

PARTS AND OPERATION MANUAL

MULTIQUIP Model DA-7000SS A.C. GENERATOR

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Revision #1 (03/05/01)



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WARNING



CALIFORNIA — Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

HERE'S HOW TO GET HELP

*PLEASE HAVE THE MODEL AND SERIAL NUMBER
ON-HAND WHEN CALLING*

PARTS DEPARTMENT

800-427-1244 or 310-537-3700

FAX: 800-672-7877 or 310-637-3284

SERVICE DEPARTMENT/TECHNICAL ASSISTANCE

800-478-1244 or 310-537-3700

FAX: 310- 537-4259

WARRANTY DEPARTMENT

888-661-4279, or 310-661-4279

FAX: 310- 537-1173

MAIN

800-421-1244 or 310-537-3700

FAX: 310-537-3927

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Kubota Z482-EB Engine

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NOTE

*Specification and part
number are subject to
change without notice.*

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PARTS ORDERING PROCEDURES

- Dealer account number
- Dealer name and address
- Shipping address (if different than billing address)
- Return fax number
- Applicable model number
- Quantity, part number and description of each part
- Specify preferred method of shipment:
 - UPS Ground
 - UPS Second Day or Third Day*
 - UPS Next Day*
 - Federal Express Priority One (please provide us with your Federal Express account number)*
 - Airborne Express*
 - Truck or parcel post

**Normally shipped the same day the order is received, if prior to 2PM west coast time.*

Earn Extra Discounts when you order by FAX!

All parts orders which include complete part numbers and are received by fax qualify for the following extra discounts:

<u>Number of line items ordered</u>	<u>Additional Discount</u>
1-9 items	3%
10+ items**	5%

Get special freight allowances when you order 10 or more line items via FAX!**

- UPS Ground Service at no charge for freight
- PS Third Day Service at one-half of actual freight cost

No other allowances on freight shipped by any other carrier.

**Common nuts, bolts and washers (all items under \$1.00 list price) do not count towards the 10+ line items.

DISCOUNTS ARE SUBJECT TO CHANGE

Fax order discount and UPS special programs revised June 1, 1995

**Extra Fax Discount
for Domestic USA
Dealers Only**

**Up to 5%
extra savings!**

**UPS
Special**
For faxed orders only

**Now! Direct TOLL-FREE access
to our Parts Department!**

Toll-free nationwide:

800-421-1244

Toll-free FAX:

800/6-PARTS-7 • 800-672-7877

RULES FOR SAFE OPERATION

CAUTION:



Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the DA-7000SS AC Generator:

GENERAL SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.



- This equipment should not be operated by persons under 18 years of age.

- **NEVER** operate this equipment without proper protective clothing, shatterproof toed boots and other protective by the job.



without proper glasses, steel-devices required

- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.



- **NEVER** operate this equipment under the influence of drugs or alcohol.



- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.

- Manufacture does not assume responsibility for any accident due to equipment modifications.

- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.

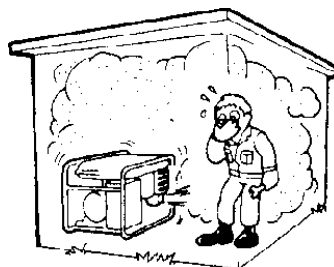
- Always check the machine for loosened threads or bolts before starting.

- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or generator.



- **High Temperatures** – Allow the engine to cool before adding fuel or performing service and maintenance functions. Contact with *hot* components can cause serious burns.

- The engine of this generator requires an adequate free flow of cooling air. Never operate the generator in any enclosed or narrow area where free flow of the air is restricted. If the air



flow is restricted it will cause serious damage to the generator engine and may cause injury to people. Remember the generator's engine gives off DEADLY carbon monoxide gas.

- Always refuel in a well-ventilated area, away from sparks and open flames.



- Always use extreme caution when working with **flammable** liquids. When refueling, **stop the** engine and allow it to cool. **DO NOT** smoke around or near the machine. Fire or explosion could result from fuel vapors, or if fuel is spilled on a hot engine.

- **NEVER** operate the generator in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe *bodily harm or even death*.

- Topping-off to filler port is dangerous, as it tends to spill fuel.

CAUTION:



Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the DA-7000SS Generator:

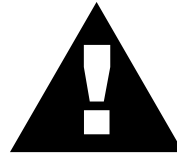
GENERAL SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.
- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.
- This generator is a source of providing **LETHAL** high voltages. Never permit unqualified personnel-especially children to operate the generator.
- Always refuel in a well-ventilated area, away from sparks and open flames.
- Always use extreme caution when working with **flammable** liquids. When refueling, **stop the engine** and allow it to cool. **DO NOT smoke** around or near the machine. Fire or explosion could result from flames or sparks, or if fuel is spilled on a hot engine.
- This generator is equipped with a **ground terminal** for your protection. Always complete the grounding path from the generator to an external grounding source.
- **NEVER** operate this generator, or handle any electrical equipment while standing in **water, while bare foot, while hands are wet, or in the rain**. *Dangerous electrical shock could occur causing severe bodily harm or even death.*
- Keep electrical cords in good condition. Worn, bare or frayed wiring can cause electrical shock, thus causing *bodily harm or even death*.
- This generator requires an adequate free flow of cooling air. Never operate the generator in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the generator and may cause injury to people.
- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing generator.

- Provide adequate ventilation when operating the generator. **DO NOT** operate the generator in any enclosed or narrow space. The gasoline engine that provides power to the generator gives off **DEADLY** monoxide gas.
- **NEVER** operate the generator in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe *bodily harm or even death*.
- Always make sure that the generator is secure on level ground so that it cannot slide or shift around, endangering workers. Also keep the immediate area free of bystanders.
- **High Temperatures** – Allow the machine and engine to cool before adding fuel or performing service and maintenance functions. Contact with *hot* components can cause serious burns.

