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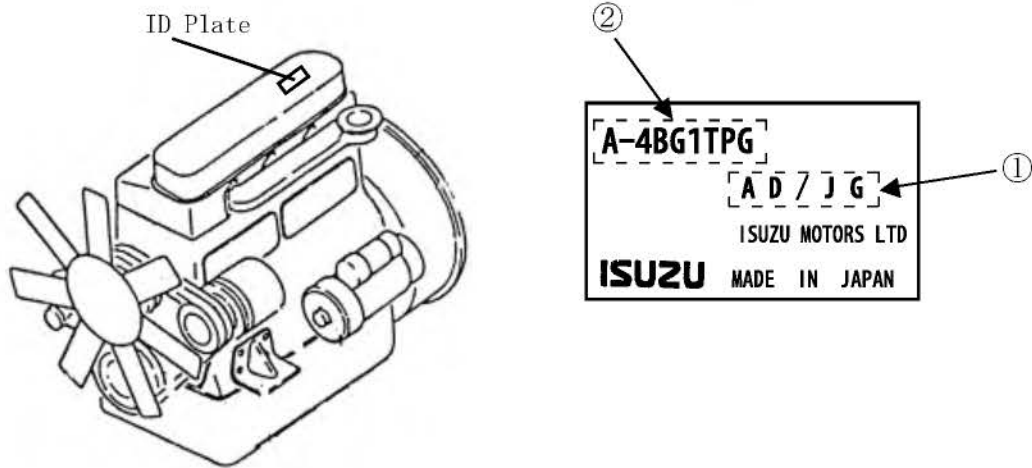
DIESEL ENGINE

4JJ1 XAGD02

PARTS CATALOG

How to search for the Part Number

© ID Plate information



① **Applied Date:** Indicated in alphabetical character on the ID Plate.
(A=0, B=1, C=2, D=3, etc.).

For example:

March '96

A D / J G
| | | |
0 3 / 9 6

(Month/Year)

② **Engine Model Name:** Individual model is indicated.

For example 1:A-4BG1TPG → TPG

For example 2:UF4BG1TPG → TPG (UF)



Parts Catalog

Check the Part

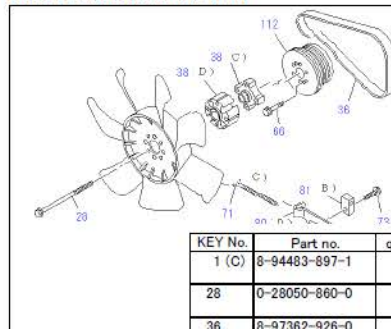


- Type of Part
- Place where the part is installed

(Part Name)

ILLUSTRATION

0-33FANANDFANBELT

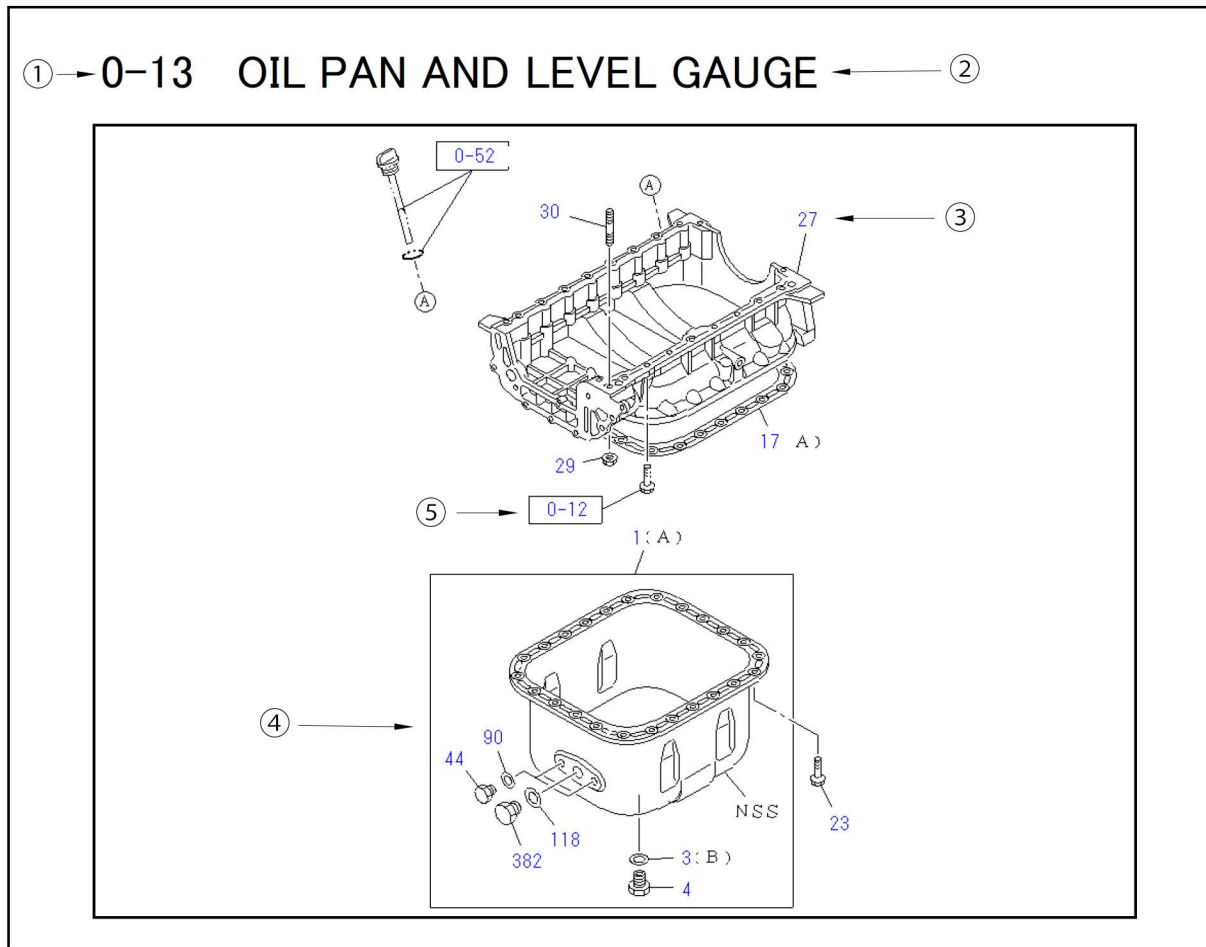


TEXT

KEY No.	Part no.	qty	Part description	Engine serial no.
1 (C)	8-94483-897-1	1	FAN, COOLING 7 BLADE OD=550	
28	0-28050-860-0	4	BOLT, COOLING FAN M8X60 FLANGE	
36	8-97362-926-0	1	BELT, COOLING FAN L=1006	
38 (C)	8-98038-883-0	1	SPACER, FAN H=20 OD=80	
38 (D)	1-13642-075-0	1	SPACER, FAN H=20 OD=78	
66	0-20800-612-0	2	BOLT, PULLEY M6X12	
71	8-97172-720-1	1	BOLT, ADJ PLATE,GEN	
73	0-28650-835-0	1	BOLT, GEN TO ADJ PLATE M8X35 FLANGE	
80 (B)	8-98084-267-0	1	PLATE, ADJ	
81 (B)	8-98093-184-0	1	PIECE, SLIDING	
96	0-28650-820-0	1	BOLT, ADJ PLATE M8X20 FLANGE	
112	8-98038-872-0	1	PULLEY, FAN CENTER OD=152	
174	9-09851-479-0	1	SPACER, ADJ PLATE	

How to refer to the Parts Catalog

1. How to interpret the illustration



① FIG NO.

A 3-digit (X-XX) Figure Number has been assigned to every section/illustration of the catalog.

The first digit of the Figure Number identifies the primary catalog section.

And the second and third digits identify the subsections.

EXAMPLE: 0-15 = Engine (0); Crankshaft, Piston and Flywheel (15).

② ILLUSTRATION TITLE

The first line of the title contains a generic name(s) for the item(s) illustrated.

The second line of the title identifies the specific application; i.e. engine model, type of transmission, etc.

③ KEY NUMBER

The Key Number connects the illustrated part to the appropriate text.

Items identified with a "NSS" (Not Serviced Separately) are not available individually, however, they may be available as part of an assembly.

④ ASSEMBLIES, KITS, SETS AND THEIR COMPONENTS

Assemblies, Kits and/or Sets are shown within a frame/box. Also shown within the frame/box are any components included with the assembly, Kit or Set.

EXAMPLE: Key No. 84 includes Key No. 86/88 and the connecting Rod and Cap which are notsupplied individually.

EXAMPLE: Key No. 8/9 includes Key No. 42 and those items identified with an asterisk(*). Items identified with no key number may only be available in an assembly, Kit or Set.

⑤ SEE FIG NO.

Items shown as a point of reference are not identified with a Key Number. These items are shown because of the way they fit within the illustration. They are described in more detail in another section of the Catalog.

The applicable catalog section is shown next to the illustration.

How to interpret the Text

KEY No.	Part no.	qty	Part description	Engine serial no.
2 (A)	8-98084-266-0	1	FOOT; ENG R	
2 (B)	8-98038-782-0	1	FOOT; ENG L	
18	0-91614-712-0	2	WASHER; PL,ENG FOOT ID=12.5 OD=32	
20 (A)	0-28051-030-0	2	BOLT; ENG FOOT R M10X30 FLANGE	
20 (B)	0-28051-045-0	1	BOLT; ENG FOOT L M10X45 FLANGE	
20 (C)	0-28051-060-0	3	BOLT; ENG FOOT L M10X60 FLANGE	
20 (D)	0-28051-070-0	2	BOLT; ENG FOOT R M10X70 FLANGE	

① KEY NUMBER

The combination of the Figure Number and Key Number identifies a particular part. For example, Figure Number 0-10 and Key Number 1 combines to identify "COVER;HEAD". This combination of the Figure Number and Key Number (i.e. 0-10-1) will be used to identify the "COVER;HEAD" in all parts catalogs. Key Numbers, therefore, may not be listed consecutively.

①' ILLUSTRATION REMARKS

When two or more items are identified by the same Key Number, an alphabetical character (i.e. "A", "B", "C", etc) will be used to identify the part number to the applicable illustration.

② PART NUMBER

Used to identify a specific part.

③ QUANTITY

The quantity of the part per that particular application for one engine is indicated. As to the component of a particular Assembly, the quantity per one assembly is indicated. In those cases where the required quantity is unknown (i.e. shims), "AR" (As required) will be indicated.

④ **DESCRIPTION**

The actual description of the part is listed first then the location of the part.

EXAMPLE: Cover ; Cylinder Head
 Name Location

④' **SIDE**

Indicated whether the item is installed on the left or right side of the engine as viewed from Flywheel.

④" **REMARKS**

Any additional information pertaining to the characteristics of the item; i.e. size, shape, color, Engine No. etc. will be listed in the Remarks Column.

⑤ **ENGINE SERIAL NUMBER**

The serial number of the engine in which the part is used.

Abbreviation List

ABBREVIATIONS	DEFINITION	ABBREVIATIONS	DEFINITION
A	AMPERE	KW	KILOWATT
ACCEL	ACCELERATOR	L	LITER
ACL	AIR CLEANER	L1=	LENGTH (VERTICAL)
ADJ	ADJUSTER	L2=	LENGTH (SIDE)
AL	ALUMINUM	L=	LENGTH
A/R	AS REQUIRED	LH	LEFT HAND
ASM	ASSEMBLY	LK	LOCK
AUTO	AUTOMATIC	LVR	LEVER
B=	BREADTH	LWR	LOWER
BRG	BEARING	MAN	MANUAL
BRK	BRAKE	MANIF	MANIFOLD
BRKT	BRACKET	MTG	MOUNTING
CAC	CHARGE AIR COOLER	M/T	MANUAL TRANSMISSION
C/BL	CYLINDER BLOCK	MM	MILLIMETER
CLU	CLUTCH	NACHI	NACHI-FUJIKOSHI CO.
CMPR	COMPRESSOR	NGK	NGK SPARK PLUG CO.
COMB	COMBINATION	NO.	NUMBER
COMPL	COMPLETE	NOK	NOK CO.
CONN	CONNECTING	NPN	NO PART NUMBER
CONT	CONTROL	NPR	NIPPON PISTON RING CO.
CVR	COVER	NSG	NIPPON SHEET GLASS CO.
CYL	CYLINDER	NSS	NOT SERVICED SEPARATELY
D=	DIAMETER	NSK	NSK LTD.
DC	DIRECT CURRENT	NTN	NTN CO.
DIAPH	DIAPHRAGM	OD	OUTSIDE DIAMETER
DIFF	DIFFERENTIAL	OPT	OPTION
EGR	EXHAUST GAS RECIRCULATION	OVSI	OVERSIZE
ENG	ENGINE	PCV	POSITIVE CRANK CASE VENTILATION
EXC	EXCEPT	PL	PLAIN
EXH	EXHAUST	PRE-CHAMBER	PRECOMBUSTION CHAMBER
E#	ENGINE NUMBER	PROP	PROPELLER
EXP	EXPORT	P/S	POWER STEERING
FIG NO.	FIGURE NUMBER	PTO	POWER TAKE OFF
FLEX	FLEXIBLE	QOS	QUICK ON START
FRT	FRONT	QTY	QUANTITY
FWD	FORWARD	QUAD	QUADRANT
G	GRAM	RAD	RADIATOR
GEN	GENERATOR	REG	REGULATOR
GOV	GOVERNOR	RET	RETAINER
GRD=	GRADE	REV	REVERSE
G/RATIO	GEAR RATIO	RH	RIGHT HAND
H=	HEIGH	RR	REAR
HD	HEAD	RWD	REARWARD
HEX	HEXAGON	SPD	SPEED
HSG	HOUSING	SPR	SPRING
ID=	INSIDE DIAMETER	STD	STANDARD
IGN	IGNITION	SW	SWITCH
INCL	INCLUDING	SYN	SYNCHRONIZER
INJ	INJECTION	T=	THICKNESS
INL	INLET	TAP	TAPPING
ISC	IDLE SPEED CONTROL	TBK	TBK CO.
JBK	JIDOSHA BUHIN KOGYO CO.	TC	TURBOCHARGER
KG	KILOGRAM	TDC	TOP DEAD CENTER
KM/H	KILOMETER PER HOUR	TEMP	TEMPERATURE

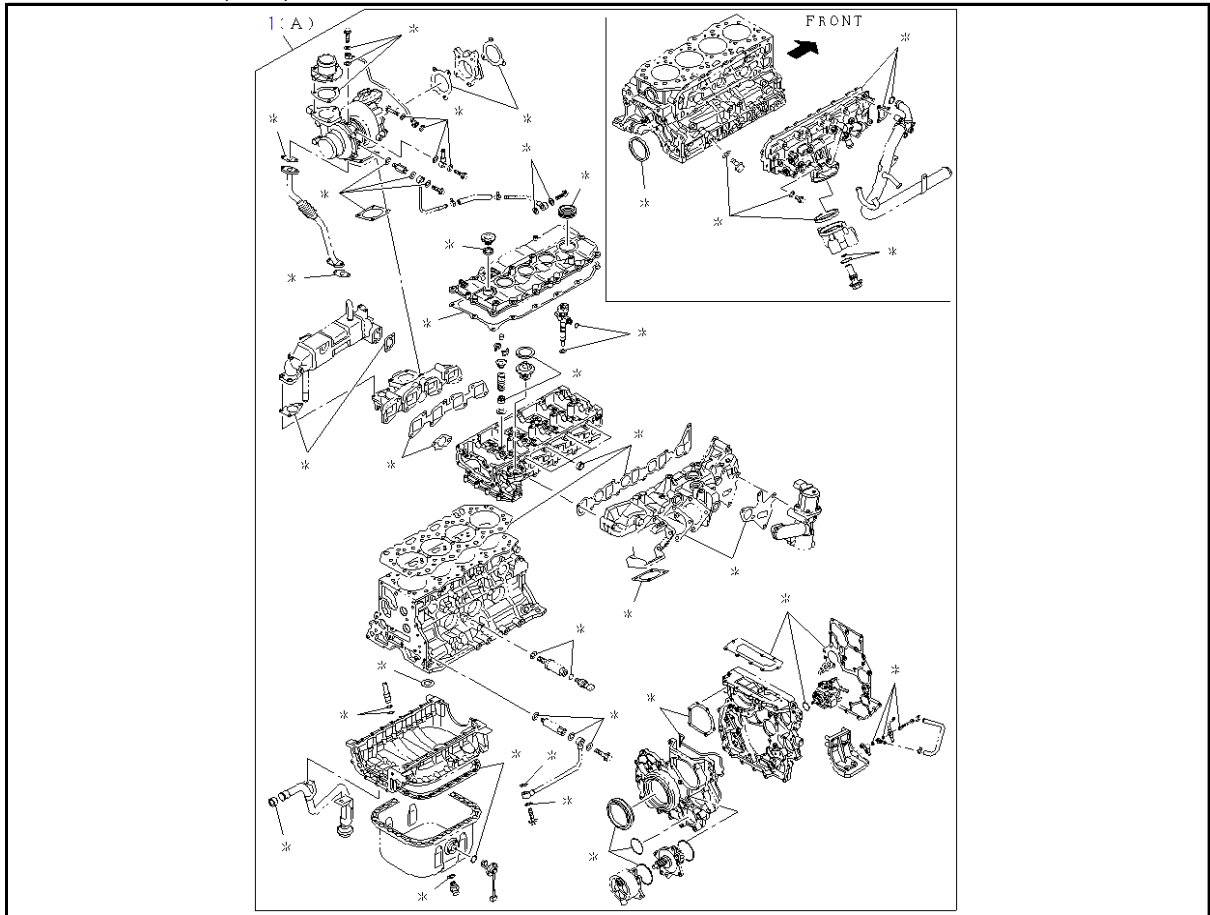
ABBREVIATIONS	DEFINITION	ABBREVIATIONS	DEFINITION
TICS	TIMING INJECTION CONTROL SYSTEM		
TRANS	TRANSMISSION		
UNSI	UNDER SIZE		
UPR	UPPER		
V	VOLT		
VAC	VACUUM		
VLV	VALVE		
W	WATT		
W/	WITH		
WO/	WITHOUT		
Z=	TEETH		
ZN	ZINC		
&	AND		
"	INCH		
#	NUMBER		
1ST	FIRST		
2ND	SECOND		
3RD	THIRD		
4TH	FOURTH		
5TH	FIFTH		
6TH	SIXTH		
7TH	SEVENTH		
8TH	EIGHTH		
9TH	NINTH		

FIGURE NUMBER INDEX

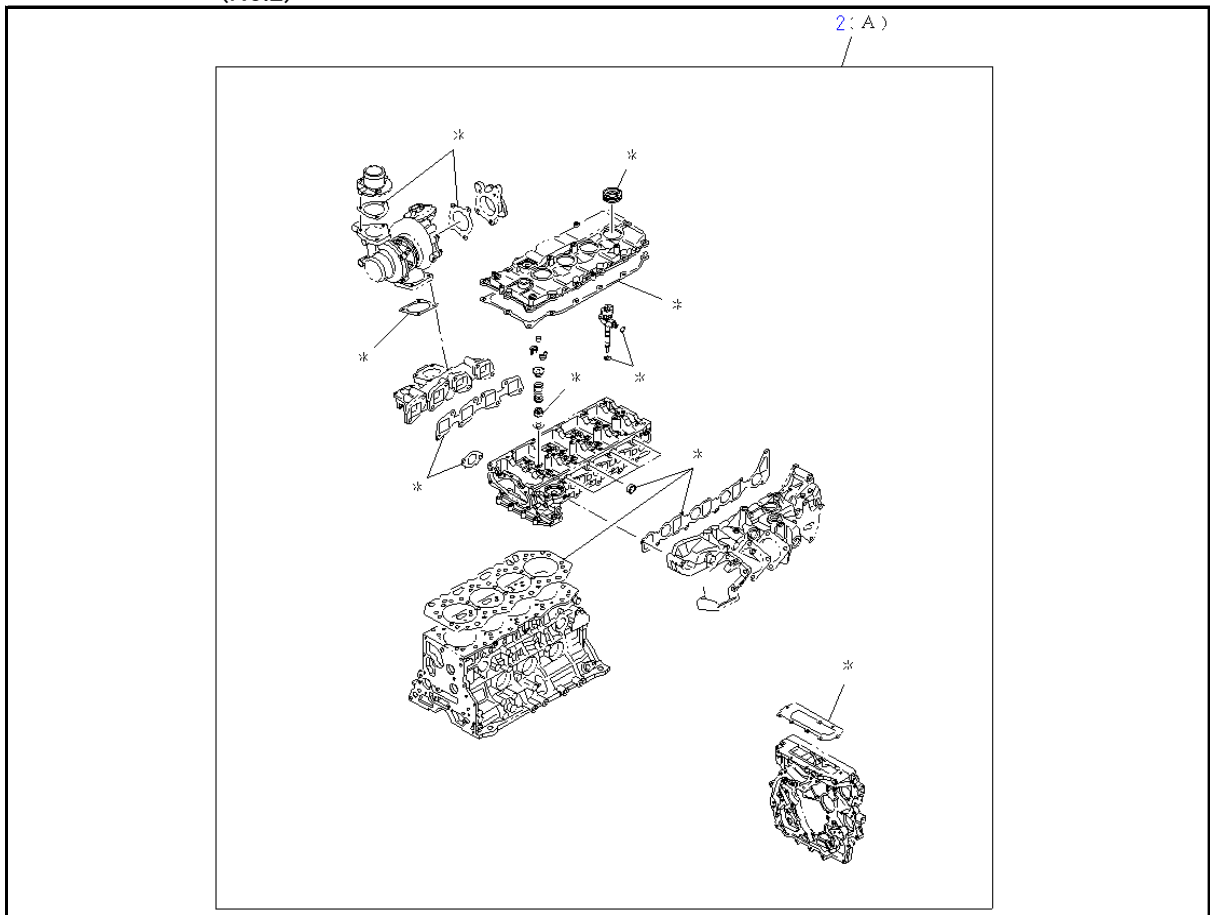
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0-14	CAMSHAFT AND VALVE	10
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0-22	ENGINE MOUNTING	17
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0-05 ENGINE GASKET KIT

(No.1)



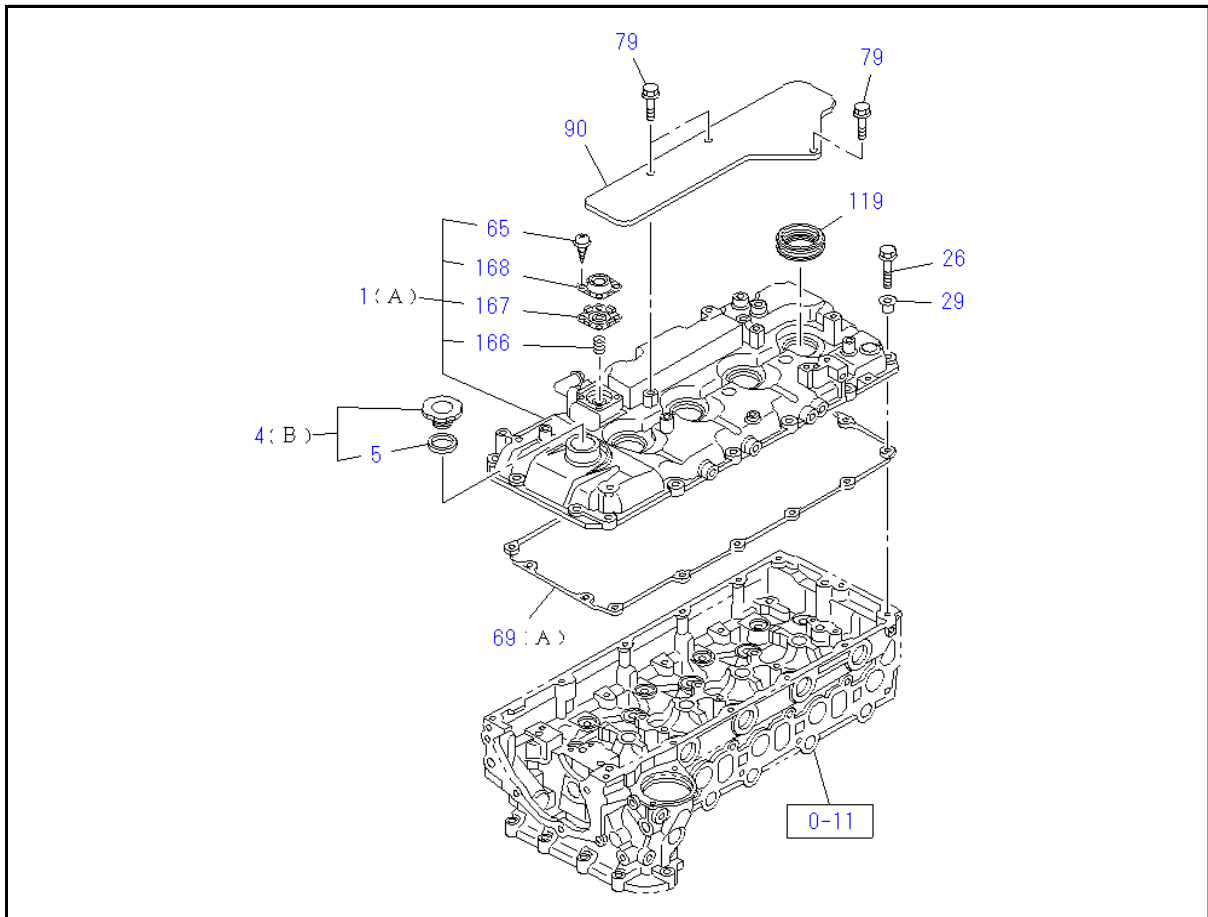
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0-05 ENGINE GASKET KIT

KEY No.	Part no.	qty	Part description	Engine serial no.
1 (A)	5-87817-789-0 <5-87817-789-2>	1	GASKET SET; ENG OVERHAUL HEAD GASKET 1-HOLE	
1 (A)	5-87817-790-0 <5-87817-790-2>	1	GASKET SET; ENG OVERHAUL HEAD GASKET 2-HOLE	
1 (A)	5-87817-791-0 <5-87817-791-2>	1	GASKET SET; ENG OVERHAUL HEAD GASKET 3-HOLE	
2 (A)	5-87817-792-0	1	GASKET SET; ENG HD OVERHAUL HEAD GASKET 1-HOLE	
2 (A)	5-87817-793-0	1	GASKET SET; ENG HD OVERHAUL HEAD GASKET 2-HOLE	
2 (A)	5-87817-794-0	1	GASKET SET; ENG HD OVERHAUL HEAD GASKET 3-HOLE	

