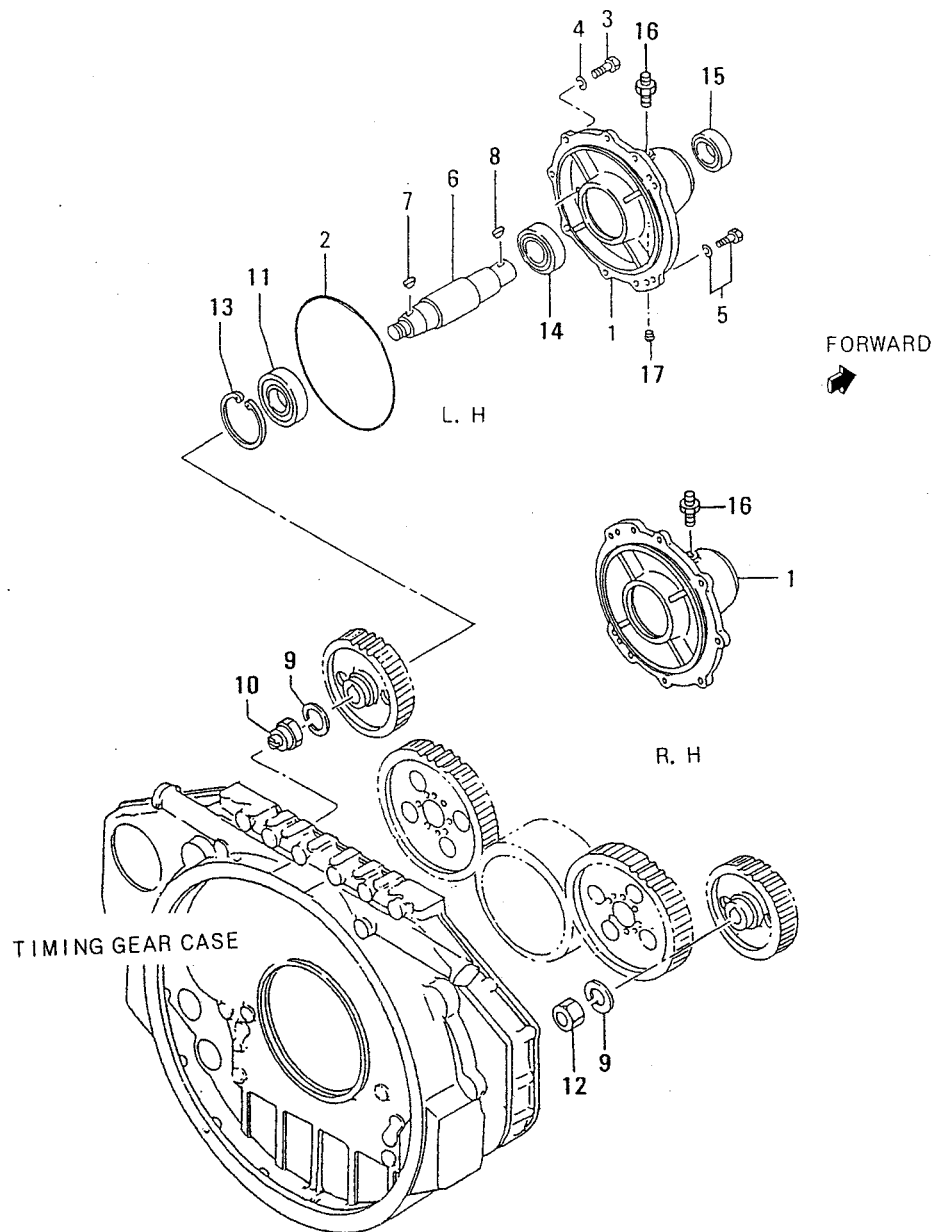


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Group 25.1: Accessory Drive, Front

Item	Part No.	Description	Qty.
			Var. 1
1	GM21799	Gear case assembly, front	1
101	GM15187	Pin	2
102	GM21603	Cap, sealing	2
103	GM21631	Stud	2
104	—	Not sold separately	1
105	GM21602	Cap, sealing	1
2	GM21798	Packing	1
3	GM21802	Plate, front	1
4	GM21800	Packing	1
5	GM14545	Bolt	10
6	GM22096	Bolt	6
7	GM14546	Bolt	1
8	GM15121	Bolt	3
9	GM15120	Bolt	1
10	GM15180	Washer, spring	21
11	GM15167	Nut	4
12	GM15150	Bolt	27
13	GM14548	Bolt	4
14	GM15182	Washer, spring	4
15	GM21149	Washer	4
16	GM21865	Coupling	2
17	GM15205	O-ring	4
18	GM15230	Connector	1
19	GM21795	Oil seal assembly, front	1
20	GM21686	Slinger	1
21	GM14920	Seal, oil	1
22	GM14964	Idler gear assembly	1
2201	GM14896	Bushing	1
2202	—	Not sold separately	1
23	GM21791	Shaft, idler	1
24	GM15109	Bolt	4
25	GM15180	Washer, spring	4
26	GM14568	Plate	1
27	GM15140	Bolt	2
28	GM21797	Gear, oil pump	1
29	GM15192	Key, woodruff	1
30	GM21801	Plate	1
31	GM15802	Pin, dowel	1
32	GM21796	Packing	1
33	GM15152	Bolt	4
34	GM21631	Stud	2
35	GM21633	Stud	2
36	GM21632	Stud	2
37	GM15180	Washer, spring	6
38	GM15165	Nut	6
39	GM21789	Cover	1
40	GM21790	Cover	1
41	GM15195	Seal, oil	1
42	GM21623	O-ring	2
43	GM15107	Bolt	8
44	GM15180	Washer, spring	8
45	GM15259	Bearing, ball	2

Group 25.2: Accessory Drive, Rear

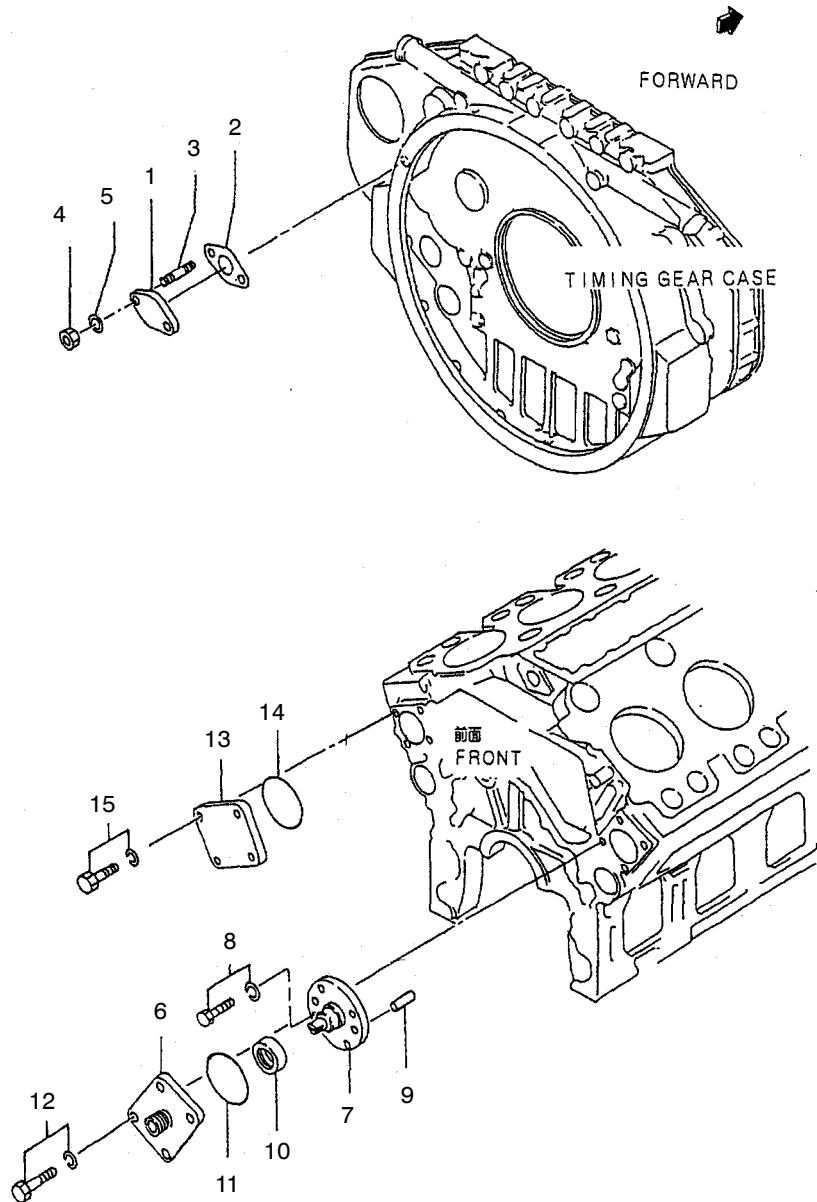


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Item	Part No.	Description	Qty. Var. 1
1	GM15692	Case, drive	2
2	GM15686	O-ring	2
3	GM15111	Bolt	10
4	GM15180	Washer, spring	10
5	GM15152	Bolt	4
6	GM21793	Shaft, drive	2
7	GM15998	Key, woodruff	2
8	GM15192	Key, woodruff	2
9	GM21714	Washer	2

Item	Part No.	Description	Qty. Var. 1
11	GM16039	Bearing, ball	2
12	GM22088	Nut	1
13	GM16021	Ring, snap	2
14	GM16037	Bearing, ball	2
15	GM14921	Seal, oil	2
16	GM15869	Connector	1
17	GM14496	Plug, tapered	2

Group 25.3: Hourmeter Cover

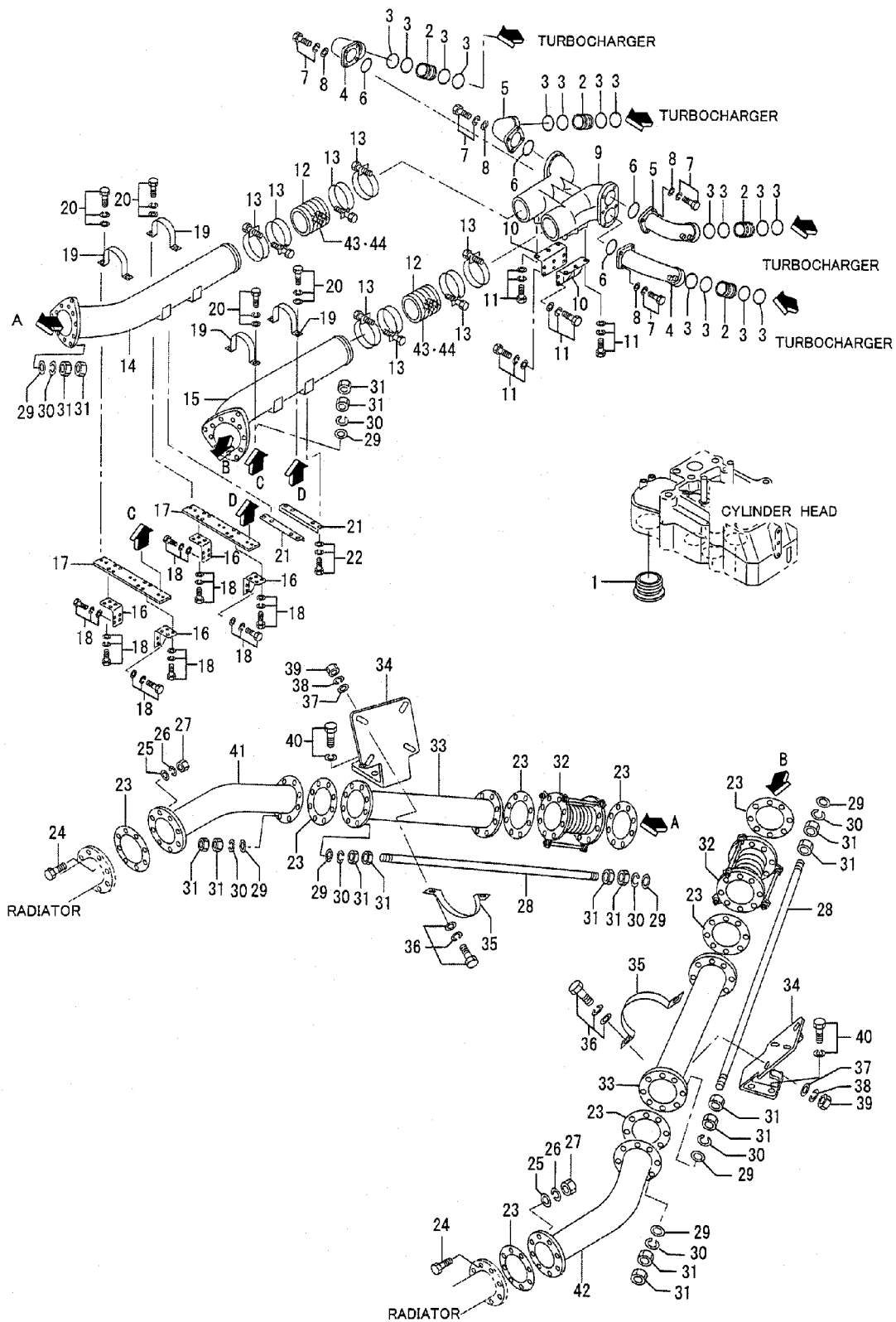


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Item	Part No.	Description	Qty. Var. 1
1	GM15549	Cover	1
2	GM15550	Gasket	1
3	GM22106	Stud	2
4	GM15163	Nut	2
5	GM15178	Washer, spring	2
6	GM21792	Case, oil seal	1
7	GM21716	Coupling	1
8	GM15150	Bolt	2
9	GM22121	Pin, dowel	2

Item	Part No.	Description	Qty. Var. 1
10	GM15193	Seal, oil	1
11	GM21622	O-ring	1
12	GM15151	Bolt	4
13	GM21794	Cover	2
14	GM21622	O-ring	2
15	GM15151	Bolt	8

Group 30.1: Intake Tubes

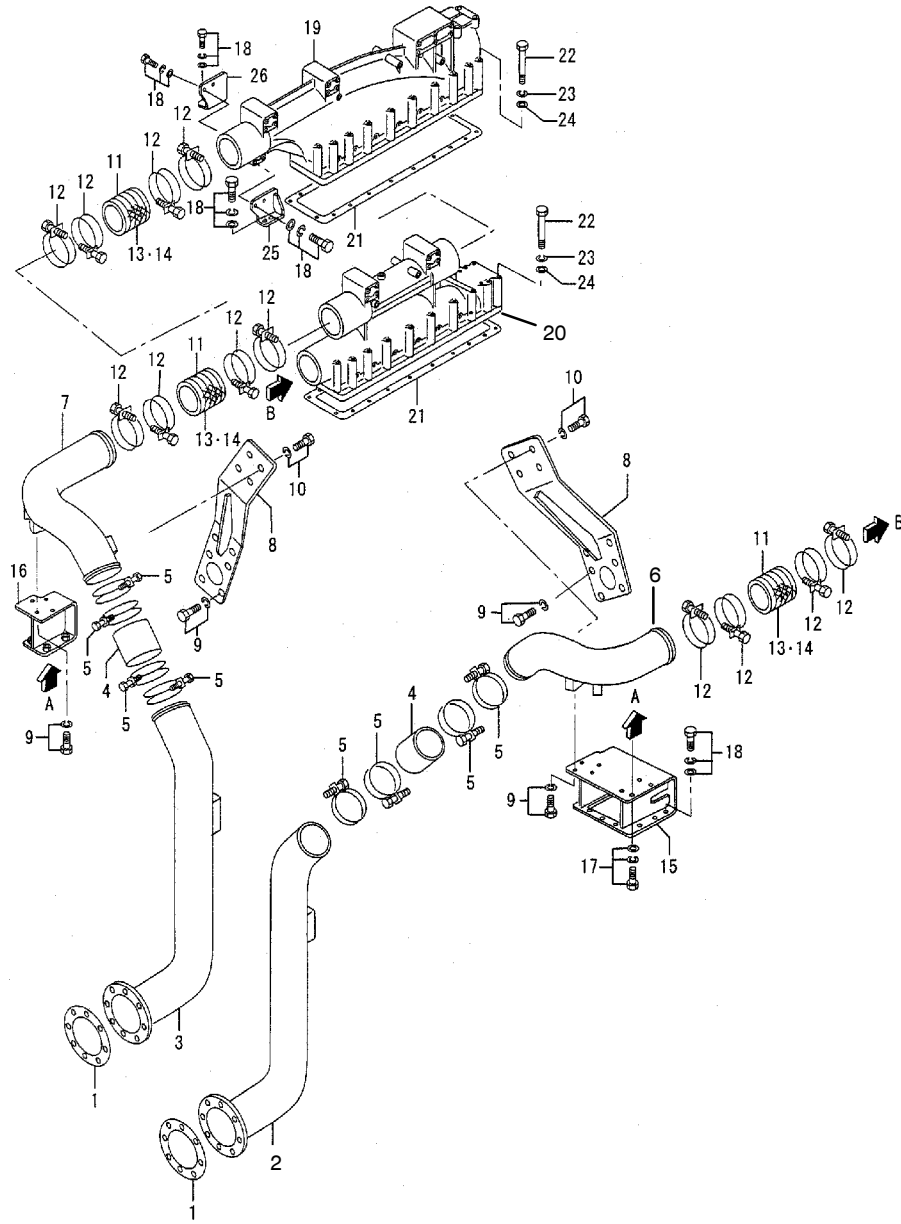


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Group 30.1: Intake Tubes

Item	Part No.	Description	Qty.
			Var. 1
1	GM15693	Packing	16
2	GM21671	Connector	4
3	GM14648	O-ring	16
4	GM21946	Duct, air, lower	2
5	GM21947	Duct, air, upper	2
6	GM21615	O-ring	4
7	GM15145	Bolt	16
8	GM15174	Washer, plain	16
9	GM21953	Duct, air	1
10	GM21941	Stay, air	2
11	GM15157	Bolt	18
12	GM21717	Hose, rubber	2
13	GM21607	Clamp	8
14	GM21948	Duct, air, right side	1
15	GM21949	Duct, air, left side	1
16	GM21942	Stay, air	4
17	GM21943	Plate, air	2
18	GM15157	Bolt	32
19	GM21137	Clamp, air duct	4
20	GM15154	Bolt	8
21	GM21940	Support, air	2
22	GM15157	Bolt	8
23	GM21146	Gasket	8
24	GM21148	Bolt	80
25	GM21149	Washer	80
26	GM22120	Washer, spring	80
26	GM15182	Washer, spring	80
27	GM15984	Nut	80
28	GM21128	Turnbuckle, M10 L1520	6
29	GM15174	Washer, plain	24
30	GM15179	Washer, spring	24
31	GM15164	Nut	48
32	GM21141	Joint, flexible	2
33	GM21935	Duct, air	2
34	GM21139	Stay, air duct	2
35	GM21137	Clamp, air duct	2
36	GM15154	Bolt	4
37	GM15174	Washer, plain	4
38	GM15179	Washer, spring	4
39	GM15164	Nut	4
40	GM15140	Bolt	8
41	GM21936	Duct, air, right side	1
42	GM21937	Duct, air, left side	1
43	GM14890	Insulator, heat	2
44	GM14900	Wire	2

Group 30.2: Air Box

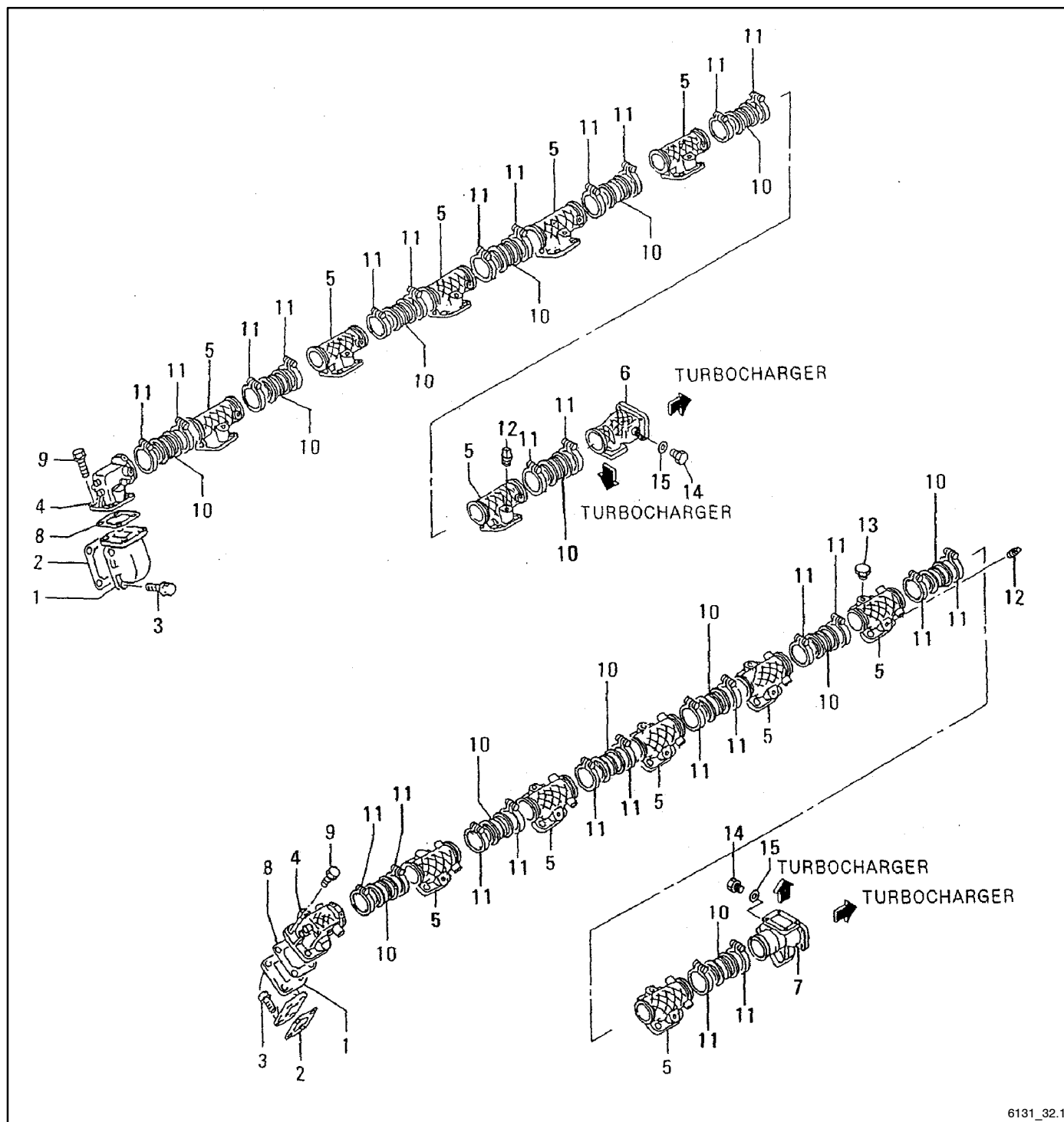


6131_30.2

Item	Part No.	Description	Qty. Var. 1
1	GM21145	Gasket	2
2	GM21954	Duct, air, right side	1
3	GM21939	Duct, air, left side	1
4	GM21718	Hose, rubber	2
5	GM21606	Clamp	8
6	GM21955	Duct, air	1
7	GM21950	Duct, air	1
8	GM21938	Stay, air	2
9	GM15152	Bolt	16
10	GM15151	Bolt	4
11	GM21718	Hose, rubber	3
12	GM21606	Clamp	12
13	GM14890	Insulator, heat	3
14	GM14900	Wire	3
15	GM21804	Stay, air	1