CAUTION:

Emergencies



- Always know the location of the nearest **fire extinguisher** and **first aid kit**. Know the location of the nearest telephone. Also know the phone numbers of the nearest **ambulance, doctor** and **fire department**. This information will be invaluable in the case of an emergency.

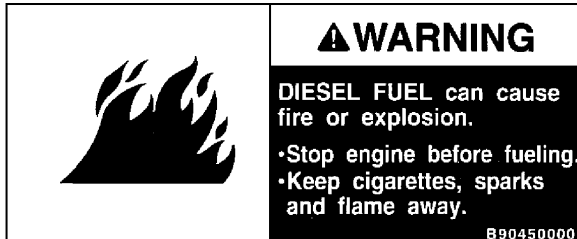
Maintenance Safety

- **NEVER** lubricate components or attempt service on a running machine.
- Always allow the machine a proper amount of time to cool before servicing.
- Keep the machinery in proper running condition.
- Fix damage to the machine immediately and always replace broken parts.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- **DO NOT** use plastic containers to dispose of hazardous waste.
- **DO NOT** pour waste, oil or fuel directly onto the ground, down a drain or into any water source.

OPERATION AND SAFETY DECALS

Machine Safety Decals

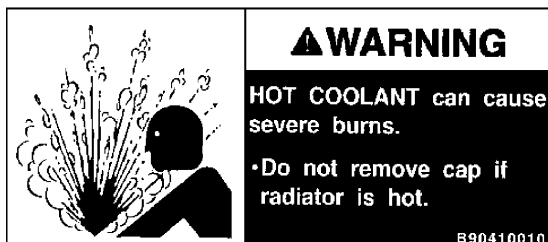
The DA-7000SS generator is equipped with a number of safety decals. These decals are provided for operator safety and maintenance information. The illustration below shows these decals as they appear on the machine. Should any of these decals become unreadable, replacements can be obtained from your dealer.



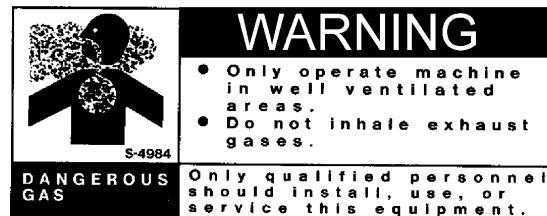
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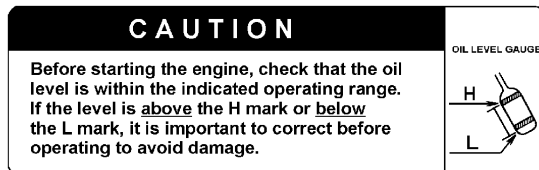
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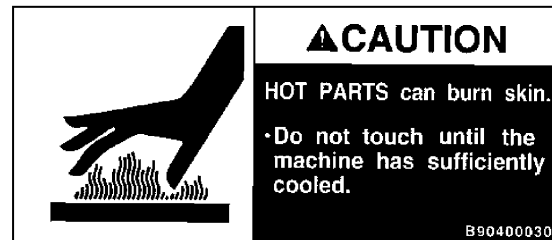
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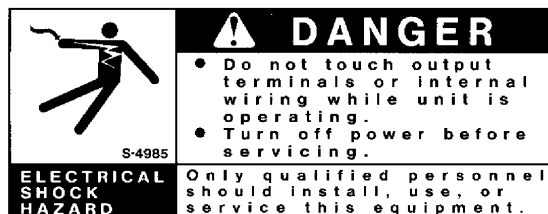
P/N 8700611804



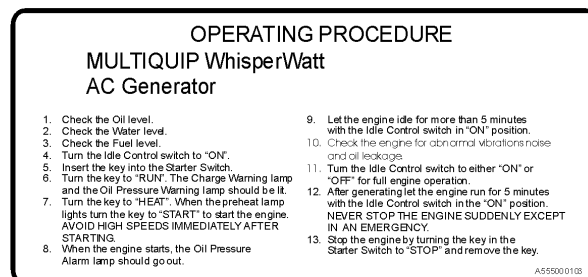
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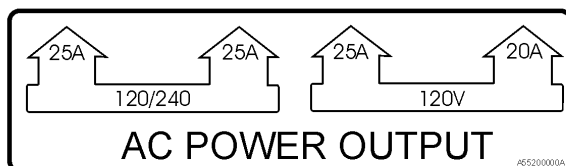
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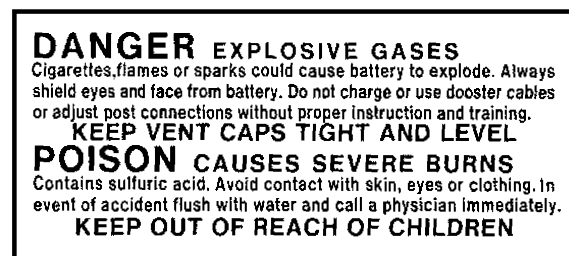
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P/N A5552000103



P/N A5552000003

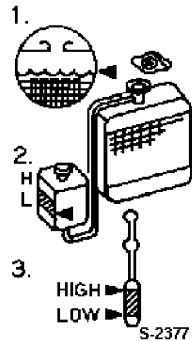


P/N 0820650604

OPERATION AND SAFETY DECALS

IMPORTANT "CHECK DAILY"

1. Radiator water level.
2. Reserve tank water level.
(Important) Not more than
a 50/50 Anti-Freeze/Water
Mixture is recommended.
3. Engine Oil Level.



