

PB22000D

GENERAC

2.2 DIESEL

REPAIR PARTS MANUAL

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LEGEND

"AR" AS REQUIRED

(STD) STANDARD SIZE

"O.S." OVERSIZE

"U.S." UNDERSIZE

NOTE: FOR PRE-1989 UNITS SEE PUBLICATION # 68063

ENGINE SERVICE RECOMMENDATIONS

SPECIFICATIONS:

CRANKCASE OIL CAPACITY 5.3 U.S. QUARTS
 COOLANT CAPACITY 8.5 U.S. QUARTS

RECOMMENDED COOLANT:

USE A MIXTURE OF HALF SILICATE, ETHELENE GLYCOL BASE ANTI-FREEZE AND HALF SOFT WATER. COOLING SYSTEM CAPACITY IS ABOUT 8.5 U.S. QUARTS (8.0 LITERS). USE ONLY SOFT WATER AND ONLY LOW SILICATE ANTIFREEZE. IF DESIRED, ADD A HIGH QUALITY RUST INHIBITOR TO THE RECOMMENDED COOLANT MIXTURE. WHEN ADDING COOLANT, ALWAYS ADD THE RECOMMENDED 50 / 50 MIXTURE. DO NOT USE ANY CHROMATE BASE RUST INHIBITOR WITH ETHYLENE GLYCOL BASE ANTI-FREEZE OR ELSE CHROMIUM HYDROXIDE ("GREEN SLIME") FORMS AND CAUSES OVERHEATING. ENGINES THAT HAVE BEEN OPERATED WITH CHROMATE BASE RUST INHIBITOR MUST BE CHEMICALLY CLEANED BEFORE YOU CAN ADD ETHYLENE GLYCOL BASE ANTI-FREEZE. USING ANY HIGH SILICATE ANTI-FREEZE BOOSTERS AND ADDITIVES WILL ALSO CAUSE OVERHEATING. WE ALSO RECOMMEND THAT YOU DO NOT USE ANY SOLUABLE OIL INHIBITOR FOR THIS EQUIPMENT.

RECOMMENDED ENGINE OIL:

USE A HIGH QUALITY DETERGENT OIL CLASSIFIED "FOR SERVICE CC, SD, SE, OR SF." DETERGENT OILS KEEP THE ENGINE CLEANER AND REDUCE CARBON DEPOSITS. USE OIL HAVING THE FOLLOWING SAE VISCOSITY RATING, BASED ON THE AMBIENT TEMPERATURE RANGE ANTICIPATED BEFORE THE NEXT OIL CHANGE.

TEMPERATURE	OIL GRADE (RECOMMENDED)
ABOVE 80 deg. F	SAE 30
30-80 deg. F	SAE 20W-20
BELOW 32 deg. F	SAE 10W

AFTER FIRST 30 HOURS OF OPERATION

- *CHECK AND ADJUST VALVE CLEARANCE.
- *RETORQUE CYLINDER HEAD BOLTS.
- *RETORQUE INTAKE / EXHAUST MANIFOLD BOLTS.
- *RETORQUE OIL PAN BOLTS.
- *RETORQUE ENGINE FAN BOLTS.
- *TEST FUEL INJECTION NOZZLES.
- *CHECK INJECTION TIMING.
- *INSPECT WIRING.
- *CHANGE ENGINE CRANKCASE OIL.
- *INSPECT ENGINE FAN BELTS.
- *INSPECT BATTERY CABLES.

EVERY MONTH

- *INSPECT BATTERY CABLES.
- *CHECK ENGINE OIL LEVEL.
- *CHECK COOLANT LEVEL.

EVERY TWO YEARS

- *REPLACE ALL RUBBER HOSES.
- *REPLACE ENGINE FAN BELTS.
- *INSPECT FUEL SUPPLY SYSTEM.

EVERY SIX MONTHS

- *CHANGE ENGINE OIL AND FILTER.
- *LUBRICATE ENGINE OIL CONTROLS.
- *SERVICE ENGINE AIR CLEANER.
- *SERVICE ENGINE FUEL FILTER (S).
- *INSPECT FAN BELTS.
- *CHECK ENGINE COOLANT LEVEL.
- *INSPECT COOLING SYSTEM HOSES.
- CHECK ENGINE COMPRESSION.

ONCE ANNUALLY

- *CHECK ENGINE VALVE CLEARANCE.
- *TEST FUEL INJECTION NOZZLES.
- *TEST INJECTION TIMING.
- *TEST ENGINE STARTER OPERATION.
- *RETORQUE FAN BOLTS.

ENGINE GASKET SET 104-67057

REF#	GENERAC#	DESCRIPTION	QTY
A	113-67057	VALVE STEM SEAL	8
B	178-67057	OIL SEAL, CAMSHAFT	1
C	118-67057	CYLINDER HEAD CVOVER GASKET	1
D	123-67057	CYLINDER HEAD GASKET	1
E	153-67057	OIL PAN GASKET	1
F	183-67057	GASKET, REAR COVER	1
G	184-67057	REAR MAIN OIL SEAL	1
H	178-67057	CAMSHAFT FRONT OIL SEAL	1
I	179-67057	CAMSHAFT REAR OIL SEAL	1
J	240-67057	INTAKE MANIFOLD GASKET	1
K	298-67057	OIL STRAINER GASKET	1
L	312-67057	WATER PUMP GASKET SIDE	1
M	114-67057	THERMOSTAT CASING GASKET	1
N	102-67057	THERMOSTAT COVER GASKET	1
O	246-67057	EXHAUST MANIFLD GASKET	1
P	316-67057	WATER PUMP GASKET	1

