

Yanmar 4TNV98-ZNMS 4TNV98T-ZNMS 4TNV98-ZNTBL 4TNV98T-ZNTBL Engines

(P/N's 192809, 192808,
242474, 241451, 196108,
196340)

Mustang 2066/76/86, 2700V
and Gehl 56/6640E, V270
Skid-Steer Loaders

Gehl CTL65/75 and
Mustang MTL316/320
Compact
Track
Loaders



Form No.
917304

Revision C
07/09

ENGINE PARTS MANUAL

Introduction

This manual covers the Yanmar 4TNV98-ZNMS (and Turbocharged version) and 4TNV98-ZNTBL (and Turbocharged version) engines with the following part numbers:

Part Number 192809: Mustang 2066 (naturally-aspirated)

Part Number 192808: Mustang 2076 and 2086 (turbocharged)

Part Number 242474: Mustang 2066 (naturally-aspirated)

Part Number 241451: Mustang 2076/2086/2700V and Gehl 5640E/6640E/V270 (turbocharged)

Part Number 196108: Gehl CTL65 and Mustang MTL316 (naturally-aspirated)

Part Number 196340: Gehl CTL75 and Mustang MTL320 (turbocharged)

When ordering service parts, specify the correct part number, full description, quantity required, and the engine model number and serial number.

Items shown that do not have a part number are shown for reference purposes only and are not available for purchase. Part numbers may change. Your Gehl or Mustang dealer will have the latest part number.

Gehl® Company and the Mustang® Manufacturing Co., Inc., reserve the right to make changes or improvements in the design or construction of any part of the unit without incurring the obligation to install such changes on any previously delivered units.

IMPORTANT

For maximum engine life, when shutting the engine down, allow the engine to idle, without load, for five minutes. This will allow engine components that operate at high temperatures to cool slightly before the engine itself is shut down.

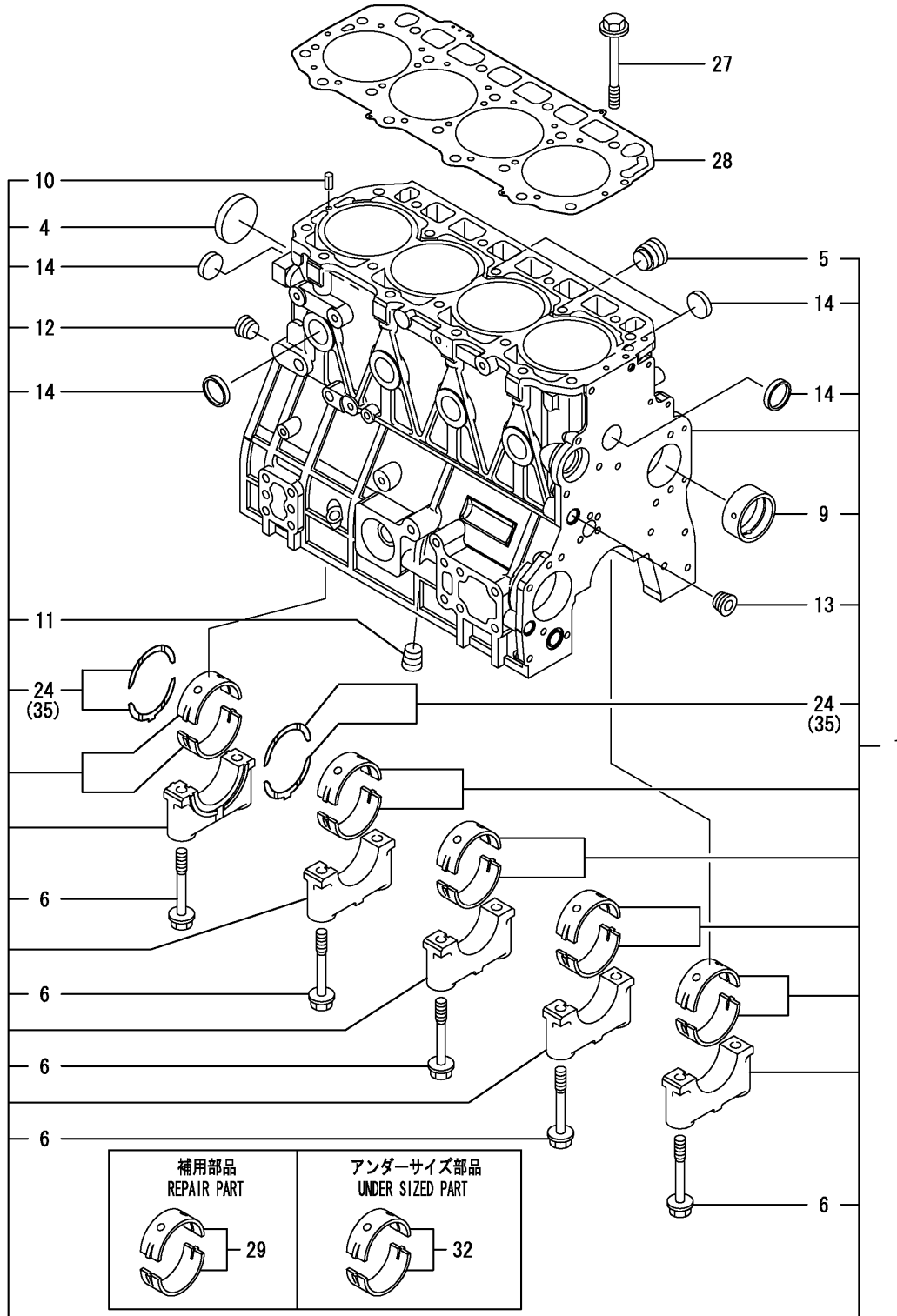
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CYLINDER BLOCK

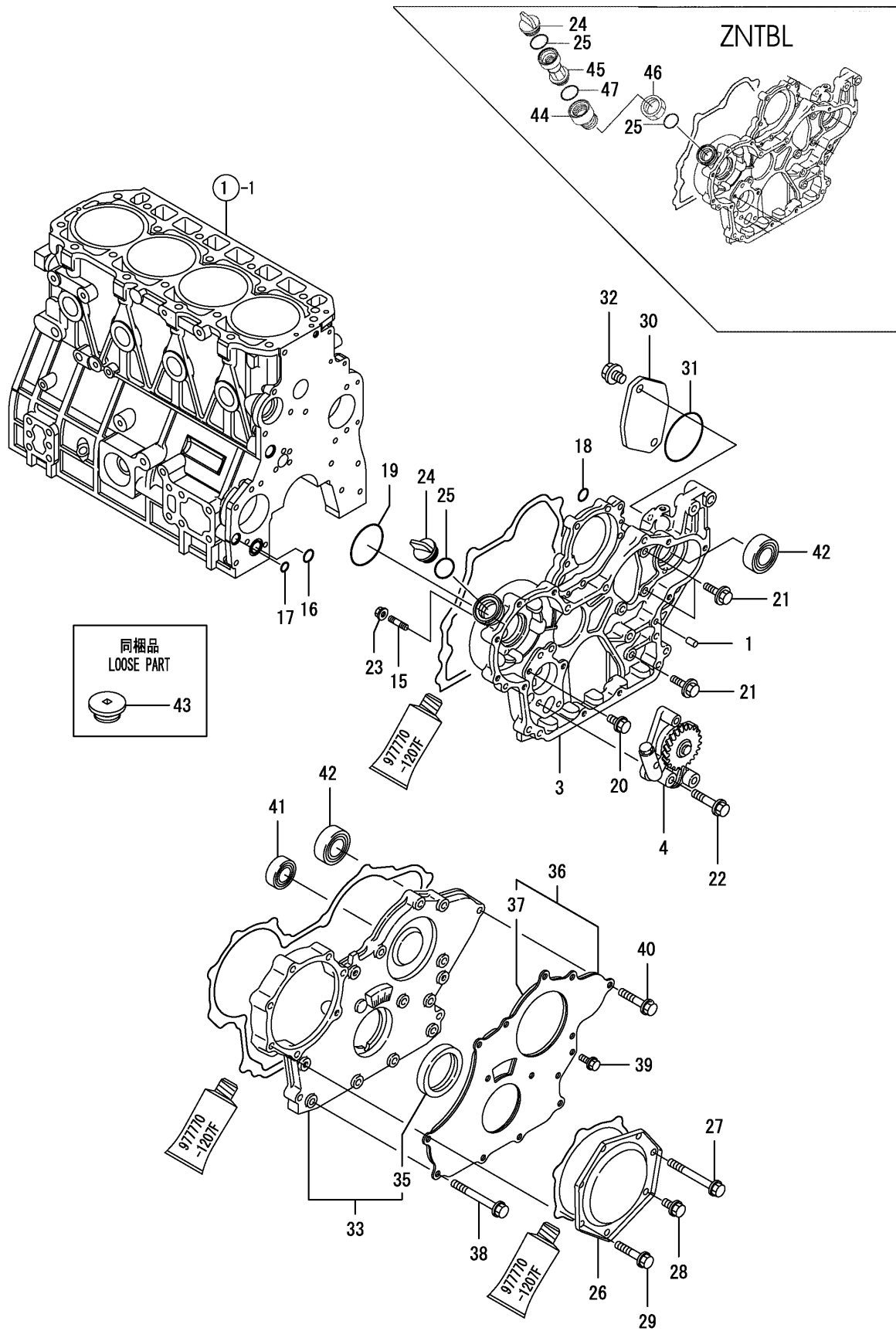


Y00W2680	1, CYLINDER BLOCK			
4TNV98-ZNMS	1, 07/12	2	3	PLUS

CYLINDER BLOCK

Ref. No.	Part No.	Description	Quantity 4TNV98
1	197827	BLOCK ASSY, CYLINDER (ZNMS AND ZNTBL)	1
	197831	BLOCK ASSY, CYLINDER (T-ZNMS AND T-ZNTBL)	1
4	186486	PLUG 55	1
5	425-34722	PLUG	1
6	186491	BOLT, METAL CAP	10
9	186493	BUSH, CAMSHAFT	1
10	425-34783	SPRING PIN 6X12	2
11	425-36260	PLUG PT3/8,SCREW	1
12	425-36260	PLUG PT3/8,SCREW	1
13	425-36260	PLUG PT3/8,SCREW	1
14	188757	PLUG 30	8
24	186494	BEARING ASSY, THRUST	2
27	186485	BOLT, HEAD	18
28	186513	GASKET,CYLINDER HEAD	1
29	186635	MAIN BEARING SET	5
32	197591	MAIN BEARING US=0.25	5
35	197592	BEARING,THRUST .25OS	2

GEAR HOUSING

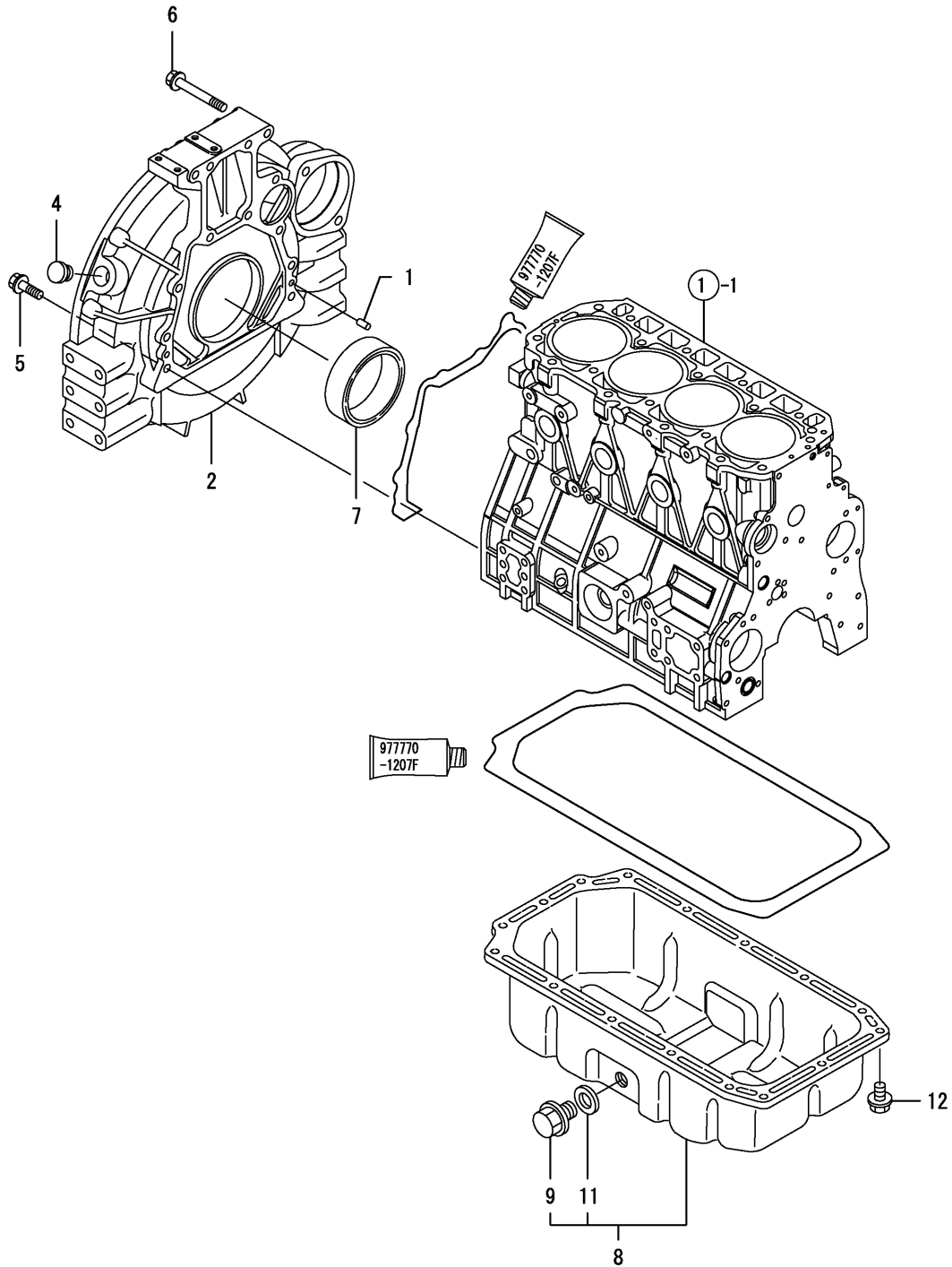


Y00W2680	2, GEAR HOUSING			
4TNV98-ZNMS	1, 07/12	2	3	PLUS

GEAR HOUSING

Ref. No.	Part No.	Description	Quantity 4TNV98
1	188573	PARALLEL PIN 8X16	4
3	186586	CASE, GEAR (ZNMS AND ZNTBL)	1
	197697	HOUSING,GEARS (T-ZNMS AND T-ZNTBL)	1
4	186543	PUMP ASSY, LUB.OIL (ZNMS AND ZNTBL)	1
	197614	PUMP ASSY, LUB.OIL (T-ZNMS AND T-ZNTBL)	1
15	138139	STUD BOLT	4
16	138100	O-RING P20	1
17	138101	O-RING P14	1
18	186607	O-RING 1A P-7.0	1
19	186612	PACKING, 3075	1
20	425-34733	BOLT M 8X 16 PLATED	1
21	425-34746	BOLT M 8X 20 PLATED	3
22	425-34747	BOLT M 8X 45 PLATED	3
23	138141	NUT	4
24	425-34740	COVER,FILLER	1
25	425-34745	O-RING 1A P-32.0	1
26	186487	COVER, F.I. PUMP	1
27	186466	BOLT M 8X 70 PLATED	1
28	425-34733	BOLT M 8X 16 PLATED	1
29	188742	BOLT M 8X 40 PLATED	5
30	137948	COVER, HO-P	1
31	138127	O-RING 1A G-85.0	1
32	138133	BOLT M10X 20 PLATED	2
33	197826	HOUSING ASSY,COVER,G	1
35	186664	SEAL, OIL	1
36	186489	COVER ASSY	1
37	186490	SPONGE	1
38	186466	BOLT M 8X 70 PLATED	6
39	425-34733	BOLT M 8X 16 PLATED	3
40	188742	BOLT M 8X 40 PLATED	5
41	197593	BEARING #6205	1
42	186507	BALL BEARING	2
43	137947	CAP, LUB.OIL SUPPLY	1
44	185643	ADAPTOR, OIL FILLER (ZNTBL AND T-ZNTBL)	1
45	137949	PIPE (ZNTBL AND T-ZNTBL)	1
46	185644	NUT, OIL FILLER (ZNTBL AND T-ZNTBL)	1
47	185645	O-RING 1A P-30.0 ZNTBL AND T-ZNTBL)	1

FLYWHEEL HOUSING AND OIL SUMP



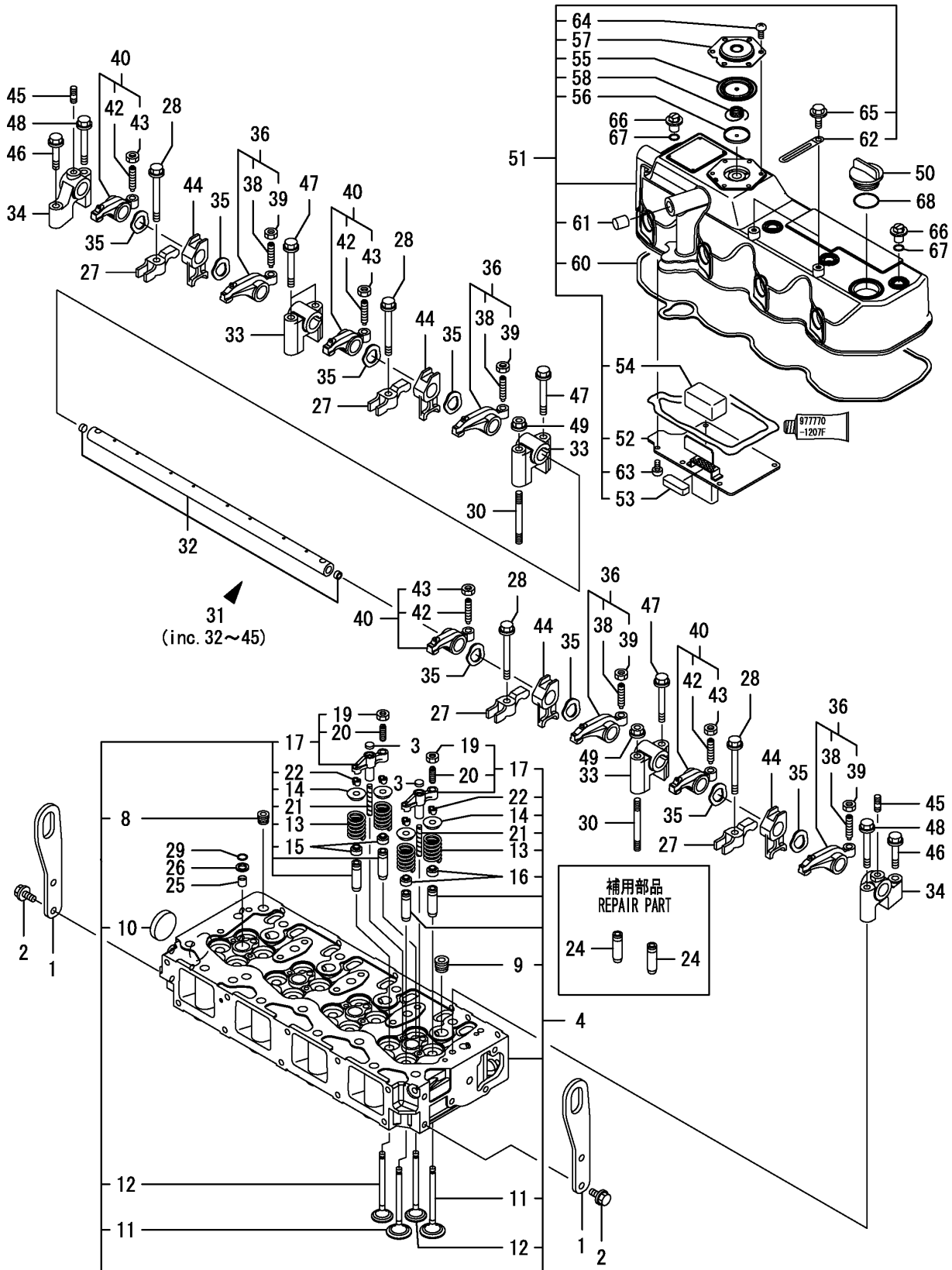
Y00W2680	3, FLYWHEEL HOUSING & OIL SUMP			
4TNV98-ZNMS	1, 07/12	2	3	PLUS

