



# Parts Manual

## S4S Diesel Engine

For use with DP20N, DP25N, DP30N, DP35N  
Chassis Parts Manual.

98725-55100



## **CAT LIFT TRUCK™ GENUINE PARTS**

“CAT LIFT TRUCK™ GENUINE PARTS” should be used exclusively for servicing your Cat Lift Truck Engine.

“CAT LIFT TRUCK GENUINE PARTS” are superior and reliable because they have been produced under the excellent quality-control system, and have passed the strict inspections.

Imitation parts are not reliable from the viewpoints of their material and manufacturing method which are entirely incomparable with those of genuine parts.

A large assortment of “CAT LIFT TRUCK GENUINE PARTS” is always available at any of our authorized dealers, so do your ordering at your nearest dealer by specifying “CAT LIFT TRUCK GENUINE PARTS”.

## GUIDE FOR USE OF PARTS LIST

1. This Parts List contains complete lists of parts for the S4S engine mounted on Cat Lift Trucks :

For the chassis parts of these lift trucks, refer to the following parts lists:

DP20, DP25, DP30, DP35

2. This Parts List is applicable to the initial serial numbers.
3. When ordering parts, give the Cat Lift Truck dealer or distributor the following information:
  - (1) Part number (or assembly number) and part name
  - (2) Quantity required
  - (3) Model and serial number

NOTE : In cases where the ordered parts happen to be out of stock, substitute parts (interchangeable with those ordered) will be supplied.

4. Indication of assembled bolts with washer

Of the standard bolts, those with washers are identified by the symbol "B/W" in the Description column of each list. (Part Name : BOLT,W/WASHER)

For the part numbers of the bolts and washers and those of bolts with washers, refer to the listing (beginning with the page D1) at the end of this parts list. These bolts and washers should be ordered individually.

5. For the numerical index, refer to the page beginning with C1 at the end of this parts list.

6. The parts and part numbers are subject to change without prior notice.

# SAMPLE OF PARTS LIST



REF. NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	Q T Y	MODEL & APPLICABLE SERIAL NO.		M / R D
						FROM	TO	
1	90420-01320			KEY	24			
2	90420-01330			CAP	12			
3	90420-01300			SPRING	12			
4	90420-01290			SEAL	6			
5	90420-01220		C	VALVE, INTAKE	6			
6	90420-01730	N	1	VALVE, INTAKE	6	00008		V
7	90420-01200			VALVE, EXHAUST	6			
8	90420-01140		C	ARM KIT	12		00007	
9	90420-11140	N	1	ARM KIT	12	00008		V
10	90420-01290			SEAL	6			
	90420-01270			SEAL, HARDENED	6	00008		V
	90420-01880			SUPPORT, ROCKER ARM	2	00008		V

See (4)  
Interchangeability  
codes.

See (5)  
Sequence-of-change  
numbers.

See (6) Change codes.

See (2) Reference  
number

Quantity per unit

Applicable from serial No.  
indicated.

Part newly changed  
or added. See (12)

Applicable up to serial  
NO. indicated

NOTE: Some of model designations, number of variations and serial numbers, indicated above, are quoted from other parts lists. Read these items of information as those for this parts list.

NOTE: For the description of each item, refer to the pages which follow.

HOW TO USE THIS PARTS LIST (to be referred to together with the former SAMPLE OF PARTS LIST)

(1)

01 CYLINDER HEAD

- 3 -

REF. NO.	PART NO.	R P	S E N P Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M R	V D
					S4S			FROM-	-@UPTO		
1	32A01-01023			HEAD ASSY, CYLINDER	1						
1 01	MM316248			PLUG, DRAIN	1					A	
1 02	30636-25901			GASKET	1					A	
2	*			HEAD SUB ASSY, CYL	1						
2 01	04826-22000			CAP, SEALING	8						

(2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

The items (1) thru (12) are as described below:

(1) Compiling system

The systems of a unit are grouped according to their location in the unit. The groups, each identified by group number, are listed in the order by CONTENTS. Each group is preceded by an "exploded view" which clearly illustrates each part in its correct relation to the other parts in the illustration.

(2) Reference number

Abbreviated to "REF. No.," this number is used to locate a part in the illustration. In cases where the reference number is of three to four figures, the first and second figures show the reference number of an assembly, and the last two figures show the numbers of its component parts.

(3) Part numbers

The part numbers shown in this parts list are those assigned to Cat Lift Truck genuine parts.

NOTE : Parts with asterisk (\*) are not supplied individually.

(4) Interchangeability codes

The interchangeability codes used in this parts list are as follows:

PART NO.	Code (R/P)	DESCRIPTION
A (Old) B (New)	R	B (new part) and A (old part) are mutually interchangeable
A (Old) B (New)	1	A (Old part) is not supplied. B (new part) can be substituted for A (Old part).
A (Old) B (New)	3	B (new part) can be substituted for A (old part). [A (old part) cannot be substituted for B (new part).]
A (Old) B (New)	N	B (new part) and A (old part) are not interchangeable.
A (Old) B (New)	G	B (new part) can be substituted for A (old part) in combination with other part(s). (For the parts to be combined, refer to the listing beginning with the page E1 at the end of this parts list.)

(5) Sequence-of-change numbers

The parts are changed for improved quality or performance. Their changes are indicated in sequence by numerals (1.2.3...)

Blank : Original

1 : 1st change

2 : 2nd change

3 : 3rd change

(6) Change codes

These codes indicate the reason or purpose of changes of the parts.

A : Added part (a part entered into service)

C : Change of part number

D : Deleted part (a part applicable up to the serial no. expressed in Serial No. column)

E : Added part except above reasons

Q : Change of quantity

(7) Part name

Abbreviations are sometimes used. For the abbreviations, refer to TABLE OF SYMBOLS & ABBREVIATIONS appeared in hind pages of this general information chapter.

(8) Description & specification codes

(a) Description codes (expressed in the first part of Description column).

B/W : Assembled bolt (with washer)

KIT : Part supplied as a kit

STD : Standard part

OPT : Optional part

AR : Part used, as required or by selection or in adjusted quantity for necessity

SFN : Semi-finished part

(b) The Description codes in above paragraph (a) are followed by supplementary Explanation such as dimensions (thickness, length, etc.) , manufacturer part number, manufacturer name, etc. as occasion demands.

NOTE: Unless otherwise indicated, the dimensions are shown in millimeter and the name of unit is abbreviated.

(Examples) Thickness : T = 1.00                      Length : L = 1000

Width : W = 1500                      Height : H = 500

(c) The parts indicated as "NOT SHOWN", such as component parts of repair kit, are not shown in the illustration.

(9) Quantity

Quantity of part or assembly and its component parts required for one unit of product is indicated.

NOTE: In case "AR" appears in QTY column, it is required to adjust quantity for use.

(10) Model & Applicable serial numbers

- (a) Model : Model, type, specification, destination, etc. of product to which a parts list applies are indicated in the title column of each variation.
- (b) Applicable serial numbers : Applicable serial numbers of product are indicated in the "FROM" or "UP TO" column. Serial numbers with "@" are scheduled ones and sometimes differ from the real serial numbers.  
If the "FROM" column is blank, the parts is applicable to serial number shown on this cover and up.

NOTE: In this parts catalogue, the approximate production date is indicated in the SERIAL NO. column instead of the applicable serial number.

When placing a order for any of the chassis or mast parts which are classified "N" (not interchangeable) or "G" (interchangeable as an assembly), ask and confirm to our authorized dealer in advance by giving the chassis or mast model name and serial number to choose an applicable part between the new and old parts.

[Example of approximate date of production]

- 00007 : Manufactured not later than July, 2000
- 00008- : Manufactured in and after August, 2000
- 00104 : Manufactured not later than April, 2001
- 00105- : Manufactured in and after May, 2001
- 00106 : Manufactured not later than June, 2001
- 00107- : Manufactured in and after July, 2001

(11) Management rank

Parts ranked as "A" are high-demand parts. This ranking is to be referred to by dealers, and is devised to facilitate and rationalize their distribution, stocking and inventory of the parts.

(12) Parts changed or added after the last parts list that has been published are identified by "V."

### TABLE OF SYMBOLS & ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
ACCEL	ACCELERATOR	EQUIP	EQUIPMENT
ADJ	ADJUSTING (ADJUSTABLE)	EXH	EXHAUST
AIR-CON	AIR-CONDITIONER	E/TNK	EXPANSION TANK
ASSY	ASSEMBLY	FITT	FITTING
ATT	ATTACHMENT	FLEX	FLEXIBLE
AUTO	AUTOMATIC	FR	FRONT
AUX	AUXILIARY	GSKT	GASKET
AR	AS REQUIRED	GEN	GENERATOR
BATT	BATTERY	GOV	GOVERNOR
BRG	BEARING	G/N	GROUP NUMBER
BRKT	BRACKET	H/EXCH	HEAT EXCHANGER
BUSH	BUSHING	HEX	HEXAGON
CARB	CARBURETTOR	HYD	HYDRAULIC
C/L	CENTERLINE	H=	HEIGHT
COMPR	COMPRESSOR	IND	INDUSTRIAL
CON-ROD	CONNECTING-ROD	INJ	INJECTION
C/MBR	CROSS-MEMBER	INSTAL	INSTALLATION
CYL	CYLINDER	INST	INSTRUMENT
DIA	DIAMETER	INTLK	INTERLOCK
DIFF	DIFFERENTIAL	JUNC	JUNCTION
DISTR	DISTRIBUTOR	KD	KNOCKDOWN
DR	DRIVE	L.H.	LEFT HAND
D=	OUTER DIAMETER	LUB	LUBRICATION
ELEC	ELECTRIC	L=	LENGTH
ENG	ENGINE	MANF	MANIFOLD
		MAX	MAXIMUM

### TABLE OF SYMBOLS & ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
M.L.H	MAXIMUM LIFTING HEIGHT	TEMP	TEMPERATURE
MIN	MINIMUM	TERM	TERMINAL
MTR	MOTOR	T/CONV	TORQUE-CONVERTER
MTG	MOUNTING	T/F	TRANSFER
NO.	NUMBER	T/M	TRANSMISSION
OPT	OPTION	T/HSG	TURBINE-HOUSING
O/D	OVER DRIVE	T/C	TURBOCHARGER
O.S	OVERSIZE	T=	THICKNESS
PTO	POWER TAKE-OFF	U/BODY	UNDERBODY
P/S	POWER STEERING	U.S	UNDERSIZE
PRESS	PRESSURE	UNIV	UNIVERSAL
P/N	PART NUMBER	VAC	VACUUM
QTY	QUANTITY	VENT	VENTILATOR
RAD	RADIATOR	W/STRIP	WEATHERSTRIP
RE	REAR	W/	WITH
REG	REGULATOR	W/O	WITHOUT
REV	REVERSE	W/W	WOODWARD
R.H.	RIGHT HAND	W/PMP	WATER PUMP
REF.NO.	REFERENCE NUMBER	W=	WIDTH
SECT	SECTION	Z=	NUMBER OF GEAR TEETH
S/MBR	SIDE MEMBER	&	AND
STD	STANDARD	@	UNCONFIRMED
SUPT	SUPPORT	*	PART NOT TO BE SUPPLIED
SYM	SYMBOL	IGBT	INSULATED GATE BIPOLAR TRANSISTOR
SYNCH	SYNCHRONIZER	SRD	SET, RUN, DIAGNOSIS
SYS	SYSTEM		

### TABLE OF MAKER'S NAME

	OMRON Electronics Mando AC Delco Goodyear		Automotive Controls Corp. Japan Servo Co. LTD. Toyoda Gousei LTD. Robert Shaw
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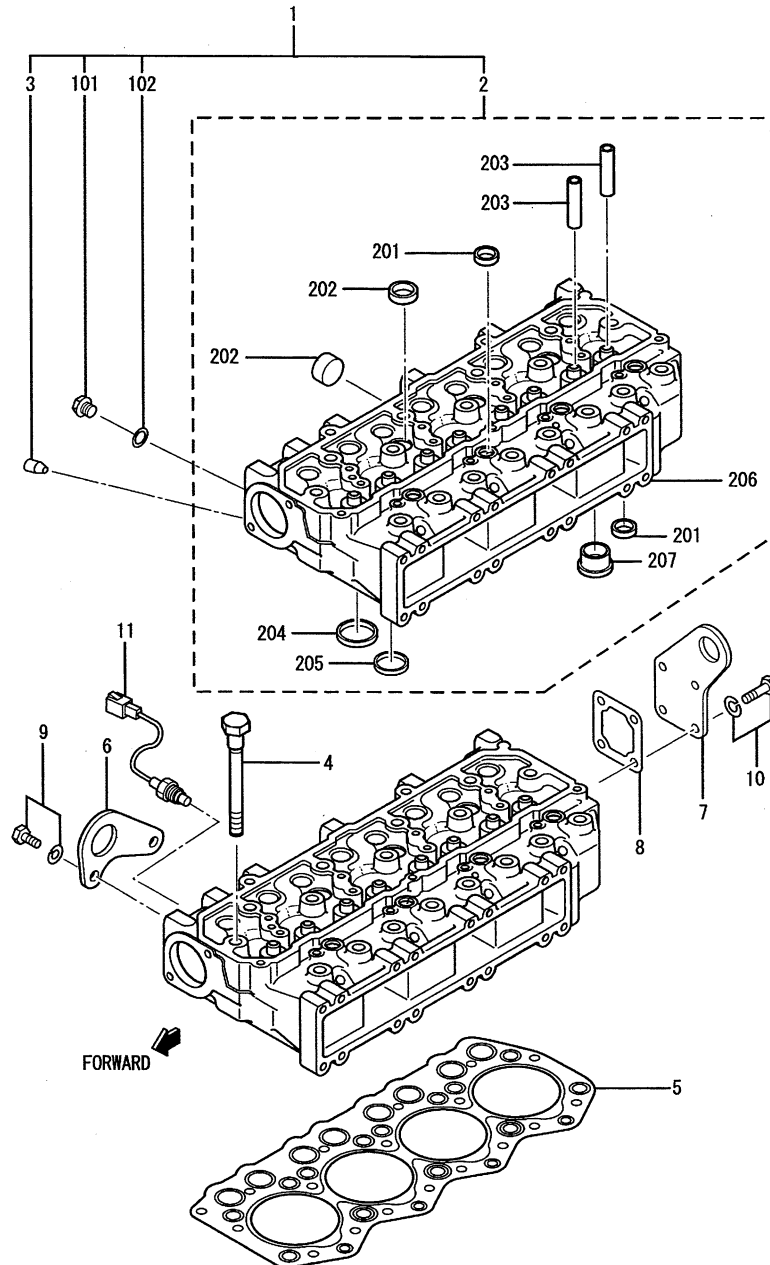
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04-01	VALVE MECHANISM .....	4
04-02	ROCKER COVER & BREATHER .....	6
05	CAMSHAFT .....	8
07-01	CRANKCASE ASSY .....	10
07-02	MAIN BEARING .....	12
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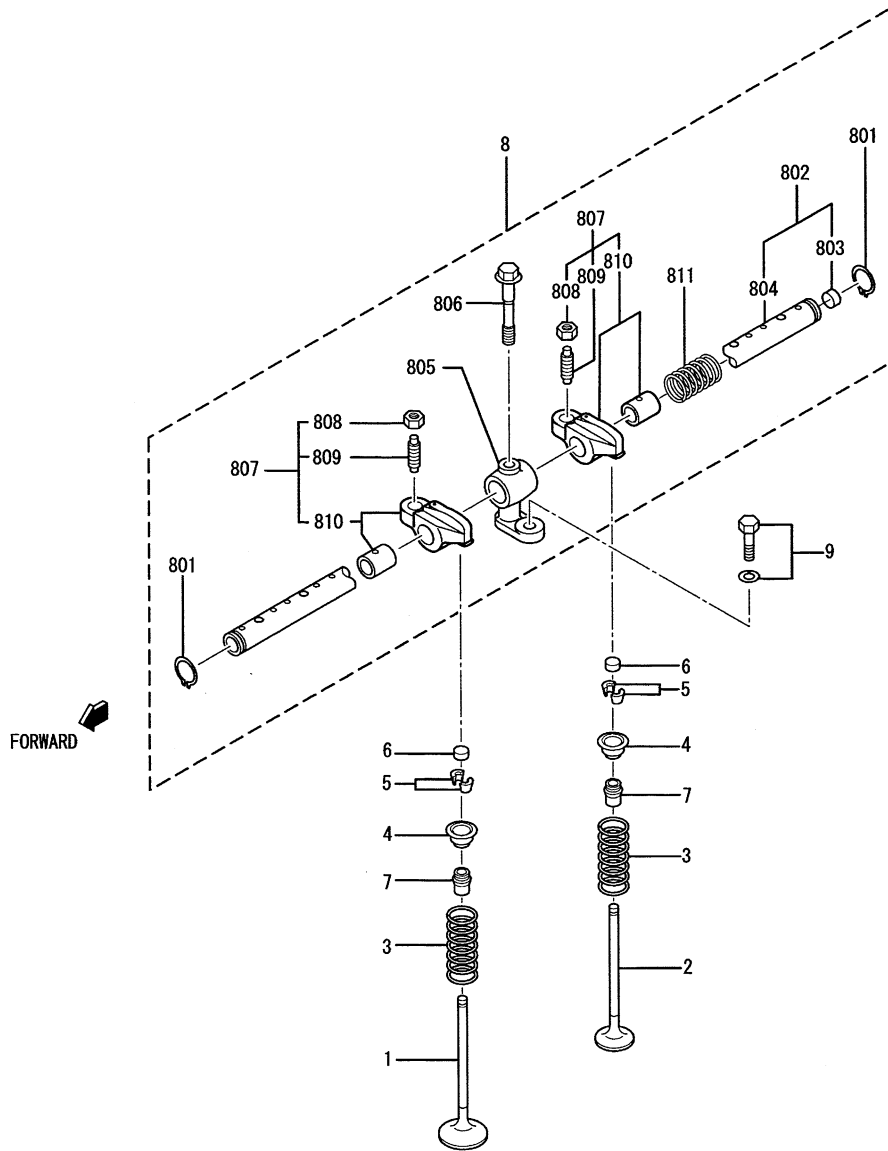
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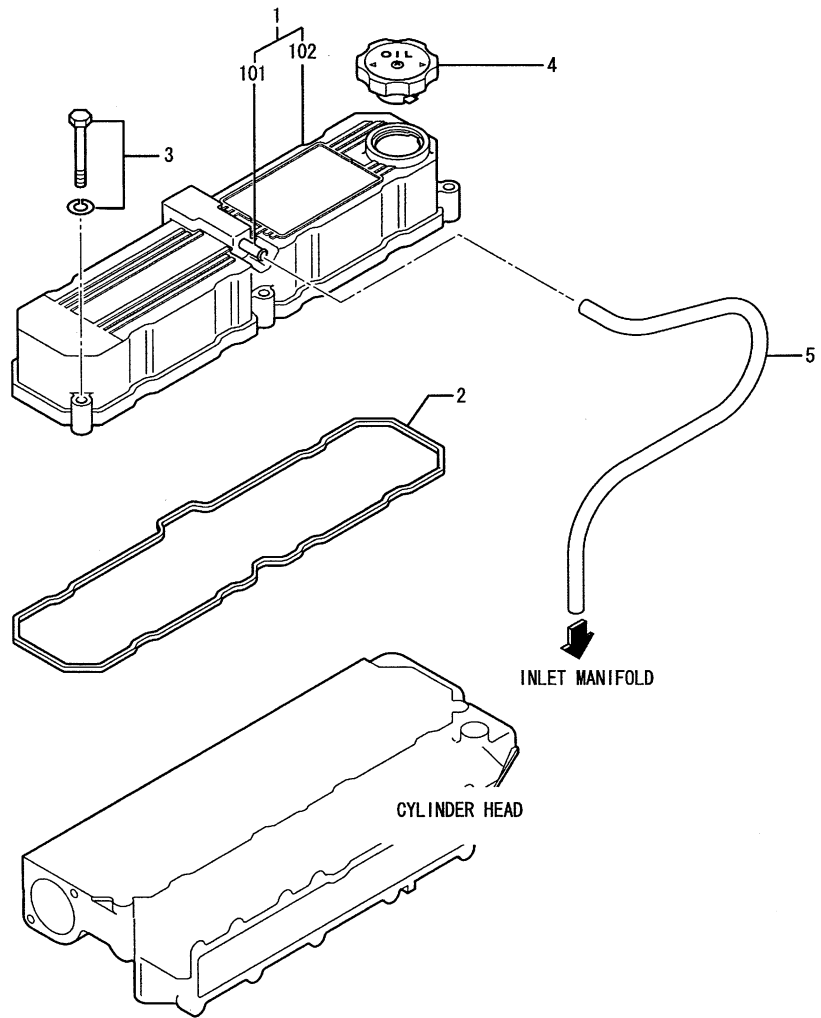
CYLINDER HEAD