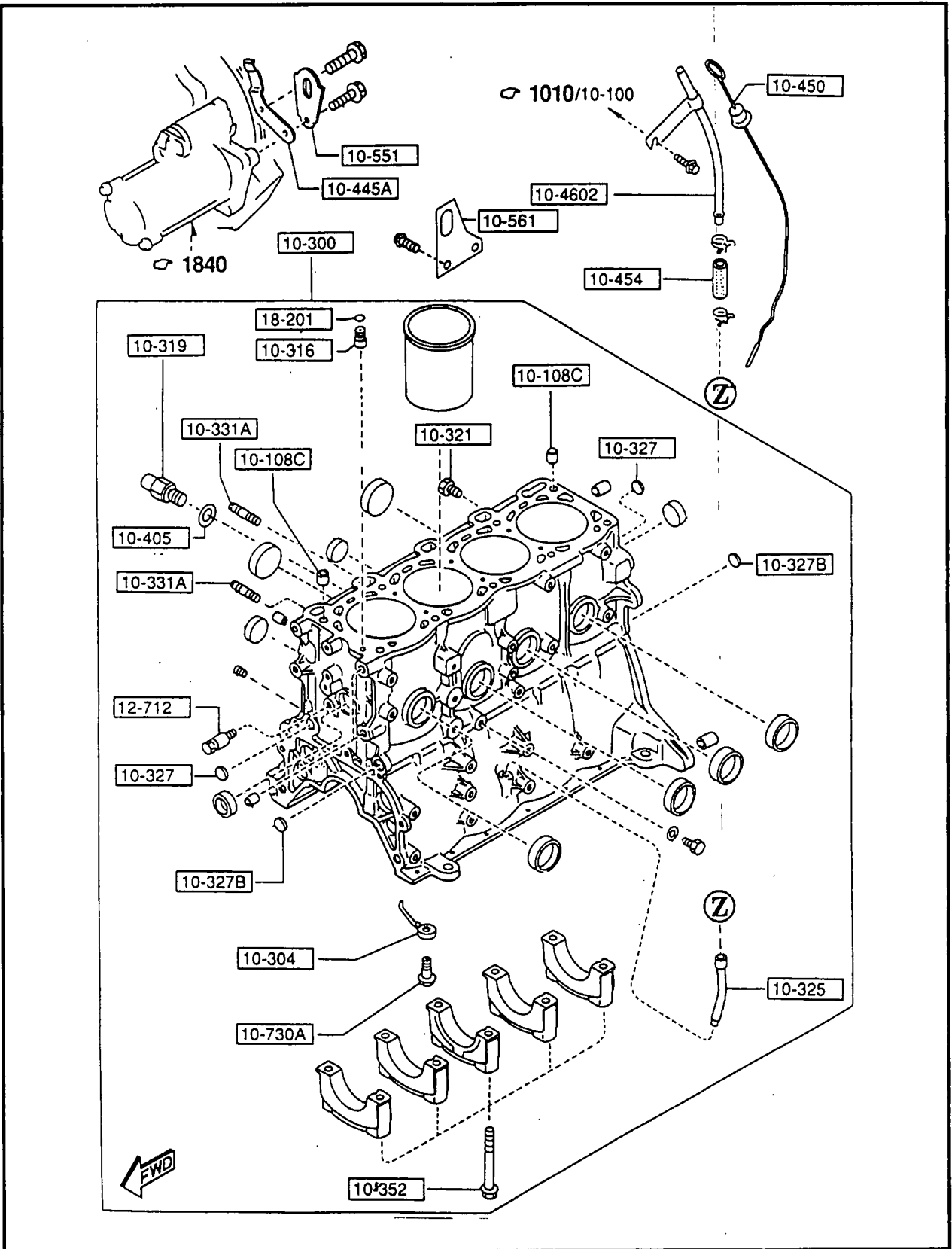
ENGINE TUNE-UP / ENGINE PARTS

AIR FILTER ASSEMBLY	73912
AIR FILTER (PLEATED PAPER)	62784
V-BELT	36290
THERMOSTAT	103-67057
THERMOSTAT GASKET	102-67057
FUEL FILTER ELEMENT	363-67057
OIL FILTER ELEMENT	304-67057
GLOW PLUGS	332-67057
CONTROL UNIT FOR GLOW PLUGS	362-67057
CONNECTING ROD BEARING (STD)	208-67057
PISTON RING SET (STD)	212-67057
MAIN BEARING SET (STD)	215-67057
PISTON SET (STD)	219-67057
THRUST SET (STD)	222-67057
TIMING BELT	230-67057
TAPPET (LIFTER)	236-67057

TORQUE SPECIFICATIONS

CONNECTING ROD CAP BOLTS	48-51 ft lbs
OIL PUMP M8 SMALLER BOLT	14-19 ft lbs
OIL PUMP M10 BIGGER BOLT	27-38 ft lbs
OIL STRAINER	5-7 ft lbs
OIL PAN	5-7 ft lbs
TIMING BELT PULLEY (CRANKSHAFT)	116-123 ft lbs
CYLINDER HEAD BOLTS	22 ft lbs
**NOTE: After initial torquing of cylinder head bolts, mark head bolts with a dot of paint in the twelve o'clock position and proceed to another 90-105 degrees, then repeat step one more time.	
CAMSHAFT RETAINER BOLTS	15-20 ft lbs
GLOW PLUGS	11-15 ft lbs
WATER PUMP	27-38 ft lbs
THERMOSTAT ASSEMBLY	6-8 ft lbs
CAMSHAFT PULLEY	17-24 ft lbs
INJECTION PUMP PULLEY	43-51 ft lbs
CRANKSHAFT PULLEY	17-24 ft lbs
INTAKE / EXHAUST MANIFOLD	16-20 ft lbs