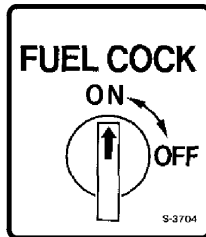
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WARNING!

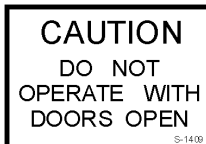
Before connecting this generator to any building's electrical system, a licensed electrician must install an isolation [transfer] switch.

Serious injury or death may result without this transfer switch.

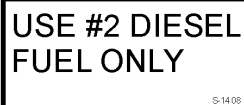
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P/N 1630680104



P/N 1630610504



P/N 1630680004

OPERATING PROCEDURE MULTIQUIP WhisperWatt AC Generator

1. Check the Oil level.
2. Check the Water level.
3. Check the Fuel level.
4. Turn the Idle Control switch to "ON".
5. Insert the key into the Starter Switch.
6. Turn the key to "RUN". The Charge Warning lamp and the Oil Pressure Warning lamp should be lit.
7. Turn the key to "HEAT". When the preheat lamp lights turn the key to "START" to start the engine. AVOID HIGH SPEEDS IMMEDIATELY AFTER STARTING.
8. When the engine starts, the Oil Pressure Alarm lamp should go out.
9. Let the engine idle for more than 5 minutes with the Idle Control switch in "ON" position.
10. Check the engine for abnormal vibrations noise and oil leakage.
11. Turn the Idle Control switch to either "ON" or "OFF" for full engine operation.
12. After generating let the engine run for 5 minutes with the Idle Control switch in the "ON" position. NEVER STOP THE ENGINE SUDDENLY EXCEPT IN AN EMERGENCY.
13. Stop the engine by turning the key in the Starter Switch to "STOP" and remove the key.

A555000103

P/N A5552000103

OIL DRAIN

S-1405

P/N 1630645004

COOLANT DRAIN

S-1404

P/N 1630647004

FUEL DRAIN

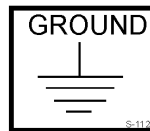
S-3060

P/N 7810680104

G.F.C.I.

D92200100

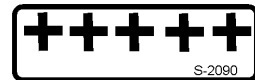
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P/N 0800628504



P/N 8700611603



P/N 0600689404



P/N 0800689504



P/N 1630610404

COOLING WATER

S-3061

P/N 7810680204

NAMEPLATE

CONTACT MQ
SERVICE DEPT.

FUSE PULLY			
F6		15A	SPARE
F5	15A	15A	
F4	5A	5A	
F3	5A	5A	
F2	5A	30A	
F1	30A	30A	

P/N 8700625504

DA-7000SS— SPECIFICATIONS

Table 1. Specifications	
Generator Specifications	
Model	DA-7000SS
Phase	Single Phase
Wires	4-Wires (Neutral Grounded)
Maximum Output	7000 Watts
Continuous Output	6000 Watts
Rated Voltage	120/240 Volts
Frequency	60 Hz
Speed	3600 rpm
Power Factor	100%
Rating	Continuous
Dry Weight	675 lbs. (305 kg)
Engine Specifications	
Model	KUBOTA Z-482-EB
Type	Vertical, 4-Cycle
Rated Output	8.9 kW/11.9 HP @ 3600 rpm
Displacement	29.23 cu. in (479 cc)
Number of Cylinders	2
Cooling System	Water-Cooled
Starting System	Electric Start
Fuel Tank Capacity	6.6 gal/25 liters
Coolant Capacity	0.74 gal/2.8 liters
Lube Oil Capacity	0.66 gal/2.5 liters
Fuel Consumption	0.69 gal (2.63 liters)/hr.
Battery	12V-35Ah
Fuel	Diesel Fuel No. 2
Dimensions (LxWxH)	351 x 389 x 520 mm (13.82 x 15.31 x 20.47 in)
Weight	117.1 lbs. (53.1 kg)

The maximum output of the engine listed above is applicable to supplying electrical power for continuous service at ambient conditions in accordance with SAE Test cord J607. The above ambient conditions are at standard sea level, with a barometric reading of 29.92 inches and a temperature of 60 degrees Fahrenheit.

Generally, the engine output power will decrease 3 1/2% for each 1000 feet of altitude above sea level, and 1% for each 10° F Fahrenheit above the standard temperature of 60° F

DA-7000SS— GENERAL INFORMATION

DA-7000SS FAMILIARIZATION

Generator

The MQ Power, Model DA-7000SS is a 50 amp (120 VAC) 6.0 kW (continuous output), 7.0 kW (max output) A.C. Generator .

Control Panel

The **control panel** is provided with the following:

- One GFCI 120 volt receptacle, 20 amp (single-phase)
- One 125 volt receptacle, 30 amp (single-phase)
- One 125/250 volt receptacle, 50 amp (single-phase)
- One 125/250 volt receptacle, 30 amp (single-phase)
- AC Voltmeter
- Main Circuit Breaker 265V @25 Amps
- Circuit Protector Breaker (GFCI) 120V @20 Amps
- Idle Control Switch
- Starter Switch
- Warning Lamp Unit
- Hour Meter
- Ground Terminal

Engine Protection System

Engine protection fail safe features are provided in the event of low oil pressure, high coolant temperature and failure of the battery to charge. If any of the above conditions occur while operating the generator it will cause a complete unit shut down.

Battery Charge Alarm

This unit is equipped with a protective device that signals an alarm and automatically stops the engine when the battery cannot be charged by the alternator

Water Temperature Alarm

This unit is equipped with an apparatus that signals an alarm and automatically stops the engine when the cooling water temperature becomes abnormally high. This apparatus will not function properly if the machine is operated with less than the proper amount of coolant.