FLYWHEEL HOUSING AND OIL SUMP

Ref. No.	Part No.	Description	Quantity 4TNV98
1	188573	PARALLEL PIN 8X16	2
2	197590	COVER ASSY,FLYWHEEL (ZNMS AND T-ZNMS)	1
	186576	HOUSING, FLYWHEEL (ZNTBL AND T-ZNTBL)	1
4	425-34756	CAP, FLYWHEEL COVER	1
5	186622	BOLT M10X 35 PLATED	9
6	186623	BOLT M10X 70 PLATED	4
7	197620	SEAL, OIL	1
8	197753	PAN ASSY, LUB. OIL (ZNMS)	1
	197470	SUMP ASSY, LUB.OIL (T-ZNMS)	1
	425-36120	SUMP ASSY, OIL (ZNTBL)	1
	197664	SUMP ASSY, OIL (T-ZNTBL)	1
9	425-36121	DRAIN PLUG M22	1
11	138113	SEAL WASHER 22S	1
12	425-34729	BOLT M 8X 12 PLATED	16

CYLINDER HEAD AND BONNET

ZNMS AND ZNTBL Engines



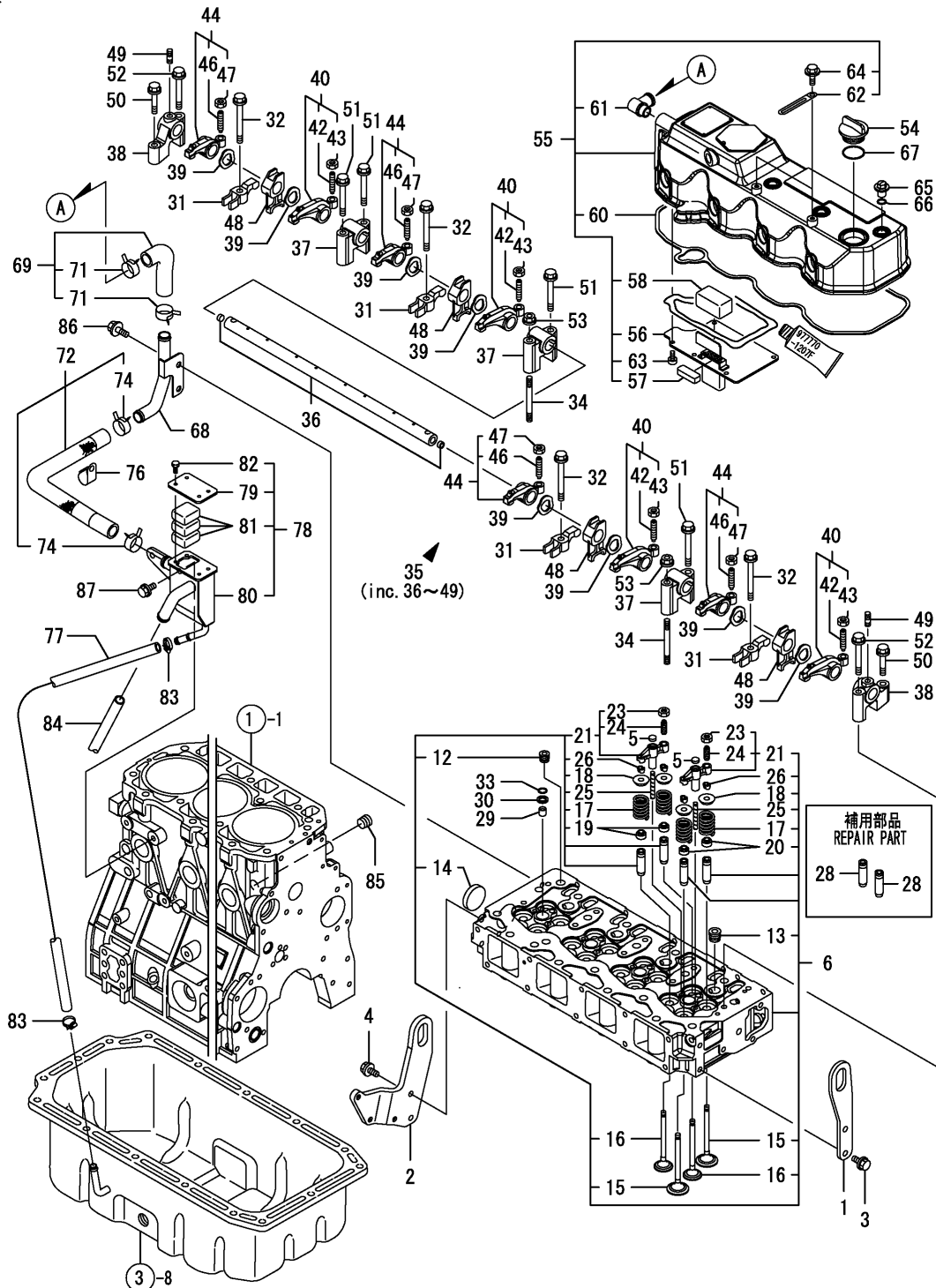
Y00W2680	4, CYLINDER HEAD & BONNET		
4TNV98-ZNMS		1, 07/12	2 3 PLUS

CYLINDER HEAD AND BONNET

Ref. No.	Part No.	Description	Quantity ZNMS/ZNTBL
1	186519	LIFTER, ENGINE (ZNMS)	2
	186519	LIFTER, ENGINE (ZNTBL)	1
	197733	LIFTER,ENGINE (ZNTBL)	1
2	425-34733	BOLT M 8X 16 PLATED	4
3	186406	SEAT A,VALVE BRIDGE	8
4	197622	HEAD ASSY, CYLINDER	1
8	186602	PLUG PT1/4,SCREW	1
9	425-36260	PLUG PT3/8,SCREW	4
10	425-34779	PLUG 40	1
11	186520	VALVE(INT)	8
12	186521	VALVE(EXH)	8
13	186522	VALVE SPRING	16
14	425-35188	RETAINER, SPRING	16
15	197472	SEAL, VALVE STEM(EXH)	8
16	425-35191	SEAL, VALVE STEM(INT)	8
17	186529	BRIDGE ASSY,VALVE	8
19	425-34791	NUT M8XP1.0	8
20	186411	SCREW,VALVE BRIDGE	8
21	186410	GUIDE,VALVE BRIDGE	8
22	425-35189	COTTER ASSY	16
24	186533	GUIDE, VALVE	16
25	186337	PROTECTOR, NOZZLE	4
26	425-34796	SEAT, NOZZLE	4
27	186534	RETAINER,F.I.VALVE	4
28	197603	FLANGE BOLT,RETAINER	4
29	425-34776	O-RING 1A P 12.0	4
30	186314	BOLT 8X80	2
31	186528	SUPPORT CMP	1
32	186523	SHAFT,ROCKER ARM	1
33	186524	SUPPORT A	3
34	186525	SUPPORT B	2
35	186401	WAVE WASHER	8
36	186530	ARM ASSY, ROCKER	4
38	188596	SCREW, VALVE	4
39	425-34791	NUT M8XP1.0	4
40	186531	ARM ASSY, ROCKER	4
42	188596	SCREW, VALVE	4
43	425-34791	NUT M8XP1.0	4
44	186535	PEDESTAL,RETAINER	4
45	186624	STUD M 8X 22 PLATED	2
46	188742	BOLT M 8X 40 PLATED	2
47	188746	BOLT M 8X 60 PLATED	4
48	188746	BOLT M 8X 60 PLATED	2
49	138140	NUT	2
50	425-34740	COVER,FILLER	1
51	197621	BONNET ASSY	1
52	197601	BAFFLE PLATE	1
53	197602	BAFFLE	1
54	186518	BAFFLE	1
55	186388	DIAPHRAGM,BREATHER	1
56	186389	CENTER PLATE	1
57	186390	PLATE,BREATHER	1
58	186391	SPRING, DIAPHRAGM	1
60	197698	GASKET, BONNET	1
61	186335	PLUG	1
62	197779	CLIP	2
63	186598	SCREW 5X10,TAPPING	6
64	186598	SCREW 5X10,TAPPING	6
65	186615	BOLT M 6X 12 PLATED	2
66	425-34775	KNOB	4
67	425-34776	O-RING 1A P 12.0	4
68	425-34745	O-RING 1A P-32.0	1

CYLINDER HEAD AND BONNET

T-ZNMS and T-ZNTBL



Y00W2670	4, CYLINDER HEAD & BONNET			
4TNV98T-ZNMS	1, 07/12	2	3	PLUS

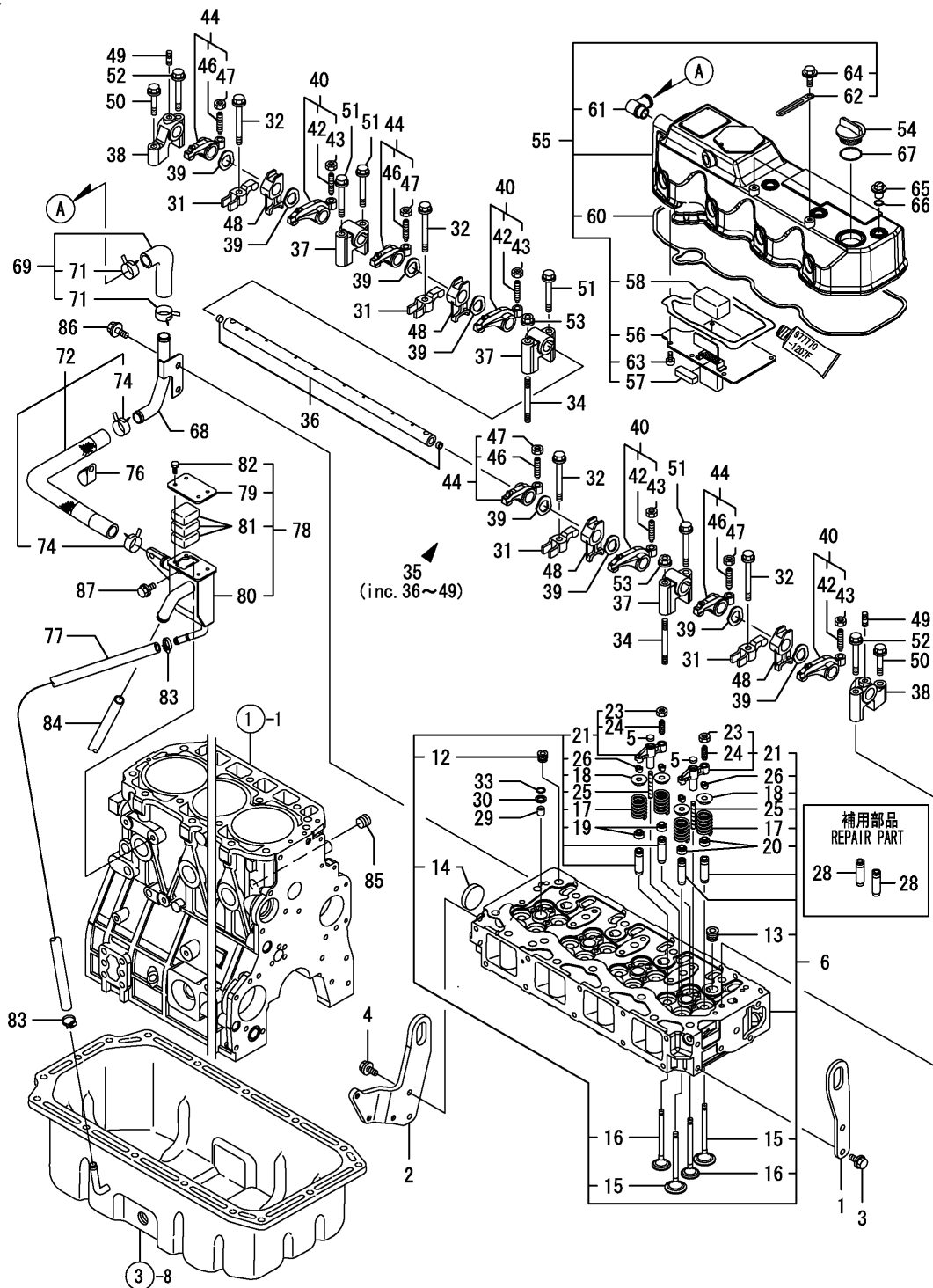
CYLINDER HEAD AND BONNET

Ref. No.	Part No.	Description	Quantity T-ZNMS/T-ZNTBL
1	186519	LIFTER, ENGINE	1
2	197668	LIFTER, ENGINE	1
3	425-34733	BOLT M 8X 16 PLATED	2
4	425-34746	BOLT M 8X 20 PLATED	2
5	186406	SEAT A, VALVE BRIDGE	8
6	197670	HEAD ASSY, CYLINDER	1
12	186602	PLUG PT1/4,SCREW	1
13	425-36260	PLUG PT3/8,SCREW	4
14	425-34779	PLUG 40	1
15	186520	VALVE(INT)	8
16	186521	VALVE(EXH)	8
17	186522	VALVE SPRING	16
18	425-35188	RETAINER, SPRING	16
19	197472	SEAL, VALVE STEM(EXH)	8
20	425-35191	SEAL, VALVE STEM(INT)	8
21	186529	BRIDGE ASSY,VALVE	8
23	425-34791	NUT M8XP1.0	8
24	186411	SCRWE,VALVE BRIDGE	8
25	186410	GUIDE,VALVE BRIDGE	8
26	425-35189	COTTER ASSY	16
28	186533	GUIDE, VALVE	16
29	186337	PROTECTOR, NOZZLE	4
30	425-34796	SEAT, NOZZLE	4
31	186534	RETAINER,F.I.VALVE	4
32	197603	FLANGE BOLT,RETAINER	4
33	425-34776	O-RING 1A P 12.0	4
34	186314	BOLT 8X80	2
35	186528	SUPPORT CMP	1
36	186523	SHAFT,ROCKER ARM	1
37	186524	SUPPORT A	3
38	186525	SUPPORT B	2
39	186401	WAVE WASHER	8
40	186530	ARM ASSY, ROCKER	4
42	188596	SCREW, VALVE	4
43	425-34791	NUT M8XP1.0	4
44	186531	ARM ASSY, ROCKER	4
46	188596	SCREW, VALVE	4

Parts Listing Continued On Next Page

CYLINDER HEAD AND BONNET

T-ZNMS and T-ZNTBL



Y00W2670	4, CYLINDER HEAD & BONNET		
4TNV98T-ZNMS	1, 07/12	2	3 PLUS

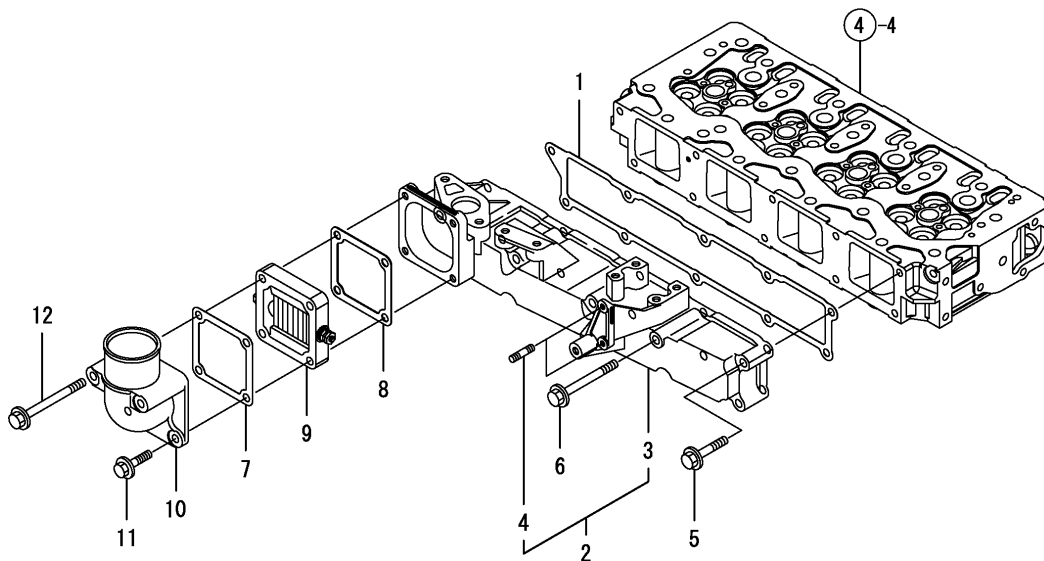
CYLINDER HEAD AND BONNET

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Ref. No.	Part No.	Description	Quantity T-ZNMS/T-ZNTBL
47	425-34791	NUT M8XP1.0	4
48	186535	PEDESTAL,RETAINER	4
49	186624	STUD M 8X 22 PLATED	2
50	188742	BOLT M 8X 40 PLATED	2
51	188746	BOLT M 8X 60 PLATED	4
52	188746	BOLT M 8X 60 PLATED	2
53	138140	NUT	2
54	425-34740	COVER,FILLER	1
55	197669	BONNET ASSY	1
56	197601	BAFFLE PLATE	1
57	197602	BAFFLE	1
58	186518	BAFFLE	1
60	197698	GASKET, BONNET	1
61	197449	JOINT, BREATHER	1
62	197572	CLIP	2
63	186598	SCREW 5X10,TAPPING	6
64	186615	BOLT M 6X 12 PLATED	2
65	425-34775	KNOB	4
66	425-34776	O-RING 1A P 12.0	4
67	425-34745	O-RING 1A P-32.0	1
68	197665	PIPE, BREATHER	1
69	197666	HOSE CMP, BREATHER	1
71	188632	CLAMP 22	2
72	197666	HOSE CMP, BREATHER	1
74	188632	CLAMP 22	2
76	425-34772	RETAINER	1
77	197475	HOSE, RETURN (T-ZNMS)	1
	197667	HOSE ASSY,BREAZER (T-ZNTBL, INCLUDES PIPE PROTECTOR)	1
	197692	PROTECTOR, PIPE 19	1
78	197749	MISTSEPARATOR ASSY	1
79	197747	COVER,SEPARATOR	1
80	197748	MISTSEPARATOR	1
81	138479	WOOL, STEEL	3
82	197810	BOLT M 5X 10 PLATED	4
83	197789	CLAMP 22	2
84	197792	HOSE, 16 X 250	1
85	425-36260	PLUG PT3/8,SCREW	1
86	425-34729	BOLT M 8X 12 PLATED	2
87	188736	BOLT 8X 14 PLATED	2

SUCTION MANIFOLD

ZNMS AND ZNTBL Engines



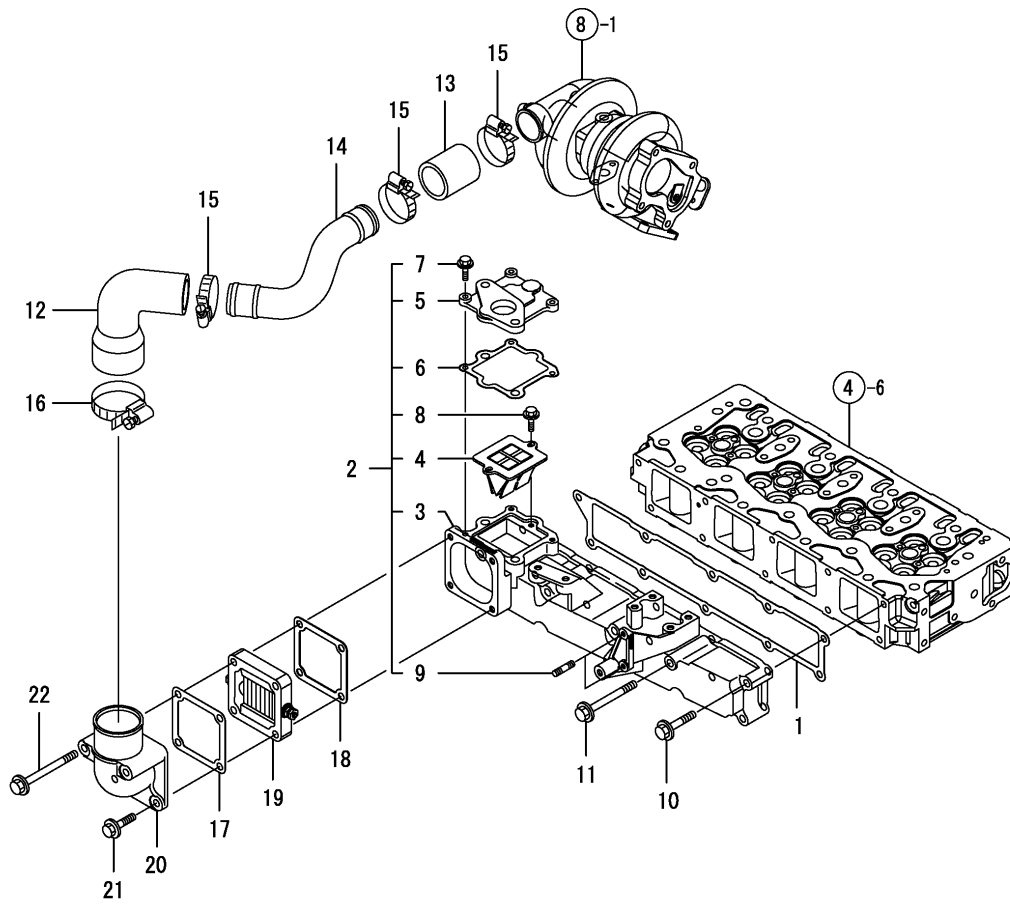
Y00W2680	5. SUCTION MANIFOLD			
4TNV98-ZNMS	1. 07/12	2	3	PLUS