Item	Part No.	Description	Qty. Var. 1
16	GM21803	Stay, air	1
17	GM22114	Bolt w/washer	8
18	GM15156	Bolt	17
19	GM21952	Box, air, rear	1
20	GM21951	Box, air, front	1
21	GM21992	Gasket	2
22	GM14541	Bolt	40
23	GM15179	Washer, spring	40
24	GM15174	Washer, plain	40
25	GM21944	Stay, air	1
26	GM21945	Stay, air	1

Group 32.1: Exhaust System

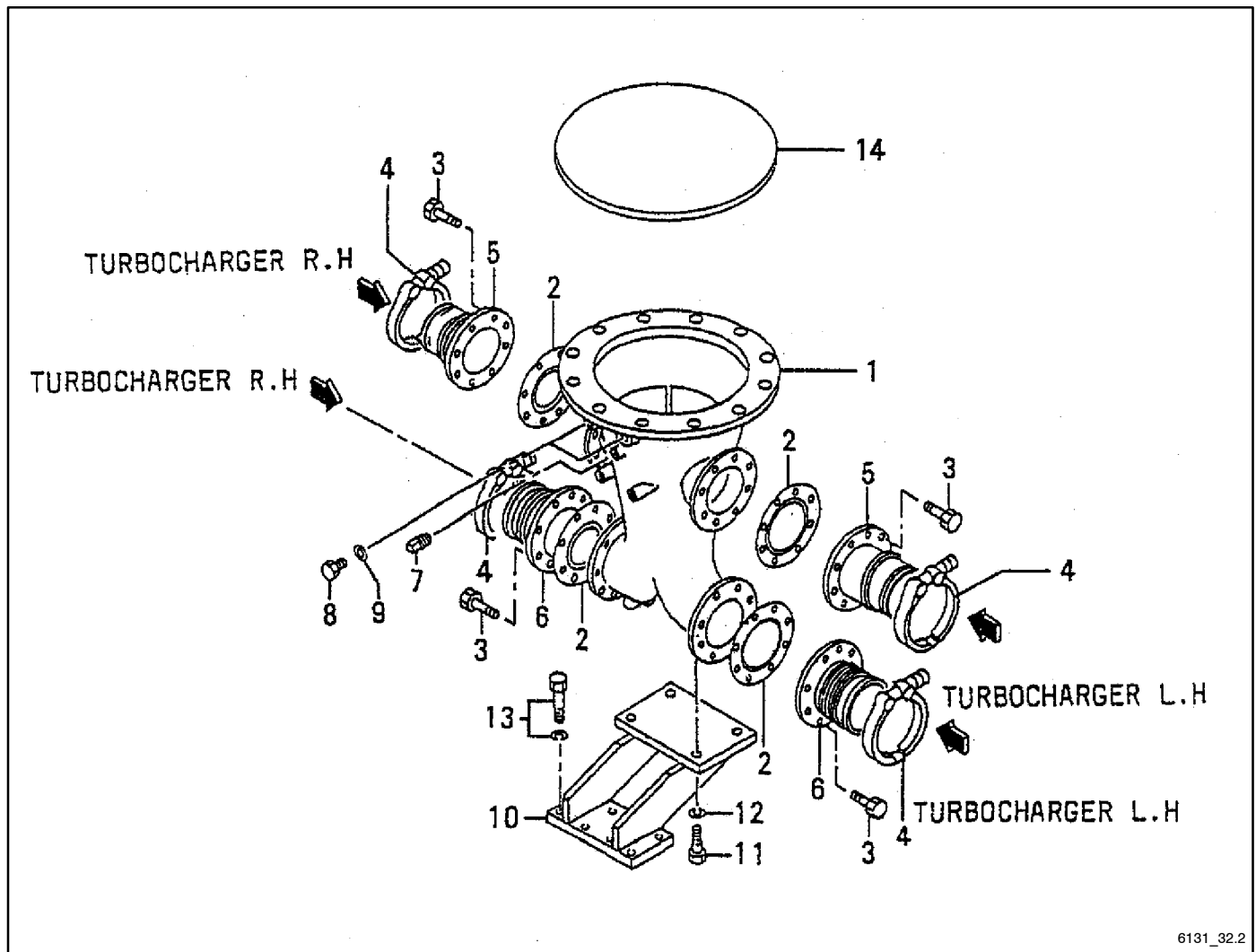


6131_32.1

Item	Part No.	Description	Qty. Var. 1
1	GM21809	Connector	16
2	GM15700	Gasket, exhaust	16
3	GM21719	Bolt	64
4	GM21811	Manifold, exhaust	2
5	GM21812	Manifold, exhaust	12
6	GM21968	Manifold, exhaust, right side	1
7	GM21967	Manifold, exhaust, left side	1
8	GM21807	Gasket, exhaust	16
9	GM21658	Bolt	64

Item	Part No.	Description	Qty. Var. 1
10	GM21813	Joint	14
11	GM21808	V-clamp	28
12	GM16034	Plug, tapered	16
13	GM21805	Plug, taper	16
14	GM22026	Plug, screw	4
15	GM22025	Gasket	4

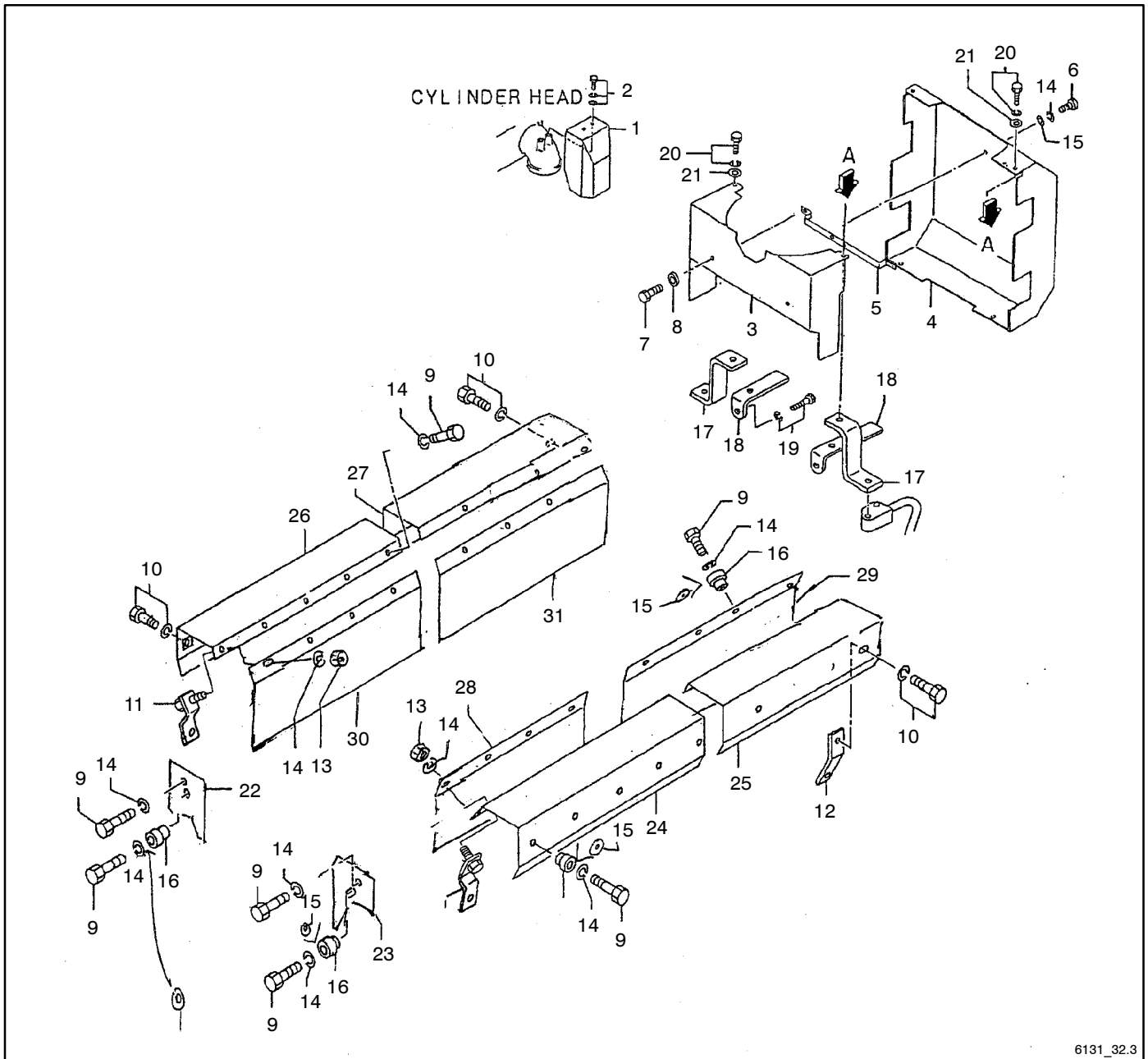
Group 32.2: Exhaust Elbow



6131_32.2

Item	Part No.	Description	Qty.
			Var. 1
1	GM21966	Pipe, exhaust	1
2	GM21961	Gasket, exhaust	4
3	GM21658	Bolt	32
4	GM22067	V-clamp	4
5	GM21962	Joint, exhaust	2
6	GM21956	Joint, bellows	2
7	GM15246	Plug, tapered	2
8	GM14994	Plug	1
9	GM15229	Gasket	1
10	GM21965	Bracket, pipe	1
11	GM21636	Bolt	4
12	GM15180	Washer, spring	4
13	GM15151	Bolt	8
14	GM21958	Cover, exhaust	1

Group 32.3: Exhaust Cover

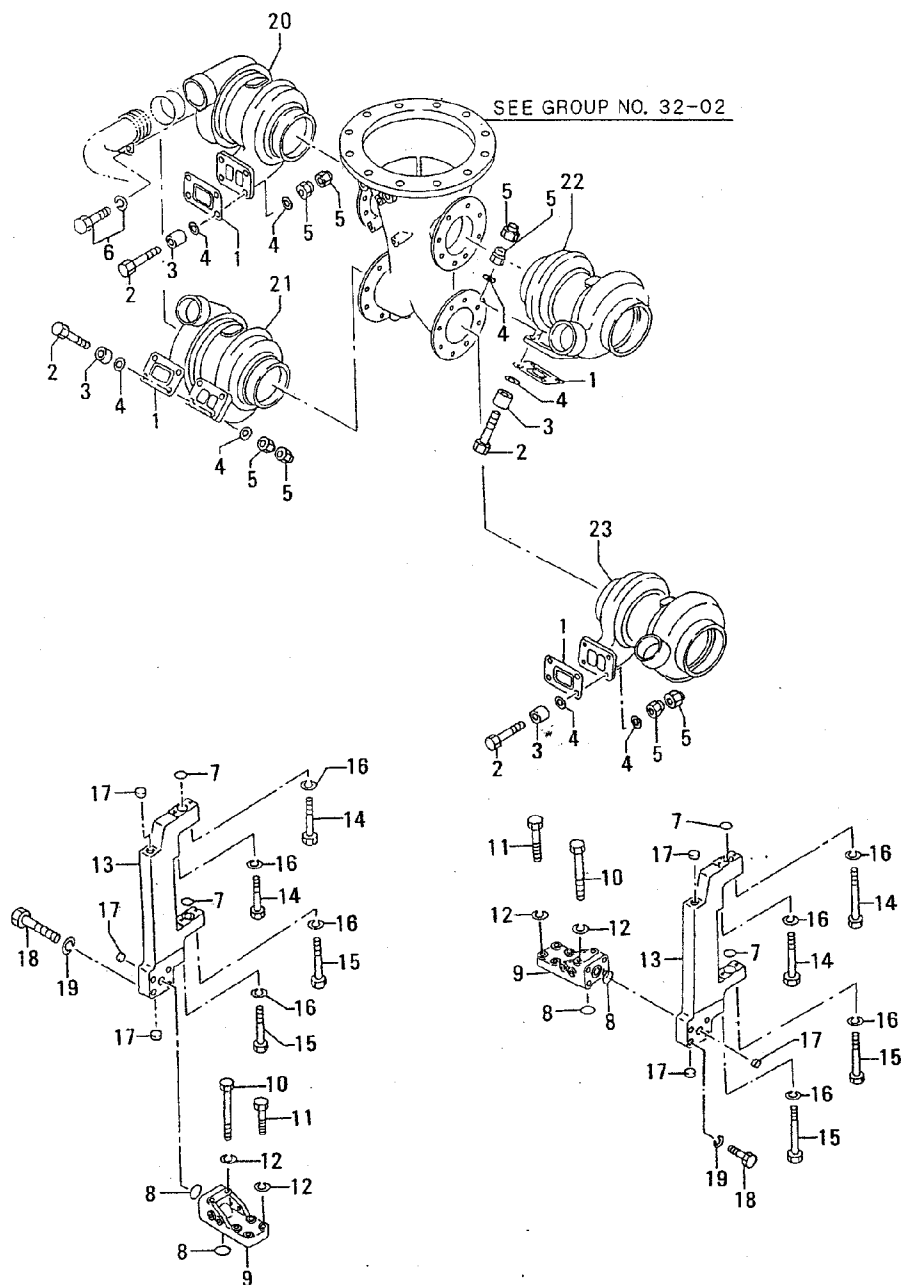


6131_32.3

Item	Part No.	Description	Qty. Var. 1
1	GM15702	Insulator	16
2	GM15980	Bolt	32
3	GM21963	Insulator, turbo, front	1
4	GM21964	Insulator, turbo, rear	1
5	GM21959	Stay, insulator	1
6	GM15924	Bolt	4
7	GM21656	Bolt	2
8	GM21664	Spacer	2
9	GM14594	Bolt	24
10	GM15140	Bolt	10
11	GM21979	Stay, insulator	8
12	GM21814	Stay, insulator	10
13	GM15164	Nut	8
14	GM15179	Washer, spring	38
15	GM15174	Washer, plain	14

Item	Part No.	Description	Qty. Var. 1
16	GM21810	Washer	14
17	GM21806	Stay, insulator	2
18	GM22081	Plate	2
19	GM15140	Bolt	2
20	GM15139	Bolt w/washer	4
21	GM15174	Washer, plain	4
22	GM21969	Cover, insulator	1
23	GM21970	Cover, insulator	1
24	GM21971	Insulator, out, front left	1
25	GM21972	Insulator, out, rear left	1
26	GM21973	Insulator, out, front right	1
27	GM21974	Insulator, out, rear right	1
28	GM21975	Insulator, in, front left	1
29	GM21976	Insulator, in, rear left	1
30	GM21977	Insulator, in, front right	1
31	GM21978	Insulator, in, rear right	4

Group 33.1: Turbocharger and Mounting



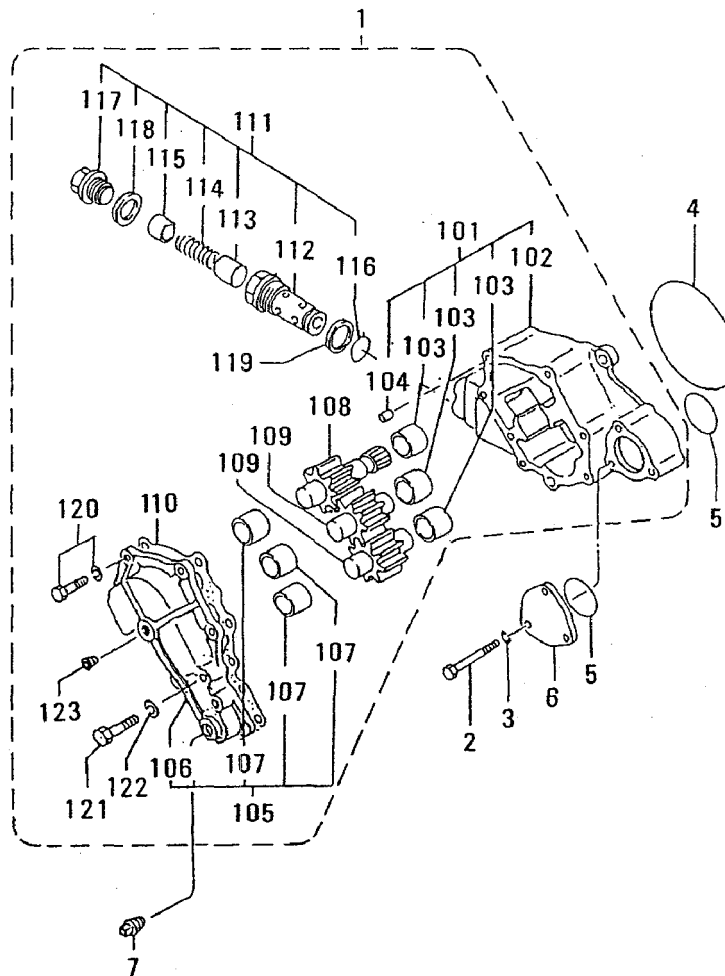
6131_33.1

Item	Part No.	Description	Qty.
			Var. 1
1	GM21657	Gasket	4
2	GM14593	Bolt	16
3	GM14968	Spacer	16
4	GM14969	Washer	32
5	GM15087	Nut	32
6	GM22115	Washer, spring	4
7	GM14515	O-ring	4
8	GM14515	O-ring	4
9	GM21957	Bracket	2
10	GM22095	Bolt	4
11	GM15112	Bolt	8
12	GM15180	Washer, spring	12

Item	Part No.	Description	Qty.
			Var. 1
13	GM21960	Bracket, turbo	2
14	GM22104	Bolt	4
15	GM22105	Bolt	4
16	GM15179	Washer, spring	8
17	GM14490	Cap, sealing	2
18	GM22100	Bolt	8
19	GM22115	Washer, spring	8
20	GM22074	Turbocharger, right upper	1
21	GM22076	Turbocharger, right lower	1
22	GM22075	Turbocharger, left upper	1
23	GM22077	Turbocharger, left lower	1

Notes

Group 35: Oil Pump

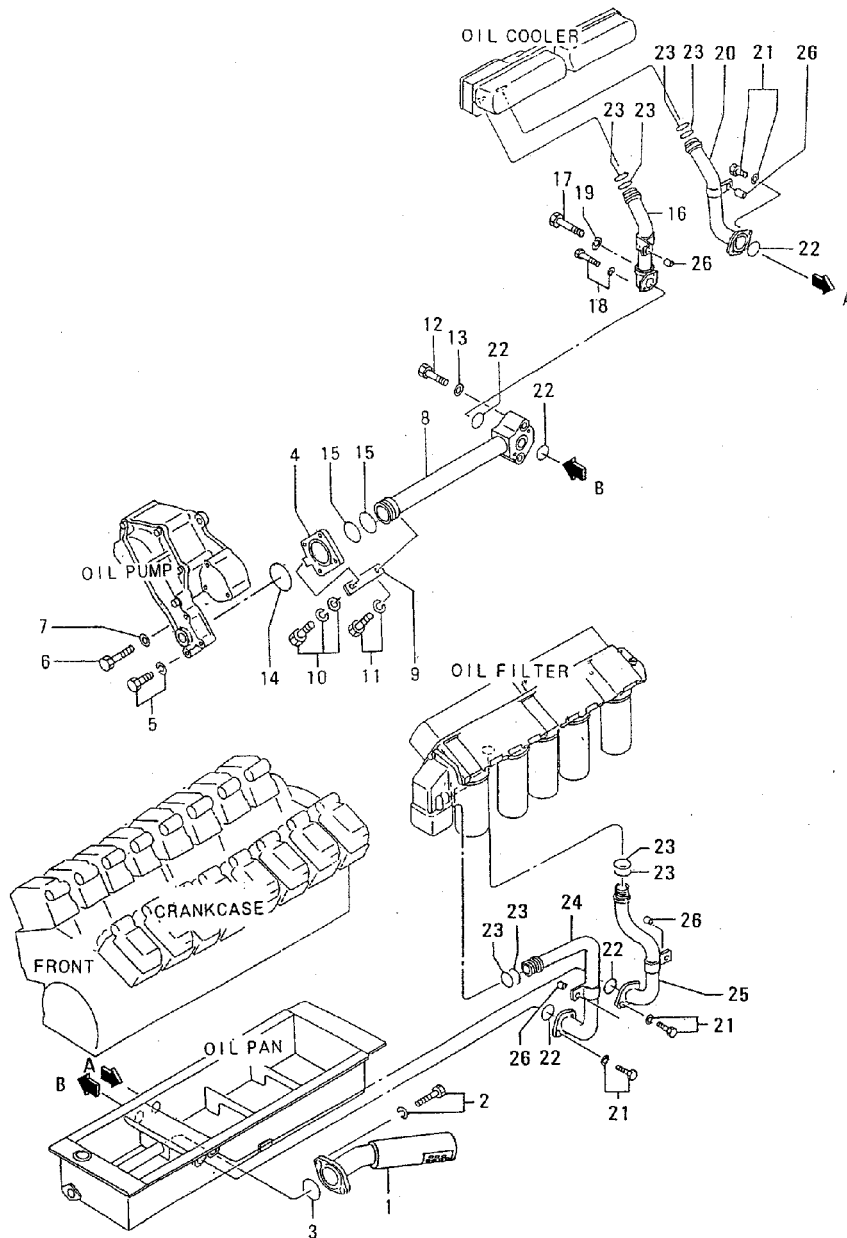


6131_35

Item	Part No.	Description	Qty. Var. 1
1	GM21824	Oil pump assembly	1
101	GM21822	Oil pump case assembly	1
102	—	Not sold separately	3
103	—	Not sold separately	3
104	—	Not sold separately	2
105	GM21823	Oil pump cover assembly	1
106	—	Not sold separately	1
107	—	Not sold separately	3
108	GM21818	Shaft and gear	1
109	GM21820	Shaft and gear	2
110	GM21819	Packing	1
111	GM21821	Valve assembly	3
112	—	Not sold separately	1
113	GM21672	Valve	3
114	GM21720	Spring	3

Item	Part No.	Description	Qty. Var. 1
115	GM21721	Stopper	3
116	GM21816	O-ring	3
117	GM21817	Plug	3
118	GM14533	Washer, sealing	3
119	GM21628	Washer, sealing	3
120	GM15143	Bolt	6
121	GM15958	Bolt	2
122	GM15179	Washer, spring	2
123	GM21605	Plug, tapered	1
2	GM22095	Bolt	3
3	GM15180	Washer, spring	3
4	GM21624	O-ring	1
5	GM14518	O-ring	2
6	GM21815	Cover, oil pump	1
7	GM22128	Plug, tapered	1