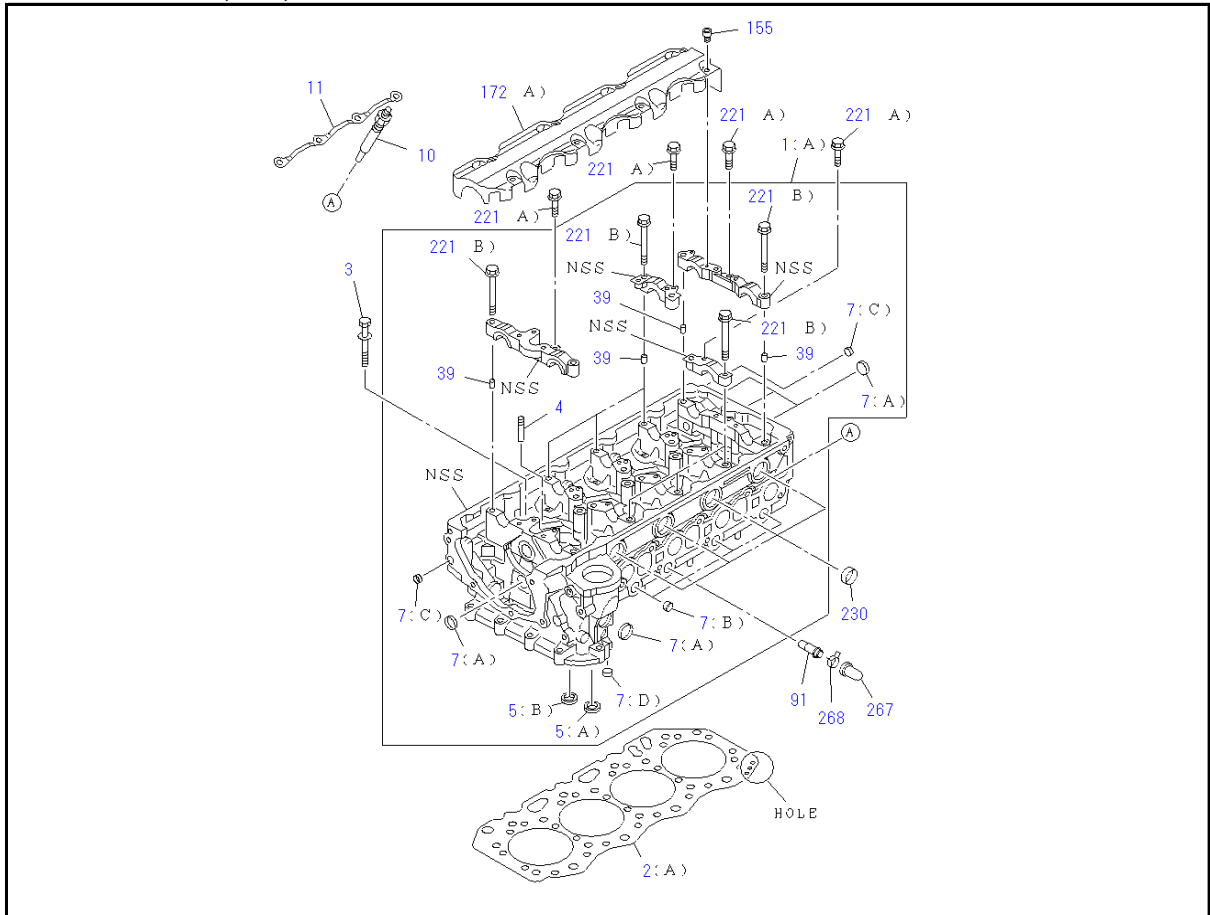
0-10 CYLINDER HEAD COVER



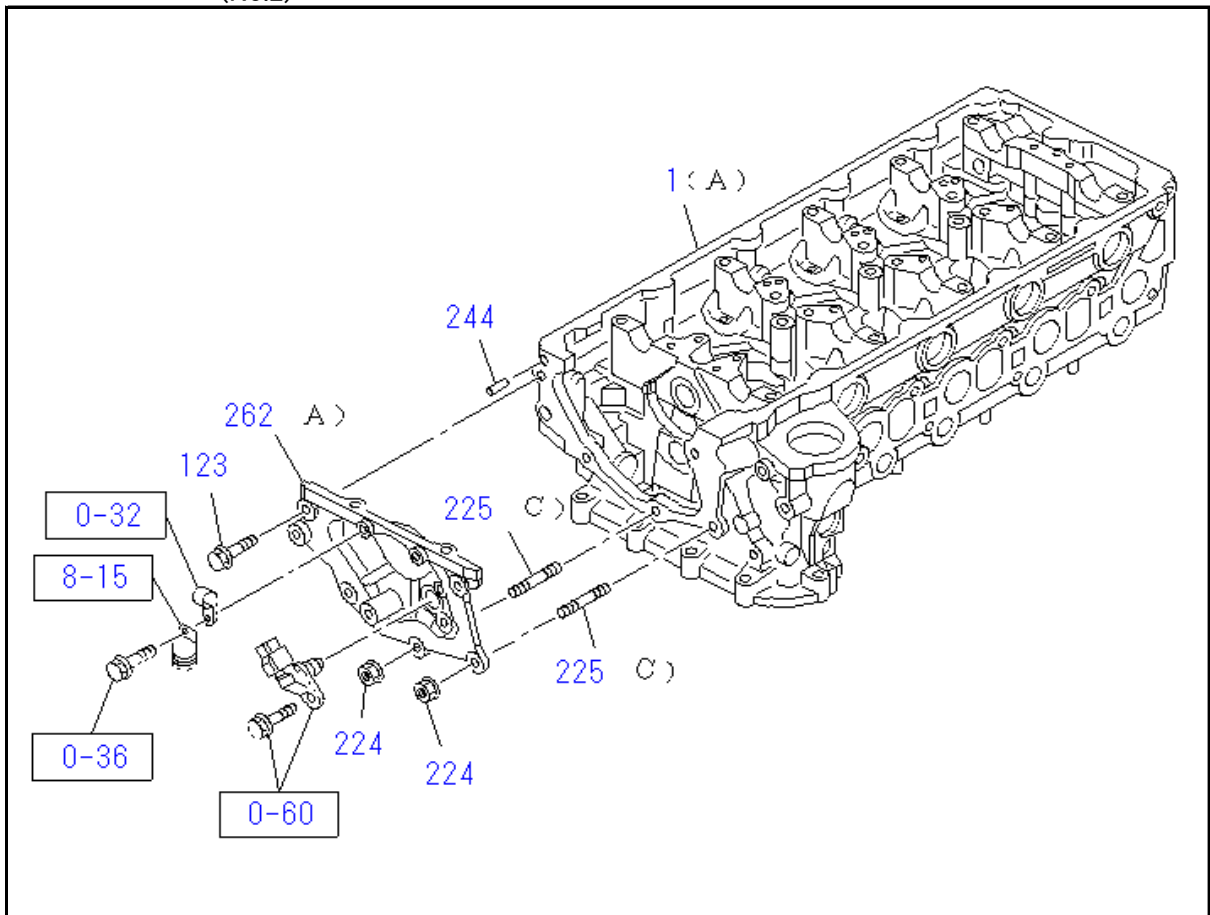
KEY No.	Part no.	qty	Part description	Engine serial no.
1 (A)	8-98273-572-2 <8-98273-572-1>	1	COVER; CYL HD	
4 (B)	8-94133-207-5	1	CAP; OIL FILLER	
5	8-94123-623-1	1	GASKET; OIL FILLER ID=32 OD=40	
26	0-28650-630-0	15	BOLT; CYL HD COVER M6X30 FLANGE	
29	8-97168-200-1	15	RUBBER; MTG,HD COVER	
65	8-98304-519-0	4	SCREW; ADAPTER M5X10 W/LK WASHER	
69 (A)	8-98181-200-0	1	GASKET; HD TO COVER	
79	0-28050-816-0	3	BOLT; COVER M8X16 FLANGE	
90	8-98255-563-0	1	COVER; NOZZLE,INJ	
119	8-98037-543-0	4	COVER; SEAL,NOZZLE	
166	8-97365-998-0	1	SPRING; VENTILATOR	
167	8-98226-101-1	1	DIAPHRAGM; VENTILATOR	
168	8-97365-992-0	1	COVER; VENTILATOR	

0-11 CYLINDER HEAD

(No.1)

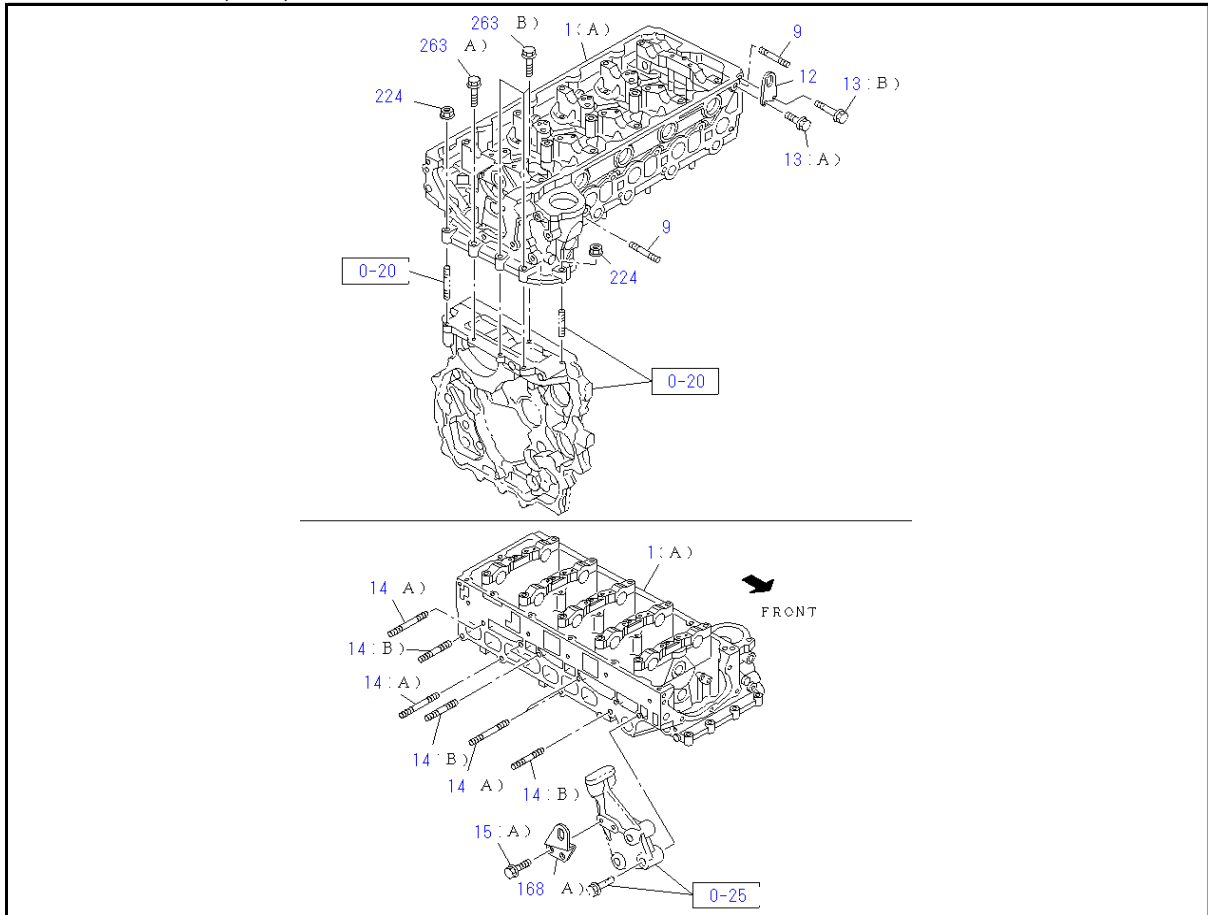


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0-11 CYLINDER HEAD

(No.3)

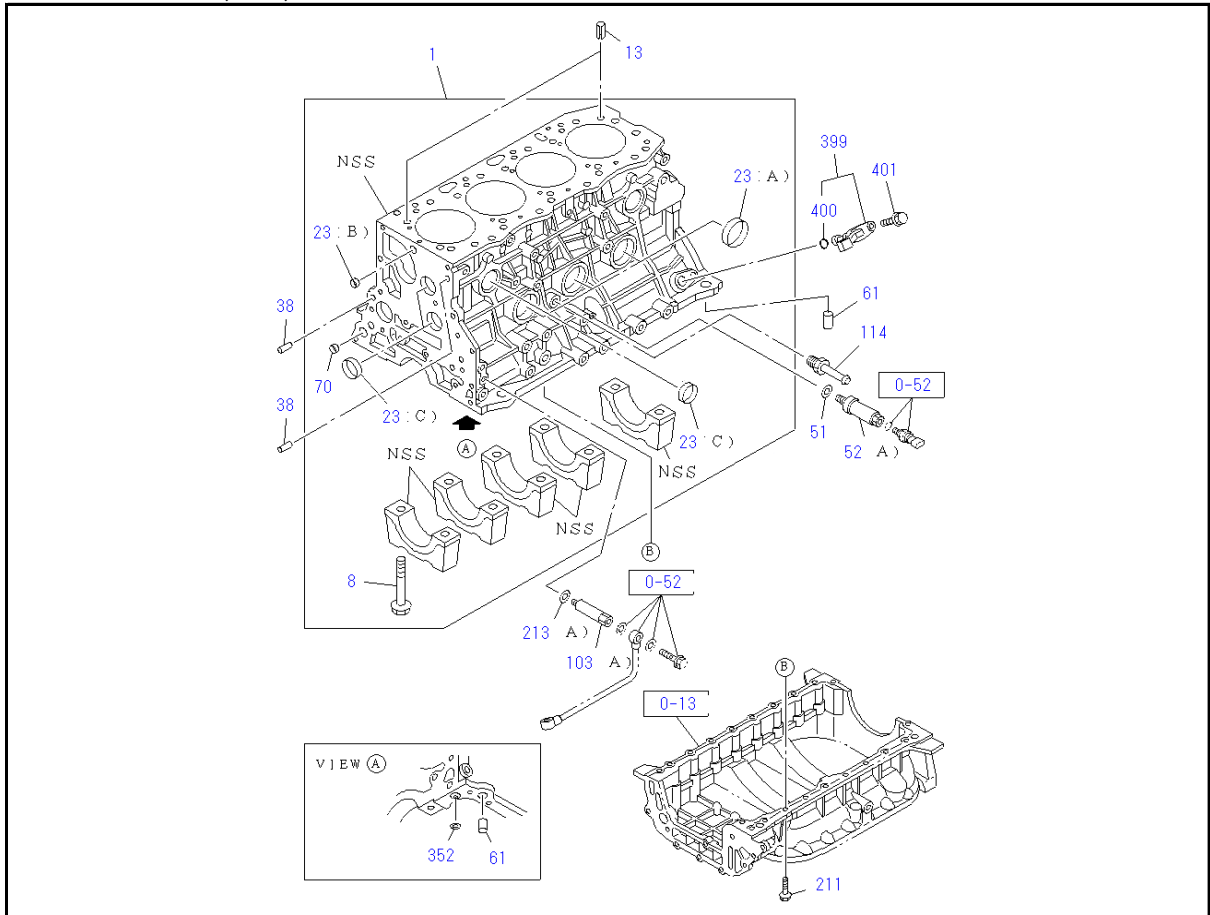


KEY No.	Part no.	qty	Part description	Engine serial no.
1 (A)	8-98281-767-2	1	HEAD ASM; CYL	
2 (A)	8-98261-311-0	1	GASKET; CYL HD 1-HOLE	
2 (A)	8-98261-312-0	1	GASKET; CYL HD 2-HOLE	
2 (A)	8-98261-313-0	1	GASKET; CYL HD 3-HOLE	
3	8-98201-019-0	18	BOLT; CYL HD TO BLOCK M11X114	
4	8-94239-423-0	16	GUIDE; VLV	
5 (A)	8-97311-378-0	8	SEAT; VLV INSERT INLET	
5 (B)	8-97311-379-0	8	SEAT; VLV INSERT EXH	
7 (A)	8-97333-120-0	5	CUP; SEALING,CYL HEAD OD=24	
7 (B)	5-11219-008-0	7	CUP; SEALING,CYL HEAD OD=18	
7 (C)	5-11219-011-0	2	CUP; SEALING,CYL HEAD OD=14	
7 (D)	8-97233-429-0	1	CUP; SEALING,CYL HEAD OD=8	
9	8-98017-063-0	2	STUD; INL MANIF M8X71 L=83	
10	8-97600-096-3	4	PLUG; GLOW NGK 12V	
11	8-98014-335-0	1	CONNECTOR; GLOW PLUG	
12	8-98255-505-1	1	HANGER; ENG,RR	
13 (A)	0-58330-820-0	1	BOLT; HANGER M8X20 HEX SOCKET	

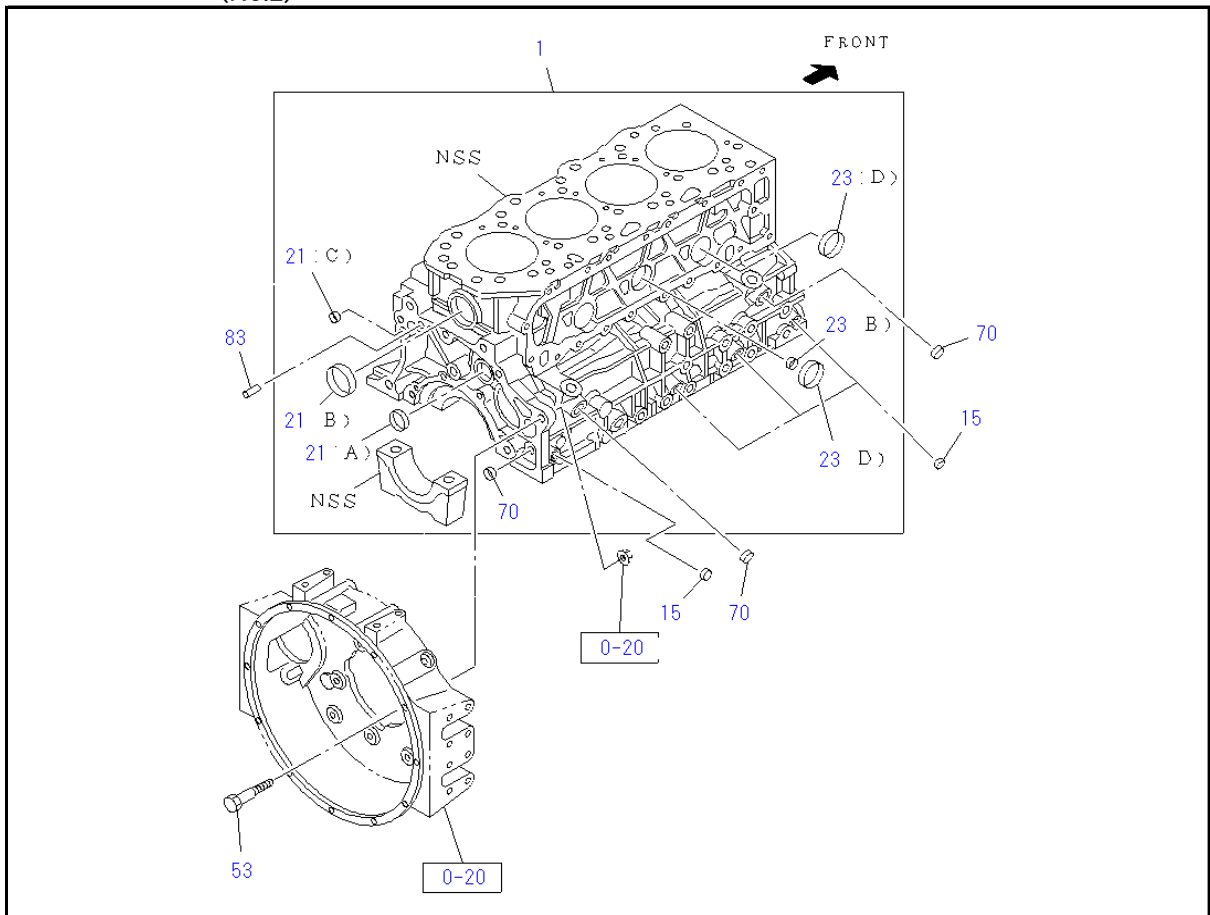
KEY No.	Part no.	qty	Part description	Engine serial no.
13 (B)	0-58330-835-0	1	BOLT; HANGER M8X35 HEX SOCKET	
14 (A)	8-98048-446-0	4	STUD; EXH MANIF M10X70 L=83	
14 (B)	8-97307-075-2	4	STUD; EXH MANIF M10X33 L=48	
15 (A)	0-28050-820-0	2	BOLT; HANGER,FRT M8X20 FLANGE	
39	8-97329-129-1	26	DOWEL; CAP,CM/SHF	
91	8-98255-504-0	1	PIPE; HTR	
123	0-28050-820-0	3	BOLT; COVER M8X20 FLANGE	
155	0-58330-610-0	8	BOLT; BAFFLE PLATE M6X10 HEX SOCKET	
168 (A)	8-98052-041-0	1	HANGER; ENG,FRT	
172 (A)	8-98212-020-0	1	PLATE; BAFFLE,CYL HD	
221 (A)	0-28050-630-0	8	BOLT; BRKT M6X30 FLANGE	
221 (B)	1-09044-074-0	21	BOLT; BRKT M8X85	
224	0-91180-208-0	2	NUT; COVER M8 FLANGE	
225 (C)	8-98017-062-0	2	STUD; COVER M8X15.5 L=33	
230	1-09639-034-0	4	GASKET; SLEEVE,INJECTOR OD=30	
244	9-08150-510-0	1	PIN; HEAD GASKET OD=5 L=10	
262 (A)	8-98243-226-0	1	COVER; CYL HEAD	
263 (A)	0-28050-860-0	1	BOLT; CYL HD M8X60 FLANGE	
263 (B)	0-28650-835-0	3	BOLT; CYL HD M8X35 FLANGE	
267	8-94107-793-0	1	CAP; PIPE,HTR	
268	8-94125-862-1	1	CLIP; CAP ID=20.8	

0-12 CYLINDER BLOCK

(No.1)



(No.2)

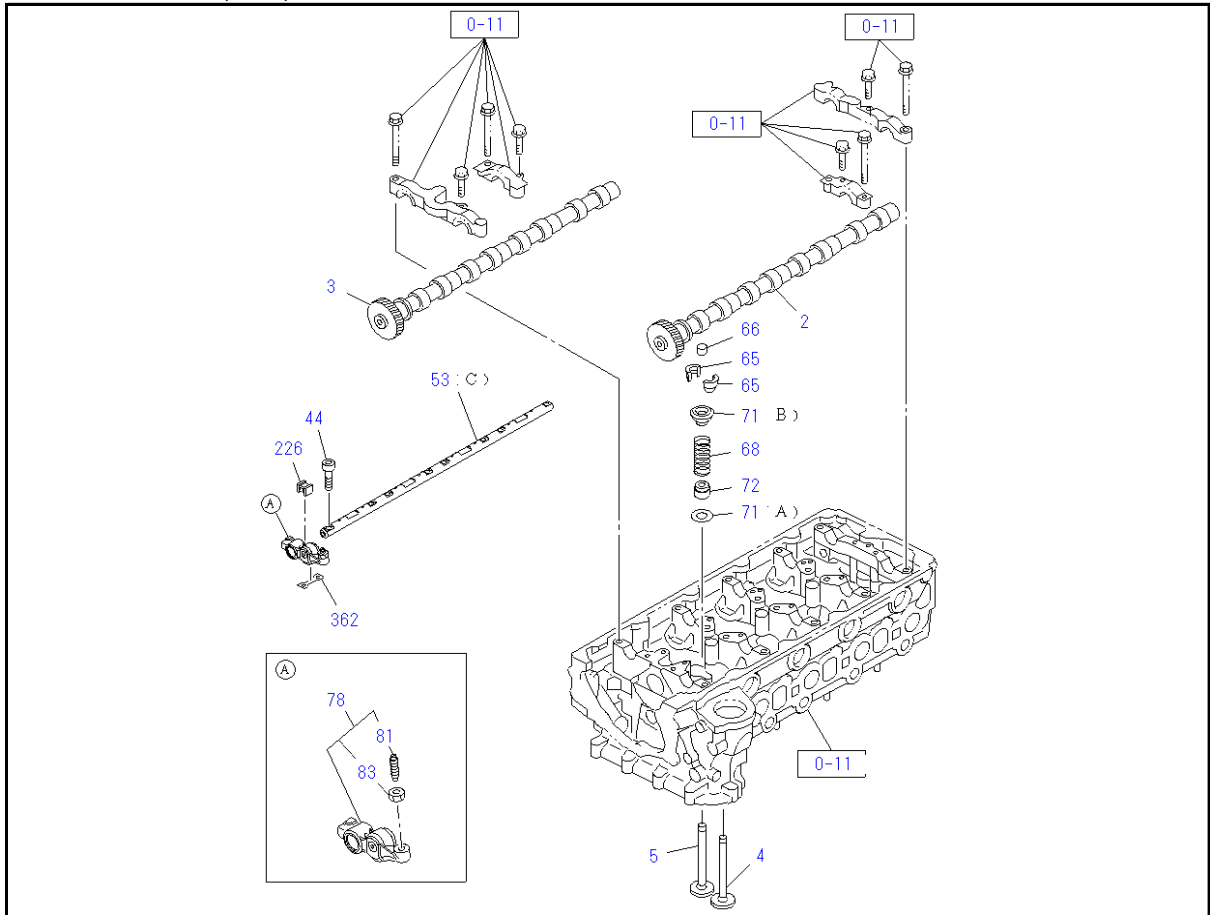


0-12 CYLINDER BLOCK

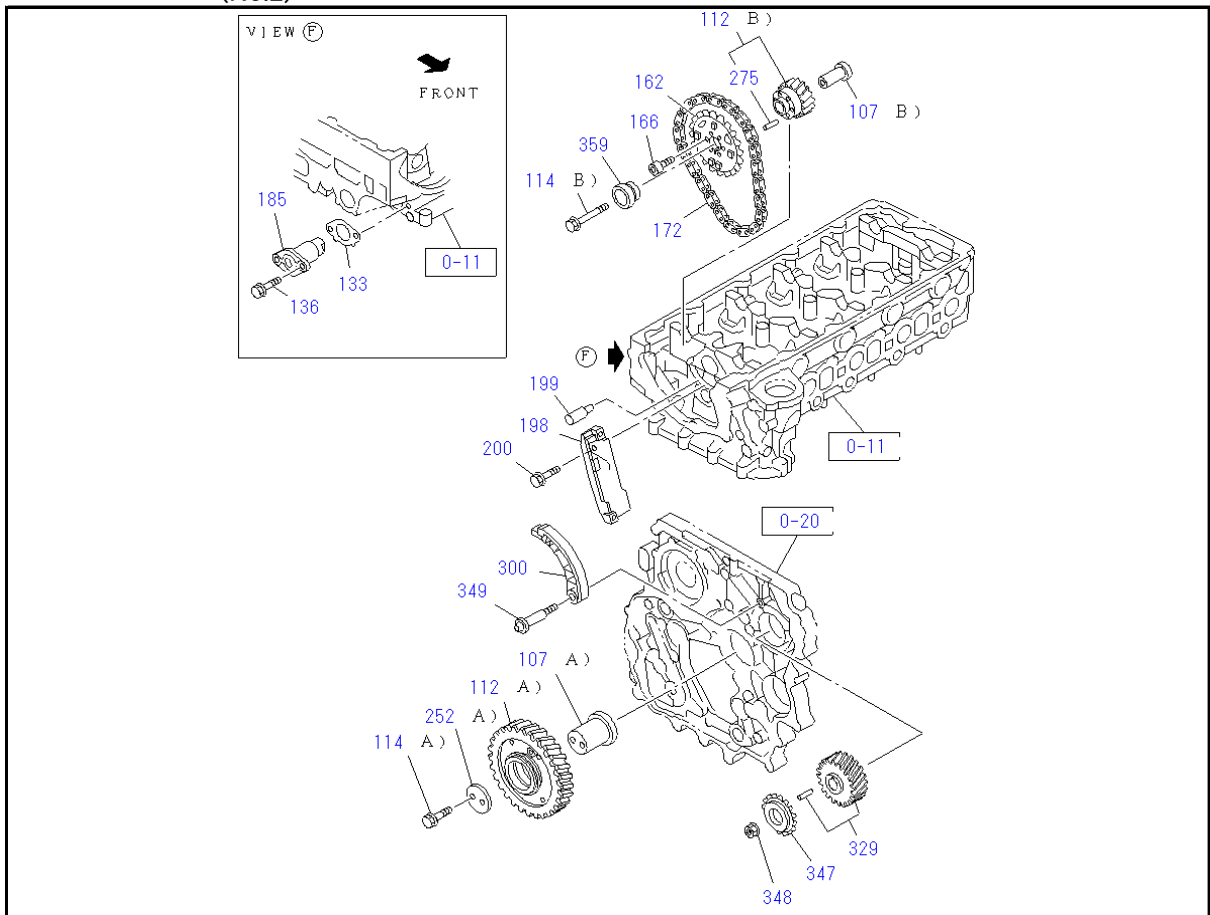
KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98274-662-0	1	BLOCK ASM; CYL	
8	8-94432-642-0	10	BOLT; BRG CAP M14X89 FLANGE	
13	8-94453-344-0	2	DOWEL; C/BL TO HD OD=14	
15	8-97369-552-1 <1-09605-050-0>	4	PLUG; OIL GALLERY PT 1/8	
21 (A)	5-11219-017-0	1	CUP; SEALING,RR OD=38	
21 (B)	5-11219-018-0	1	CUP; SEALING,RR OD=36	
21 (C)	5-09600-013-0	1	CUP; SEALING,RR OD=12.3	
23 (A)	8-97036-550-1	3	CUP; SEALING,C/BL FRT & RR OD=45	
23 (B)	5-11219-008-0	2	CUP; SEALING,C/BL FRT & RR OD=18	
23 (C)	1-09600-012-2 <5-11219-015-0>	4	CUP; SEALING,C/BL FRT & RR OD=32	
23 (D)	5-11219-018-0	2	CUP; SEALING,C/BL FRT & RR OD=36	
38	8-97135-423-0	2	PIN; TIMING GEAR CASE L=20 OD=10	
51	8-94336-292-0	1	GASKET; OIL PRESS WARNING	
52 (A)	8-98019-475-1	1	NIPPLE; OIL PRESS WARNING SW,C/BL	
53	9-09606-535-0	1	BOLT; REAMER M10X43	
61	9-09878-597-0	2	PIN; STRAIGHT	
70	5-11129-006-0	6	CUP; SEALING,FRT & RR OD=16	
83	9-08151-030-0	1	PIN; FLYWHEEL HSG	
103 (A)	8-97316-983-4	1	NIPPLE; OIL FEED	
114	5-13721-028-1	1	NIPPLE; WATER DRAIN	
211	0-28650-825-0	19	BOLT; CRANKCASE M8X25 FLANGE	
213 (A)	9-09571-410-0	1	GASKET; NIPPLE,OIL FEED ID=10.2 OD=16.0	
352	9-09566-109-0	1	GASKET; C/BL TO CRANKCASE	
399	8-97312-108-1	1	SENSOR; CRANKSHAFT POSITION	
400	8-97369-404-0	1	GASKET; CRANKSHAFT POSITION SENSOR	
401	0-28050-616-0	1	BOLT; SENSOR M6X16 FLANGE	

0-14 CAMSHAFT AND VALVE

(No.1)



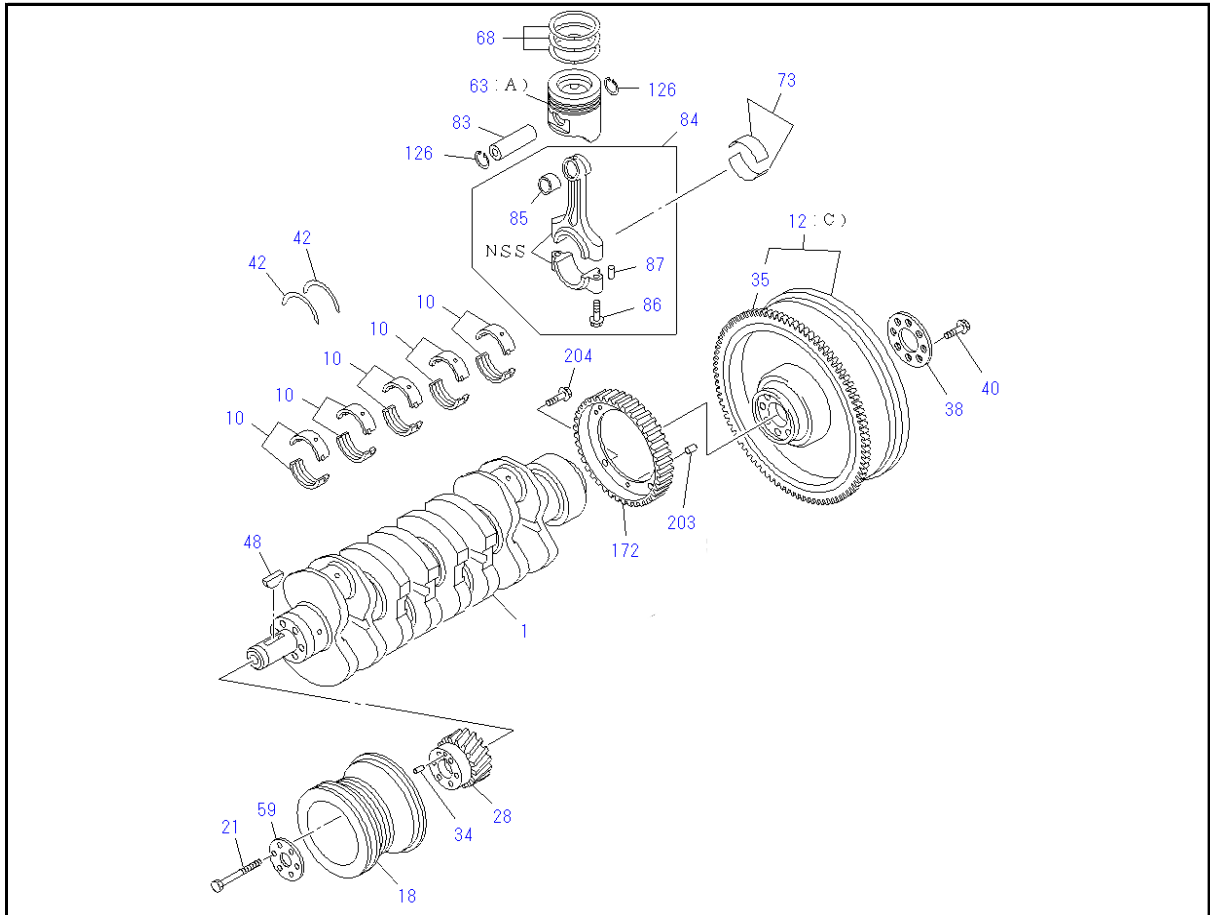
(No.2)