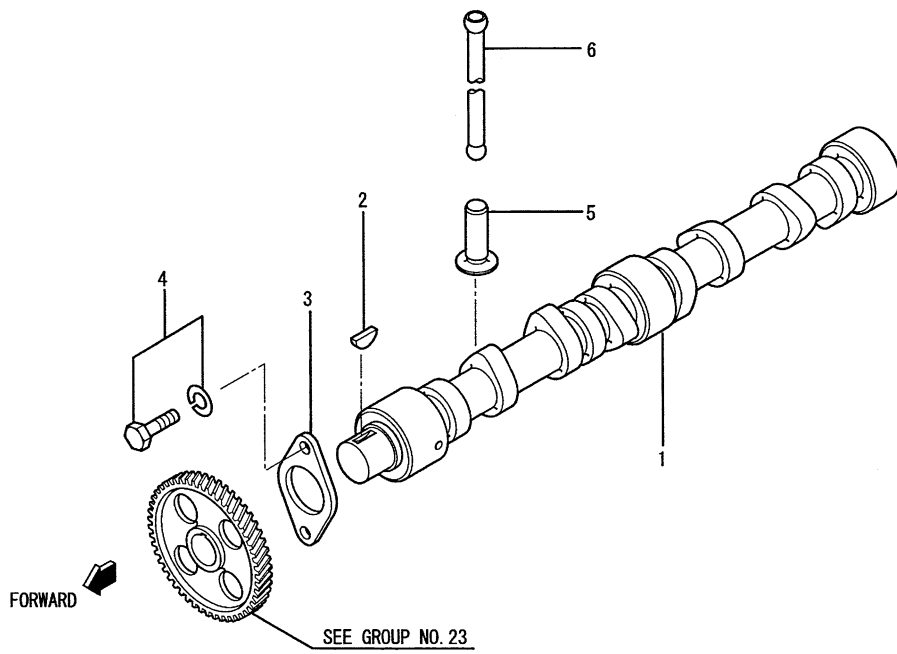




REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A04-10101			VALVE, INLET	4						
2	32A04-11101			VALVE, EXHAUST	4						
3	30604-21402			SPRING, VALVE	8					A	
4	30604-31601			RETAINER, UPPER	8						
5	34404-02901			COTTER, VALVE	16					A	
6	31304-11700			CAP	8						
7	32A04-02801			SEAL, VALVE STEM	8						
8	32A04-20020			ROCKER & SHAFT ASSY	1						
8 01	MF522010			RING, SNAP	2					A	
8 02	32A04-04011			SHAFT ASSY, ROCKER	1						
8 03	04826-21200			CAP, SEALING	2						
8 04	*			SHAFT, ROCKER	1						
8 05	32A04-04701			BRACKET, ROCKER SHAFT	4						
8 06	32A04-04801			BOLT, ROCKER BRACKET	4						
8 07	32A04-22010			ROCKER ASSY	8						
8 08	F2325-08000			NUT, JAM	8					A	
8 09	32A04-02401			SCREW, ROCKER	8						
8 10	*			ROCKER & BUSHING	8						
8 14	32C04-04501			SPRING, ROCKER	3						
9	F1805-08025			BOLT, W/WASHER	4					A	

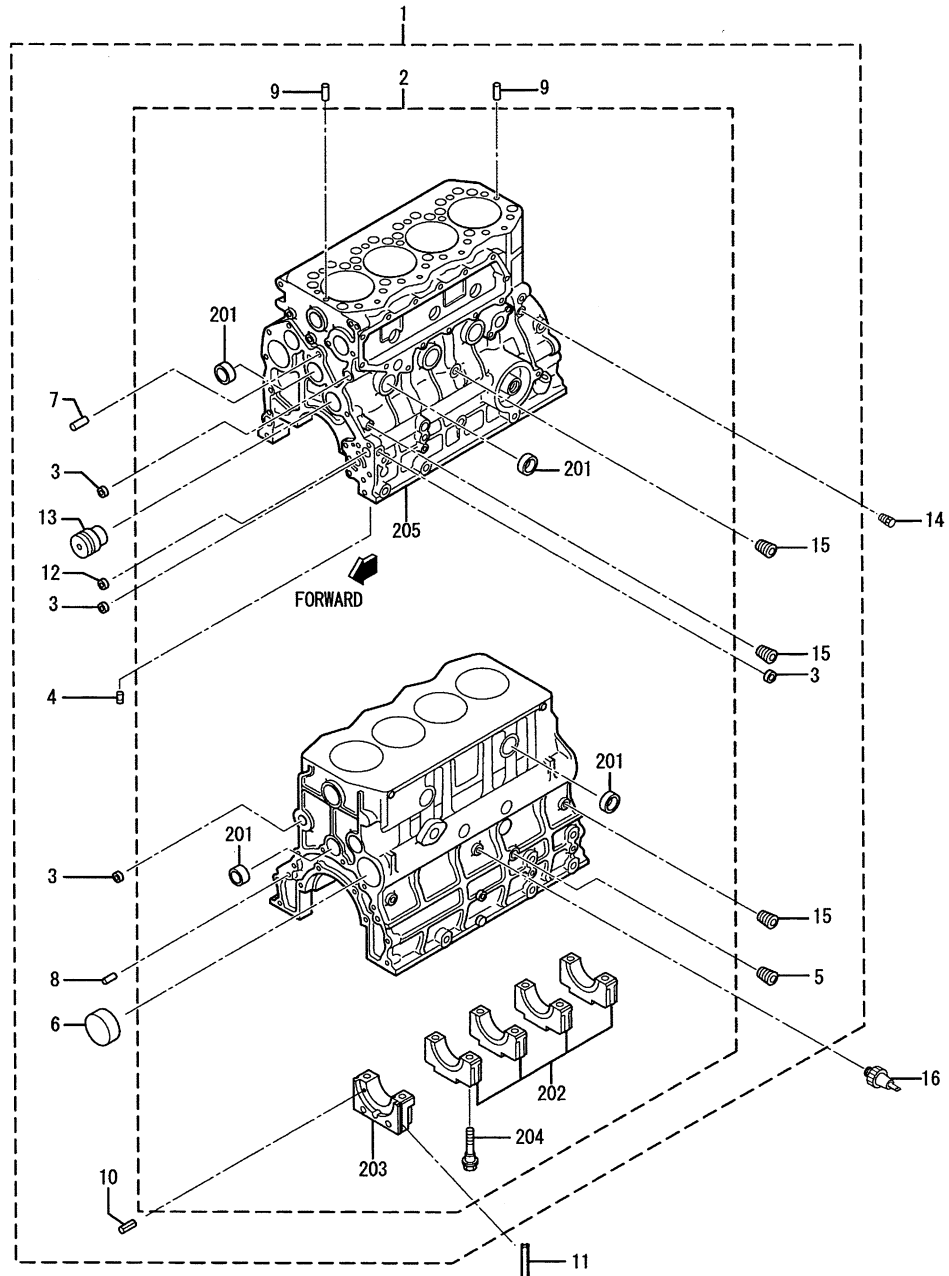


REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A04-13011			COVER ASSY, ROCKER	1						
1 01	*			PIPE	1						
1 02	*			COVER, ROCKER	1						
2	32A04-13200			GASKET, ROCKER COVER	1						
3	F1805-08040			BOLT, W/WASHER	5						A
4	MD008784			CAP, OIL FILLER	1						
5	MM433787			HOSE, BREATHER	1						

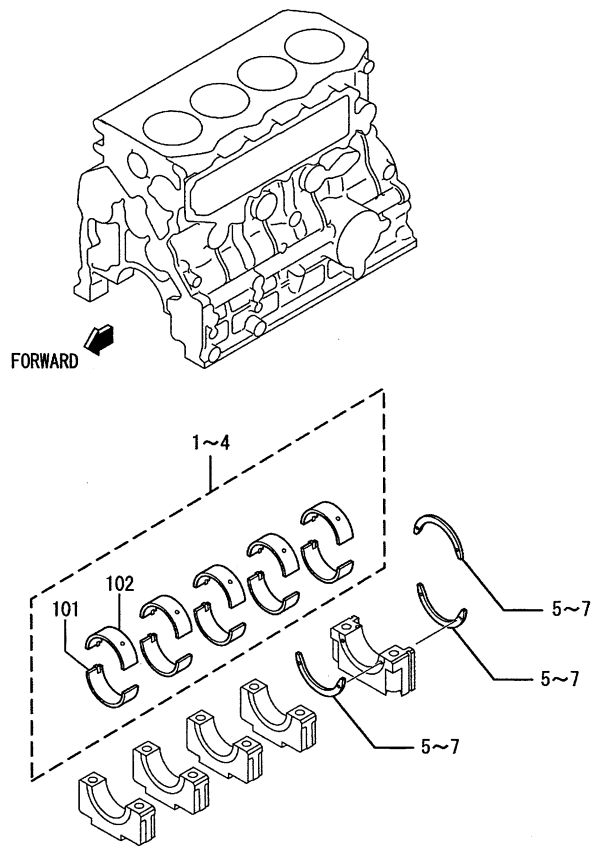


REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM	UPTO		
1	32A05-00101			CAMSHAFT		1						
2	F2870-07022			KEY, WOODRUFF		1						
3	30405-31403			PLATE, THRUST		1						
4	F1805-08016			BOLT, W/WASHER	B/W	2					A	
5	32A05-02101			TAPPET		8						
6	32A05-13100			ROD, PUSH		8						

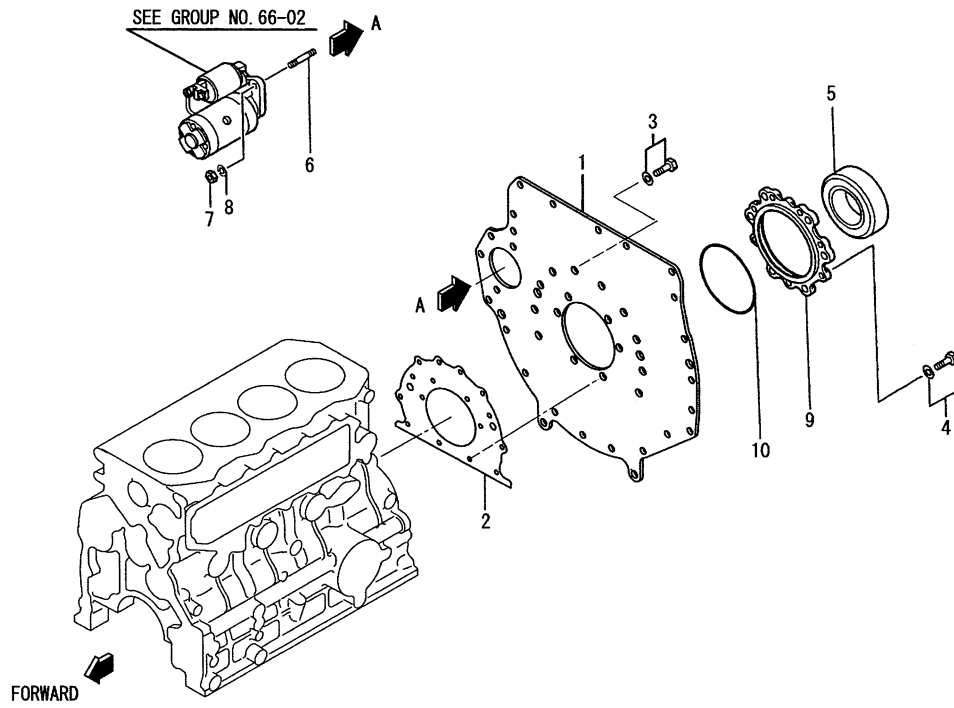
07-01 CRANKCASE ASSY



REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-TO		
1	32A07-01016			CRANKCASE ASSY	1						
2	*			CRANKCASE SUB ASSY	1						
2 01	04826-23500			CAP, SEALING	10						
2 02	*			CAP, BEARING	4						
2 03	*			CAP, BEARING REAR	1						
2 04	32A07-02600			BOLT, BEARING CAP	10						A
2 05	*			CRANKCASE	1						
3	04826-21800			CAP, SEALING	5						
4	*			PLUG	3						
5	MS661142			PLUG, TAPER	1						
6	34307-02100			PLUG, CAM	1						
7	32A07-01501			PIN, DOWEL	2						A
8	F2846-12000			PIN, DOWEL	2						A
9	F2846-05000			PIN, DOWEL	2						A
10	F2850-04008			PIN, SPRING	6						A
11	32A07-11700			SEAL, SIDE	2						
12	05605-01410			BUSHING	1						
13	32A23-03500			SHAFT, IDLER	1						
14	MD000269			PLUG, TAPER	1						A
15	MS661140			PLUG, TAPER	7						A
16	MM130066			SWITCH, OIL PRESSURE	1						

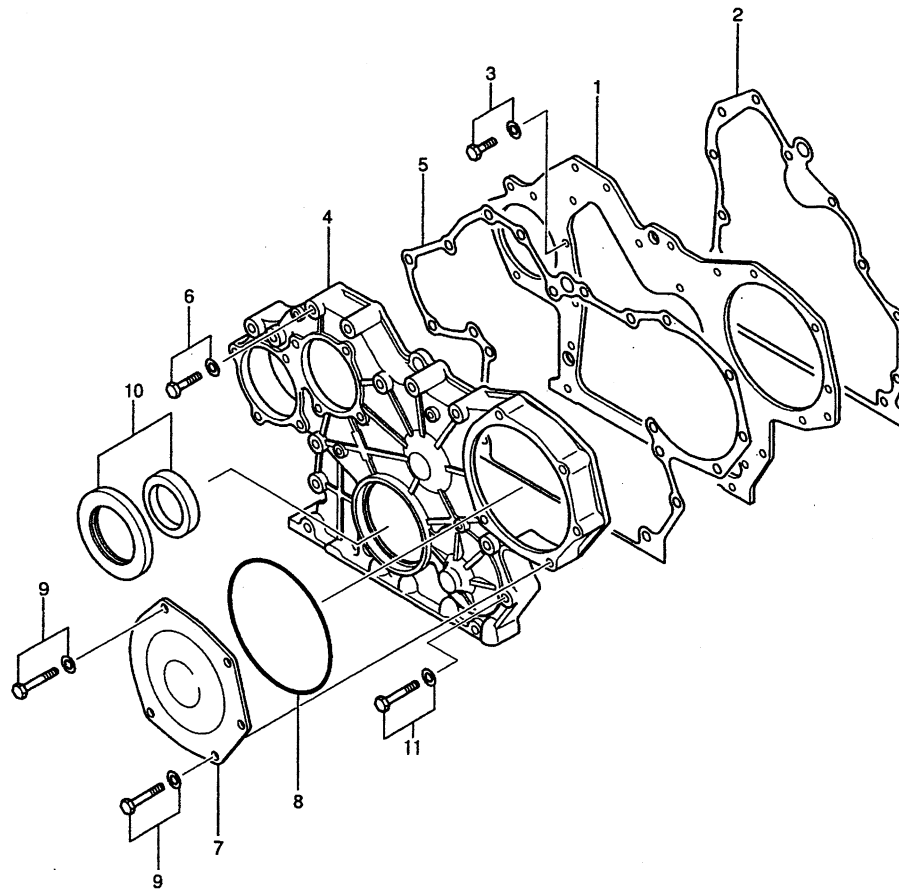


REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM-	-@UPTO		
1	32A09-00010			BEARING SET, MAIN	STD	1					A	
1 01	*			MAIN, BEARING LOWER		5						
1 02	*			MAIN, BEARING UPPER		5						
2	32A09-00020			BEARING SET, MAIN	U. S 0. 25	1					A	
3	32A09-00030			BEARING SET, MAIN	U. S 0. 50	1					A	
4	32A09-00040			BEARING SET, MAIN	U. S 0. 75	1					A	
5	32B09-08101			PLATE, THRUST	STD	3						
6	32B09-08201			PLATE, THRUST	0. S 0. 15	3						
7	32B09-08301			PLATE, THRUST	0. S 0. 30	3						

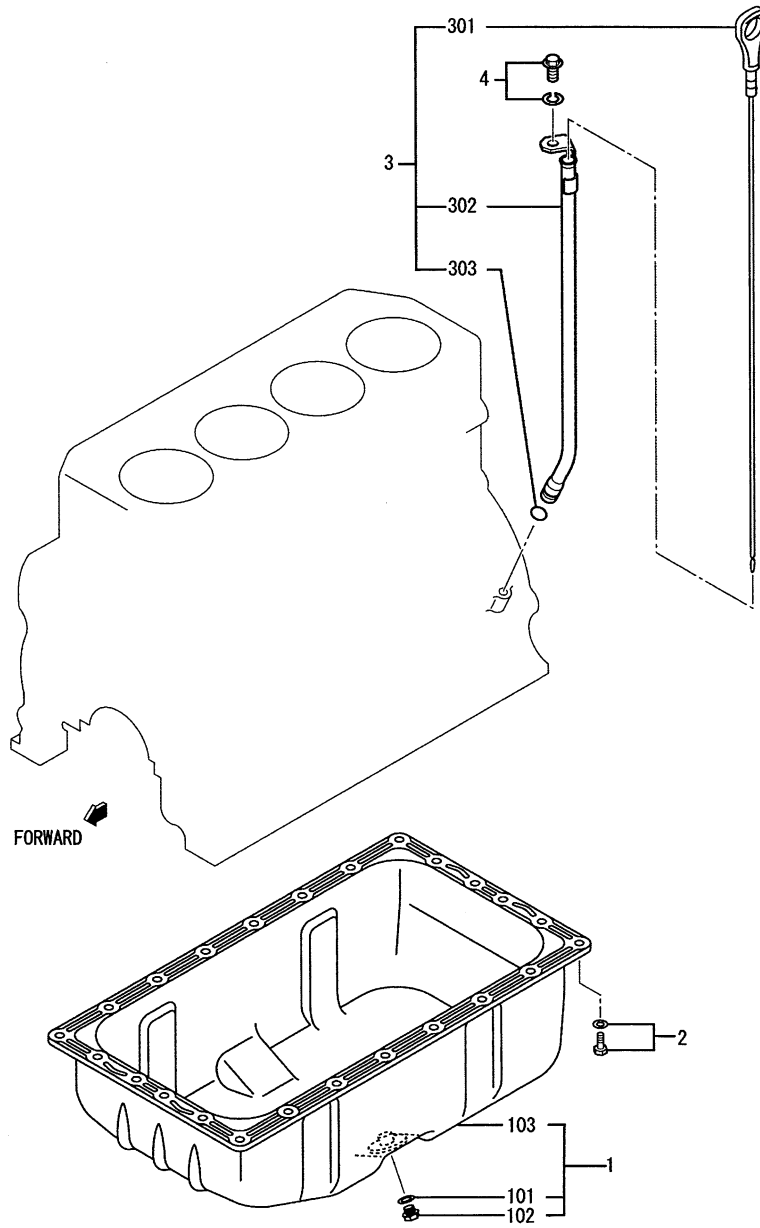


REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	34A07-07400			PLATE, REAR	1						
2	32A07-14201			GASKET, REAR	1					A	
3	F1805-10020			BOLT, W/WASHER	10					A	
4	F1805-10030			BOLT, W/WASHER	6					A	
5	34407-11090			SEAL ASSY, OIL	1						
6	32A07-06900			STUD	2						
7	F2300-10000			NUT	2						
8	F2515-10000			WASHER, SPRING	2					A	
9	32A07-17101			CASE, REAR OIL SEAL	1						
10	06016-13120			O-RING	1					A	