Group 36.1: Oil Strainer

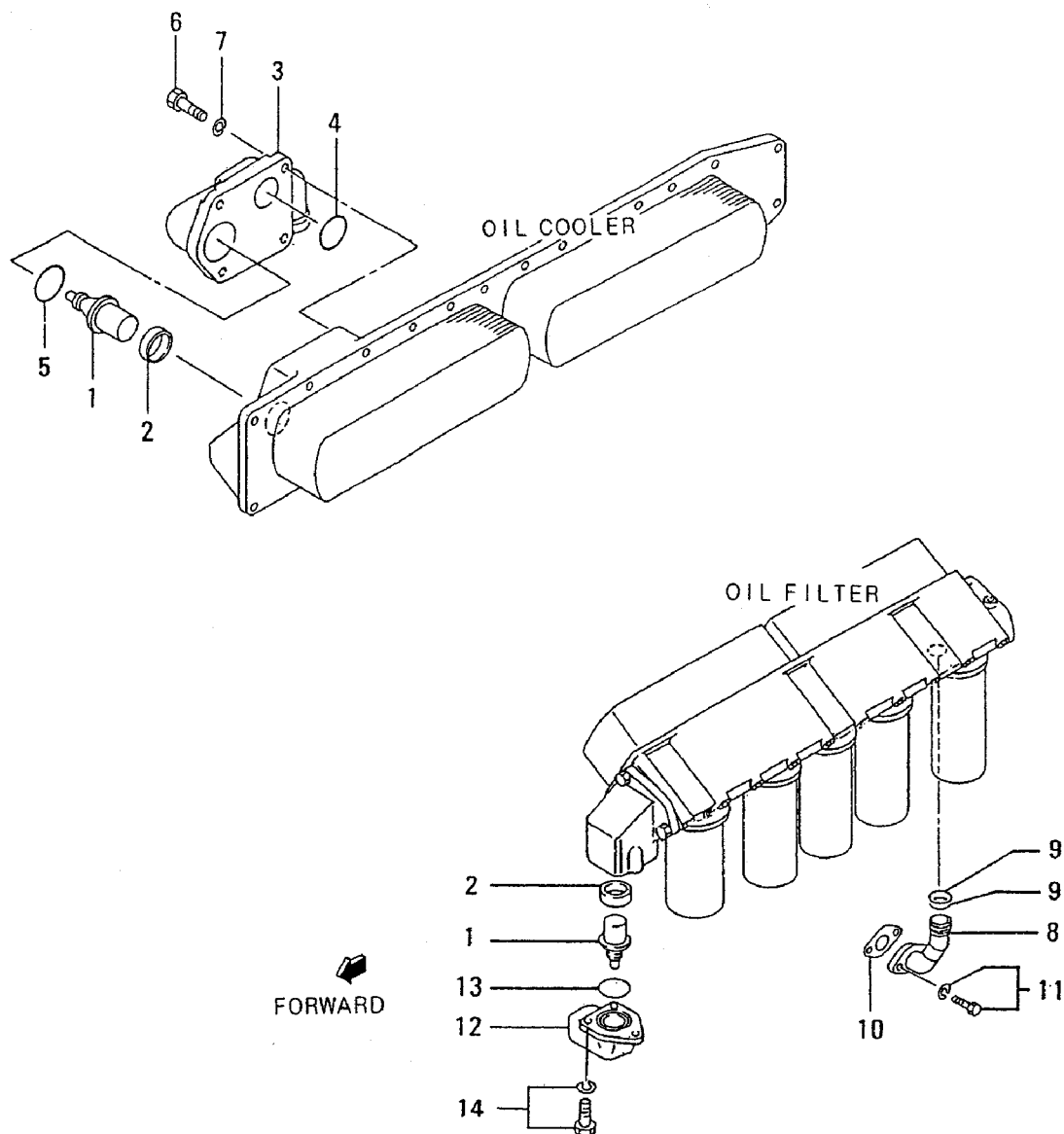


6131_36.1

Item	Part No.	Description	Qty. Var. 1
1	GM21828	Strainer, oil	1
2	GM15151	Bolt	2
3	GM14519	O-ring	1
4	GM21827	Connector	1
5	GM15142	Bolt w/washer	2
6	GM15958	Bolt	2
7	GM15179	Washer, spring	2
8	GM21826	Pipe, oil	1
9	GM21665	Stay	1
10	GM15153	Bolt	1
11	GM15140	Bolt	1
12	GM15119	Bolt	2
13	GM15180	Washer, spring	2
14	GM14519	O-ring	1
15	GM21620	O-ring	2

Item	Part No.	Description	Qty. Var. 1
16	GM21836	Pipe, oil, right hand	1
17	GM22092	Bolt	1
18	GM15141	Bolt	1
19	GM15179	Washer, spring	1
20	GM21834	Pipe, oil	1
21	GM15141	Bolt	6
22	GM21619	O-ring	5
23	GM21616	O-ring	8
24	GM21830	Pipe, oil	1
25	GM21831	Pipe, oil	1
26	GM21825	Spacer	4

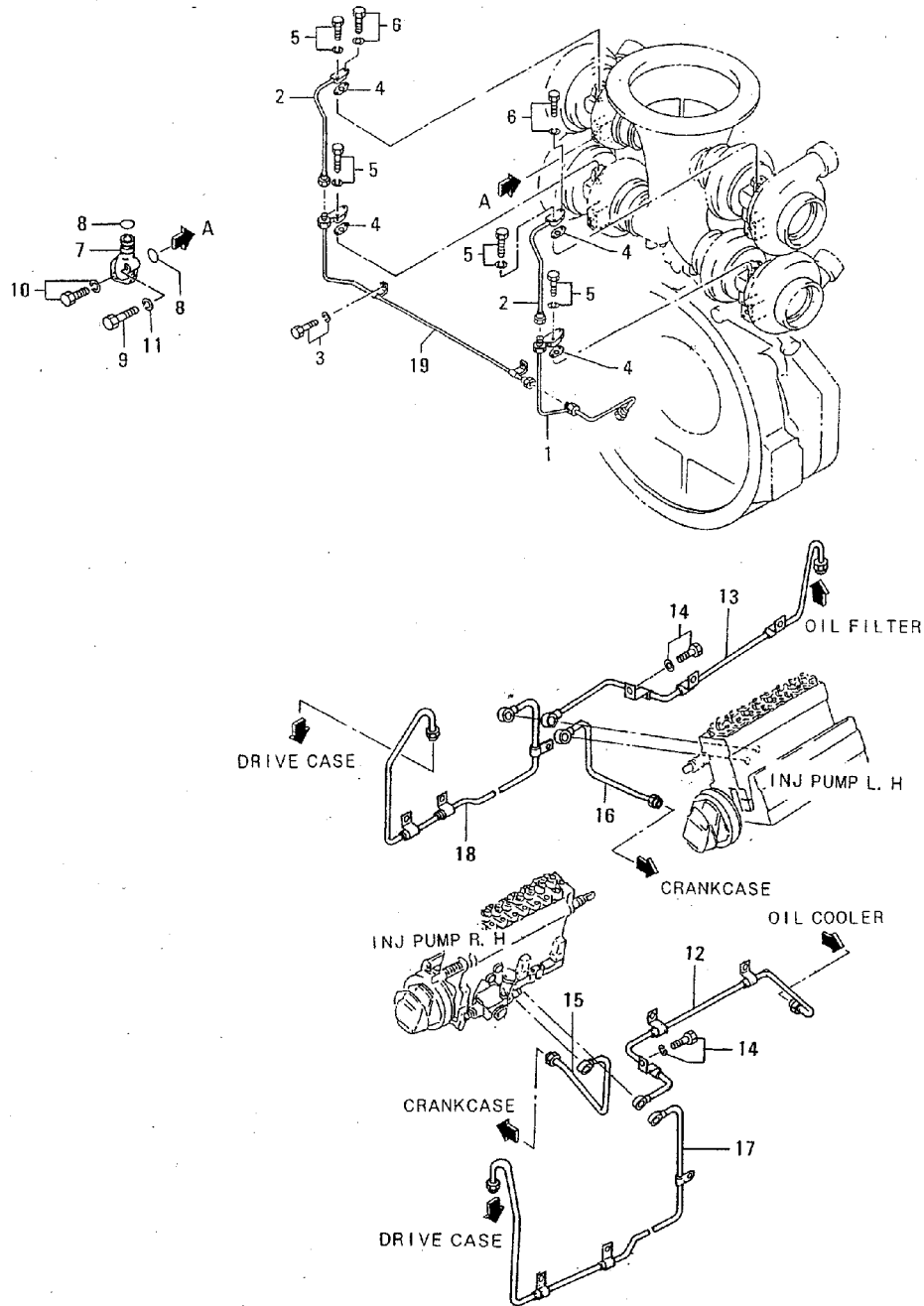
Group 36.2: Oil Thermostat



6131_36.2

Item	Part No.	Description	Qty.
			Var. 1
1	GM21844	Thermostat, oil	2
2	GM21724	Seal, thermostat	2
3	GM21833	Connector, right hand	1
4	GM21617	O-ring	1
5	GM21621	O-ring	1
6	GM15120	Bolt	4
7	GM15180	Washer, spring	4
8	GM21837	Pipe, oil	1
9	GM21616	O-ring	2
10	GM21668	Gasket	1
11	GM15140	Bolt	2
12	GM21829	Connector, left hand	1
13	GM14519	O-ring	1
14	GM15150	Bolt	3

Group 36.3: Oil Pipes

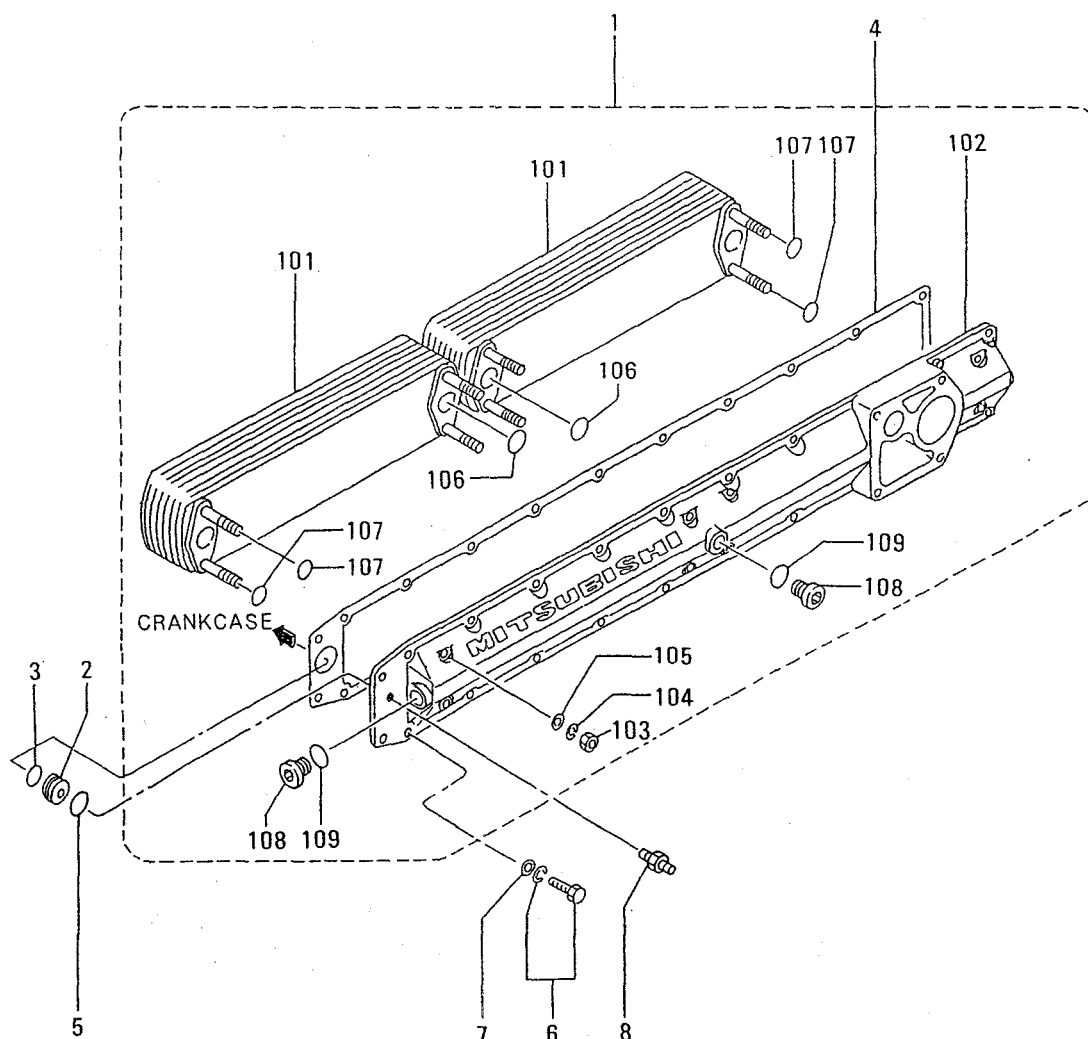


6131_36.3

Item	Part No.	Description	Qty.
			Var. 1
1	GM21980	Pipe, oil	1
2	GM21982	Pipe, oil	2
3	GM15139	Bolt w/washer	2
4	GM21680	Packing	4
5	GM22111	Bolt	6
6	GM22112	Bolt	2
7	GM21983	Connector, drain	4
8	GM15528	O-ring	8
9	GM15958	Bolt	4
10	GM15141	Bolt	4

Item	Part No.	Description	Qty.
			Var. 1
11	GM15179	Washer, spring	4
12	GM21984	Pipe, oil	1
13	GM21987	Pipe, oil	1
14	GM15975	Bolt w/washer	2
15	GM21985	Pipe, drain	1
16	GM21986	Pipe, drain	1
17	GM21988	Pipe, oil	1
18	GM21989	Pipe, oil	1
19	GM21981	Pipe, oil	1

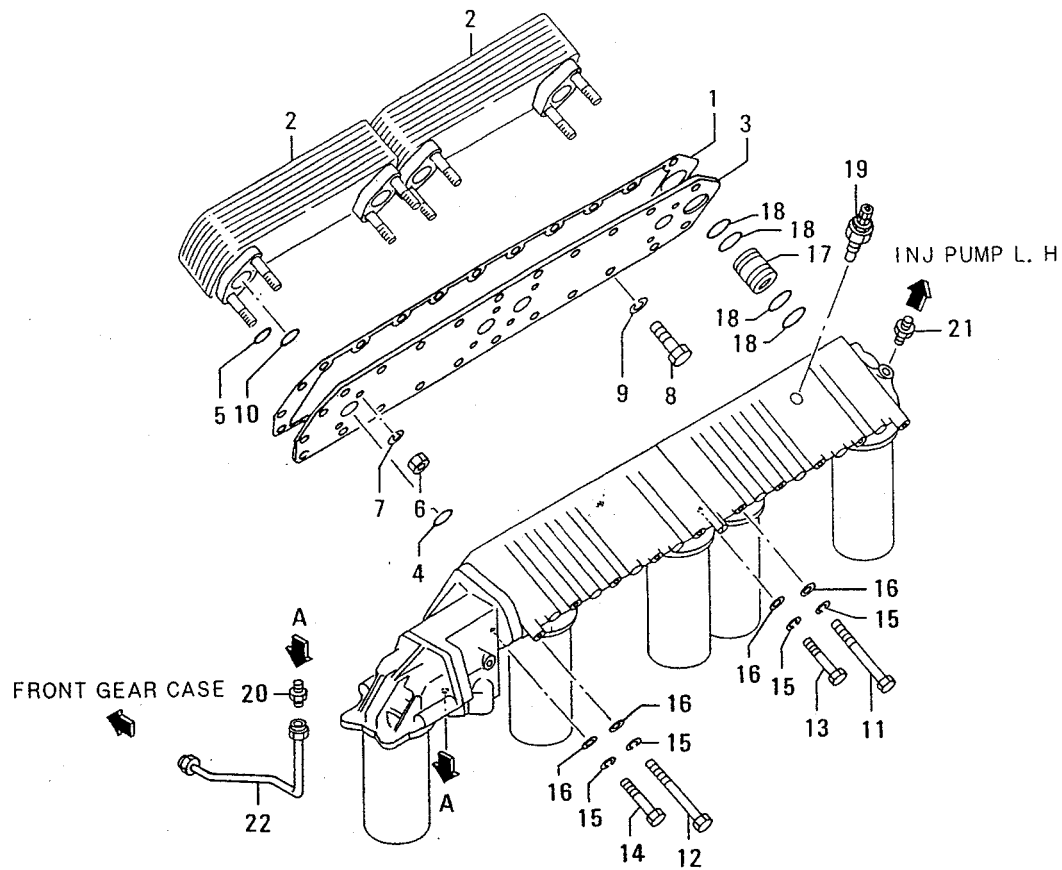
Group 39: Oil Cooler



6131_39

Item	Part No.	Description	Qty. Var. 1
1	GM21845	Oil cooler assembly	1
101	GM21838	Element, oil	2
102	GM21843	Cover, oil cooler	1
103	GM15164	Nut	8
104	GM15179	Washer, spring	8
105	GM15174	Washer, plain	8
106	GM15266	O-ring, oil	4
107	GM15264	O-ring	8
108	GM16042	Plug	3
109	GM15265	O-ring	3
2	GM15622	Plate, nozzle	1
3	GM14511	O-ring	1
4	GM21839	Packing, oil cooler	1
5	GM21614	O-ring	1
6	GM22114	Bolt w/washer	18
7	GM15175	Washer	18
8	GM16028	Connector	1

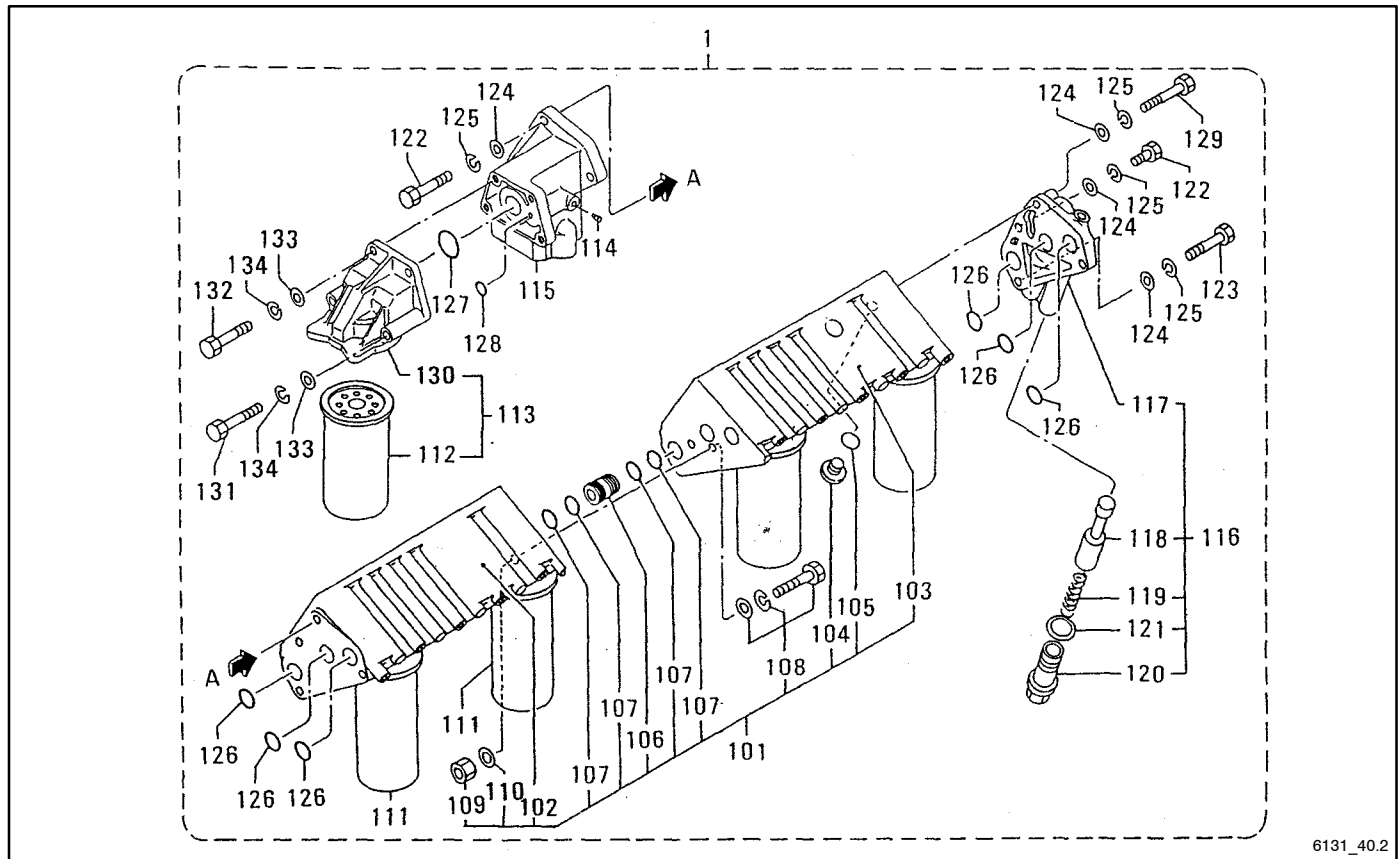
Group 40.1: Oil Filter



6131_40.1

Item	Part No.	Description	Qty.
			Var. 1
1	GM21841	Gasket, oil cooler	1
2	GM21840	Element, oil cooler	2
3	GM21842	Plate, oil cooler	1
4	GM14515	O-ring	4
5	GM21610	O-ring	8
6	GM22118	Nut, self-locking	8
7	GM15179	Washer, spring	8
8	GM15107	Bolt	3
9	GM15180	Washer, spring	3
10	GM14515	O-ring	4
11	GM16043	Bolt	8
12	GM22129	Bolt	2
13	GM15120	Bolt	8
14	GM22096	Bolt	2
15	GM15180	Washer, spring	20
16	GM15175	Washer	20
17	GM21846	Coupling	1
18	GM21616	O-ring	2
19	GM21722	Alarm, oil filter	1
20	GM15230	Connector	1
21	GM16027	Connector	1
22	GM21835	Pipe, drain	1

Group 40.2: Oil Filter Assembly

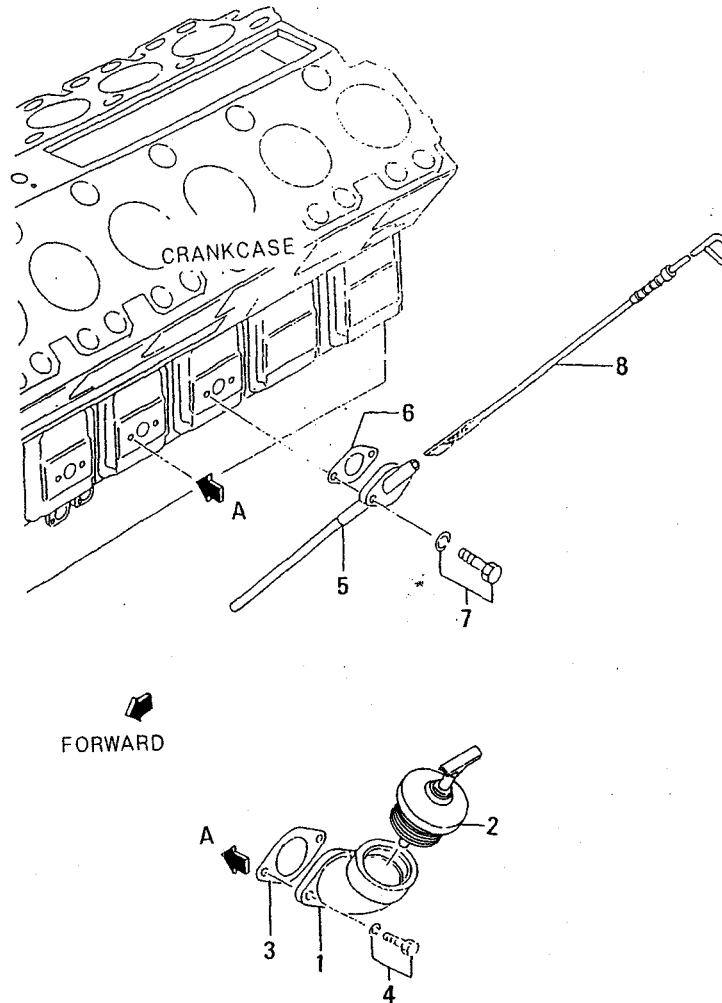


6131_40.2

Item	Part No.	Description	Qty. Var. 1
1	GM21851	Oil filter assembly	1
101	GM21852	Bracket assembly	1
102	—	Not sold separately	1
103	—	Not sold separately	1
104	GM21849	Plug	5
105	GM21850	O-ring	5
106	GM21847	Coupling, filter	3
107	GM15211	O-ring	12
108	GM22110	Bolt	2
109	GM15163	Nut	2
110	GM15173	Washer, plain	2
111	GM15738	Filter GM13949	4
112	GM15739	Filter GM13950	1
113	GM21848	Bypass filter assembly	1
114	GM15242	Plug, tapered	3
115	GM21858	Adapter	1
116	GM21853	Adapter assembly	1
117	—	Not sold separately	1