Oil Pressure Warning Alarm

This unit is equipped with a protective device that detects low oil pressure. If the lubricating oil pressure of this unit should become abnormally low, the protective device will automatically stop the engine. If this condition should occur, please refer to the engine troubleshooting table in this manual.

Excitation System

The DA-7000SS generator uses a brushless exciter to create rated output electricity. This system will use the mechanical energy generated by the 3600 RPM engine to spin the rotor (or armature) inside the generator (or alternator end).

The motion created by the rotor (which holds copper coils) spins inside a housing of permanent magnets called the "STATOR". A magnetic field is created by the stator and produces an electrical current.

Engine

The DA-7000SS is powered by a 4-cycle KUBOTA **diesel** gasoline engine. This engine is designed to meet every performance requirement for generator. Reference Table 1, page 10 for engine specifications

In keeping with Multiquip's policy of constantly improving its products, the specifications quoted herein are subject to change without prior notice.

Figures 2 and 3 (pages 14-15) show the basic controls and indicators for the DA-7000SS generator.

DA-7000SS — DIMENSIONS

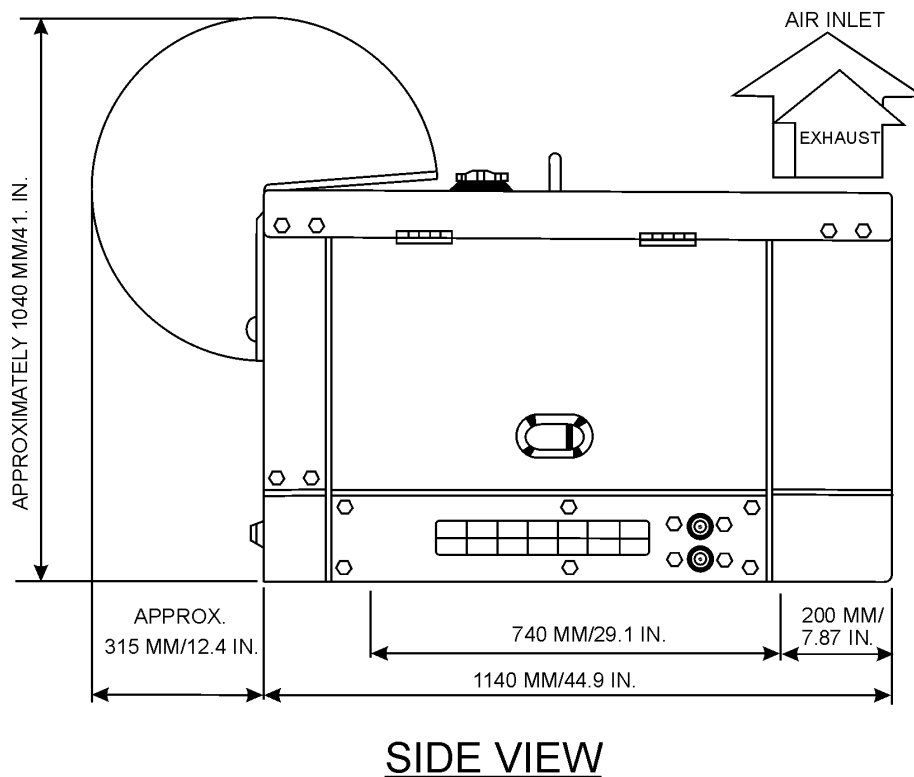
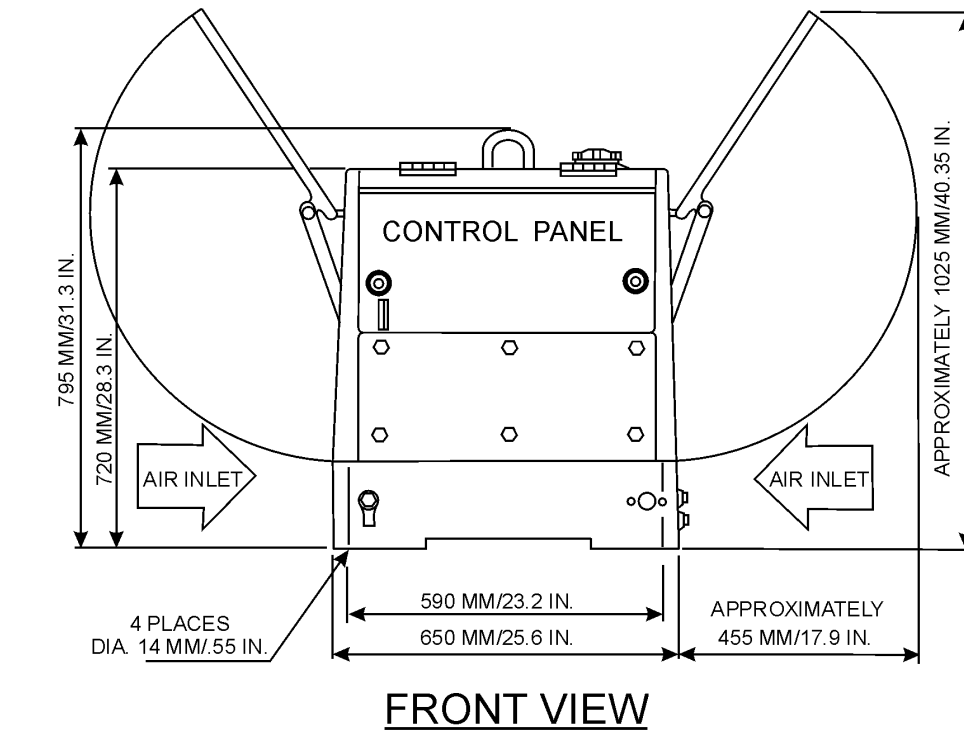
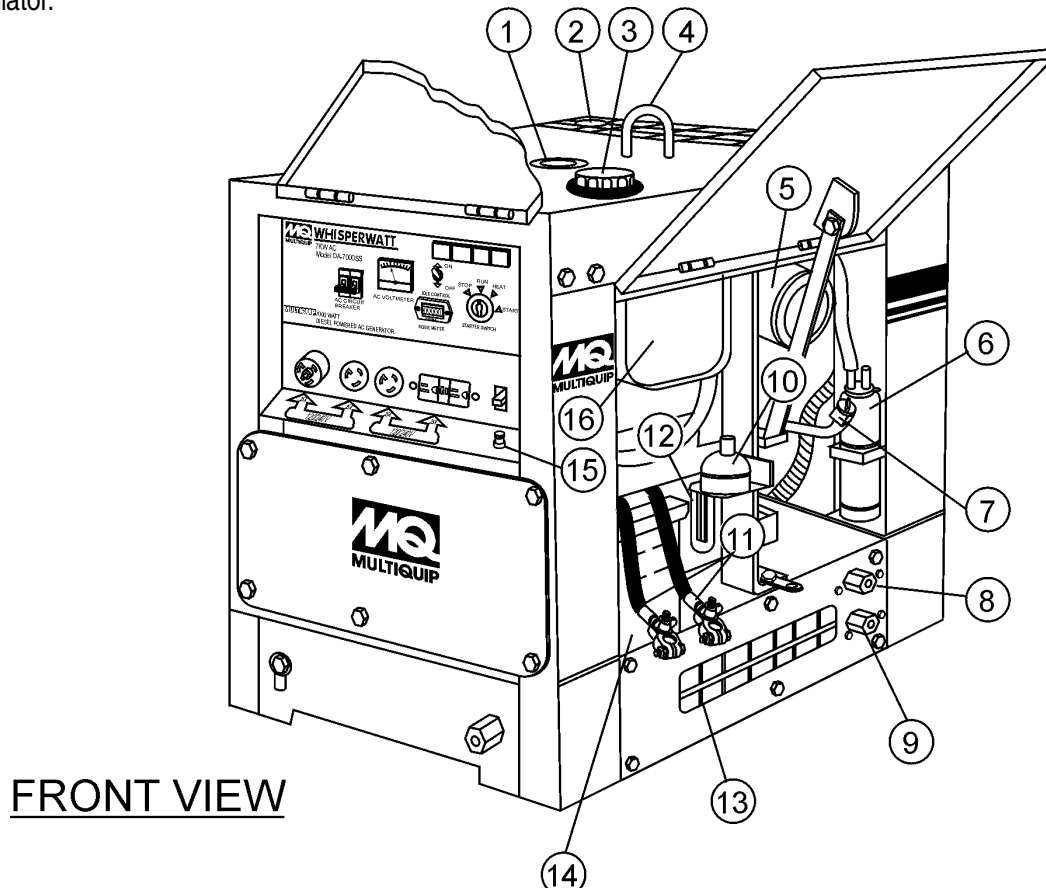