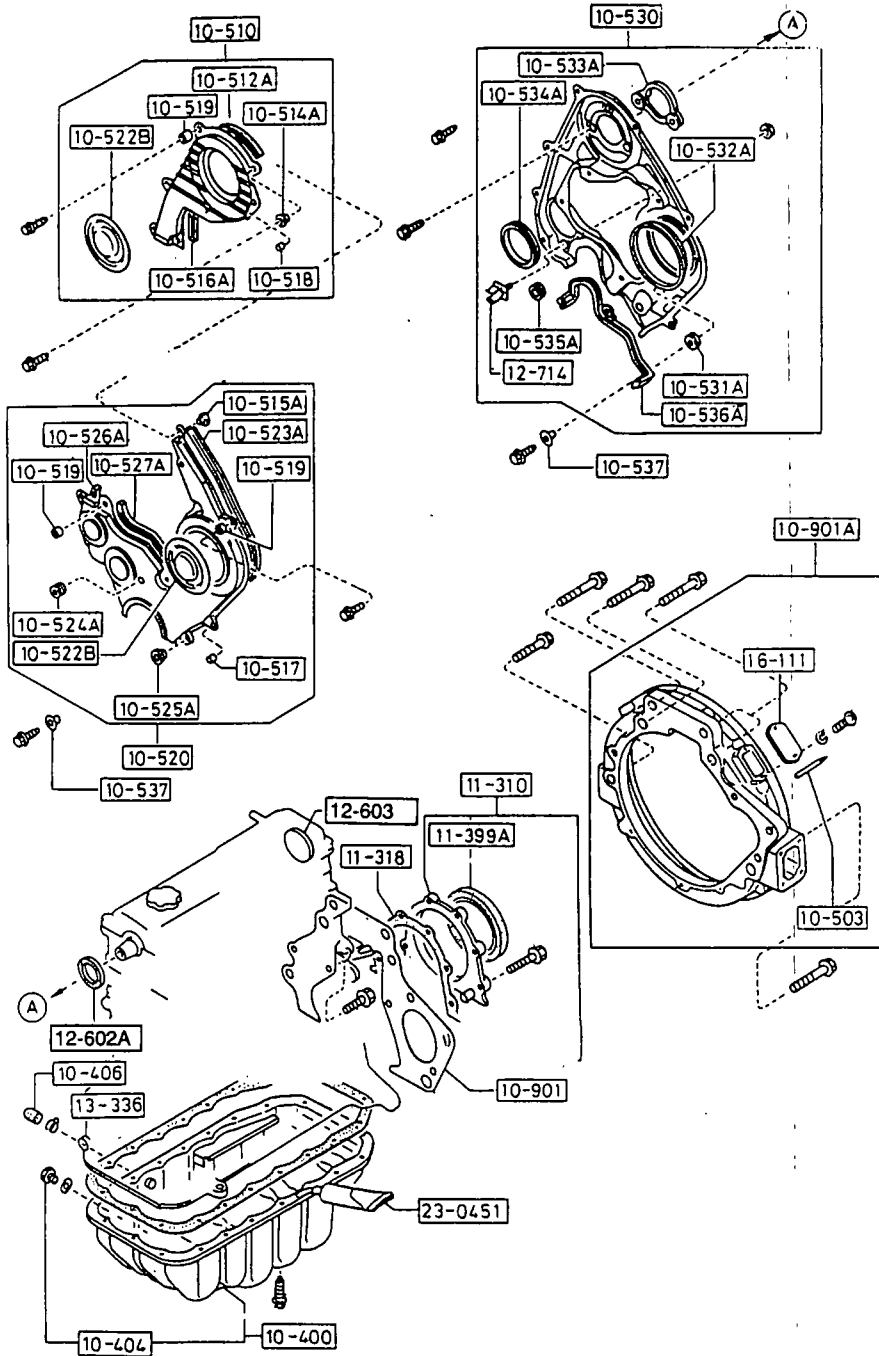
CYLINDER BLOCK AND RELATED PARTS



CYLINDER BLOCK AND RELATED PARTS

REF#	GENERAC#	DESCRIPTION	QTY
10-108C	129-67057	PIN, TUBULAR	2
10-300	130-67057	BLOCK, CYLINDER	1
10-316	131-67057	PLUG, OIL CONTROL	1
10-319	132-67057	JOINT	1
10-321	133-67057	PLUG	1
10-325	134-67057	PIPE, OIL LEVEL GAUGE	1
10-327	135-67057	PLUG, BLIND	2
10-327B	136-67057	PLUG, BLIND	2
10-331A	137-67057	STUD, TORX	2
10-352	138-67057	BOLT, BEARING CAP	10
10-450	139-67057	GAUGE, OIL LEVEL	1
10-454	140-67057	HOLDER, GAUGE PIPE	1
10-4602	141-67057	PIPE, OIL LEVEL GAUGE	1
10-551	142-67057	HANGER, ENGINE	1
10-710A	143-67057	JET, OIL	4
10-715	144-67057	GASKET, OIL JET	8
10-730A	145-67057	VALVE, OIL JET	4
12-712	146-67057	SET PIN, SPRING	1
18-201	147-67057	O-RING	1
23-800	105-67057	SHORT BLOCK ASSEMBLY	1
43-694	148-67057	BOLT, CONNECTOR	1