0-14 CAMSHAFT AND VALVE

KEY No.	Part no.	qty	Part description	Engine serial no.
2	8-98257-541-0	1	CAMSHAFT; INL	
3	8-98257-542-0	1	CAMSHAFT; EXH	
4	8-98016-973-0	8	VALVE; INL	
5	8-98016-974-1	8	VALVE; EXH	
44	8-98224-626-0	14	BOLT M6X25 HEX SOCKET	
53 (C)	8-98271-105-0	2	SHAFT; ROCKER ARM	
65	8-94239-501-0	32	COLLAR; SPLIT	
66	8-98147-945-0	16	CAP; VLV STEM END	
68	8-98038-881-0	16	SPRING; VLV	
71 (A)	8-97144-584-0	16	SEAT; SPR LOWER	
71 (B)	8-98017-067-0	16	SEAT; SPR UPPER	
72	8-97328-647-0	16	SEAL; VLV GUIDE	
78	8-98236-198-0	16	ARM; ROCKER	
81	8-98025-497-0	16	SCREW; ADJ. ROCKER ARM	
83	9-09844-574-0	16	NUT; ADJ. SCREW,LK M8	
107 (A)	8-97312-315-2	1	SHAFT; IDLE GEAR	
107 (B)	8-98201-549-0	1	SHAFT; IDLE GEAR	
112 (A)	8-98222-484-0	1	GEAR; IDLE Z=80	
112 (B)	8-97381-520-3	1	GEAR; IDLE Z=35	
114 (A)	0-28061-060-0	2	BOLT; IDLE GEAR M10X60 FLANGE	
114 (B)	8-98176-233-0	1	BOLT; IDLE GEAR M12X75	
133	8-97312-336-0	1	GASKET; CHAIN TENSIONER	
136	0-28050-616-0	2	BOLT; TENSIONER M6X16 FLANGE	
162	8-98193-179-0	1	SPROCKET; IDLE	
166	0-58330-616-0	6	BOLT; SPROCKET TO LAYSHAFT M6X16 HEX SOCKET	
172	8-97945-067-0	1	CHAIN; TIMING,CM/SHF	
185	8-98039-754-1	1	TENSIONER; CHAIN	
198	8-97945-069-0	1	GUIDE; TIMING CHAIN	
199	8-97356-061-1	1	JET; OIL,TIMING CHAIN	
200	1-09070-120-1	2	BOLT; CHAIN GUIDE,LWR M8X20	
226	8-98204-889-0	8	SPRING; CMPR,ROCKER ARM	
252 (A)	8-98016-892-0	1	FLANGE; IDLE SHAFT	
275	9-08160-510-0	1	PIN; IDLE GEAR OD=5 L=10	
300	8-97945-070-0	1	LEVER; TENSION,TIMING CHAIN	
329	8-98017-539-1	1	GEAR; INJ PUMP Z=44	
347	8-97312-330-1	1	SPROCKET; I/PUMP	
348	8-97312-423-2	1	NUT; SPROCKET M14 FLANGE	
349	8-97312-328-0	1	PIVOT; CHAIN LEVER	
359	8-98201-554-0	1	SLEEVE; GEAR	
362	8-98225-381-1	6	PLATE	

0-15 CRANKSHAFT,PISTON AND FLYWHEEL

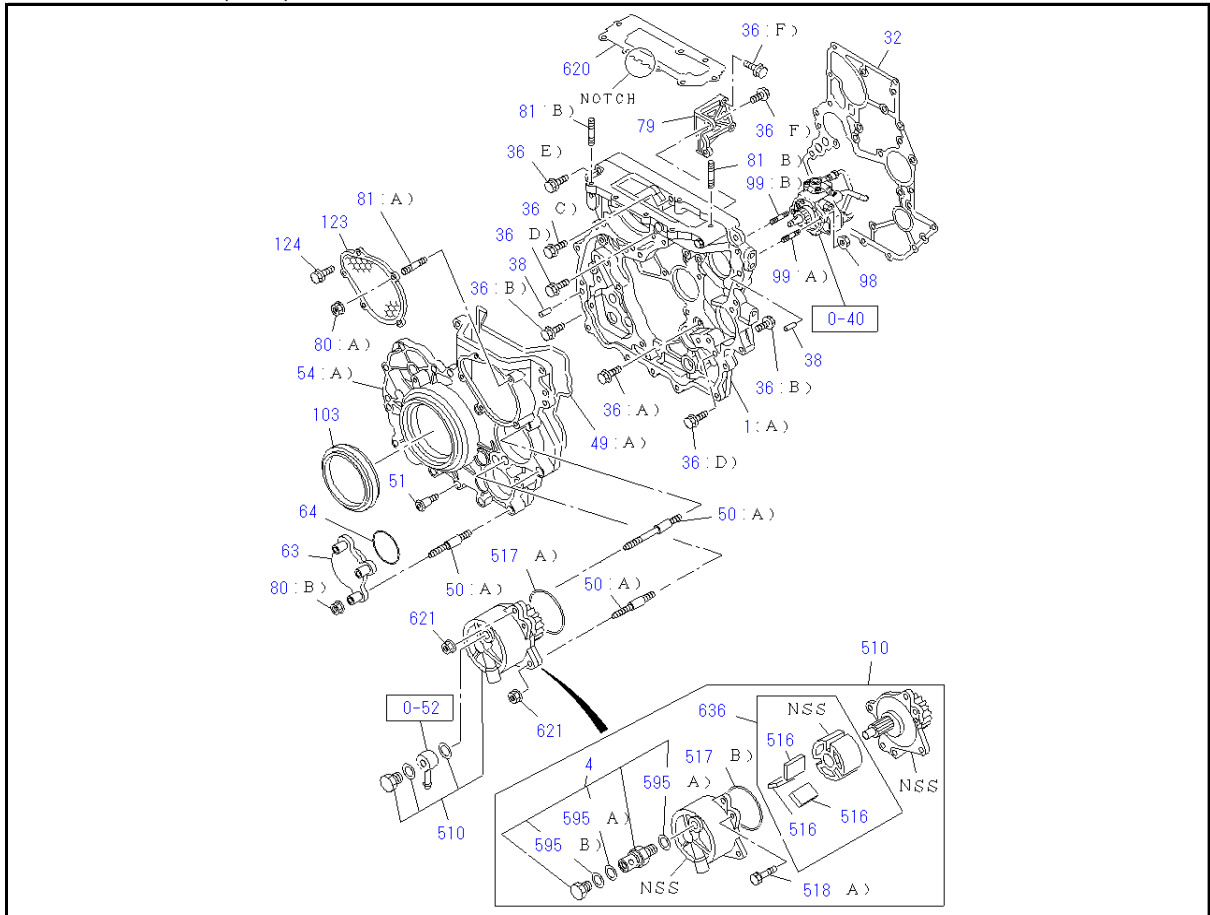


KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98273-590-0	1	CRANKSHAFT	
10	8-97387-964-0	5	METAL SET; CRANKSHAFT GRADE=1	
10	8-97387-965-0	5	METAL SET; CRANKSHAFT GRADE=2	
10	8-97387-966-0	5	METAL SET; CRANKSHAFT GRADE=3	
10	8-97387-967-0	5	METAL SET; CRANKSHAFT GRADE=4	
10	8-97387-968-0	5	METAL SET; CRANKSHAFT GRADE=5	
12 (C)	8-98084-309-0	1	FLYWHEEL	
18	8-98183-453-1	1	PULLEY; CR/SHF OD=176	
21	8-98165-234-1	6	BOLT; PULLEY FIX M10X90	
28	8-98154-945-1	1	GEAR; CR/SHF Z=44	
34	9-08160-510-0	1	PIN; GEAR SETTING OD=5 L=10	
35	9-12333-606-1	1	GEAR; RING Z=122	
38	8-94142-156-1	1	WASHER; FLYWHEEL	
40	8-94418-050-0	8	BOLT; FLYWHEEL M13X45	
42	8-98040-704-0	2	WASHER; THRUST,CR/SHF	
48	8-94201-641-0	1	KEY; WOODRUFF,CR/SHF	
59	8-98165-125-0	1	WASHER; CR/SHF PULLEY	
63 (A)	8-98232-356-0	4	PISTON GRADE=A	

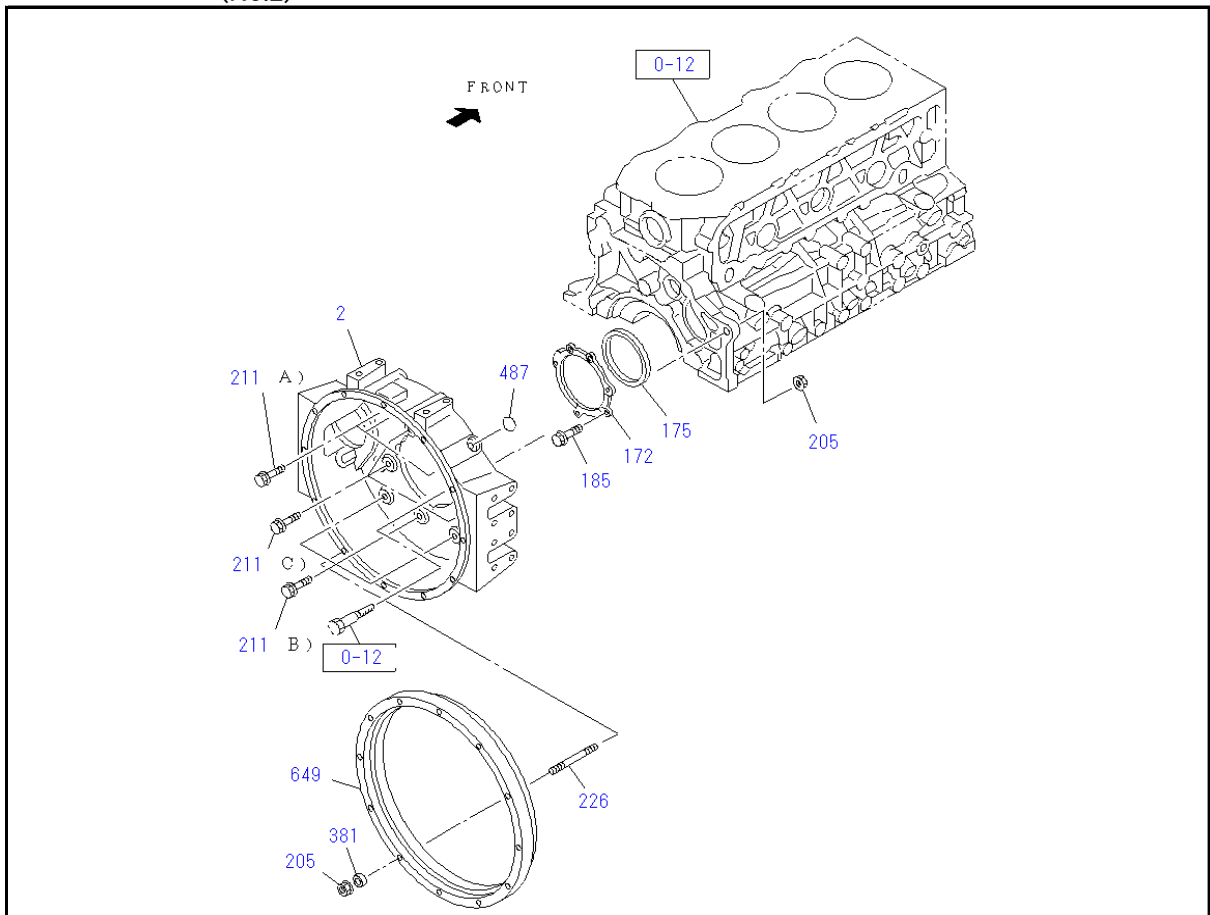
KEY No.	Part no.	qty	Part description	Engine serial no.
63 (A)	8-98232-357-0	4	PISTON GRADE=B	
63 (A)	8-98232-358-0	4	PISTON GRADE=C	
68	8-98057-222-0	4	RING SET; PISTON,STANDARD	
73	8-97358-234-0	4	METAL SET; CONN ROD,STANDARD	
83	8-98015-193-1	4	PIN; PISTON	
84	8-97388-921-2	4	ROD ASM; CONN	
85	8-97383-066-0	4	BUSHING; CONNROD AFTER PRESS FITTING	
86	8-98048-538-0	8	BOLT; CONNROD M11X44.5	
87	9-08160-508-0	8	PIN; CONNROD BIG END OD=5 L=8	
126	8-94460-687-0	8	RING; SNAP,PISTON PIN	
172	8-98163-693-0	1	ROTOR; CRANK SENSOR	
203	9-08160-508-0	1	PIN; ROTOR OD=5 L=8	
204	8-98038-343-0	3	BOLT; ROTOR M6X10	

0-20 TIMING GEAR CASE AND FLYWHEEL HOUSING

(No.1)



(No.2)

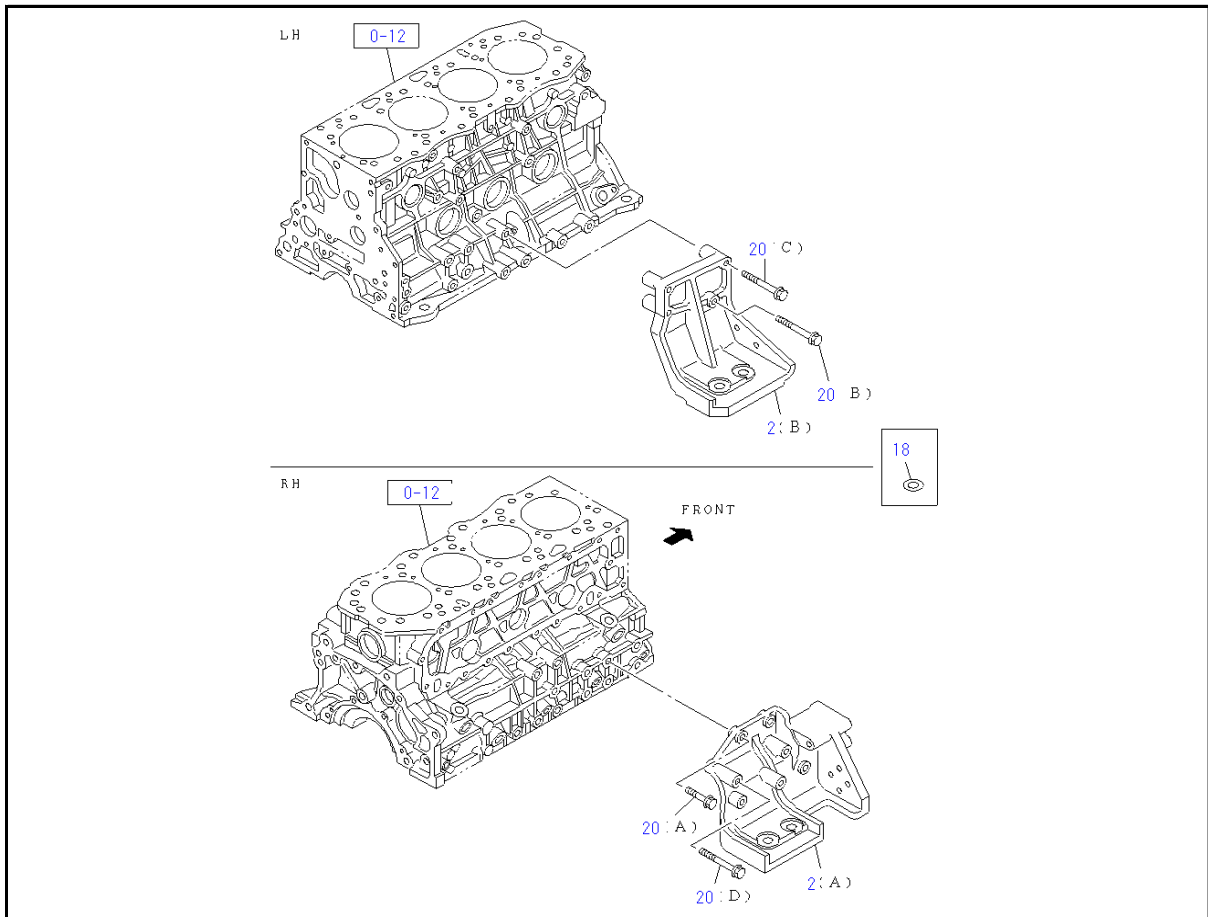


0-20 TIMING GEAR CASE AND FLYWHEEL HOUSING

KEY No.	Part no.	qty	Part description	Engine serial no.
1 (A)	8-97945-261-2	1	CASE; TIMING GEAR	
2	8-98084-394-0	1	HOUSING; FLYWHEEL	
4	8-98049-521-0	1	VALVE ASM; CHECK	
32	8-97312-221-2	1	GASKET; GEAR CASE TO C/BL	
36 (A)	0-28050-816-0	1	BOLT; GEAR CASE M8X16 FLANGE	
36 (B)	0-28050-820-0	16	BOLT; GEAR CASE M8X20 FLANGE	
36 (C)	0-28050-835-0	1	BOLT; GEAR CASE M8X35 FLANGE	
36 (D)	0-28050-845-0	2	BOLT; GEAR CASE M8X45 FLANGE	
36 (E)	0-28050-860-0	1	BOLT; GEAR CASE M8X60 FLANGE	
36 (F)	0-28650-830-0	3	BOLT; GEAR CASE M8X30 FLANGE	
38	8-97135-423-0	2	PIN; GEAR CASE COVER L=20 OD=10	
49 (A)	8-97945-298-0	1	GASKET; GEAR CASE TO COVER	
50 (A)	8-97354-808-2	6	STUD	
51	8-97354-697-1	14	BOLT; GEAR CASE COVER	
54 (A)	8-98253-700-1	1	COVER; GEAR CASE	
63	8-97367-336-2	1	COVER; P/S	
64	8-97109-679-0	1	GASKET; COVER,P/S	
79	8-97370-390-2	1	BRACKET; GEAR CASE COVER	
80 (A)	0-91180-206-0	2	NUT; COVER M6 FLANGE	
80 (B)	0-91180-208-0	3	NUT; COVER M8 FLANGE	
81 (A)	0-41010-616-0	2	STUD; GEAR CASE COVER FIX M6X16 L=25	
81 (B)	0-49140-830-0	2	STUD; GEAR CASE COVER FIX M8X30 L=48	
98	0-91180-208-0	2	NUT; STUD,INJ PUMP M8 FLANGE	
99 (A)	8-98336-983-0	1	STUD; INJ PUMP M8X30 L=41	
99 (B)	8-97369-450-0	1	STUD; INJ PUMP M8X45 L=56	
103	8-98158-110-0	1	SEAL; OIL,CR/SHF,FRT	
123	8-97371-720-1	1	COVER; TIMING,LWR	
124	0-28050-616-0	3	BOLT; TIMING COVER M6X16 FLANGE	
172	8-97379-826-0	1	RETAINER; CR/SHF	
175	8-97071-561-1	1	SEAL; OIL,CR/SHF,RR	
185	0-28650-825-0	5	BOLT; RET TO C/BL M8X25 FLANGE	
205	0-91180-110-0	3	NUT; HSG M10 FLANGE	
211 (A)	0-28651-030-0	3	BOLT; HSG M10X30 FLANGE	
211 (B)	0-28751-235-0	4	BOLT; HSG M12X35 FLANGE	
211 (C)	5-09000-227-0	3	BOLT; HSG M12X25	
226	0-44011-050-0	2	STUD; HSG M10X50 L=65	
381	8-94369-173-0	2	SPACER; FLYWHEEL HSG	
487	8-97220-740-0	1	COVER; HOLE	

KEY No.	Part no.	qty	Part description	Engine serial no.
510	8-98251-764-0	1	PUMP ASM; VACUUM	
516	8-98051-275-0	3	VANE; VAC PUMP	
517 (A)	9-09566-271-0	1	GASKET; VAC PUMP	
517 (B)	8-98251-769-0	1	GASKET; VAC PUMP	
518 (A)	8-98049-523-0	3	BOLT; VAC PUMP M6X16 W/WASHER	
595 (A)	8-98018-519-0	2	GASKET; VLV ID=18 OD=24	
595 (B)	8-98018-518-0	1	GASKET; VLV ID=12 OD=24	
620	8-97328-828-2	1	GASKET; GEAR CASE T=1.40 1-NOTCH	
620	8-97331-631-2	1	GASKET; GEAR CASE T=1.45 2-NOTCH	
620	8-97331-632-2	1	GASKET; GEAR CASE T=1.50 3-NOTCH	
621	0-91180-208-0	3	NUT; VAC PUMP M8 FLANGE	
636	8-98049-520-0	1	ROTOR & VANE ASM; VAC PUMP	
649	8-98084-269-1	1	ADAPTER; FLYWHEEL HSG	

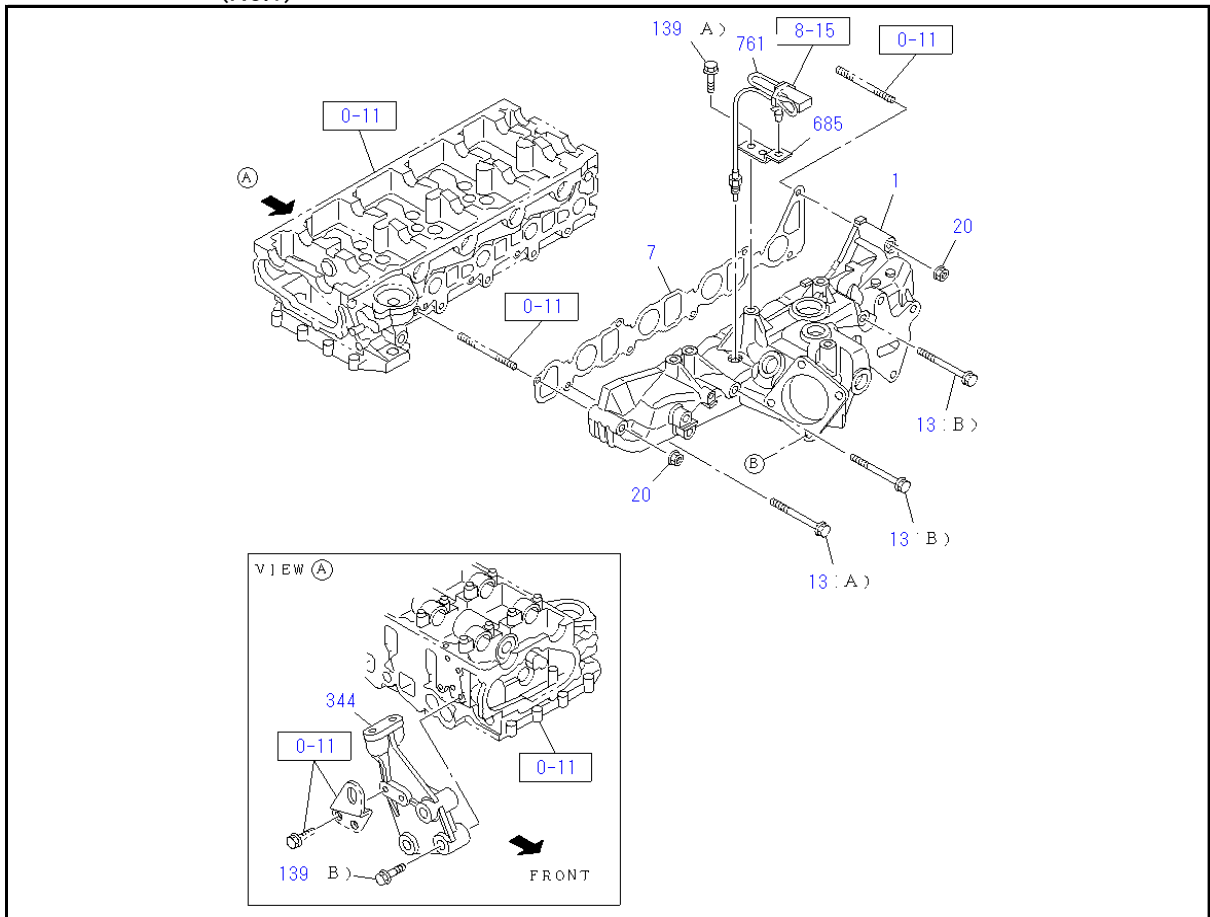
0-22 ENGINE MOUNTING



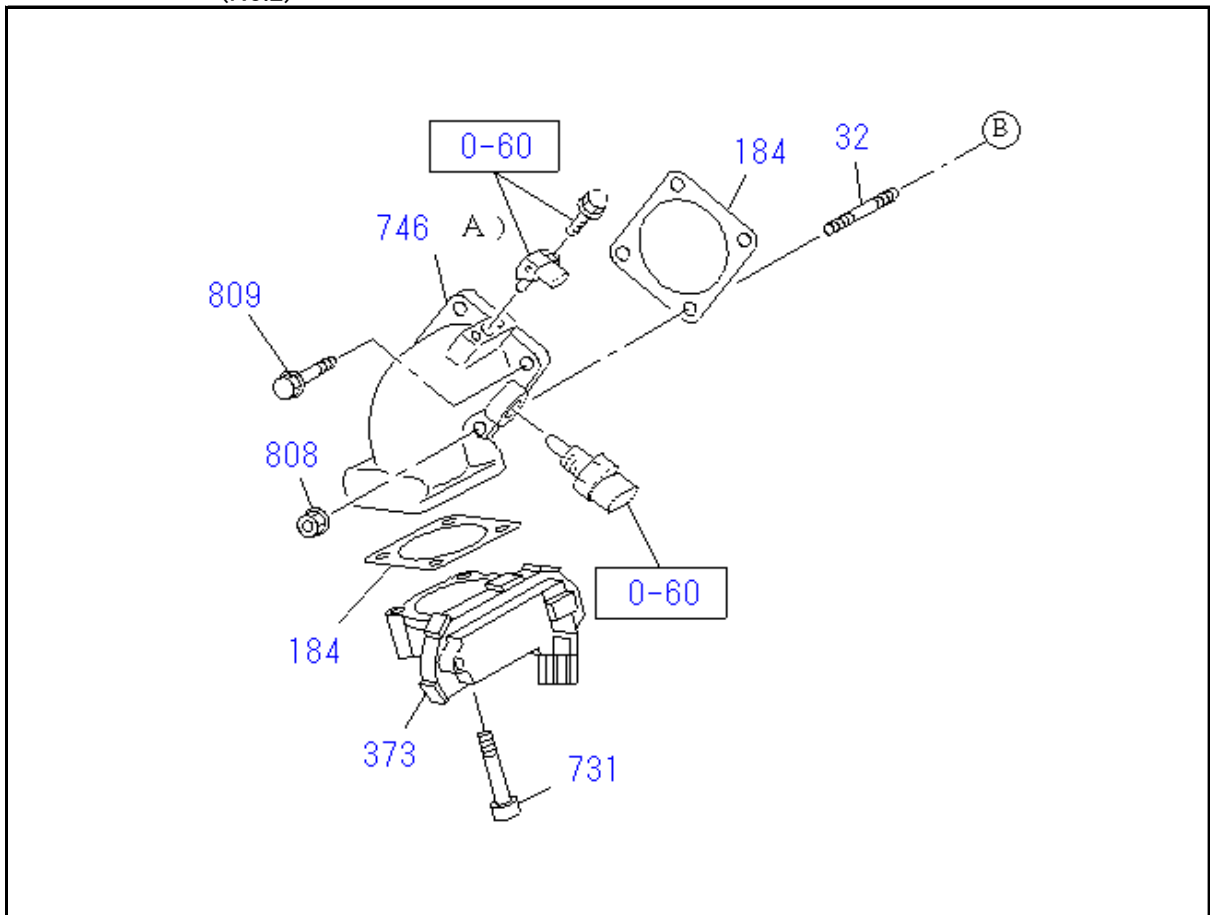
KEY No.	Part no.	qty	Part description	Engine serial no.
2 (A)	8-98084-266-0	1	FOOT; ENG R	
2 (B)	8-98038-782-0	1	FOOT; ENG L	
18	0-91614-712-0	2	WASHER; PL,ENG FOOT ID=12.5 OD=32	
20 (A)	0-28051-030-0	2	BOLT; ENG FOOT R M10X30 FLANGE	
20 (B)	0-28051-045-0	1	BOLT; ENG FOOT L M10X45 FLANGE	
20 (C)	0-28051-060-0	3	BOLT; ENG FOOT L M10X60 FLANGE	
20 (D)	0-28051-070-0	2	BOLT; ENG FOOT R M10X70 FLANGE	

0-25 INLET MANIFOLD

(No.1)