Figure 1. DA-7000SS Dimensions

DA-7000SS — CONTROLS AND INDICATORS

Figures 2 and 3 show the location of the controls and indicators. The functions of each control or indicator is described below and on the preceding page.

1. **Fuel Gauge** – Indicates the amount of fuel in the fuel tank.
2. **Air Outlet Exhaust** – Allows engine exhaust to exit the generator into the open air. **NEVER** block this opening.
3. **Fuel Cap** – Remove this cap to add fuel. Add only #2 Diesel Fuel. Always keep an adequate amount of fuel in the tank. **DO NOT** top off. Wipe up any spilled fuel immediately.
4. **Lifting Hook** – Use this hook to lift the generator.
5. **Engine Air Cleaner** – Prevents dirt and other debris from entering the fuel system. Lift locking latch on air filter cannister to gain access to filter element.
6. **Overflow Bottle** – Supplies coolant to the radiator when radiator coolant level is low. Fill to indicated level as shown on bottle.
7. **Engine Oil Filler Port** – Remove this cap to add engine oil. Use only recommended type oil. See Table 3.
8. **Coolant Drain Plug** – Remove this plug to drain coolant from the radiator.
9. **Oil Drain Plug** – Remove this plug to drain oil from the engine.
10. **Automatic Speed Control Solenoid** – Automatically regulates engine speed.
11. **Battery Terminals** – Connect these terminals to the battery. Always pay close attention to the polarity of the terminals when connecting to the battery, RED (positive), and BLACK (negative).
12. **Fuel Filter** – Prevents dirt and other debris from entering the fuel system. Change fuel filter as recommended in the maintenance section of this manual.
13. **Air Inlet Vent** – Allows outside air to enter the generator. **NEVER** block this opening.
14. **Battery** – Provides +12 VDC power for the generator. When replacing battery (12V 35 AH) use only recommended type battery.
15. **G.F.C.I Ground Terminal** – Use this terminal to connect external equipment grounds so that the GFCI receptacle will have a ground path.
16. **Fuel Tank** – Holds 6.6 gallons (25 liters) of diesel fuel.