SUCTION MANIFOLD

Ref. No.	Part No.	Description	Quantity ZNMS/ZNTBL
1	186538	PACKING(INT.MANIFOLD	1
2	197624	MANIFOLD CMP,INTAKE	1
3		MANIFOLD,INTAKE	1
4	425-34780	STUD M 6X 20 PLATED	2
5	425-34747	BOLT M 8X 45 PLATED	6
6	425-34800	BOLT M 8X 80 PLATED	4
7	197450	GASKET	1
8	425-36318	GASKET, (NON-ASB.)	1
9	197705	HEATER, AIR	1
10	197451	BEND	1
11	188742	BOLT M 8X 40 PLATED	2
12	186618	BOLT M 8X 90 PLATED	2

SUCTION MANIFOLD

T-ZNMS and T-ZNTBL Engines



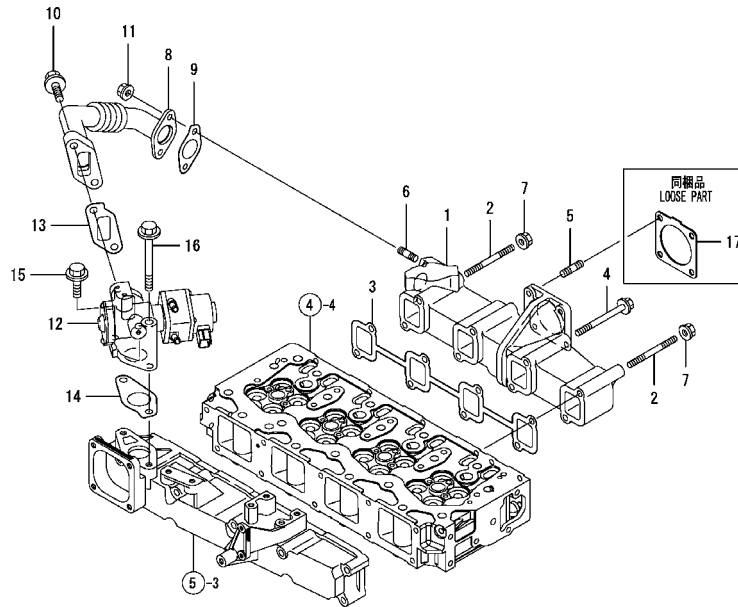
Y00W2670	5. SUCTION MANIFOLD			
4TNV98T-ZNMS	1. 07/12	2	3	PLUS

SUCTION MANIFOLD

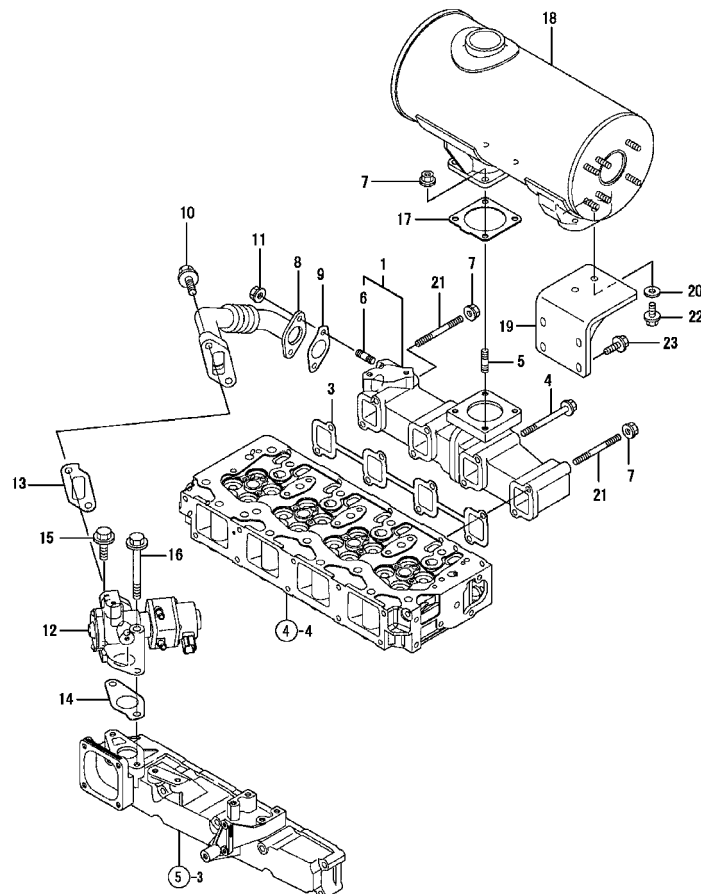
Ref. No.	Part No.	Description	Quantity T-ZNMS/T-ZNTBL
1	186538	PACKING(INT.MANIFOLD	1
2	197672	MANIFOLD CMP,INTAKE	1
3	197671	MANIFOLD,INTAKE	1
4	197677	REEDVALVE	1
5	197678	SPACER(EGR VALVE	1
6	197679	GASKET(EGR-V SPACER	1
7	188732	BOLT M 6X 20 PLATED	3
8	188732	BOLT M 6X 20 PLATED	2
9	425-34780	STUD M 6X 20 PLATED	2
10	425-34747	BOLT M 8X 45 PLATED	6
11	425-34800	BOLT M 8X 80 PLATED	4
12	197750	RUBBER HOSE	1
13	197483	JOINT B	1
14	197476	DUCT,SUCTION	1
15	425-36131	CLAMP 54	3
16	425-36133	CLAMP 70	1
17	197450	GASKET	1
18	425-36318	GASKET, (NON-ASB.)	1
19	197705	HEATER, AIR	1
20	197451	BEND	1
21	188742	BOLT M 8X 40 PLATED	2
22	186618	BOLT M 8X 90 PLATED	2

EXHAUST MANIFOLD AND SILENCER

ZNMS Engine



ZNTBL Engine

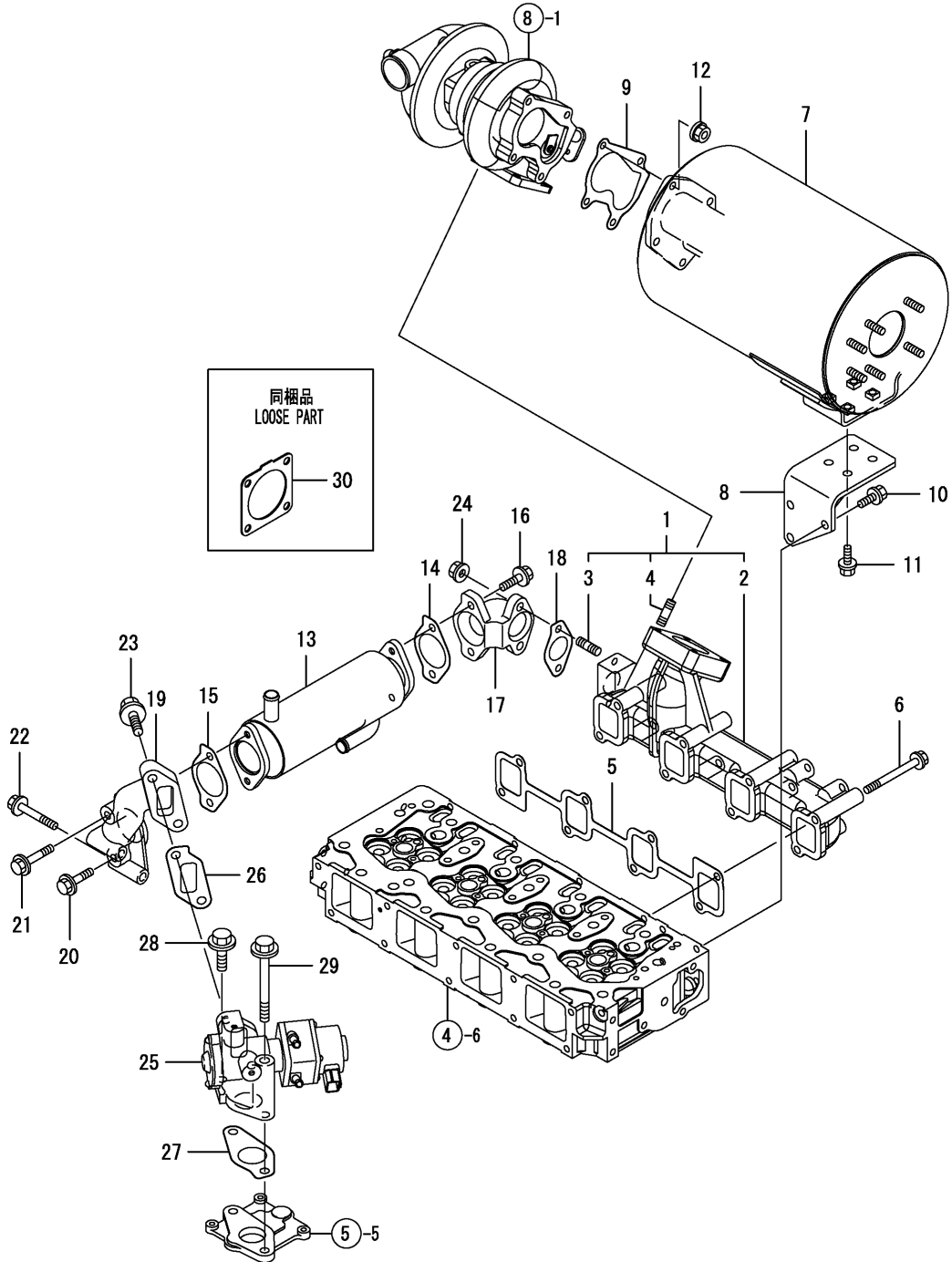


EXHAUST MANIFOLD AND SILENCER

Ref. No.	Part No.	Description	Quantity ZNMS/ZNTBL
1	197469	MANIFOLD,EXHAUST (ZNMS)	1
	197625	MANIFOLD,EXHAUST (ZNTBL)	1
2	197507	STUD	2
3	425-36128	GASKET	1
4	197462	BOLT, M8X90	6
5	425-36249	BOLT M 8X 22	4
6	138512	STUD BOLT M8X20	2
7	138140	NUT	2
8	197626	PIPE(EGR CMP	1
9	197627	GASKET, EGR PIPE	1
10	197807	BOLT M10X 30 PLATED	2
11	138140	NUT (ZNMS)	2
	138140	NUT (ZNTBL)	4
12	197628	EGR VALVE	1
13	197629	GASKET(EGR-V IN	1
14	197630	GASKET(EGR-V OUT	1
15	197807	BOLT M10X 30 PLATED	1
16	138522	BOLT M10X 95 PLATED	1
17	138104	GASKET, SILENCER	1
18	186567	SILENCER	1
19	186568	STAY, SILENCER	1
20	186593	WASHER 8	2
21	197507	BOLT, M8X100	2
22	425-34733	BOLT, M8X16 PLATED	2
23	425-34746	BOLT, M8X20 PLATED	4

EXHAUST MANIFOLD AND SILENCER

T-ZNMS and T-ZNTBL Engine

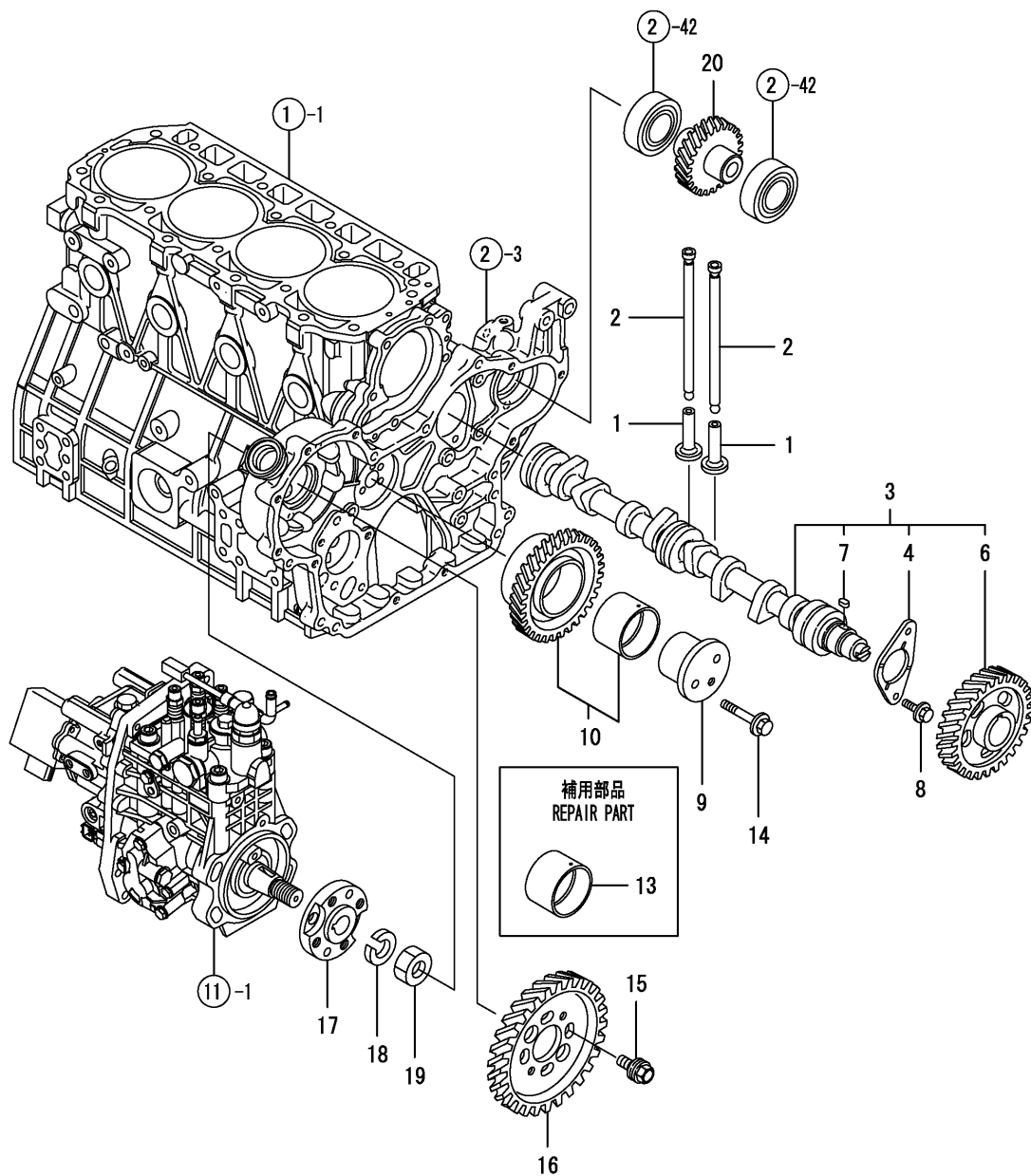


Y00D9990	6. ハイキマニホールド & サイレンサ			
4TNV98T-ZNTBL	1, 08/01	2	3	PLUS

EXHAUST MANIFOLD AND SILENCER

Ref. No.	Part No.	Description	Quantity T-ZNMS/T-ZNTBL
1	197674	MANIFOLD ASSY,EXH (T-ZNTBL)	1
2	197673	MANIFOLD, EXHAUST (T-ZNTBL)	1
	197737	MANIFOLD, EXHAUST (T-ZNMS)	1
3	138512	STUD BOLT M8X20	2
4	425-36249	BOLT M 8X 22	4
5	425-36128	GASKET	1
6	186375	BOLT 8X80	8
7	197609	SILENCER (T-ZNTBL)	1
8	197699	STAY, SILENCER (T-ZNTBL)	1
9	138488	PK(T/C OUT)	1
10	425-34733	BOLT M8X16 PLATED (T-ZNTBL)	3
11	425-34746	BOLT M8 X 20 PLATED (T-ZNTBL)	4
12	138140	NUT (T-ZNTBL)	4
13	197675	EGR COOLER	1
14	197676	GASKET, EGR COOLER	1
15	197676	GASKET, EGR COOLER	1
16	197463	BOLT, M8X25	2
17	197680	PIPE(EGR IN)	1
18	197627	GASKET, EGR PIPE	1
19	197681	PIPE(EGR OUT)	1
20	425-34761	BOLT M 8X 35 PLATED	1
21	425-34747	BOLT M 8X 45 PLATED	1
22	425-34748	BOLT M 8X 55 PLATED	2
23	425-35772	BOLT M10X 25 PLATED	2
24	138140	NUT	2
25	197628	EGR VALVE	1
26	197629	GASKET(EGR-V IN)	1
27	197630	GASKET(EGR-V OUT)	1
28	197808	BOLT M10X 40 PLATED	1
29	197809	BOLT M10X105 PLATED	1
30	138104	GASKET, SILENCER (T-ZNTBL)	1

CAMSHAFT AND DRIVING GEAR

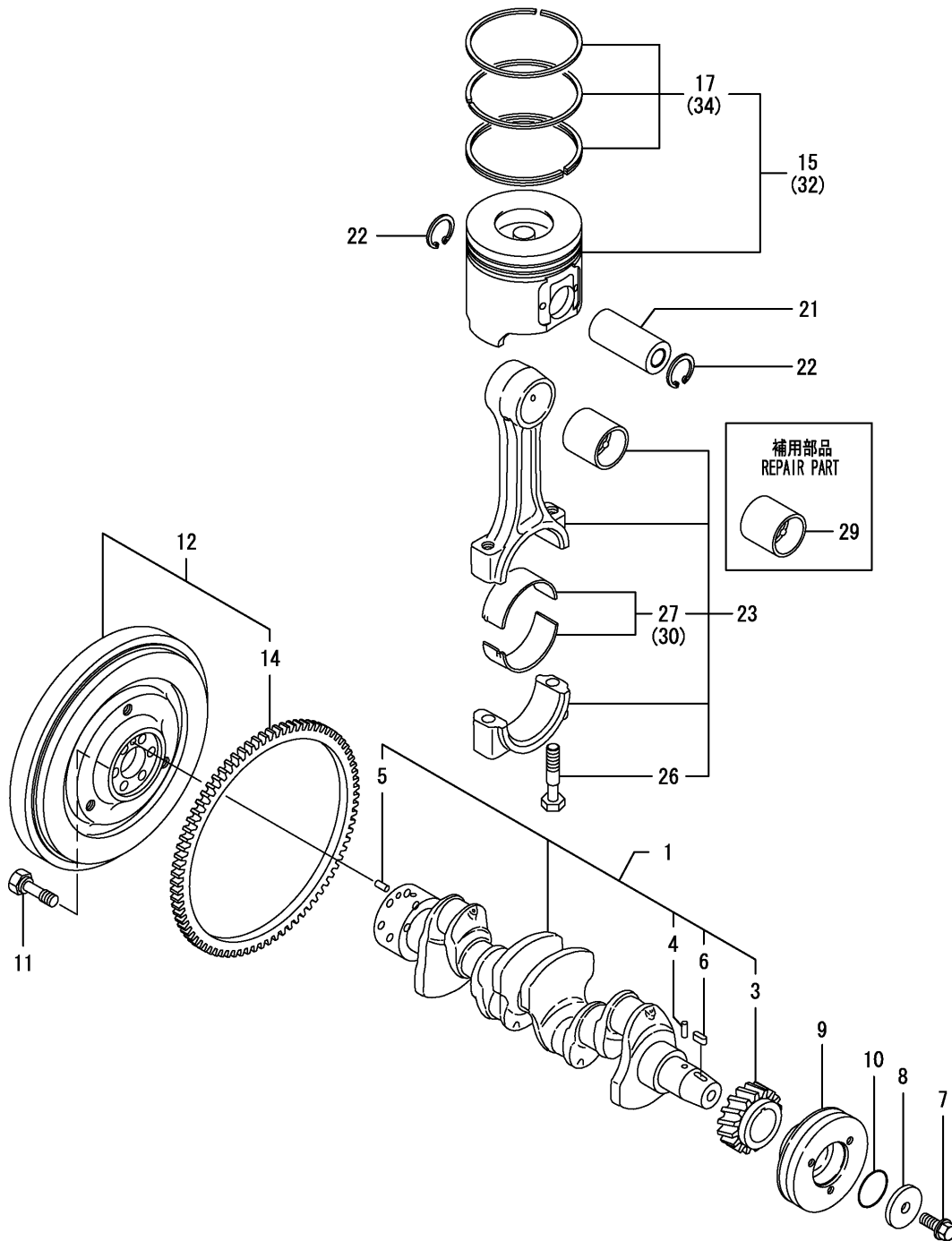


Y00W2680	7. CAMSHAFT & DRIVING GEAR		
4TNV98-ZNMS	1. 07/12	3	PLUS

CAMSHAFT AND DRIVING GEAR

Ref. No.	Part No.	Description	Quantity 4TNV98
1	186471	TAPPET	8
2	186539	PUSH ROD	8
3	197610	CAMSHFT ASSY (ZNMS AND T-ZNMS)	1
	197611	CAMSHFT ASSY (ZNTBL AND T-ZNTBL)	1
4	425-34656	METAL,THRUST(CAM	1
6	138097	GEAR, CAMSHAFT	1
7	425-34810	KEY 7X 14	1
8	425-34733	BOLT M 8X 16 PLATED	2
9	138020	SHAFT(GEAR,IDLE	1
10	197597	GEAR ASSY, IDLE (ZNMS AND T-ZNMS)	1
	186505	GEAR ASSY, IDLE (ZNTBL AND T-ZNTBL)	1
13	425-34813	BUSH, IDLE GEAR	1
14	425-34748	BOLT M 8X 55 PLATED	3
15	186579	BOLT	4
16	197605	GEAR,F.I.PUMP	1
17	186590	FLANGE	1
18	186596	SPRING WASHER 18	1
19	186626	NUT M18,LOCK	1
20	197752	GEAR, H.O. PUMP (ZNMS AND T-ZNMS)	1
	186506	GEAR, H.O. PUMP (ZNTBL AND T-ZNTBL)	1