OIL PAN AND TIMING COVER ACCESSORIES



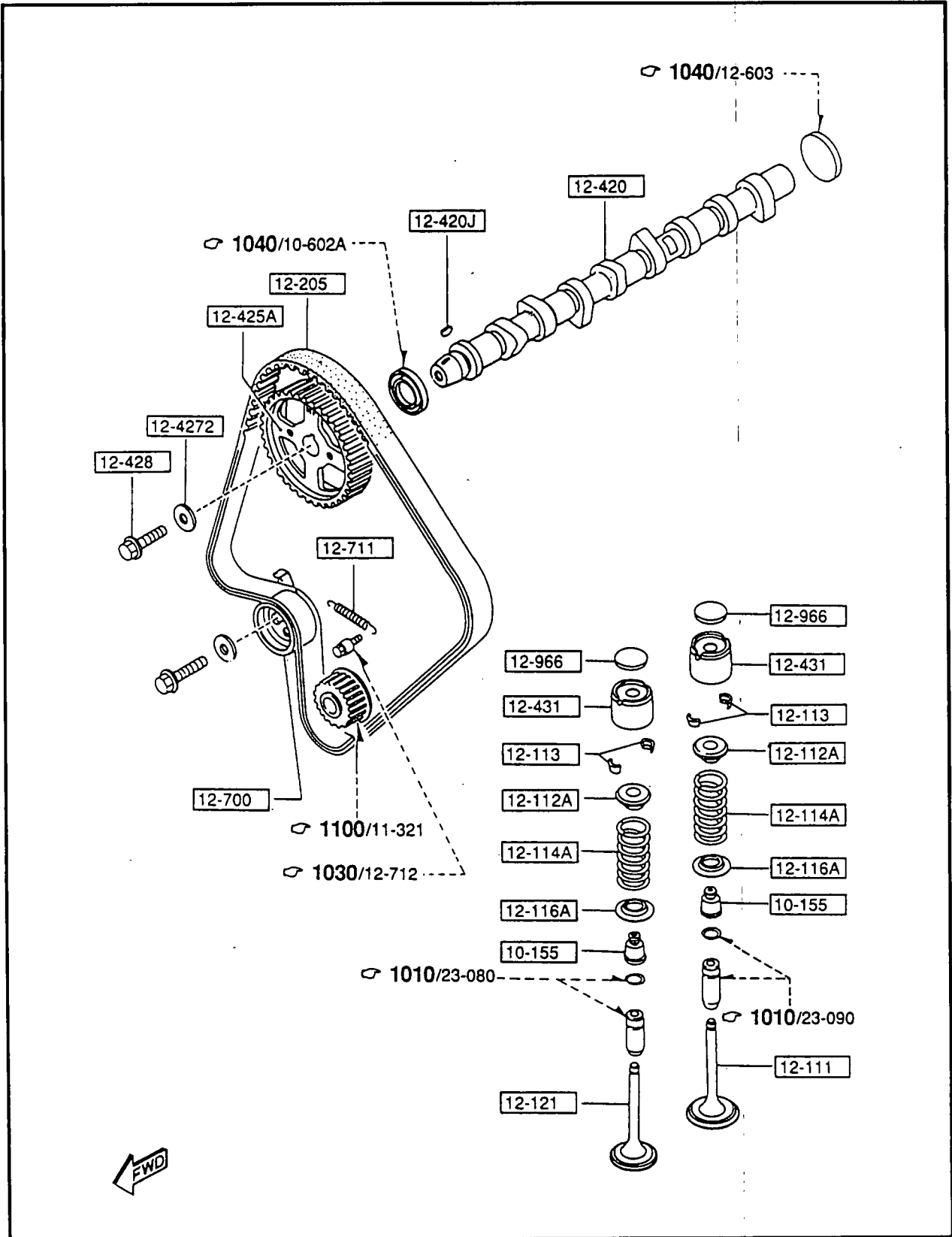
OIL PAN AND TIMING COVER ACCESSORIES

REF#	GENERAC#	DESCRIPTION	QTY
10-400	149-67057	PAN, OIL	1
10-404	150-67057	PLUG, DRAIN	1
10-405	151-67057	GASKET, DRAIN PLUG	1
10-406	152-67057	CAP, SEALING	1
10-431	153-67057	GASKET, OIL PAN	1
10-503	154-67057	PIN, TOP INDICATOR	1
10-510	155-67057	COVER, TIMING COVER (RIGHT)	1
10-512A	156-67057	GASKET, TIMING BELT COVER (UPPER)	1
10-514A	157-67057	INSERT, TIMING BELT COVER	3
10-515A	158-67057	INSERT, TIMING BELT COVER	3
10-516A	159-67057	RUBBER SEAL	1
10-517	160-67057	INSERT	1
10-518	161-67057	INSERT	1
10-519	162-67057	INSERT	7
10-520	163-67057	COVER, TIMING BELT (LEFT)	1
10-522B	164-67057	CAP, TIMING COVER BELT	2
10-523A	165-67057	RUBBER SEAL	1
10-524A	166-67057	SEAL, INDICATOR PIN	1
10-525A	167-67057	RUBBER SEAL	2
10-526A	168-67057	RUBBER SEAL	1
10-527A	169-67057	SEAL, RUBBER	1
10-530	170-67057	PLATE, SEAL	1
10-531A	171-67057	RUBBER, SEAL	3
10-532A	172-67057	RUBBER, SEAL	1
10-533A	173-67057	RUBBER, SEAL	1
10-534A	174-67057	RUBBER, SEAL	1
10-535A	175-67057	RUBBER, SEAL	1
10-536A	176-67057	RUBBER, SEAL	1
10-537	177-67057	SPACER	7
10-602	178-67057	OIL SEAL, CAMSHAFT	1
10-901	180-67057	PLATE, END	1
10-901A	181-67057	HOUSING, FLYWHEEL	1
11-310	182-67057	COVER, REAR	1
11-318	183-67057	GASKET, REAR COVER	1
11-399A	184-67057	SEAL, OIL CRANKSHAFT	1
12-714	185-67057	CLIP, TENSIONER SP.	1
13-336	186-67057	CLIP, HOSE	1
16-111	187-67057	COVER, PEEPING HOLE	2
16-121	188-67057	COVER, UNDER CLUTCH HOUSING	1
23-0451	189-67057	TUBE, SILICON	1

PISTON, CRANKSHAFT, FLYWHEEL AND ACCESSORIES

REF#	GENERAC#	DESCRIPTION	QTY
11-205	190-67057	CLIP	8
11-210	191-67057	ROD, CONNECTING	4
11-213	192-67057	BUSH, CONNECTING ROD	4
11-215	193-67057	NUT, CONNECTING ROD	8
11-301	194-67057	CRANKSHAFT	1
11-301J	195-67057	KEY, WOODRUFF-PULLEY	1
11-321	196-67057	PULLEY, TIMING BELT	1
11-371	197-67057	PULLEY, CRANKSHAFT	1
11-371A	198-67057	WASHER, FLAT	6
11-376	199-67057	BOLT, PULLEY	1
11-377	200-67057	WASHER, PLAIN	1
11-402	201-67057	PULLEY	1
11-406	202-67057	BOLT, LOCK -CRANK SHAFT PULLEY	6
11-500	203-67057	FLYWHEEL	1
11-500J	204-67057	FLYWHEEL BALL BEARING	1
11-502	205-67057	FLYWHEEL RING GEAR	1
11-511	206-67057	FLYWHEEL LOCK BOLT	8
14-134A	207-67057	GEAR, OIL PUMP DRIVE	1
23-105	208-67057	CONNECTING ROD BEARINGSET (STD)	1
23-105	209-67057	CONNECTING ROD BEARING SET (0.25 U.S.)	AR
23-105	210-67057	CONNECTING ROD BEARING SET (0.50 U.S.)	AR
23-105	211-67057	CONNECTING ROD BEARING SET (0.75 U.S.)	AR
23-130	212-67057	PISTON RING SET (STD)	1
23-130	213-67057	PISTON RING SET (0.25 O.S.)	AR
23-130	214-67057	PISTON RING SET (0.50 O.S.)	AR
23-151	215-67057	MAIN BEARING SET (STD)	1
23-151	216-67057	MAIN BEARING SET (0.25 U.S.)	AR
23-151	217-67057	MAIN BEARING SET (0.50 U.S.)	AR
23-151	218-67057	MAIN BEARING SET (0.75 U.S.)	AR
23-200	219-67057	PISTON SET (STD)	1
23-200	220-67057	PISTON SET (0.25 O.S.)	AR
23-200	221-67057	PISTON SET (0.50 O.S.)	AR
23-201	222-67057	THRUST BEARING SET (STD)	1
23-201	223-67057	THRUST BEARING SET (O.S.)	AR