FRONT VIEW

Figure 2. DA-7000 Components 1

DA-7000SS — CONTROLS AND INDICATORS

17. **Fuel drain Plug** – Remove this plug to drain fuel from the fuel tank.
18. **Frame Ground Lug** – Connect a ground strap between this lug and a ground rod. Make sure that the ground rod is inserted deep into the ground to provide a good earth ground. Consult with local Electrical and Safety Codes for proper connection.
19. **Receptacle** – Provides 120/240 volts output at 50 amps.
20. **Receptacle** – Provides 120/240 volts output at 30 amps.
21. **Receptacle** – Provides 120 volts output at 30 amps.
22. **Receptacle G.F.C.I.** – This receptacle provides 120 volts output at 20 amps.
23. **Circuit Protector Circuit Breaker** – This single pole circuit breaker provides circuit protection (250V @25 amps) for the G.F.C.I receptacle.
24. **Main Circuit Breaker** – This 2-pole circuit breaker provides circuit protection (265V @25 amps) for the Electric Parts Assembly.
25. **AC Voltmeter** – Indicates the rated 60 Hz, single phase output voltage.
26. **Hour Meter** – Indicates number of hours machine has been in use or hours engine was run.
27. **Idle Control Switch** – Regulates the engine speed when the generator is under load.
28. **Warning Lamp Display** – Lights red when the following conditions occur:
 - Low Oil Pressure
 - High Water Temperature
 - Electrical System Is Not Charging Properly
29. **Ignition Switch** – With key inserted turn clockwise to start engine.
30. **Oil Filter** – Provides oil filtering for the engine.

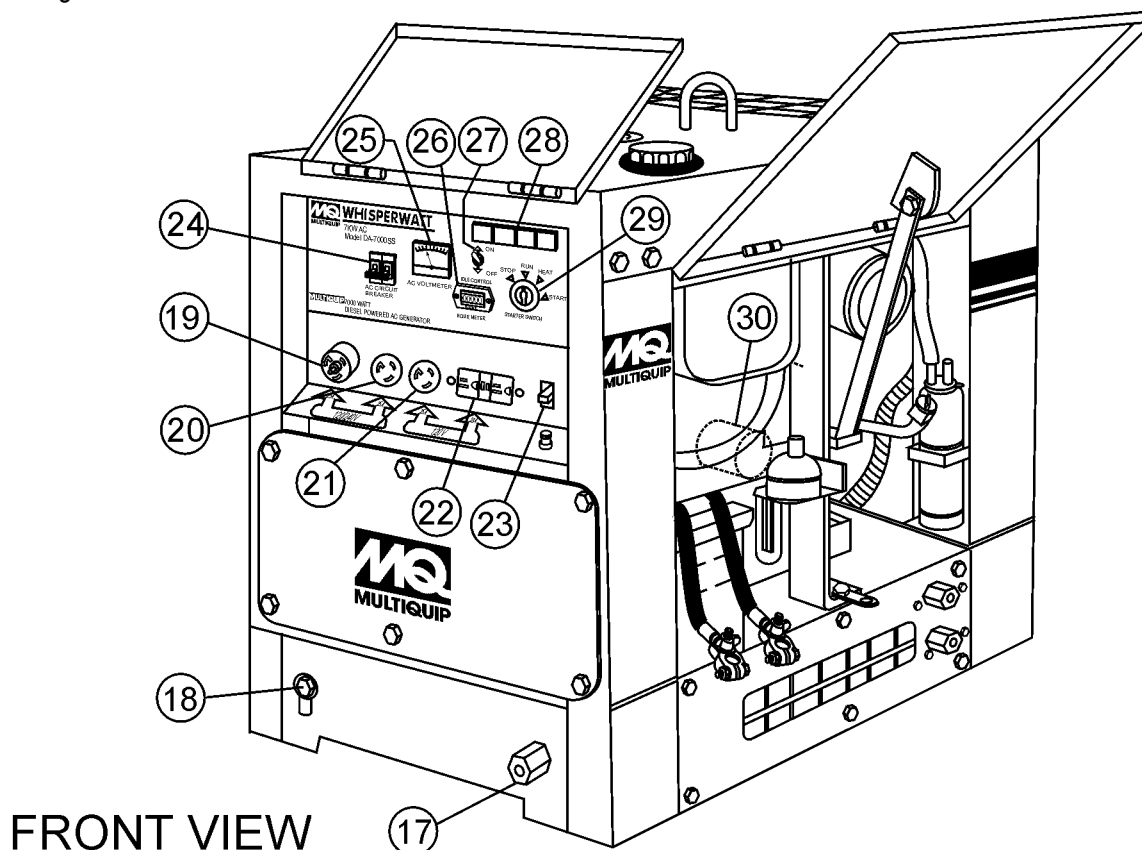


Figure 3. DA-7000 Components 2

Outdoor Installation

Install the generator in a location where it will not be exposed to rain or sunshine. Make sure that the welder/generator is on secure level ground so that it cannot slide or shift around. Also install the generator in a manner so that the exhaust will not be discharged in the direction of nearby homes.

The installation site must be relatively free from moisture and dust. All electrical equipment should be protected from excessive moisture. Failure to do will result in deterioration of the insulation and will result in short circuits and grounding.

Foreign materials such as dust, sand, lint and abrasive materials have a tendency to cause excessive wear, not only to the engine parts, but also to the alternator parts.

CAUTION :



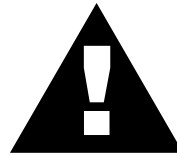
Pay close attention to ventilation when operating the generator inside tunnels and caves. The engine exhaust contains noxious elements.

Indoor Installation

Exhaust gases from gasoline engines are extremely poisonous. Whenever an engine is installed indoors the exhaust fumes must be vented to the outside. The engine should be installed at least two feet from any outside wall. Using an exhaust pipe which is too long or too small can cause excessive back pressure which will cause the engine to heat excessively and possibly burn the valves.

Eliminate the danger of deadly carbon monoxide gas. Remember that exhaust fumes from any gasoline engine are very poisonous if discharged in a closed room, but harmless if allowed to mix with the outside air. If the generator is installed indoors, you must make provisions for venting the engine exhaust to the outside of the building.

CAUTION :



An electric shock is apt to happen when vibrators are used. Pay close attention to handling when operating vibrators and always use rubber boots and gloves to insulate the body from a short circuit.