TIMING GEAR CASE

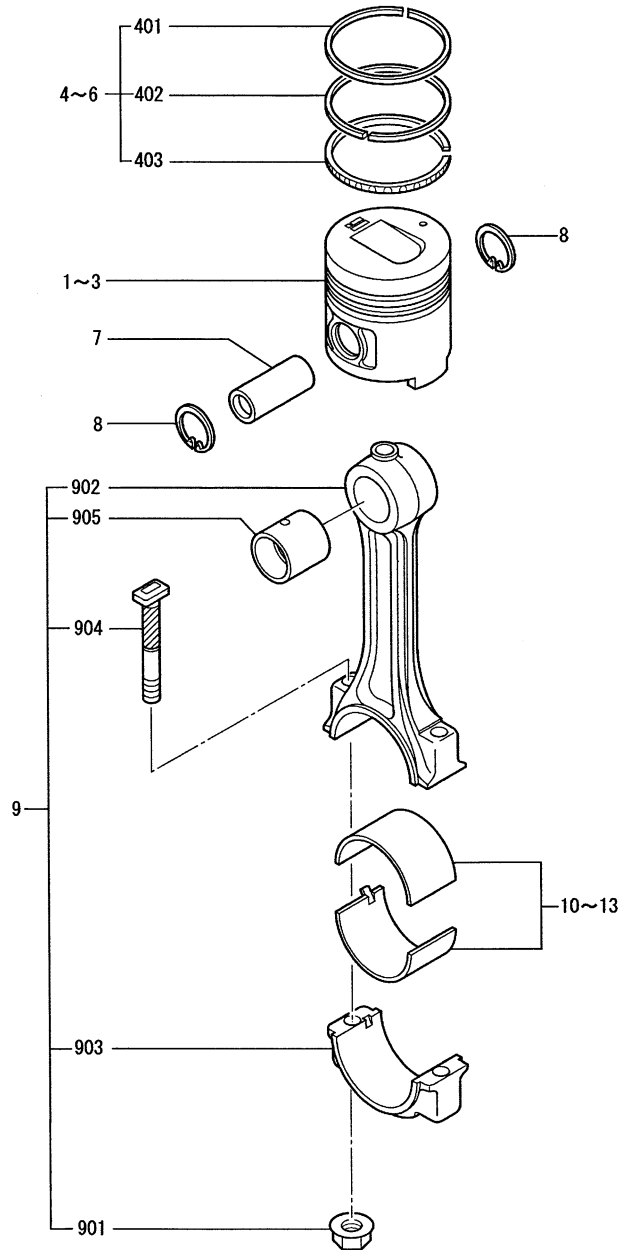


REF. NO.	PART NO.	R / P	S C E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A11-03300			PLATE, FRONT	1						
2	32A07-04100			GASKET, FRONT PLATE	1						
3	F1805-08016			BOLT, W/WASHER	5					A	
4	32A11-00501			CASE, TIMING GEAR	1						
5	32A11-22201			GASKET, GEAR CASE	1					A	
6	F1805-08055			BOLT, W/WASHER	11					A	
7	32A11-01100			COVER, GEAR CASE	1						
8	06016-13140			O-RING	1					A	
9	MF241266			BOLT, W/WASHER	7					A	
10	32A11-04010			SEAL ASSY, OIL	1						
11	MF241269			BOLT, W/WASHER	2					A	



REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	UPTO		
1	32A13-01030			PAN ASSY, OIL	1						
1 01	MD050317			GASKET	1						
1 02	MD050316			PLUG, DRAIN	1						A
1 03	*			PAN, OIL	1						
2	F1805-08016			BOLT, W/WASHER	24						A
3	32A42-07030			GAGE & GUIDE ASSY	1						
3 01	32A42-07300			GAGE, OIL LEVEL	1						
3 02	32A42-07400			GUIDE, OIL LEVEL GAGE	1						
3 03	05507-10110			O-RING	1						A
4	F1805-08020			BOLT, W/WASHER	1						A

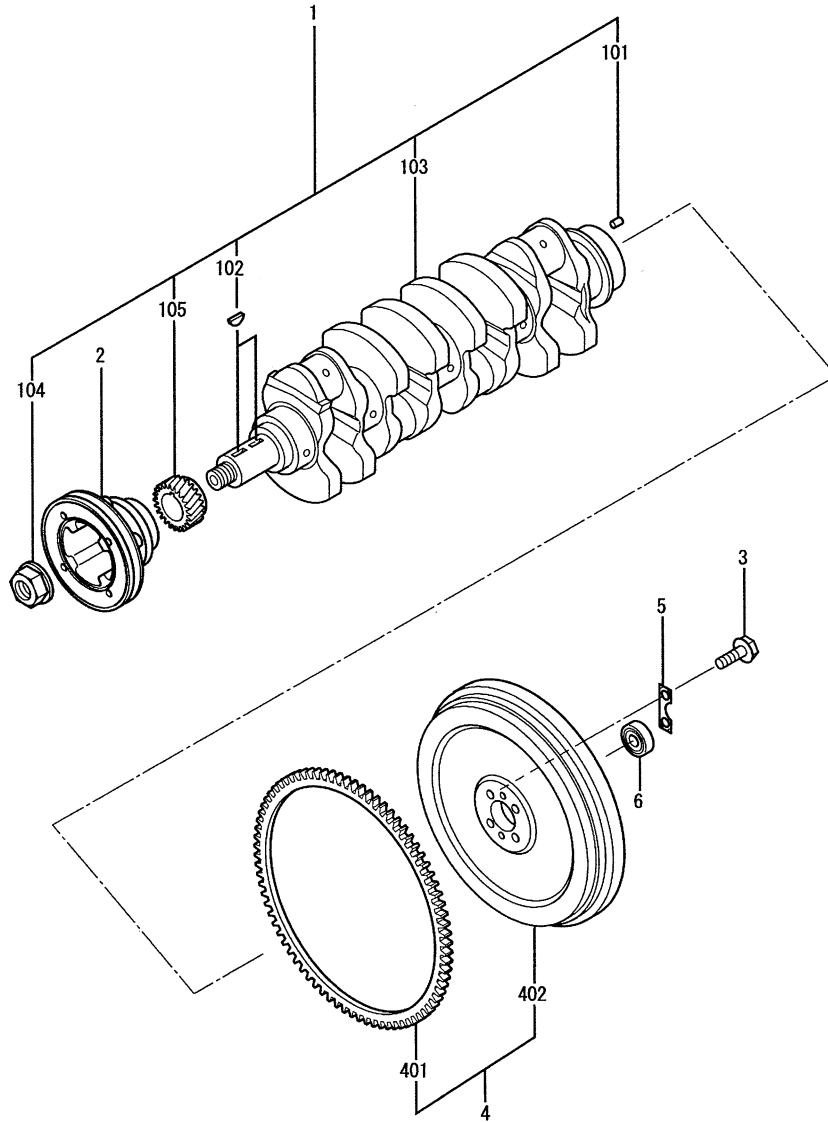
PISTON & CONNECTING-ROD



PISTON & CONNECTING-ROD

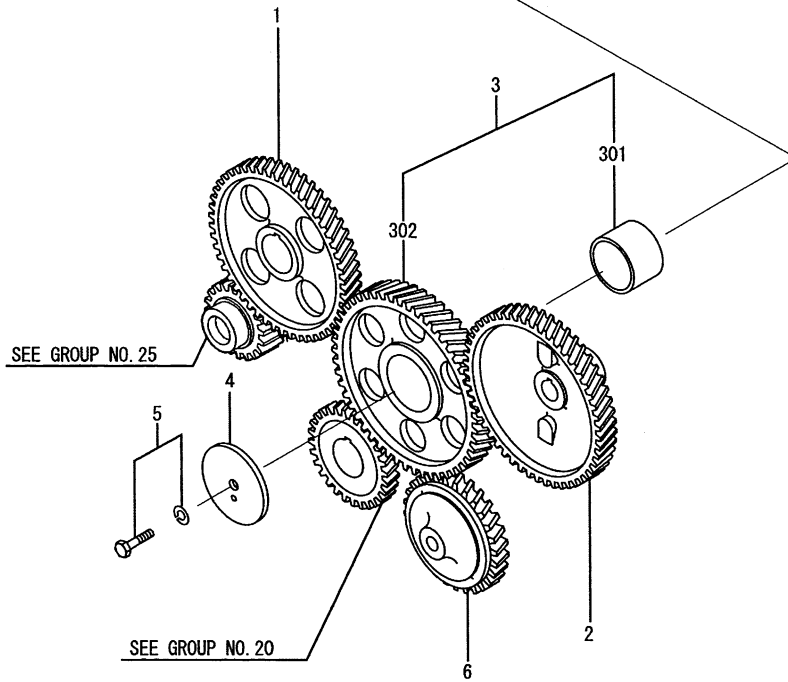
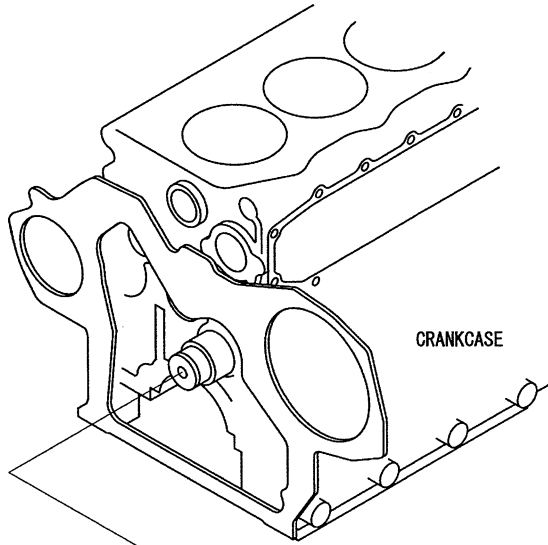
REF. NO.	PART NO.	R / P	S C E N Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V / R D
						S4S			FROM-	-@UPTO		
1	32A17-10100			PISTON	STD	4						A
2	32A17-10200			PISTON	O. S 0. 25	4						
3	32A17-10300			PISTON	O. S 0. 50	4						
4	32A17-02010			RING SET, PISTON	STD	4						
4 01	*			RING, NO. 1		4						
4 02	*			RING, NO. 2		4						
4 03	*			RING, OIL		4						
5	32A17-02020			RING SET, PISTON	O. S 0. 25	4						
6	32A17-02030			RING SET, PISTON	O. S 0. 50	4						
7	32A17-08300			PIN, PISTON		4						A
8	F3202-03000			RING, SNAP		8						A
9	32A19-00011			ROD ASSY, CONNECTING		4						
9 01	30619-10501			NUT, CONNECTING-ROD		8						A
9 02	*			CONNECTING-ROD		4						
9 03	*			CAP, CONNECTING-ROD		4						
9 04	32A19-00400			BOLT, CONNECTING-ROD		8						A
9 05	32A19-00500			BUSHING, CON-ROD		4						
10	32A19-09010			METAL SET, CON-ROD	STD	1						
11	32A19-09020			METAL SET, CON-ROD	U. S 0. 25	1						
12	32A19-09030			METAL SET, CON-ROD	U. S 0. 50	1						
13	32A19-09040			METAL SET, CON-ROD	U. S 0. 75	1						

CRANKSHAFT & FLYWHEEL



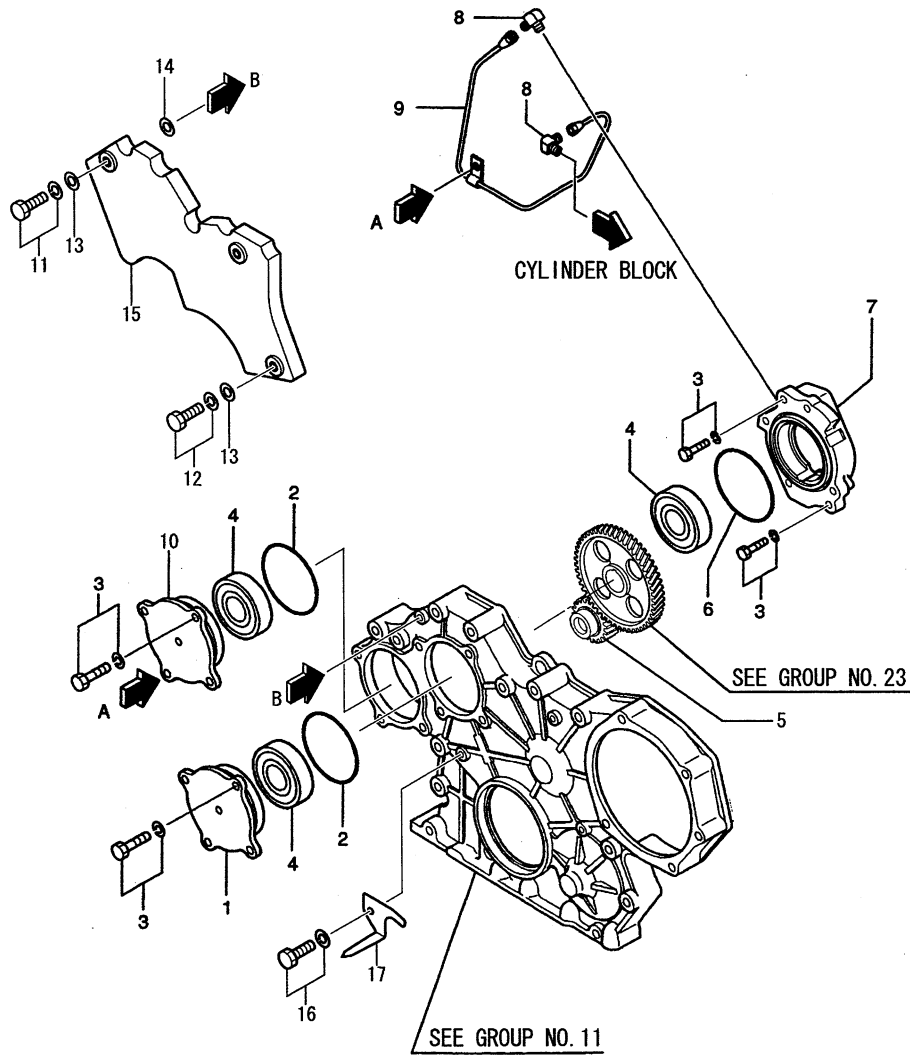
REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-OUP TO		
1	32A20-00080			CRANKSHAFT ASSY	1						
1 01	F2846-10000			PIN, DOWEL	2					A	
1 02	F2870-07022			KEY, WOODRUFF	2						
1 03	*			CRANKSHAFT	1						
1 04	32A20-02900			NUT, CRANKSHAFT	1						
1 05	32A23-00600			GEAR, CRANKSHAFT	1						
2	32A20-03400			PULLEY, CRANKSHAFT	1						
3	F1035-12035			BOLT	4					A	
4	32A21-00012			FLYWHEEL ASSY	1						
4 01	32A21-00900			GEAR, RING	1						
4 02	*			FLYWHEEL	1						
5	30621-55501			WASHER, LOCK	2					A	
6	30621-55900			BEARING, BALL	1					A	

TIMING GEAR



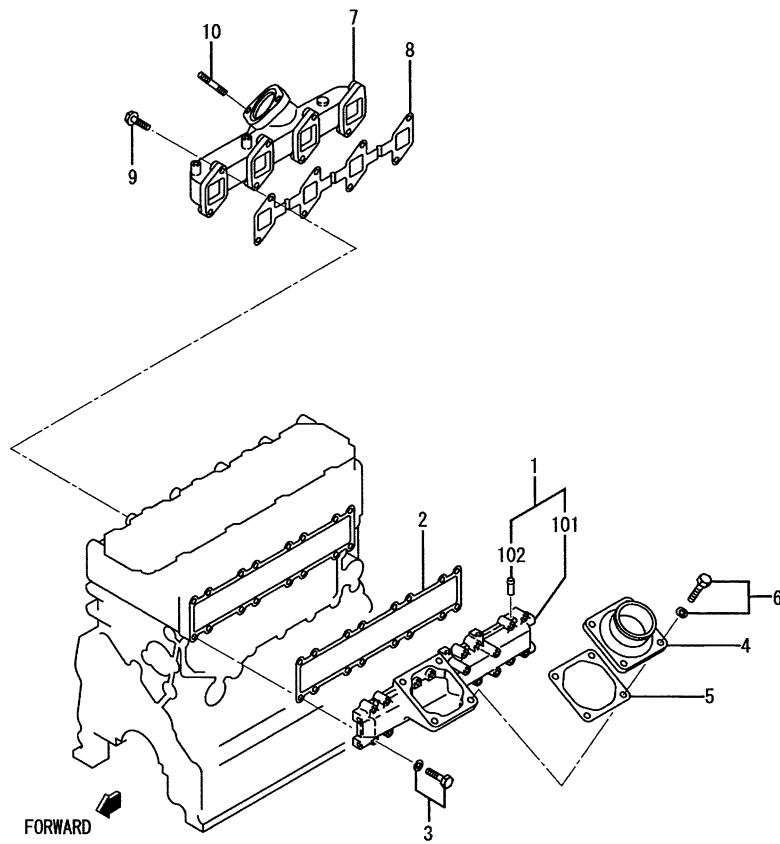
REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM@-	-@UPTO		
1	32A23-01500			GEAR, CAMSHAFT	Z=64	1						
2	32A23-05300			GEAR, INJECTION PUMP	Z=64	1						
3	32A23-03080			IDLER ASSY, GEAR	Z=70	1						
3 01	*			BUSHING, IDLER		1						
3 02	*			GEAR, IDLER		1						
4	34323-00801			PLATE, THRUST		1						
5	F1805-10020			BOLT, W/WASHER	B/W	1					A	
6	32A35-02300			GEAR, OIL PUMP	Z=44	1						

SIDE POWER TAKE-OFF



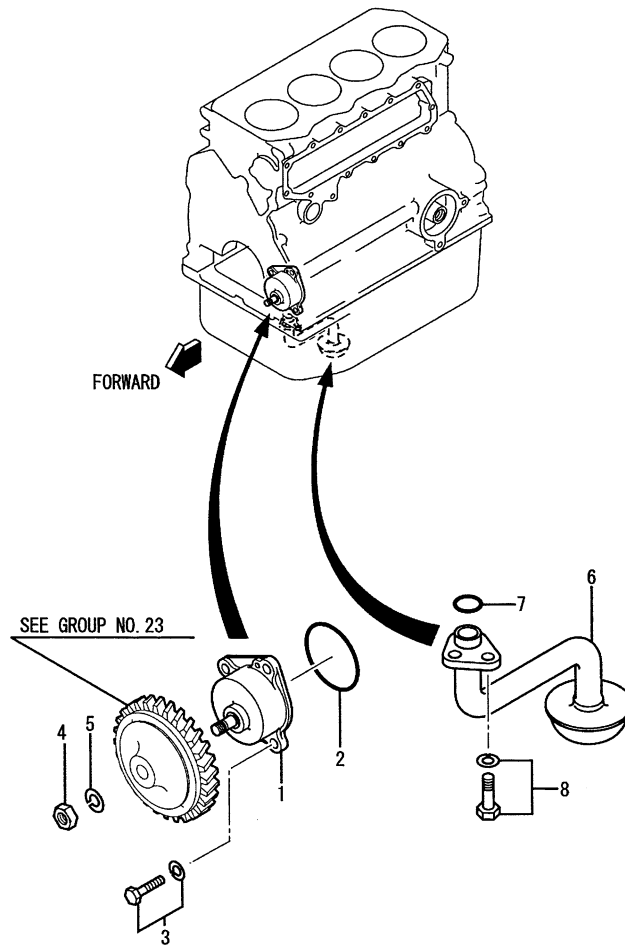
REF. -NO.	PART NO.	R / P	S E N G Q	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A11-02300			CASE, BEARING	1						
2	F3153-07500			O-RING	2					A	
3	F1805-08016			BOLT, W/WASHER	7					A	
4	F8004-06008			BEARING, BALL	3					A	
5	32A23-04800			GEAR, PUMP DRIVE	1						
6	06016-13075			O-RING	1					A	
7	32A23-04700			CASE, BEARING	1						
8	32A36-00500			CONNECTOR	2						
9	32A36-10400			PIPE, OIL	1						
10	32A11-02600			CASE, BEARING	1						
11	F1805-06018			BOLT, W/WASHER	2					A	
12	F1805-06020			BOLT, W/WASHER	1					A	
13	F2500-06000			WASHER, PLAIN	3					A	
14	MM432306			WASHER	1					A	
15	32A11-00600			COVER, INSULATOR	1						
16	MF241222			BOLT, W/WASHER	1					A	
17	32A11-01801			POINTER	1						