Item	Part No.	Description	Qty. Var. 1
118	GM21854	Valve, oil relief	1
119	GM21855	Spring	1
120	GM21856	Cap	1
121	GM21857	Packing	1
122	GM15103	Bolt	6
123	GM15116	Bolt	1
124	GM15175	Washer	2
125	GM15180	Washer, spring	2
126	GM16011	O-ring	6
127	GM15211	O-ring	1
128	GM15197	O-ring	1
129	GM15119	Bolt	1
130	—	Not sold separately	1
131	GM22094	Bolt	2
132	GM21147	Bolt	2
133	GM15174	Washer, plain	10
134	GM15179	Washer, spring	10

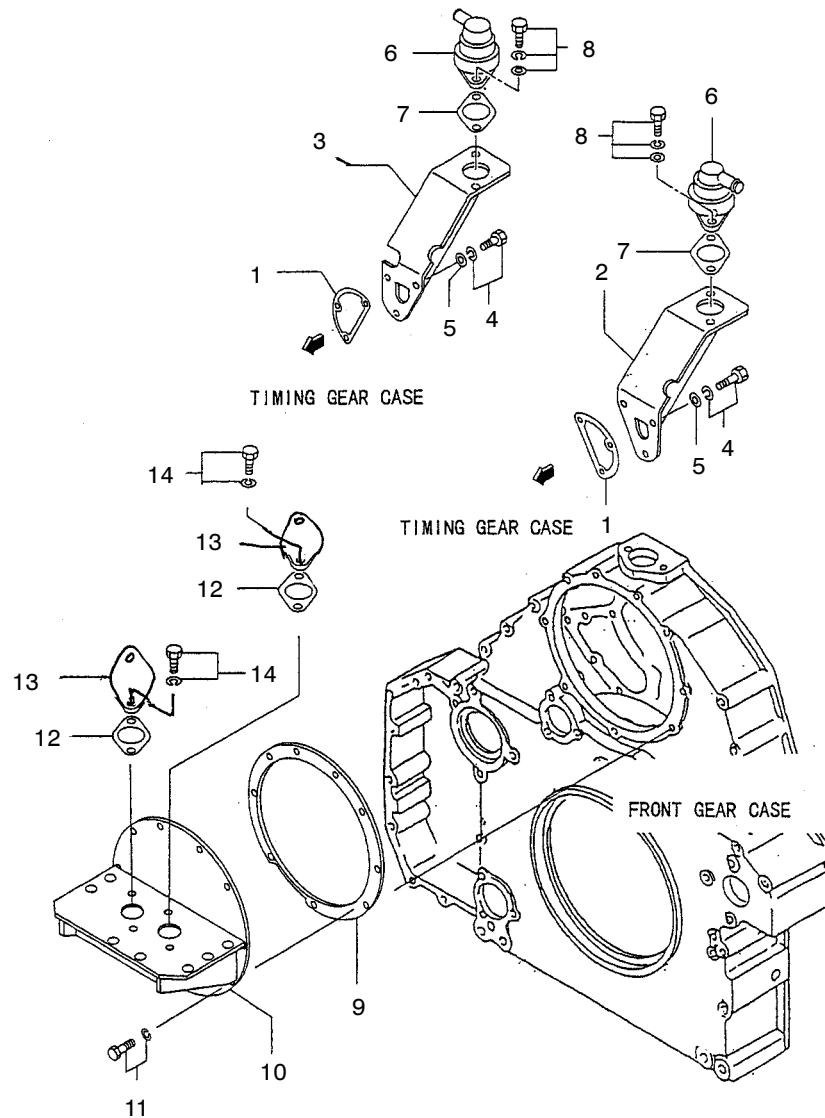
Group 42: Oil Filler and Dipstick



6131_42

Item	Part No.	Description	Qty.
			Var. 1
1	GM14602	Elbow	1
2	GM14633	Cap, oil	1
3	GM21668	Gasket	1
4	GM15141	Bolt	2
5	GM21990	Guide	1
6	GM21668	Gasket	1
7	GM15140	Bolt	2
8	GM21659	Dipstick	1

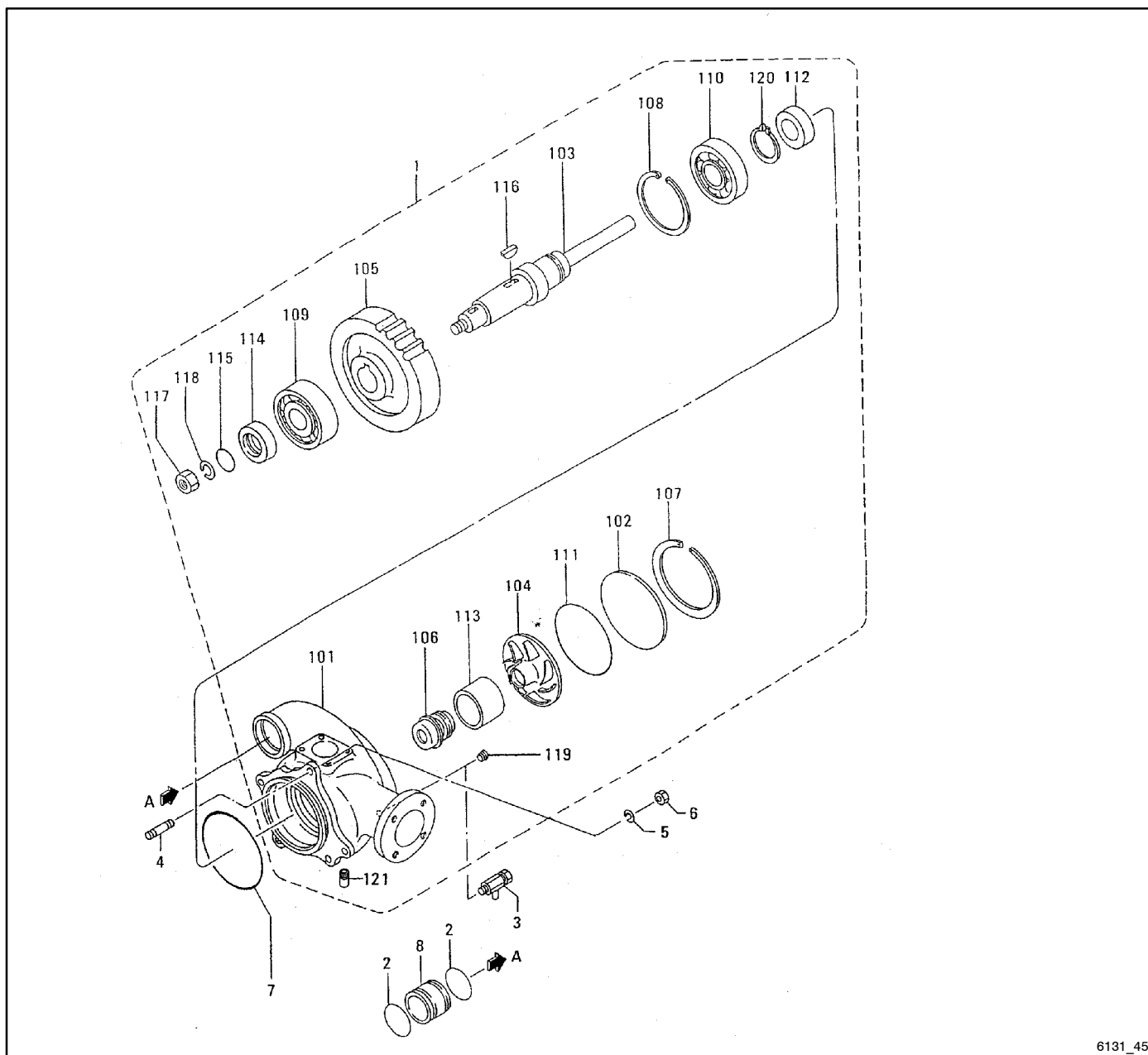
Group 43: Breather



6131_43

Item	Part No.	Description	Qty.
			Var. 1
1	GM21762	Gasket	2
2	GM21859	Pipe, breather, left side	1
3	GM21860	Pipe, breather, right side	1
4	GM15149	Bolt w/washer	6
5	GM15175	Washer	6
6	GM21681	Breather	2
7	GM22032	Packing	2
8	GM15155	Bolt w/washer	4
9	GM21862	Gasket, breather	1
10	GM21861	Case, breather	1
11	GM15151	Bolt	9
12	GM22032	Packing	2
13	GM21863	Cover	2
14	GM15141	Bolt	4

Group 45: Water Pump

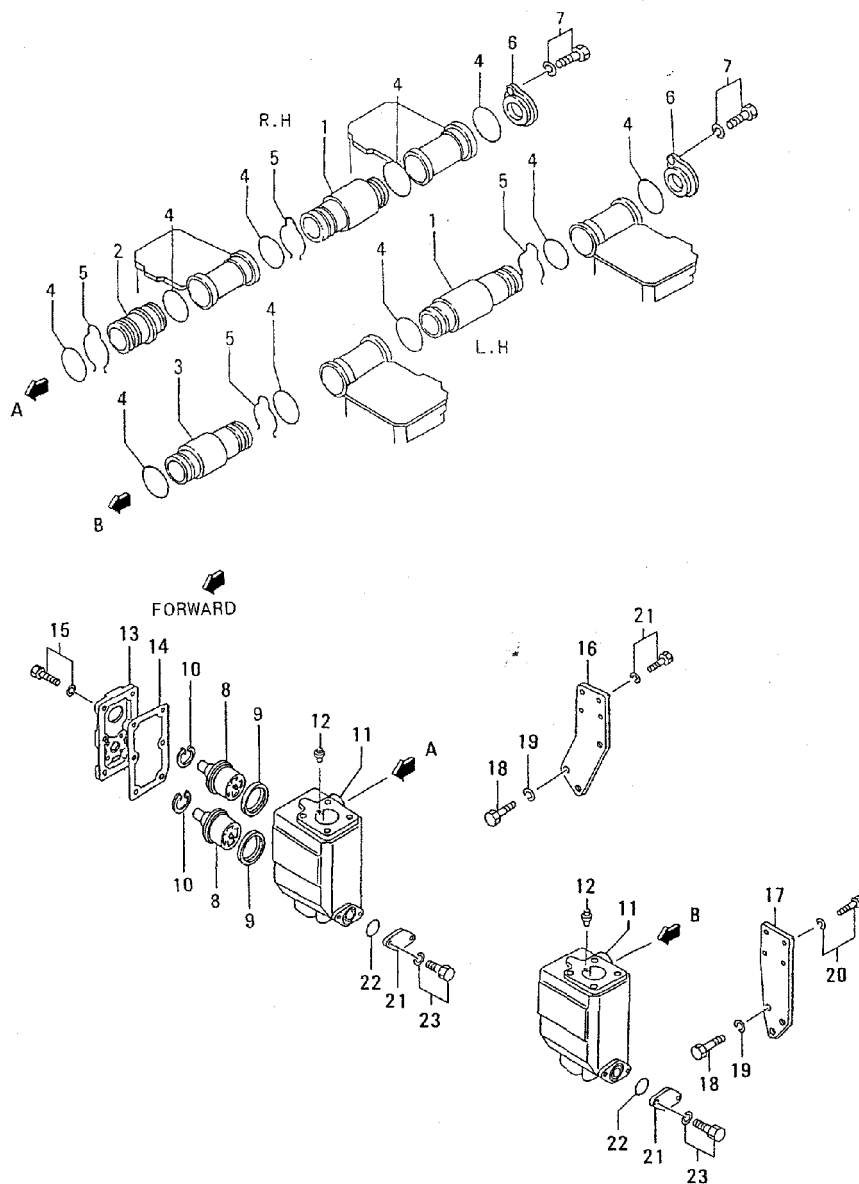


6131_45

Item	Part No.	Description	Qty. Var. 1
1	GM21864	Water pump assembly	1
2	GM15208	O-ring	2
3	GM21660	Valve, drain	1
4	GM14537	Stud	3
5	GM15180	Washer, spring	3
6	GM15165	Nut	3
7	GM21625	O-ring	1
8	GM14985	Coupling	1
101	—	Not sold separately	1
102	GM14927	Cover	1
103	GM14982	Shaft, water pump	1
104	GM14983	Impeller	1
105	GM14467	Gear, head	1
106	GM14898	Seal, unit	1
107	GM14928	Ring, snap	1

Item	Part No.	Description	Qty. Var. 1
108	GM15223	Ring, snap	1
109	GM15259	Bearing, ball	1
110	GM15260	Bearing, ball	1
111	GM15210	O-ring	1
112	GM14921	Seal, oil	1
113	GM14980	Ring	1
114	GM14981	Sleeve	1
115	GM15213	O-ring	1
116	GM15192	Key, woodruff	1
117	GM15988	Nut, jam	1
118	GM15995	Washer, spring	1
119	GM15242	Plug, tapered	1
120	GM15219	Ring, snap	1
121	GM21653	Pipe	1

Group 46.1: Thermostat and Covers



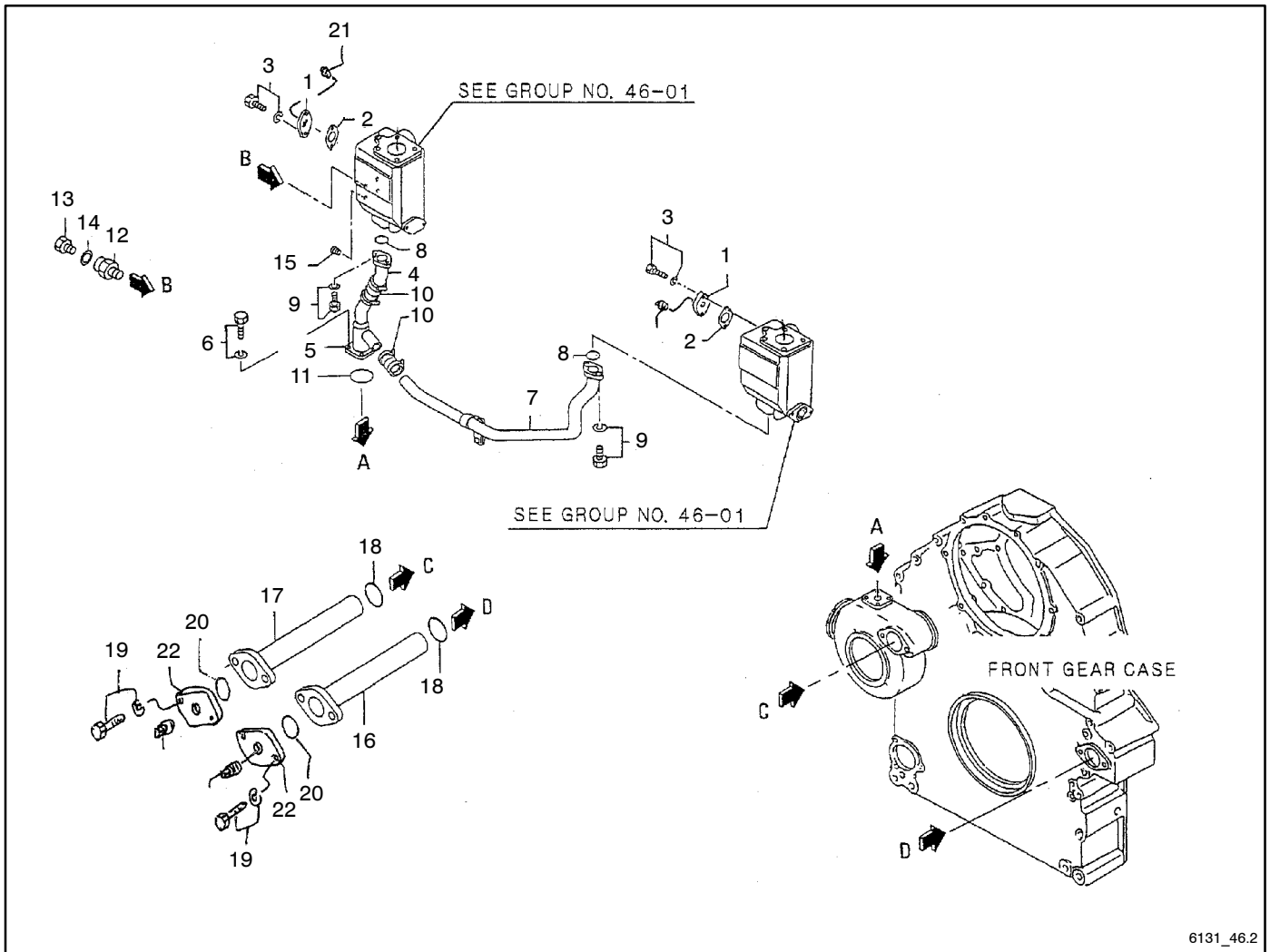
6131_46.1

Item	Part No.	Description	Qty. Var. 1
1	GM21866	Connector	14
2	GM21867	Connector, right hand	1
3	GM21868	Connector, left hand	1
4	GM21723	O-ring	34
5	GM15772	Ring, snap	16
6	GM15771	Plug	2
7	GM15140	Bolt	2
8	GM15777	Thermostat	4
9	GM15764	Seal	4
10	GM15763	Ring, snap	4
11	GM21729	Case, thermostat	2
12	GM15588	Valve	2

Item	Part No.	Description	Qty. Var. 1
13	GM21728	Cover	2
14	GM21727	Packing	2
15	GM15142	Bolt w/washer	12
16	GM21873	Bracket, thermostat	1
17	GM21874	Bracket, thermostat	1
18	GM15963	Bolt	6
19	GM22120	Washer, spring	6
19	GM15182	Washer, spring	6
20	GM15143	Bolt	8
21	GM21726	Cover	2
22	GM16005	O-ring	2
23	GM15142	Bolt w/washer	4

GM31390

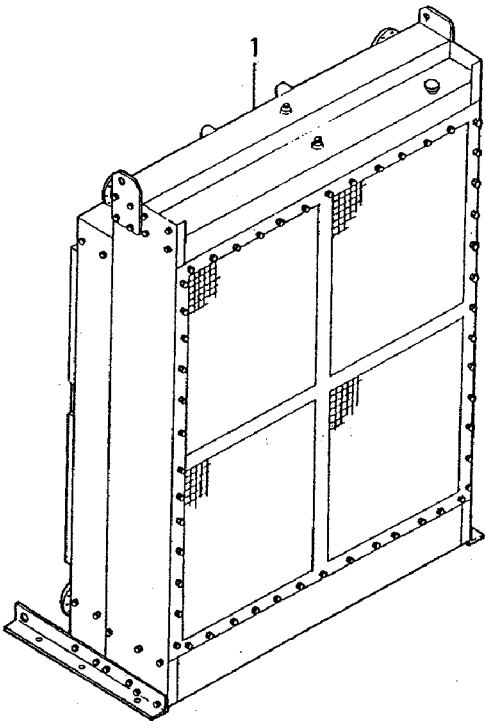
Group 46.2: Cooling System



6131_46.2

Item	Part No.	Description	Qty.
			Var.
1	GM22033	Flange	2
2	GM14605	Gasket	2
3	GM15151	Bolt	4
4	GM21875	Pipe	1
5	GM21870	Pipe	1
6	GM15141	Bolt	4
7	GM21869	Pipe, bypass	1
8	GM16005	O-ring	2
9	GM15141	Bolt	4
10	GM21604	Coupling	2
11	GM15200	O-ring	1
12	GM15857	Connector	1
13	GM15238	Plug, screw	1
14	GM14531	Washer, sealing	1
15	GM16033	Plug	6
16	GM21871	Connector	1
17	GM21872	Connector	1
18	GM15204	O-ring	2
19	GM22108	Bolt	4
20	GM15204	O-ring	2
21	GM15247	Plug, tapered	4
22	GM14471	Cover	2

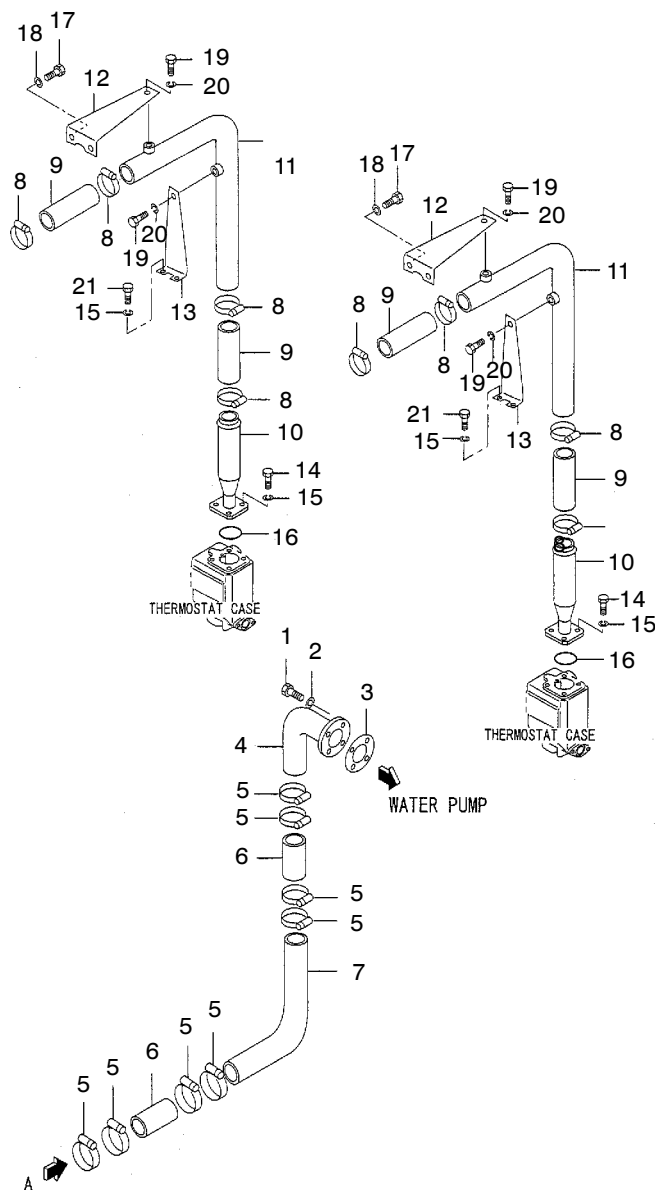
Group 47.1: Radiator



6131_47.1

Item	Part No.	Description	Qty.
			Var. 1
1	GM21991	Radiator assembly	1

Group 47.2: Radiator Piping

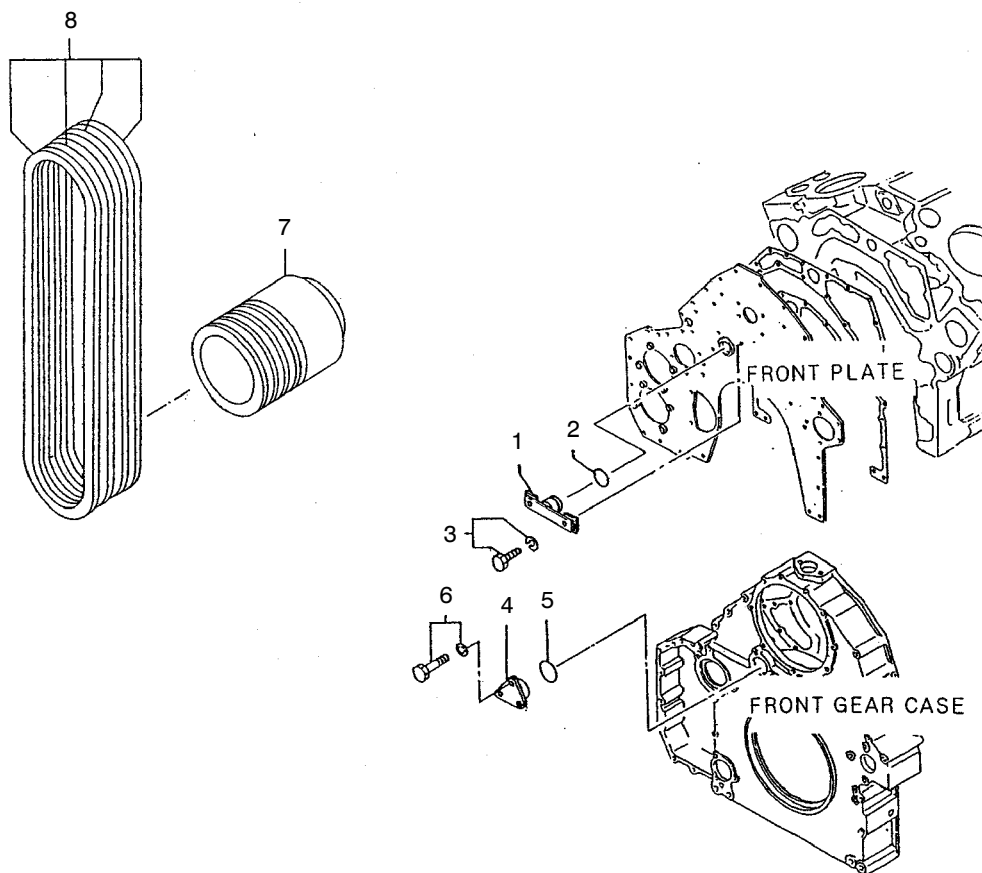


6131_47.2

Item	Part No.	Description	Qty. Var. 1
1	GM22098	Bolt	4
2	GM15182	Washer, spring	4
3	GM21133	Gasket	1
4	GM21130	Pipe, water	1
5	GM21136	Clamp	8
6	GM21142	Hose, rubber	2
7	GM21131	Pipe, water	1
8	GM21135	Clamp	8
9	GM21150	Hose, rubber	4
10	GM22034	Pipe, water	2
11	GM21132	Pipe, water	2
12	GM21143	Stay, pipe	2