General Inspection Prior to Operation

The DA-7000SS utilizes a generator that has been thoroughly inspected and accepted prior to shipment from the factory. However, be sure to check for damaged parts or components, or loose nuts and bolts, which could have occurred in transit.

Ground

The nut and ground terminal on the generator should always be used to connect the generator to a suitable ground. The ground path should be of #8 size wire.

Connect the terminal of the ground wire between the lock washer and the nut and tighten the nut fully. Connect their end of the wire to a suitable ground.

Circuit Breakers

To protect the generator from an overload, a 2-pole, 25 amp, **main** circuit breaker is provided. In addition a single pole, 25 amp breaker is provided for the G.F.C.I. receptacle. Make sure to switch both circuit breakers to the "OFF" position prior to starting the engine.

Extension Cable

When electric power is to be provided to various tools or loads at some distance from the generator, extension cords are normally used. Cables should be sized to allow for distance in length and amperage so that the voltage drop between the generator and point of use (load) is held to a minimum. Use the cable selection chart (Table 2) as a guide for selecting proper cable size.

Table 2.Extension Cable Selection (60 Hz, Single Phase Operation)

Current in Amperes	Load In Watts		Maximum Allowable Cable Length			
	At 120 Volts	At 240 Volts	#10 Wire	#12 Wire	#14 Wire	#16 Wire
2.5	300	600	1000 ft.	600 ft.	375 ft.	250 ft.
5	600	1200	500 ft.	300 ft.	200 ft.	125 ft.
7.5	900	1800	350 ft.	200 ft.	125 ft.	100 ft.
10	1200	2400	250 ft.	150 ft.	100 ft.	
15	1800	3600	150 ft.	100 ft.	65 ft.	
20	2400	4800	125 ft.	75 ft.	50 ft.	
30	3600	7200	75 ft.	50 ft.	35 ft.	
CAUTION: Equipment damage can result from low voltage.						

Lubrication Oil

Fill the engine crankcase with lubricating oil through the filler hole, but do not overfill. Make sure the generator is level. With the dipstick inserted all the way, but without being screw into the filler hole, verify that the oil level is maintained between the two notches (Figure 3) on the dipstick. See Table 3 for proper selection of engine oil.

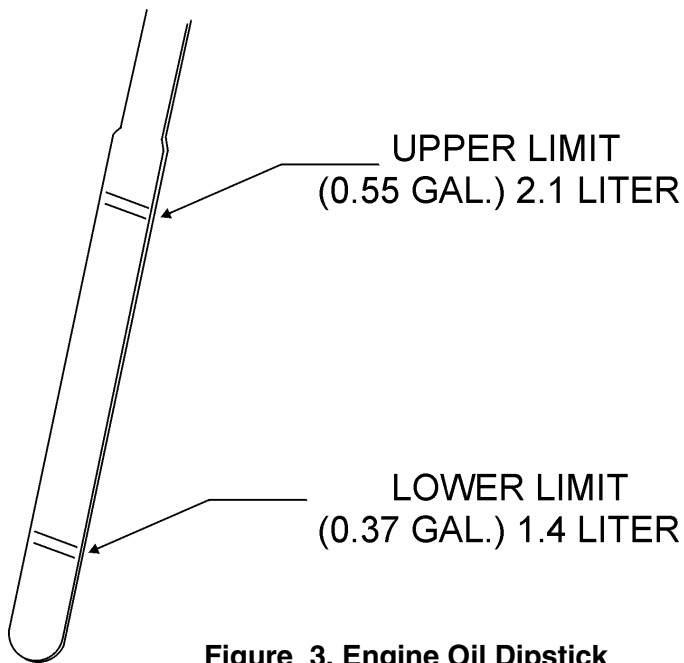


Figure 3. Engine Oil Dipstick

Fuel

Fill the fuel tank with clean and fresh unleaded gasoline. Do not fill the tank beyond capacity.

Pay attention to the fuel tank capacity when replenishing fuel. Refer to the fuel tank capacity listed on page 10 Specification Table 1.

The fuel tank cap must be closed tightly after filling. Handle fuel in a safety container. If the container does not have a spout, use a funnel.

CAUTION :



Never fill the fuel tank while the engine is running or in the dark. Gasoline spillage on a hot engine can cause a fire or explosion. If gasoline spillage occurs, wipe up the spilled gasoline completely to prevent fire hazards.

Coolant

Use only drinkable tap water. If hard water or water with many impurities is used, the inside of the engine and radiator may become coated with deposits and cooling efficiency will be reduced.

An anticorrosion additive added to the water will help prevent deposits and corrosion in the cooling system. See the engine manual for further details.

Table 3. Recommended Motor Oil

Temperature Range	Type Oil
104° F ~ 23° F (40° C ~ -5°C)	SAE 30
23° F ~ 5° F (-5° C ~ -15°C)	SAE 20 or SAE 10W-30
Below 5° C (-15°)	SAE 10W or SAE 10W-30

CAUTION :



When adding coolant or anti-freeze to the radiator, do not remove the radiator cap until the unit has completely cooled.

Day-to-day addition of coolant or antifreeze is done from the reserve tank. See Table 4. for engine, radiator and reserve tank coolant capacities. Make sure that the coolant level in the reserve tank is always between the "H" and the "L" markings.

Table 4. Coolant Capacity

Engine and Radiator	0.66 Gal.
Reserve Tank	0.27 Gal.

Operation in Freezing Weather

When operating in freezing weather, be certain that the proper amount of antifreeze has been added. See Table 5. for anti-freeze operating temperatures.

Table 5. Anti-Freeze Operating Temperatures

Vol % Anti-Freeze	Freezing Point		Boiling Point	
	°C	°F	°C	°F
40	-24	-12	106	222
50	-37	-34	108	226

NOTE

When the anti-freeze is mixed with water, the anti-freeze mixing ratio must be less than 50%.