INLET & EXHAUST SYSTEM



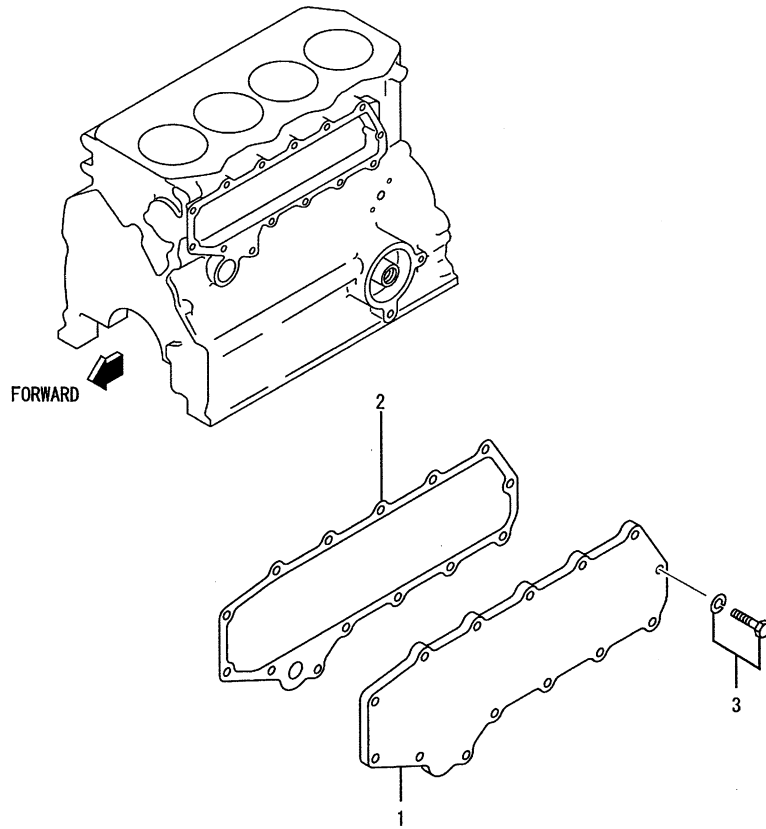
REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A30-00040			MANIFOLD ASSY, INLET	1						
1 01	*			MANIFOLD, INLET	1						
1 02	*			PIPE	1						
2	32A30-00201			GASKET, INLET MANF	1						
3	F1805-08040			BOLT, W/WASHER	16						A
4	32A30-01200			PIPE, AIR INLET	1						
5	34330-04300			GASKET, AIR HEATER	1						A
6	F1805-08022			BOLT, W/WASHER	4						A
7	32A32-05200			MANIFOLD, EXHAUST	1						
8	32A32-00200			GASKET, EXHAUST MANF	1						
9	F1035-08020			BOLT	8						A
10	F1450-10020			STUD	2						

OIL PUMP & OIL STRAINER



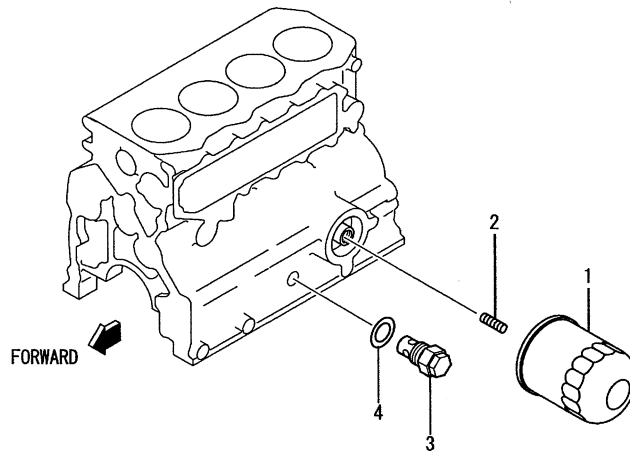
REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM-	-@UPTO		
1	32A35-10011			PUMP ASSY, OIL		1						
2	06016-13060			O-RING		1					A	
3	F1805-08020			BOLT, W/WASHER	B/W	4					A	
4	F2320-10000			NUT, JAM		1					A	
5	F2515-10000			WASHER, SPRING		1					A	
6	32A35-06400			STRAINER, OIL		1					A	
7	F3150-02000			O-RING		1					A	
8	F1805-08016			BOLT, W/WASHER	B/W	2					A	

OIL COOLER



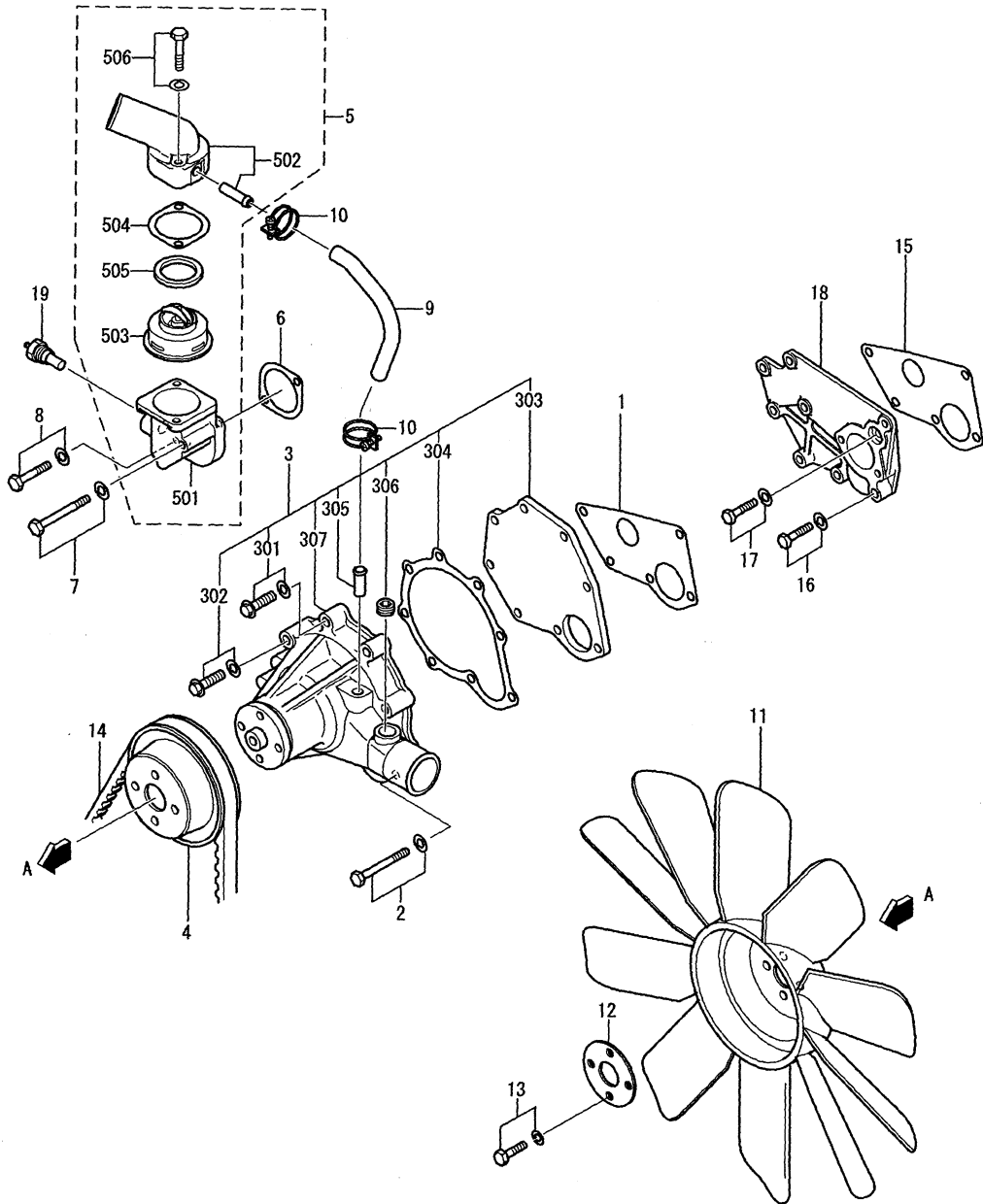
REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM-	-@UPTO		
1	32A39-01100			COVER, SIDE		1						
2	32A39-01201			GASKET, SIDE COVER		1						
3	F1805-08016			BOLT, W/WASHER	B/W	14						A

OIL FILTER



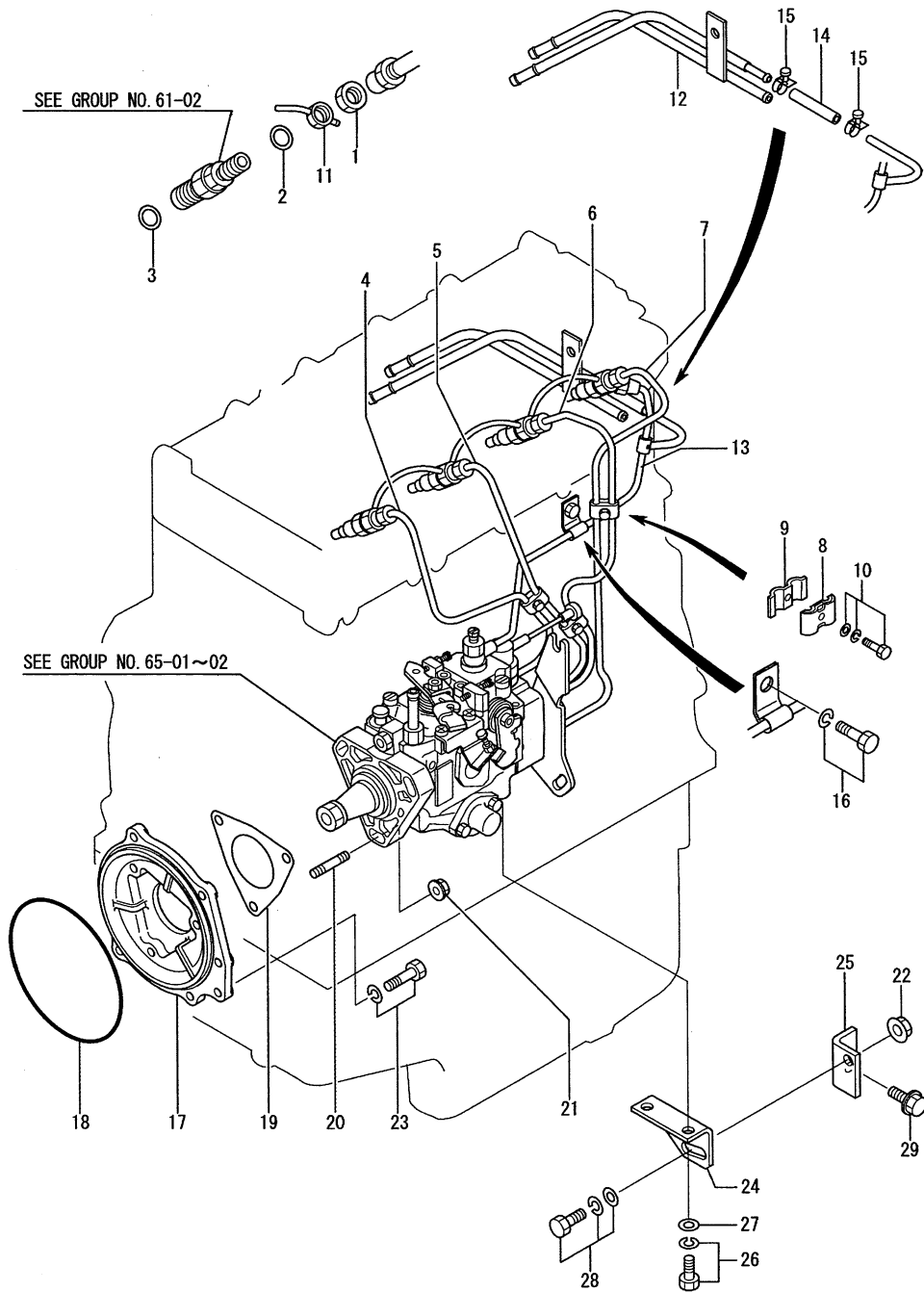
REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A40-00100			CARTRIDGE ASSY, OIL	1						
2	32A40-01100			UNION, OIL FILTER	1						
3	32A36-05012			VALVE ASSY, SAFETY	1						
4	34340-00700			GASKET	1						A

COOLING SYSTEM

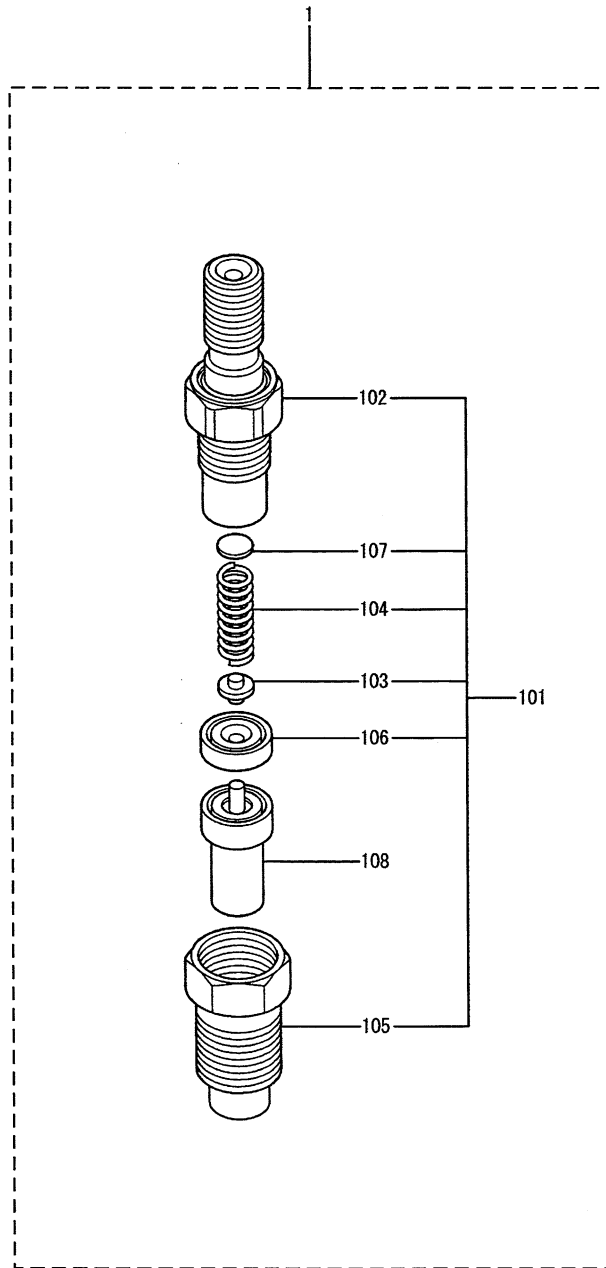


REF. -NO.	PART NO.	R / P	S E N G Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A45-00500			GASKET, WATER PUMP	1						
2	F1805-08045			BOLT, W/WASHER	5					A	
3	32A45-00022			PUMP ASSY, WATER	1						
3 01	MF140227			BOLT	2						
3 02	MF140231			BOLT	1						
3 03	32A45-00300			COVER, WATER PUMP	1						
3 04	32A45-00400			GASKET, PUMP COVER	1						
3 05	*			PIPE, WATER PUMP	1						
3 06	F5005-17001			PLUG, TAPERED	1					A	
3 07	*			CASE, WATER PUMP	1						
4	32A45-03400			PULLEY, WATER PUMP	1						
5	32A46-01020			THERMOSTAT ASSY	1						
5 01	32A46-00500			CASE, THERMOSTAT	1						
5 02	32A46-01070			COVER, THERMOSTAT	1						
5 03	31646-02200			THERMOSTAT	1						
5 04	34446-05300			GASKET	1					A	
5 05	31346-11900			GASKET	1					A	
5 06	F1805-08045			BOLT, W/WASHER	2					A	
6	34446-05300			GASKET	1					A	
7	F1805-08075			BOLT, W/WASHER	1					A	
8	F1805-08030			BOLT, W/WASHER	1					A	
9	32B46-01100			HOSE, BY-PASS	1					A	
10	32A46-03100			CLAMP, HOSE	2						
11	32A48-00300			FAN	1						
12	31345-12100			PLATE, FAN	1						
13	F1805-08018			BOLT, W/WASHER	4					A	
14	91921-06300			BELT, RAW EDGE	1					A	
15	32B45-05500			GASKET, WATER PUMP	1					A	
16	F1805-08050			BOLT, W/WASHER	4					A	
17	F1805-08040			BOLT, W/WASHER	1					A	
18	32B45-00901			SPACER, WATER PUMP	1						
19	05204-50300			UNIT, SENDER	1						