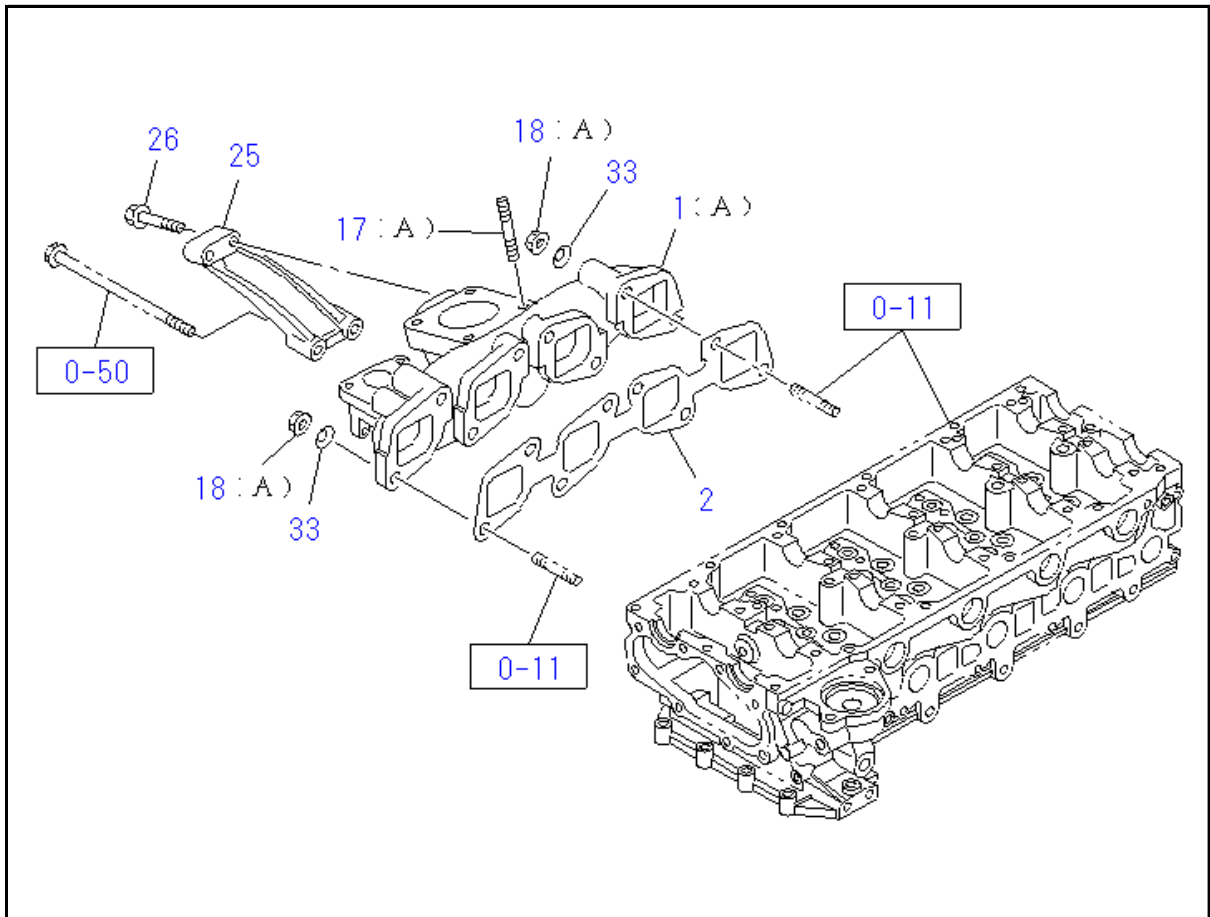
(No.2)



0-25 INLET MANIFOLD

KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98281-779-0	1	MANIFOLD; INL	
7	8-98212-999-0	1	GASKET; INL MANIF TO HD	
13 (A)	0-28050-870-0	4	BOLT; INL MANIF M8X70 FLANGE	
13 (B)	0-28055-811-0	2	BOLT; INL MANIF M8X110 FLANGE	
20	0-91180-208-0	2	NUT; INL MANIF M8 FLANGE	
32	0-41010-620-0	2	STUD; INL PIPE M6X20 L=28	
139 (A)	0-28050-816-0	1	BOLT; BRACKET FIX M8X16 FLANGE	
139 (B)	8-98234-152-0	2	BOLT; BRACKET FIX M10X53 FLANGE	
184	8-98096-968-0	2	GASKET; T/V	
344	8-98255-562-0	1	BRACKET; INLET PIPE	
373	8-98100-891-4	1	THROTTLE ASM; INT	
685	1-82699-588-0	1	BRACKET; HARNESS	
731	0-58330-650-0	4	BOLT; THROTTLE ASM M6X50 HEX SOCKET	
746 (A)	8-98171-031-0	1	ADAPTER	
761	8-97381-182-0	1	SENSOR; MANIF	
808	0-91110-506-0	2	NUT; ADAPTER	
809	0-28650-630-0	2	BOLT; ADAPTER M6X30 FLANGE	

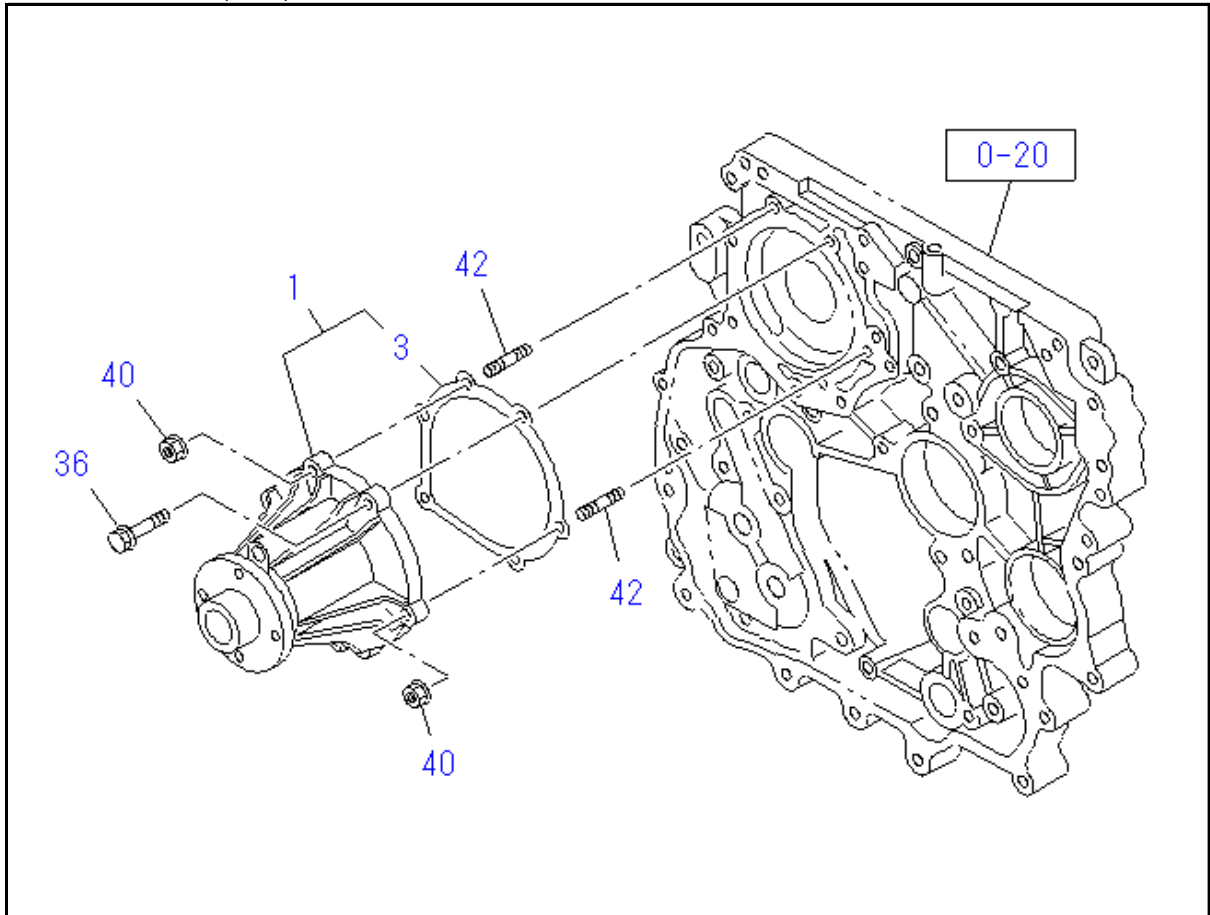
0-27 EXHAUST MANIFOLD



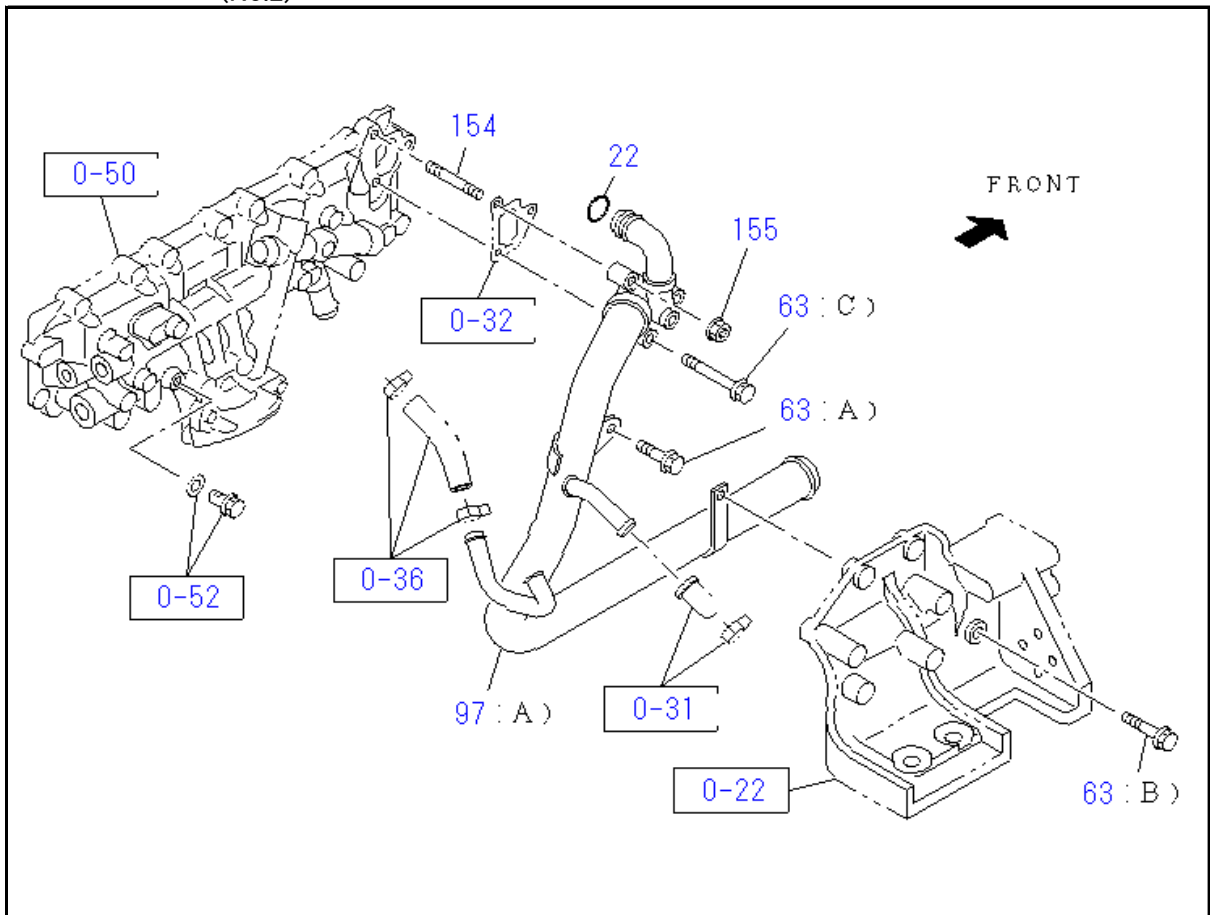
KEY No.	Part no.	qty	Part description	Engine serial no.
1 (A)	8-98134-060-1	1	MANIFOLD; EXHAUST	
2	8-98215-752-0	1	GASKET; EXH MANIF TO HD	
17 (A)	8-97378-062-0	4	STUD; MANIF TO TURBOCHARGER M8X25 L=36	
18 (A)	8-97381-617-0	8	NUT; EXH MANIF M10 FLANGE	
25	8-98188-741-0	1	BRACKET; EXH MANIF	
26	8-98065-481-0	2	BOLT; BRACKET TO EXH MANIF M8X43 HEX SOCKET	
33	5-09500-013-0	8	WASHER; EXH MANIF ID=10.5	

0-30 WATER PUMP AND CORROSION RESISTOR

(No.1)



(No.2)

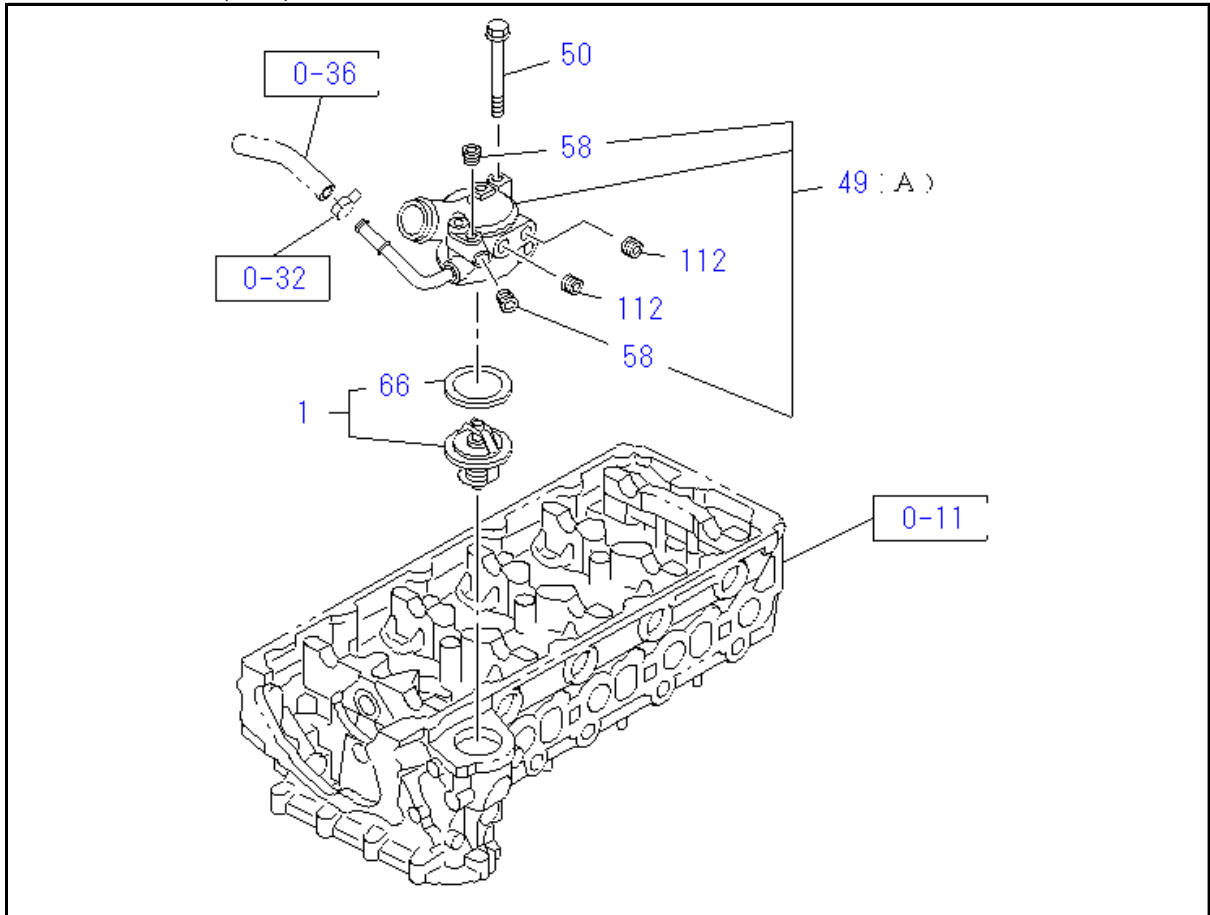


0-30 WATER PUMP AND CORROSION RESISTOR

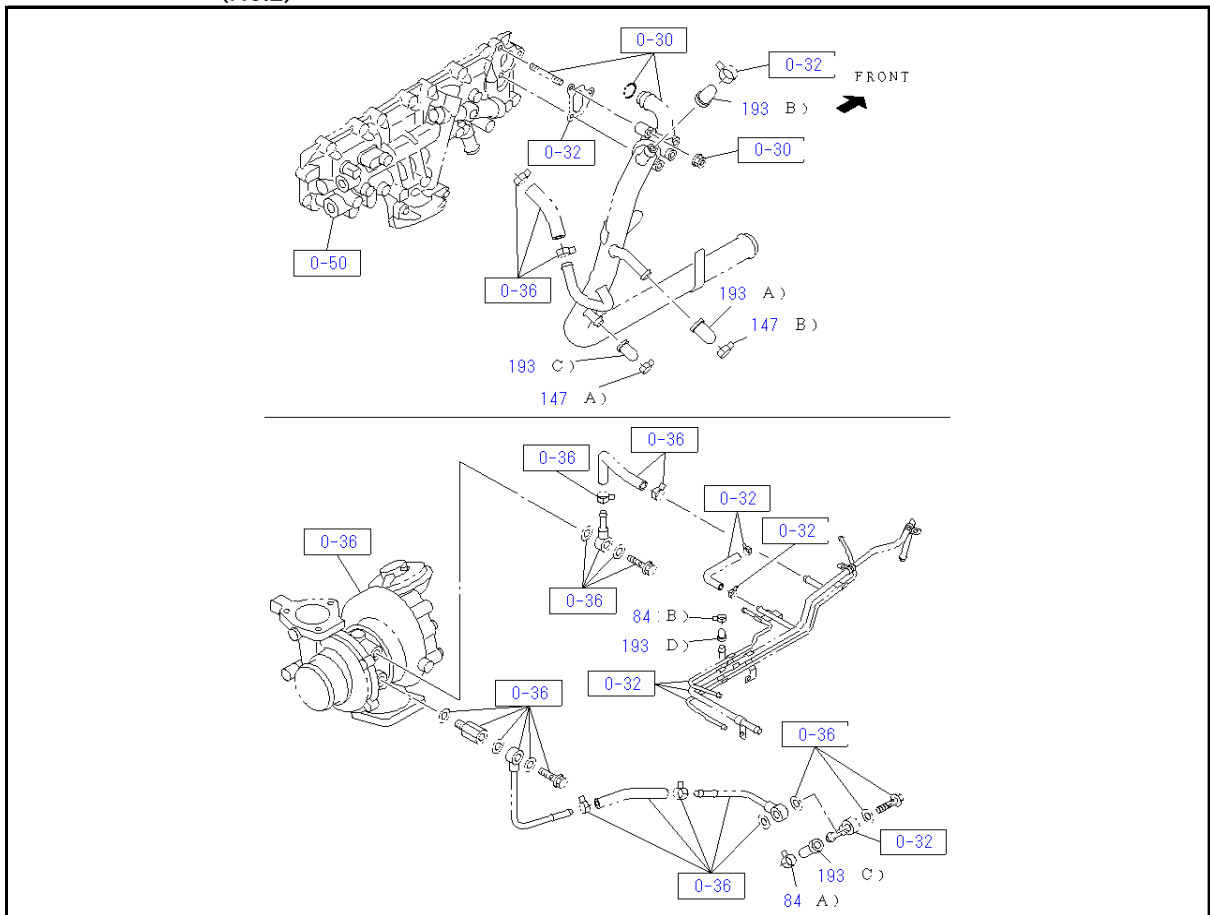
KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98047-689-4	1	PUMP ASM; WATER,W/GASKET	
3	8-97312-156-0	1	GASKET; PUMP TO C/BL	
22	0-95690-226-0	1	GASKET ID=26.2	
36	0-28050-860-0	4	BOLT; WATER PUMP TO C/BL M8X60 FLANGE	
40	0-91180-208-0	2	NUT; WATER PUMP M8 FLANGE	
42	0-41010-830-0	2	STUD; WATER PUMP M8X30 L=41	
63 (A)	0-28050-816-0	1	BOLT; INL PIPE M8X16 FLANGE	
63 (B)	0-28650-830-0	1	BOLT; INL PIPE M8X30 FLANGE	
63 (C)	0-28050-870-0	1	BOLT; INL PIPE M8X70 FLANGE	
97 (A)	8-98255-375-0	1	PIPE; WATER	
154	0-41010-835-0	2	STUD; PIPE FIX M8X35 L=47	
155	0-91180-208-0	2	NUT; PIPE M8 FLANGE	

0-31 THERMOSTAT AND HOUSING

(No.1)



(No.2)

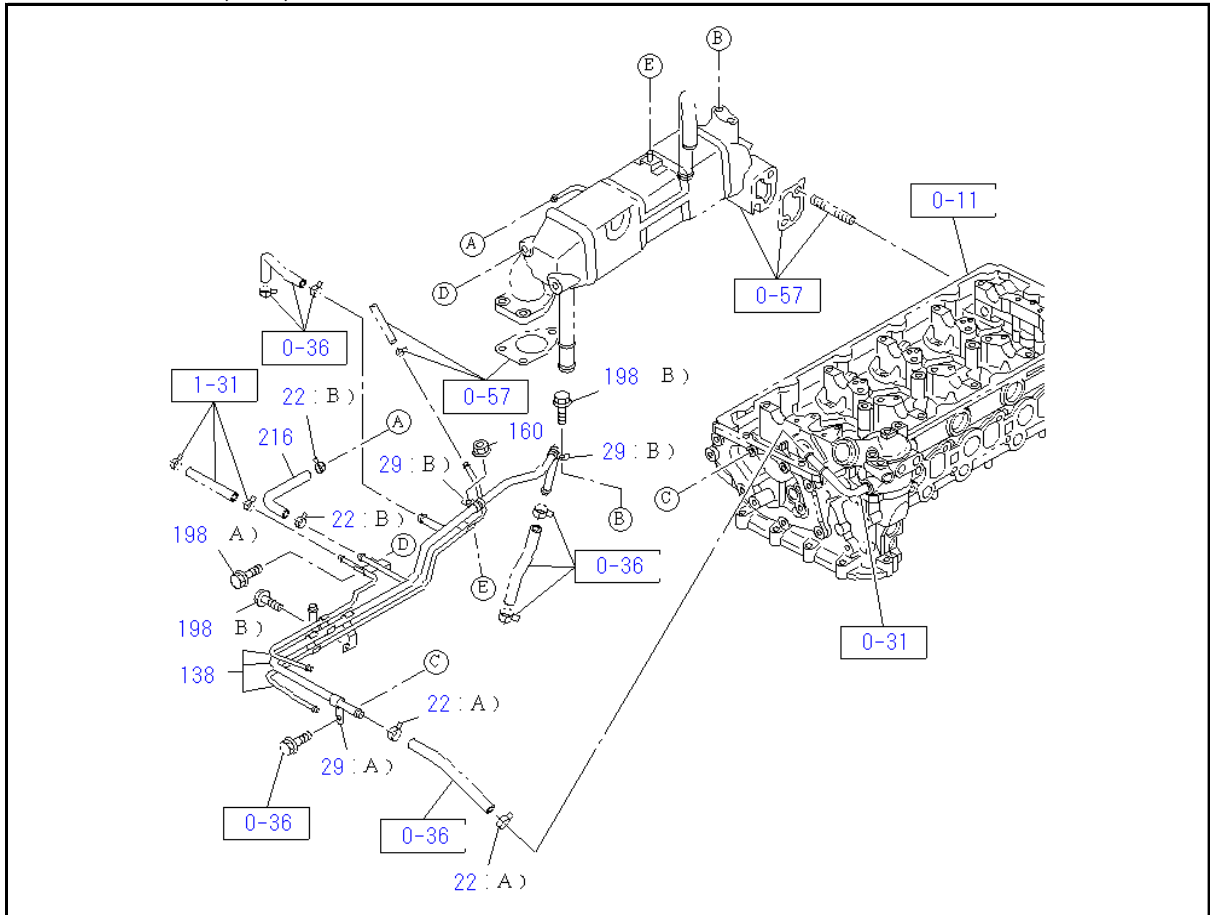


0-31 THERMOSTAT AND HOUSING

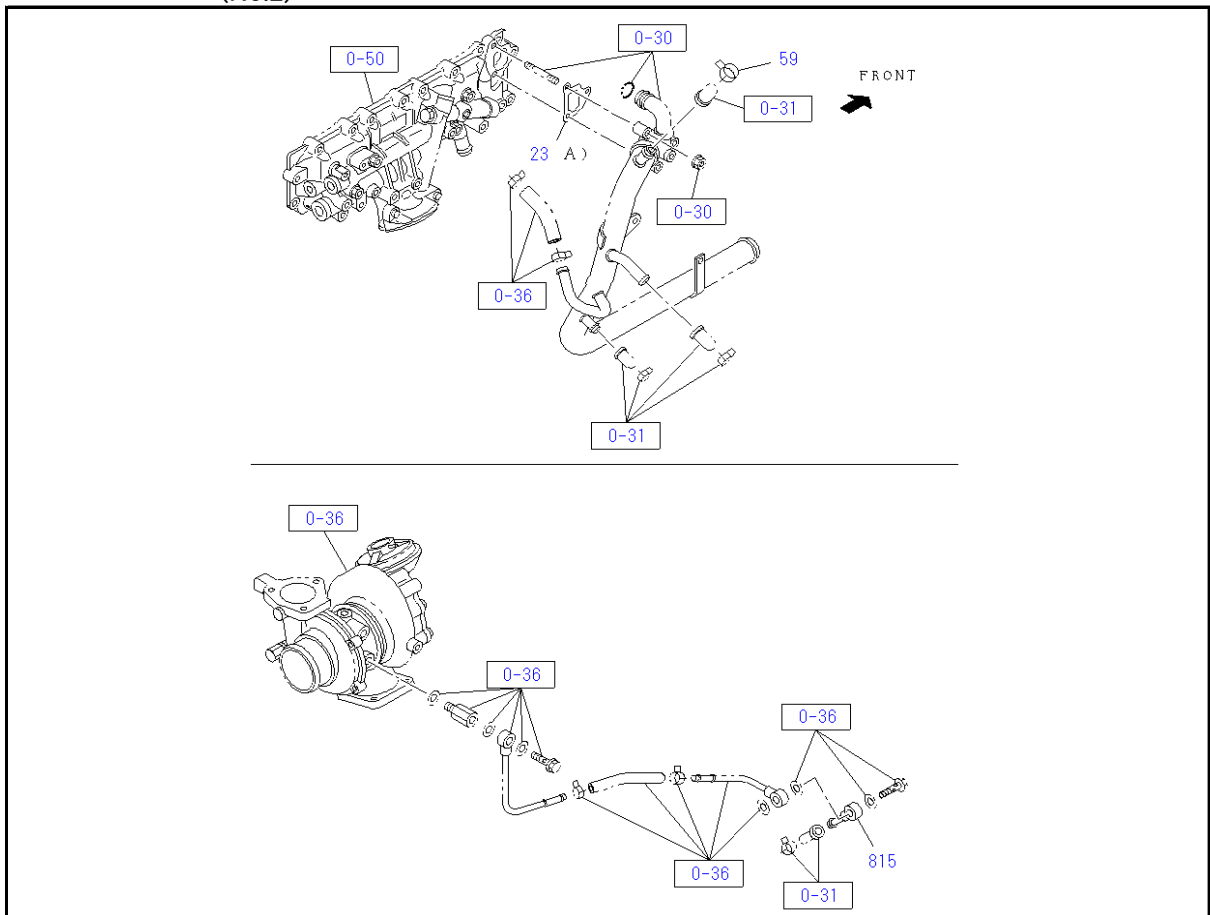
KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98227-722-0	1	THERMOSTAT 82 CELSIUS ORANGE	
49 (A)	8-98257-492-0	1	PIPE; WATER OUTLET	
50	0-28050-880-0	2	BOLT; OUTLET PIPE M8X80 FLANGE	
58	8-97369-552-1	2	PLUG PT 1/8	
66	8-98114-587-0	1	GASKET; THERMOSTAT	
84 (A)	8-94122-679-0	1	CLIP; WATER PIPE ID=17.1	
84 (B)	8-94448-727-0	1	CLIP; WATER PIPE ID=14.8	
112	5-09605-005-0	2	PLUG PT 3/8	
147 (B)	8-94125-862-1	1	CLIP; RUBBER CAP ID=20.8	
147 (A)	8-94122-679-0	1	CLIP; RUBBER CAP ID=17.1	
193 (A)	8-94107-793-0	1	CAP; RUBBER	
193 (B)	8-94107-678-0	1	CAP; RUBBER	
193 (C)	8-94173-731-0 <8-94249-289-0>	2	CAP; RUBBER ID=12 L=30	
193 (D)	8-94366-898-1	1	CAP; RUBBER	

0-32 WATER PIPING; ENGINE

(No.1)



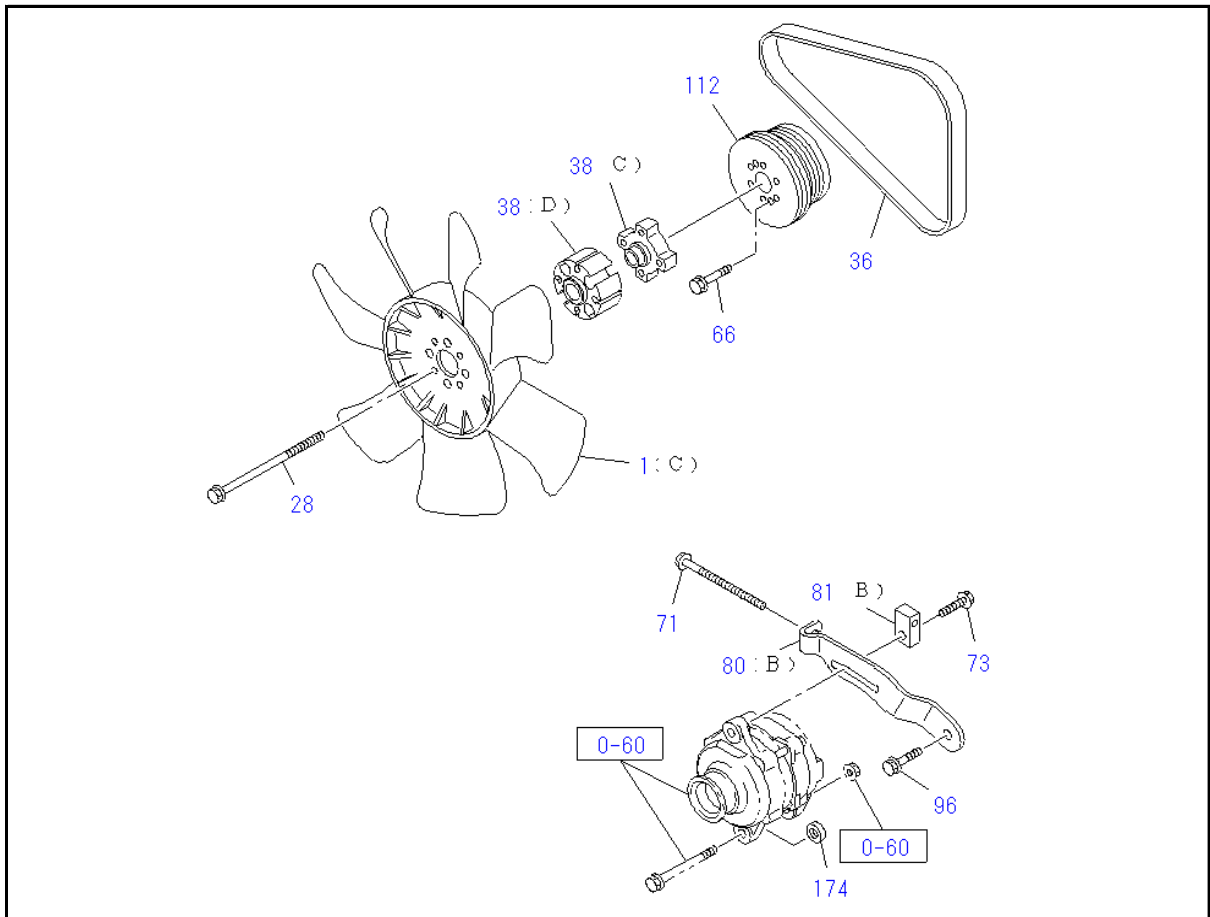
(No.2)