CRANKSHAFT AND PISTON



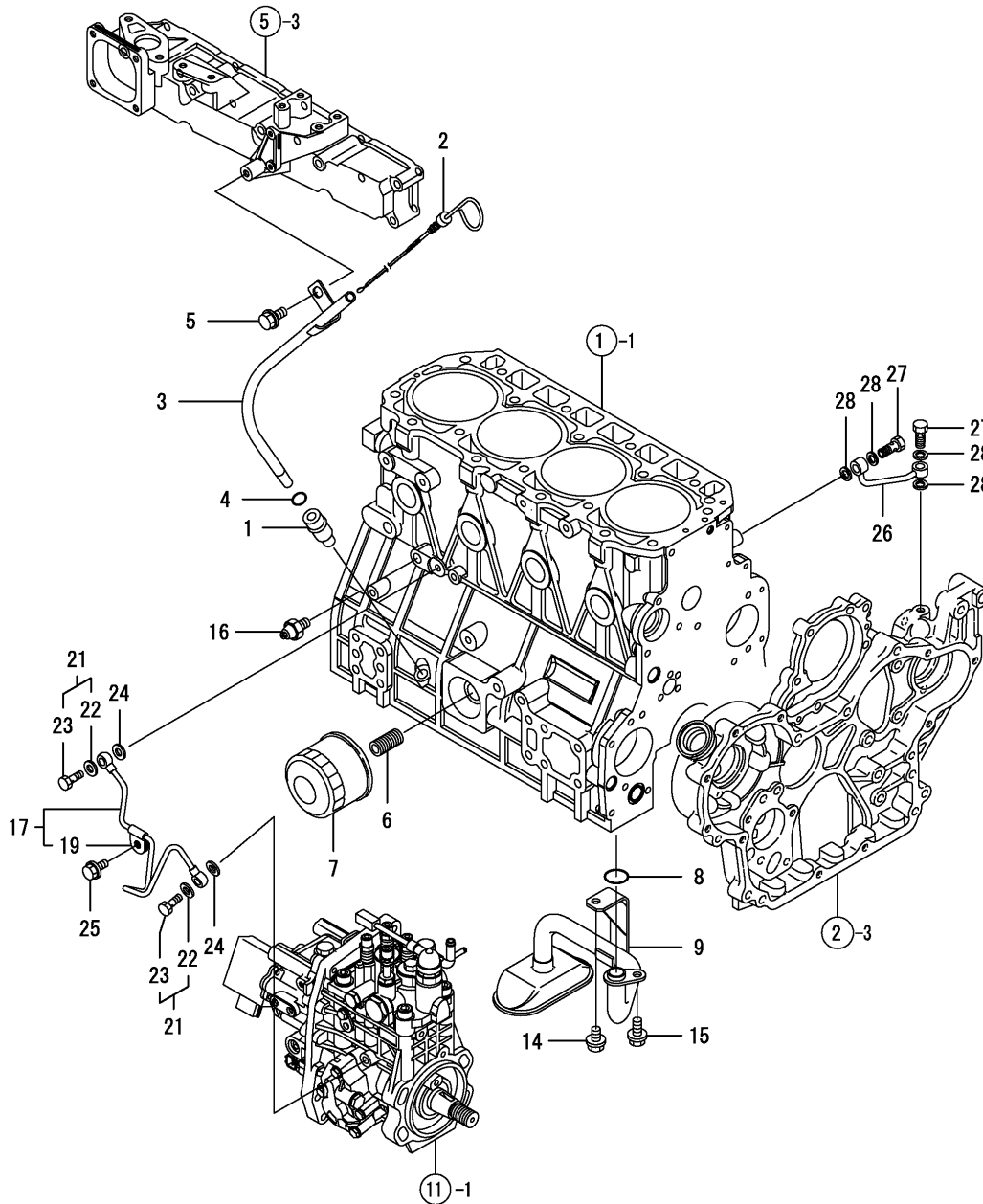
Y00W2680	8. CRANKSHAFT & PISTON		
4TNV98-ZNMS	1. 07/12	2	3 PLUS

CRANKSHAFT AND PISTON

Ref. No.	Part No.	Description	Quantity 4TNV98
1	197598	CRANKSHAFT COMP (ZNMS)	1
	197612	CRANKSHAFT COMP (T-ZNMS)	1
	186510	CRANKSHAFT COMP (ZNTBL)	1
	197613	CRANKSHAFT ASSY (T-ZNTBL)	1
3	138098	GEAR, CRANKSHAFT	1
	186498	GEAR, CRANKSHAFT (T-ZNTBL)	1
4	137957	PARALLEL PIN	1
5	137958	PARALLEL PIN 10X22	1
6	425-34810	KEY 7X 14	1
7	186663	BOLT, V-PULLEY	1
8	186585	WASHER	1
9	197604	V-PULLEY,CRANKSHAFT (ZNMS AND T-ZNMS)	1
	186662	V-PULLEY,CRANKSHAFT (ZNTBL AND T-ZNTBL)	1
10	186611	O-RING 1A S-53.0	1
11	137956	BOLT, FLYWHEEL	6
12	186578	FLYWHEEL ASSY	1
	197739	FLYWHEEL ASSY (T-ZNTBL)	1
14	186499	GEAR, RING	1
15	197632	PISTON ASSY (ZNMS AND ZNTBL)	4
	197682	PISTON ASSY (T-ZNMS AND T-ZNTBL)	4
17	197631	RING SET, PISTON	4
21	186343	PIN, PISTON	4
22	197783	CIRCLIP 30	8
23	197594	ROD ASSY, CONNECTING	4
26	186501	BOLT, ROD	8
27	186502	METAL ASSY, CRANKPIN	4
29	197596	BUSH, PISTON PIN	4
30	197595	BEARING,PIN U.S=0.25	4
32	197828	PISTON W/RING,0.25OS (ZNMS AND ZNTBL)	4
	197832	PISTON W/RING,0.25OS (T-ZNMS AND T-ZNTBL)	4
34	197829	RING SET, 0.25OS	4

LUBRICATION OIL SYSTEM

ZNMS Engine



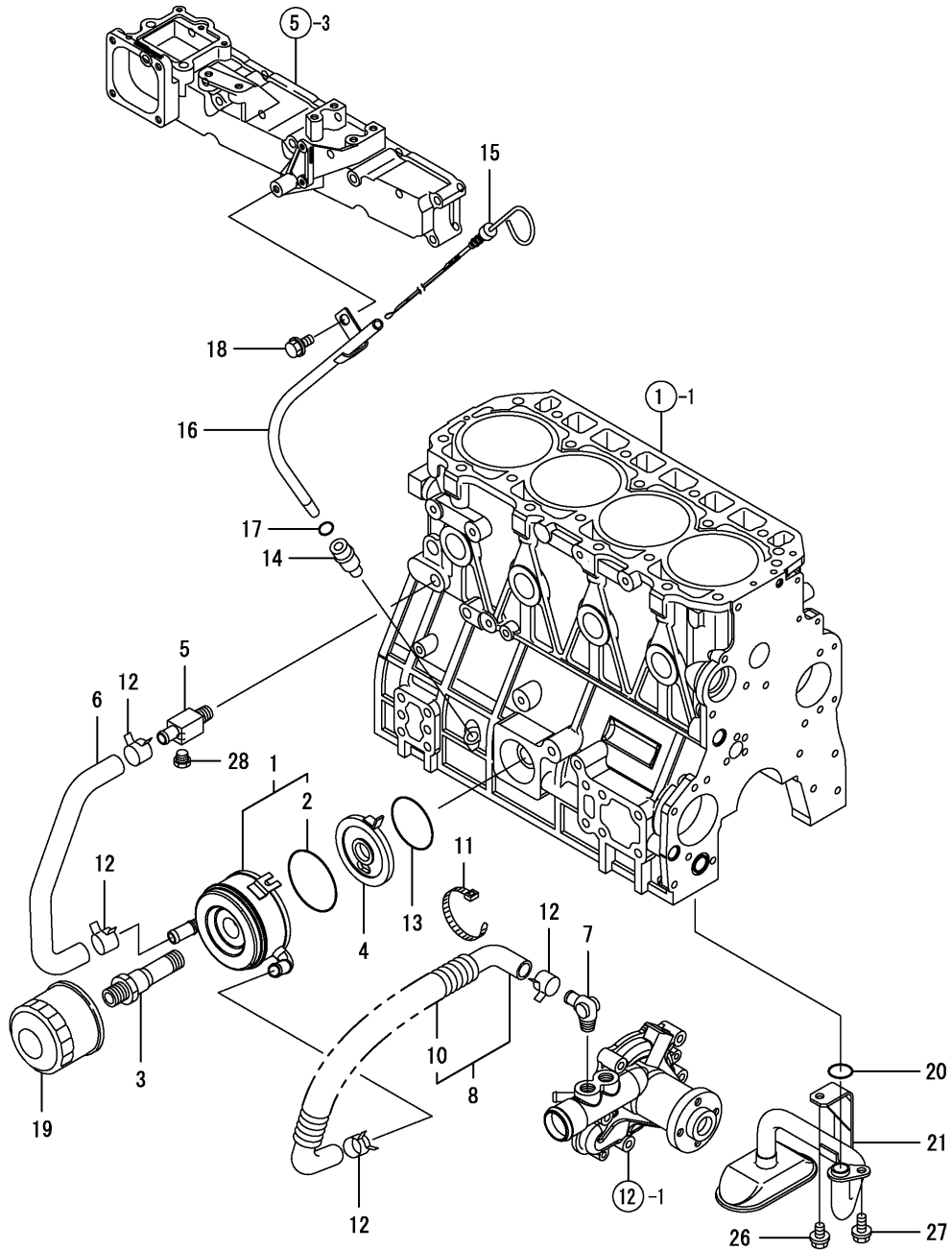
Y00W2680	9. LUB. OIL SYSTEM			
4TNV98-ZNMS	1. 07/12	2	3	PLUS

LUBRICATION OIL SYSTEM

Ref. No.	Part No.	Description	Quantity ZNMS
1	425-34825	GUIDE, DIPSTICK	1
2	197607	DIPSTICK	1
3	197683	DIPSTICK	1
4	425-34827	O-RING 1A P-10A	1
5	425-34733	BOLT M 8X 16 PLATED	1
6	186302	STUD, LUB.OIL FILTER	1
7	194315	FILTER 80X80L	1
8	138100	O-RING P20	1
9	197743	PIPE ASY,L.OIL INLET	1
14	425-34729	BOLT M 8X 12 PLATED	1
15	425-34733	BOLT M 8X 16 PLATED	1
16	425-36085	SENDER, OIL PRESSURE	1
17	197633	PIPE ASSY, LUB.OIL	1
19	186421	SUPPORT,PIPE	1
21	186468	BOLT ASSY, JOINT	2
22	425-34750	SEAL WASHER 8S	2
23	186600	JOINT BOLT 3	2
24	425-34750	SEAL WASHER 8S	2
25	425-34729	BOLT M 8X 12 PLATED	1
26	186565	PIPE	1
27	186300	BOLT, PIPE JOINT	2
28	425-34750	SEAL WASHER 8S	4

LUBRICATION OIL SYSTEM

T-ZNMS Engine



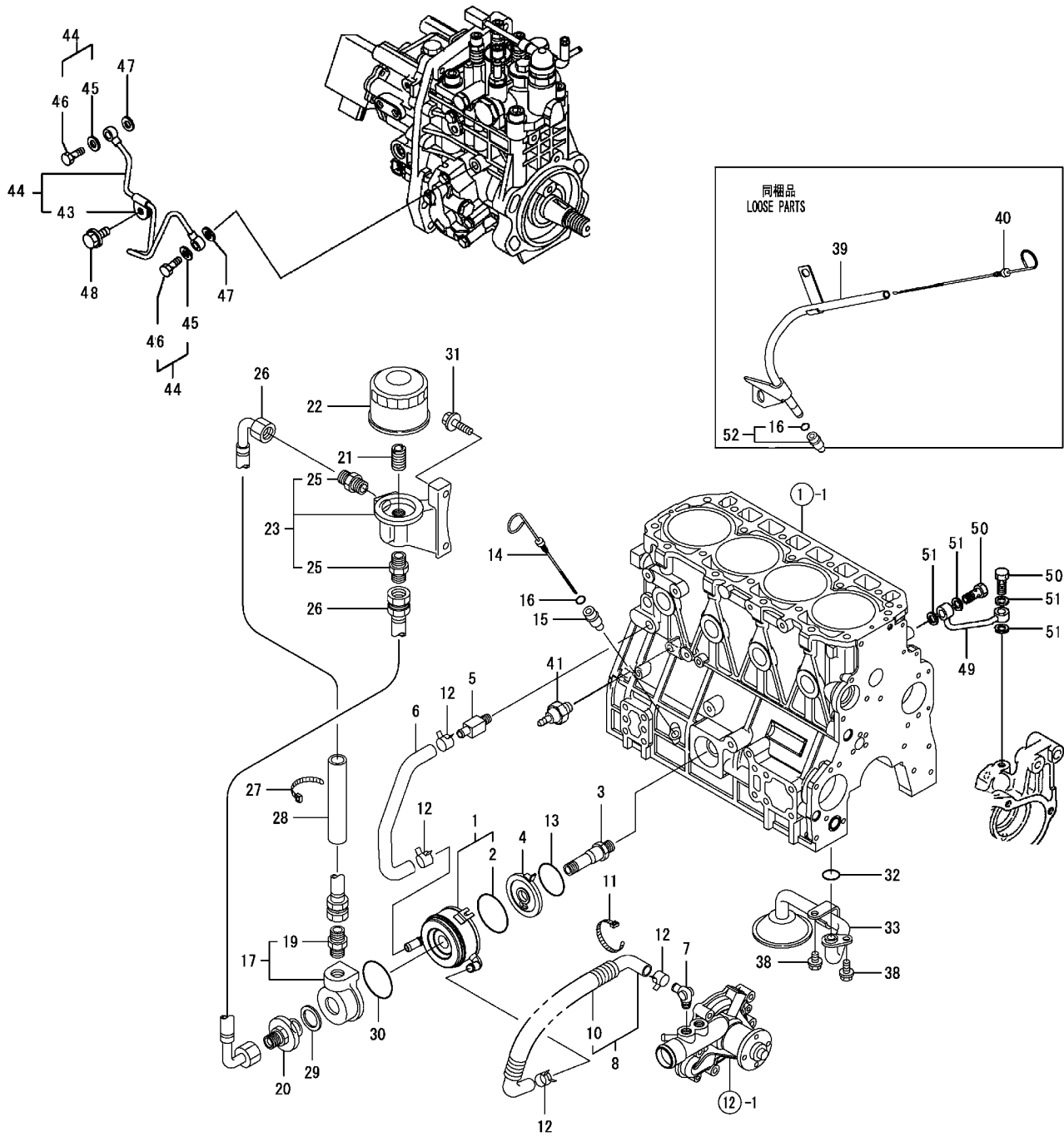
Y00W2670	10. LUB. OIL SYSTEM			
4TNV98T-ZNMS	1, 07/12	2	3	PLUS

LUBRICATION OIL SYSTEM

Ref. No.	Part No.	Description	Quantity T-ZNMS
1	197615	COOLER ASSY, OIL	1
2	197481	O-RING	1
3	138072	BOLT, L.O.COOLER	1
4	197616	BRACKET,OIL COOLER	1
5	188567	JOINT	1
6	197619	PIPE, COOLING WATER	1
7	138093	ELBOW PT3/8	1
8	186442	PIPE, C.W.	1
10	186443	PROTECTOR,CW-T	1
11	137953	CLAMP 140	1
12	197790	CLAMP 25	4
13	186609	O-RING 1A G-60.0	1
14	425-34825	GUIDE, DIPSTICK	1
15	197607	DIPSTICK	1
16	197683	DIPSTICK	1
17	425-34827	O-RING 1A P-10A	1
18	425-34733	BOLT M 8X 16 PLATED	1
19	194315	FILTER 80X80L	1
20	138100	O-RING P20	1
21	197743	PIPE ASY,L.OIL INLET	1
26	425-34729	BOLT M 8X 12 PLATED	1
27	425-34733	BOLT M 8X 16 PLATED	1
28	270970	PLUG, DRAIN	1