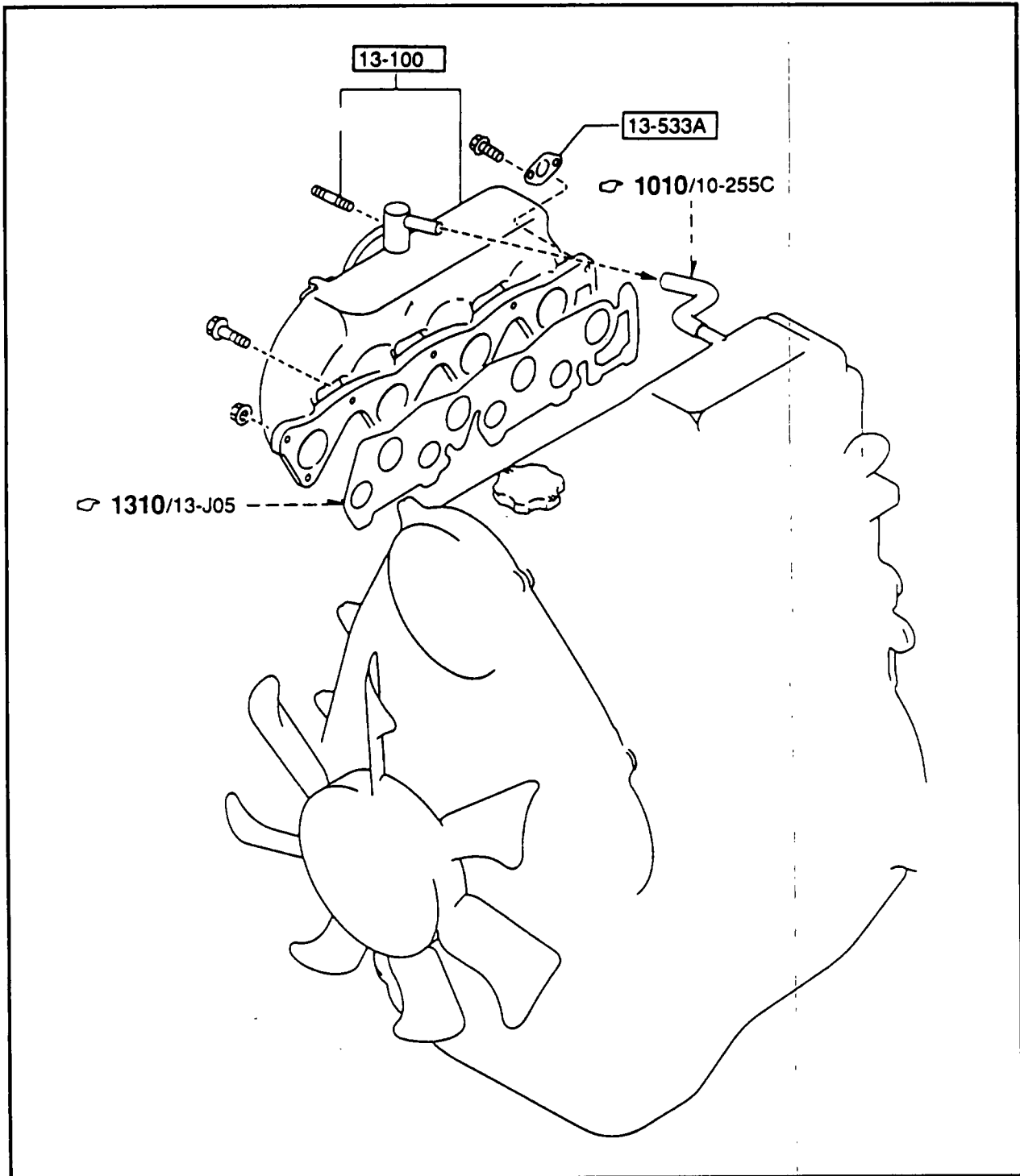
VALVE SYSTEM AND ACCESSORIES



VALVE SYSTEM AND ACCESSORIES

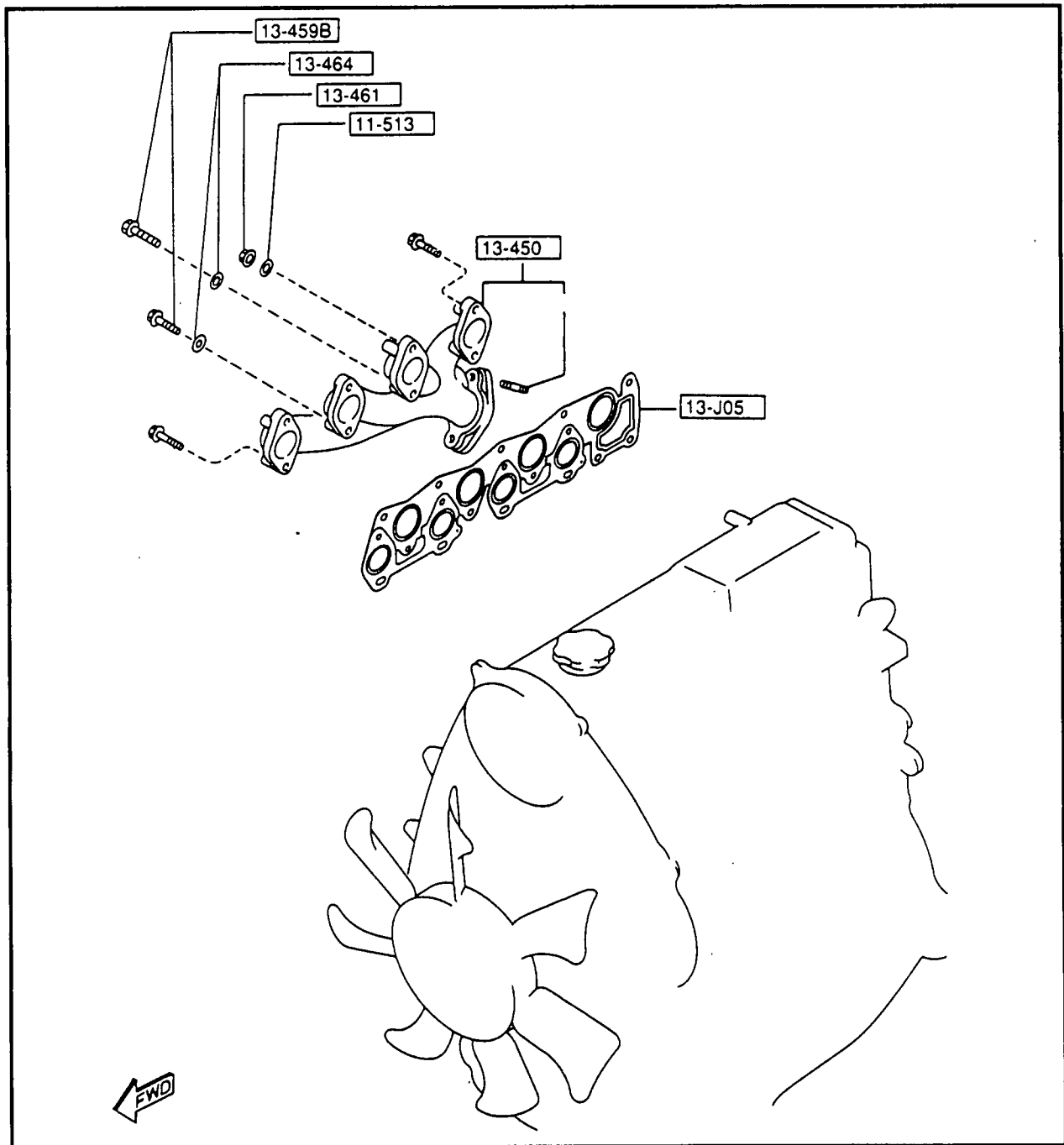
REF#	GENERAC#	DESCRIPTION	QTY
12-111	224-67057	VALVE, INLET	4
12-112A	225-67057	VALVE SPRING SEAT, UPPER	8
12-113	226-67057	COTTER, VALVE INTAKE	16
12-114A	227-67057	OUTER VALVE SPRING	8
12-121	229-67057	VALVE, EXHAUST	4
12-205	230-67057	BELT, TIMING	1
12-420	231-67057	CAMSHAFT	1
12-420J	232-67057	KEY, WOODRUFF	1
12-425A	233-67057	PULLEY, CAMSHAFT	1
12-4272	234-67057	WASHER	1
12-428	235-67057	BOLT, LOCK CAMSHAFT PULLEY	1
12-431	236-67057	TAPPET, (LIFTER)	8
12-700	237-67057	TIMING BELT TENSIONER	1
12-711	238-67057	SPRING, TENSIONER	1
12-966	400-67057	DISC, ADJUSTING 4.6mm	AR
12-966	400-67057A	DISC, ADJUSTING 4.55mm	AR
12-966	400-67057B	DISC, ADJUSTING 4.5mm	AR
12-966	400-67057C	DISC, ADJUSTING 4.4mm	AR
12-966	400-67057D	DISC, ADJUSTING 4.35mm	AR
12-966	400-67057E	DISC, ADJUSTING 4.3mm	AR
12-966	400-67057F	DISC, ADJUSTING 4.25mm	AR
12-966	400-67057G	DISC, ADJUSTING 4.2mm	AR
12-966	400-67057H	DISC, ADJUSTING 4.15mm	AR
12-966	400-67057I	DISC, ADJUSTING 4.15mm	AR
12-966	400-67057J	DISC, ADJUSTING 4.05mm	AR
12-966	400-67057K	DISC, ADJUSTING 4.0mm	AR
12-966	400-67057L	DISC, ADJUSTING 3.95mm	AR
12-966	400-67057M	DISC, ADJUSTING 3.9mm	AR
12-966	400-67057N	DISC, ADJUSTING 3.85mm	AR
12-966	400-67057O	DISC, ADJUSTING 3.8mm	AR
12-966	400-67057P	DISC, ADJUSTING 3.75mm	AR
12-966	400-67057Q	DISC, ADJUSTING 3.7mm	AR
12-966	400-67057R	DISC, ADJUSTING 3.65mm	AR
12-966	400-67057S	DISC, ADJUSTING 3.6mm	AR
12-966	400-67057T	DISC, ADJUSTING 3.55	AR
12-966	400-67057U	DISC, ADJUSTING 3.5mm	AR
12-966	400-67057V	DISC, ADJUSTING 3.4mm	AR