0-32 WATER PIPING; ENGINE

KEY No.	Part no.	qty	Part description	Engine serial no.
22 (A)	8-94221-519-0 <8-94367-943-0>	2	CLIP; WATER HOSE ID=13	
22 (B)	8-97375-639-0	2	CLIP; WATER HOSE ID=11	
23 (A)	8-98075-127-0	1	GASKET; SUCTION PIPE TO BLOCK	
29 (A)	0-95235-052-0	1	CLIP; PIPE ID=11 L=28	
29 (B)	8-98120-917-0	2	CLIP; PIPE ID=12 L=20	
59	8-97010-605-0	1	CLIP; HARNESS,WATER OUTLET PIPE ID=24	
138	8-98255-561-0	1	PIPE; WATER	
160	0-91180-206-0	1	NUT; WATER PIPE	
198 (A)	8-97378-075-0	1	BOLT; PIPE M8X14 FLANGE	
198 (B)	0-28050-612-0	2	BOLT; PIPE M6X12 FLANGE	
216	8-98171-133-0	1	HOSE; WATER	
815	5-13311-126-0	1	PIPE; WATER,DEF TANK FEED	

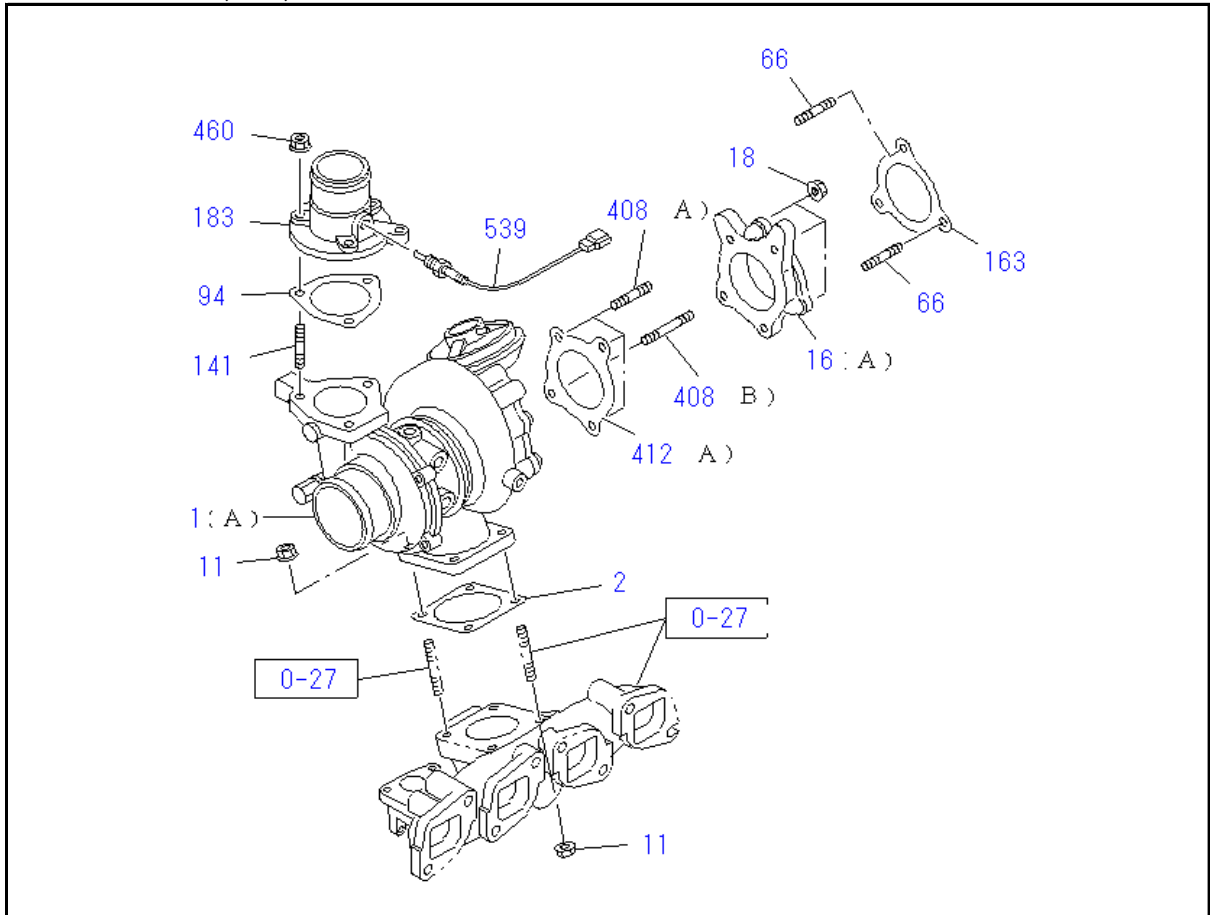
0-33 FAN AND FAN BELT



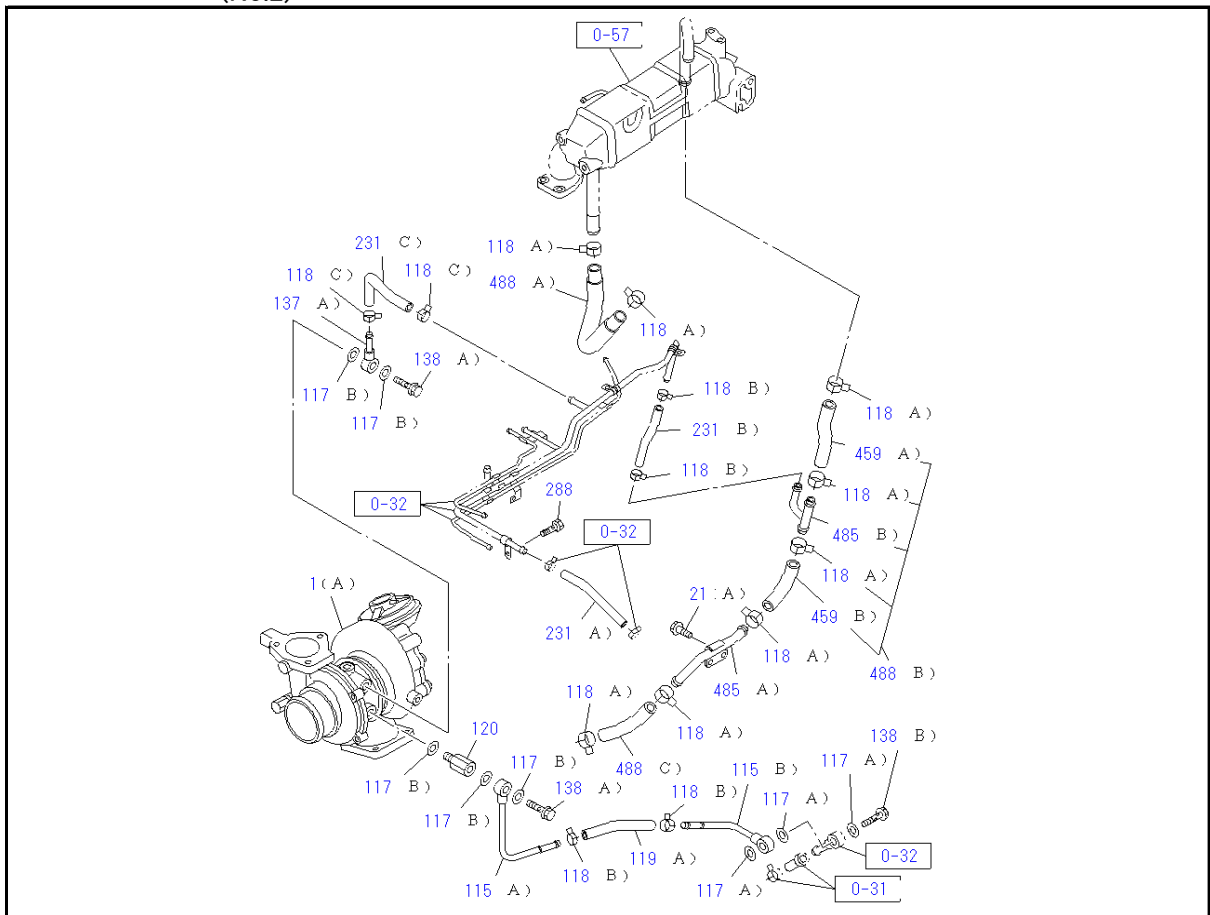
KEY No.	Part no.	qty	Part description	Engine serial no.
1 (C)	8-94483-897-1	1	FAN; COOLING 7 BLADE OD=550	
28	0-28050-860-0	4	BOLT; COOLING FAN M8X60 FLANGE	
36	8-97362-926-0	1	BELT; COOLING FAN L=1006	
38 (C)	8-98038-883-0	1	SPACER; FAN H=20 OD=80	
38 (D)	1-13642-075-0	1	SPACER; FAN H=20 OD=78	
66	0-20800-612-0	2	BOLT; PULLEY M6X12	
71	8-97172-720-1	1	BOLT; ADJ PLATE,GEN	
73	0-28650-835-0	1	BOLT; GEN TO ADJ PLATE M8X35 FLANGE	
80 (B)	8-98084-267-0	1	PLATE; ADJ	
81 (B)	8-98093-184-0	1	PIECE; SLIDING	
96	0-28650-820-0	1	BOLT; ADJ PLATE M8X20 FLANGE	
112	8-98038-872-0	1	PULLEY; FAN CENTER OD=152	
174	9-09851-479-0	1	SPACER; ADJ PLATE	

0-36 TURBOCHARGER SYSTEM

(No.1)



(No.2)

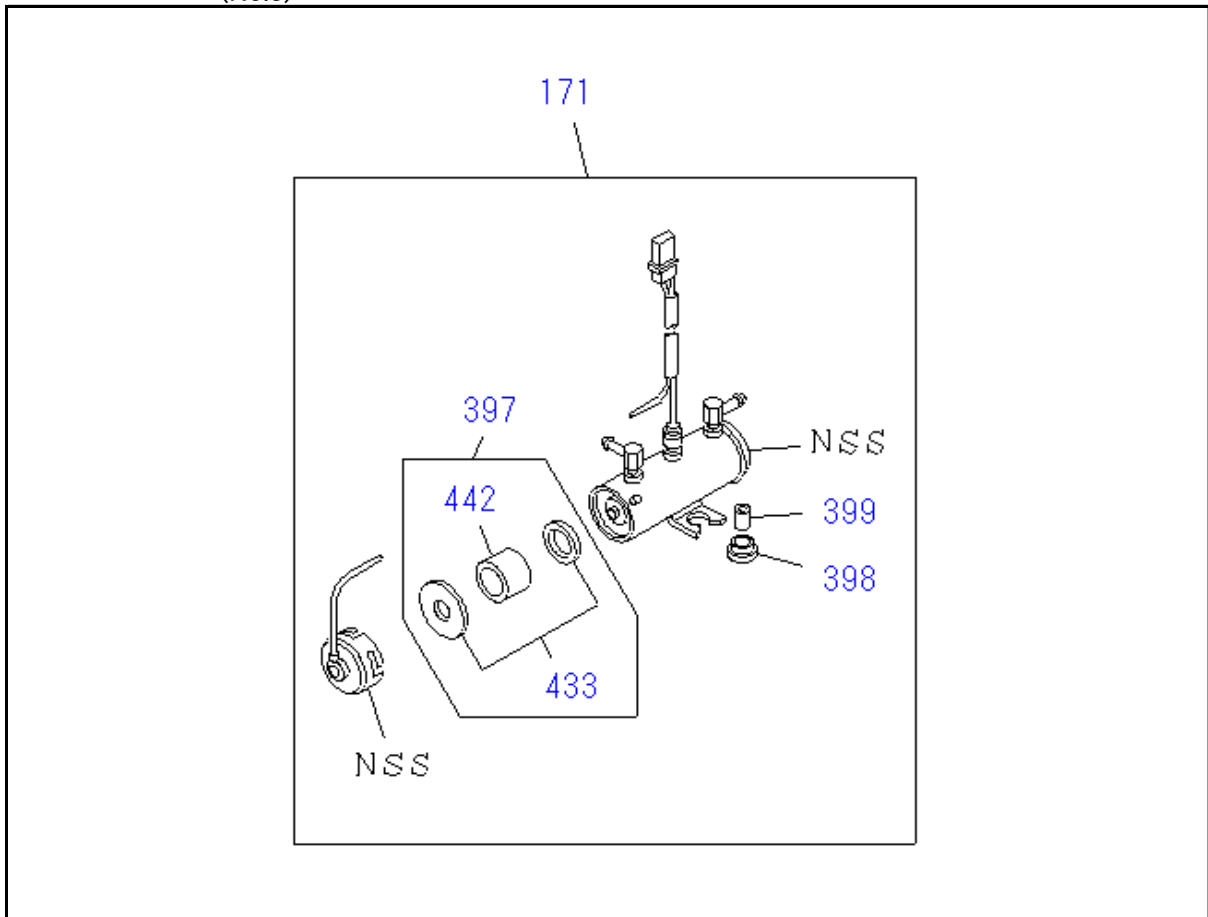


0-36 TURBOCHARGER SYSTEM

KEY No.	Part no.	qty	Part description	Engine serial no.
1 (A)	8-98368-661-0	1	TURBOCHARGER ASM	
2	8-94433-605-0	1	GASKET; TURBOCHARGER TO EXH	
11	8-97161-607-0	4	NUT; TURBOCHARGER M8 FLANGE	
16 (A)	8-98133-854-0	1	ADAPTER; EXH PIPE	
18	8-97161-607-0	3	NUT; EXH PIPE M8 FLANGE	
21 (A)	0-28050-616-0	2	BOLT; PIPE M6X16 FLANGE	
66	9-04130-825-0	2	STUD; EXH PIPE M8X25 L=36	
94	8-97202-328-1	1	GASKET; INL PIPE	
115 (A)	8-98135-331-0	1	PIPE; WATER,TURBOCHARGER OUT	
115 (B)	8-98184-428-0	1	PIPE; WATER,TURBOCHARGER OUT	
117 (A)	9-09571-414-0	3	GASKET; WATER PIPE ID=14.2 OD=20.0	
117 (B)	9-09920-873-1	5	GASKET; WATER PIPE ID=12.2	
118 (A)	8-94125-862-1	8	CLIP; WATER HOSE ID=20.8	
118 (B)	8-94221-519-0 <8-94367-943-0>	2	CLIP; WATER HOSE ID=12.8	
118 (C)	8-97375-636-0	2	CLIP; WATER HOSE ID=14.2	
119 (A)	0-03559-300-0	1	HOSE; WATER,TURBOCHARGER L=110 S.B. L=3000	
120	8-94472-583-0	1	ADAPTER; WATER	
137 (A)	8-98135-333-0	1	PIPE; WATER,TURBOCHARGER IN	
138 (A)	1-09675-081-0	2	BOLT; EYE,WATER PIPE M12X24 FLANGE	
138 (B)	1-09675-109-0	1	BOLT; EYE,WATER PIPE	
141	0-41010-620-0	3	STUD; INL PIPE TO BRKT M6X20 L=28	
163	8-94369-021-0	1	GASKET; ADAPTER TO EXH PIPE	
183	8-98255-409-0	1	PIPE; INLET,TURBOCHARGER	
231 (A)	0-03559-300-0	1	HOSE; RUBBER,TURBOCHARGER OUT L=140 S.B. L=3000	
231 (B)	8-98120-394-1	1	HOSE; RUBBER,TURBOCHARGER OUT	
231 (C)	8-98153-814-0	1	HOSE; RUBBER,TURBOCHARGER OUT	
288	0-28050-612-0	1	BOLT; WATER PIPE CLIP M6X12 FLANGE	
408 (A)	8-97378-060-0	3	STUD; TURBOCHARGER TO ADAPTER M8X20 L=31	
408 (B)	8-94109-890-0	1	STUD; TURBOCHARGER TO ADAPTER M8x50 L=61	
412 (A)	8-98011-532-0	1	GASKET; TURBOCHARGER	
459 (A)	8-98107-347-0	1	HOSE; WATER	
459 (B)	8-98108-321-0	1	HOSE; WATER	
460	0-91180-106-0	3	NUT; PIPE	
485 (A)	8-98082-424-1	1	PIPE; WATER EGR	
485 (B)	8-98107-346-0	1	PIPE; WATER EGR	
488 (A)	8-98075-184-0	1	HOSE; RUBBER	
488 (B)	8-98082-221-0	1	HOSE; RUBBER	
488 (C)	0-03566-300-0	1	HOSE; RUBBER L=140 S.B. L=3000	
539	8-97381-182-0	1	SENSOR; TURBOCHARGER	

0-40 FUEL INJECTION SYSTEM

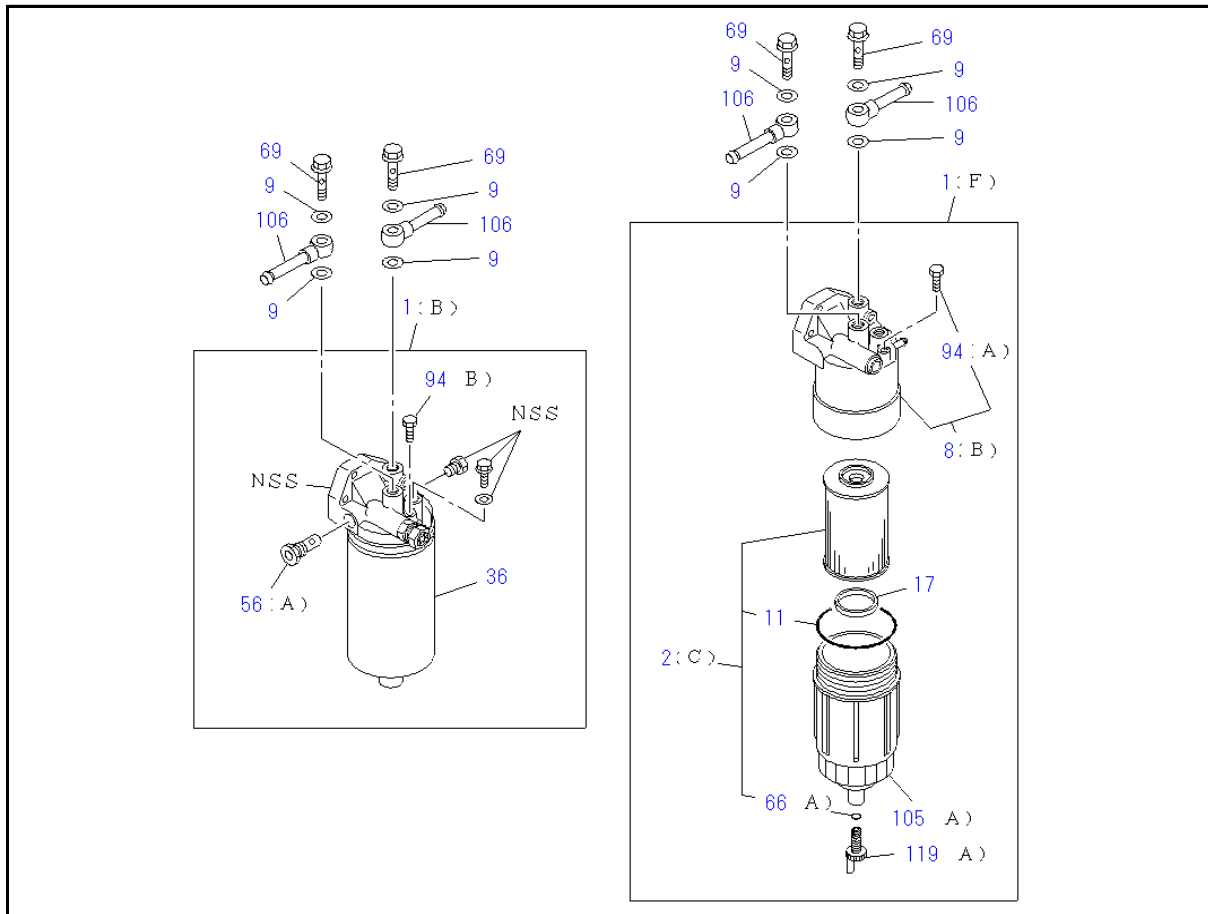
(No.3)



KEY No.	Part no.	qty	Part description	Engine serial no.
9	0-41010-630-0	2	STUD; CLIP M6X30 L=38	
16	8-98255-512-0	1	PIPE; INJ NO.1	
17	8-98255-513-0	1	PIPE; INJ NO.2	
18	8-98255-514-0	1	PIPE; INJ NO.3	
19	8-98255-515-0	1	PIPE; INJ NO.4	
29	8-97173-223-0 <8-97019-473-0>	10	CLIP; HOSE ID=10.5	
30 (A)	0-01804-130-0	1	HOSE; RUBBER,FUEL LEAK L=130	
30 (B)	8-97354-652-0	3	HOSE; RUBBER,FUEL LEAK L=98	
30 (C)	8-97362-306-2	1	HOSE; RUBBER,FUEL LEAK L=150	
31	8-98282-514-0	4	NOZZLE ASM; INJ	
59	8-98092-539-0	4	CLAMP; NOZZLE HOLDER	
66	8-98181-540-0	4	GASKET; INJ NOZZLE	
68 (A)	8-97330-118-3	2	CLIP; INJ PIPE ID=7&7 L=22	
68 (B)	8-97330-119-3	2	CLIP; INJ PIPE ID=7&7 L=22	
71	0-28050-812-0	1	BOLT; BRKT M8X12 FLANGE	
110	0-91180-106-0	2	NUT; CLIP M6 FLANGE	
120	8-98255-568-0	1	BRACKET; INJ PIPE	
122	8-97315-286-0	4	CLIP; LEAK OFF PIPE	
137 (A)	8-98161-062-0	1	PIPE ASM; LEAK OFF	
137 (B)	8-98161-061-0	3	PIPE ASM; LEAK OFF	
137 (C)	8-98036-510-0	1	PIPE ASM; LEAK OFF	

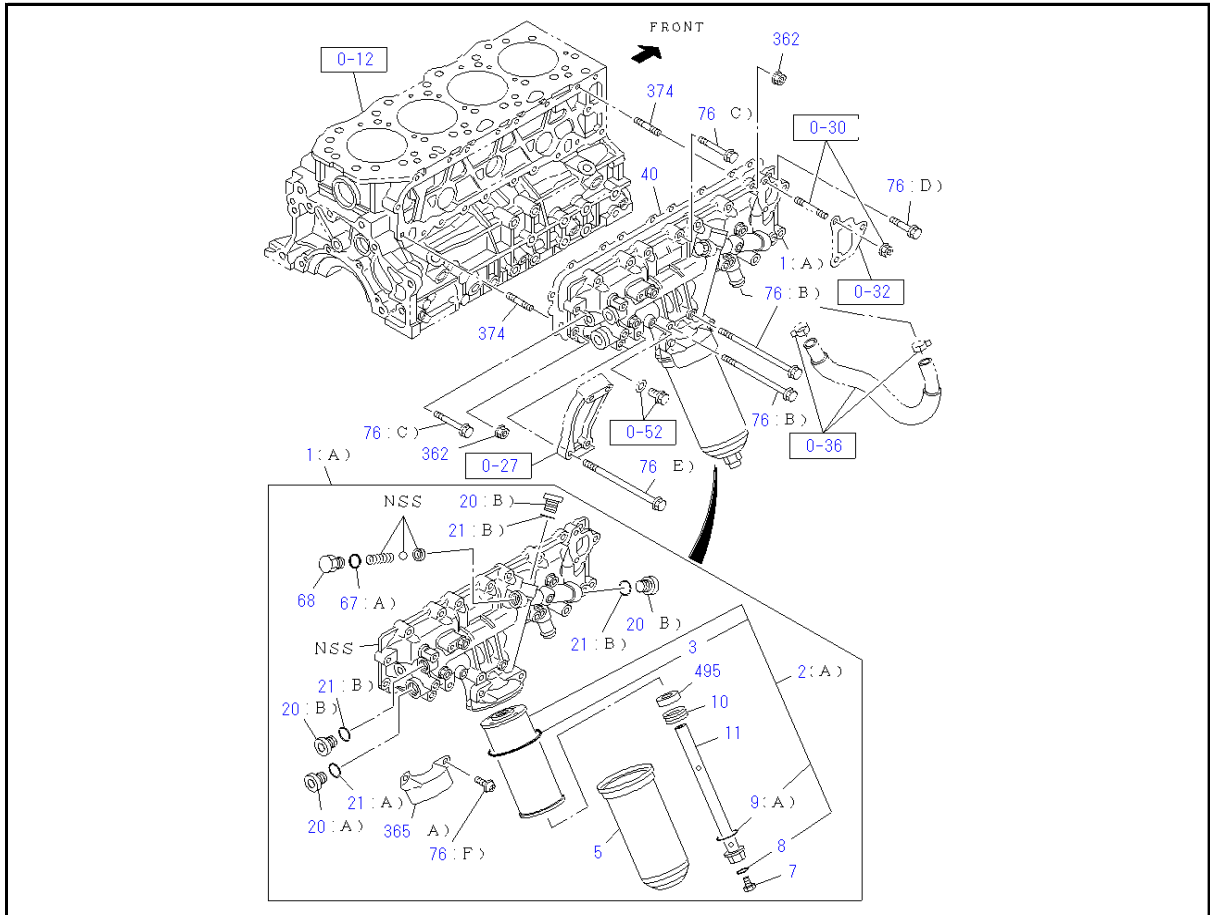
137 (D)	8-98255-569-0	1	PIPE ASM; LEAK OFF	
166	9-09566-111-0	4	GASKET; FUEL INJECTOR	
171	8-98068-275-0	1	PUMP ASM; FUEL FEED 12V	
175	1-15619-508-0	2	GASKET; EYE BOLT,OUTLET,FUEL FEED PUMP	
199	8-97602-218-0	2	GASKET; EYE BOLT	
205	8-98023-581-0	1	SENSOR; FUEL TEMP	
210	8-98158-733-0	1	PIPE; INJ,C/R	
211	8-98244-669-0	1	RAIL ASM; COMMON	
216 (A)	8-98035-828-0	1	BOLT; EYE	
216 (B)	8-98300-014-0	1	BOLT; EYE	
219	1-09623-541-0	1	GASKET ID=49.7	
265	8-98074-955-0	1	VALVE; FEED PUMP	
279 (A)	8-94392-924-0	2	CLIP; FUEL HOSE ID=16	
279 (B)	8-97375-638-0	2	CLIP; FUEL HOSE ID=11.5	
280	0-28050-812-0	1	BOLT; CLIP,FUEL HOSE M8X12 FLANGE	
282 (A)	8-98255-405-0	1	BRACKET; COMMON RAIL	
283 (A)	8-98174-080-0	3	BOLT; COMMON RAIL M8X25 FLANGE	
283 (B)	8-98174-180-0	4	BOLT; COMMON RAIL M8X40 FLANGE	
289	8-98138-695-0	1	LIMITER; FUEL PRESS	
290	8-98138-736-0	1	SENSOR; PRESS	
313	8-98212-021-0	4	BOLT; BRKT,INJ NOZZLE M8X85 W/WASHER	
315 (A)	5-15411-223-1	1	PIPE; FUEL,SUCTION	
315 (B)	8-98038-778-0	1	PIPE; FUEL,SUCTION	
347	8-98165-035-0	4	PIN	
348 (A)	8-98038-889-0	1	HOSE; FUEL	
348 (B)	8-98305-523-0	1	HOSE; FUEL	
382	8-98161-995-0	1	KEY; DRIVE SHAFT	
397	8-98173-165-0	1	REPAIR KIT; FUEL PUMP	
398	8-97047-266-0	2	GROMMET; FUEL PUMP	
399	8-97047-265-0	2	COLLAR; FUEL PUMP	
408	8-98253-389-1	1	PUMP ASM; FUEL,SUPPLY	
424	8-98145-502-1	1	OVERHAUL KIT; SUPPLY PUMP	
425	8-98084-393-0	1	BRACKET; VALVE	
426	0-28650-825-0	2	BOLT; BRACKET M8X25 FLANGE	
427	8-98251-345-0	3	GASKET; FUEL PIPE ID=14.2 OD=19.2	
433	8-98071-404-0	1	GASKET KIT; FUEL PUMP	
442	8-98071-401-0	1	FILTER; FUEL PUMP	

0-41 FUEL FILTER AND BRACKET



KEY No.	Part no.	qty	Part description	Engine serial no.
1 (B)	8-98312-915-1	1	FILTER ASM; FUEL DUAL ELEMENT	
1 (F)	8-98075-855-4	1	FILTER ASM; FUEL PRE FILTER	
2 (C)	8-98074-288-1	1	ELEMENT KIT; FUEL FILTER YELLOW	
8 (B)	8-98076-261-2	1	COVER; FUEL FILTER	
9	1-09630-086-0	8	GASKET; EYE JOINT ID=16.2	
11	8-98008-842-0	1	GASKET; CASE TO BODY,FUEL FILTER	
17	8-98008-849-0	1	FLOAT; FUEL FILTER	
36	8-98312-918-0	1	ELEMENT; FUEL FILTER	
56 (A)	8-98008-847-1	1	PLUG; FUEL FILTER	
66 (A)	8-98074-297-0	1	GASKET; PLUG,FUEL FILTER	
69	1-09675-095-1	4	BOLT; EYE,FUEL FILTER M16X30 FLANGE	
94 (A)	8-98367-380-0 <8-98008-846-1>	1	VALVE; FUEL FILTER	
94 (B)	8-98367-380-0	1	VALVE; FUEL FILTER	
105 (A)	8-98074-290-1	1	CASE; FUEL FILTER	
106	8-97383-427-0	4	PIPE; FUEL	
119 (A)	8-98074-292-0	1	PLUG; DRAIN,FUEL FILTER	