LUBRICATION OIL SYSTEM

ZNTBL and T-ZNTBL Engines



Y00D9990	10, LOSシステム			
4TNV98T-ZNTBL	1, 08/01	2	3	PLUS

LUBRICATION OIL SYSTEM

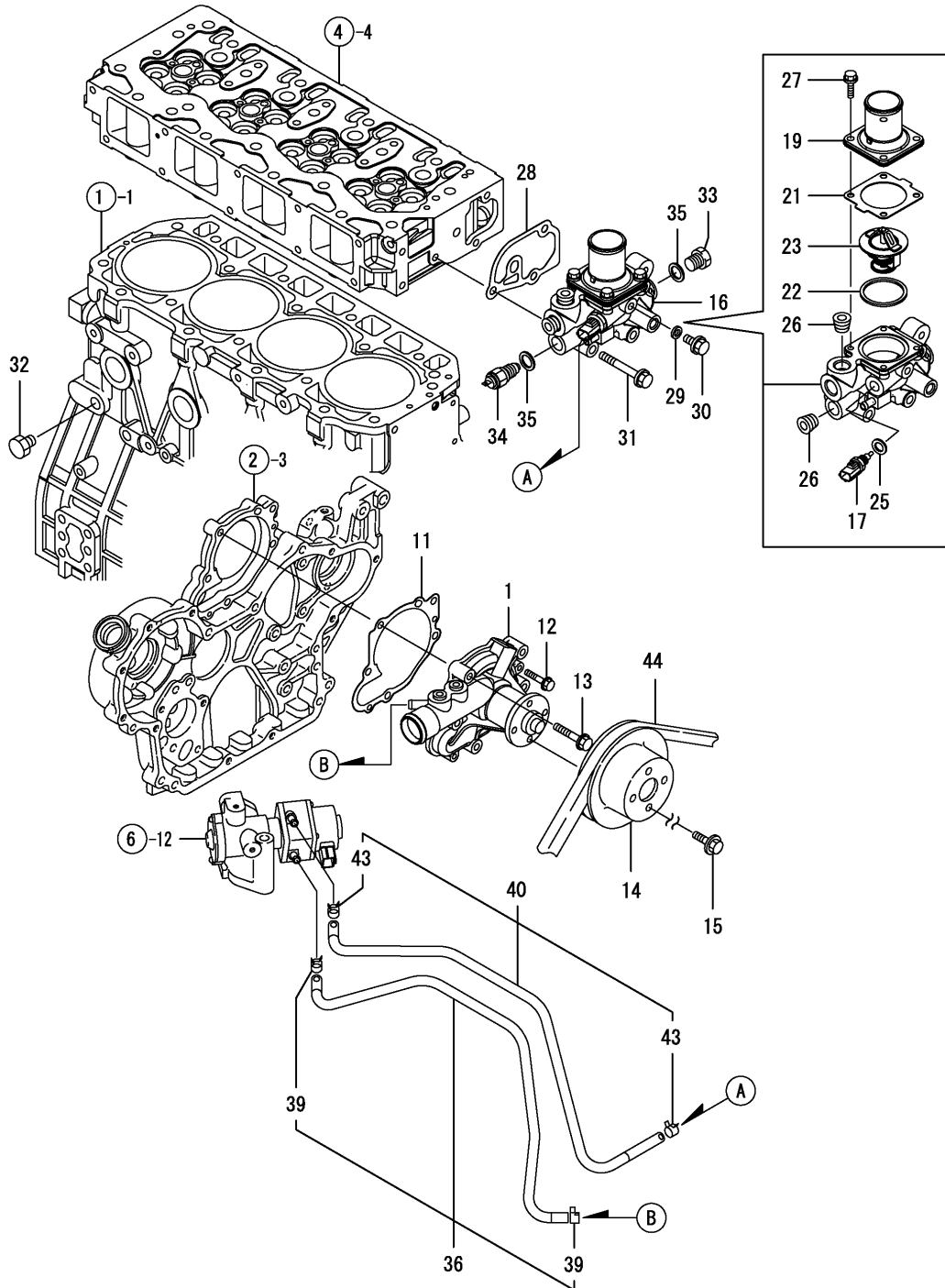
Ref. No.	Part No.	Description	Quantity ZNTBL/T-ZNTBL
1	197615	COOLER ASSY, OIL (T-ZNTBL)	1
2	197481	O-RING (T-ZNTBL)	1
3	186587	STUD, LUB.OIL FILTER (ZNTBL)	1
	138072	BOLT, L.O.COOLER (T-ZNTBL)	1
4	197616	BRACKET,OIL COOLER (T-ZNTBL)	1
5	188567	JOINT (T-ZNTBL)	1
6	197619	PIPE, COOLING WATER (T-ZNTBL)	1
7	138093	ELBOW PT3/8 (T-ZNTBL)	1
8	186442	PIPE, C.W. (T-ZNTBL)	1
10	186443	PROTECTOR,CW-T (T-ZNTBL)	1
11	137953	CLAMP 140 (T-ZNTBL)	1
12	197790	CLAMP 25 (T-ZNTBL)	4
13	186609	O-RING 1A G-60.0	1
14	197606	DIPSTICK (ZNTBL)	1
	197870	DIPSTICK (T-ZNTBL)	1
15	425-34825	GUIDE, DIPSTICK	1
16	425-34827	O-RING 1A P-10A	1
17	186569	CASE ASSY, LUB. OIL (ZNTBL)	1
	186451	CASE ASSY, LUB. OIL (T-ZNTBL)	1
19	186582	ADAPTER	1
20	186580	COVER	1
21	186302	STUD, LUB.OIL FILTER	1
22	194315	FILTER 80X80L	1
23	197734	BRACKET ASSY, LUB.OIL (ZNTBL)	1
	186570	SPACER(LO, FILTER (ZNTBL ONLY - NOT SHOWN)	1
	197740	BRACKET ASSY, LUB.OIL (T-ZNTBL)	1
25	186582	ADAPTER	2
26	197735	PIPE, LUB.OIL (ZNTBL)	1
	197744	PIPE, LUB.OIL (ZNTBL)	1
	197482	LO-T (T-ZNTBL)	2
27	186665	CLAMP 200 (T-ZNTBL)	1
28	186666	PROTECTOR (T-ZNTBL)	1
29	186595	SEAL WASHER 30S	1
30	186610	O-RING 1A G70.0,NBR (T-ZNTBL)	1
31	425-34766	BOLT M8X50 PLATED (ZNTBL)	2
	138136	BOLT M10X45 PLATED (T-ZNTBL AND ZNTBL)	2
32	138100	O-RING P20	1
33	186508	PIPE ASSY, LUB.OIL	1
38	425-34729	BOLT M8X12 PLATED	2
39	197710	GUIDE, DIPSTICK	1
40	186574	DIPSTICK (ZNTBL)	1
	197712	OIL,DIPSTICK (T-ZNTBL)	1

Following Parts Are For ZNTBL Engines

Ref. No.	Part No.	Description	Quantity ZNTBL
41	425-34684	SWITCH, (0.5KG)L.O.	1
42	197633	PIPE ASSY, LUB.OIL	1
43	186421	SUPPORT, PIPE	1
44	186468	BOLT ASSY, JOINT	2
45	425-34750	SEAL WASHER 8S	2
46	186600	JOINT BOLT 3	2
47	425-34750	SEAL WASHER 8S	2
48	425-34729	BOLT M8X12 PLATED	1
49	186565	PIPE	1
50	186300	BOLT, PIPE JOINT	2
51	425-34750	SEAL WASHER 8S	4
52	197711	GUIDE, LO GAUGE, CMP	1

COOLING WATER SYSTEM

ZNMS Engine



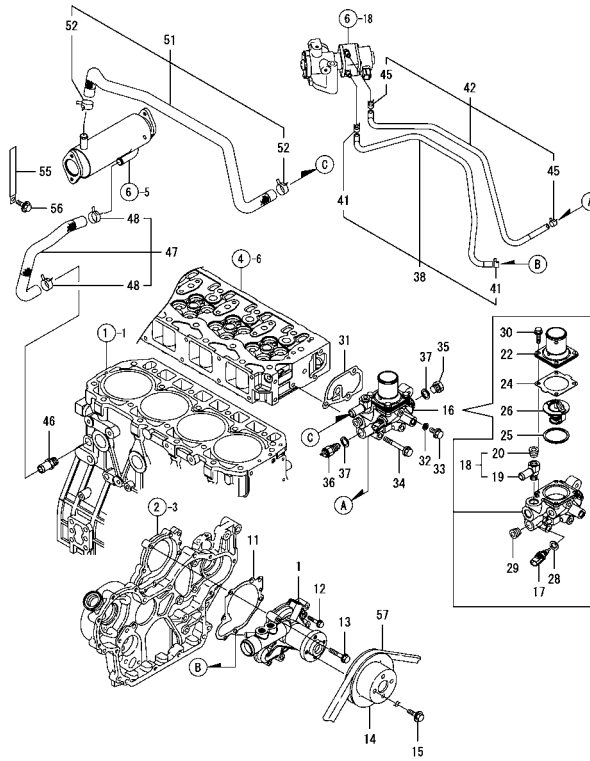
Y00W2680	10. COOLING WATER SYSTEM			
4TNV98-ZNMS	1. 07/12	2	3	PLUS

COOLING WATER SYSTEM

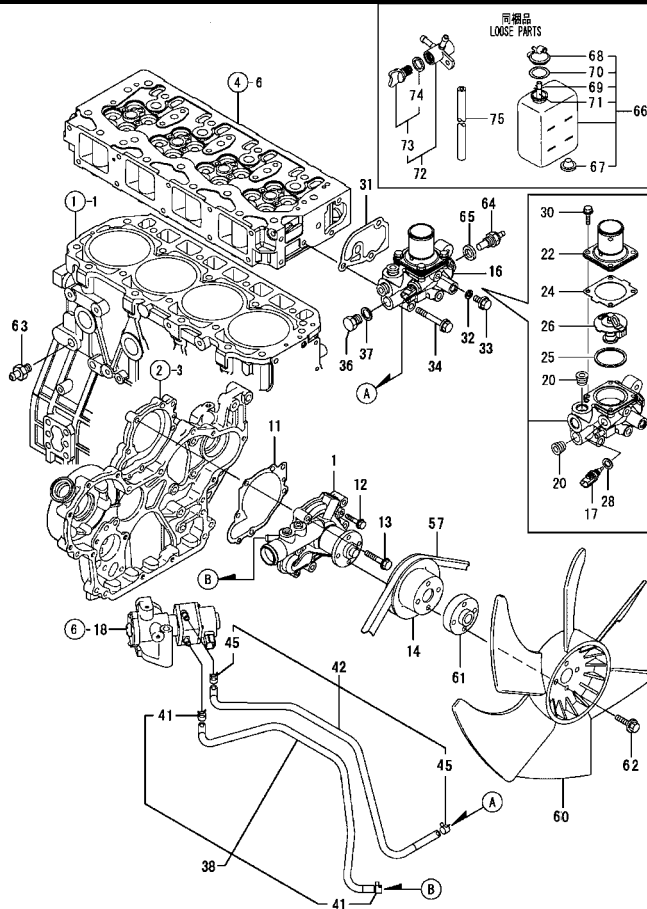
Ref. No.	Part No.	Description	Quantity ZNMS
1	197634	PUMP ASSY,WATER	1
11	425-36113	GASKET, CW-P	1
12	425-35165	BOLT M 6X 30 PLATED	2
13	425-34748	BOLT M 8X 55 PLATED	5
14	197695	PULLEY	1
15	186615	BOLT M 6X 12 PLATED	4
16	197638	CASE ASSY,THERMOSTAT	1
17	197635	THERMOMETER	1
19	186564	COVER, THERMOSTAT	1
21	425-36114	GASKET, THERMOSTAT	1
22	186370	GASKET, THERMOSTAT	1
23	186371	THERMOSTAT	1
25	425-35959	SEAL WASHER 12	1
26	138123	PLUG PT3/8,STEEL	2
27	188732	BOLT M 6X 20 PLATED	4
28	425-36319	GASKET, CASE	1
29	425-34727	GASKET 8, ROUND	1
30	425-34729	BOLT M 8X 12 PLATED	1
31	188746	BOLT M 8X 60 PLATED	3
32	270970	PLUG, DRAIN	1
33	425-34851	PLUG M16	1
34	197459	SWITCH, THERMO 111	1
35	160427	GASKET 16	2
36	197636	PIPE ASSY, WATER A	1
39	197793	CLAMP 12	2
40	197637	PIPE ASSY, WATER B	1
43	197793	CLAMP 12	2
44	197802	V-BELT A44	1

COOLING WATER SYSTEM

T-ZNMS and T-ZNTBL Engines



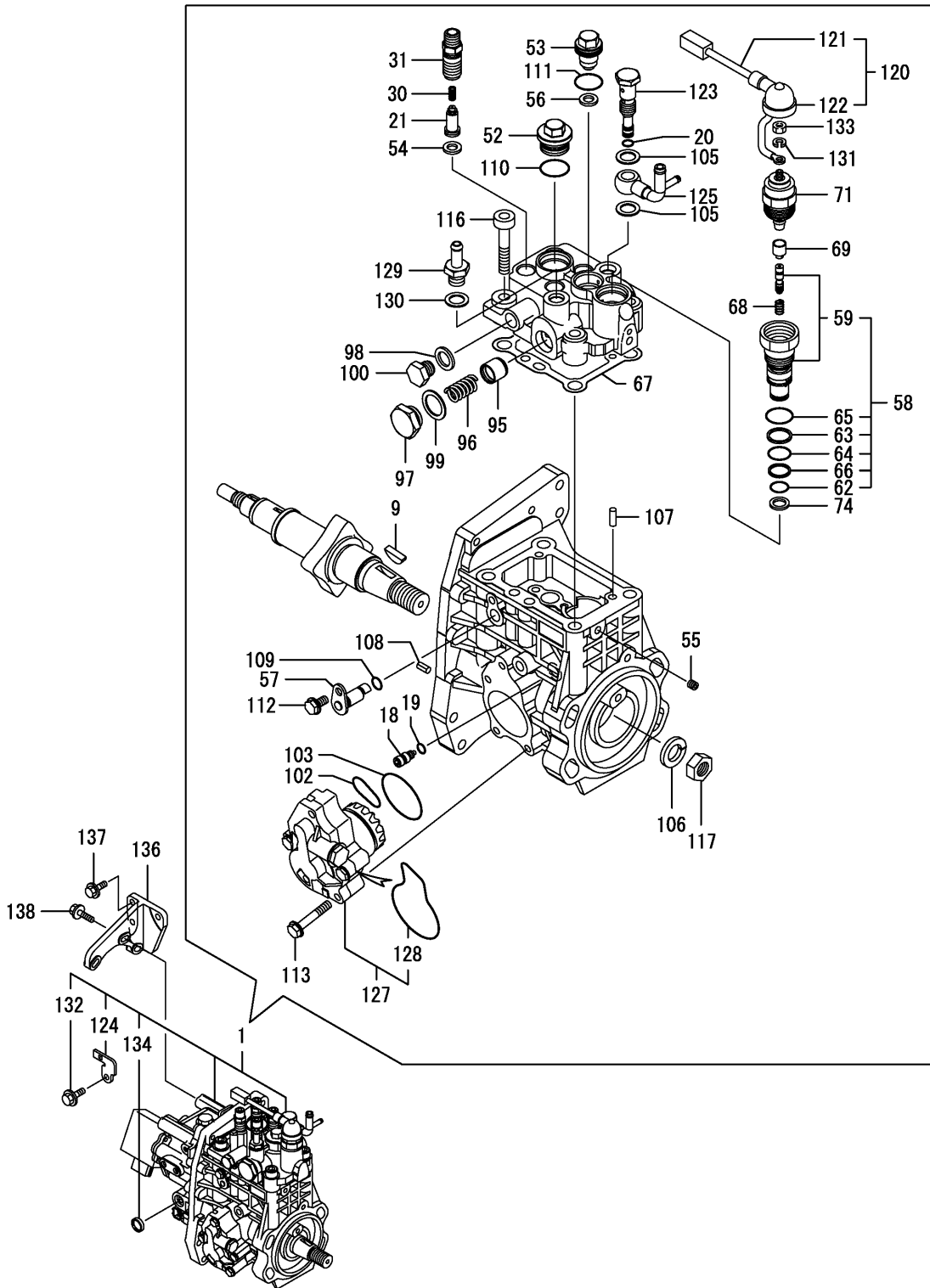
ZNTBL Engine



COOLING WATER SYSTEM

Ref. No.	Part No.	Description	Quantity ZNTBL/T-ZNTBL/ T-ZNMS
1	197634	PUMP ASSY,WATER	1
11	425-36113	GASKET, CW-P	1
12	425-35165	BOLT M 6X 30 PLATED	2
13	425-34748	BOLT M 8X 55 PLATED	5
14	197695	PULLEY (T-ZNMS)	1
	197696	PULLEY (ZNTBL)	1
	183543	PULLEY (T-ZNTBL)	1
15	186615	BOLT M 6X 12 PLATED	4
16	197689	CASE ASSY,THERMOSTAT (T-ZNMS)	1
	197702	CASE ASSY,THERMOSTAT (ZNTBL)	1
	197741	CASE ASSY,THERMOSTAT (T-ZNTBL)	1
17	197635	THERMOMETER	1
18	197685	JOINT CMP	1
19	197686	JOINT	1
20	138123	PLUG PT3/8,STEEL	1
22	186564	COVER, THERMOSTAT	1
24	425-36114	GASKET, THERMOSTAT	1
25	186370	GASKET, THERMOSTAT	1
26	186371	THERMOSTAT	1
28	425-35959	SEAL WASHER 12	1
29	138123	PLUG PT3/8,STEEL	1
30	188732	BOLT M 6X 20 PLATED	4
31	425-36319	GASKET, CASE	1
32	425-34727	GASKET 8, ROUND	1
33	425-34729	BOLT M 8X 12 PLATED	1
34	188746	BOLT M 8X 60 PLATED	3
35	425-34851	PLUG M16	1
36	197459	SWITCH, THERMO 111	1
37	160427	GASKET 16	2
38	197636	PIPE ASSY, WATER A	1
41	197793	CLAMP 12	2
42	197637	PIPE ASSY, WATER B	1
45	197793	CLAMP 12	2
46	197687	JOINT	1
47	197738	PIPE ASSY, WATER IN	1
48	197745	HOSE CLIP 22	2
51	197688	PIPE ASSY, WATER OUT	1
52	197745	HOSE CLIP 22	2
55	197694	CRIP150-M8	1
56	425-34729	BOLT M 8X 12 PLATED	1
57	197802	V-BELT A44 (T-ZNMS)	1
	197803	V-BELT (ZNTBL)	1
	184405	V-BELT A41 (T-ZNTBL)	1
60	186563	FAN (ZNTBL)	1
61	186303	SPACER, FAN (ZNTBL)	1
	197446	SPACER, FAN (T-ZNTBL)	1
62	425-34761	BOLT M8X35 PLATED (ZNTBL)	4
	425-34747	BOLT M8X45 PLATED (T-ZNTBL)	4
63	425-34736	JOINT PT1/4 (T-ZNMS AND T-ZNTBL)	1
64	186311	SENSOR, THERMO. (T-ZNMS AND T-ZNTBL)	1
65	425-34707	GASKET 10 (T-ZNMS AND T-ZNTBL)	1
66	186479	SUBTANK (T-ZNMS AND T-ZNTBL)	1
67	186360	PLUG, SUBTANK	1
68	186359	CAP	1
69	186461	CLAMP	1
70	186361	GASKET	1
71	186358	PIPE	1
72	425-34854	COCK ASSY, 3-WAY	1
73	425-35273	COCK, DRAIN	1
74	197454	GASKET	1
75	186301	PIPE, FUEL	1

FUEL INJECTION PUMP

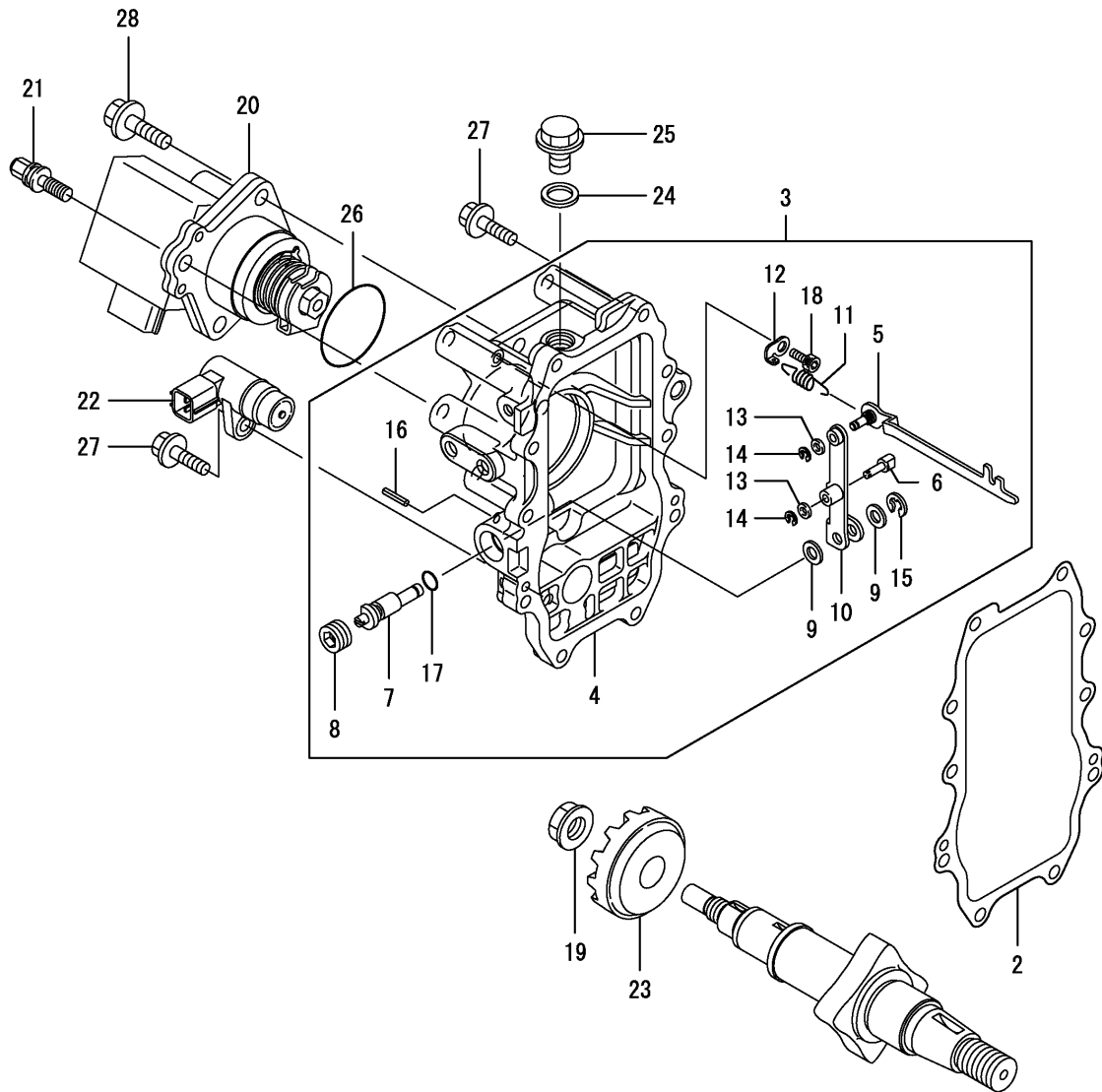


Y00W2680	11, FUEL INJECTION PUMP		
4TNV98-ZNMS	1, 07/12	2	3 PLUS

FUEL INJECTION PUMP

Ref. No.	Part No.	Description	Quantity 4TNV98
1	197835	INJECTON PUMP ASSY (ZNMS)	1
	197837	INJECTON PUMP ASSY (T-ZNMS)	1
	197834	INJECTON PUMP ASSY (ZNTBL)	1
	197836	INJECTON PUMP ASSY (T-ZNTBL)	1
9	197754	KEY 5X19	1
18	197772	STOPPER	1
19	197770	O-RING	1
20	197770	O-RING	1
21	197640	VALVE ASSY, DELIVERY	4
30	186678	SPRING	4
31	197641	HOLDER,DELIVERY (ZNMS AND ZNTBL)	4
	197690	HOLDER,DELIVERY (T-ZNMS AND T-ZNTBL)	4
52	197773	PLUG	1
53	197608	PLUG	1
54	186676	PK(BARREL PLUG	4
55		PLUG	1
56	197599	PACKING, PLUG	1
57		LIFTER	1
58		TIMER SET	1
59		TIMER CMP	1
62		O-RING, 1011	1
63		BACKUP RING	1
64		O RING	1
65		PACKING, 1020	1
66		RING, BACKUP T2 P 15	1
67	197768	PACKING, HEAD	1
68		SPRING,TIMER	1
69		CAP,TIMER	1
71	197477	VALVE,SOLENOID	1
74		PACKING,TIMER	1
95		PISTON	1
96		DAMPER ASSY	1
97		PLUG	1
98	425-35959	SEAL WASHER 12	1
99	192294	SEAL WASHER 18	1
100	425-35174	PLUG M12,HEX.	1
102	192297	O-RING	1
103	192299	O-RING 4E S42	1
105	425-35959	SEAL WASHER 12	2
106	186596	SPRING WASHER 18	1
107		PARALLEL PIN 5X14	2
108	425-34892	SPRING PIN 5X10	2
109	186607	O-RING 1A P-7.0	1
110	197799	PACKING, 1020	1
111	197800	O RING	1
112	425-35263	BOLT 6X 10 PLATED	1
113	425-35705	BOLT M 6X 35 PLATED	4
116	197816	BOLT M10X 45	4
117	186626	NUT M18,LOCK	1
120	197642	HARNESS CMP	1
121	197643	HARNESS ,CSD	1
122	197510	CAP,RUBBER	1
123	192292	JOINT	1
124	197644	BRACKET ,CSD	1
125	192290	JOINT	1
127	192295	PUMP ASSY,FEED	1
128	192296	O-RING(FEED P INNER	1
129	192298	JOINT,PIPE	1
130	425-35959	SEAL WASHER 12	1
131	425-34968	SPRING WASHER 5	1
132	186615	BOLT M 6X 12 PLATED	1
133	197817	NUT M 5	1
134	197818	PLUG 16	1
136	197639	RETAINER(FOP	1
137	425-34746	BOLT M 8X 20 PLATED	3
138	425-34760	BOLT M 8X 30 PLATED	3