INTAKE MANIFOLD AND ACCESSORIES



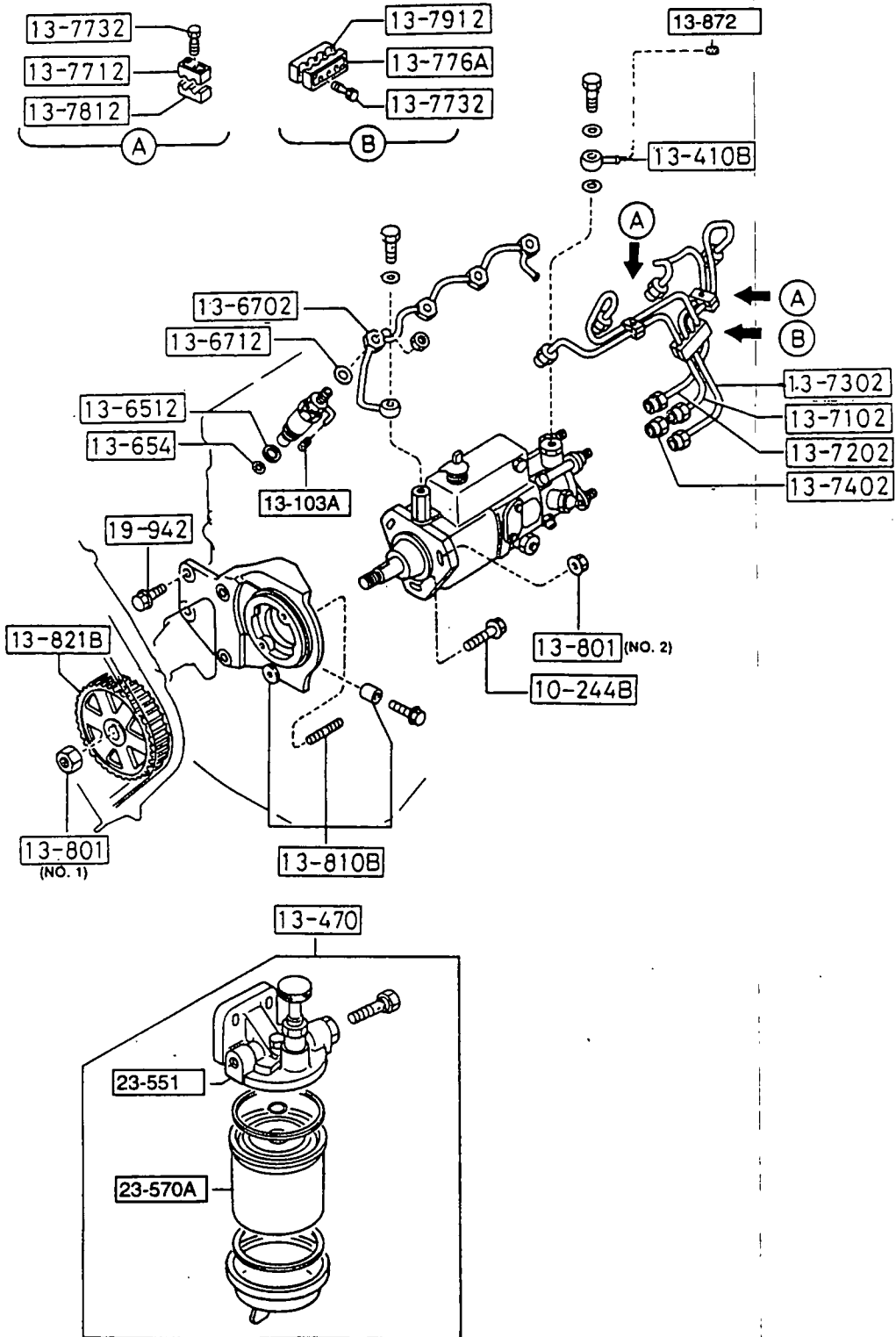
REF#	GENERAC#	DESCRIPTION	QTY
13-100	239-67057	MANIFOLD, INTAKE	1
13-111	240-67057	GASKET, INTAKE MANIFOLD	1
13-126A	241-67057	GASKET, INTAKE ELBOW	1

EXHAUST MANIFOLD AND ACCESSORIES



REF#	GENERAC#	DESCRIPTION	QTY
11-513	242-67057	WASHER, FLAT	2
13-450	243-67057	MANIFOLD, EXHAUST	1
13-459B	244-67057	WASHER, FLAT	1
13-461	245-67057	NUT, EXHAUST MANIFOLD	2
13-462	246-67057	GASKET, EXHAUST MANIFOLD	1
13-464	247-67057	BOLT, EXHAUST MANIFOLD	1
13-390D	248-67057	INSULATOR, EXHAUST MANIFOLD	1