61-01 FUEL SYSTEM

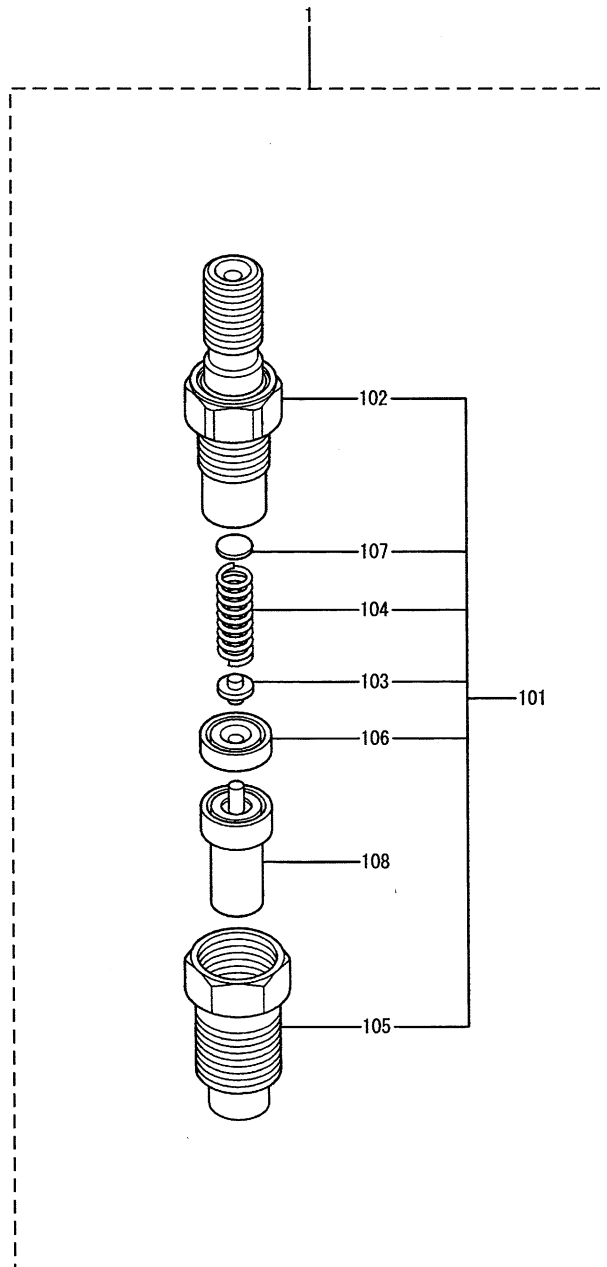


REF. -NO.	PART NO.	R / P	S E N G Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	MD068353			NUT	4						A
2	MD068355			GASKET, FUEL RETURN	4						A
3	MD070717			GASKET, HOLDER	4						A
4	32A61-08100			PIPE, INJ NO. 1	1						
5	32A61-08200			PIPE, INJ NO. 2	1						
6	32A61-08300			PIPE, INJ NO. 3	1						
7	32A61-08400			PIPE, INJ NO. 4	1						
8	MM430703			CLAMP	3						
9	MM430614			CLAMP	3						
10	F1825-06025			BOLT, W/WASHER	3						A
11	32A61-04100			PIPE, FUEL LEAK-OFF	1						
12	32A61-00800			PIPE, FUEL	1						
13	32A61-08600			PIPE, FUEL RETURN	1						
14	MS602007			HOSE, FUEL	1						
15	F4300-01200			CLAMP	2						
16	F1805-08016			BOLT, W/WASHER	1						
17	32A61-01100			FLANGE, INJ PUMP	1						
18	06016-13140			O-RING	1						A
19	30461-71601			GASKET, INJ PUMP	1						A
20	MS401429			STUD	3						
21	05633-30800			NUT, FLABGE	3						A
22	05633-31000			NUT, FLANGE	1						A
23	F1805-08020			BOLT, W/WASHER	1						A
24	32A61-08800			BRACKET, INJ PUMP	1						
25	32A61-08900			BRACKET, INJ PUMP	1						
26	F2005-10020			BOLT, W/WASHER	2						A
27	F2500-10000			WASHER, PLAIN	2						A
28	F1825-10025			BOLT, W/WASHER	1						A
29	32A13-02700			BOLT, FLANGE	1						



61-02 NOZZLE

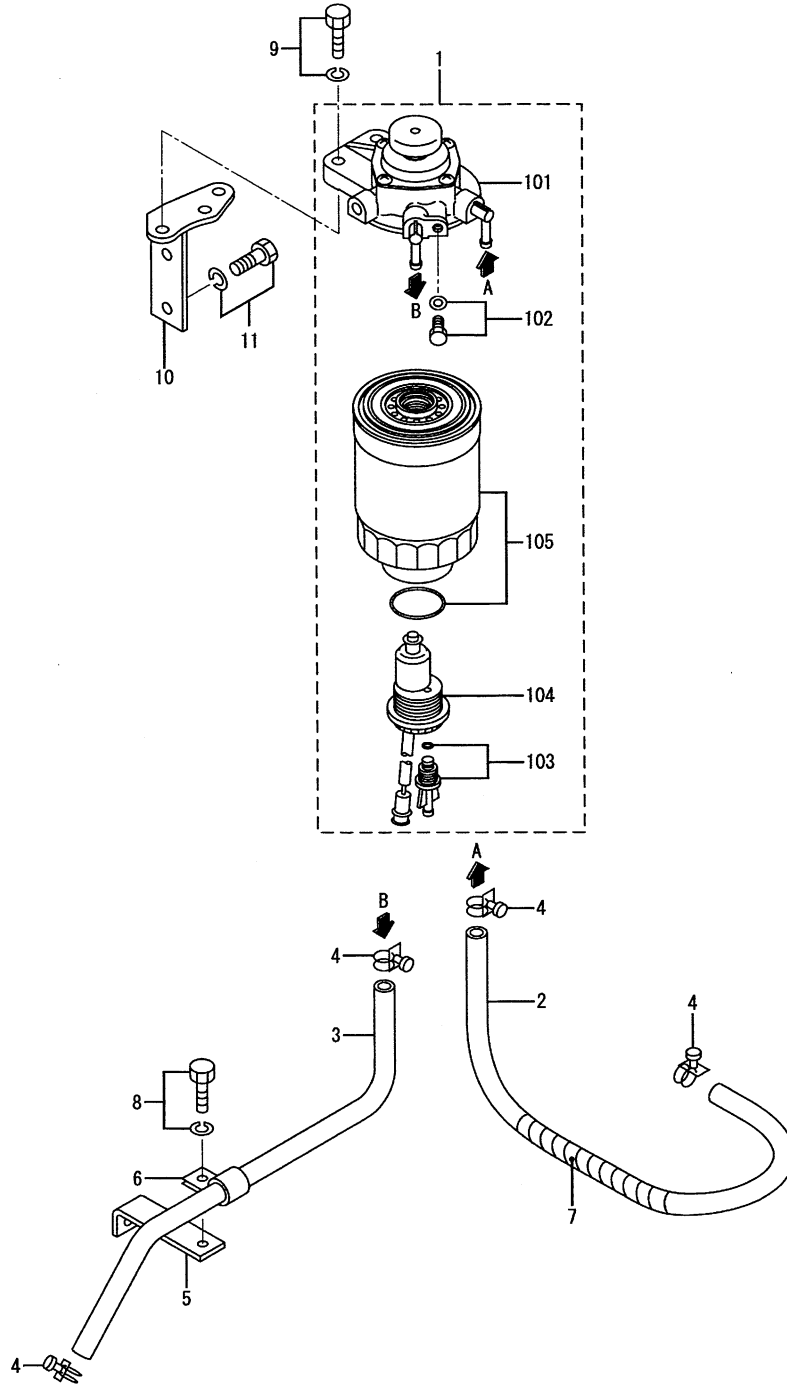
REF.-NO.	PART NO.	R / P	S E N G Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM-	-@UPTO		
1	32C61-06000			NOZZLE ASSY	093500-5480 DEN	4					A	
1 01	32C61-06010			HOLDER ASSY, NOZZLE	093100-5480 DEN	4						
1 02	09311-05480			BODY SUB ASSY		4						
1 03	09312-10380			PIN, PRESSURE		4						
1 04	09312-70360			SPRING, PRESSURE		4					A	
1 05	09316-41351			NUT, NOZZLE RETAINING		4						
1 06	09317-40070			PIECE, DISTANCE		4						
1 07	09317-51670			WASHER	T=0. 900	AR					A	
	09317-51680			WASHER	T=0. 925	AR					A	
	09317-51690			WASHER	T=0. 950	AR					A	
	09317-51700			WASHER	T=0. 975	AR					A	
	09317-51710			WASHER	T=1. 000	AR					A	
	09317-51720			WASHER	T=1. 025	AR					A	
	09317-51730			WASHER	T=1. 050	AR					A	
	09317-51740			WASHER	T=1. 075	AR					A	
	09317-51750			WASHER	T=1. 100	AR					A	
	09317-51760			WASHER	T=0. 125	AR					A	
	09317-51770			WASHER	T=1. 150	AR					A	
	09317-51780			WASHER	T=1. 175	AR					A	
	09317-51790			WASHER	T=1. 200	AR					A	
	09317-51800			WASHER	T=1. 225	AR					A	
	09317-51810			WASHER	T=1. 250	AR					A	
	09317-51820			WASHER	T=1. 275	AR					A	
	09317-51830			WASHER	T=1. 300	AR					A	
	09317-51840			WASHER	T=1. 325	AR					A	
	09317-51850			WASHER	T=1. 350	AR					A	
	09317-51860			WASHER	T=1. 375	AR					A	
	09317-51870			WASHER	T=1. 400	AR					A	
	09317-51880			WASHER	T=1. 425	AR					A	
	09317-51890			WASHER	T=1. 450	AR					A	
	09317-51900			WASHER	T=1. 475	AR					A	
	09317-51910			WASHER	T=1. 500	AR					A	
	09317-51920			WASHER	T=1. 525	AR					A	
	09317-51930			WASHER	T=1. 550	AR					A	
	09317-51940			WASHER	T=1. 575	AR					A	
	09317-51950			WASHER	T=1. 600	AR					A	
	09317-51960			WASHER	T=1. 625	AR					A	
	09317-51970			WASHER	T=1. 650	AR					A	
	09317-51980			WASHER	T=1. 675	AR					A	
	09317-51990			WASHER	T=1. 700	AR					A	
	09317-52000			WASHER	T=1. 725	AR					A	
	09317-52010			WASHER	T=1. 750	AR					A	
	09317-52020			WASHER	T=1. 775	AR					A	
	09317-52030			WASHER	T=1. 800	AR					A	
	09317-52040			WASHER	T=1. 825	AR					A	
	09317-52050			WASHER	T=1. 850	AR					A	
	09317-52060			WASHER	T=1. 875	AR					A	
	09317-52070			WASHER	T=1. 900	AR					A	
	09317-52080			WASHER	T=1. 925	AR					A	
	09317-52090			WASHER	T=1. 950	AR					A	



61-02 NOZZLE

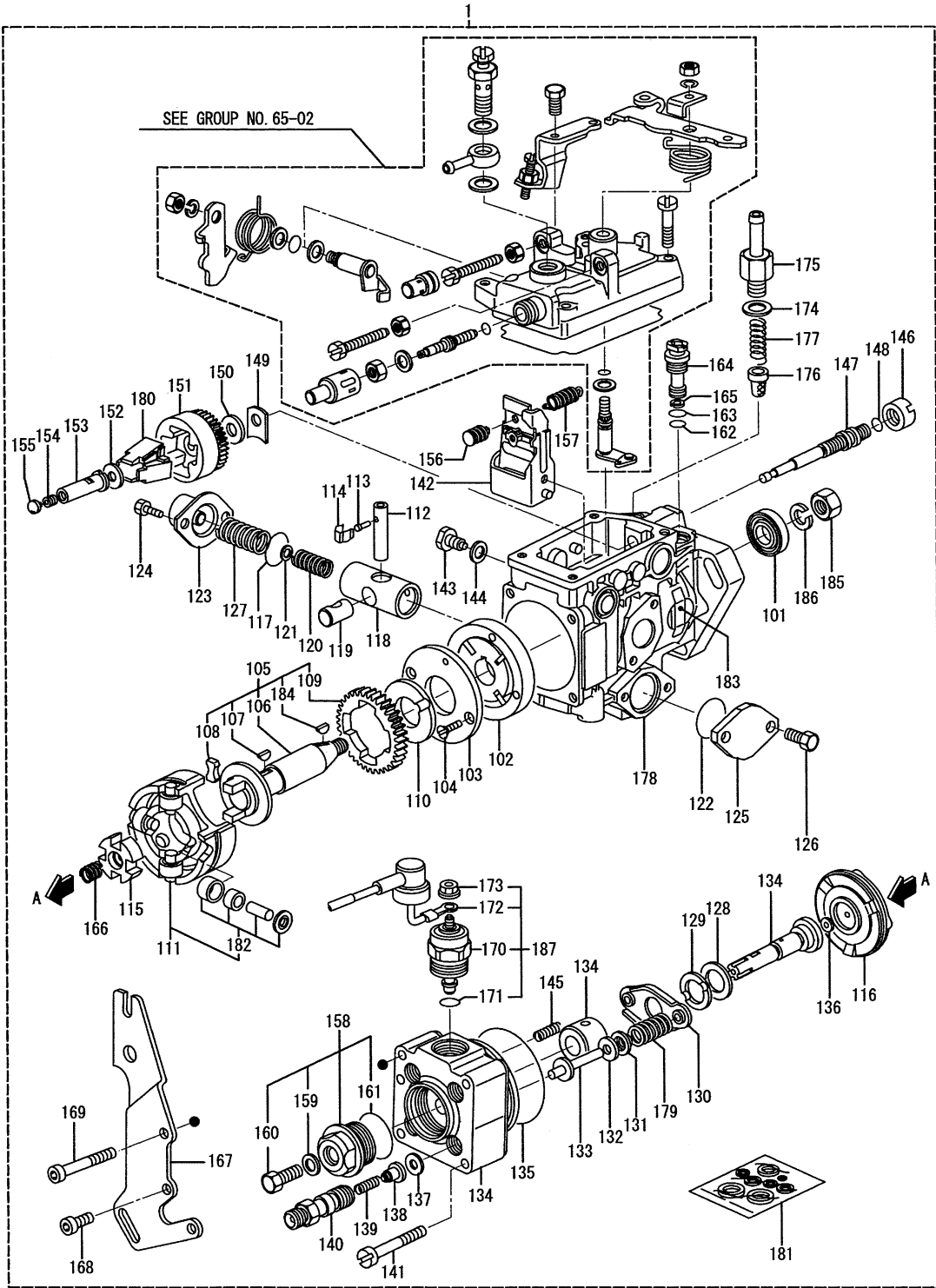
REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM-	-UPTO		
1 08	34661-02000			TIP ASSY. NOZZLE	093400-5210 DEN	4					A	

FUEL FILTER



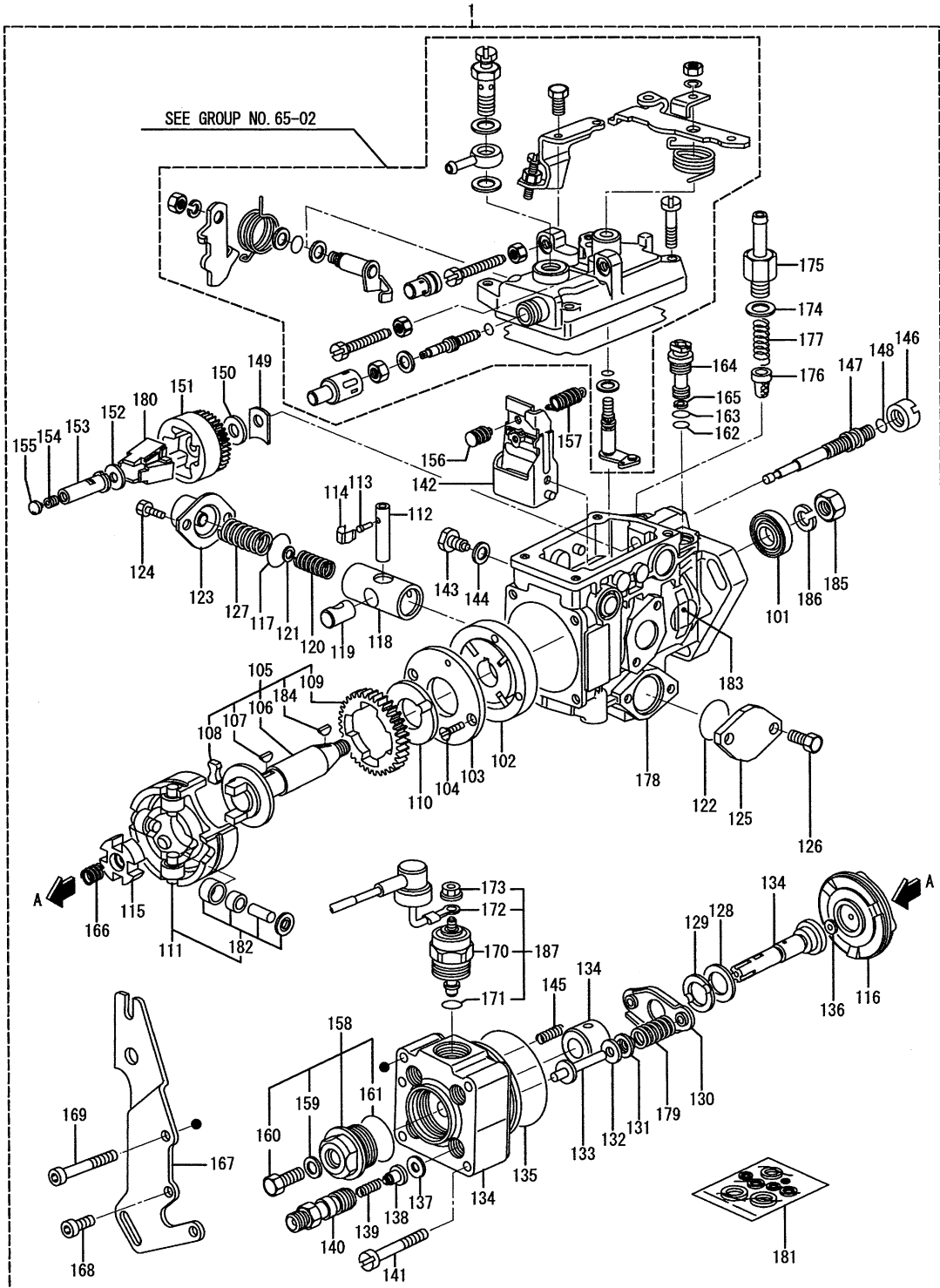
REF. -NO.	PART NO.	R / P	S E N G / Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	34462-30030			FILTER ASSY, FUEL	1					A	
1 01	34462-01050			BODY ASSY	1						
1 02	34462-01060			AIR PLUG SET	1						
1 03	34462-01070			DRAIN PLUG SET	1					A	
1 04	34462-11030			SENSOR ASSY	1						
1 05	34462-21040			ELEMENT KIT	1					A	
2	91E64-00400			HOSE, FUEL	1						
3	92364-01400			HOSE, FUEL	1						
4	F4300-01200			CLAMP	4						
5	32A61-05901			STAY, FUEL HOSE	1						
6	MH020804			CLIP	1						
7	05379-23024			TUBE, SPIRAL	1						
8	F1805-06014			BOLT, W/WASHER	1					A	
9	F1805-08030			BOLT, W/WASHER	2					A	
10	32A62-10400			BRACKET, FUEL FILTER	1						
11	F1805-08016			BOLT, W/WASHER	2					A	