GOVERNOR

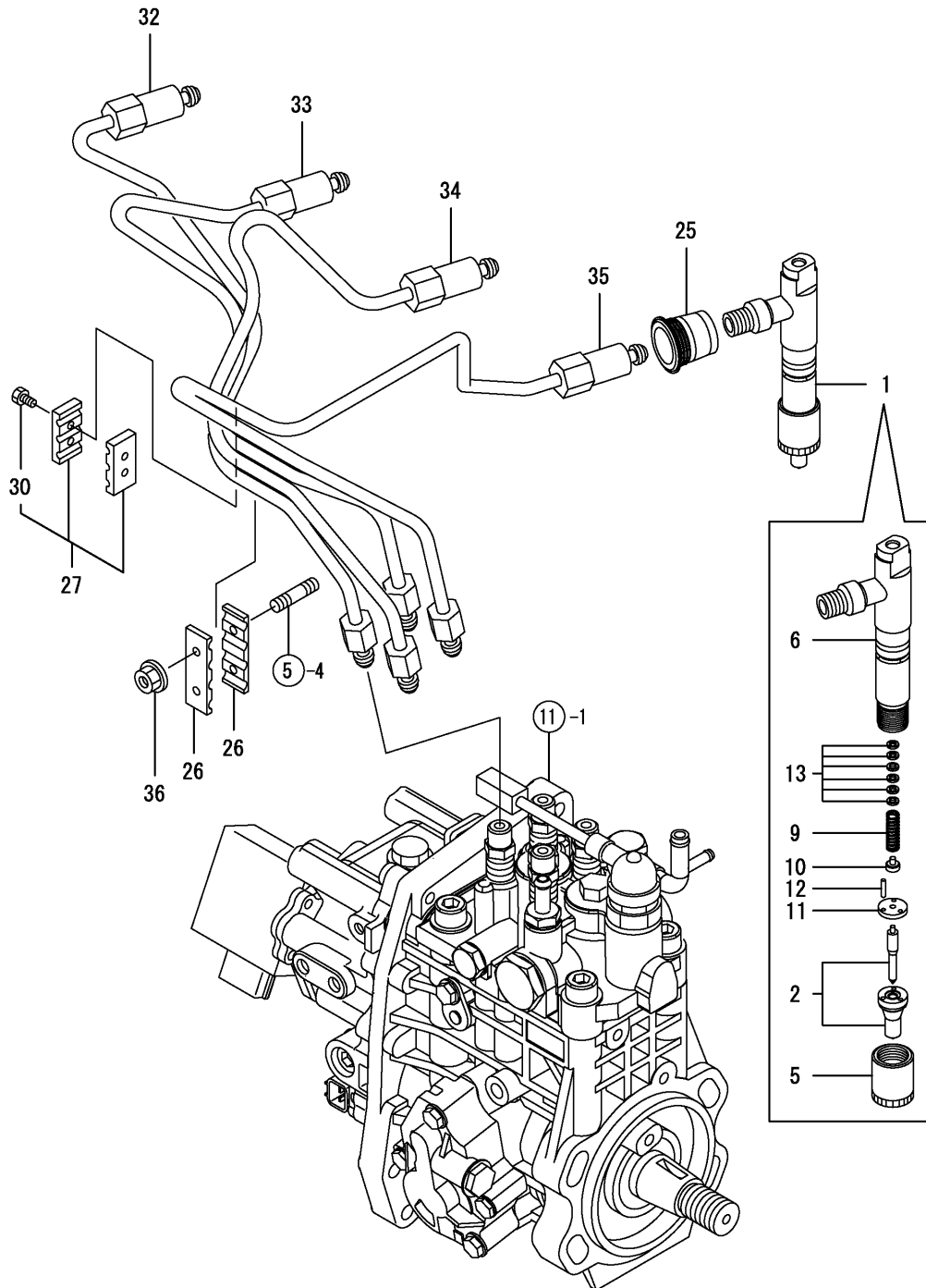


Y00W2680	12. GOVERNOR			
4TNV98-ZNMS	1. 07/12	2	3	PLUS

GOVERNOR

Ref. No.	Part No.	Description	Quantity 4TNV98
2	197769	PACKING, CASE	1
3	197653	CASE ASSY, GOVERNOR	1
4	197652	CASE, GOVERNOR	1
5	197654	LINK	1
6	197693	PIN,GOVERNOR LEVER	1
7	197762	SHAFT,GOV.LEVER	1
8	197763	SCREW	1
9	197764	SPACER,GOV.LEVER	2
10	197655	LEVER, GOVERNOR	1
11	197765	SPRING	1
12	197766	LOCK,SPRING	1
13	197782	WASHER 4	2
14	197784	CIRCLIP E- 3	2
15	425-34969	CIRCLIP E- 4	1
16	197786	SPRING PIN 2X10	1
17	197795	O-RING 1A P-6.0	1
18	197813	BOLT M 5X 10	1
19	425-35343	NUT, GOVERNOR WEIGHT	1
	197488	NUT, GOVERNOR WEIGHT (T-ZNTBL)	1
20	197657	ACTUATOR (ZNMS AND T-ZNMS)	1
	197656	ACTUATOR (ZNTBL AND T-ZNTBL)	1
21	197658	BOLT,ECO	1
22	197767	SENSOR	1
23	197760	GEAR,SENSOR	1
24	425-34935	GASKET 12, ROUND	1
25	425-35174	PLUG M12,HEX.	1
26	197797	O-RING 1A S-48.0	1
27	197805	BOLT M 6X 25 PLATED	10
28	425-34765	BOLT M 8X 25 PLATED	3

FUEL INJECTION VALVE

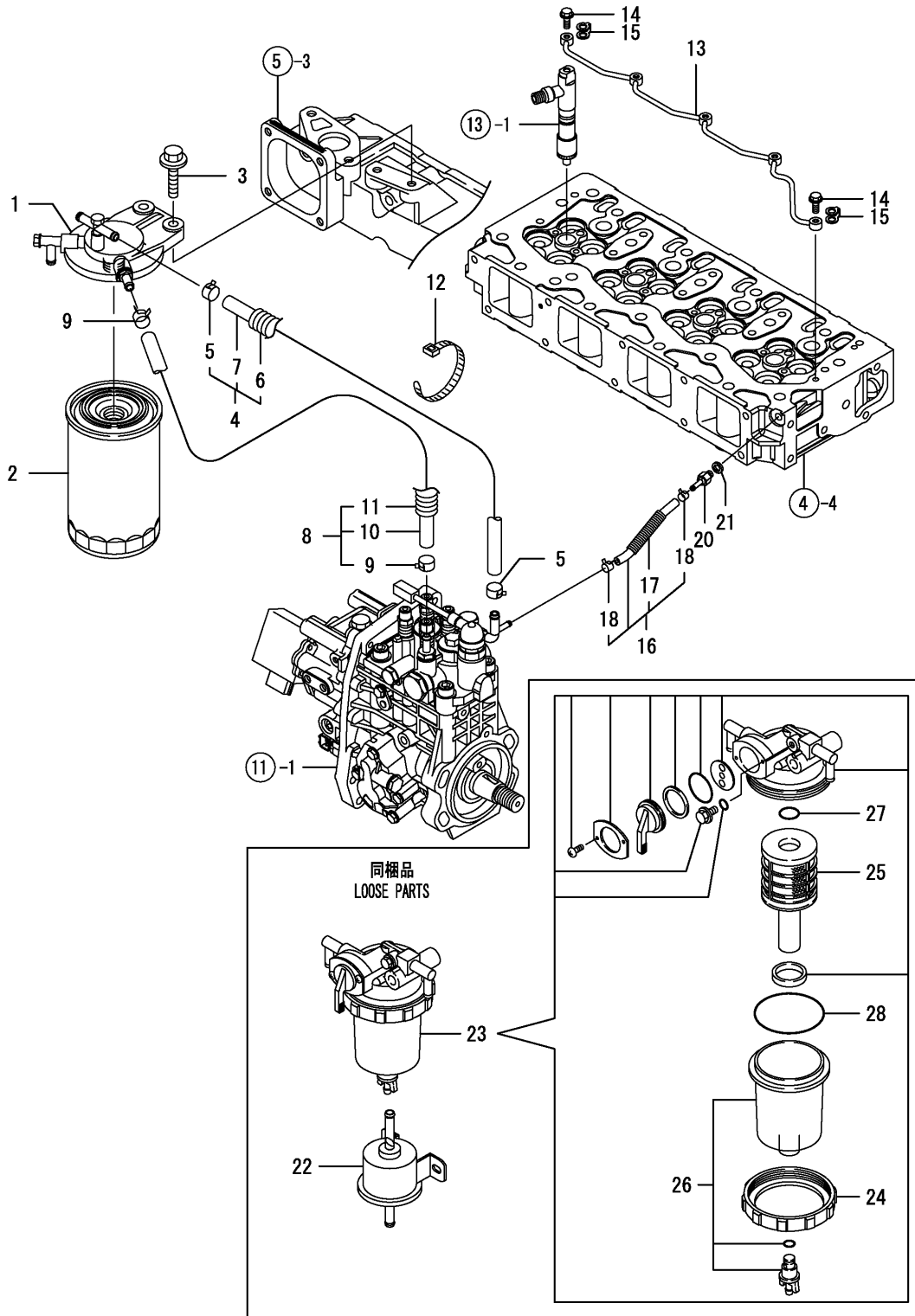


Y00W2680	13, FUEL INJECTION VALVE			
4TNV98-ZNMS	1, 07/12	2	3	PLUS

FUEL INJECTION VALVE

Ref. No.	Part No.	Description	Quantity 4TNV98
1	197830	FUEL INJECTOR(RDG (ZNMS AND ZNTBL)	4
	197833	FUEL INJECTOR(RDN (T-ZNMS AND T-ZNTBL)	4
2	197645	NOZZLE ASSY (ZNMS AND ZNTBL)	4
	197691	NOZZLE ASSY (T-ZNMS AND T-ZNTBL)	4
5	425-34903	NUT, NOZZLE CASE	4
6	197646	HOLDER ASSY, NOZZLE (ZNMS AND ZNTBL)	4
	186553	HOLDER ASSY, NOZZLE (T-ZNMS AND T-ZNTBL)	4
9	425-34666	SPRING, NOZZLE	4
10	425-34905	SEAT, NOZZLE SPRING	4
11	425-34906	PLATE, STOP	4
12	188447	PIN	8
13	188448	SHIM PACK	4
25	186407	PIPE SEAL	4
26	137962	BRACKET	2
27	425-35452	RETAINER, INJ. PIPE	1
30	186473	BOLT M4X14,HEX.SCKT.	2
32	197648	PIPE ASSY, INJECTION	1
33	197649	PIPE ASSY, INJECTION	1
34	197650	PIPE ASSY, INJECTION	1
35	197651	PIPE ASSY, INJECTION	1
36	188754	NUT M 6	2

FUEL LINE



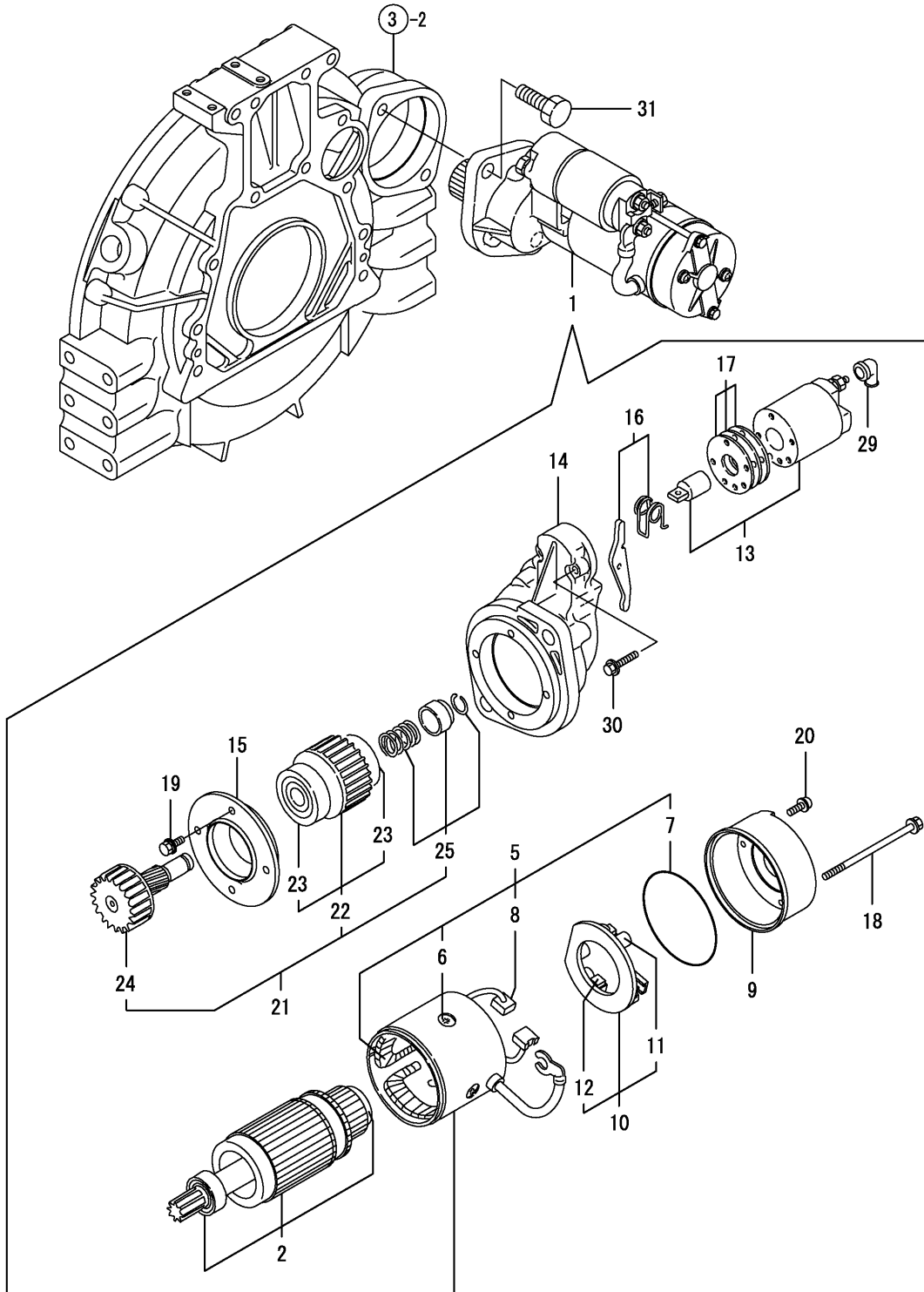
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LOOSE PARTS

Y00W2680	14, FUEL LINE			
4TNV98-ZNMS	1, 07/12	2	3	PLUS

FUEL LINE

Ref. No.	Part No.	Description	Quantity 4TNV98
1	186467	BRACKET,FUEL FILTER	1
2	193024	FILTER, FUEL OIL	1
3	425-34760	BOLT M 8X 30 PLATED	2
4	186478	PIPE ASSY, FUEL	1
5	425-34916	CLAMP 12	2
6	138107	PROTECTOR, FUEL PIPE	1
7	425-36289	PIPE, FUEL OIL	1
8	197746	PIPE ASSY, FUEL	1
9	425-34916	CLAMP 12	2
10	197500	PIPE, FUEL OIL	1
11	188691	TUBE	1
12	137953	CLAMP 140	1
13	186554	PIPE ASSY,F.O.RETURN	1
14	186430	JOINT BOLT M6	5
15	186431	PACKING,FUEL RETURN	5
16	197647	PIPE, FUEL RETURN	1
17	197508	CORRUGATED TUBE	1
18	186464	CLAMP 9	2
20	186432	HOSE JOINT 4	1
21	425-34750	SEAL WASHER 8S	1
22	186308	PUMP ASSY, FUEL FEED (ZNMS AND T-ZNMS)	1
	186483	PUMP ASSY, FUEL FEED (ZNTBL AND T-ZNTBL)	1
23	194317	SEPARATOR ASSY	1
24	425-34924	RING, RETAINING	1
25	186340	ELEMENT	1
26	270981	CUP ASSY(SERVICE PAR	1
27	425-34744	O-RING 1A P-16.0	1
28	425-34927	O-RING 1A G-65.0	1

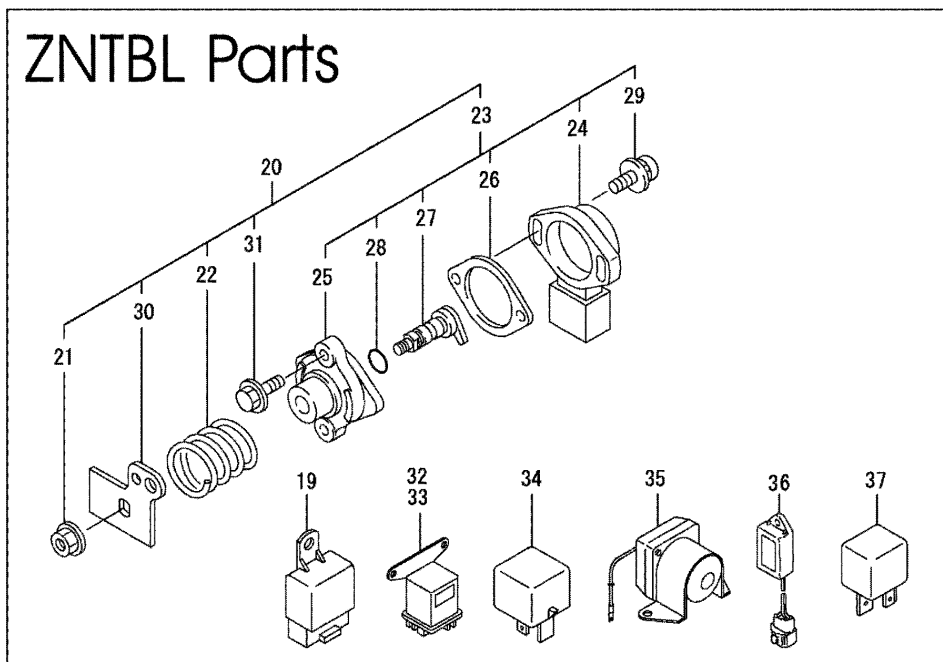
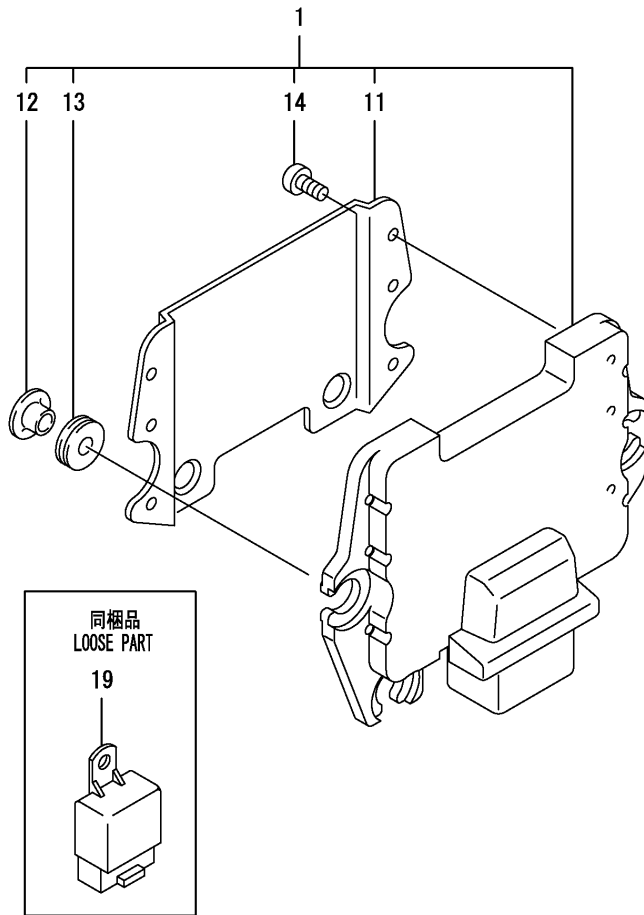
STARTING MOTOR