Item	Part No.	Description	Qty. Var. 1
13	GM21144	Stay, pipe	2
14	GM21147	Bolt	4
15	GM15179	Washer, spring	8
16	GM15205	O-ring	2
17	GM15111	Bolt	4
18	GM15180	Washer, spring	4
19	GM22091	Bolt	4
20	GM15179	Washer, spring	4
21	GM15956	Bolt	4

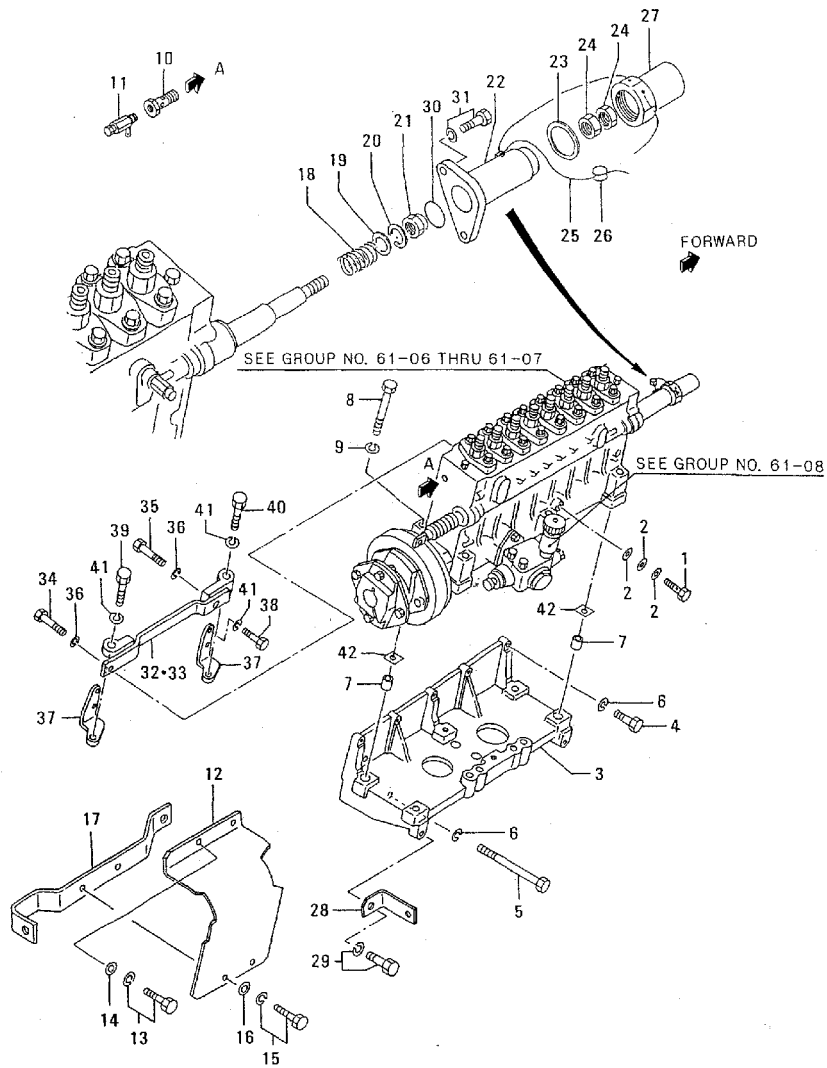
Group 48: Fan Drive



6131_48

Item	Part No.	Description	Qty.
			Var.
1	GM21876	Plug, case	1
2	GM21618	O-ring	1
3	GM15979	Bolt	2
4	GM21670	Flange	1
5	GM14517	O-ring	1
6	GM15151	Bolt	3
7	GM21777	Pulley, crankshaft	1
8	GM21122	V-belt, ban	1

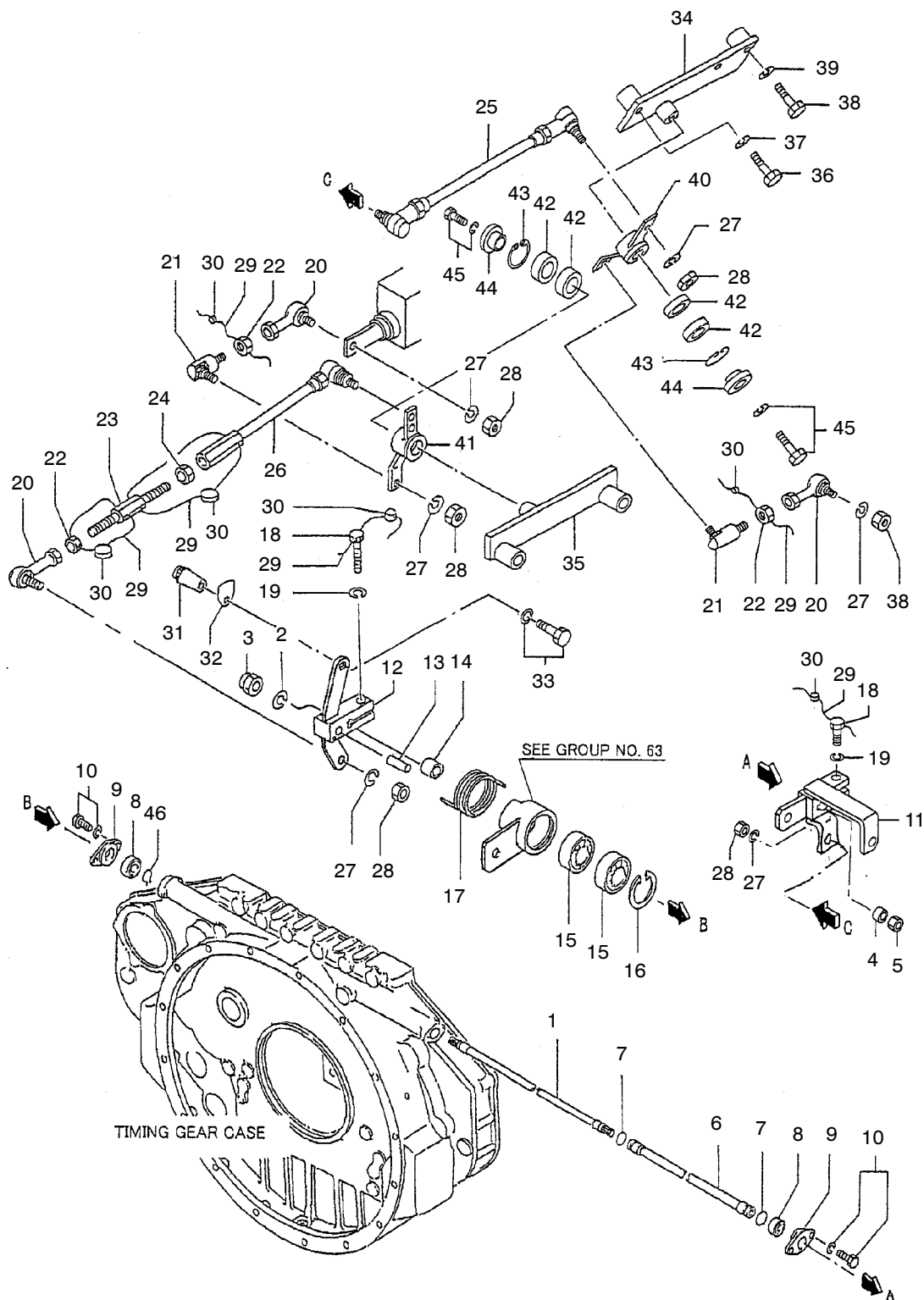
Group 61.1: Fuel Injection Pump



6131_61.1

Item	Part No.	Description	Qty. Var.	Item	Part No.	Description	Qty. Var.
1	GM21682	Eyebolt	2	25	GM14463	Wire, seal	2
2	GM14529	Washer, sealing	6	26	GM15001	Seal	2
3	GM21997	Bracket, injection pump	2	27	GM21736	Cap, rack set	2
4	GM15112	Bolt	10	28	GM21899	Stay, pipe	1
5	GM22096	Bolt	8	29	GM15151	Bolt	1
6	GM15180	Washer, spring	18	30	GM21613	O-ring	2
7	GM15764	Seal	4	31	GM15975	Bolt w/washer	4
8	GM15121	Bolt	12	32	GM21995	Stay	1
9	GM15180	Washer, spring	12	33	GM21996	Stay	1
10	GM15917	Eyebolt	2	34	GM15961	Bolt	3
11	GM15552	Vent, air	2	35	GM22097	Bolt	1
12	GM21895	Cover, coupling	2	36	GM15181	Washer, spring	4
13	GM15149	Bolt w/washer	4	37	GM21888	Stay	4
14	GM15175	Washer	4	38	GM15108	Bolt	8
15	GM15139	Bolt w/washer	4	39	GM15110	Bolt	3
16	GM15174	Washer, plain	4	40	GM15112	Bolt	1
17	GM21884	Stay cover	2	41	GM15180	Washer, spring	12
18	GM21735	Spring return	2	42	GM21723	O-ring	6
19	GM15174	Washer, plain	2				
20	GM15179	Washer, spring	2				
21	GM22119	Nut, self-locking	2				
22	GM21737	Case, spring	2				
23	GM21627	Washer, sealing	2				
24	GM22116	Nut, jam	4				

Group 61.2: Fuel Rack Control

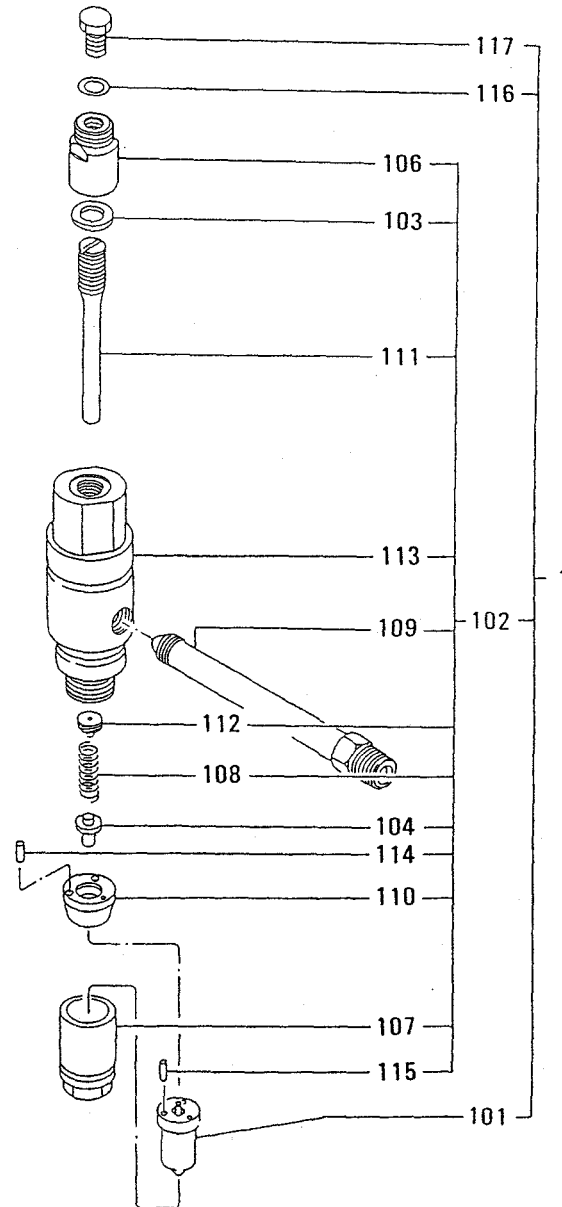


6131_61.2

Group 61.2: Fuel Rack Control

Item	Part No.	Description	Qty.
			Var. 1
1	GM21889	Shaft, control	1
2	GM15179	Washer, spring	1
3	GM22119	Nut, self-locking	1
4	GM21907	Spacer	1
5	GM21908	Nut, lock	1
6	GM21885	Pipe	1
7	GM14508	O-ring	2
8	GM15258	Bearing, ball	2
9	GM14913	Cover	2
10	GM15137	Bolt w/washer	4
11	GM21882	Lever, right hand	1
12	GM21894	Lever, left hand	1
13	GM21883	Pin, dowel	1
14	GM15088	Spacer	1
15	GM15257	Bearing, ball	2
16	GM15220	Ring, snap	1
17	GM21661	Spring	1
18	GM15127	Bolt	2
19	GM15178	Washer, spring	2
20	GM21676	Joint, ball	3
21	GM21742	Joint, ball	2
22	GM14621	Nut	5
23	GM22027	Rod	1
24	GM15531	Nut, lock	1
25	GM21892	Link, right hand	1
26	GM21893	Link, left hand	1
27	GM15178	Washer, spring	8
28	GM15163	Nut	6
29	GM14463	Wire, seal	6
30	GM15001	Seal	6
31	GM14474	Grip	1
32	GM14473	Plate, caution	1
33	GM15975	Bolt w/washer	1
34	GM21890	Bracket, lever, right hand	1
35	GM21891	Bracket, lever, left hand	1
36	GM21887	Bolt, lever bracket	1
37	GM15181	Washer, spring	2
38	GM15115	Bolt	2
39	GM15180	Washer, spring	2
40	GM21880	Lever, link	1
41	GM21886	Lever, link	1
42	GM15256	Bearing, ball	4
43	GM16017	Ring, snap	2
44	GM14608	Plate, end	2
45	GM15144	Bolt	2
46	GM22126	Ring, snap	1

Group 61.3: Nozzle Assembly

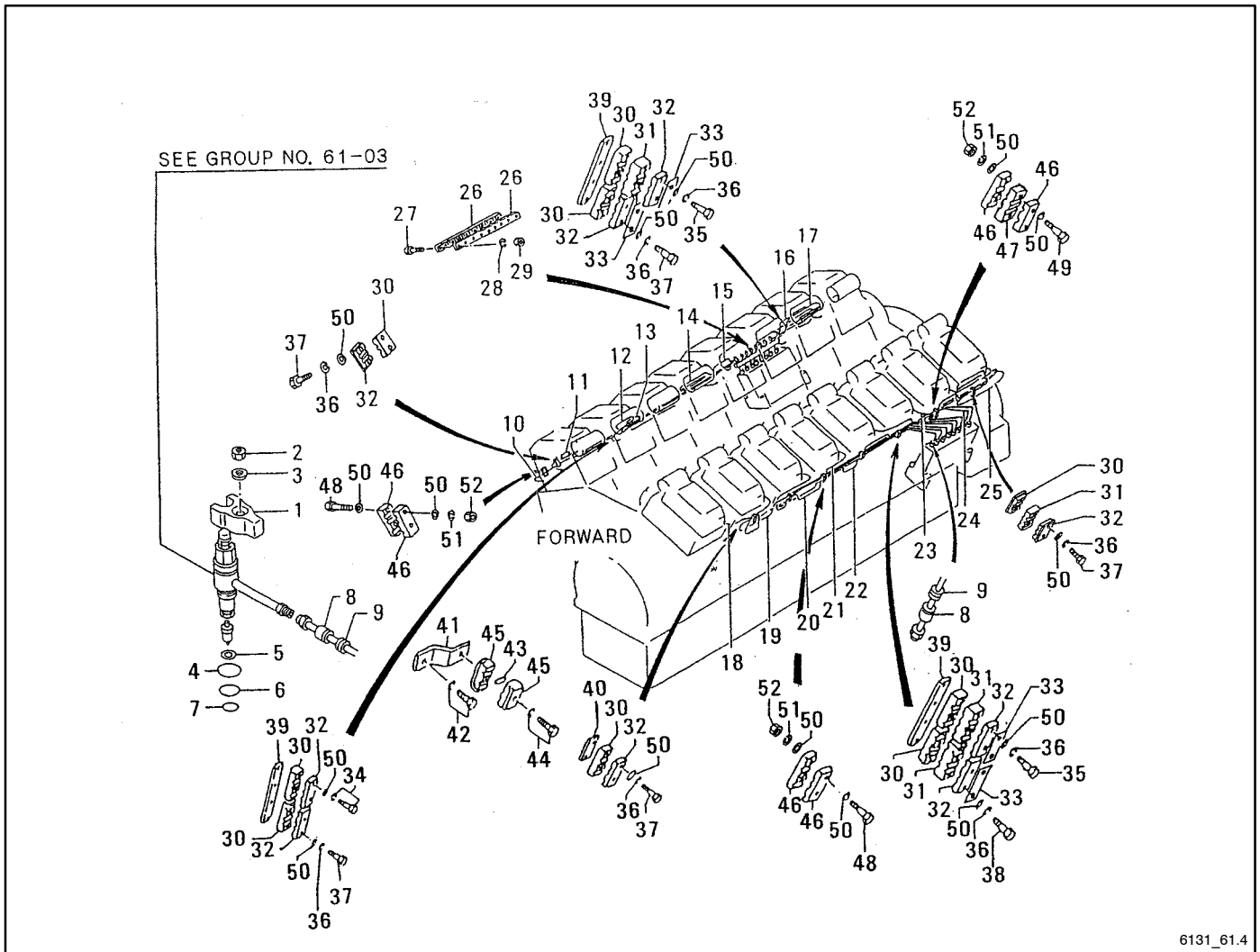


6131_61.3

Item	Part No.	Description	Qty. Var. 1
1	GM21731	Nozzle assembly	16
101	GM21733	Nozzle tip assembly	16
102	GM21732	Nozzle holder assembly	16
103	GM14530	Washer, sealing	16
104	GM21734	Bearing, roller	16
106	GM15817	Nut, cap	16
107	GM15816	Nut, retaining	16
108	GM15825	Spring	16
109	GM15827	Connector, inlet	16

Item	Part No.	Description	Qty. Var. 1
110	GM15828	Spacer	16
111	GM15826	Screw	16
112	GM15809	Spring, seat	16
113	GM15829	Body, nozzle holder	16
114	GM16036	Bearing, roller	32
115	GM15254	Bearing, roller	32
116	GM14528	Washer, sealing	16
117	GM15569	Screw, set	16

Group 61.4: Fuel Injection Lines

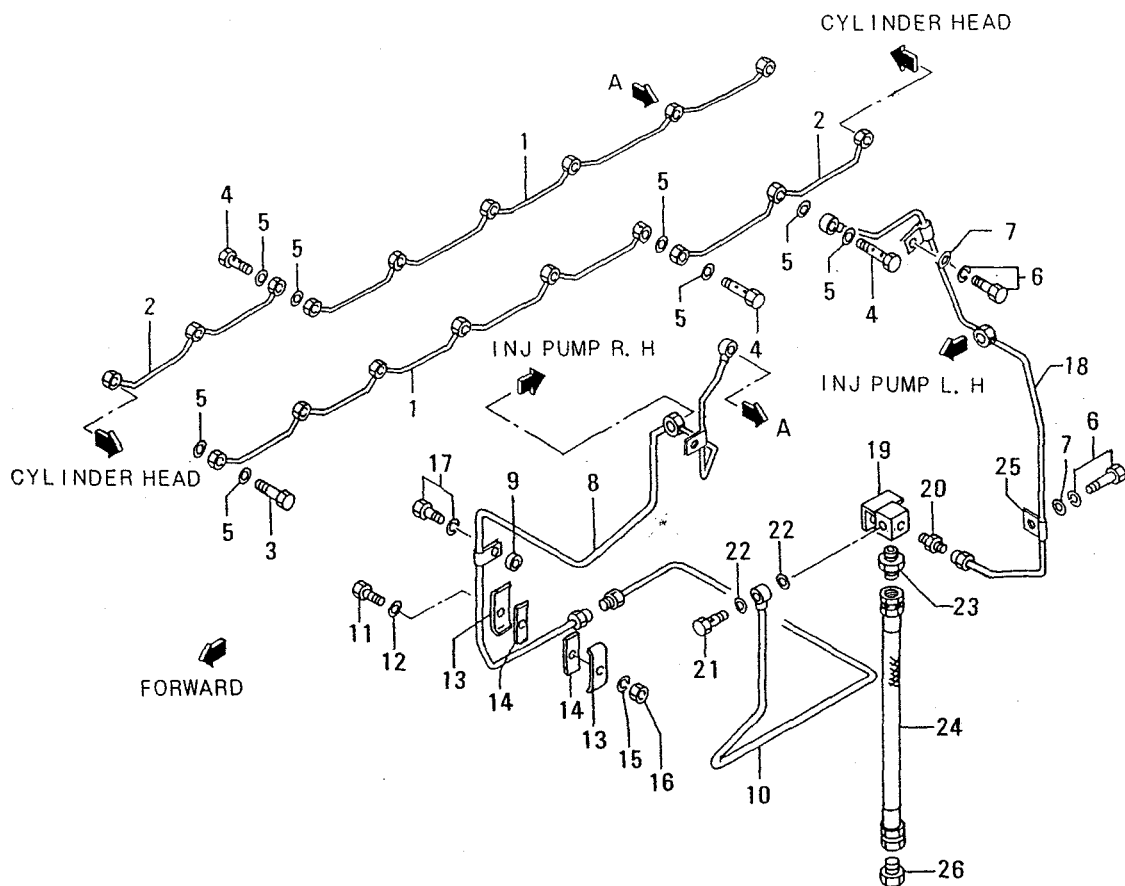


6131_61.4

Item	Part No.	Description	Qty. Var.
1	GM21725	Gland, nozzle	16
2	GM15168	Nut	16
3	GM21669	Washer	16
4	GM14512	O-ring	16
5	GM15818	Gasket, nozzle	16
6	GM14511	O-ring	16
7	GM21612	O-ring	16
8	GM15813	Cover	32
9	GM15814	Holder	32
10	GM21998	Pipe, injection, No. 1	1
11	GM21999	Pipe, injection, No. 2	1
12	GM22000	Pipe, injection, No. 3	1
13	GM22001	Pipe, injection, No. 4	1
14	GM22002	Pipe, injection, No. 5	1
15	GM22003	Pipe, injection, No. 6	1
16	GM22004	Pipe, injection, No. 7	1
17	GM22005	Pipe, injection, No. 8	1
18	GM22006	Pipe, injection, No. 9	1
19	GM22007	Pipe, injection, No. 10	1
20	GM22008	Pipe, injection, No. 11	1
21	GM22009	Pipe, injection, No. 12	1
22	GM22010	Pipe, injection, No. 13	1
23	GM22011	Pipe, injection, No. 14	1
24	GM22012	Pipe, injection, No. 15	1
25	GM22013	Pipe, injection, No. 16	1
26	GM21993	Clamp	4
27	GM22090	Bolt	18