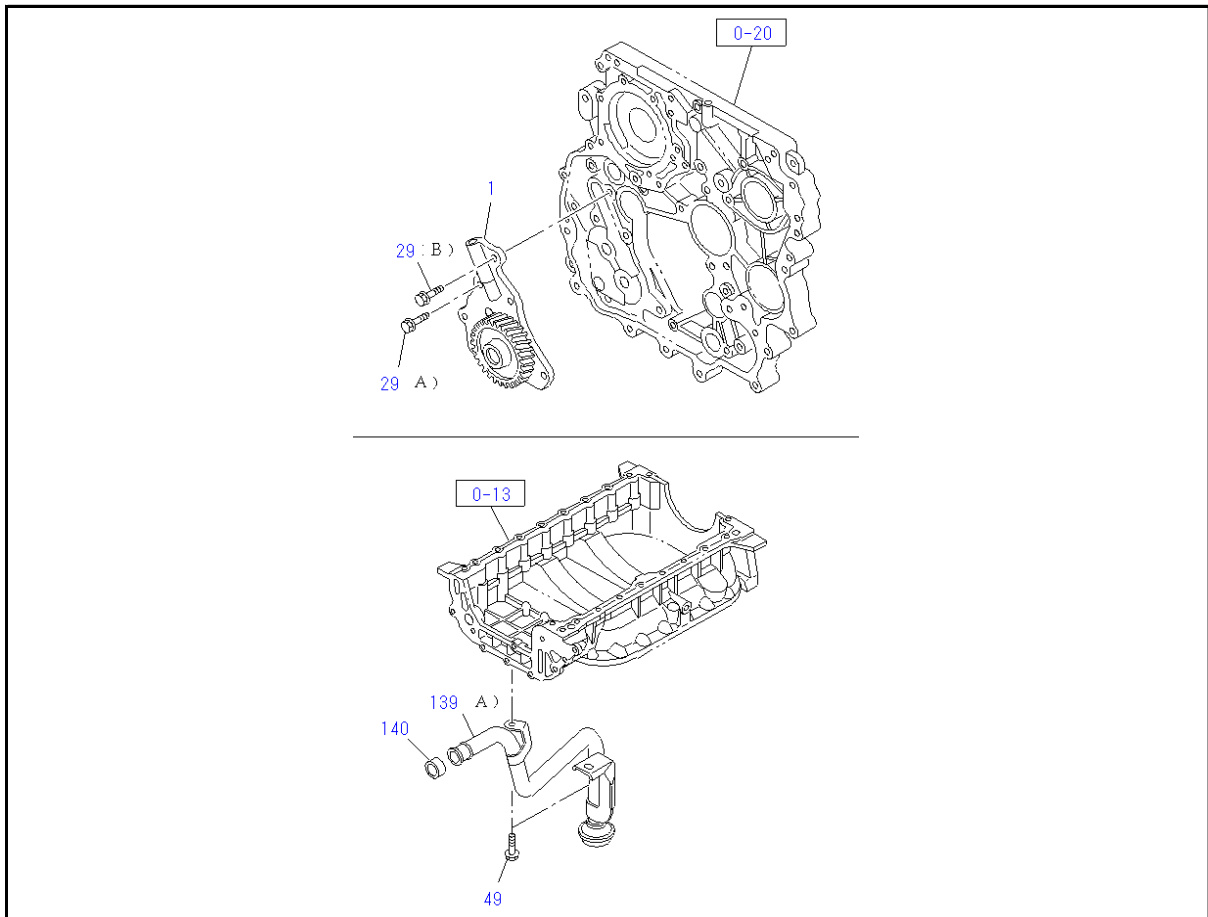
0-50 OIL COOLER AND OIL FILTER



KEY No.	Part no.	qty	Part description	Engine serial no.
1 (A)	8-98274-345-0	1	FILTER & COOLER ASM; OIL	
2 (A)	8-98018-858-0	1	ELEMENT; OIL FILTER	
3	8-98024-708-1 <8-98024-708-0>	1	GASKET	
5	8-98018-862-0	1	CASE; OIL FILTER	
7	8-98018-846-0	1	PLUG; CENTER BOLT	
8	1-09623-055-0	1	GASKET; PLUG ID=9.8	
9 (A)	1-09623-500-0	1	GASKET; CENTER BOLT	
10	8-98018-850-0	1	SPRING; ELEMENT	
11	8-98018-847-0	1	BOLT; CENTER	
20 (A)	8-94396-753-0	1	PLUG; COOLER BODY	
20 (B)	8-98133-978-0	3	PLUG; COOLER BODY	
21 (A)	8-98133-060-0	1	GASKET; PLUG	
21 (B)	8-98133-979-0	3	GASKET; PLUG	
40	8-98074-746-0	1	GASKET; O/FILTER BODY	
67 (A)	8-98133-059-0	1	GASKET; VLV	
68	9-13263-010-0	1	PLUG; VLV	
76 (B)	0-28050-890-0	2	BOLT; OIL FILTER M8X90 FLANGE	
76 (C)	0-28650-835-0	12	BOLT; OIL FILTER M8X35 FLANGE	
76 (D)	0-28050-820-0	1	BOLT; OIL FILTER M8X20 FLANGE	
76 (E)	0-28055-811-0	2	BOLT; OIL FILTER M8X110 FLANGE	
76 (F)	8-98041-912-0	2	BOLT; OIL FILTER	
362	0-91180-208-0	2	NUT; OIL FILTER M8 FLANGE	
365 (A)	8-98133-061-0	1	PROTECTOR; OIL FILTER	

KEY No.	Part no.	qty	Part description	Engine serial no.
374	0-41010-820-0	2	STUD; OIL FILTER M8X20 L=32	
495	8-98018-853-0	1	PLATE; OIL FILTER	

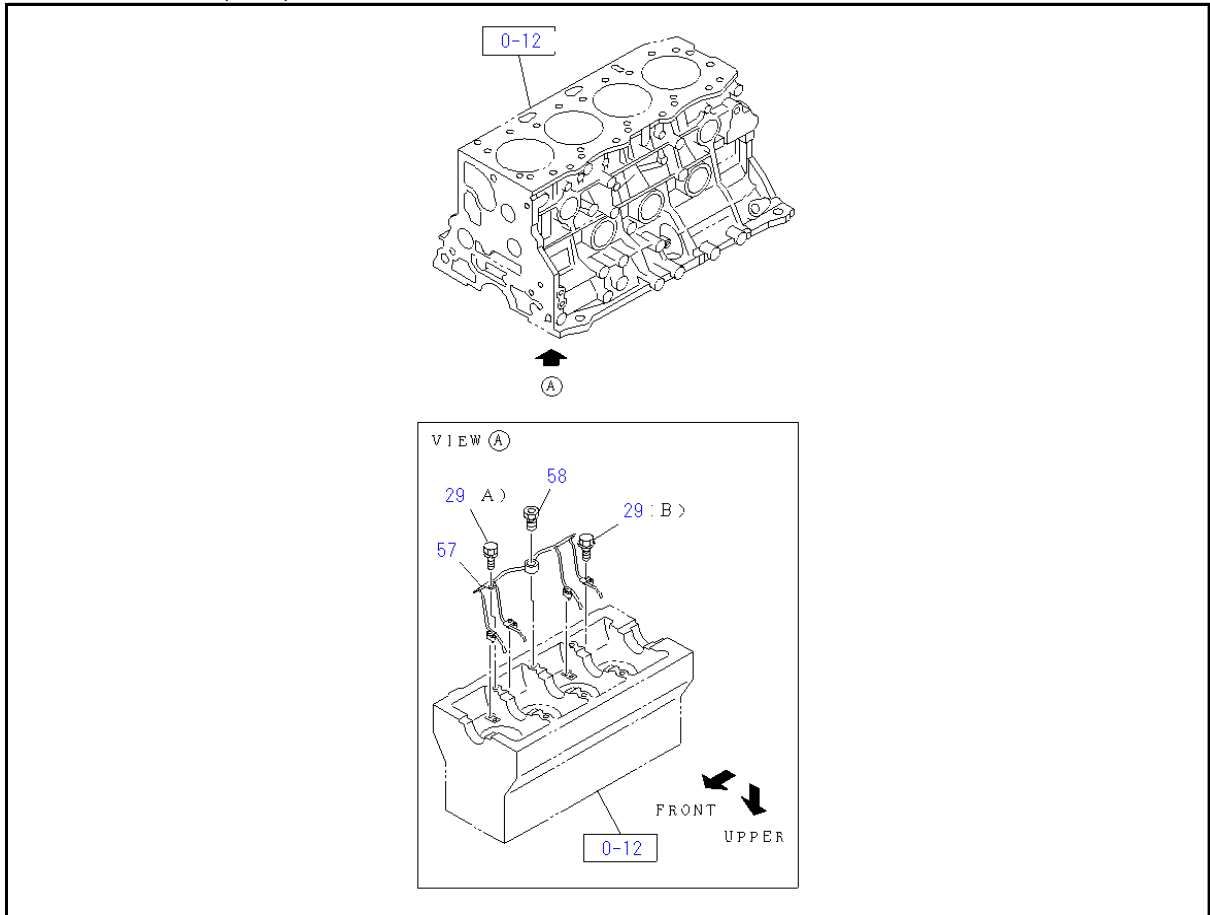
0-51 OIL PUMP AND OIL STRAINER



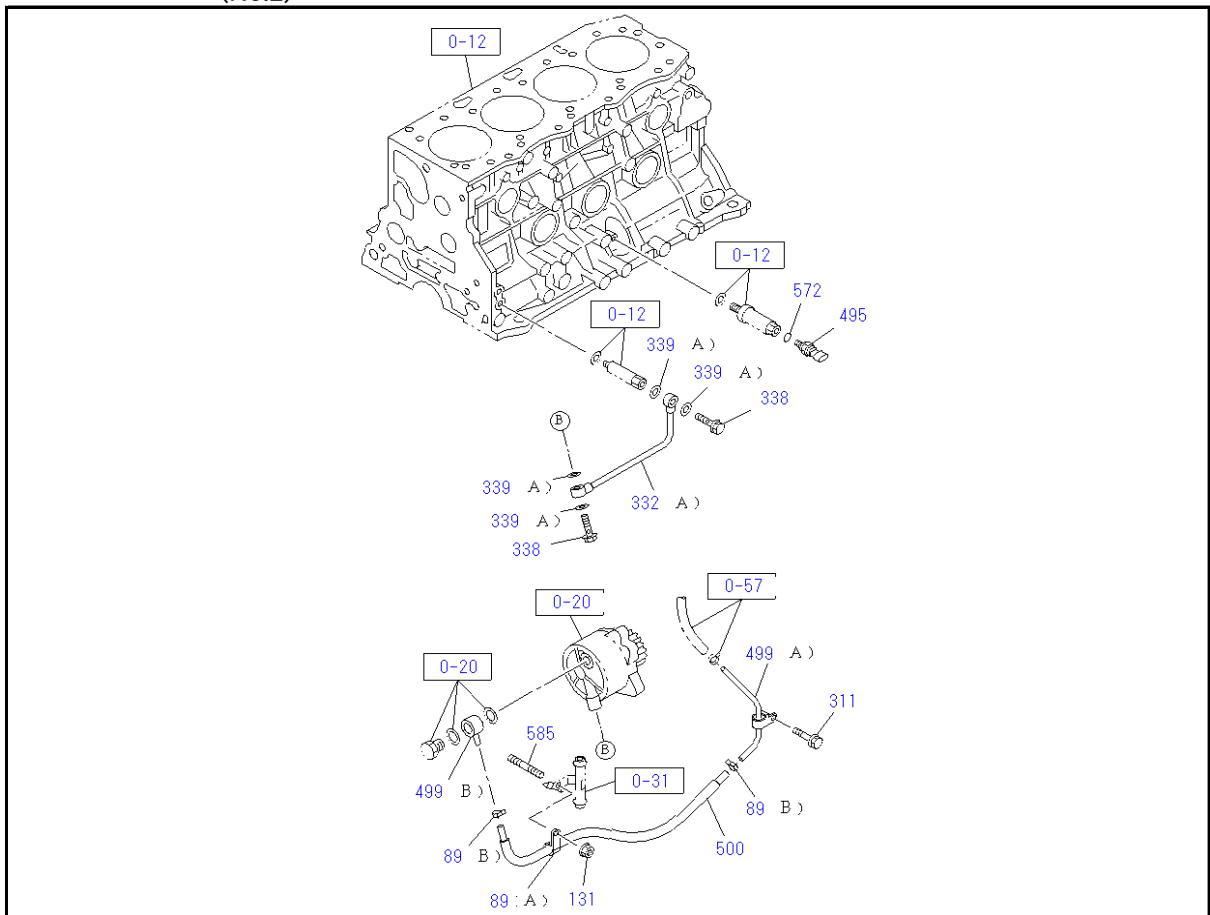
KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98145-153-1	1	PUMP ASM; OIL	
29 (A)	0-28050-830-0	4	BOLT; OIL PUMP M8X30 FLANGE	
29 (B)	0-28050-845-0	2	BOLT; OIL PUMP M8X45 FLANGE	
49	0-28050-816-0	2	BOLT; STRAINER,OIL PUMP M8X16 FLANGE	
139 (A)	8-98019-510-1	1	PIPE; OIL STRAINER	
140	8-97356-150-0	1	GASKET; OIL STRAINER	

0-52 OIL AND VACUUM PIPING; ENGINE

(No.1)

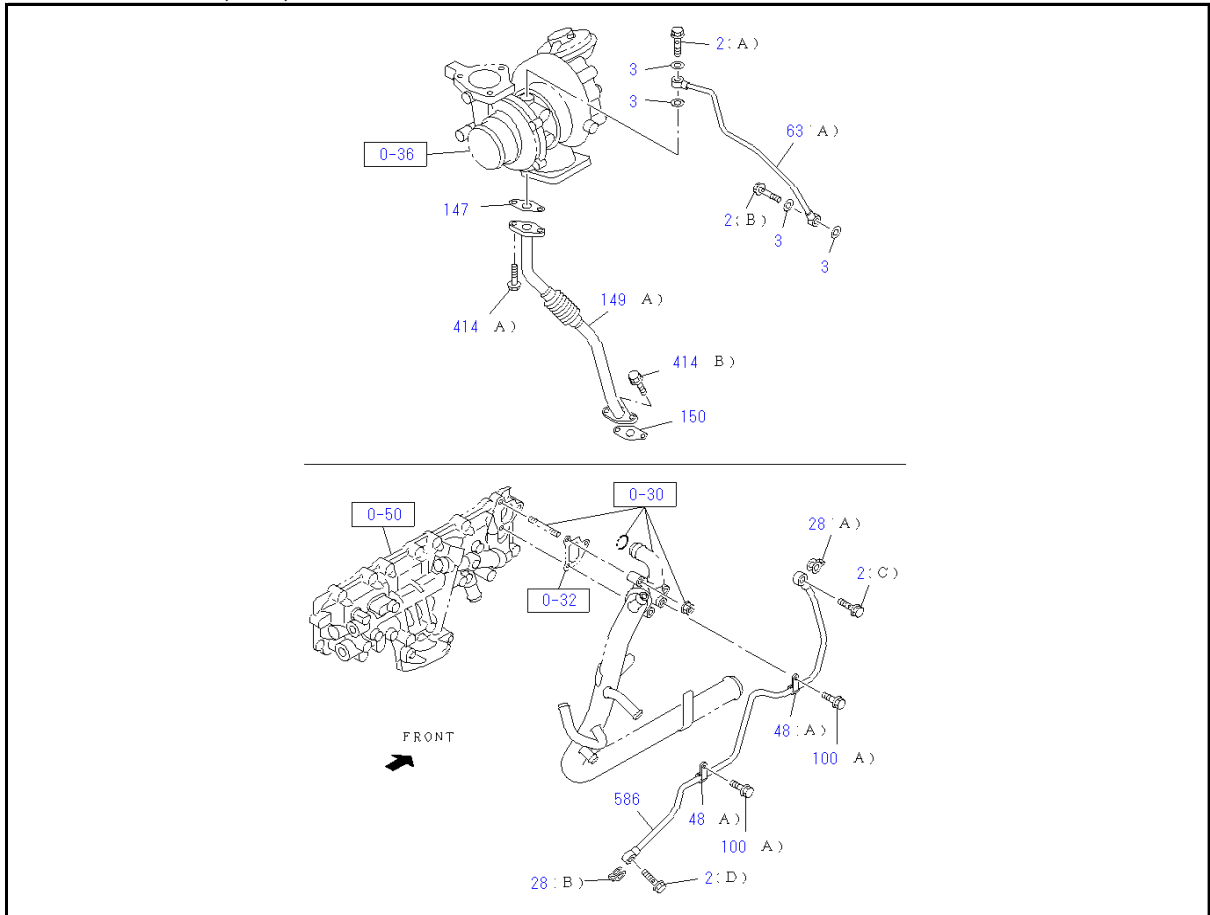


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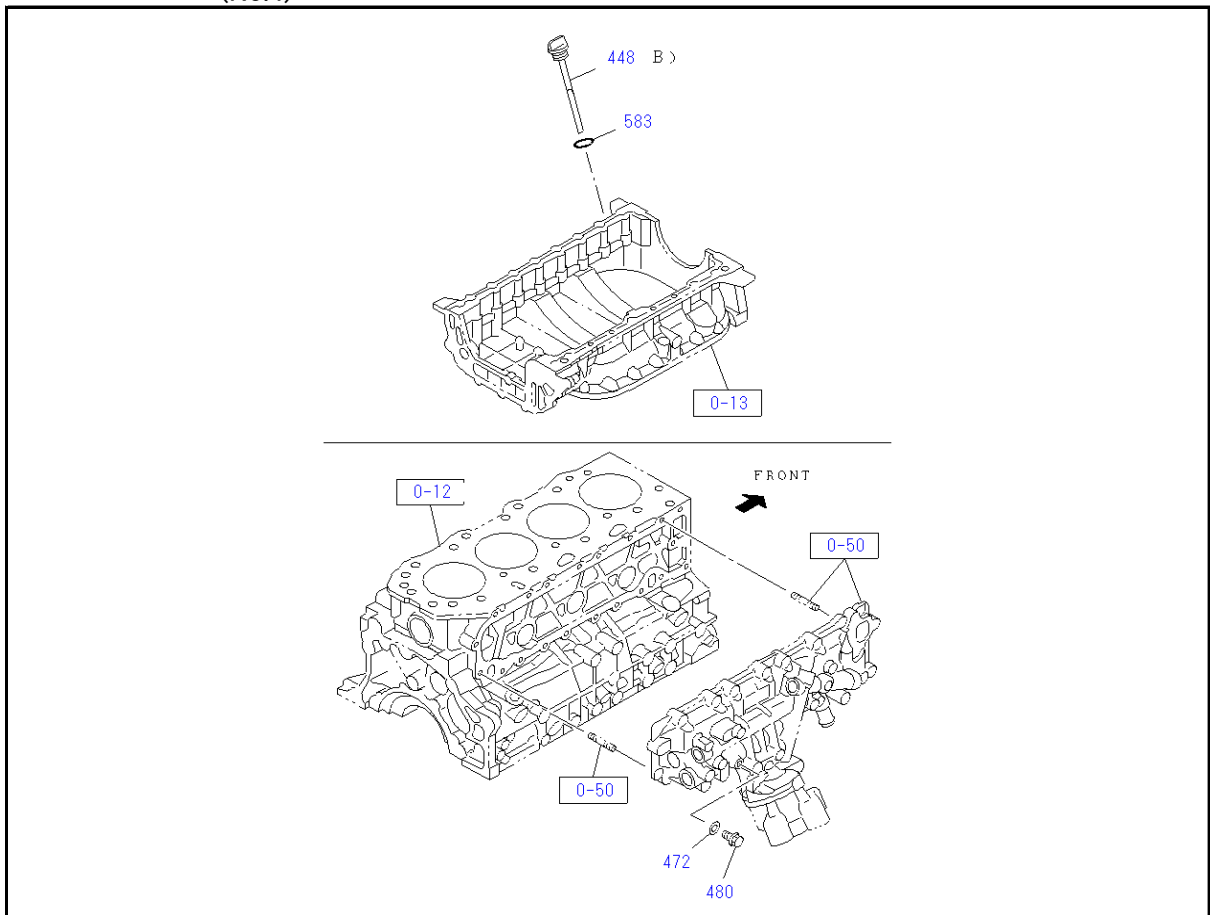


0-52 OIL AND VACUUM PIPING; ENGINE

(No.3)



(No.4)



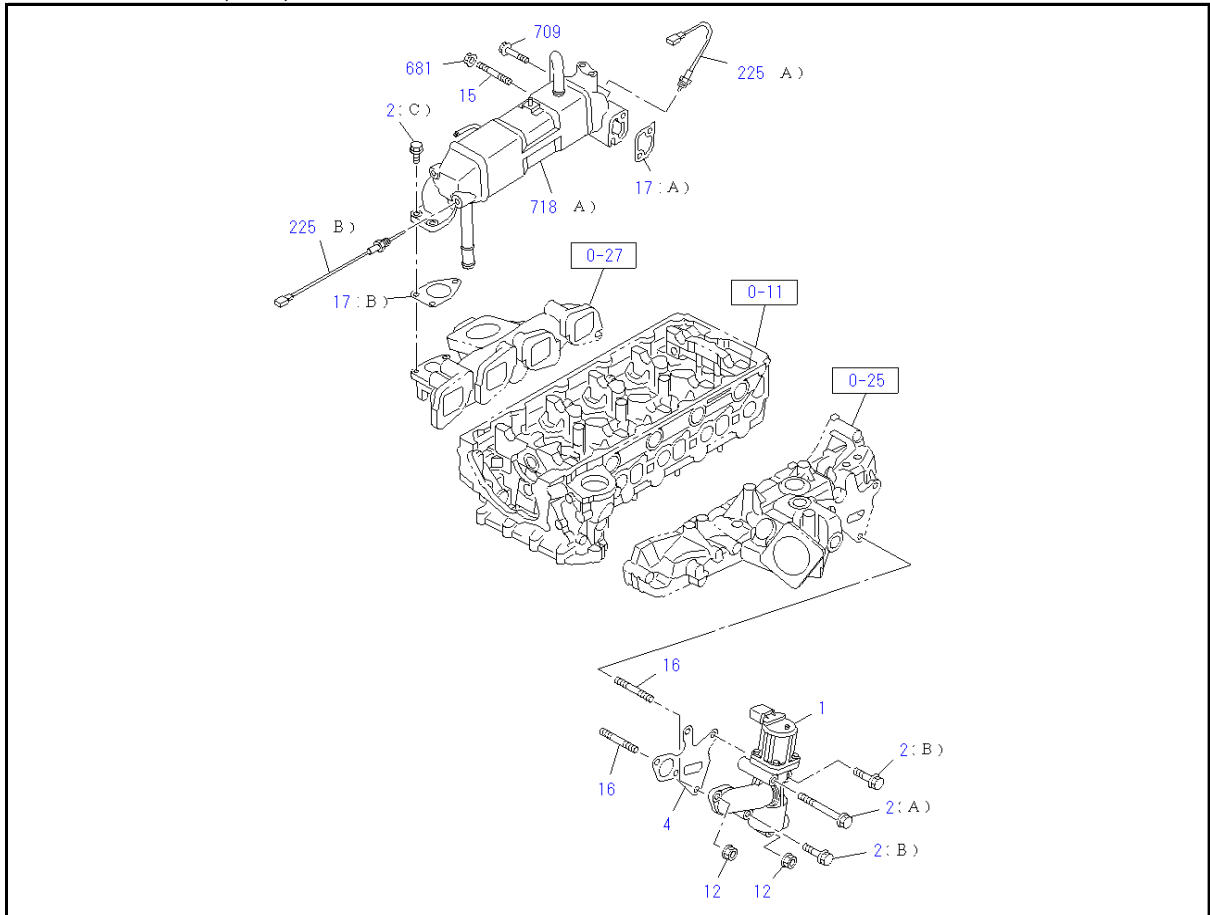
0-52 OIL AND VACUUM PIPING; ENGINE

KEY No.	Part no.	qty	Part description	Engine serial no.
2 (A)	8-94443-535-0	1	BOLT; EYE,OIL PIPE M10X27 EYE-BOLT	
2 (B)	9-09906-205-1	1	BOLT; EYE,OIL PIPE M10X24 EYE-BOLT	
2 (C)	8-98108-689-0	1	BOLT; EYE,OIL PIPE M8X23 EYE-BOLT	
2 (D)	1-09675-086-0	1	BOLT; EYE,OIL PIPE M14X27 EYE-BOLT	
3	9-09571-410-0	4	GASKET; EYE BOLT,OIL PIPE ID=10.2 OD=16.0	
28 (A)	8-97251-046-0 <8-98340-723-0>	1	GASKET; OIL PIPE ID=8.2	
28 (B)	8-98113-762-0	1	GASKET; OIL PIPE ID=14.2 OD=20.0	
29 (A)	0-28050-810-0	1	BOLT; OIL PIPE,OIL JET M8X10 FLANGE	
29 (B)	8-97117-298-1	4	BOLT; OIL PIPE,OIL JET M6X20 FLANGE	
48 (A)	8-98121-233-0	2	CLIP; OIL PIPE ID=7 L=28	
57	8-97312-132-3	1	PIPE; OIL,OIL JET	
58	8-98285-334-0	1	VALVE; RELIEF,OIL JET,PISTON	
63 (A)	8-98135-325-0	1	PIPE; OIL,TURBOCHARGER FEED	
89 (A)	0-95234-855-0	1	CLIP; HOSE,VAC ID=9 L=28	
89 (B)	8-97031-674-0	2	CLIP; HOSE,VAC ID=7.3	
100 (A)	0-28050-812-0	2	BOLT; CLIP M8X12 FLANGE	
131	0-91180-208-0	1	NUT; CLIP FIX M8 FLANGE	
147	8-98029-475-0	1	GASKET; OIL PIPE TO	
149 (A)	8-98135-326-0	1	PIPE; OIL RETURN,TURBOCHARGER	
150	8-98029-476-0	1	GASKET; OIL PIPE TO C/BL	
311	0-28050-612-0	1	BOLT; PIPE FIX M6X12 FLANGE	
332 (A)	8-98038-929-0	1	PIPE; OIL, VAC OIL FEED	
338	5-09675-018-1	2	BOLT; JOINT,OIL PIPE M8X20 EYE-BOLT	
339 (A)	9-09571-408-0	4	GASKET; OIL PIPE ID=8.2 OD=14	
414 (A)	0-28650-620-0	2	BOLT; OIL PIPE M6X20 FLANGE	
414 (B)	8-97366-632-0	2	BOLT; OIL PIPE M8X20 FLANGE	
448 (B)	8-98095-245-0	1	FILLER; OIL L=126	
472	9-09571-410-0	1	GASKET; PLUG ID=10.2 OD=16.0	
480	1-09604-074-0	1	PLUG; OIL FILTER M10X10	
495	8-98027-456-0	1	SENSOR; OIL PRESS	
499 (A)	8-98153-682-0	1	PIPE; VACUUM	
499 (B)	8-97381-661-3	1	PIPE; VACUUM	
500	8-98153-816-0	1	HOSE ASM; VAC	
572	8-98251-345-0	1	GASKET; SENSOR ID=14.2 OD=19.2	
583	1-09623-246-0	1	GASKET; ADAPTER	

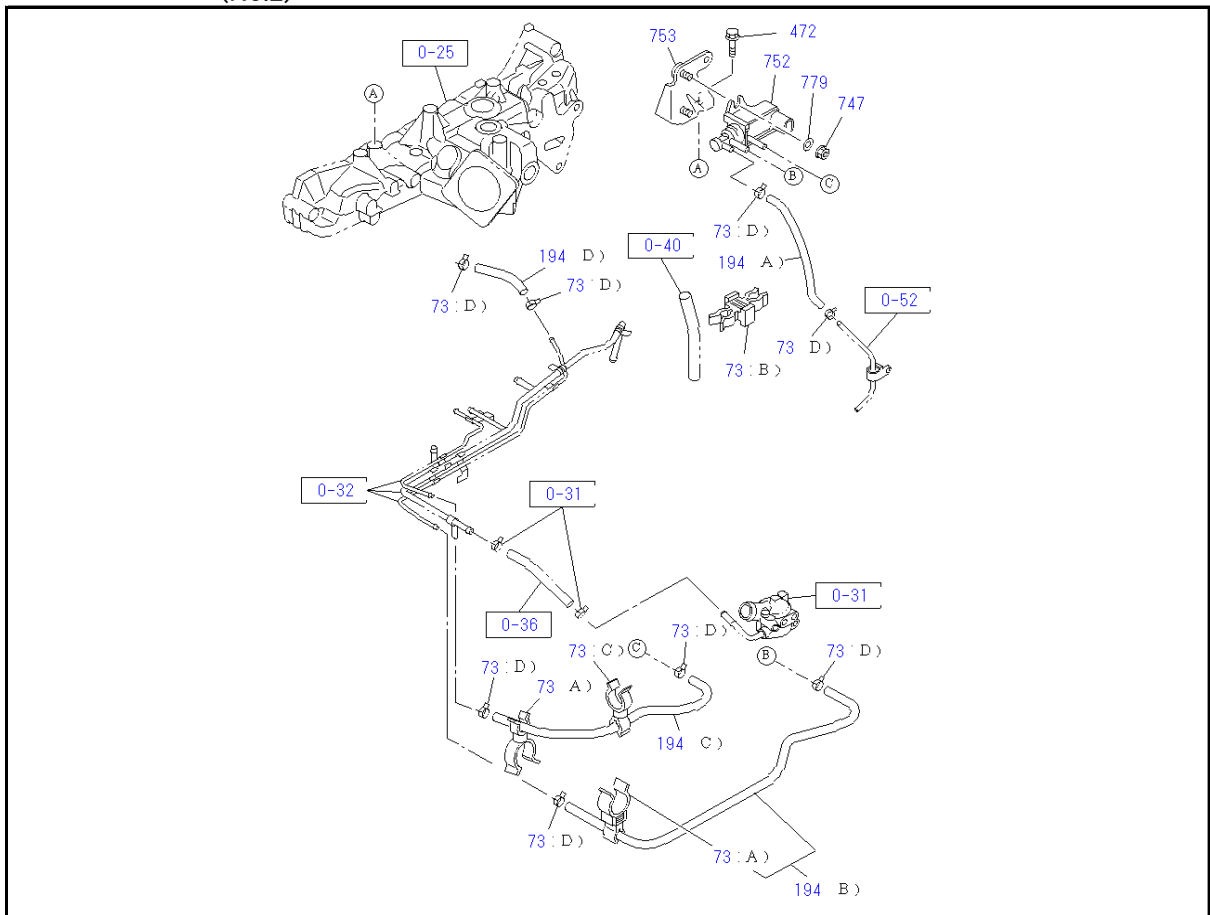
KEY No.	Part no.	qty	Part description	Engine serial no.
585	0-41010-818-0	1	STUD; CLIP M8X18 L=30	
586	8-98255-507-0	1	PIPE; OIL, TENSIONER	