Y00W2680	15. STARTING MOTOR			
4TNV98-ZNMS	1, 07/12	2	3	PLUS

STARTING MOTOR

Ref. No.	Part No.	Description	Quantity 4TNV98
1	194316	STARTER 12V,3KW	1
2	197716	ARMATURE ASSY	1
5	197717	COIL ASSY, FIELD	1
6	197718	SCREW, POLE CORE SET	4
7	197719	O-RING	1
8	197720	BRUSH (+)	2
9	197721	COVER, REAR	1
10	197722	HOLDER, BRUSH	1
11	197723	SPRING, BRUSH	1
12	197724	BRUSH (-)	2
13	197725	SWITCH ASSY,MAGNETIC	1
14	197726	HOUSING, GEARS	1
15	197727	RETAINER, BEARING	1
16	197728	SHIFT LEVER SET	1
17	197729	COVER ASSY, DUST	1
18	197730	THROUGHT BOLT	2
19	197731	BOLT M6X 20	4
20	197732	SCREW M4X 10	2
21	138056	PINION ASSY	1
22	138057	CLUTCH ASSY	1
23		BALL BEARING (3)	2
24	138058	SHAFT, PINION	1
25	137930	STOPPER KIT, PINION	1
29	425-35916	TERMINAL COVER (ZNMS, T-ZNMS AND T-ZNTBL)	1
	186463	COVER, TERMINAL (ZNTBL)	1
30	197444	BOLT M 6X 37	2
31	188748	BOLT M12X 25 PLATED	2
	425-36301	BOLT M12 X 30 PLATED (T-ZNTBL)	2



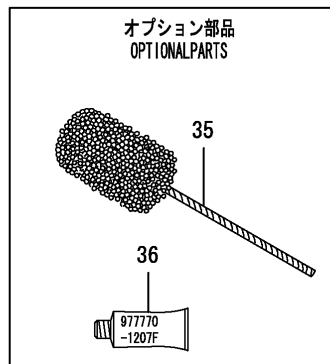
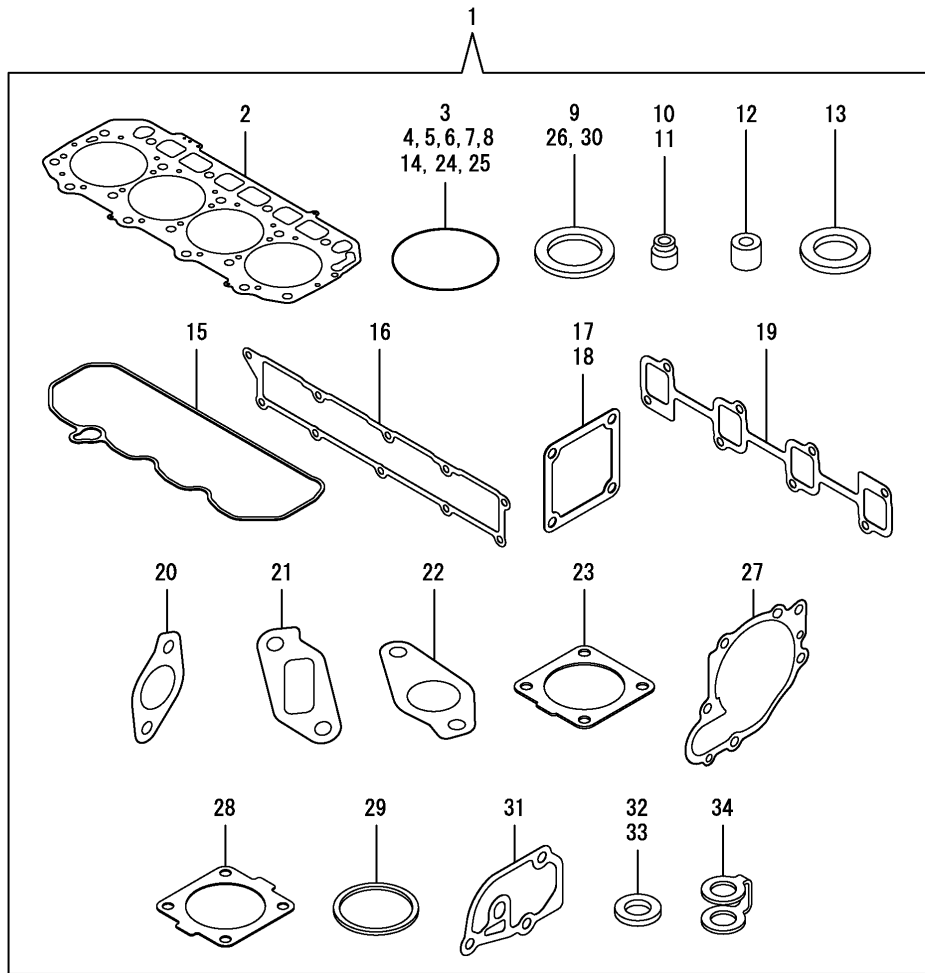
Y00W2680	16, ELECTRIC PARTS		
4TNV98-ZNMS	1, 07/12	2	3 PLUS

ELECTRIC PARTS

Ref. No.	Part No.	Description	Quantity 4TNV98
1	197713	ECU,CMP (ZNMS)	1
	197742	ECU CMP (T-ZNMS)	1
	197714	ECU,CMP (ZNTBL)	1
	197659	ECU, CMP (T-ZNTBL)	1
11	197660	SHIELD,ECU	1
12	197661	COLLAR, CONTROLLER	3
13	197452	RUBBER, CUSHION	3
14	197788	SCREW, 5.0 X 8	6
19	193206	RELAY CA,TYPE C	2
20	197703	ACCEL SENSOR ASSY	1
21	197781	NUT W/ WASHER 6	1
22	197448	SPRING, RETURN	1
23	197493	SENSOR ASSY, ACCEL	1
24	197780	BODY	1
25	197494	SUPPORT	1
26	197495	GASKET, SUPPORT	1
27	197496	SHAFT ASSY	1
28	186607	O-RING 1A P-7.0	1
29	197804	SCREW M4X20	2
30	197704	ACCEL SENSOR LEVER	1
31	186615	BOLT M6X12 PLATED	2
32	186336	RELAY, POWER	1
33	186336	RELAY, POWER	1
34	197662	RELAY(SIO,90A	1
35	160888	RELAY, MAGNETIC	1
36	160891	TIMER	1
37	197663	RELAY(ISO,70A	1

TOOL AND GASKET SET

ZNMS Engine



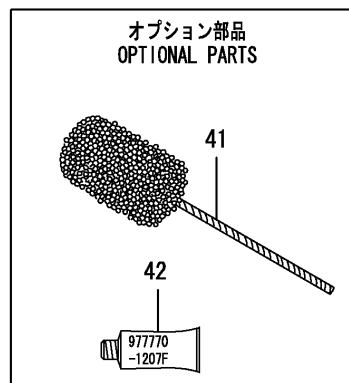
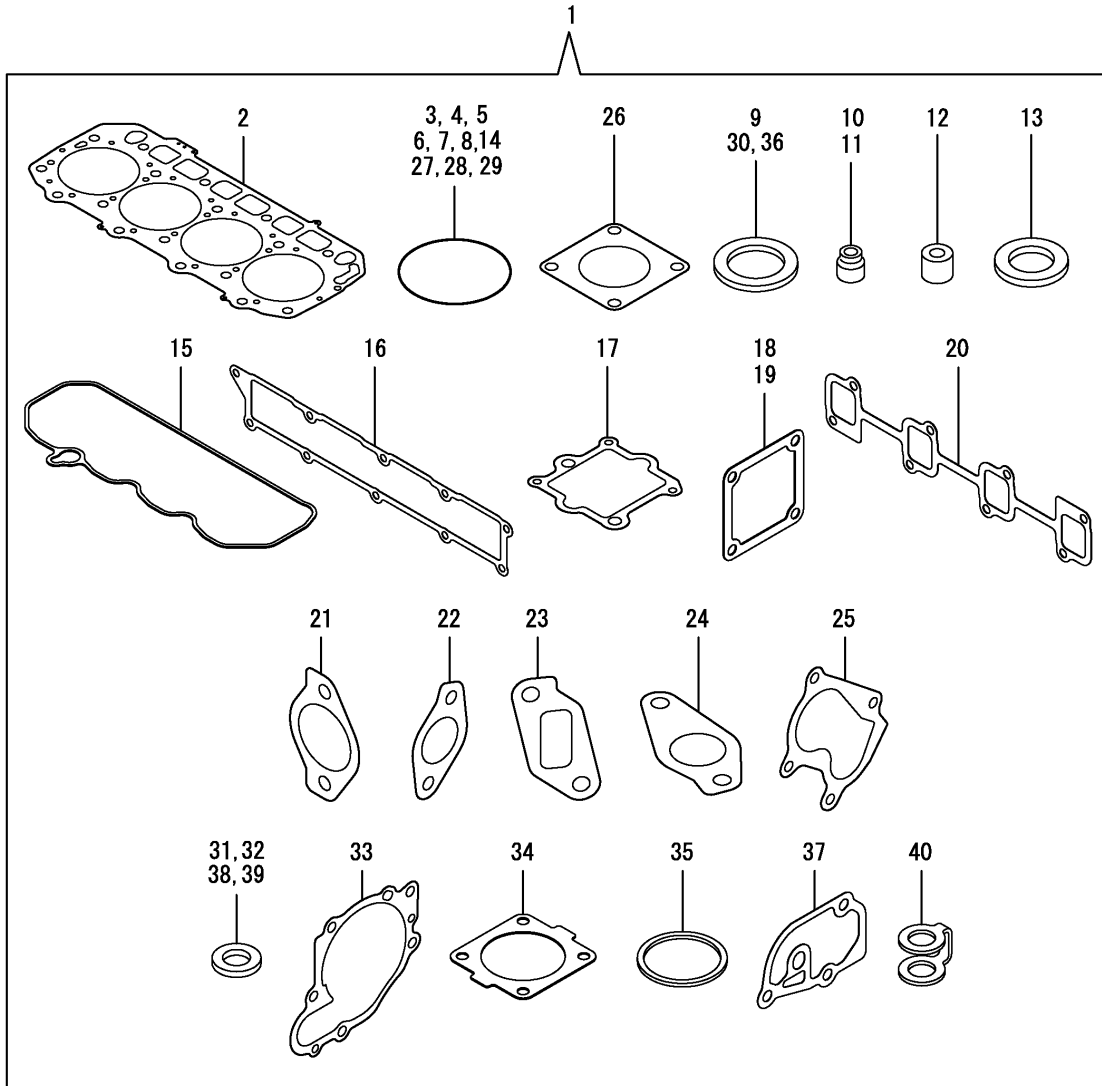
Y00W2680	17. GASKET SET			
4TNV98-ZNMS	1, 07/12	2	3	PLUS

TOOL AND GASKET SET

Ref. No.	Part No.	Description	Quantity -ZNMS
1	197503	GASKET SET(NON-ASB.)	1
2	186513	GASKET,CYLINDER HEAD	1
3	138100	O-RING P20	2
4	138101	O-RING P14	1
5	186607	O-RING 1A P-7.0	1
6	186612	PACKING, 3075	1
7	425-34745	O-RING 1A P-32.0	2
8	138127	O-RING 1A G-85.0	1
9	138113	SEAL WASHER 22S	1
10	197472	SEAL, VALVE STEM(EXH)	8
11	425-35191	SEAL, VALVE STEM(INT)	8
12	186337	PROTECTOR, NOZZLE	4
13	425-34796	SEAT, NOZZLE	4
14	425-34776	O-RING 1A P 12.0	8
15	197698	GASKET, BONNET	1
16	186538	PACKING(INT.MANIFOLD)	1
17	197450	GASKET	1
18	425-36318	GASKET, (NON-ASB.)	1
19	425-36128	GASKET	1
20	197627	GASKET, EGR PIPE	1
21	197629	GASKET(EGR-V IN	1
22	197630	GASKET(EGR-V OUT	1
23	138104	GASKET, SILENCER	1
24	186611	O-RING 1A S-53.0	1
25	425-34827	O-RING 1A P-10A	1
26	425-34750	SEAL WASHER 8S	9
27	425-36113	GASKET, CW-P	1
28	425-36114	GASKET, THERMOSTAT	1
29	186370	GASKET, THERMOSTAT	1
30	425-35959	SEAL WASHER 12	1
31	425-36319	GASKET, CASE	1
32	425-34727	GASKET 8, ROUND	1
33	160427	GASKET 16	2
34	186431	PACKING,FUEL RETURN	5
35	138091	FLEX HONE	1
36	138154	GASKET.LIQUID	1

TOOL AND GASKET SET

ZNTBL, T-ZNTBL and T-ZNMS Engines



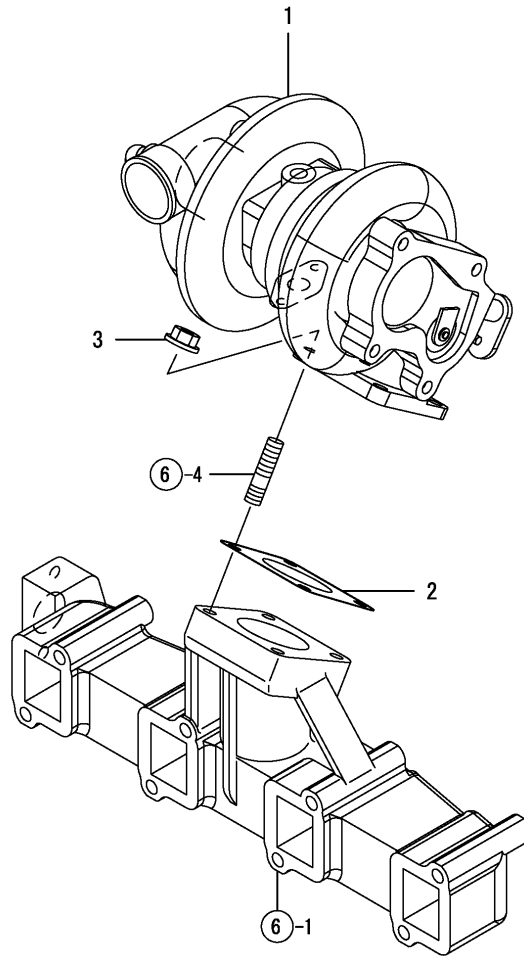
Y00W2670	19, GASKET SET			
4TNV98T-ZNMS	1, 07/12	2	3	PLUS

TOOL AND GASKET SET

Ref. No.	Part No.	Description	Quantity ZNTBL/T-ZNTBL/ T-ZNMS
1	197504	GASKET SET(NON-ASB.) (T-ZNMS)	1
	197503	GASKET SET(NON-ASB.) (ZNTBL)	1
	197871	GASKET SET(NON-ASB.) (T-ZNTBL)	1
2	186513	GASKET,CYLINDER HEAD	1
3	138100	O-RING P20	2
4	138101	O-RING P14	1
5	186607	O-RING 1A P-7.0	1
6	186612	PACKING, 3075	1
7	425-34745	O-RING 1A P-32.0 (T-ZNMS)	2
	425-34745	O-RING 1A P-32.0 (ZNTBL AND T-ZNTBL)	4
	185645	O-RING 1A P-30.0 (ZNTBL AND T-ZNTBL)	1
8	138127	O-RING 1A G-85.0	1
	186610	O-RING 1A G70.0,NBR (T-ZNTBL)	1
9	138113	SEAL WASHER 22S (T-ZNMS AND T-ZNTBL)	1
	186595	SEAL WASHER 30S (ZNTBL)	1
10	197472	SEAL, VALVE STEM(EXH)	8
11	425-35191	SEAL, VALVE STEM(INT)	8
12	186337	PROTECTOR, NOZZLE	4
13	425-34796	SEAT, NOZZLE	4
14	425-34776	O-RING 1A P 12.0	8
15	197698	GASKET, BONNET	1
16	186538	PACKING(INT.MANIFOLD)	1
17	197679	GASKET(EGR-V SPACER)	1
18	197450	GASKET	1
19	425-36318	GASKET, (NON-ASB.)	1
20	425-36128	GASKET	1
21	197676	GASKET, EGR COOLER	2
22	197627	GASKET, EGR PIPE	1
23	197629	GASKET(EGR-V IN)	1
24	197630	GASKET(EGR-V OUT)	1
25	138488	PK(T/C OUT)	1
26	197514	GASKET (T-ZNMS)	1
	138104	GASKET, SILENCER (ZNTBL AND T-ZNTBL)	2
27	186611	O-RING 1A S-53.0	1
28	186609	O-RING 1A G-60.0	1
29	425-34827	O-RING 1A P-10A	1
30	425-34750	SEAL WASHER 8S (T-ZNMS AND T-ZNTBL)	11
	425-34750	SEAL WASHER 8S (ZNTBL)	9
31	425-34837	GASKET 10, ROUND (T-ZNMS AND T-ZNTBL)	2
	425-34707	GASKET 10 (ZNTBL)	1
32	197618	GASKET,LO-T RETURN	1
33	425-36113	GASKET, CW-P	1
34	425-36114	GASKET, THERMOSTAT	1
35	186370	GASKET, THERMOSTAT	1
36	425-35959	SEAL WASHER 12	1
37	425-36319	GASKET, CASE	1
38	425-34727	GASKET 8, ROUND	1
39	160427	GASKET 16 (T-ZNMS)	2
	160427	GASKET 16 (ZNTBL AND T-ZNTBL)	1
40	186431	PACKING,FUEL RETURN	5
41	138091	FLEX HONE	1
42	138154	GASKET.LIQUID	1