Item	Part No.	Description	Qty. Var.
28	GM15178	Washer, spring	18
29	GM15163	Nut	18
30	GM21738	Clamp	27
31	GM21739	Seat	19
32	GM15834	Clamp, pipe	27
33	GM21740	Plate	27
34	GM15147	Bolt	2
35	GM15958	Bolt	22
36	GM15179	Washer, spring	52
37	GM22092	Bolt	14
38	GM22094	Bolt	16
39	GM21877	Plate	12
40	GM21878	Plate	3
41	GM21881	Pipe, injection stay	1
42	GM15139	Bolt w/washer	1
43	GM22122	Pin	1
44	GM15974	Bolt	1
45	GM22131	Clamp	2
46	GM15834	Clamp, pipe	20
47	GM21739	Seat	5
48	GM15957	Bolt	10
49	GM22093	Bolt	10
50	GM21740	Plate	20
51	GM15179	Washer, spring	18
52	GM15164	Nut	18

Group 61.5: Fuel Leakoff Pipes

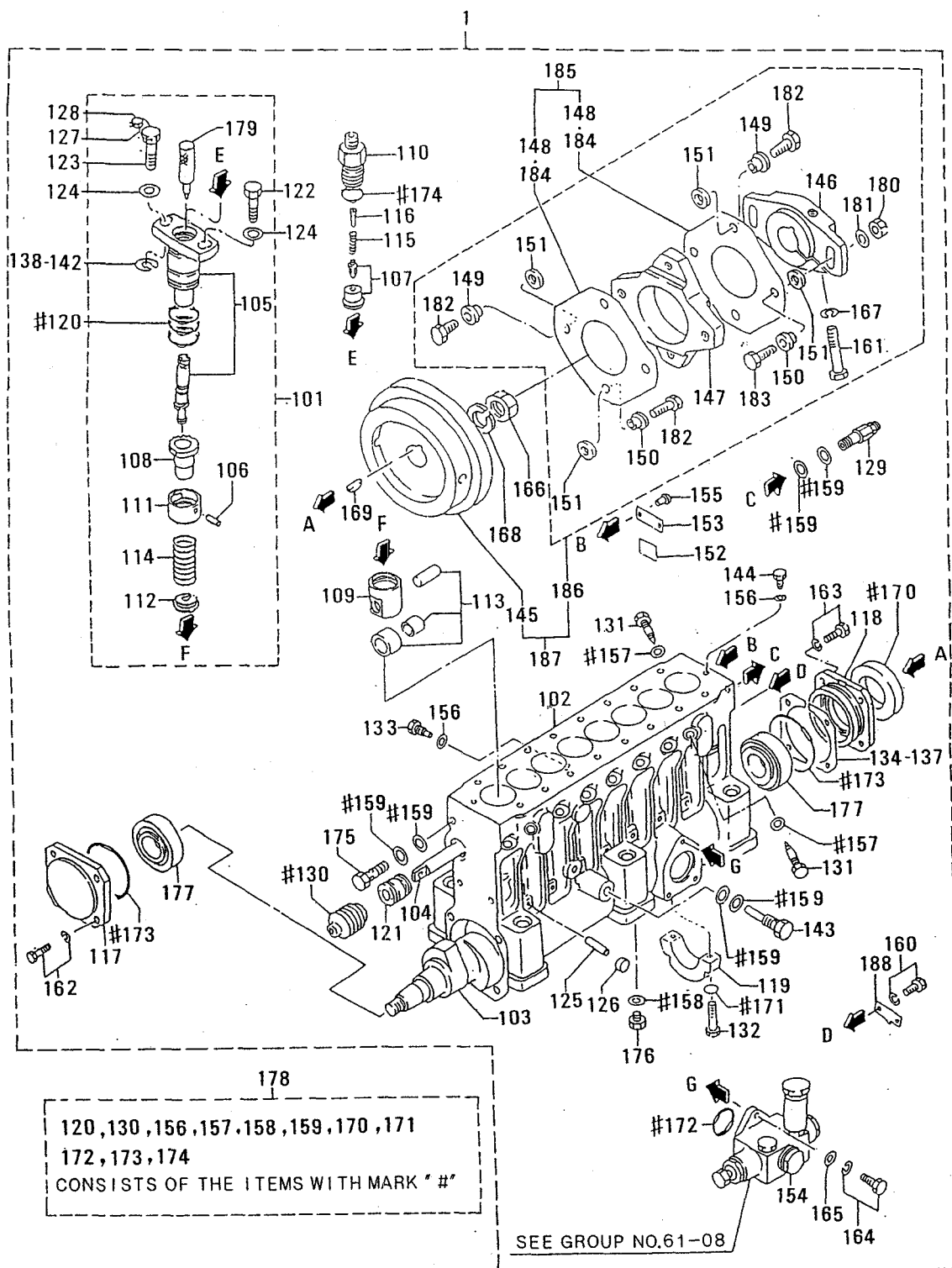


6131_61.5

Group 61.5: Fuel Leakoff Pipes

Item	Part No.	Description	Qty.
			Var. 1
1	GM21879	Pipe, fuel leakoff	2
2	GM21994	Pipe, fuel leakoff	2
3	GM15559	Eyebolt	12
4	GM21673	Eyebolt	4
5	GM14528	Washer, sealing	36
6	GM15139	Bolt w/washer	2
7	GM15174	Washer, plain	2
8	GM21904	Pipe, fuel	1
9	GM21825	Spacer	1
10	GM21901	Pipe, leak	1
11	GM15956	Bolt	5
12	GM15174	Washer, plain	5
13	GM15599	Clamp	10
14	GM15600	Seat	10
15	GM15179	Washer, spring	5
16	GM15164	Nut	5
17	GM15149	Bolt w/washer	3
18	GM21902	Pipe, fuel	1
19	GM21897	Connector	1
20	GM16029	Connector	1
21	GM15234	Eyebolt	1
22	GM14530	Washer, sealing	2
23	GM22127	Connector	1
24	GM22029	Pipe	1
25	GM22130	Clip	1
26	GM21587	Connector	1

Group 61.6: Injection Pump, Right



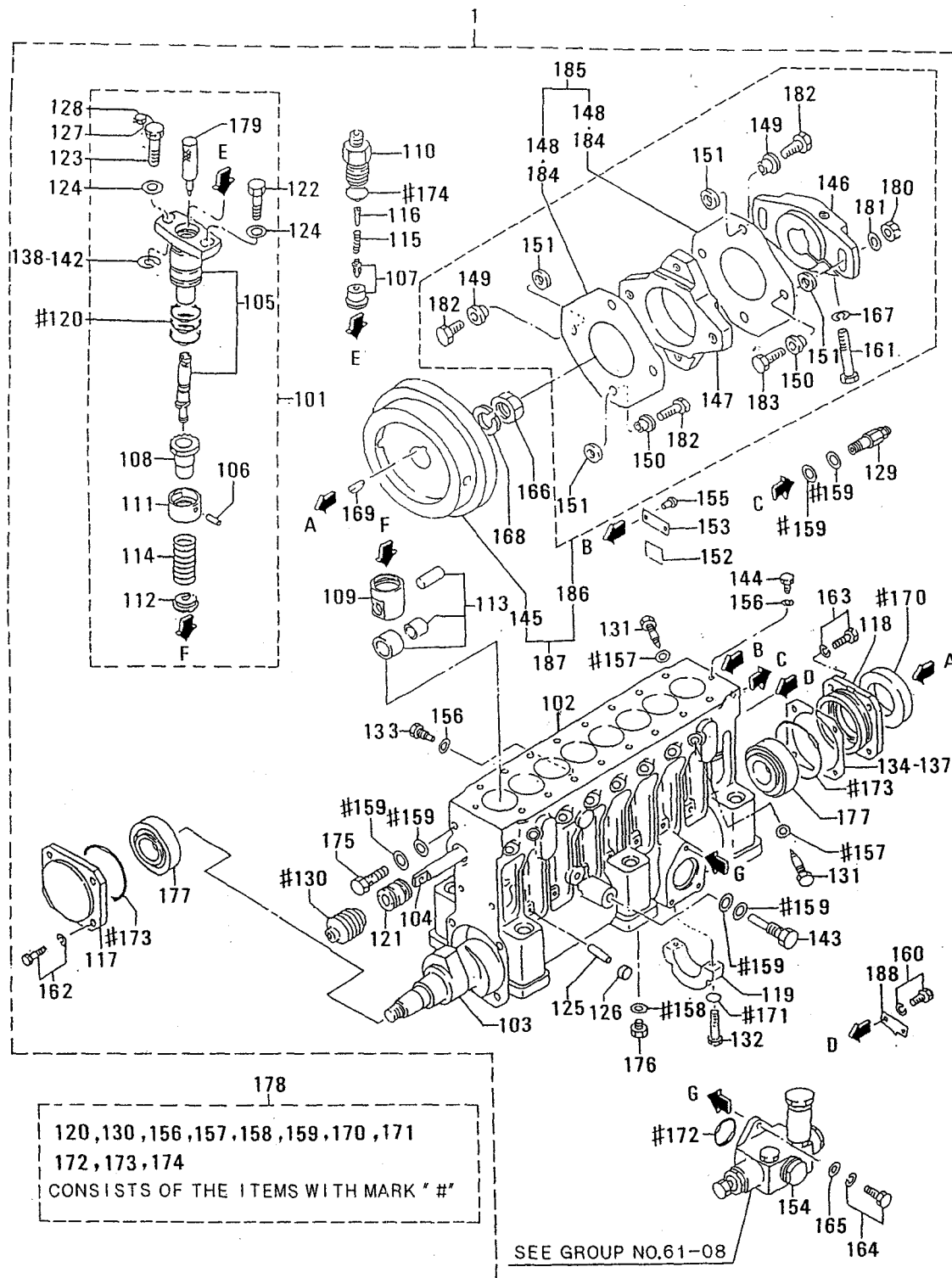
6131_61.6

Group 61.6: Injection Pump, Right

Item	Part No.	Description	Qty. Var. 1
1	GM22064	Injection pump assembly	1
101	GM22065	Block, twin plunger	1
102	GM22056	Case, injection pump	1
103	GM22054	Camshaft	1
104	GM22053	Rack	1
105	—	Not sold separately	8
106	—	Not sold separately	8
107	GM22062	Delivery valve assembly	8
108	GM22042	Pinion	8
109	GM15904	Tappet	8
110	GM22061	Holder, valve	8
111	GM15896	Seat	8
112	GM15897	Seat	8
113	GM22051	Roller tappet assembly	8
114	GM15888	Spring	8
115	GM22039	Spring, valve	8
116	GM22040	Stopper	8
117	GM22052	Cover, front	1
118	GM22041	Cover, rear	1
119	GM15872	Bearing, center	1
120	GM15889	O-ring	24
121	GM15898	Bushing, rack	2
122	GM15873	Bolt, barrel	8
123	GM15885	Bolt, barrel	8
124	GM15004	Washer, barrel	16
125	GM15874	Pin	9
126	GM14489	Cap, sealing	9
127	GM15883	Wire	1
128	GM15001	Seal	1
129	GM15005	Valve, check	1
130	GM15890	Bellows	1
131	GM15903	Bolt, deflector	16
132	GM15900	Bolt	2
133	GM22043	Screw, set	1
134	GM15891	Shim t = 0.50 mm	4
135	GM15892	Shim t = 0.10 mm	1
136	GM15893	Shim t = 0.15 mm	1
137	GM15894	Shim t = 0.50 mm	2
138	GM15875	Shim, barrel t = 0.80 mm	1
139	GM15876	Shim, barrel t = 0.90 mm	16
140	GM15877	Shim, barrel t = 1.00 mm	1
141	GM15878	Shim, barrel t = 1.10 mm	1
142	GM15879	Shim, barrel t = 1.30 mm	1
143	GM22037	Eyebolt	1
144	GM15882	Eyebolt	2

Item	Part No.	Description	Qty. Var. 1
145	GM22050	Flywheel	1
146	GM22049	Coupling	1
147	GM22047	Coupling	1
148	GM15908	Plate, laminate	12
149	GM15911	Bushing	4
150	GM15912	Bushing	4
151	GM15910	Washer, coupling	8
152	GM15566	Plate	1
153	—	Not sold separately	1
154	GM15514	Pump, fuel	1
155	GM14481	Rivet, screw	2
156	GM14527	Washer	3
157	GM14528	Washer, sealing	16
158	GM14529	Washer, sealing	1
159	GM14530	Washer, sealing	6
160	GM15972	Bolt w/washer	2
161	GM15962	Bolt	1
162	GM15976	Bolt w/washer	4
163	GM15138	Bolt w/washer	4
164	GM15973	Bolt	3
165	GM15991	Washer	3
166	GM15987	Nut, jam	1
167	GM15181	Washer, spring	1
168	GM14571	Washer	1
169	GM15998	Key, woodruff	1
170	GM15884	Seal	1
171	GM21609	O-ring	2
172	GM21616	O-ring	1
173	GM14519	O-ring	2
174	GM15528	O-ring	8
175	GM15917	Eyebolt	1
176	GM15237	Plug, screw	1
177	GM16041	Bearing, roller	2
178	GM22044	Kit, gasket	1
179	GM15921	Holder, plunger (service only)	1
180	GM22059	Nut, flange	2
181	GM22058	Washer	2
182	GM22060	Bolt	6
183	GM22057	Bolt	2
184	GM22045	Plate	4
185	GM22036	Plate kit	1
186	GM22048	Coupling assembly	1
187	GM22046	Coupling assembly	1
188	GM22038	Pointer	1

Group 61.7: Injection Pump, Left



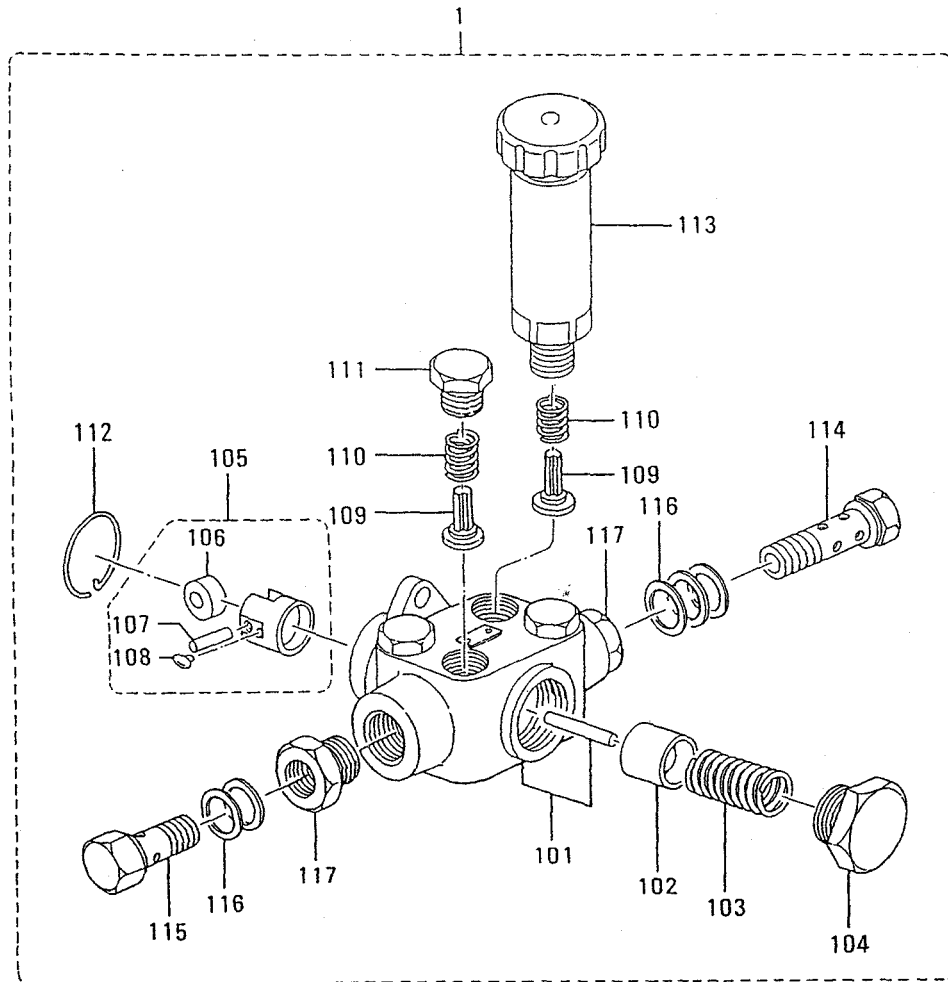
6131_61.7

Group 61.7: Injection Pump, Left

Item	Part No.	Description	Qty. Var. 1
1	GM22063	Injection pump assembly	1
101	GM22065	Block, twin plunger	1
102	GM22055	Case, injection pump	1
103	GM22054	Camshaft	1
104	GM22053	Rack	1
105	—	Not sold separately	8
106	—	Not sold separately	8
107	GM22062	Delivery valve assembly	8
108	GM22042	Pinion	8
109	GM15904	Tappet	8
110	GM22061	Holder, valve	8
111	GM15896	Seat	8
112	GM15897	Seat	8
113	GM22051	Roller tappet assembly	8
114	GM15888	Spring	8
115		Spring, D/V	8
116		Seat, spring	8
117	GM22052	Cover, front	1
118	GM22041	Cover, rear	1
119	GM15872	Center bearing	1
120	GM15889	O-ring	24
121	GM15898	Bushing, rack	2
122	GM15873	Bolt, barrel	8
123	GM15885	Bolt, barrel	8
124	GM15004	Washer, barrel	16
125	GM15874	Pin	9
126	GM14489	Cap, sealing	9
127	GM15883	Wire	1
128	GM15001	Seal	1
129	GM15005	Valve, check	1
130	GM15890	Bellows	1
131	GM15903	Bolt, deflector	16
132	GM15900	Bolt	2
133	GM22043	Screw, set	1
134	GM15891	Shim t = 0.50 mm	4
135	GM15892	Shim t = 0.10 mm	1
136	GM15893	Shim t = 0.15 mm	1
137	GM15894	Shim t = 0.50 mm	2
138	GM15875	Shim, barrel t = 0.80 mm	1
139	GM15876	Shim, barrel t = 0.90 mm	16
140	GM15877	Shim, barrel t = 1.00 mm	1
141	GM15878	Shim, barrel t = 1.10 mm	1
142	GM15879	Shim, barrel t = 1.30 mm	1
143	GM15880	Eyebolt	1
144	GM15882	Eyebolt	2

Item	Part No.	Description	Qty. Var. 1
145	GM22050	Flywheel	1
146	GM22049	Coupling	1
147	GM22047	Coupling	1
148	GM15908	Plate, laminate	12
149	GM15911	Bushing	4
150	GM15912	Bushing	4
151	GM15910	Washer, coupling	8
152	GM15566	Plate	1
153	—	Not sold separately	1
154	GM15514	Pump fuel	1
155	GM14481	Rivet, screw	2
156	GM14527	Washer	3
157	GM14528	Washer, sealing	16
158	GM14529	Washer, sealing	1
159	GM14530	Washer, sealing	6
160	GM15972	Bolt w/washer	2
161	GM15962	Bolt	1
162	GM15976	Bolt w/washer	4
163	GM15138	Bolt w/washer	4
164	GM15973	Bolt	3
165	GM15991	Washer	3
166	GM15987	Nut, jam	1
167	GM15181	Washer, spring	1
168	GM14571	Washer	1
169	GM15998	Key, woodruff	1
170	GM15884	Seal	1
171	GM15523	O-ring	2
172	GM21616	O-ring	1
173	GM14519	O-ring	2
174	GM15528	O-ring	8
175	GM15917	Eyebolt	1
176	GM15237	Plug, screw	1
177	GM16041	Bearing, roller	2
178	GM22044	Gasket kit	1
179	GM15921	Holder, plunger (service only)	1
180	GM22059	Nut, flange	2
181	GM22058	Washer	2
182	GM22060	Bolt	6
183	GM22057	Bolt	2
184	GM22045	Plate	4
185	GM22036	Plate kit	1
186	GM22048	Coupling assembly	1
187	GM22046	Coupling assembly	1
188	GM22038	Pointer	1