0-57 EMISSION PIPING

(No.1)



(No.2)

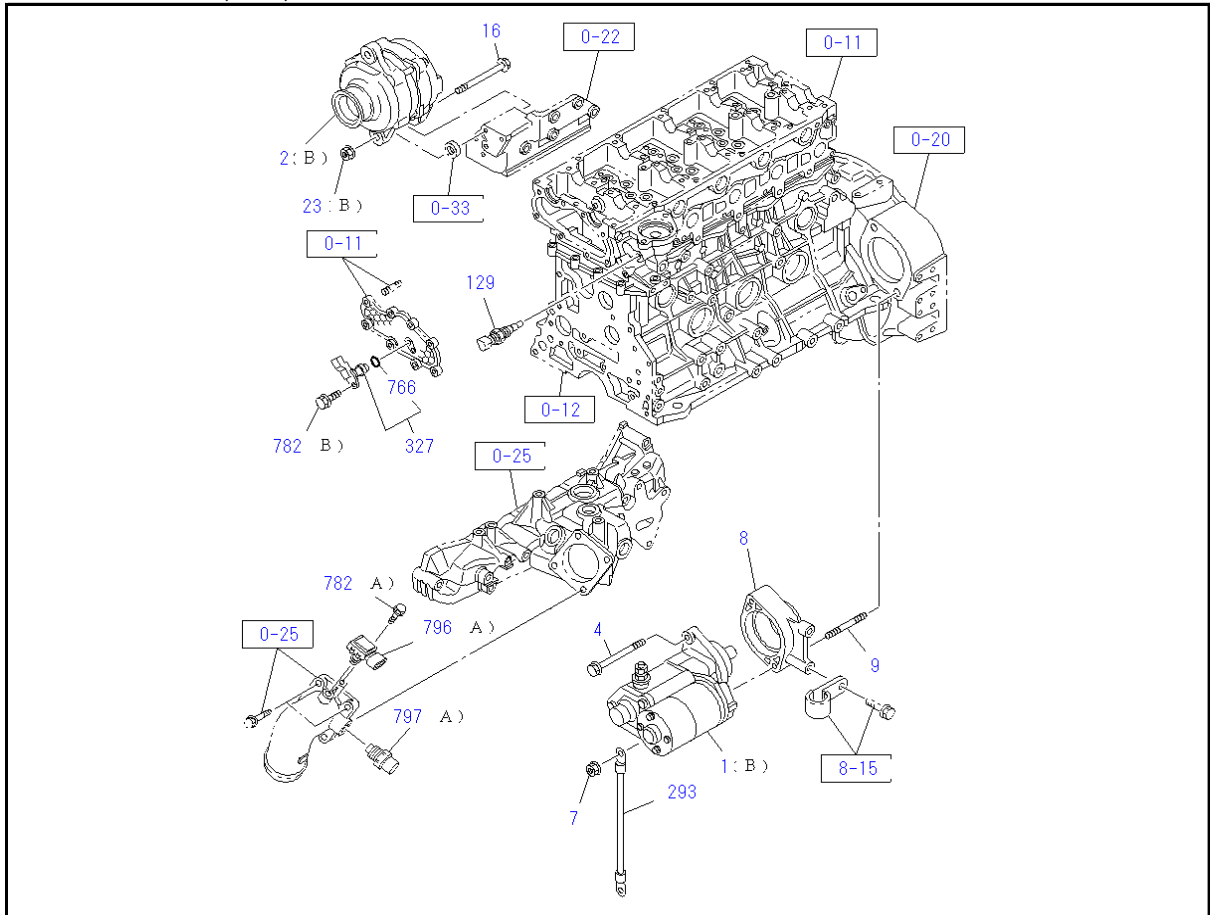


0-57 EMISSION PIPING

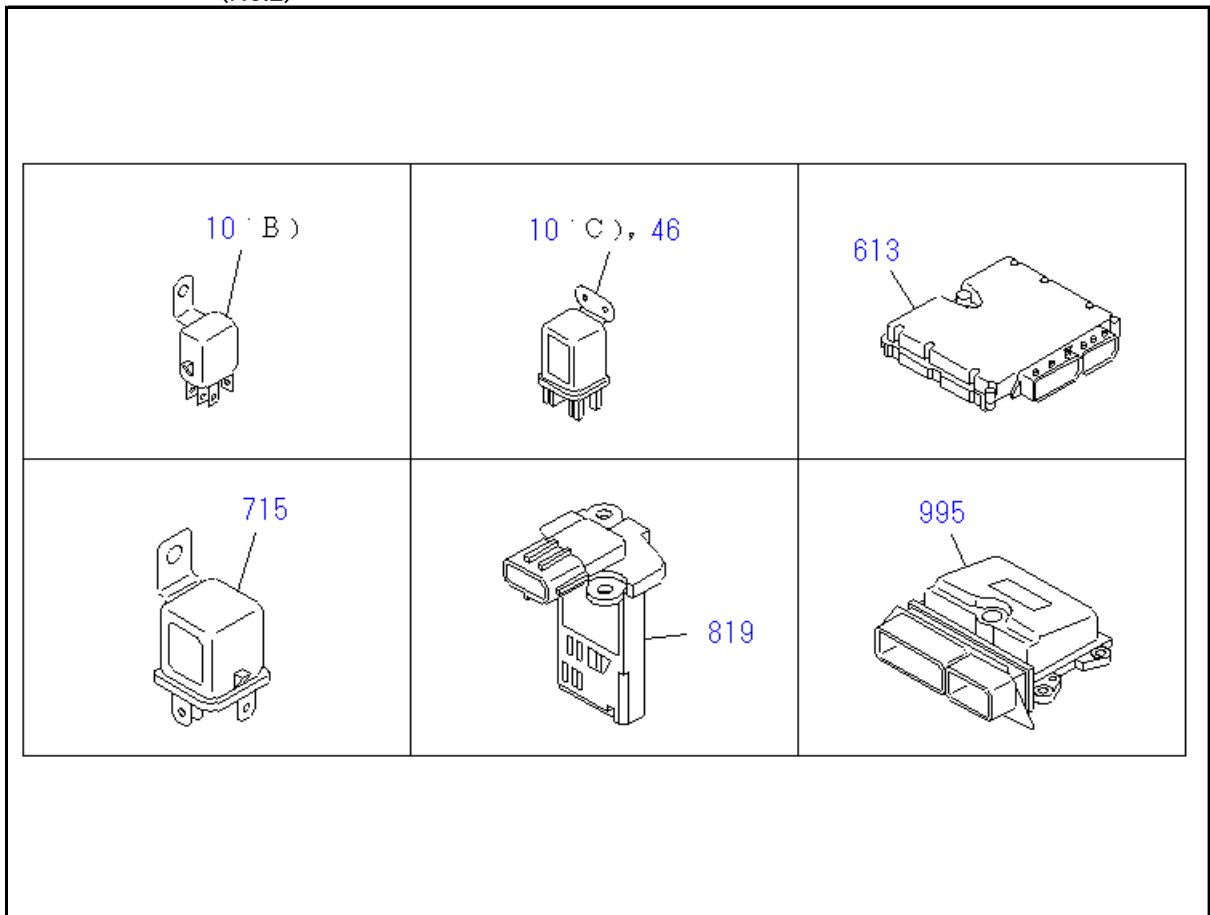
KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98238-246-1	1	VALVE; EGR 12V	
2 (A)	0-28050-880-0	1	BOLT; EGR VLV M8X80 FLANGE	
2 (B)	0-28050-850-0	2	BOLT; EGR VLV M8X50FLANGE	
2 (C)	8-97378-077-0	3	BOLT; EGR VLV M8X23 FLANGE	
4	8-98094-528-2	1	GASKET; EGR VLV	
12	0-91180-208-0	2	NUT; EGR VLV M8 FLANGE	
15	0-40210-860-0	1	STUD; EGR PIPE M8X60 L=72	
16	0-41010-820-0	2	STUD; EGR VLV M8X20 L=32	
17 (A)	8-98228-303-0	1	GASKET; EGR PIPE	
17 (B)	8-98063-284-1	1	GASKET; EGR PIPE	
73 (A)	8-94315-426-0	1	CLIP; VAC HOSE ID=13.2 & 7.5	
73 (B)	1-09709-182-0	1	CLIP; VAC HOSE ID=11.8 & 7.5	
73 (C)	8-94169-027-0	1	CLIP; VAC HOSE ID=8.3 & 16.5	
73 (D)	8-97031-674-0	8	CLIP; VAC HOSE ID=7.3	
194 (A)	0-04420-270-0	1	HOSE; VAC ID=3.5 L=270	
194 (B)	8-98255-407-0	1	HOSE; VAC	
194 (C)	8-98187-061-0	1	HOSE; VAC ID=4 L=490	
194 (D)	8-98187-062-0	1	HOSE; VAC ID=4 L=200	
225 (A)	8-98028-398-0	1	SENSOR; THERMO,EGR	
225 (B)	8-98030-955-0	1	SENSOR; THERMO,EGR	
472	0-28050-816-0	2	BOLT; BRKT M8X16 FLANGE	
681	0-91180-208-0	1	NUT; EGR PIPE M8 FLANGE	
709	0-28050-850-0	1	BOLT; EGR COOLER M8X50 FLANGE	
718 (A)	8-98238-195-0	1	COOLER; EGR	
747	0-91180-108-0	2	NUT; VAC REG VALVE	
752	8-98116-260-0	1	VALVE; EVRV	
753	8-97381-571-1	1	BRACKET; VALVE	
779	1-14319-034-0 <0-91610-608-0>	2	WASHER; VALVE	

0-60 ENGINE ELECTRICAL CONTROL PARTS

(No.1)



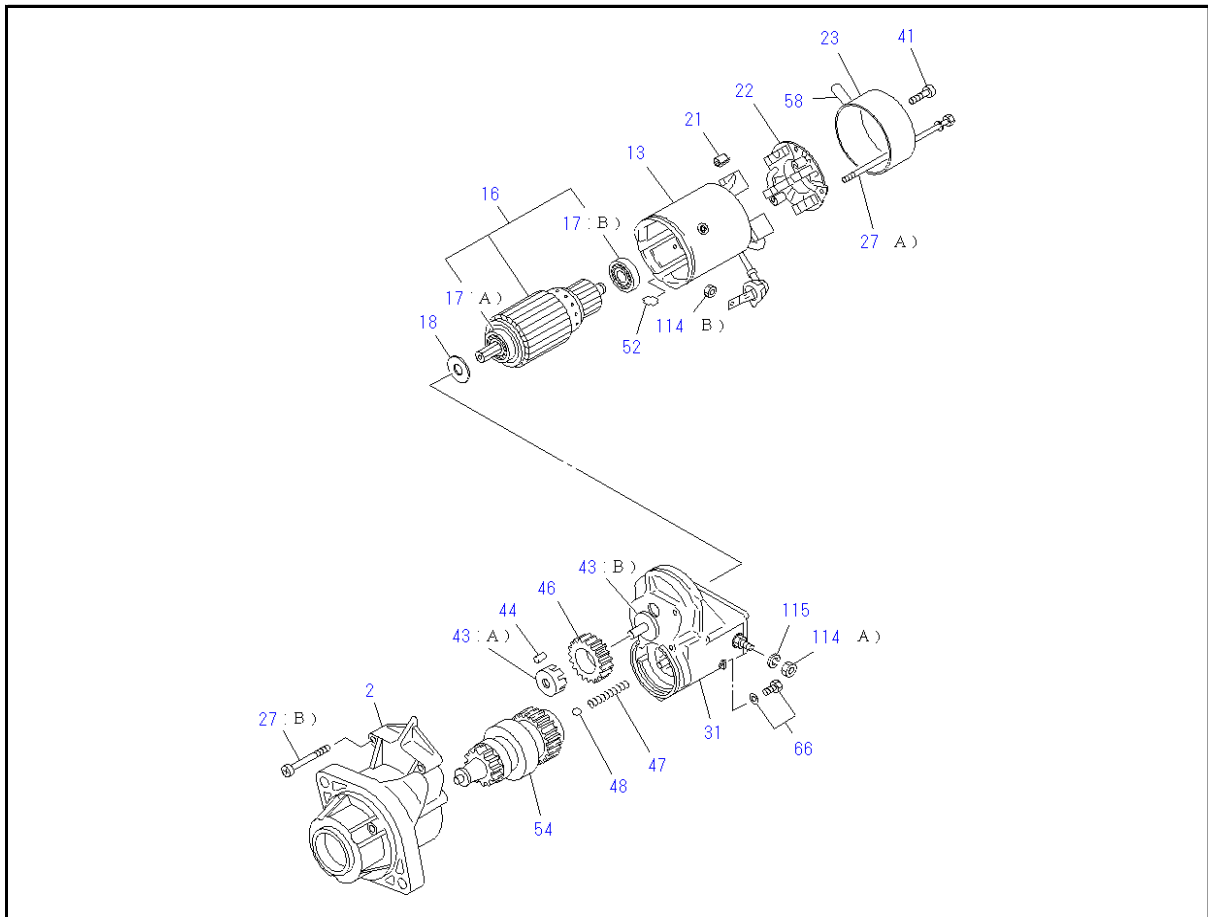
(No.2)



0-60 ENGINE ELECTRICAL CONTROL PARTS

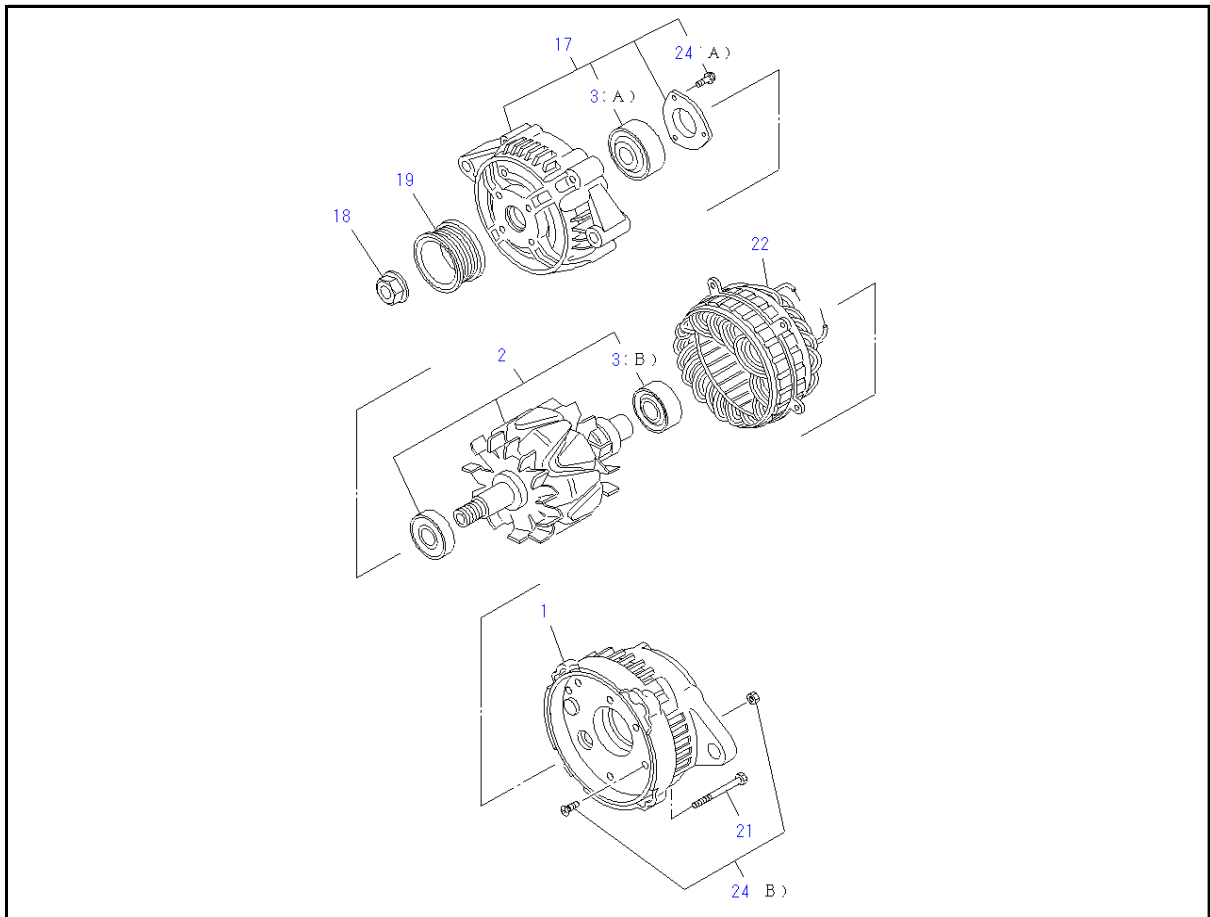
KEY No.	Part no.	qty	Part description	Engine serial no.
1 (B)	8-98084-407-0	1	STARTER ASM 12V 2.5KW	
2 (B)	8-98076-260-2	1	GENERATOR ASM 12V 110A	
4	0-28161-280-0	1	BOLT; STARTER M12X80 FLANGE	
7	0-91180-112-0	1	NUT; STARTER M12 FLANGE	
8	8-98084-405-0	1	SPACER; STARTER	
9	0-44011-270-0	1	STUD; STARTER M12X70 L=110	
10 (B)	5-82550-029-0	1	RELAY; STARTER 12V	
10 (C)	8-94248-161-0	1	RELAY; STARTER 12V	
16	0-28056-013-0	1	BOLT; GEN M10X130 FLANGE	
23 (B)	0-91180-210-0	1	NUT; GEN M10	
46	8-97011-949-0	1	RELAY; GLOW PLUG 12V	
129	8-98023-717-0	1	SENSOR; GLOW PLUG,THERMO	
293	8-97180-556-0	1	CABLE; STARTER EARTH L=300	
327	8-98019-024-0	1	SENSOR; CAMSHAFT POSITION	
613	8-98324-333-0	1	CONTROL UNIT; ENG	
715	5-82550-029-0	1	RELAY; FUEL PUMP	
766	8-97369-404-0	1	GASKET; SENSOR	
782 (A)	8-97316-615-0	2	BOLT; SENSOR M4X10 W/PL WASHER	
782 (B)	0-28050-616-0	1	BOLT; SENSOR M6X16 FLANGE	
796 (A)	8-98009-418-0	1	SENSOR; MAP	
797 (A)	8-12146-830-0	1	SENSOR; MAT	
819	8-97601-967-0	1	SENSOR; MASS AIR FLOW (MAF)	
995	8-98324-339-0	1	CONTROL UNIT; DEF DCM	

0-65 STARTER



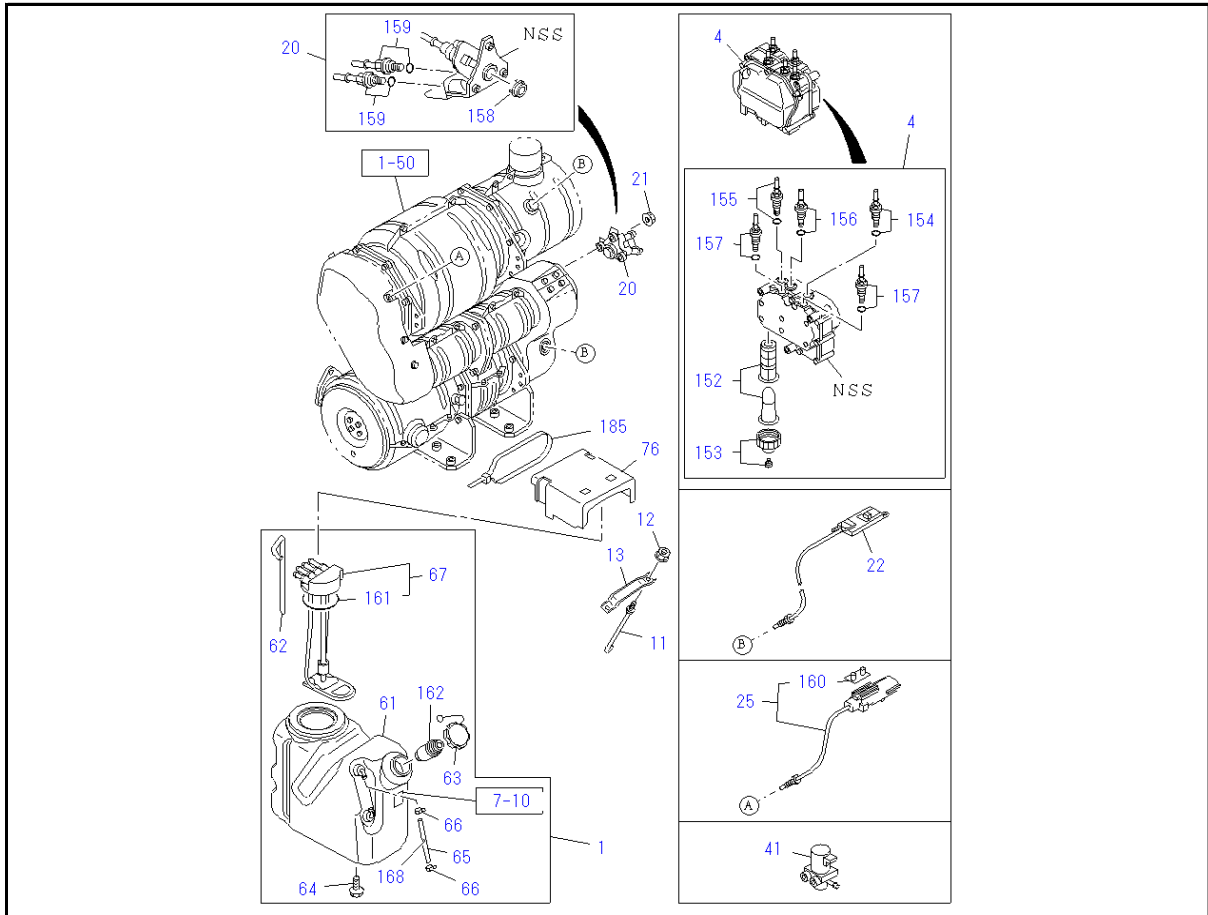
KEY No.	Part no.	qty	Part description	Engine serial no.
2	8-98090-888-0	1	CASE; PINION,STARTER	
13	8-98090-882-0	1	YOKE; STARTER	
16	8-98090-885-0	1	ARMATURE; STARTER	
17 (A)	5-09800-064-0	1	BEARING; ARMATURE,STARTER	
17 (B)	5-09800-081-0 <5-09800-041-0>	1	BEARING; ARMATURE,STARTER	
18	5-81129-128-0	1	WASHER;	
21	1-81117-010-0	4	SPRING; BRUSH HOLDER STARTER	
22	5-81118-013-0	1	HOLDER; BRUSH STARTER	
23	8-98090-896-0	1	COVER; RR COVER STARTER	
27 (A)	1-81129-698-0	2	BOLT; THROUGH,STARTER	
27 (B)	5-81129-132-0	3	BOLT; THROUGH,STARTER	
31	8-98090-891-0	1	SWITCH; ENGAGE STARTER	
41	5-81129-130-0	2	SCREW; RR COVER,STARTER	
43 (A)	5-81129-121-0	1	RETAINER; PINION STARTER	
43 (B)	5-81129-127-0	1	RETAINER; PINION STARTER	
44	5-81129-120-0	5	ROLLER; PINION STARTER	
46	5-81123-018-0	1	GEAR; CLU STARTER	
47	5-81129-119-0	1	SPRING; PINION STARTER	
48	5-81129-092-0	1	BALL; PINION STARTER	
52	5-81129-136-0	1	PLATE; LK,STARTER	
54	8-97361-736-0	1	CLUTCH; PINION,STARTER	
58	1-81129-677-0	1	PIPE; DRAIN RR COVER,STARTER	
66	8-98090-918-0	1	SCREW; ENGAGE SW,STARTER	
114 (A)	5-81129-126-0	1	NUT; TERMINAL	
114 (B)	8-97211-014-0	1	NUT; TERMINAL	
115	1-83318-117-0 <5-81129-129-0>	1	WASHER; TERMINAL	

0-66 GENERATOR



KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98239-408-0	1	COVER ASM; RR,GEN	
2	8-97374-374-0	1	ROTOR; GEN	
3 (A)	8-98159-457-0	1	BEARING; ROTOR,GEN	
3 (B)	8-97103-807-0	1	BEARING; ROTOR,GEN	
17	8-97374-376-0	1	COVER ASM; FRT,GEN	
18	8-97074-927-0	1	NUT; PULLEY,GEN	
19	8-97379-555-0	1	PULLEY; GEN	
21	8-97182-960-0	4	BOLT; THROUGH,GEN	
22	8-98014-283-0	1	STATOR; GEN	
24 (A)	8-94233-653-0	1	SCREW; RECTIFIER	
24 (B)	8-97120-257-0	1	SCREW; RECTIFIER	

1-46 DEF TANK AND PIPING



KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98298-447-1	1	TANK ASM; DEF	
4	8-98268-811-1 <8-98268-811-0>	1	PUMP ASM; DEF,DCM SPLY	
11	8-98157-936-0	2	BOLT; DEF TANK	
12	0-91180-110-0	2	NUT; DEF TANK	
13	8-98156-747-0	1	RETAINER; DEF TANK	
20	8-98231-898-2	1	INJECTOR ASM; DEF DCM	
21	0-91180-106-0	3	NUT; INJECTOR ASM,DEF DCM	
22	8-98246-506-2 <8-98246-506-1>	2	SENSOR; DEF DCM EXH NOX	
25	8-98086-329-0	1	SENSOR; DEF DCM EXH TEMP	
41	8-98121-306-1	1	VALVE ASM; DEF TANK HTR DLVY 12V	
61	8-98120-260-1 <8-98120-260-2>	1	BODY ASM; DEF TANK	
62	8-98120-261-0	1	HOSE; VENT,DEF TANK	
63	8-98120-262-2	1	CAP ASM; FILLER,DEF TANK	
64	8-98120-263-0	1	PLUG; DRAIN,DEF TANK	
65	8-98120-264-1	1	HOSE; WATER LEVEL	
66	8-98120-265-1	2	CLAMP; WATER LEVEL HOSE	
67	8-98286-177-0	1	SENSOR ASM; DEF TANK	
76	8-98156-298-1	1	COVER; DEF TANK CAP	
152	8-98169-403-0	1	FILTER KIT; PUMP ASM,DEF DCM SPLY	
153	8-98169-408-0	1	COVER KIT; PUMP ASM,DEF DCM SPLY	
154	8-98169-409-0	1	CONNECTOR KIT; INLET PUMP,DEF	
155	8-98169-411-0	1	CONNECTOR KIT; OUTLET PUMP,DEF	
156	8-98268-813-0	1	CONNECTOR KIT; RETURN PUMP,DEF	
157	8-98169-414-1	2	CONNECTOR KIT; COOLANT PUMP,DEF	
158	8-98086-333-0	1	GASKET; INJECTOR ASM,DEF DCM	

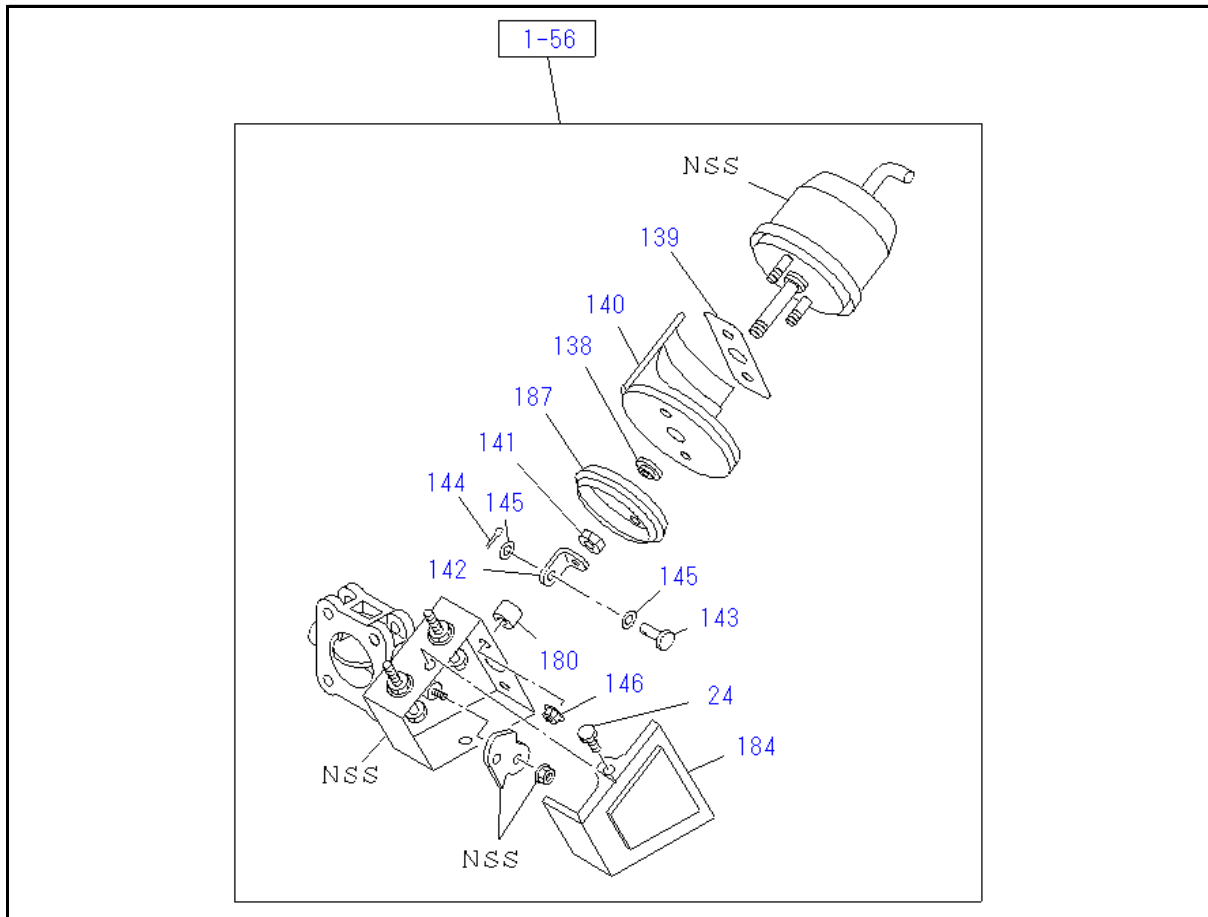
KEY No.	Part no.	qty	Part description	Engine serial no.
159	8-98169-416-1	2	CONNECTOR KIT; COOLANT,INJECTOR ASM DEF	
160	8-98170-331-0	1	CLIP; HARNESS,SENSOR DEF DCM XXH TEMP	
161	8-98170-383-0	1	GASKET; SENSOR ASM,DEF TANK	
162	8-98234-328-0	1	ADAPTER; DEF TANK	
168	8-98204-163-0	1	INDICATOR; WATER LEVEL	
185	1-09707-183-0	1	CLIP; BAND	