# 65-01 INJECTION PUMP(PART-1)

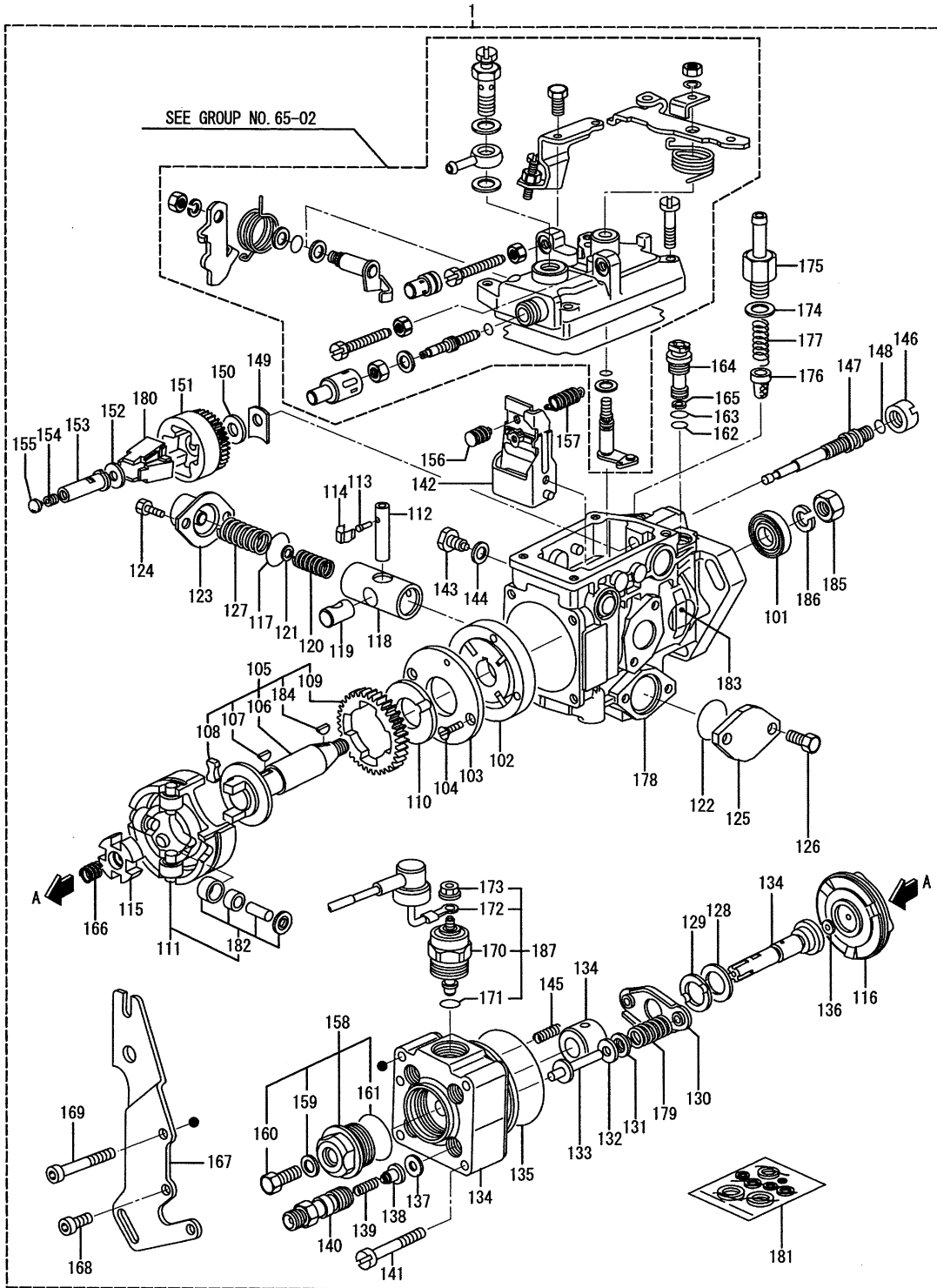


REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-TO		
1	32A65-00830			PUMP GEN ASSY, INJ	104780-3031 BAS	1					
1 01	146601-0900			SEAL, OIL		1					
1 02	146100-0420			PUMP, FEED		1					
1 03	146103-0100			COVER		1					
1 04	139104-0000			SCREW		2					
1 05	146200-0020			SHAFT ASSY, DRIVE		1					
1 06	146200-0000			SHAFT, DRIVE		1					
1 07	146201-0000			KEY, WOODRUFF		1					
1 08	146202-0100			DAMPER		2					
1 09	146203-0000			GEAR		1					
1 10	146204-0000			WASHER		1					
1 11	146210-2320			ROLLER ASSY		1					
1 12	146303-0000			PIN		1					
1 13	146304-0000			PIN		1					
1 14	146305-0000			CLIP		1					
1 15	146205-0000			DISK		1					
1 16	146220-4820			CAM, DISK		1					
1 17	146600-0800			O-RING		1					
1 18	146311-5420			PISTON		1					
1 19	146301-0000			SLIDER		1					
1 20	146312-6300			SPRING, TIMER		1					
1 21	146690-4300			SHIM	T=0. 75	AR					
	146690-4200			SHIM	T=0. 5	AR					
	146690-4100			SHIM	T=2	AR					
	146690-3500			SHIM	T=1. 0	AR					
	146690-3400			SHIM	T=0. 25	AR					
	144690-3300			SHIM	T=0. 2	AR					
	144690-3200			SHIM	T=0. 1	AR					
1 22	146600-0800			O-RING		1					
1 23	146310-4020			COVER		1					
1 24	146620-5000			BOLT		2					
1 25	146310-0100			COVER		1					
1 26	146620-5000			BOLT		2					
1 27	146312-1900			SPRING, TIMER		1					
1 28	146230-0000			SHIM		1					
1 29	146230-0100			WASHER		1					
1 30	146231-0001			SEAT, SPRING		1					
1 31	146233-0000			SEAT, SPRING		2					
1 32	146690-1900			SHIM	T=1. 7	AR					
	146690-1800			SHIM	T=1. 6	AR					
	146690-1700			SHIM	T=1. 4	AR					
	146690-1600			SHIM	T=1. 3	AR					
	146690-1500			SHIM	T=1. 1	AR					
	146690-1400			SHIM	T=0. 9	AR					
	146690-7800			SHIM	T=0. 2	AR					
	146690-7500			SHIM	T=1. 9	AR					
	146603-0600			SHIM	T=2. 00	AR					
	146603-0500			SHIM	T=1. 80	AR					
	146603-0400			SHIM	T=1. 50	AR					
	146603-0300			SHIM	T=1. 20	AR					

65-01 INJECTION PUMP(PART-1)

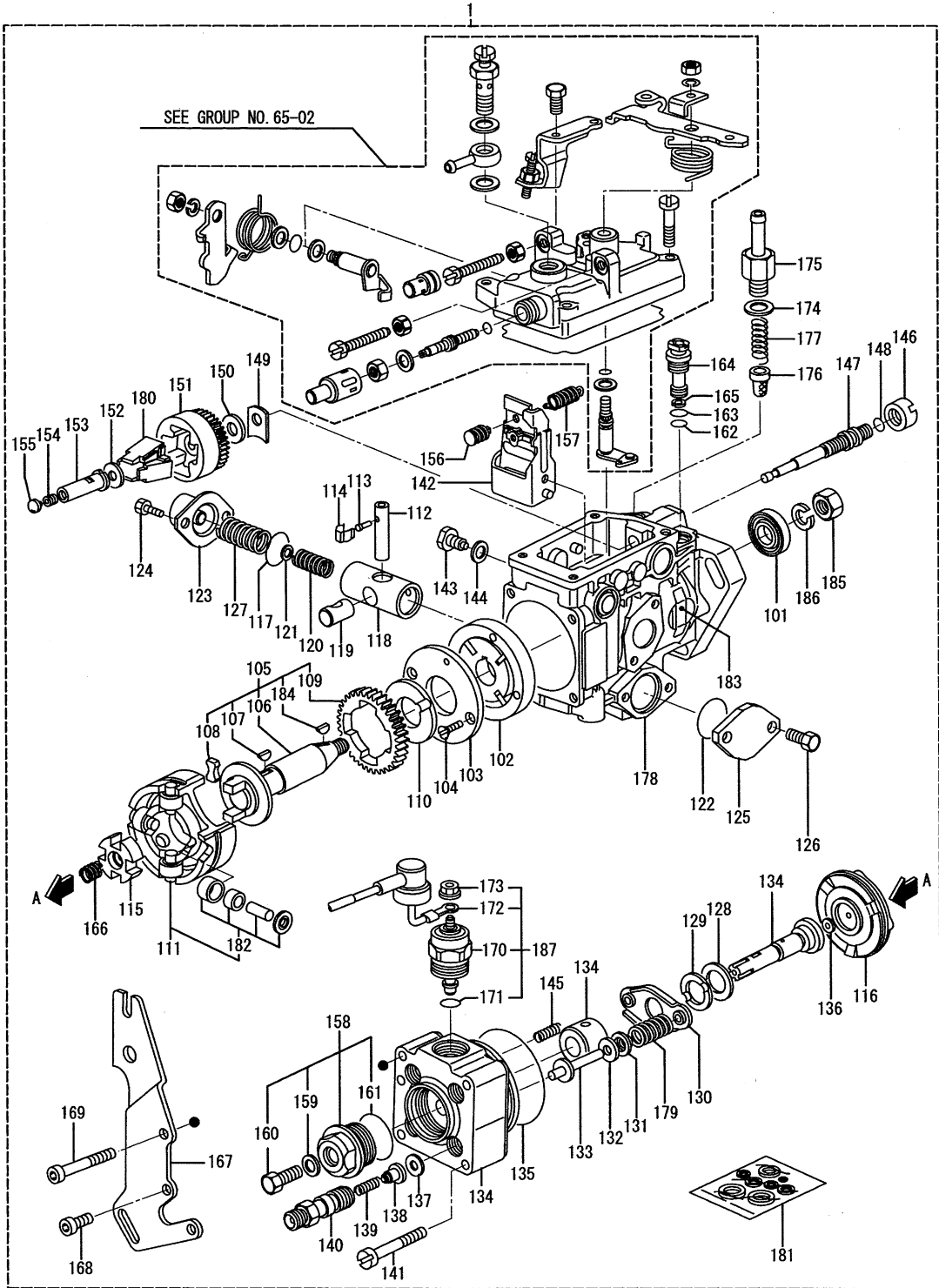


REF. -NO.	PART NO.	R / P	S C E N G Q G	PART NAME & DESCRIPTION		MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
						S4S			FROM-	-UPTO		
1 32	146603-0200			SHIM	T=1. 00	AR						
	146603-0100			SHIM	T=0. 80	AR						
	146603-0000			SHIM	T=0. 50	AR						
	146690-7400			SHIM	T=0. 7	AR						
	146690-7300			SHIM	T=0. 6	AR						
	146690-7200			SHIM	T=0. 4	AR						
	146690-7100			SHIM	T=3. 4	AR						
	146690-7000			SHIM	T=3. 3	AR						
	146690-6900			SHIM	T=3. 2	AR						
	146690-6800			SHIM	T=3. 1	AR						
	146690-6700			SHIM	T=3. 0	AR						
	146690-6600			SHIM	T=2. 9	AR						
	146690-6500			SHIM	T=2. 8	AR						
	146690-6400			SHIM	T=2. 7	AR						
	146690-6300			SHIM	T=2. 6	AR						
	146690-6200			SHIM	T=2. 5	AR						
	146690-6100			SHIM	T=2. 4	AR						
	146690-6000			SHIM	T=2. 3	AR						
	146690-5900			SHIM	T=2. 2	AR						
	146690-5800			SHIM	T=2. 1	AR						
1 33	146234-0600			PIN, GUIDE		2						
1 34	146403-9520			HEAD, DISTRIBUTOR		1						
1 35	146600-0000			O-RING		1						
1 36	146420-5100			SHIM	T=1. 74	AR						
	146420-3800			SHIM	T=2. 66	AR						
	146420-5200			SHIM	T=1. 76	AR						
	146420-5300			SHIM	T=1. 78	AR						
	146420-4100			SHIM	T=2. 72	AR						
	146420-4200			SHIM	T=2. 74	AR						
	146420-4300			SHIM	T=2. 76	AR						
	146420-4400			SHIM	T=2. 78	AR						
	146420-5000			SHIM	T=2. 90	AR						
	146420-4600			SHIM	T=2. 82	AR						
	146420-4700			SHIM	T=2. 84	AR						
	146420-4800			SHIM	T=2. 86	AR						
	146420-4900			SHIM	T=2. 88	AR						
	146420-3900			SHIM	T=2. 68	AR						
	146420-4000			SHIM	T=2. 70	AR						
	146420-3500			SHIM	T=2. 60	AR						
	146420-5400			SHIM	T=1. 80	AR						
	146420-0000			SHIM	T=1. 90	AR						
	146420-5500			SHIM	T=1. 82	AR						
	146420-5600			SHIM	T=1. 84	AR						
	146420-5700			SHIM	T=1. 86	AR						
	146420-5800			SHIM	T=1. 88	AR						
	146420-3600			SHIM	T=2. 62	AR						
	146420-3700			SHIM	T=2. 64	AR						
	146420-3300			SHIM	T=2. 56	AR						
	146420-3400			SHIM	T=2. 58	AR						
	146420-2900			SHIM	T=2. 48	AR						



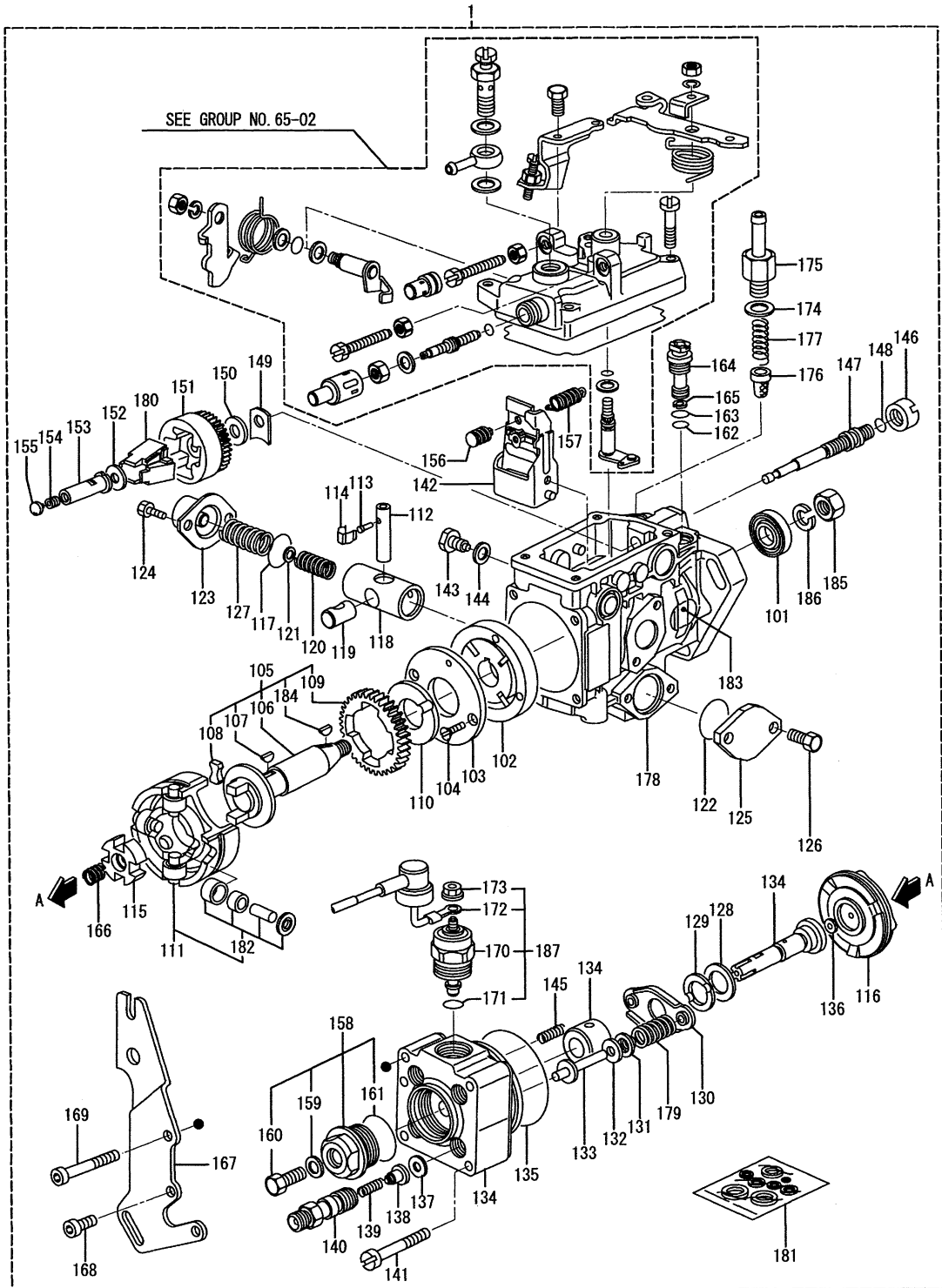
REF. -NO.	PART NO.	R / P	S E N G Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1 36	146420-3000			SHIM	T=2. 50	AR					
	146420-3100			SHIM	T=2. 52	AR					
	146420-3200			SHIM	T=2. 54	AR					
	146420-2700			SHIM	T=2. 44	AR					
	146420-2800			SHIM	T=2. 46	AR					
	146420-0400			SHIM	T=1. 98	AR					
	146420-0300			SHIM	T=1. 96	AR					
	146420-2500			SHIM	T=2. 40	AR					
	146420-2600			SHIM	T=2. 42	AR					
	146420-0500			SHIM	T=2. 00	AR					
	146420-0600			SHIM	T=2. 02	AR					
	146420-0700			SHIM	T=2. 04	AR					
	146420-0800			SHIM	T=2. 06	AR					
	146420-0900			SHIM	T=2. 08	AR					
	146420-1000			SHIM	T=2. 10	AR					
	146420-1100			SHIM	T=2. 12	AR					
	146420-1200			SHIM	T=2. 14	AR					
	146420-1300			SHIM	T=2. 16	AR					
	146420-1400			SHIM	T=2. 18	AR					
	146420-1500			SHIM	T=2. 20	AR					
	146420-1600			SHIM	T=2. 22	AR					
	146420-1700			SHIM	T=2. 24	AR					
	146420-1800			SHIM	T=2. 26	AR					
	146420-1900			SHIM	T=2. 28	AR					
	146420-2000			SHIM	T=2. 30	AR					
	146420-2100			SHIM	T=2. 32	AR					
	146420-2200			SHIM	T=2. 34	AR					
	146420-2300			SHIM	T=2. 36	AR					
	146420-2400			SHIM	T=2. 38	AR					
	146420-0100			SHIM	T=1. 92	AR					
	146420-0200			SHIM	T=1. 94	AR					
	146420-4500			SHIM	T=2. 80	AR					
1 37	146433-0100			GASKET		4					
1 38	146430-0320			VALVE, DELIVERY		4					
1 39	146432-0000			SPRING		4					
1 40	146440-0220			HOLDER		4					
1 41	139106-0100			SCREW		3					
1 42	146871-7220			LEVER, GOVERNOR		1					
1 43	146568-0000			BOLT, PIVOT		2					
1 44	026508-1140			GASKET		2					
1 45	146588-0500			SPRING		2					
1 46	146569-0300			NUT		1					
1 47	146570-0420			SHAFT, GOVERNOR		1					
1 48	146600-0400			O-RING		1					
1 49	146571-0000			SHIM	T=1. 05	AR					
	146571-0100			SHIM	T=1. 25	AR					
	146571-0200			SHIM	T=1. 45	AR					
	146571-0300			SHIM	T=1. 65	AR					
	146571-0400			SHIM	T=1. 85	AR					
	146571-0500			SHIM	T=1. 15	AR					

65-01 INJECTION PUMP(PART-1)