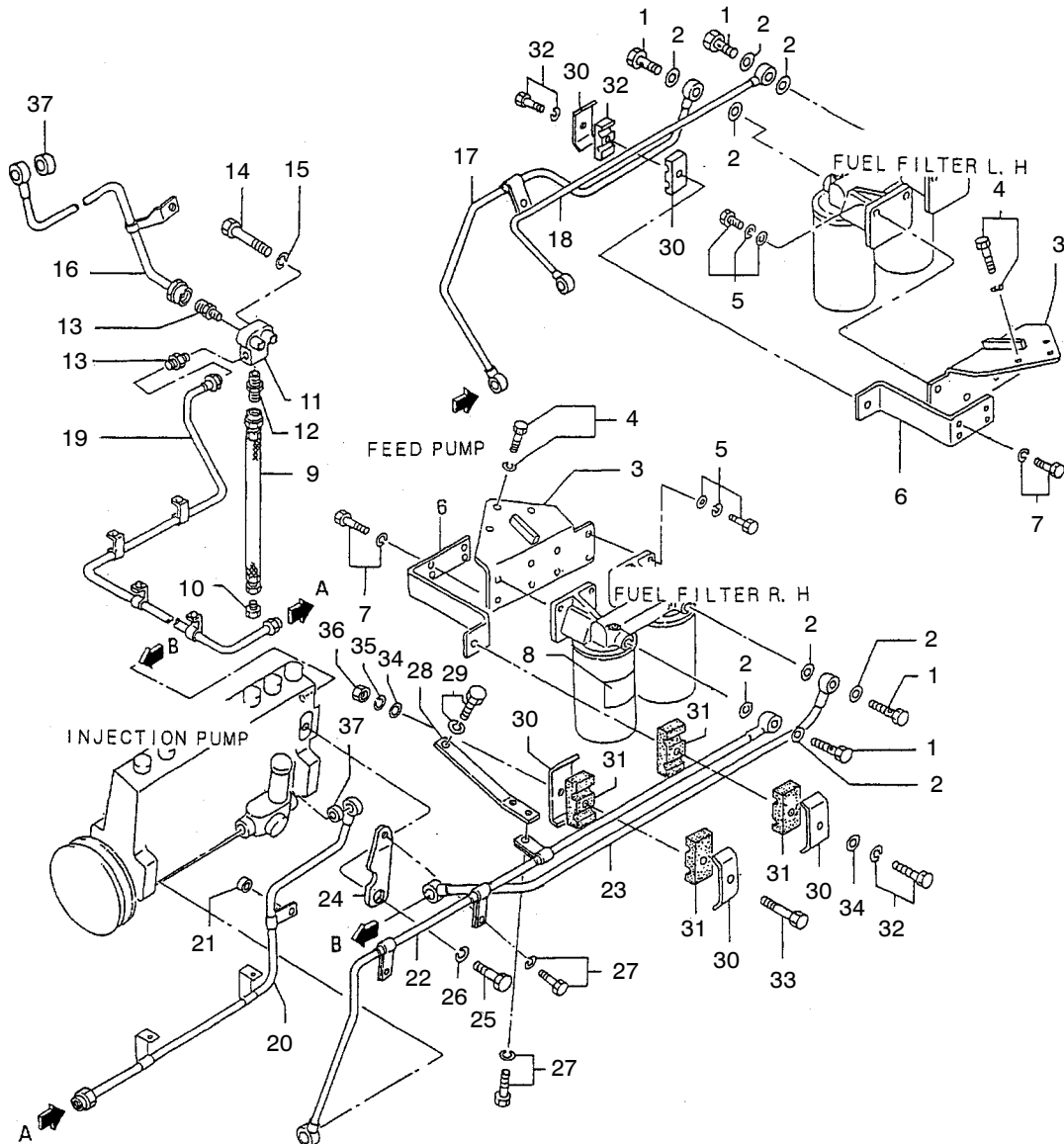
Group 61.8: Fuel Feed Pump



6131_61.8

Item	Part No.	Description	Qty.
			Var. 1
1	GM15514	Pump, fuel	1
101	GM15532	Housing	1
102	GM15533	Piston	1
103	GM15534	Spring, piston	1
104	GM15535	Plug	1
105	GM15536	Tappet assembly	1
106	GM15537	Roller	1
107	GM15538	Pin	1
108	GM15539	Guide	2
109	GM15540	Valve	4
110	GM15541	Spring	4
111	GM15542	Plug	3
112	GM15543	Ring, snap	1
113	GM15544	Pump, priming	1
114	GM15545	Eyebolt	1
115	GM15513	Eyebolt	1
116	GM14530	Washer, sealing	5
117	GM15546	Adapter	2

Group 62.1: Fuel Filter Piping

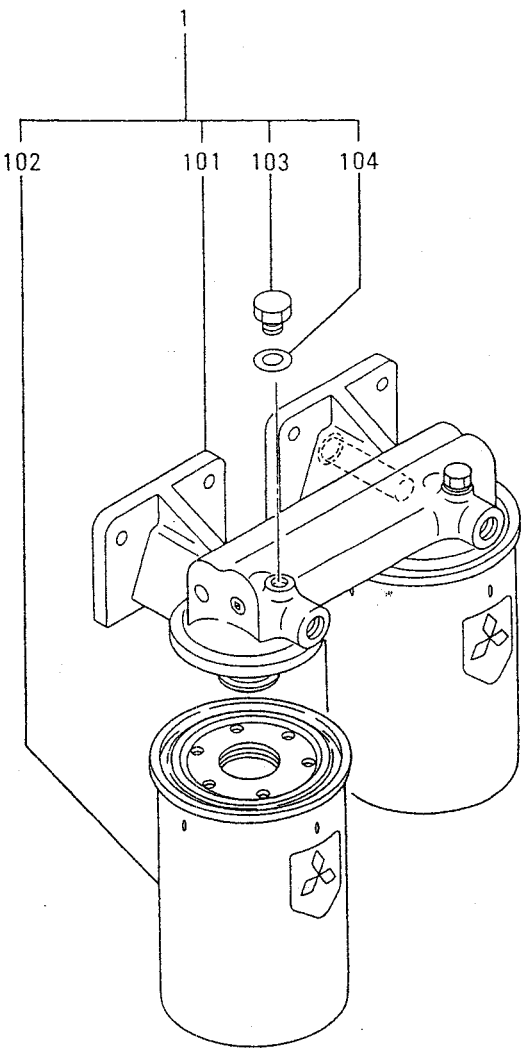


6131_62.1

Item	Part No.	Description	Qty. Var. 1
1	GM15234	Eyebolt	4
2	GM14530	Washer, sealing	8
3	GM21900	Bracket, fuel filter	2
4	GM15151	Bolt	6
5	GM15154	Bolt	8
6	GM21898	Stay, pipe	2
7	GM15140	Bolt	4
8	GM21662	Label, caution	1
9	GM22029	Pipe	1
10	GM21587	Connector	1
11	GM21896	Connector	1
12	GM22127	Connector	1
13	GM16029	Connector	2
14	GM22095	Bolt	2
15	GM15180	Washer, spring	2
16	GM22017	Pipe, fuel	1
17	GM22020	Pipe, fuel	1
18	GM22015	Pipe, fuel	1

Item	Part No.	Description	Qty. Var. 1
19	GM21905	Pipe, fuel	1
20	GM22018	Pipe, fuel	1
21	GM21825	Spacer	1
22	GM22019	Pipe, fuel	1
23	GM22016	Pipe, fuel	1
24	GM21903	Stay, pipe	3
25	GM15960	Bolt	3
26	GM15181	Washer, spring	3
27	GM15139	Bolt w/washer	4
28	GM22014	Stay, fuel pipe	1
29	GM15150	Bolt	1
30	GM15599	Clamp	6
31	GM15600	Seat	8
32	GM15142	Bolt w/washer	2
33	GM15956	Bolt	2
34	GM15174	Washer, plain	6
35	GM15179	Washer, spring	2
36	GM15164	Nut	2
37	GM15803	Spacer	2

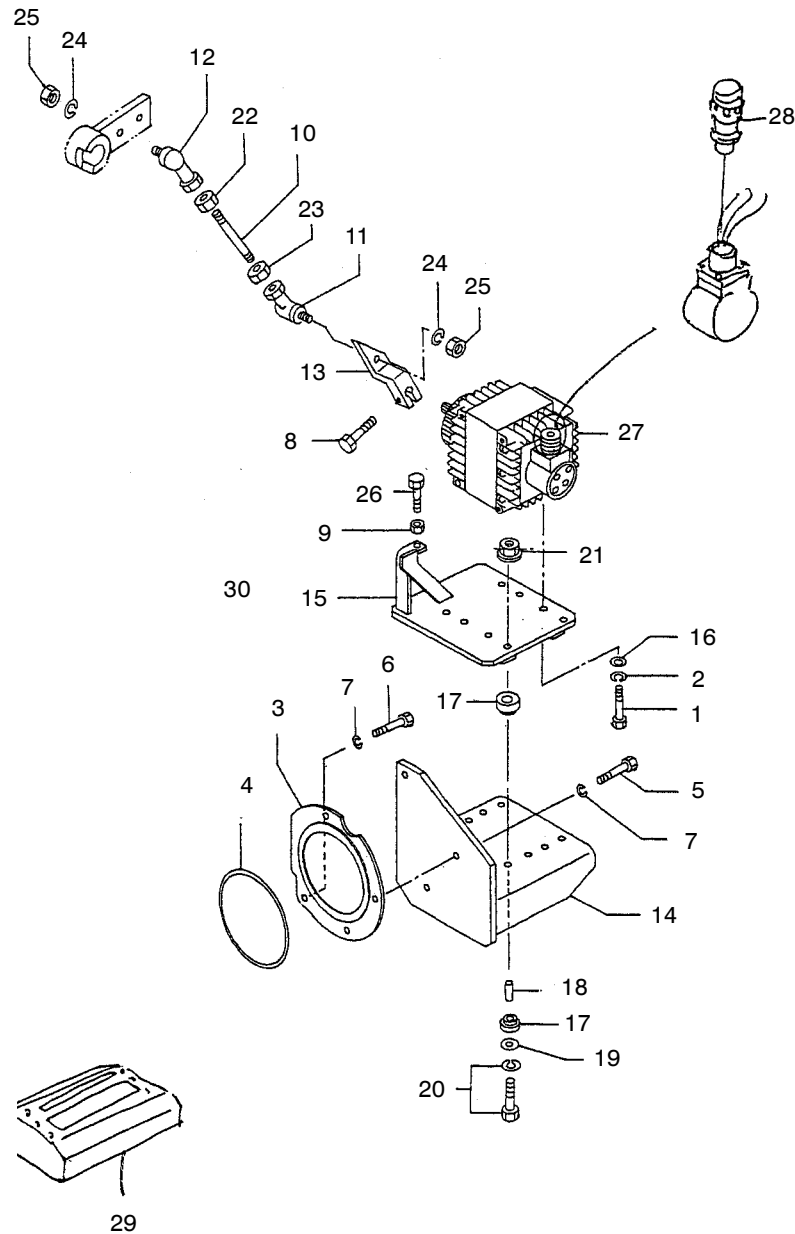
Group 62.2: Fuel Filter



6131_62.2

Item	Part No.	Description	Qty. Var.
1	GM21741	Filter assembly	2
101	GM14930	Bracket assembly	2
102	GM21663	Element	4
103	GM14609	Plug, air	2
104	GM14527	Washer	2

Group 63.1: Governor Control

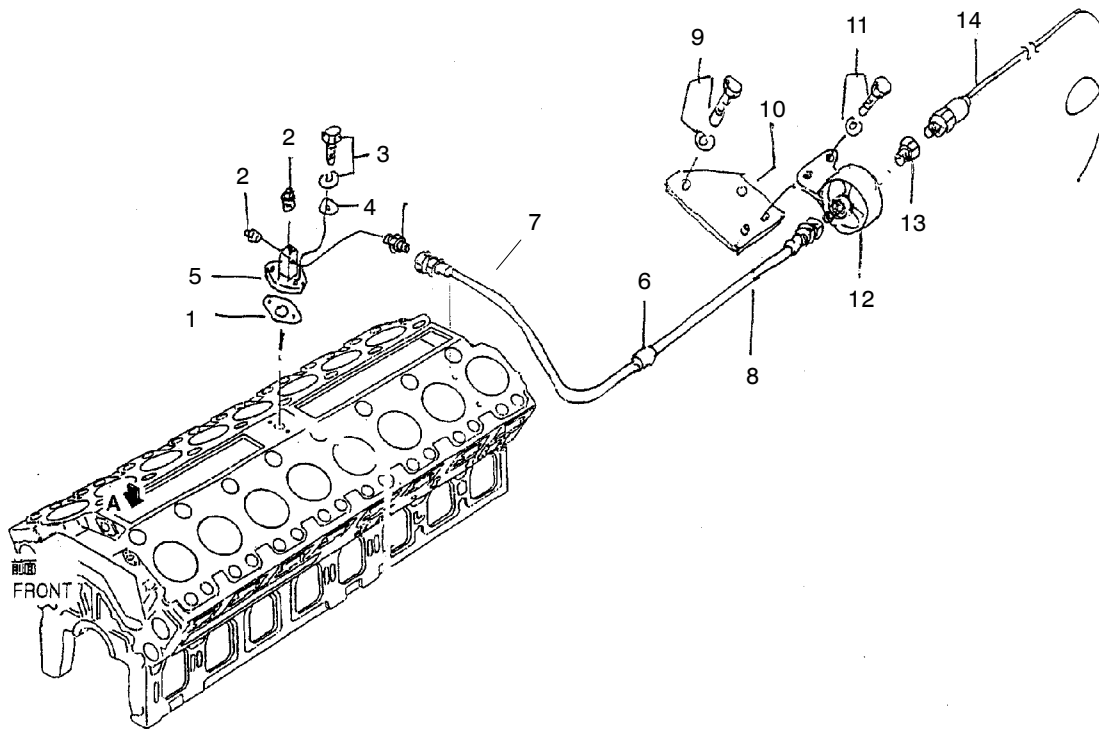


6131_63.1

Item	Part No.	Description	Qty. Var. 1
1	GM21906	Bolt	4
2	GM15178	Washer, spring	4
3	GM15868	Cover	1
4	GM21624	O-ring	1
5	GM15109	Bolt	3
6	GM15109	Bolt	1
7	GM15180	Washer, spring	4
8	GM15127	Bolt	1
9	GM15163	Nut	1
10	GM21626	Bolt	1
11	GM21676	Joint, ball	1
12	GM21677	Joint, ball	1
13	GM21909	Lever, throttle	1
14	GM21910	Bracket, proact	1
15	GM21911	Plate, proact	1

Item	Part No.	Description	Qty. Var. 1
16	GM15173	Washer, plain	4
17	GM21637	Mount	8
18	GM21674	Spacer	4
19	GM22087	Washer	4
20	GM22107	Bolt, w/washer	4
21	GM21908	Nut, lock	4
22	GM15531	Nut, lock	2
23	GM15985	Nut	1
24	GM15178	Washer, spring	2
25	GM15163	Nut	2
26	GM15808	Bolt	1
27	GM21678	Actuator, proact	1
28	GM22021	Cap, proact	1
29	GM21679	Controller	1

Group 63.2: Boost Sensor

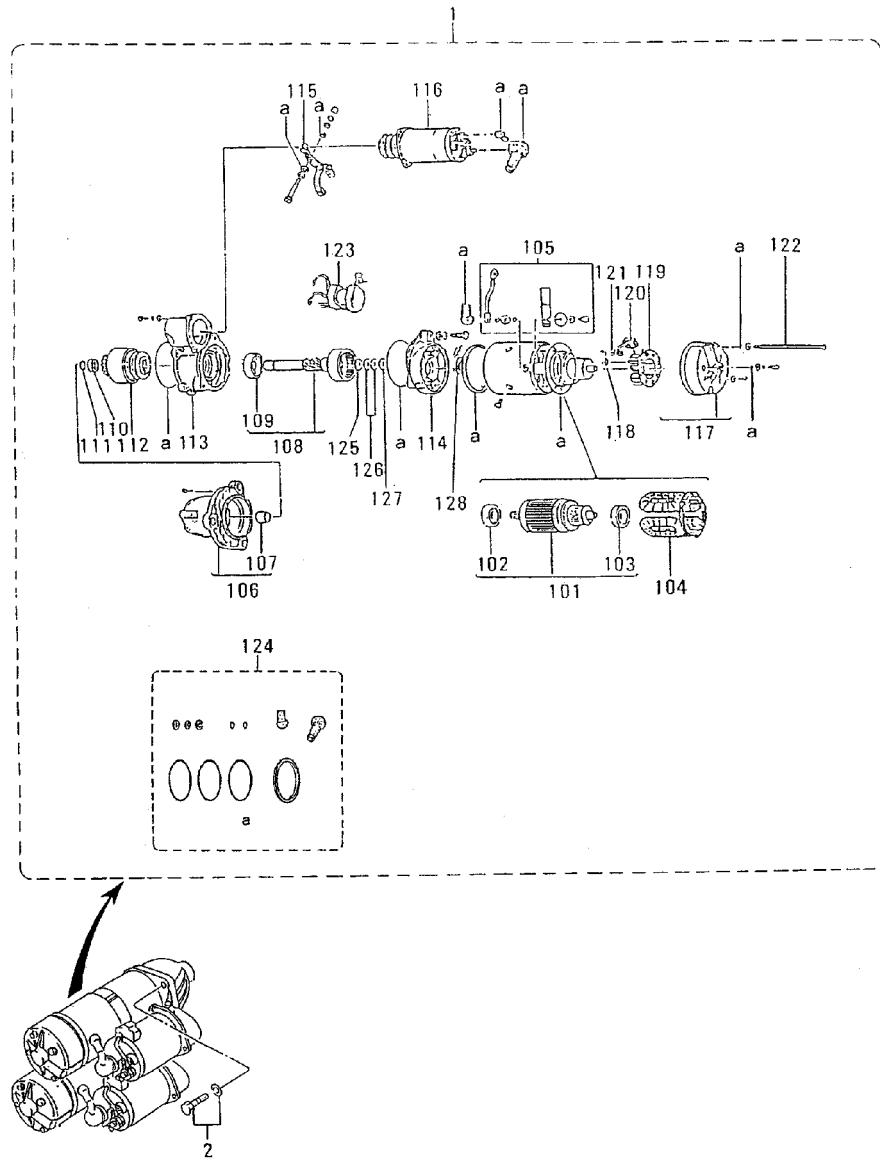


6131_63.2

Item	Part No.	Description	Qty.
			Var. 1
1	GM21730	Gasket	1
2	GM15246	Plug, tapered	2
3	GM15150	Bolt	2
4	GM15175	Washer	2
5	GM22023	Cover	1
6	GM15230	Connector	3
7	GM21608	Pipe, steel	2
8	GM22030	Pipe, flexible	1
9	GM15116	Bolt	2
9	GM15180	Washer, plain	2
10	GM22022	Bracket	1
11	GM15140	Bolt	2
12	GM21655	Mount	1
13	GM22082	Connector	1
14	GM21744	Sensor, boost	1

Group 66: Starter

Parts without items numbers are not supplied separately.

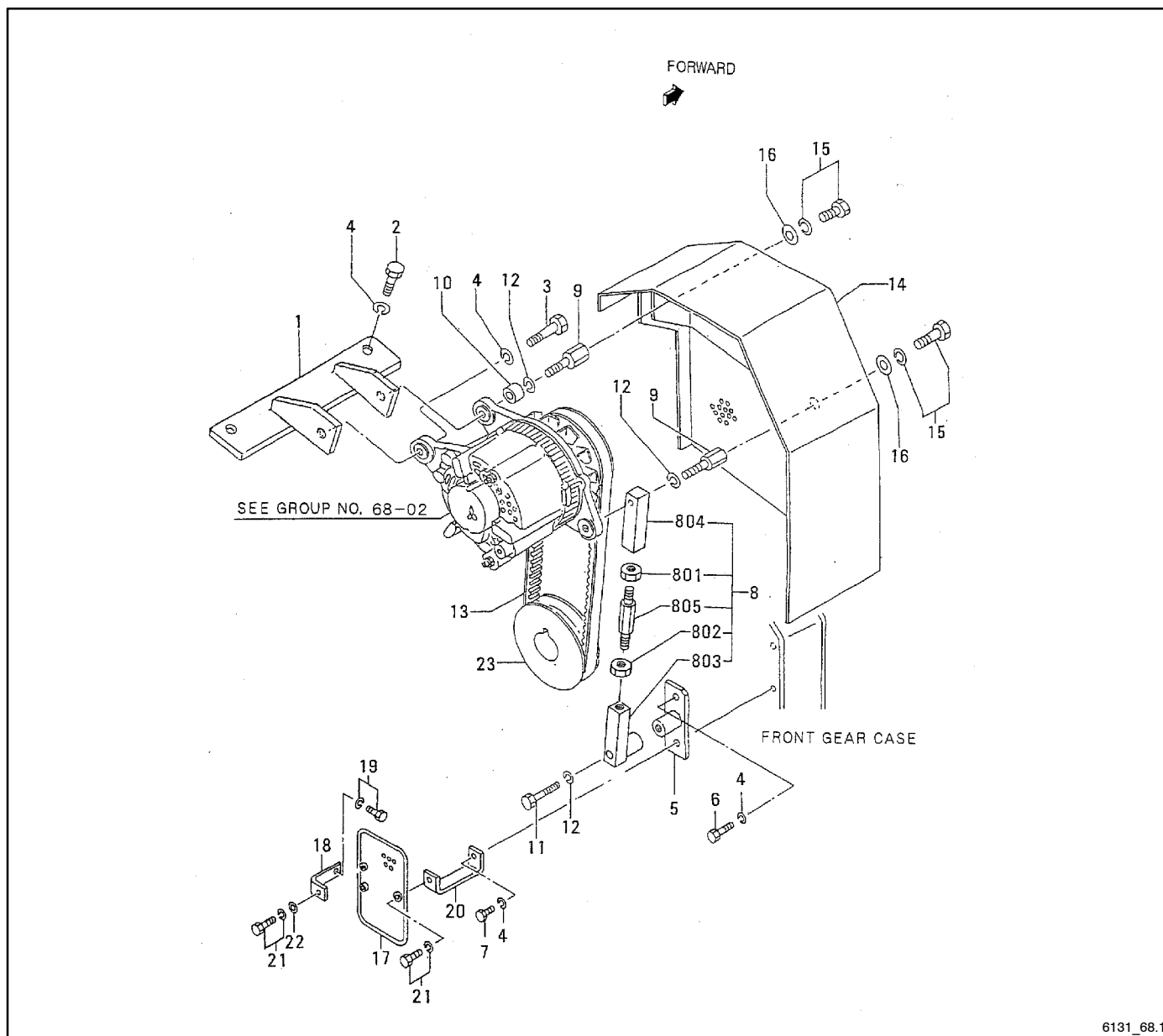


6131_66

Item	Part No.	Description	Qty. Var. 1
1	GM21913	Starter	2
2	GM15152	Bolt	6
101	GM21590	Armature	2
102	GM21641	Bearing, ball	2
103	GM21640	Bearing, ball	2
104	GM21591	Coil, field	2
105	GM22086	Terminal	2
106	GM21592	Bracket	2
107	GM22085	Metal	2
108	GM22084	Shaft	2
109	GM21639	Bearing, ball	2
110	GM21642	Stopper, pinion	2
111	GM21648	Ring, clip	2
112	GM21593	Stopper clutch assembly	2
113	GM21645	Housing	2

Item	Part No.	Description	Qty. Var. 1
114	GM21644	Bracket	2
115	GM21643	Yoke assembly	2
116	GM21601	Switch assembly	2
117	GM21594	Bracket	2
118	GM21647	Spring, brush	8
119	GM21595	Holder, brush	2
120	GM21646	Brush	8
121	GM21652	Plate	8
122	GM21589	Bolt	4
123	GM21597	Switch	2
124	GM22083	Kit, seal	2
125	GM21649	Washer	2
126	GM21650	Washer	4
127	GM21651	Washer	2
128	GM21596	Washer	4