TURBINE

T-ZNMS and T-ZNTBL Engines



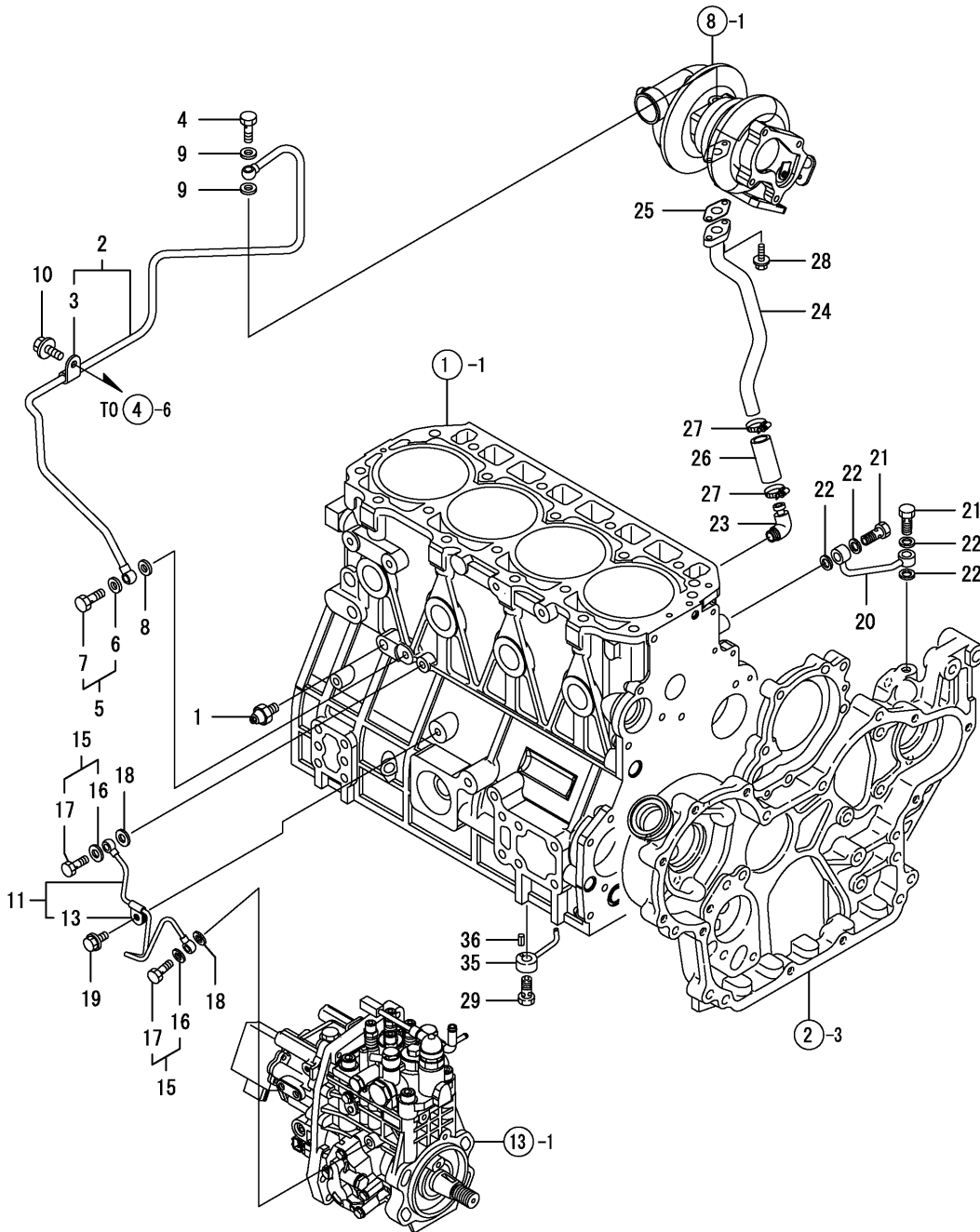
Y00W2670	8	TURBINE			
4TNV98T-ZNMS	1.07/12	2	3	PLUS	

TURBINE

Ref. No.	Part No.	Description	Quantity T-ZNMS/T-ZNTBL
1	197700	TURBINE, RHF5	1
2	197514	GASKET	1
3	138140	NUT	4

LUBRICATION OIL LINE

T-ZNMS and T-ZNTBL Engines

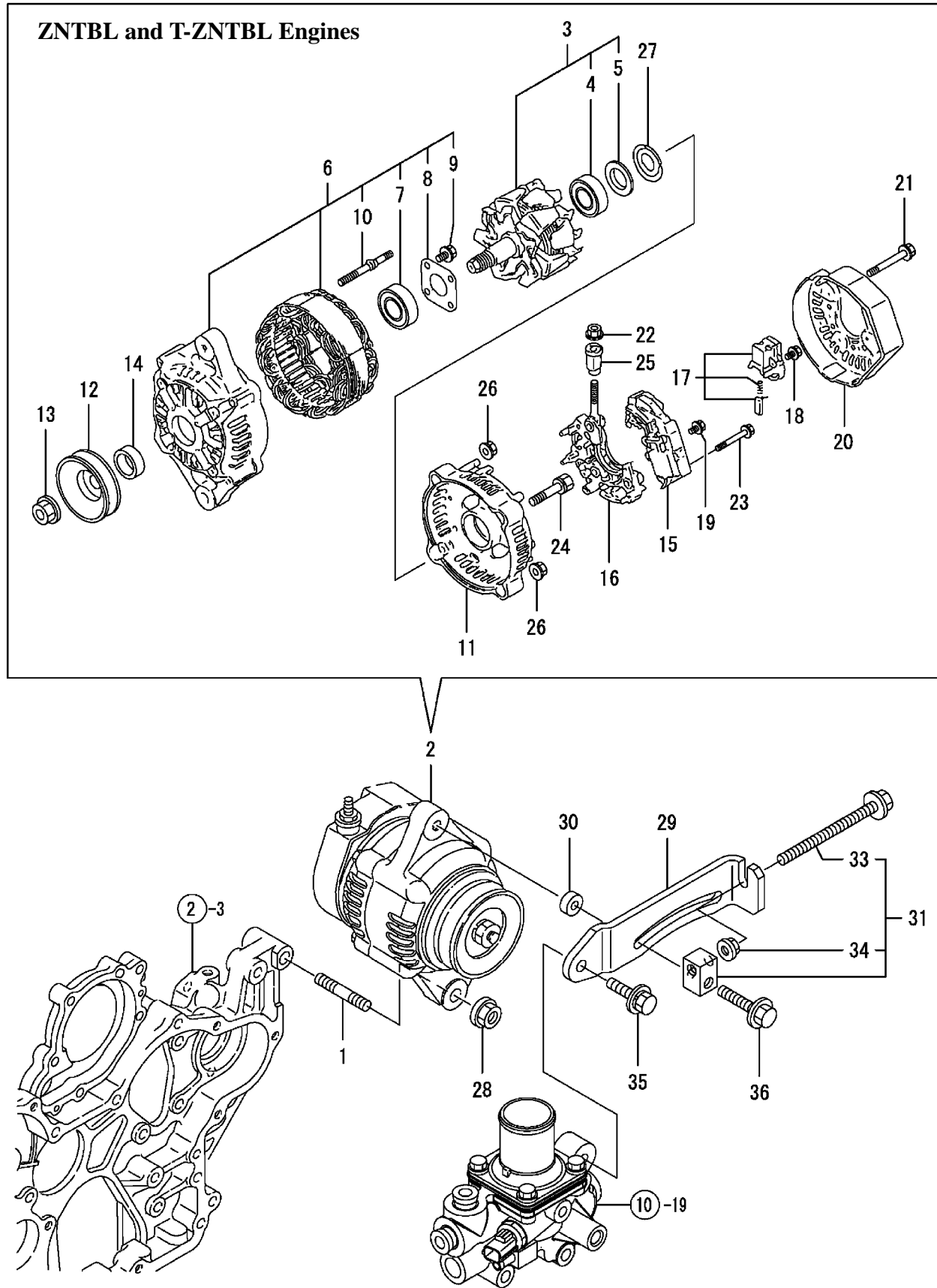


Y00W2670	11, LUB. OIL LINE			
4TNV98T-ZNMS	1.07/12	2	3	PLUS

LUBRICATION OIL LINE

Ref. No.	Part No.	Description	Quantity T-ZNMS/T-ZNTBL
1	425-36085	SENDER, OIL PRESSURE (T-ZNMS)	1
	425-34684	SENDER, OIL PRESSURE (T-ZNTBL)	1
2	197502	PIPE ASSY,LUB OIL (T-ZNMS)	1
	197684	PIPE ASSY,LUB OIL (T-ZNTBL)	1
3	138510	RETAINER	1
4	138471	BOLT, PIPE JOINT	1
5	186468	BOLT ASSY, JOINT	1
6	425-34750	SEAL WASHER 8S	1
7	186600	JOINT BOLT 3	1
8	425-34750	SEAL WASHER 8S	1
9	425-34837	GASKET 10, ROUND	2
10	425-34729	BOLT M 8X 12 PLATED	1
11	197633	PIPE ASSY, LUB.OIL	1
13	186421	SUPPORT,PIPE	1
15	186468	BOLT ASSY, JOINT	2
16	425-34750	SEAL WASHER 8S	2
17	186600	JOINT BOLT 3	2
18	425-34750	SEAL WASHER 8S	2
19	425-34729	BOLT M 8X 12 PLATED	1
20	186565	PIPE	1
21	186300	BOLT, PIPE JOINT	2
22	425-34750	SEAL WASHER 8S	4
23	138509	ELBOW (PT3/8)	1
24	197751	PIPE ASSY, LUB. OIL (T-ZNMS)	1
	197701	PIPE ASSY, LUB. OIL (T-ZNTBL)	1
	425-34729	BOLT M 8X 12 PLATED (T-ZNTBL)	1
	197480	RETAINER (T-ZNTBL)	1
25	197618	GASKET,LO-T RETURN	1
26	138492	HOSE	1
27	197790	CLAMP 25	2
28	425-35164	BOLT M 6X 16 PLATED	2
29	197617	VALVE ASSY, CHECK	4
35	197445	NOZZLE, PISTON JET	4
36	138117	SPRING PIN 3X10	4

GENERATOR



GENERATOR

Ref. No.	Part No.	Description	Quantity ZNTBL/T-ZNTBL
1	186484	STUD	1
2	184401	ALTERNATOR	1
3	186315	ROTOR ASSY	1
4	188508	BEARING, BALL	1
5	186325	COVER, BEARING	1
6	186316	FLAME ASSY, DRIVE	1
7	186321	BALL BEARING	1
8	186322	PLATE	1
9	186323	SCREW	4
10	186324	BOLT, STUD	2
11	186317	FLAME ASSY, REAR	1
12	186318	PULLEY	1
13	186319	NUT	1
14	186320	COLLAR	1
15	186475	REGULATOR	1
16	186326	HOLDER	1
17	186469	HOLDER, BRUSH	1
18	186327	SCREW	6
19	186328	SCREW	1
20	186476	COVER, END, RR	1
21	186329	BOLT	3
22	186477	NUT	1
23	186330	SCREW W/ WASHER	2
24	186331	BOLT	2
25	186332	INSULATION BUSH	1
26	186333	NUT	2
27	186334	THRUST WASHER	1
28	138141	NUT	1
29	197600	ADJUSTER, BELT	1
30	137950	SPACER	1
31	197453	BROCK, GENERATOR CMP	1
33	197806	BOLT 8*100	1
34	138140	NUT	1
35	425-35026	BOLT M8X25	1
36	425-34748	BOLT M8X55 PLATED	1

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137949	4	45	138141	56	28	186335	8	61	186473	40	30
137950	56	30	138154	48	36	186336	46	32	186475	56	15
137953	28	11	138154	50	42	186336	46	33	186476	56	20
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137956	24	11	138488	20	9	186337	48	12	186479	34	66
137957	24	4	138488	50	25	186337	50	12	186483	42	22
137958	24	5	138492	54	26	186340	42	25	186484	56	1
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138057	44	22	138512	20	3	186360	34	67	186489	4	36
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138093	30	7	160888	46	35	186371	34	26	186501	24	26
138097	22	6	160891	46	36	186375	20	6	186502	24	27
138098	24	3	183543	34	14	186388	8	55	186505	22	10
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186579	22	15	186676	36	54	197450	48	17	197603	10	32
186580	30	20	186678	36	30	197450	50	18	197604	24	9
186582	30	19	188447	40	12	197451	14	10	197605	22	16
186582	30	25	188448	40	13	197451	16	20	197606	30	14
186585	24	8	188508	56	4	197452	46	13	197607	26	2
186586	4	3	188567	28	5	197453	56	31	197607	28	15
186587	30	3	188567	30	5	197454	34	74	197608	36	53
186590	22	17	188573	4	1	197459	32	34	197609	20	7
186593	18	20	188573	6	1	197459	34	36	197610	22	3
186595	30	29	188596	8	38	197462	18	4	197611	22	3
186595	50	9	188596	8	42	197463	20	16	197612	24	1
186596	22	18	188596	10	42	197469	18	1	197613	24	1
186596	36	106	188596	10	46	197470	6	8	197614	4	4
186598	8	63	188632	12	71	197472	8	15	197615	28	1
186598	8	64	188632	12	74	197472	10	19	197615	30	1
186598	12	63	188691	42	11	197472	48	10	197616	28	4
186600	26	23	188732	16	7	197472	50	10	197616	30	4
186600	30	46	188732	16	8	197475	12	77	197617	54	29
186600	54	7	188732	32	27	197476	16	14	197618	50	32
186600	54	17	188732	34	30	197477	36	71	197618	54	25
186602	8	8	188736	12	87	197480	54	24	197619	28	6
186602	10	12	188742	4	29	197481	28	2	197619	30	6
186607	4	18	188742	4	40	197481	30	2	197620	6	7
186607	36	109	188742	8	46	197482	30	26	197621	8	51
186607	46	28	188742	12	50	197483	16	13	197622	8	4
186607	48	5	188742	14	11	197488	38	19	197624	14	2
186607	50	5	188742	16	21	197493	46	23	197625	18	1
186609	28	13	188746	8	47	197494	46	25	197626	18	8
186609	30	13	188746	8	48	197495	46	26	197627	18	9
186609	50	28	188746	12	51	197496	46	27	197627	20	18
186610	30	30	188746	12	52	197500	42	10	197627	48	20
186610	50	8	188746	32	31	197502	54	2	197627	50	22
186611	24	10	188746	34	34	197503	48	1	197628	18	12

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197628	20	25	197673	20	2	197727	44	15	197793	34	45
197629	18	13	197674	20	1	197728	44	16	197795	38	17
197629	20	26	197675	20	13	197729	44	17	197797	38	26
197629	48	21	197676	20	14	197730	44	18	197800	36	111
197629	50	23	197676	20	15	197731	44	19	197802	32	44
197630	18	14	197676	50	21	197732	44	20	197802	34	57
197630	20	27	197677	16	4	197733	8	1	197803	34	57
197630	48	22	197678	16	5	197734	30	23	197804	46	29
197630	50	24	197679	16	6	197735	30	26	197805	38	27
197631	24	17	197679	50	17	197737	20	2	197806	56	33
197632	24	15	197680	20	17	197738	34	47	197807	18	10
197633	26	17	197681	20	19	197739	24	12	197807	18	15
197633	30	42	197682	24	15	197740	30	23	197808	20	28
197633	54	11	197683	26	3	197741	34	16	197809	20	29
197634	32	1	197683	28	16	197742	46	1	197810	12	82
197634	34	1	197684	54	2	197743	26	9	197813	38	18
197635	32	17	197685	34	18	197743	28	21	197816	36	116
197635	34	17	197686	34	19	197744	30	26	197817	36	133
197636	32	36	197687	34	46	197745	34	48	197818	36	134
197636	34	38	197688	34	51	197745	34	52	197826	4	33
197637	32	40	197689	34	16	197746	42	8	197827	2	1
197637	34	42	197690	36	31	197747	12	79	197828	24	32
197638	32	16	197691	40	2	197748	12	80	197829	24	34
197639	36	136	197692	12	77	197749	12	78	197830	40	1
197640	36	21	197693	38	6	197750	16	12	197831	2	1
197641	36	31	197694	34	55	197751	54	24	197832	24	32
197642	36	120	197695	32	14	197752	22	20	197833	40	1
197643	36	121	197695	34	14	197753	6	8	197834	36	1
197644	36	124	197696	34	14	197754	36	9	197835	36	1
197645	40	2	197697	4	3	197760	38	23	197836	36	1
197646	40	6	197698	8	60	197762	38	7	197837	36	1
197647	42	16	197698	12	60	197763	38	8	197870	30	14
197648	40	32	197698	48	15	197764	38	9	197871	50	1
197649	40	33	197698	50	15	197765	38	11	270970	28	28
197650	40	34	197699	20	8	197766	38	12	270970	32	32
197651	40	35	197700	52	1	197767	38	22	270981	42	26
197652	38	4	197701	54	24	197768	36	67	425-34656	22	4
197653	38	3	197702	34	16	197769	38	2	425-34666	40	9
197654	38	5	197703	46	20	197770	36	19	425-34684	30	41
197655	38	10	197704	46	30	197770	36	20	425-34684	54	1
197656	38	20	197705	14	9	197772	36	18	425-34707	34	65
197657	38	20	197705	16	19	197773	36	52	425-34707	50	31
197658	38	21	197710	30	39	197779	8	62	425-34722	2	5
197659	46	1	197711	30	52	197780	46	24	425-34727	32	29
197660	46	11	197712	30	40	197781	46	21	425-34727	34	32
197661	46	12	197713	46	1	197782	38	13	425-34727	48	32
197662	46	34	197714	46	1	197783	24	22	425-34727	50	38
197663	46	37	197716	44	2	197784	38	14	425-34729	6	12
197664	6	8	197717	44	5	197786	38	16	425-34729	12	86
197665	12	68	197718	44	6	197788	46	14	425-34729	26	14
197666	12	69	197719	44	7	197789	12	83	425-34729	26	25
197666	12	72	197720	44	8	197790	28	12	425-34729	28	26
197667	12	77	197721	44	9	197790	30	12	425-34729	30	38
197668	10	2	197722	44	10	197790	54	27	425-34729	30	48
197669	12	55	197723	44	11	197792	12	84	425-34729	32	30
197670	10	6	197724	44	12	197793	32	39	425-34729	34	33
197671	16	3	197725	44	13	197793	32	43	425-34729	34	56
197672	16	2	197726	44	14	197793	34	41	425-34729	54	10

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425-34733	4	28	425-34766	30	31	425-35174	36	100	425-36319	48	31
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425-34733	10	3	425-34775	12	65	425-35188	10	18			
425-34733	18	22	425-34776	8	29	425-35189	8	22			
425-34733	20	10	425-34776	8	67	425-35189	10	26			
425-34733	22	8	425-34776	10	33	425-35191	8	16			
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425-34740	12	54	425-34783	2	10	425-35916	44	29			
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425-34745	8	68	425-34791	8	43	425-35959	32	25			
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425-34746	4	21	425-34796	10	30	425-35959	48	30			
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425-34746	20	11	425-34800	14	6	425-36085	54	1			
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425-34748	20	22	425-34825	30	15	425-36114	48	28			
425-34748	22	14	425-34827	26	4	425-36114	50	34			
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425-34748	34	13	425-34827	30	16	425-36121	6	9			
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425-34750	26	24	425-34837	50	31	425-36128	48	19			
425-34750	26	28	425-34837	54	9	425-36128	50	20			
425-34750	30	45	425-34851	32	33	425-36131	16	15			
425-34750	30	47	425-34851	34	35	425-36133	16	16			
425-34750	30	51	425-34854	34	72	425-36249	18	5			
425-34750	42	21	425-34892	36	108	425-36249	20	4			
425-34750	48	26	425-34903	40	5	425-36260	2	11			
425-34750	50	30	425-34905	40	10	425-36260	2	12			
425-34750	50	30	425-34906	40	11	425-36260	2	13			
425-34750	54	6	425-34916	42	5	425-36260	8	9			
425-34750	54	8	425-34916	42	9	425-36260	10	13			
425-34750	54	16	425-34924	42	24	425-36260	12	85			
425-34750	54	18	425-34927	42	28	425-36289	42	7			
425-34750	54	22	425-34935	38	24	425-36301	44	31			
425-34756	6	4	425-34968	36	131	425-36318	14	8			
425-34760	36	138	425-34969	38	15	425-36318	16	18			
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TORQUE SPECIFICATIONS

Use these torque values when tightening hardware (excluding locknuts, and self-tapping, thread-forming, and sheet metal screws) unless otherwise specified.

UNIFIED NATIONAL THREAD	GRADE 2		GRADE 5		GRADE 8	
	DRY	LUBED	DRY	LUBED	DRY	LUBED
8-32	19*	14*	30*	22*	41*	31*
8-36	20*	15*	31*	23*	43*	32*
10-24	27*	21*	43*	32*	60*	45*
10-32	31*	23*	49*	36*	68*	51*
1/4-20	66*	50*	9	75*	12	9
1/4-28	76*	56*	10	86*	14	10
5/16-18	11	9	17	13	25	18
5/16-24	12	9	19	14	25	20
3/8-16	20	15	30	23	45	35
3/8-24	23	17	35	25	50	35
7/16-14	32	24	50	35	70	55
7/16-20	36	27	55	40	80	60
1/2-13	50	35	75	55	110	80
1/2-20	55	40	90	65	120	90
9/16-12	70	55	110	80	150	110
9/16-18	80	60	120	90	170	130
5/8-11	100	75	150	110	220	170
5/8-18	110	85	180	130	240	180
3/4-10	175	130	260	200	380	280
3/4-16	200	150	300	220	420	320
7/8-9	170	125	430	320	600	460
7/8-14	180	140	470	360	660	500
1-8	250	190	640	480	900	680
1-12	270	210	710	530	1000	740
METRIC COARSE THREAD	GRADE 8.8		GRADE 10.9		GRADE 12.9	
	DRY	LUBED	DRY	LUBED	DRY	LUBED
M6-1	8	6	11	8	13.5	10
M8-1.25	19	14	27	20	32.5	24
M10-1.5	37.5	28	53	39	64	47
M12-1.75	65	48	91.5	67.5	111.5	82
M14-2	103.5	76.5	145.5	108	176.5	131
M16-2	158.5	117.5	223.5	165.5	271	200

*All torque values are in ft-lbs except those marked with an * which are in lbs.

For metric torque value (N·m) multiply ft-lbs value by 1.355 or the in-lbs value by 0.113.

GEHL®

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