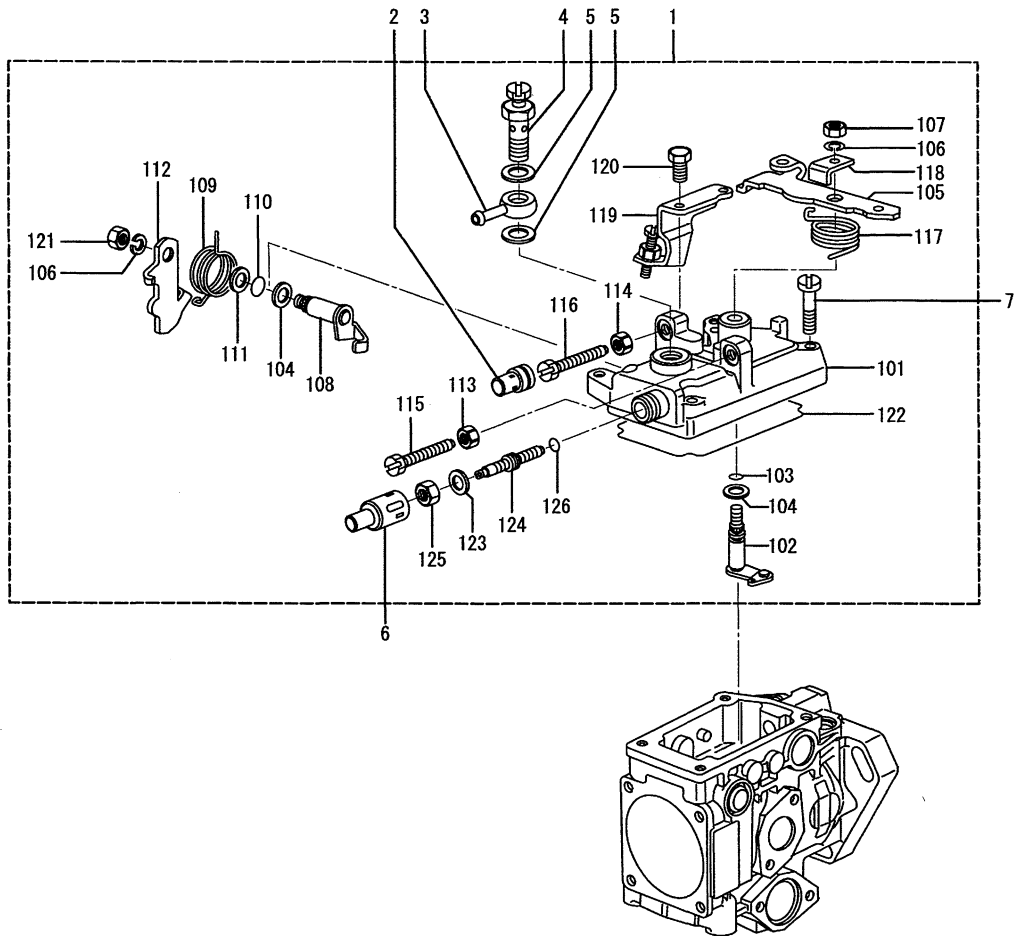
REF. -NO.	PART NO.	R / P	S E N G Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1 49	146571-0600			SHIM	T=1. 35	AR					
	146571-0700			SHIM	T=1. 55	AR					
	146571-0800			SHIM	T=1. 75	AR					
1 50	146602-0600			WASHER		1					
1 51	146572-0020			HOLDER		1					
1 52	146602-2600			WASHER		1					
1 53	146976-1200			SLEEVE, GOVERNOR		1					
1 54	146576-0200			CAP		1					
1 55	146877-5000			PLUG, CLOSING		AR					
	146877-4900			PLUG, CLOSING		AR					
	146877-4800			PLUG, CLOSING		AR					
	146877-4700			PLUG, CLOSING		AR					
	146877-0300			PLUG, CLOSING	L=5. 5	AR					
	146877-0200			PLUG, CLOSING	L=5. 4	AR					
	146877-0100			PLUG, CLOSING	L=5. 3	AR					
	146877-0000			PLUG, CLOSING	L=5. 2	AR					
	146577-8100			PLUG, CLOSING	L=5. 0	AR					
	146577-8000			PLUG, CLOSING	L=4. 8	AR					
	146577-7900			PLUG, CLOSING	L=4. 6	AR					
	146577-7800			PLUG, CLOSING	L=4. 4	AR					
	146577-7700			PLUG, CLOSING	L=4. 2	AR					
	146577-7600			PLUG, CLOSING	L=4. 0	AR					
	146577-7500			PLUG, CLOSING	L=3. 8	AR					
	146577-7400			PLUG, CLOSING	L=3. 6	AR					
	146577-7300			PLUG, CLOSING	L=3. 4	AR					
	146577-7200			PLUG, CLOSING	L=3. 2	AR					
	146577-7100			PLUG, CLOSING	L=3. 0	AR					
	146577-7000			PLUG, CLOSING	L=2. 8	AR					
	146577-6900			PLUG, CLOSING	L=2. 6	AR					
	146577-6800			PLUG, CLOSING	L=2. 4	AR					
	146577-6700			PLUG, CLOSING	L=2. 2	AR					
	146577-3300			PLUG, CLOSING	L=5. 1	AR					
	146577-3200			PLUG, CLOSING	L=4. 9	AR					
	146577-3100			PLUG, CLOSING	L=4. 7	AR					
	146577-3000			PLUG, CLOSING	L=4. 5	AR					
	146577-2900			PLUG, CLOSING	L=4. 3	AR					
	146577-2800			PLUG, CLOSING	L=4. 1	AR					
	146577-2700			PLUG, CLOSING	L=3. 9	AR					
	146577-2600			PLUG, CLOSING	L=3. 7	AR					
	146577-2500			PLUG, CLOSING	L=3. 5	AR					
	146577-2400			PLUG, CLOSING	L=3. 3	AR					
	146577-2300			PLUG, CLOSING	L=3. 1	AR					
	146577-2200			PLUG, CLOSING	L=2. 9	AR					
	146577-2100			PLUG, CLOSING	L=2. 7	AR					
	146577-2000			PLUG, CLOSING	L=2. 5	AR					
	146577-1900			PLUG, CLOSING	L=2. 3	AR					
	146577-1800			PLUG, CLOSING	L=2. 1	AR					
1 56	146879-3320			PIN, RETAINING		1					
1 57	146580-3700			SPRING, GOVERNOR		1					
1 58	146421-0020			PLUG, CLOSING		1					

65-01 INJECTION PUMP(PART-1)

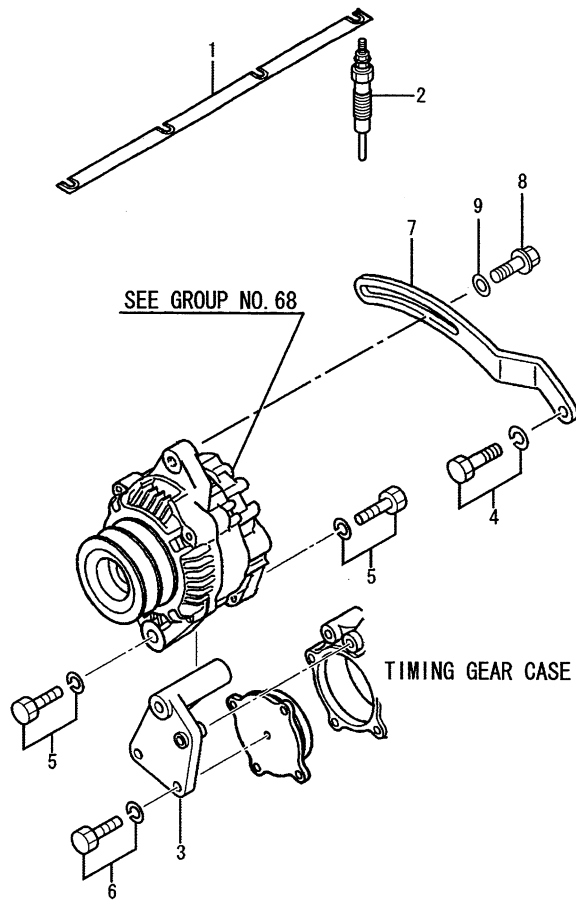




65-02 INJECTION PUMP(PART-2)

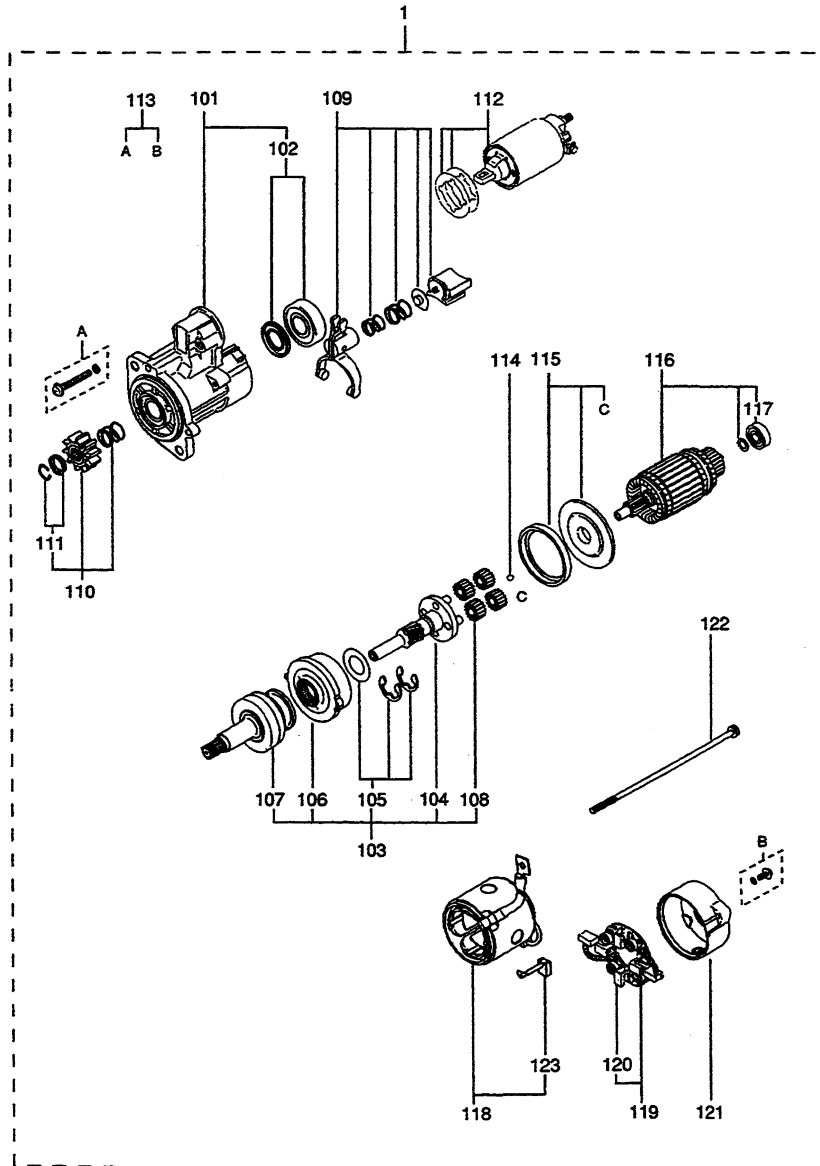


REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	146822-0120			COVER ASSY, GOVERNOR	1						
1 01	146508-1022			COVER, GOVERNOR	1						
1 02	146515-2520			CONTROL, SHAFT	1						
1 03	146600-0100			O-RING	1						
1 04	139310-0200			WASHER	2						
1 05	146832-5500			LEVER	1						
1 06	014110-6440			WASHER, SPRING	2						
1 07	013020-6040			NUT	1						
1 08	146515-1820			LEVER, SHAFT	1						
1 09	146587-4500			SPRING	1						
1 10	146600-0200			O-RING	1						
1 11	146602-0100			WASHER	1						
1 12	146540-1300			LEVER	1						
1 13	146621-1700			NUT	1						
1 14	146621-1700			NUT	1						
1 15	146526-2800			BOLT	1						
1 16	146526-3400			BOLT	1						
1 17	146587-0400			SPRING	1						
1 18	146541-0000			ANGLE	1						
1 19	146925-2520			BRACKET	1						
1 20	139006-4500			BOLT	2						
1 21	013020-6040			NUT	1						
1 22	146600-4400			SEAL, RING	1						
1 23	139308-0300			WASHER	1						
1 24	146545-3400			SCREW, LOAD	1						
1 25	139208-0900			NUT	1						
1 26	146600-1200			O-RING	1						
2	146598-0900			CAP	L=27	AR					
	146598-0800			CAP	L=24	AR					
	146598-0700			CAP	L=21	AR					
	146598-0600			CAP	L=18	AR					
3	146610-3120			EYE	1						
4	146120-0120			VALVE, OVERFLOW	1						
5	139512-0500			GASKET	2						
6	146598-1000			CAP	1						
7	139106-0200			SCREW	4						



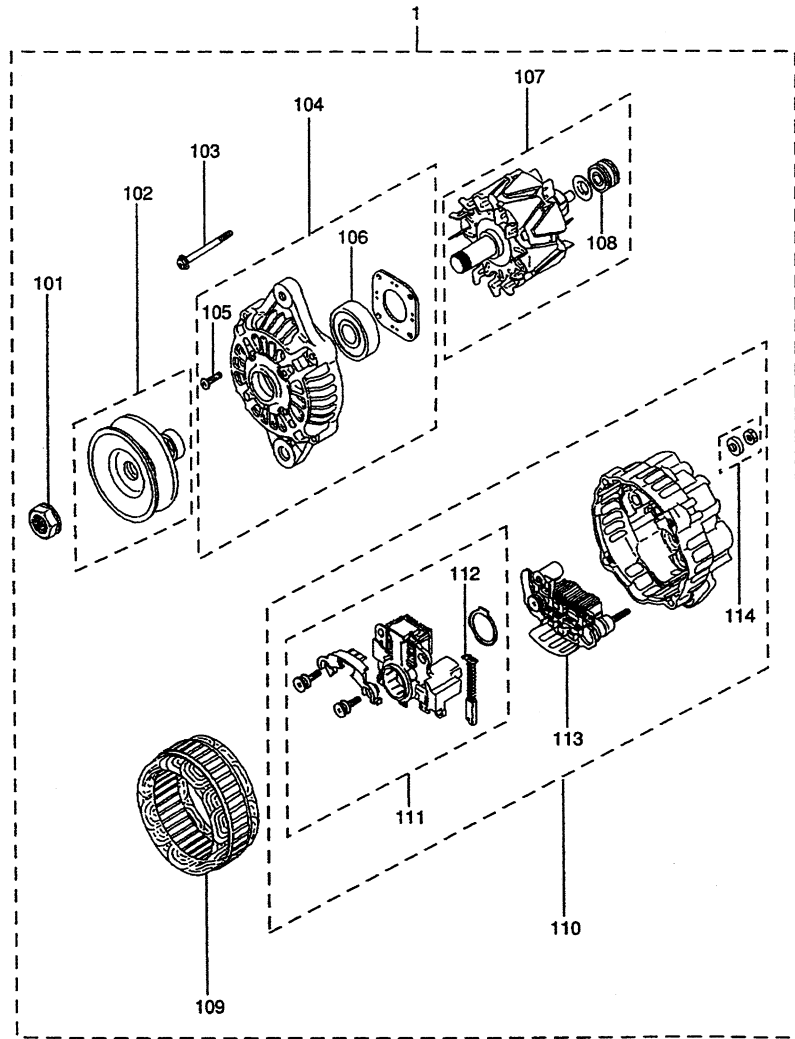


66-02 STARTER (12V-2.2KW)

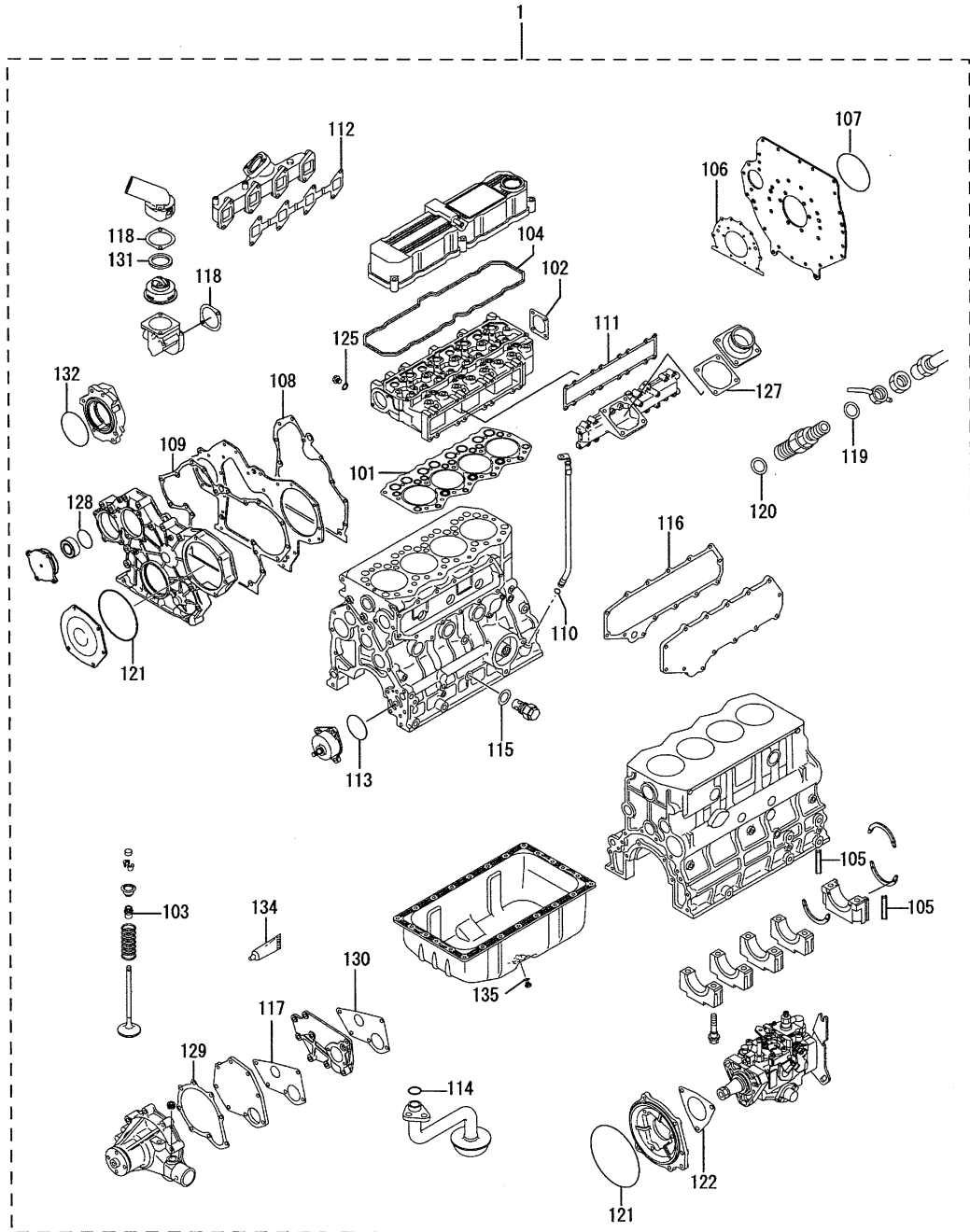


REF. -NO.	PART NO.	R / P	S C E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-OUP TO		
1	32A66-10101			STARTER ASSY	M008T75171 MEC	1					
1 01	M641X-B1571			BRACKET ASSY, FRONT		1					
1 02	M690X-00572			BEARING SET		1				A	
1 03	M357X-91874			SHAFT ASSY, CLUTCH		1					
1 04	M357X-66185			SHAFT ASSY, GEAR		1					
1 05	M982X-38871			WASHER SET		1					A
1 06	M135X-01581			GEAR ASSY, INTERNAL		1					
1 07	M191X-67685			CLUTCH, OVER RUNNING		1					
1 08	M230X-00671			GEAR ASSY		4					
1 09	M863X-08673			LEVER ASSY		1					
1 10	M605X-96571			PINION SET		1					
1 11	M385X-03771			STOPPER SET		1					
1 12	M372X-02871			SWITCH ASSY		1					
1 13	M414X-04875			SCREW SET		1				A	
1 14	S409S-00008			BALL		1				A	
1 15	M578X-29171			PACKING SET		1				A	
1 16	M106X-43571			ARMATURE SET		1					
1 17	S930P-29970			BEARING SET		1				A	
1 18	M800X-73771			YOKE ASSY		1					
1 19	M649X-20471			HOLDER ASSY, BRUSH		1					
1 20	M391X-04371			SPRING, BRUSH		4				A	
1 21	M642X-35671			BRACKET ASSY, REAR		1					
1 22	M901A-00371			BOLT SET		1				A	
1 23	M648X-40771			BRUSH		2				A	

ALTERNATOR(12V-50A)



REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM-	-@UPTO		
1	32A68-10201			ALTERNATOR ASSY	A007TA0477A MEC	1					
1 01	A981X-20771			NUT SET		1				A	
1 02	A628T-63370			PULLEY ASSY		1					
1 03	A414X-19271			BOLT SET		1				A	
1 04	A640X-69170			BRACKET ASSY, FRONT		1					
1 05	A414X-21271			SCREW SET		1				A	
1 06	S930P-94570			BEARING, FRONT		1				A	
1 07	A880X-91870			ROTOR ASSY		1					
1 08	S930P-63670			BEARING, REAR		1				A	
1 09	A383T-46370			STATOR ASSY		1					
1 10	A642X-29070			BRACKET ASSY, REAR		1					
1 11	A866X-44682			REGULATOR SET		1					
1 12	A647X-50170			BRUSH SET		2				A	
1 13	A860X-50970			RECTIFIER ASSY		1					
1 14	A529X-05571			NUT SET		1					