Group 68.1: Alternator Mounting

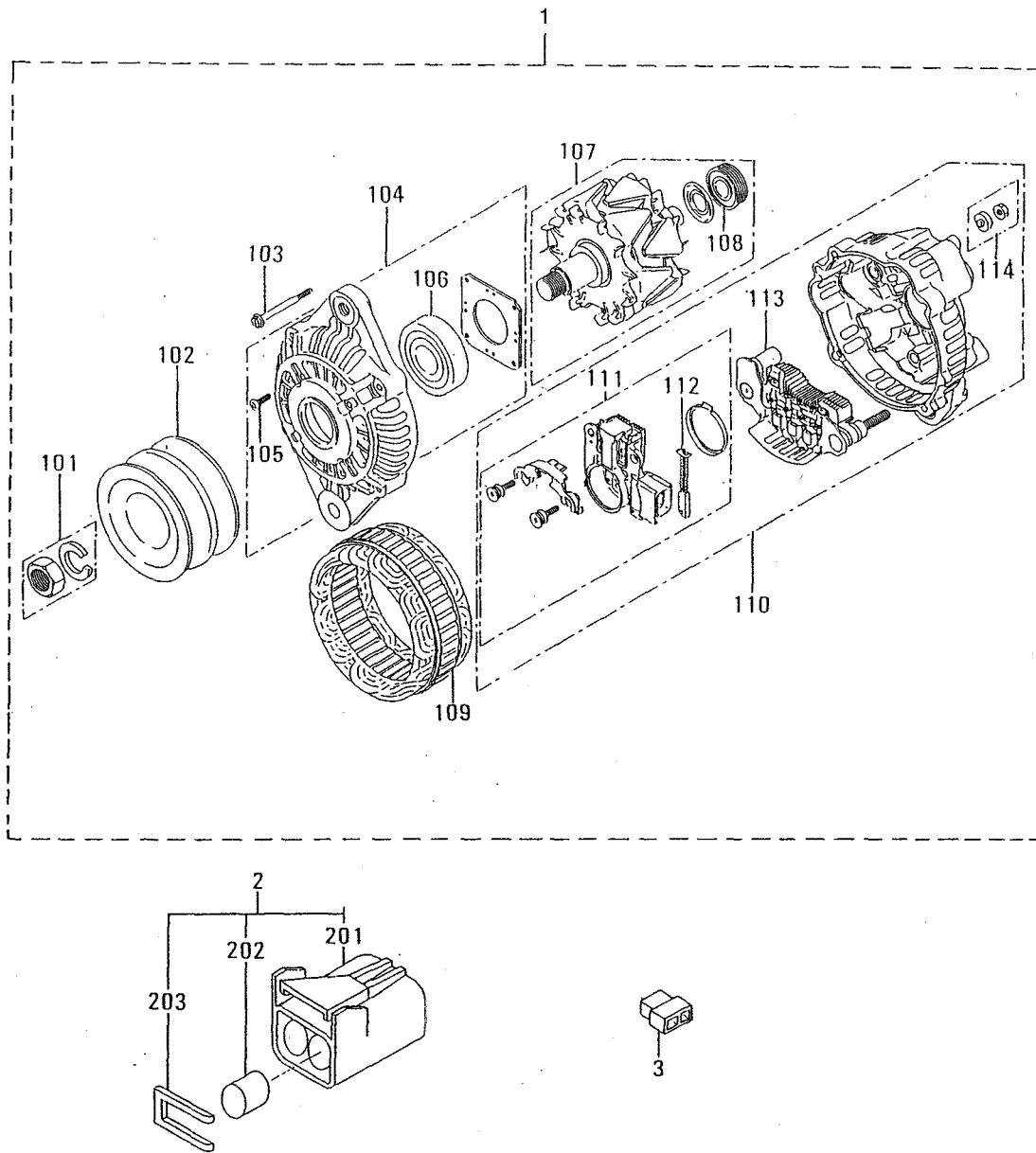


Item	Part No.	Description	Qty. Var. 1
1	GM21918	Bracket, alternator	1
2	GM15108	Bolt	2
3	GM15109	Bolt	1
4	GM15180	Washer, spring	5
5	GM21919	Bracket, alternator	1
6	GM15109	Bolt	1
7	GM15110	Bolt	1
8	GM21743	Rod, adjusting	1
9	GM14469	Bolt, alternator	2
10	GM14468	Spacer, alternator	1
11	GM15114	Bolt	1
12	GM15180	Washer, spring	3
13	GM21917	V-belt, alternator	1
14	GM21920	Cover, alternator	1
15	GM15140	Bolt	2

Item	Part No.	Description	Qty. Var. 1
16	GM15174	Washer, plain	2
17	GM21914	Cover, belt	1
18	GM21915	Stay, cover	2
19	GM15150	Bolt	2
20	GM21916	Stay, cover	1
21	GM15139	Bolt w/washer	3
22	GM15174	Washer, plain	2
23	GM14966	Pulley, alternator	1
801	GM15172	Nut	1
802	GM21638	Nut, lock	1
803	GM15851	Rod	1
804	GM14951	Rod	1
805	GM14986	Rod, adjusting	1

Group 68.2: Alternator

Parts without items numbers are not supplied separately.

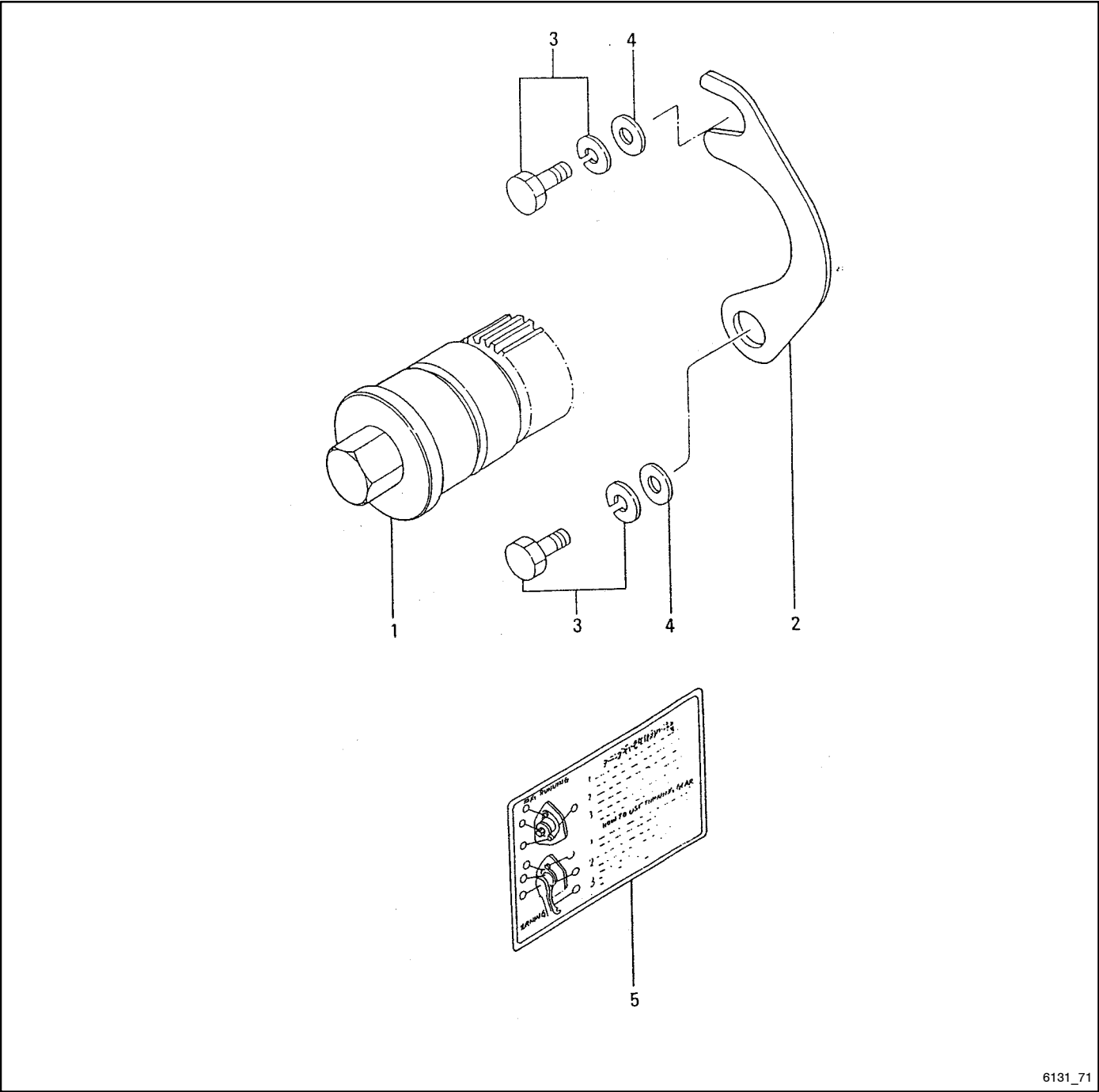


6131_68.2

Item	Part No.	Description	Qty. Var.
1	GM14483	Alternator	1
2	GM14635	Connector	1
3	GM14618	Connector	1
101	GM15092	Nut, set	1
102	GM15093	Pulley	1
103	GM15090	Screw, set	1
104	GM15094	Bracket	1
105	GM15091	Screw, set	1
106	GM15135	Bearing	1
107	GM15099	Rotor assembly	1
108	GM15170	Bearing	1
109	GM15089	Stator	1

Item	Part No.	Description	Qty. Var.
110	GM15095	Bracket	1
111	GM15098	Regulator	1
112	GM15096	Brush	2
113	GM15097	Rectifier	1
114	GM15952	Nut, set	1
201	GM15574	Body, connector	1
202	GM15575	Plug	2
203	GM21675	Holder, rear	1

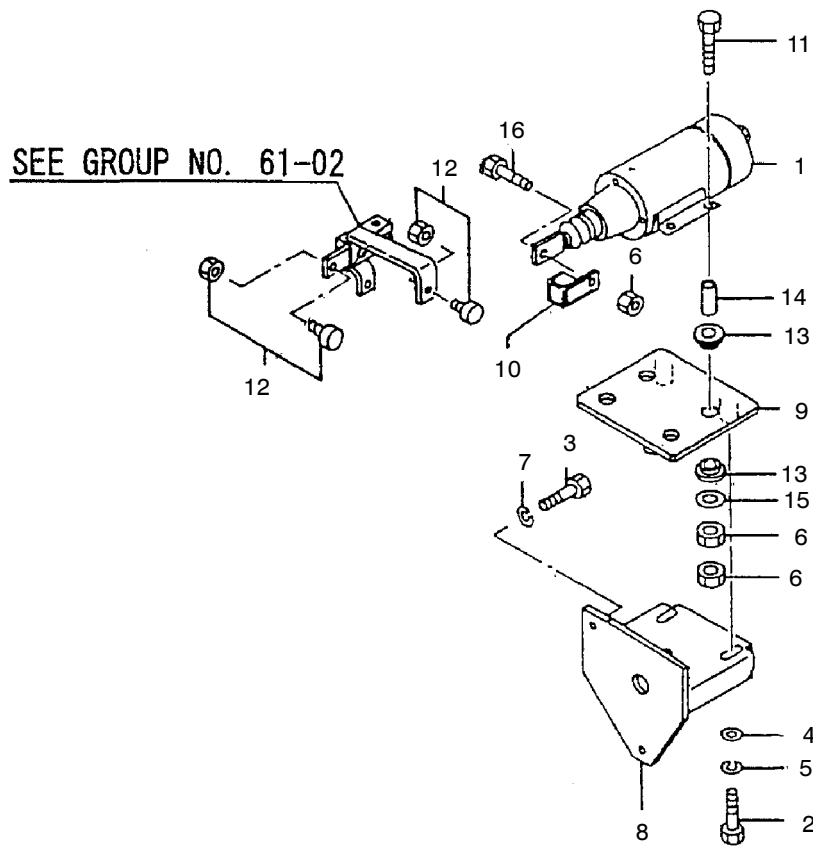
Group 71: Turning Gear



6131_71

Item	Part No.	Description	Qty.
			Var. 1
1	GM21921	Gear, turning	1
2	GM15853	Flange	1
3	GM15149	Bolt w/washer	2
4	GM15175	Washer	2
5	GM14952	Plate, caution	1

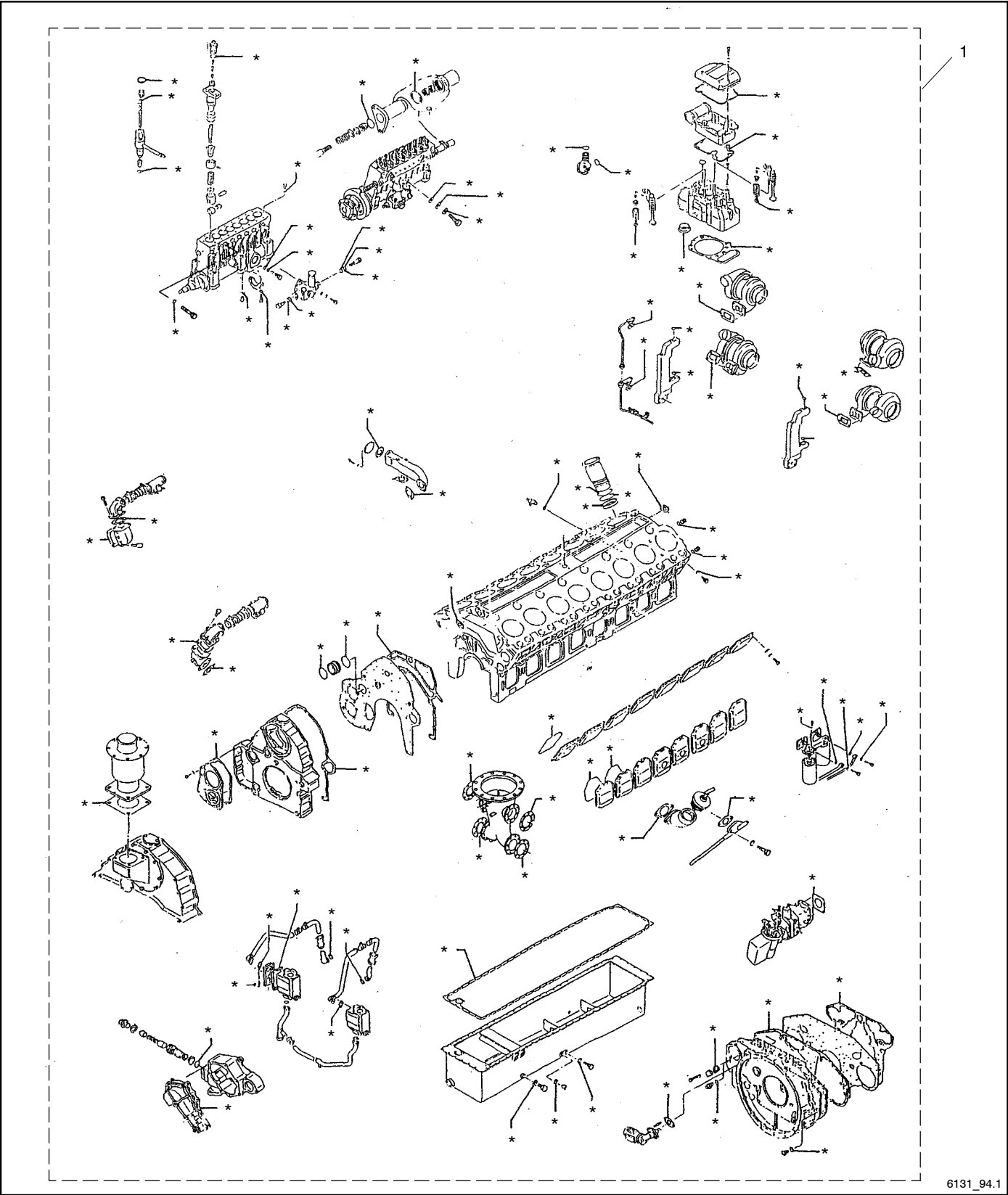
Group 87: Stop System



6131_87

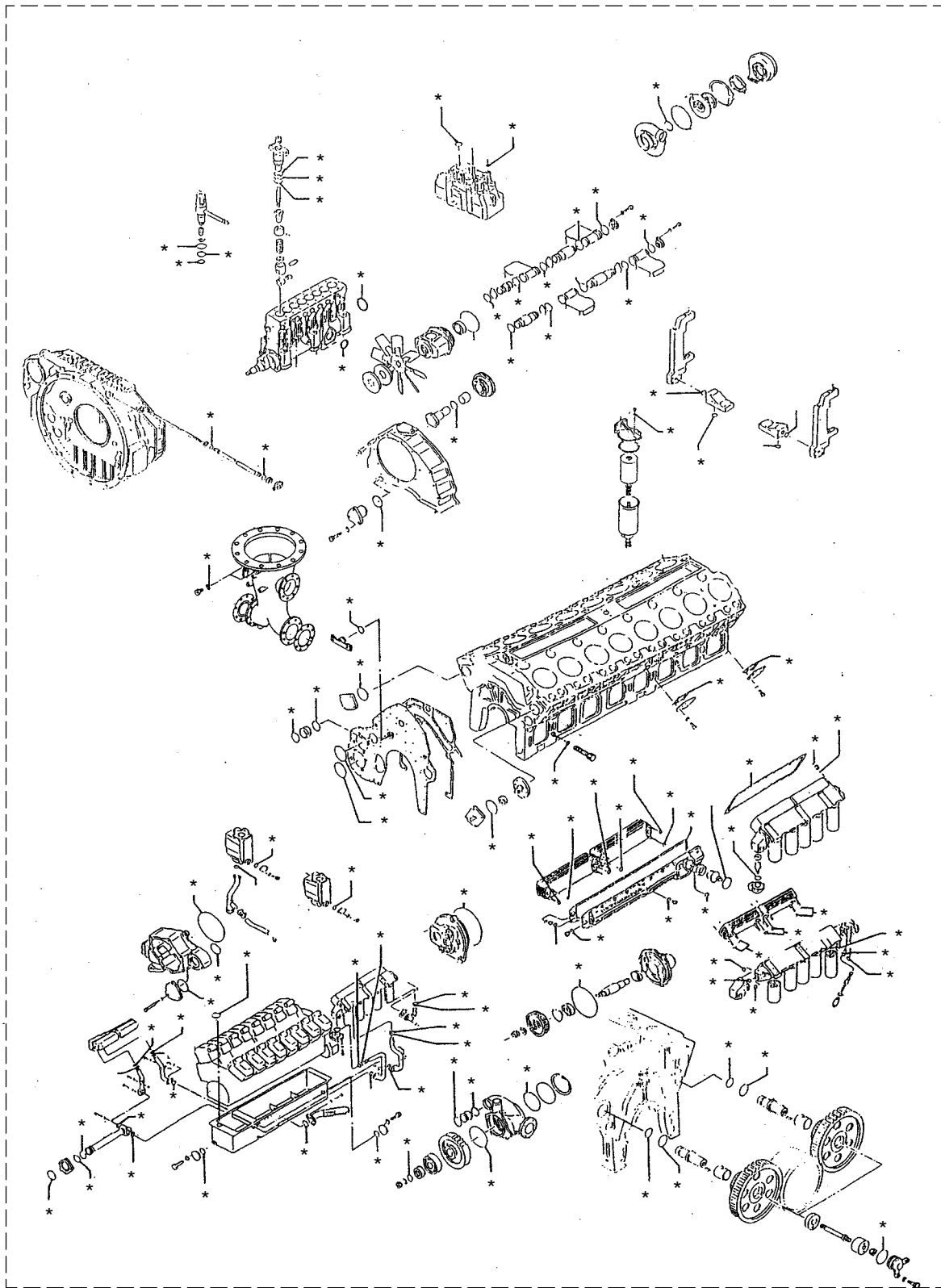
Item	Part No.	Description	Qty. Var. 1
1	GM21598	Solenoid, stop	1
2	GM15955	Bolt	3
3	GM15108	Bolt	2
4	GM15174	Washer, plain	3
5	GM15179	Washer, spring	3
6	GM15162	Nut	9
7	GM15180	Washer, spring	2
8	GM21923	Bracket	1
9	GM22035	Plate, solenoid	1
10	GM21922	Adapter	1
11	GM15101	Bolt	4
12	GM14991	Follower	2
13	GM14998	Cushion, rubber	8
14	GM14999	Spacer	4
15	GM14555	Washer	4
16	GM22089	Bolt	1

Group 94.1: Overhaul Gasket Kit



Item	Part No.	Description	Qty.
			Var.
1	GM22024	Gasket set (includes items marked with *)	1

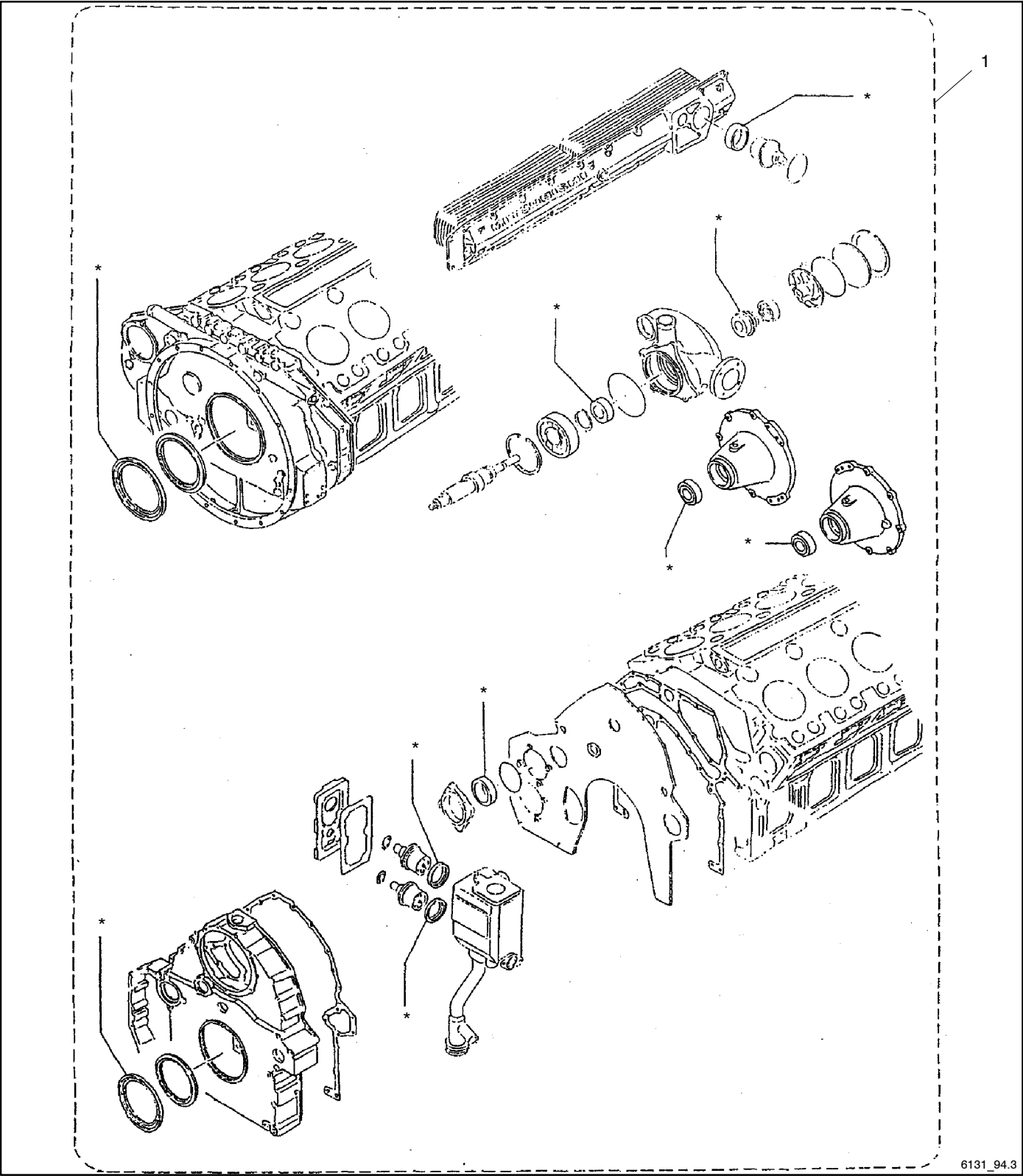
Group 94.2: Overhaul Gasket Kit



6131_94.2

Item	Part No.	Description	Qty. Var. 1
1		Gasket set (includes items marked with *)	1

Group 94.3: Oil Seal Kit



Item	Part No.	Description	Qty.
1	GM21924	Kit, oil seal (includes items marked with *)	1