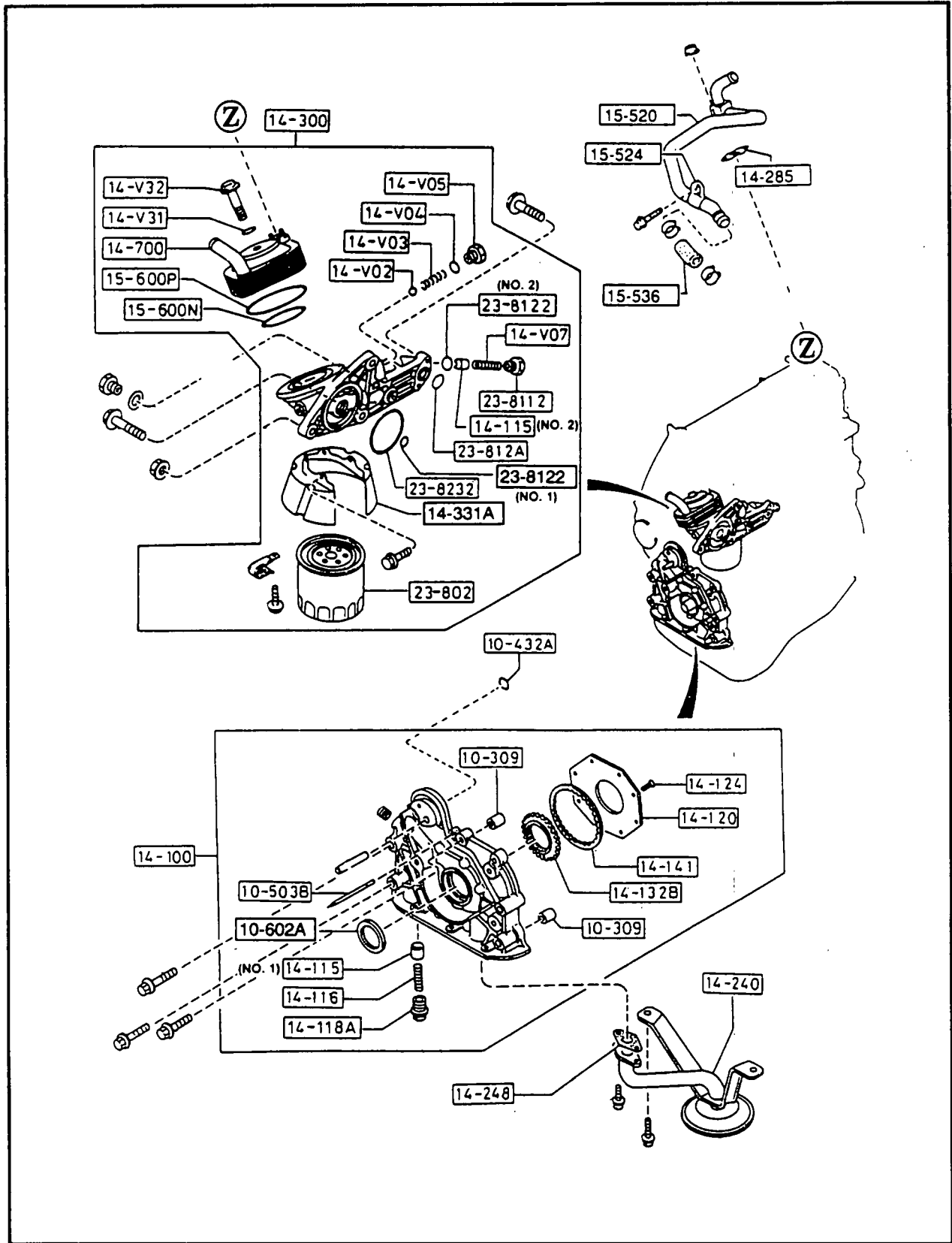
ENGINE FUEL SYSTEM



ENGINE FUEL SYSTEM

REF#	GENERAC#	DESCRIPTION	QTY
10-244B	249-67057	BOLT, FUEL INJECTION PUMP	1
13-410B	250-67057	CONNECTOR, FUEL	1
13-470	100-67057	FILTER, FUEL, ASSEMBLY	1
13-6402	269-57057	HOLDER, NOZZLE (FUEL INJECTOR ASY.)	4
13-6512	251-67057	WASHER, NOZZLE	4
13-654	252-67057	GASKET	4
13-6702	253-67057	PIPE, FUEL RETURN	1
13-6712	254-67057	GASKET, RETURN PIPE	4
13-7102	255-67057	PIPE, INJECTION # 1	1
13-7202	256-67057	PIPE, INJECTION # 2	1
13-7302	257-67057	PIPE, INJECTION # 3	1
13-7402	258-67057	PIPE, INJECTION # 4	1
13-7712	259-67057	CLAMP	2
13-7732	260-67057	BOLT, CLAMP	4
13-776A	261-67057	CLAMP	1
13-7812	262-67057	CLAMP, INJECTION PIPE	2
13-7912	263-67057	CLAMP, INJECTION PIPE	1
13-801	264-67057	NUT	1
13-8002	268-67057	INJECTION PUMP	1
13-810B	265-67057	BRACKET, FUEL INJECTION PUMP	1
13-821B	266-67057	PULLEY, FUEL INJECTION PUMP	1
19-942	267-67057	BOLT, BRACKET	1
13-8002	268-67057	PUMP, FUEL INJECTION	1
23-570A	363-67057	FUEL FILTER ELEMENT	1