REF. -NO.	PART NO.	R / P	S E N Q G	PART NAME & DESCRIPTION	MODEL & QTY			APPLICABLE SERIAL NO.		M / R	V R D
					S4S			FROM@-	-@UPTO		
1	32A94-00070			GASKET KIT, OVERHAUL	1						
1 01	32A01-02203			GASKET, CYLINDER HEAD	1					A	
1 02	32A01-02501			GASKET, HEAD REAR	1					A	
1 03	32A04-02801			SEAL, VALVE STEM	8					A	
1 04	32A04-13200			GASKET	1					A	
1 05	32A07-11700			SEAL, SIDE	2					A	
1 06	32A07-14201			GASKET, REAR	1					A	
1 07	06016-13120			O-RING	1					A	
1 08	32A07-04100			GASKET	1					A	
1 09	32A11-22201			GASKET	1					A	
1 10	05507-10110			O-RING	1					A	
1 11	32A30-00201			GASKET	1					A	
1 12	32A32-00200			GASKET	1					A	
1 13	06016-13060			O-RING	1					A	
1 14	F3150-02000			O-RING	1					A	
1 15	34340-00700			GASKET	1						
1 16	32A39-01201			GASKET	1					A	
1 17	32A45-00500			GASKET	1						
1 18	34446-05300			GASKET	2						
1 19	MD068355			GASKET	4						
1 20	MD070717			GASKET	4						
1 21	06016-13140			O-RING	2						
1 22	30461-71601			GASKET	1						
1 23	30661-51300			GASKET	1						
1 24	06016-13080			O-RING	1						
1 25	30636-25901			GASKET	1						
1 26	05946-01401			WASHER, SEALING	10					A	
1 27	34330-04300			GASKET	1					A	
1 28	F3153-07500			O-RING	2						
1 29	32A45-00400			GASKET	1						
1 30	32B45-05500			GASKET	1						
1 31	31346-11900			GASKET	1						
1 32	06016-13075			O-RING	1						
1 33	05946-01201			WASHER, SEALING	2						
1 34	32A91-05100			GASKET	1						
1 35	MD050317			GASKET	1					A	



NUMERICAL PARTS INDEX

PART NO.	GRP NO.	PA GE	REF -NO.	PART NO.	GRP NO.	PA GE	REF -NO.	PART NO.	GRP NO.	PA GE	REF -NO.
A383T-46370	68	63	1 09	F1825-06025	61-01	39	10	MD050317	13	19	1 01
A414X-19271	68	63	1 03	F1825-10025	61-01	39	28	MD050317	94	65	1 35
A414X-21271	68	63	1 05	F2005-10020	61-01	39	26	MD068353	61-01	39	1
A529X-05571	68	63	1 14	F2300-10000	08	15	7	MD068355	61-01	39	2
A628T-63370	68	63	1 02	F2320-10000	36	31	4	MD068355	94	65	1 19
A640X-69170	68	63	1 04	F2325-08000	04-01	5	8 08	MD070717	61-01	39	3
A642X-29070	68	63	1 10	F2500-06000	25	27	13	MD070717	94	65	1 20
A647X-50170	68	63	1 12	F2500-10000	61-01	39	27	MF140026	66-01	59	8
A860X-50970	68	63	1 13	F2515-10000	08	15	8	MF140227	46	37	3 01
A866X-44682	68	63	1 11	F2515-10000	36	31	5	MF140231	46	37	3 02
A880X-91870	68	63	1 07	F2846-05000	07-01	11	9	MF241222	25	27	16
A981X-20771	68	63	1 01	F2846-10000	20	23	1 01	MF241266	11	17	9
F1035-08020	30	29	9	F2846-12000	07-01	11	8	MF241269	11	17	11
F1035-12035	20	23	3	F2850-04008	07-01	11	10	MF522010	04-01	5	8 01
F1450-10020	30	29	10	F2870-07022	05	9	2	MH020804	62	45	6
F1805-06014	62	45	8	F2870-07022	20	23	1 02	MM130066	07-01	11	16
F1805-06018	25	27	11	F3150-02000	36	31	7	MM316248	01	3	1 01
F1805-06020	25	27	12	F3150-02000	94	65	1 14	MM430614	61-01	39	9
F1805-08016	01	3	9	F3153-07500	25	27	2	MM430703	61-01	39	8
F1805-08016	05	9	4	F3153-07500	94	65	1 28	MM432306	25	27	14
F1805-08016	11	17	3	F3202-03000	17	21	8	MM433787	04-02	7	5
F1805-08016	13	19	2	F4300-01200	61-01	39	15	MS401429	61-01	39	20
F1805-08016	25	27	3	F4300-01200	62	45	4	MS602007	61-01	39	14
F1805-08016	36	31	8	F5005-17001	46	37	3 06	MS661140	07-01	11	15
F1805-08016	39	33	3	F8004-06008	25	27	4	MS661142	07-01	11	5
F1805-08016	61-01	39	16	M106X-43571	66-02	61	1 16	S409S-00008	66-02	61	1 14
F1805-08016	62	45	11	M135X-01581	66-02	61	1 06	S930P-29970	66-02	61	1 17
F1805-08018	46	37	13	M191X-67685	66-02	61	1 07	S930P-63670	68	63	1 08
F1805-08020	01	3	10	M230X-00671	66-02	61	1 08	S930P-94570	68	63	1 06
F1805-08020	13	19	4	M357X-66185	66-02	61	1 04	010206-2240	65-01	55	1 68
F1805-08020	36	31	3	M357X-91874	66-02	61	1 03	013020-6040	65-02	57	1 07
F1805-08020	61-01	39	23	M372X-02871	66-02	61	1 12	013020-6040	65-02	57	1 21
F1805-08020	66-01	59	4	M385X-03771	66-02	61	1 11	013021-2140	65-01	55	1 85
F1805-08022	30	29	6	M391X-04371	66-02	61	1 20	014110-6440	65-02	57	1 06
F1805-08025	04-01	5	9	M414X-04875	66-02	61	1 13	014111-2440	65-01	55	1 86
F1805-08025	66-01	59	6	M578X-29171	66-02	61	1 15	025803-1640	65-01	55	1 84
F1805-08030	46	37	8	M605X-96571	66-02	61	1 10	026508-1140	65-01	51	1 44
F1805-08030	62	45	9	M641X-B1571	66-02	61	1 01	026508-1140	65-01	55	1 59
F1805-08040	04-02	7	3	M642X-35671	66-02	61	1 21	04826-21200	04-01	5	8 03
F1805-08040	30	29	3	M648X-40771	66-02	61	1 23	04826-21800	07-01	11	3
F1805-08040	46	37	17	M649X-20471	66-02	61	1 19	04826-22000	01	3	2 01
F1805-08045	46	37	2	M690X-00572	66-02	61	1 02	04826-22500	01	3	2 02
F1805-08045	46	37	5 06	M800X-73771	66-02	61	1 18	04826-23500	07-01	11	2 01
F1805-08050	46	37	16	M863X-08673	66-02	61	1 09	05204-50300	46	37	19
F1805-08055	11	17	6	M901A-00371	66-02	61	1 22	05379-23024	62	45	7
F1805-08075	46	37	7	M982X-38871	66-02	61	1 05	05507-10110	13	19	3 03
F1805-10020	08	15	3	MD000269	07-01	11	14	05507-10110	94	65	1 10
F1805-10020	23	25	5	MD001521	66-01	59	9	05605-01410	07-01	11	12
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06016-13060	36	31 2	09317-52020	61-02	41 1 07	146311-5420	65-01	47 1 18
06016-13060	94	65 1 13	09317-52030	61-02	41 1 07	146312-1900	65-01	47 1 27
06016-13075	25	27 6	09317-52040	61-02	41 1 07	146312-6300	65-01	47 1 20
06016-13075	94	65 1 32	09317-52050	61-02	41 1 07	146403-9520	65-01	49 1 34
06016-13080	94	65 1 24	09317-52060	61-02	41 1 07	146420-0000	65-01	49 1 36
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06016-13120	94	65 1 07	09317-52080	61-02	41 1 07	146420-0200	65-01	51 1 36
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09312-10380	61-02	41 1 03	139106-0200	65-02	57 7	146420-0700	65-01	51 1 36
09312-70360	61-02	41 1 04	139208-0900	65-02	57 1 25	146420-0800	65-01	51 1 36
09316-41351	61-02	41 1 05	139308-0300	65-02	57 1 23	146420-0900	65-01	51 1 36
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09317-51670	61-02	41 1 07	139512-0500	65-01	55 1 74	146420-1100	65-01	51 1 36
09317-51680	61-02	41 1 07	139512-0500	65-02	57 5	146420-1200	65-01	51 1 36
09317-51690	61-02	41 1 07	144690-3200	65-01	47 1 21	146420-1300	65-01	51 1 36
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09317-51710	61-02	41 1 07	146020-1820	65-01	55 1 78	146420-1500	65-01	51 1 36
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146420-4900	65-01	49	1 36	146577-2900	65-01	53	1 55	146603-0400	65-01	47	1 32
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146420-5100	65-01	49	1 36	146577-3100	65-01	53	1 55	146603-0600	65-01	47	1 32
146420-5200	65-01	49	1 36	146577-3200	65-01	53	1 55	146610-3120	65-02	57	3
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146420-5400	65-01	49	1 36	146577-6700	65-01	53	1 55	146620-5000	65-01	47	1 24
146420-5500	65-01	49	1 36	146577-6800	65-01	53	1 55	146620-5000	65-01	47	1 26
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146420-5800	65-01	49	1 36	146577-7100	65-01	53	1 55	146621-4901	65-01	55	1 73
146421-0020	65-01	53	1 58	146577-7200	65-01	53	1 55	146650-1220	65-01	55	1 70
146422-0000	65-01	55	1 60	146577-7300	65-01	53	1 55	146662-1420	65-01	55	1 72
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146433-0100	65-01	51	1 37	146577-7600	65-01	53	1 55	146690-1500	65-01	47	1 32
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146577-2200	65-01	53	1 55	146602-0100	65-02	57	1 11	146699-0020	65-01	55	1 87
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146871-7220	65-01	51	1 42	32A04-13200	04-02	7	2	32A20-03400	20	23	2
146877-0000	65-01	53	1 55	32A04-13200	94	65	1 04	32A21-00012	20	23	4
146877-0100	65-01	53	1 55	32A04-20020	04-01	5	8	32A21-00900	20	23	4 01
146877-0200	65-01	53	1 55	32A04-22010	04-01	5	8 07	32A23-00600	20	23	1 05
146877-0300	65-01	53	1 55	32A05-00101	05	9	1	32A23-01500	23	25	1
146877-4700	65-01	53	1 55	32A05-02101	05	9	5	32A23-03080	23	25	3
146877-4800	65-01	53	1 55	32A05-13100	05	9	6	32A23-03500	07-01	11	13
146877-4900	65-01	53	1 55	32A07-01016	07-01	11	1	32A23-04700	25	27	7
146877-5000	65-01	53	1 55	32A07-01501	07-01	11	7	32A23-04800	25	27	5
146879-3320	65-01	53	1 56	32A07-02600	07-01	11	2 04	32A23-05300	23	25	2
146925-2520	65-02	57	1 19	32A07-04100	11	17	2	32A30-00040	30	29	1
146935-8601	65-01	55	1 67	32A07-04100	94	65	1 08	32A30-00201	30	29	2
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146989-3300	65-01	55	1 83	32A07-11700	07-01	11	11	32A30-01200	30	29	4
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34446-05300	46	37 5 04						
34446-05300	46	37 6						
34446-05300	94	65 1 18						
34462-01050	62	45 1 01						
34462-01060	62	45 1 02						
34462-01070	62	45 1 03						
34462-11030	62	45 1 04						
34462-21040	62	45 1 05						
34462-30030	62	45 1						
34661-02000	61-02	43 1 08						
34A07-07400	08	15 1						
91921-06300	46	37 14						
91A05-02800	01	3 11						
91E64-00400	62	45 2						
92364-01400	62	45 3						



TABLE OF BOLT, W/WASHER

BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER
F1805-06010	F1035-06010 F2515-06000	F1805-06035	F1035-06035 F2515-06000	F1805-08018	F1035-08018 F2515-08000
F1805-06012	F1035-06012 F2515-06000	F1805-06040	F1035-06040 F2515-06000	F1805-08020	F1035-08020 F2515-08000
F1805-06014	F1035-06014 F2515-06000	F1805-06045	F1035-06045 F2515-06000	F1805-08022	F1035-08022 F2515-08000
F1805-06016	F1035-06016 F2515-06000	F1805-06055	F1035-06055 F2515-06000	F1805-08025	F1035-08025 F2515-08000
F1805-06018	F1035-06018 F2515-06000	F1805-06060	F1035-06060 F2515-06000	F1805-08030	F1035-08030 F2515-08000
F1805-06020	F1035-06020 F2515-06000	F1805-08012	F1035-08012 F2515-08000	F1805-08035	F1035-08035 F2515-08000
F1805-06025	F1035-06025 F2515-06000	F1805-08014	F1035-08014 F2515-08000	F1805-08040	F1035-08040 F2515-08000
F1805-06030	F1035-06030 F2515-06000	F1805-08016	F1035-08016 F2515-08000	F1805-08045	F1035-08045 F2515-08000

## TABLE OF BOLT, W/WASHER

BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER
F1805-08050	F1035-08050 F2515-08000	F1805-10018	F1035-10018 F2515-10000	F1805-10050	F1035-10050 F2515-10000
F1805-08055	F1035-08055 F2515-08000	F1805-10020	F1035-10020 F2515-10000	F1805-10055	F1035-10055 F2515-10000
F1805-08060	F1035-08060 F2515-08000	F1805-10022	F1035-10022 F2515-10000	F1805-10060	F1035-10060 F2515-10000
F1805-08065	F1035-08065 F2515-08000	F1805-10025	F1035-10025 F2515-10000	F1805-10065	F1035-10065 F2515-10000
F1805-08070	F1035-08070 F2515-08000	F1805-10030	F1035-10030 F2515-10000	F1805-10070	F1035-10070 F2515-10000
F1805-08075	F1035-08075 F2515-08000	F1805-10035	F1035-10035 F2515-10000	F1805-10085	F1035-10085 F2515-10000
F1805-10014	F1035-10014 F2515-10000	F1805-10040	F1035-10040 F2515-10000	F1805-12016	F1035-12016 F2515-12000
F1805-10016	F1035-10016 F2515-10000	F1805-10045	F1035-10045 F2515-10000	F1805-12020	F1035-12020 F2515-12000

TABLE OF BOLT, W/WASHER

BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER
F1805-12025	F1035-12025 F2515-12000	F1805-12065	F1035-12065 F2515-12000	F1825-06010	F1035-06010 F2515-06000 F2500-06000
F1805-12030	F1035-12030 F2515-12000	F1805-12085	F1035-12085 F2515-12000	F1825-06012	F1035-06012 F2515-06000 F2500-06000
F1805-12035	F1035-12035 F2515-12000	F1805-14035	F1035-14035 F2515-14000	F1825-06014	F1035-06014 F2515-06000 F2500-06000
F1805-12040	F1035-12040 F2515-12000	F1805-14045	F1035-14045 F2515-14000	F1825-06016	F1035-06016 F2515-06000 F2500-06000
F1805-12045	F1035-12045 F2515-12000			F1825-06020	F1035-06020 F2515-06000 F2500-06000
F1805-12050	F1035-12050 F2515-12000			F1825-06025	F1035-06025 F2515-06000 F2500-06000
F1805-12055	F1035-12055 F2515-12000				
F1805-12060	F1035-12060 F2515-12000				

### TABLE OF BOLT, W/WASHER

BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER
F1825-06030	F1035-06030 F2515-06000 F2500-06000	F1825-08025	F1035-08025 F2515-08000 F2500-08000	F1825-08050	F1035-08050 F2515-08000 F2500-08000
F1825-06035	F1035-06035 F2515-06000 F2500-06000	F1825-08030	F1035-08030 F2515-08000 F2500-08000	F1825-08055	F1035-08055 F2515-08000 F2500-08000
F1825-06055	F1035-06055 F2515-06000 F2500-06000	F1825-08035	F1035-08035 F2515-08000 F2500-08000	F1825-08085	F1035-08085 F2515-08000 F2500-08000
F1825-08012	F1035-08012 F2515-08000 F2500-08000	F1825-08038	F1035-08038 F2515-08000 F2500-08000	F1825-10014	F1035-10014 F2515-10000 F2500-10000
F1825-08016	F1035-08016 F2515-08000 F2500-08000	F1825-08040	F1035-08040 F2515-08000 F2500-08000	F1825-10016	F1035-10016 F2515-10000 F2500-10000
F1825-08020	F1035-08020 F2515-08000 F2500-08000	F1825-08045	F1035-08045 F2515-08000 F2500-08000	F1825-10020	F1035-10020 F2515-10000 F2500-10000

## TABLE OF BOLT, W/WASHER

BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER
F1825-10025	F1035-10025	F1825-12025	F1035-12025	F2005-10016	F1155-10016
	F2515-10000		F2515-12000		F2515-10000
	F2500-10000		F2500-12000		
F1825-10030	F1035-10030	F1825-12030	F1035-12030	F2005-10020	F1155-10020
	F2515-10000		F2515-12000		F2515-10000
	F2500-10000		F2500-12000	F2005-10025	F1155-10025
F1825-10035	F1035-10035	F1825-12040	F1035-12040	F2005-10030	F1155-10030
	F2515-10000		F2515-12000		F2515-10000
	F2500-10000		F2500-12000		
F1825-10040	F1035-10040			F2005-10035	F1155-10035
	F2515-10000				F2515-10000
	F2500-10000				
F1825-10080	F1035-10080			F2005-10040	F1155-10040
	F2515-10000				F2515-10000
	F2500-10000			F2005-10045	F1155-10045
F1825-12020	F1035-12020			F2005-10050	
	F2515-12000				F1155-10050
	F2500-12000				F2515-10000

TABLE OF BOLT, W/WASHER

BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER
F2005-10055	F1155-10055 F2515-10000	F2005-12040	F1155-12040 F2515-12000	F2015-10020	F1155-10020 F2515-10000 F2500-10000
F2005-10060	F1155-10060 F2515-10000	F2005-12045	F1155-12045 F2515-12000	F2015-10025	F1155-10025 F2515-10000 F2500-10000
F2005-10065	F1155-10065 F2515-10000	F2005-12050	F1155-12050 F2515-12000	F2015-10030	F1155-10030 F2515-10000 F2500-10000
F2005-10070	F1155-10070 F2515-10000	F2005-12055	F1155-12055 F2515-12000	F2015-10035	F1155-10035 F2515-10000 F2500-10000
F2005-12020	F1155-12020 F2515-12000	F2005-12065	F1155-12065 F2515-12000	F2015-10040	F1155-10040 F2515-10000 F2500-10000
F2005-12025	F1155-12025 F2515-12000			F2015-10050	F1155-10050 F2515-10000 F2500-10000
F2005-12030	F1155-12030 F2515-12000				
F2005-12035	F1155-12035 F2515-12000				

### TABLE OF BOLT, W/WASHER

BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER	BOLT, W/WASHER	BOLT/WASHER
F2015-10055	F1155-10055 F2515-10000 F2500-10000				
F2015-10060	F1155-10060 F2515-10000 F2500-10000				
F2015-12025	F1155-12025 F2515-12000 F2500-12000				
F2015-12030	F1155-12030 F2515-12000 F2500-12000				



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