1-50 EXHAUST PIPE AND SILENCER

KEY No.	Part no.	qty	Part description	Engine serial no.
8 (A)	8-98273-591-0	1	BRACKET; EXH PIPE	
8 (B)	8-98273-592-0	1	BRACKET; EXH PIPE	
8 (C)	8-98273-593-0	2	BRACKET; EXH PIPE	
8 (D)	8-98273-594-0	1	BRACKET; EXH PIPE	
8 (E)	8-98273-595-0	2	BRACKET; EXH PIPE	
35 (A)	8-97376-758-0	2	GASKET; EXH PIPE TO MANIF	
35 (B)	8-97373-108-0	2	GASKET; EXH PIPE TO MANIF	
65 (A)	0-91614-708-0	14	WASHER; PL ID=8.4 OD=22	
65 (B)	0-91614-610-0	8	WASHER; PL ID=10.5 OD=22	
65 (C)	8-98019-967-0	2	WASHER; PL ID=8.2	
272 (A)	8-97061-401-1	30	NUT; FLANGE M8 FLANGE	
272 (B)	0-91111-508-0	4	NUT; FLANGE M8	
272 (C)	0-91111-510-0	1	NUT; FLANGE M10	
272 (D)	0-91180-208-0	8	NUT; FLANGE M8 FLANGE	
272 (E)	8-97096-192-1	3	NUT; FLANGE M10 FLANGE	
380 (A)	8-98273-600-0	1	BRACKET; STAY	
380 (B)	8-98273-601-0	1	BRACKET; STAY	
467 (A)	0-28050-612-0	12	BOLT; PROTECTOR M6X12 FLANGE	
467 (B)	0-28060-816-0	5	BOLT; PROTECTOR M8X16 FLANGE	
467 (C)	8-98019-179-0	17	BOLT; PROTECTOR M6X16	
526	9-09571-420-0	1	GASKET; PLUG ID=20.5 OD=28.0	
530	0-91614-708-0	5	WASHER ID=8.4 OD=22	
542 (A)	8-98273-588-0	1	BRACKET	
542 (B)	8-98273-589-0	1	BRACKET	
556 (A)	8-98302-937-4	1	DPD ASM	
557 (B)	8-98306-461-1	1	CATALYST ASM	
558	8-98306-462-1	1	FILTER ASM	
560 (A)	8-97331-947-0	1	GASKET; DPD	
560 (B)	8-97628-257-0	3	GASKET; DPD	
567 (A)	0-28050-612-0	4	BOLT; DPD M6X12 FLANGE	
567 (B)	8-98011-696-1	1	BOLT; DPD M8X60 FLANGE	
567 (C)	8-98019-179-0	6	BOLT; DPD M6X16	
567 (D)	8-98053-224-0	1	BOLT; DPD M8X35 FLANGE	
567 (E)	8-98065-481-0	6	BOLT; DPD M8X43 HEX SOCKET	
569	8-97602-870-1	2	BRACKET; HARNESS CLIP	
580 (A)	0-28061-035-0	8	BOLT; FLANGE M10X35 FLANGE	
580 (B)	0-28061-040-0	1	BOLT; FLANGE M10X40 FLANGE	
580 (C)	0-28061-060-0	2	BOLT; FLANGE M10X60 FLANGE	

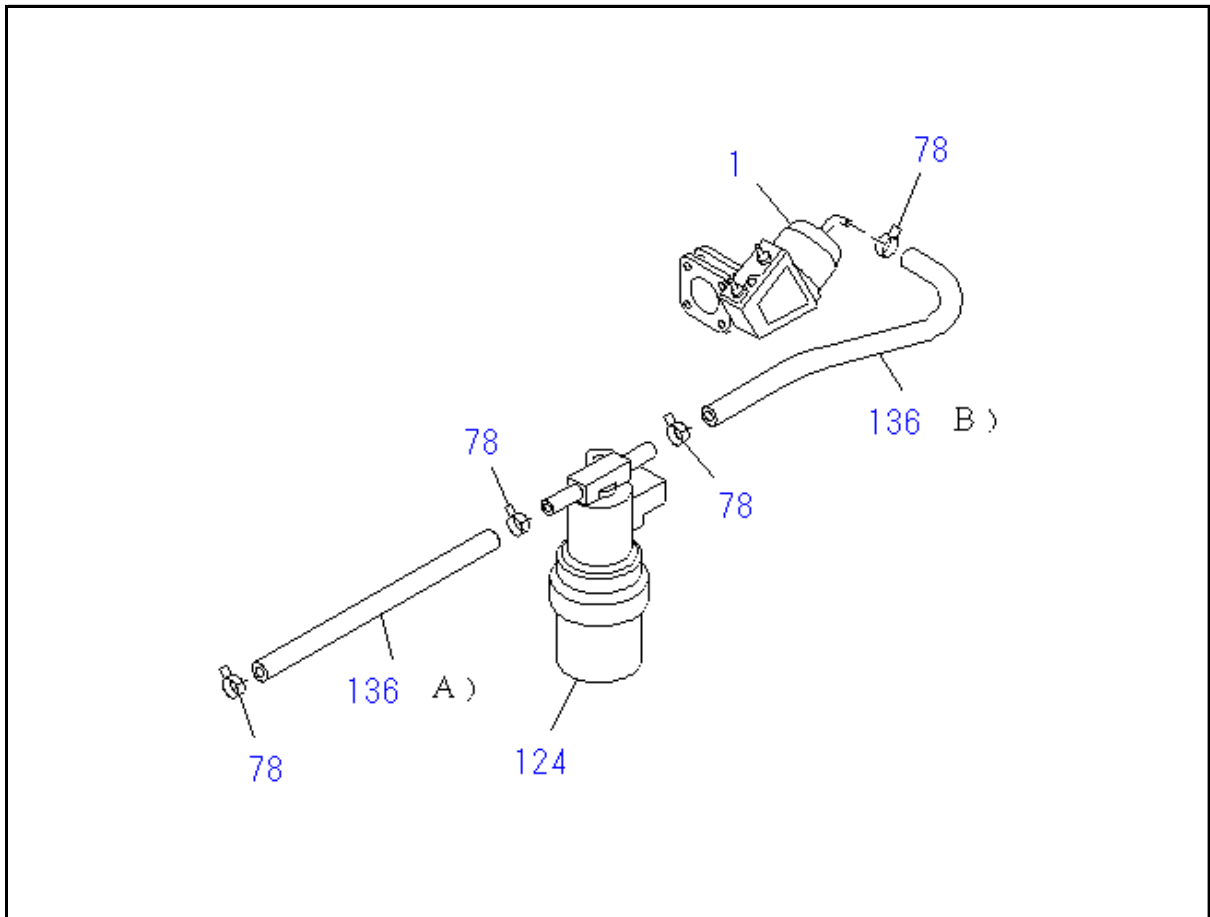
KEY No.	Part no.	qty	Part description	Engine serial no.
580 (D)	8-97378-077-0	8	BOLT; FLANGE M8X23 FLANGE	
580 (E)	8-98043-528-0	10	BOLT; FLANGE M8X28 FLANGE	
580 (F)	8-98053-224-0	17	BOLT; FLANGE M8X35 FLANGE	
580 (G)	8-98065-481-0	9	BOLT; FLANGE M8X43 HEX SOCKET	
619	9-09662-008-1	1	PLUG; SENSOR	
622	8-98290-915-0	1	SILENCER SUB ASM; DPD FRONT	
633 (A)	8-98290-912-0	1	CHAMBER SUB ASM; DEF,FRONT	
633 (B)	8-98290-913-0	1	CHAMBER SUB ASM; DEF,FRONT	
634	8-98118-422-1	1	GASKET; MIXER	
638	8-98306-463-1	1	CATALYST ASM; DEF	
641	5-87832-364-0	1	GASKET KIT; FLANGE,DPD	
643	8-98141-351-0	3	STUD	
647 (A)	1-09556-015-0	3	WASHER; FLYWHEEL	
647 (B)	5-09500-012-0	30	WASHER; FLYWHEEL	
675	8-98336-576-0	1	BRACKET; SENSOR	

1-55 EXHAUST BRAKE VALVE AND CONTROL CYLINDER



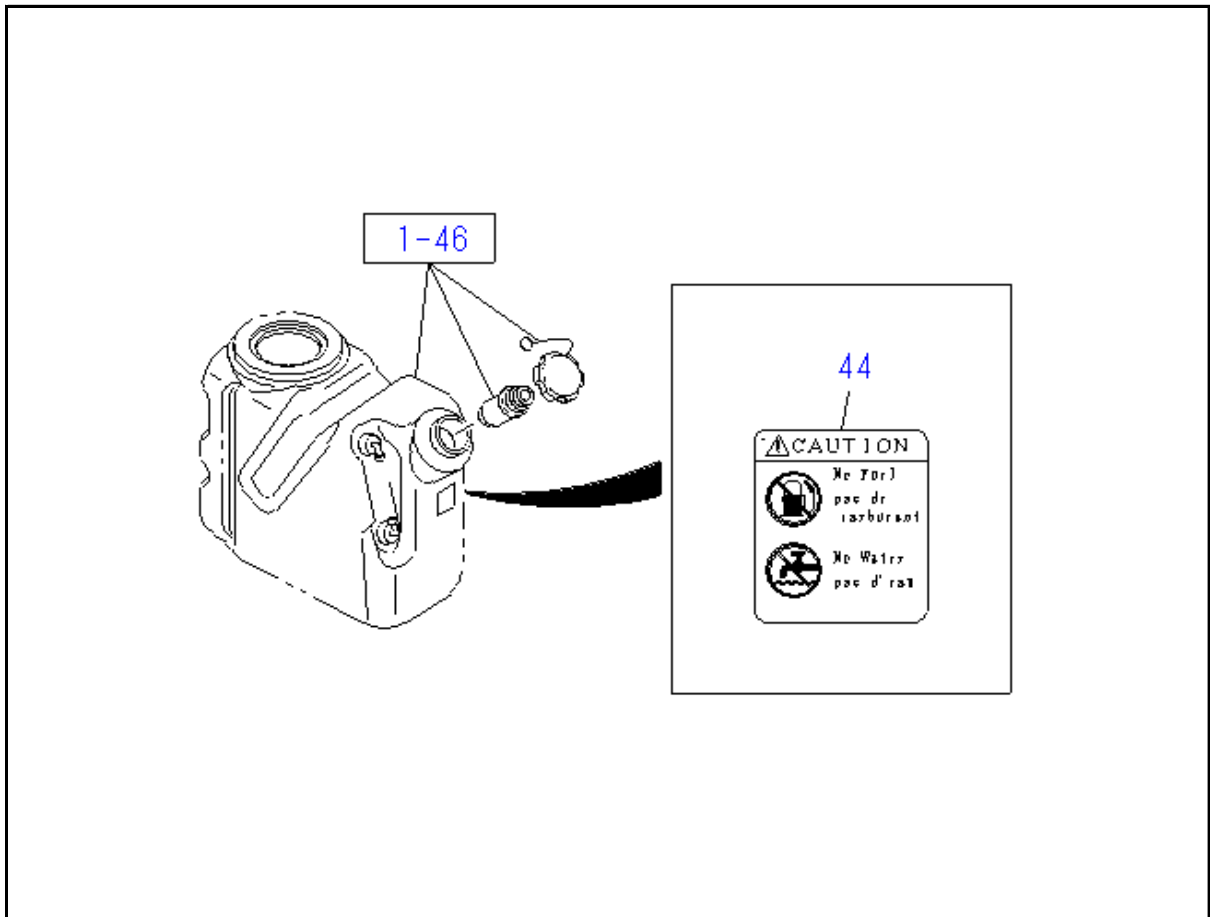
KEY No.	Part no.	qty	Part description	Engine serial no.
24	8-97065-029-0	2	BOLT; COVER	
138	8-94311-446-0 <5-22189-004-0>	1	BEARING; EXH BRK VLV	
139	8-94328-234-0	1	GASKET; EXH BRK VLV	
140	8-97381-625-0	1	INSULATOR; EXH BRK VLV	
141	8-97985-128-0	1	NUT; CLEVIS,EXH BRK VLV	
142	8-97985-127-0	1	CLEVIS; EXH BRK VLV	
143	8-97985-126-0	1	PIN; EXH BRK VLV	
144	8-97985-124-0	1	PIN; SPLIT,EXH BRK VLV	
145	8-97985-125-0	2	WASHER; LK,EXH BRK VLV	
146	0-91180-108-0	2	NUT; EXH BRK VLV	
180	8-97018-597-0	2	COLLAR; EXH BRK VLV	
184	8-98070-516-0	1	COVER; BRKT	
187	8-98037-495-0	1	PROTECTOR; EXH BRK VLV	

1-56 EXHAUST BRAKE SYSTEM



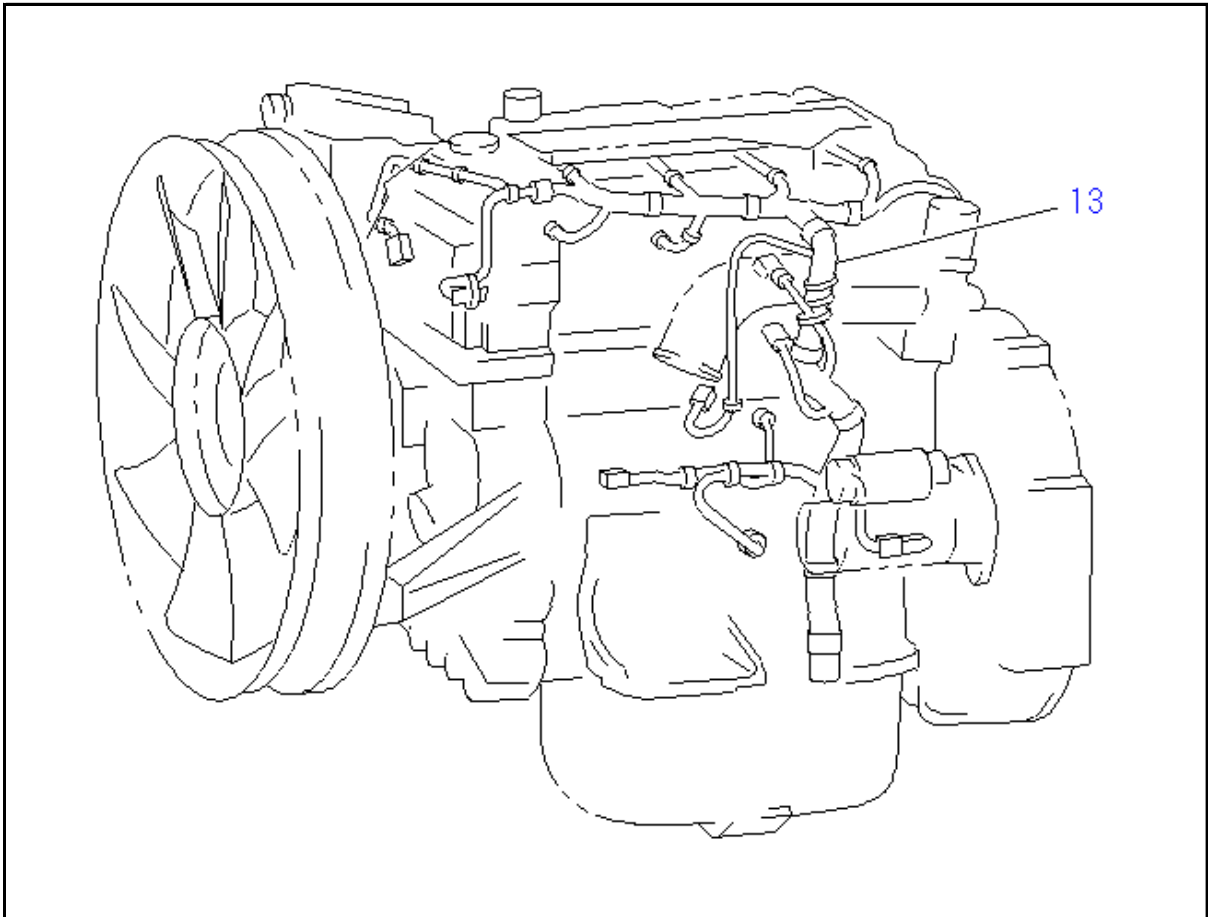
KEY No.	Part no.	qty	Part description	Engine serial no.
1	8-98305-534-0	1	BRAKE UNIT; EXH	
78	8-98008-098-0	4	CLIP; HOSE ID=16	
124	8-97328-577-0	1	VALVE; MAG,DPD EXH THROTTLE	
136 (A)	0-08358-100-0	1	HOSE; MAG VLV TO VAC PUMP L=740 S.B.L=1000	
136 (B)	0-08358-130-0	1	HOSE; MAG VLV TO VAC PUMP L=1300	

7-10 CAUTION PLATE AND LABEL



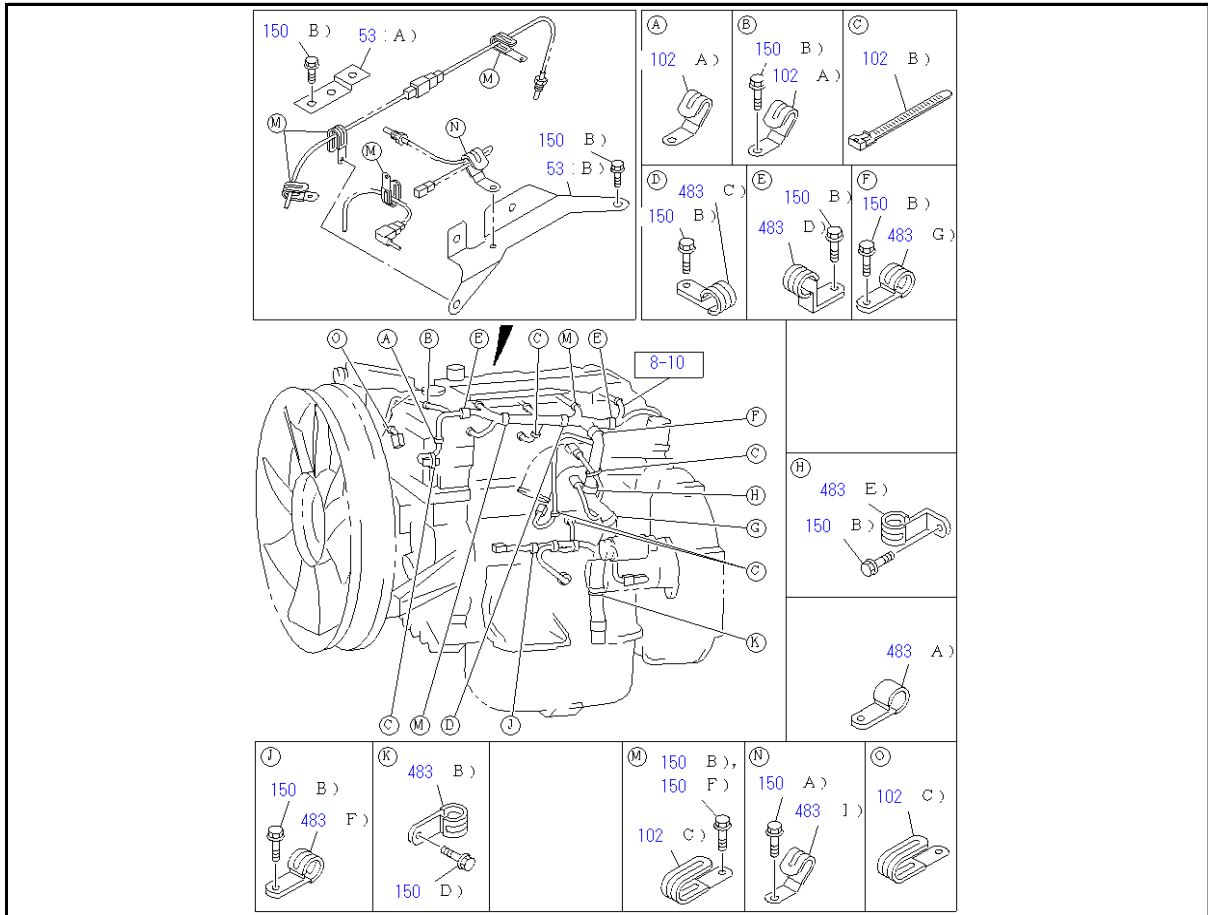
KEY No.	Part no.	qty	Part description	Engine serial no.
44	8-98194-654-0	1	PANEL; CAUTION PLATE	

8-10 WIRING HARNESS AND FUSE



KEY No.	Part no.	qty	Part description	Engine serial no.
13	8-98304-551-0	1	HARNESS; ENG	

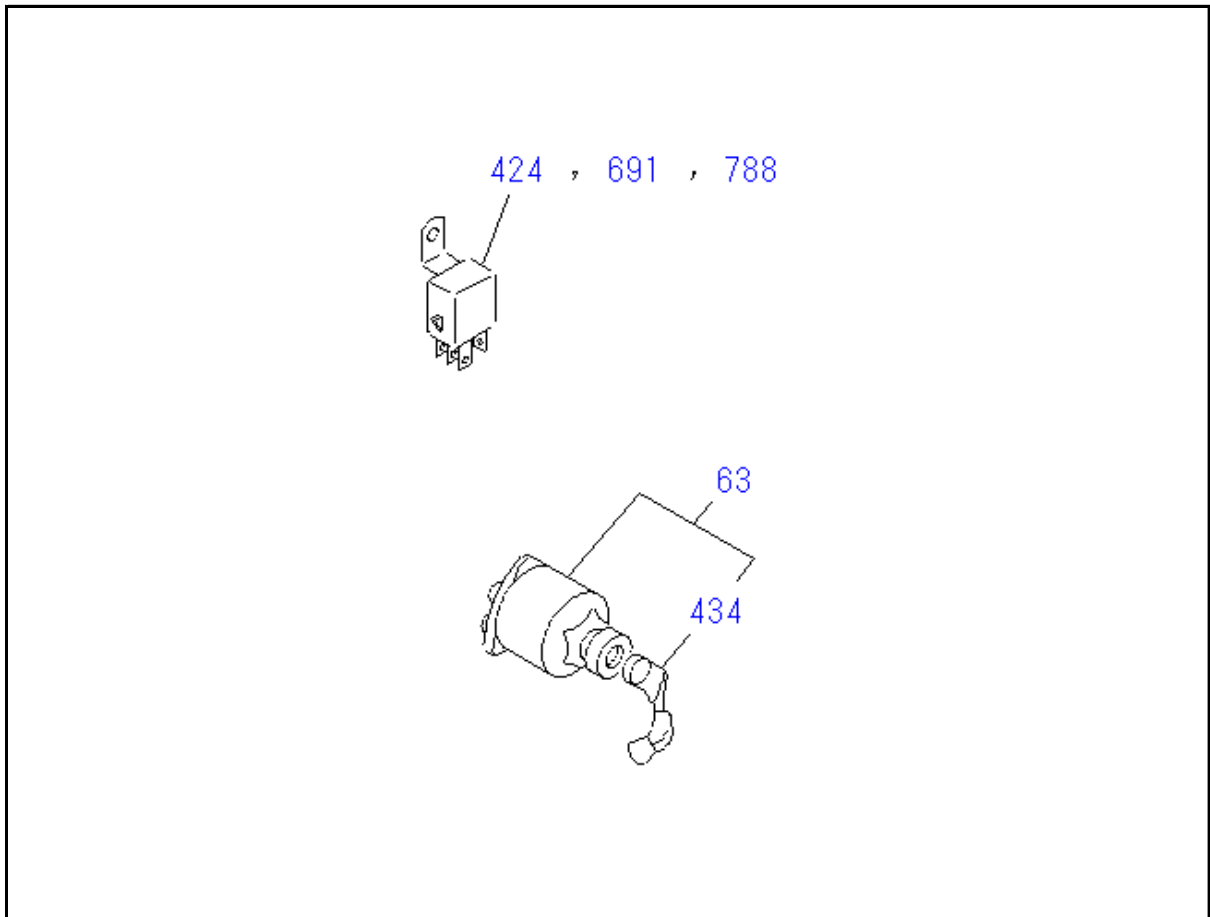
8-15 FIXING PARTS; WIRING HARNESS



KEY No.	Part no.	qty	Part description	Engine serial no.
53 (A)	1-82699-588-0	1	BRACKET; HARNESS	
53 (B)	8-98255-497-0	1	BRACKET; HARNESS	
102 (A)	8-97367-984-1	2	CLIP; BAND ID=12	
102 (B)	5-09707-031-1	7	CLIP; BAND L=140	
102 (C)	8-97367-985-1	7	CLIP; BAND ID=18 L=44	
150 (A)	0-28050-612-0	1	BOLT; CLIP M6X12 FLANGE	
150 (B)	0-28050-812-0	13	BOLT; CLIP M8X12 FLANGE	
150 (D)	0-28051-016-0	2	BOLT; CLIP M10X16 FLANGE	
150 (F)	0-28050-810-0	1	BOLT; CLIP M8X10 FLANGE	
483 (A)	0-95235-556-0	1	CLIP; ENG HARNESS ID=16 L=28	
483 (B)	1-09700-329-1 <1-09700-607-1>	2	CLIP; ENG HARNESS ID=28 L=30	
483 (C)	1-09700-809-0	1	CLIP; ENG HARNESS ID=24 L=27	
483 (D)	1-09700-860-0	2	CLIP; ENG HARNESS ID=18 H=23 L=28	
483 (E)	1-09700-947-0	1	CLIP; ENG HARNESS ID=35 H=45 L=33	
483 (F)	1-09701-013-0	1	CLIP; ENG HARNESS ID=14.5 L=28	
483 (G)	1-09701-107-1	2	CLIP; ENG HARNESS ID=28 L=32	

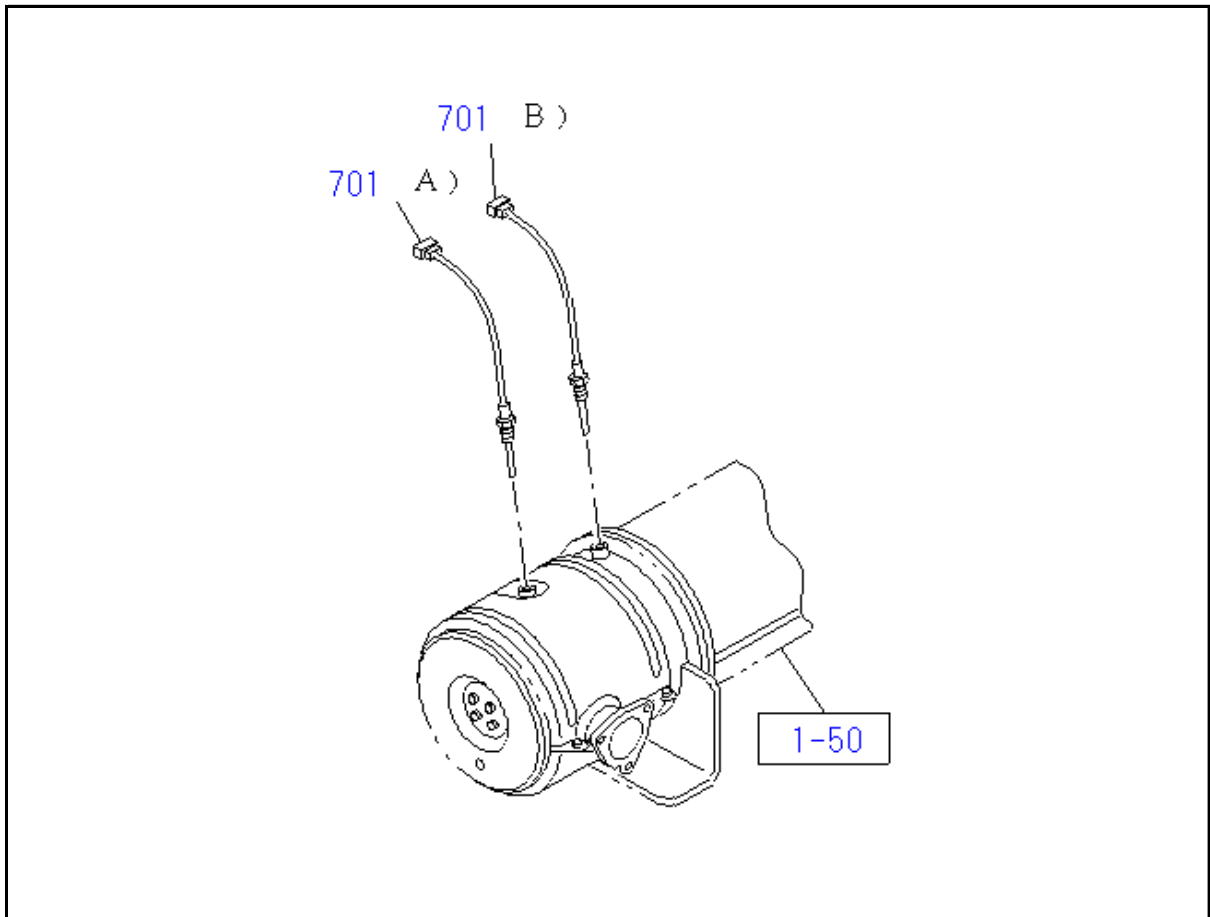
KEY No.	Part no.	qty	Part description	Engine serial no.
483 (I)	8-97329-631-0	1	CLIP; ENG HARNESS	

8-25 SWITCH AND RELAY; INSTRUMENT PANEL



KEY No.	Part no.	qty	Part description	Engine serial no.
63	8-94402-500-0	1	SWITCH ASM; STARTER	
424	5-82550-029-0	1	RELAY 12V	
434	8-94402-498-0	1	KEY; STARTER SW	
691	5-82550-029-0	1	RELAY; EXH,THROTTLE 12V	
788	5-82550-029-0	1	RELAY; DEF DCM 12V	

8-26 ELECTRICAL CONTROL AND OTHER PARTS



KEY No.	Part no.	qty	Part description	Engine serial no.
701 (A)	8-98178-358-1	1	SENSOR; DPD FRONT L=821	
701 (B)	8-98186-762-1	1	SENSOR; DPD REAR L=571	