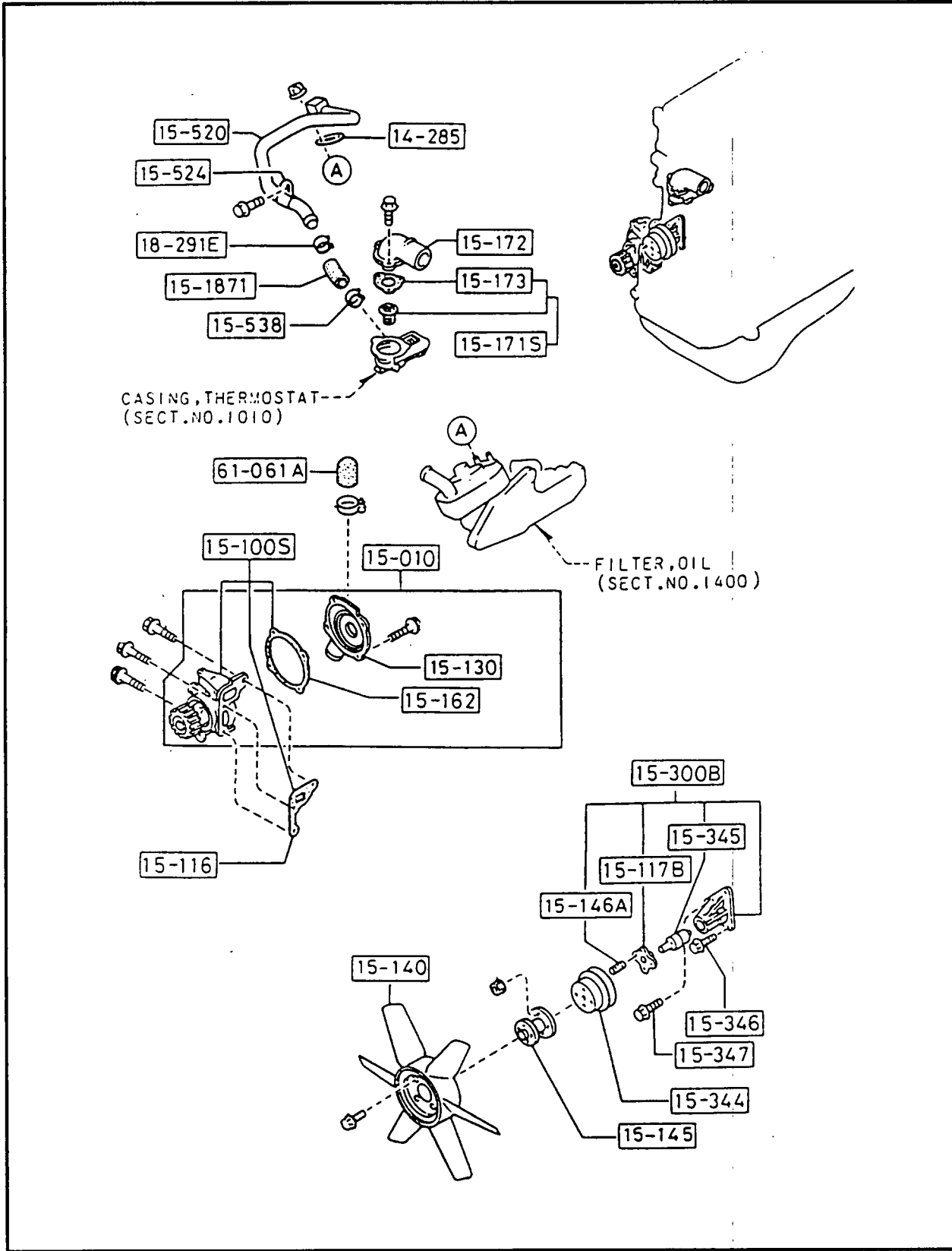
OIL PUMP AND FILTER ACCESSORIES



OIL PUMP AND FILTER ACCESSORIES

REF#	GENERAC#	DESCRIPTION	QTY
10-309	276-67057	PIN, TUBULAR	2
10-432A	277-67057	O-RING	1
10-503B	278-67057	PIN, TOP INDICATOR	1
10-602	279-67057	SEAL, OIL CAMSHAFT	1
14-V02	280-67057	BALL, STEEL RELIEF VALVE	1
14-V03	281-67057	SPRING, RELIEF VALVE	1
14-V04	282-67057	O-RING, RELIEF VALVE E-C	1
14-V05	283-67057	PLUG, RELIEF VALVE-OIL	1
14-V07	284-67057	SPRING, RELIEF VALVE OIL FLR	1
14-V31	285-67057	RING, O CENTER BOLT	1
14-V32	286-67057	BOLT, CENTER OIL COOLER	1
14-100	287-67057	PUMP, OIL	1
14-115	289-67057	PLUNGER, CONTROL	1
14-116	291-67057	SPRING, PRESSURE	1
14-118A	292-67057	PLUG	1
14-120	293-67057	COVER, OIL PUMP	1
14-124	294-67057	SCREW, OIL PUMP COVER	8
14-132B	295-67057	GEAR, INNER	1
14-141	296-67057	GEAR, OUTER	1
14-240	297-67057	STRAINER, OIL	1
14-248	298-67057	GASKET, OIL STRAINER	1
14-300	299-67057	FILTER, OIL	1
14-311	300-67057	COVER, OIL FILTER	1
14-700	301-67057	COOLER, OIL	1
15-600P	303-67057	O-RING	1
15-660N	302-67057	O-RING	1
23-802	304-67057	CARTRIDGE, OIL FILTER	1
23-8112	305-67057	PLUG	1
23-812A	306-67057	O-RING	1
23-8122	307-67057	O-RING	1
23-8232	308-67057	O-RING	1

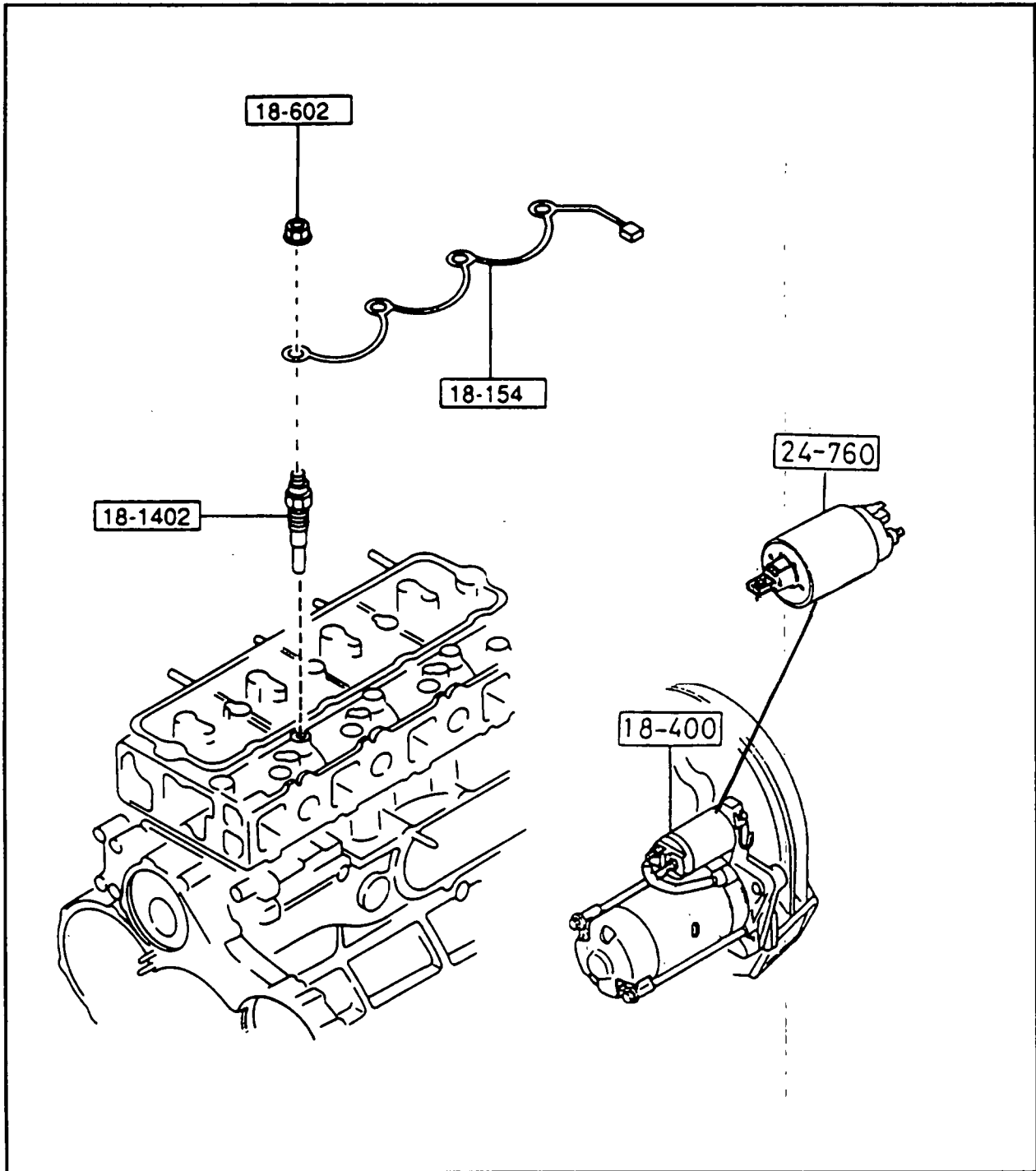
COOLING SYSTEM AND RELATED PARTS



COOLING SYSTEM AND RELATED PARTS

REF#	GENERAC#	DESCRIPTION	QTY
14-285	309-67057	GASKET, OIL PIPE	1
15-010S	310-67057	PUMP SET, WATER	1
15-100S	311-67057	BODY, WATER PUMP	1
15-116	312-67057	GASKET, WATER PUMP	1
15-117B	313-67057	HUB, WATER PUMP PULLEY	1
15-130	314-67057	COVER, WATER PUMP	1
15-140	330-67057	FAN, COOLING	1
15-146A	315-67057	STUD, COOLING FAN	4
15-162	316-67057	GASKET	1
15-1871	318-67057	HOSE, RADIATOR	1
15-300B	319-67057	BRACKET, FAN	1
15-344	322-67057	PULLEY, FAN	1
15-345	323-67057	SHAFT, BEARING FAN BRACKET	1
15-346	324-67057	BOLT	2
15-347	325-67057	BOLT	1
15-520	326-67057	PIPE, WATER	1
15-524	324-67057	CLAMP, WATER PIPE, OIL COOLER	1
15-538	329-67057	CLAMP, WATER HOSE	1
18-291E	328-67057	CLAMP, HOSE	1
61-061A	331-67057	COVER, ENGINE	1

ELECTRICAL RELATED ACCESSORIES



REF#	GENERAC#	DESCRIPTION	QTY
18-1402	332-67057	GLOW PLUG	4
18-154	333-67057	CABLE, GLOW PLUG	1
18-400	335-67057	STARTER, ASSEMBLY	1
18-602	334-67057	NUT, FLANGED-GLOW PLUG	4
24-760	356-67057	SWITCH (SOLENOID)	1