Cleaning the Radiator

The radiator may overheat if the fins become overloaded with dust or debris. Periodically clean the radiator fins with compressed air. Cleaning inside the machine is dangerous, so clean only with the engine turned off.

Fan Belt Tension

A slack fan belt may contribute to overheating, or to insufficient charging of the battery. Inspect and adjust it in accordance with the KUBOTA engine manual.

The fan belt tension is proper if the fan belt (Figure 8) bends 7 to 9 mm (0.28- to 0.35) when depressed with the thumb as shown in Figure 8 below.

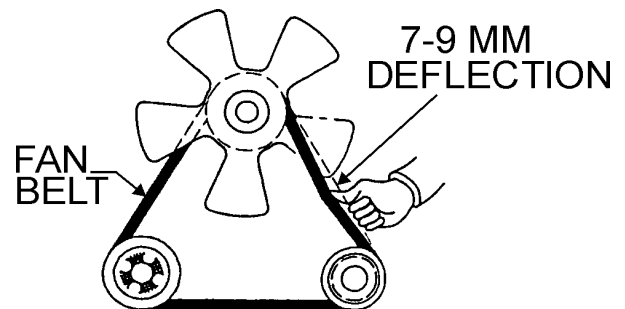


Figure 8. Fan Belt Tension

Air Cleaner

Periodic cleaning/replacement is necessary. Inspect it in accordance with the engine manual.

Battery

This unit is of negative ground. **DO NOT** connect in reverse. Always maintain battery fluid level between the specified marks. Battery life will be shortened, if the fluid level is not properly maintained. Add only distilled water when replenishment is necessary.

The battery is sufficiently charged if the specific gravity of the battery fluid is 1.28 (at 68° F). If the specific gravity should fall to 1.245 or lower, it indicates that the battery is dead and needs to be recharged or replaced.

Check to see whether the battery cables are loose. Poor contact may result in poor starting or malfunctions, always keep the terminals firmly tightened. Coating the terminals with a thin film of grease will help to inhibit corrosion.

The battery gradually deteriorates over time. The actual life span will vary according to operating conditions, but generally a battery two years or older should be replaced.

CAUTION :



When using a combination of dual receptacles, total load should not exceed the rated capacity of the generator set.

Power Outlets

The generator has the following single-phase 60 Hz, 120/240 volt receptacles.

- Single Phase

- One Duplex NEMA (GFCI) 5-20R (120V, 20 Amp)
- One Twist Lock CS-6369 (120/240V, 50 Amp)
- One Twist Lock NEMA L14-30R (120/240V, 30 Amp)
- One Twist Lock NEMA L5-30R (120V, 30 Amp)

Main Circuit Breaker (2-Pole)

This 2-pole, 25 amp breaker protects the generator from short circuiting or overloading from the 60 Hz single-phase load.

GFCI Circuit Breaker (Single-Pole)

This single-pole, 25 amp breaker protects the GFCI receptacle from short circuiting or overloading.

Warning Indicator Lights

The generator has the following warning indicator lights:

Oil Pressure Light

If the oil pressure drops suddenly, the oil pressure light will go on, and the generator will shut down.

Charge Light

The charge light will go on when the battery fails to charge, and the generator will shut down.

Water Temperature Light

The water temperature light will go on if the temperature rises to an abnormally high level, and the generator will shut down.

Idle Control Switch

The DA-7000SS generator is provided with an automatic idle (engine) control capability for noise suppression and fuel cost reduction. The automatic idle control feature automatically engages under a no-load condition.

When the Idle Control Switch is placed in the "ON" position, the engine revolutions will be approximately 2200 rpm (low-speed operation). When a load is connected to one of the output receptacles, the engine speed will automatically increase to about 3600 rpm (high-speed operation) within 10 seconds. Conversely, when the load is removed, the engine speed will automatically drop back down to 2200 rpm within 10 seconds.

With AC loads of more than 150W (such as lighting equipment, motor-powered tools, submersible water pumps, etc.), the engine runs at high speed. When a no load condition is produced, the engine automatically slows down.

Turn the idle control switch to the "ON" (up) position when AC loads of more than 150W are connected. Turn the idle control switch to the "OFF" (down) position when AC loads of less than 100W or when a magnetic switch is used.

Fuel Gauge

The fuel gauge is located on top of the generator's enclosure and allows easy monitoring of the fuel level.

GFCI Receptacle

Before connecting a load to the generator's GFCI receptacle, **push** the "Test Button" on the front of receptacle before connecting the load, to confirm that the receptacle is functioning correctly.

Single Phase Load

Always be sure to check the nameplate on the generator and equipment to insure the wattage, amperage and frequency requirements are satisfactorily supplied by the generator for operating the equipment.

Generally, the wattage listed on the nameplate of the equipment is its rated output. Equipment may require 130—150% more wattage than the rating on the nameplate, as the wattage is influenced by the efficiency, power factor and starting system of the equipment.

NOTE

If wattage is not given on the equipment's name plate, approximate wattage may be determined by multiplying nameplate voltage by the nameplate amperage.

$$\text{WATTS} = \text{VOLTAGE} \times \text{AMPERAGE}$$

The power factor of this generator is 1.0. See Table 6. below when connecting loads.

Table 6. Power Factor By Load

Type Of Load	Power Factor
Single-phase induction motors	0.4 - 0.75
Electric heaters, incandescent lamps	1.0
Fluorescent lamps, mercury lamps	0.4 - 0.9
Electronic devices, communication equipment	1.0

- When connecting a resistance load such as an incandescent lamp or electric heater, a capacity of up to the generating set's rated output (kW) can be used.
- When connecting a fluorescent or mercury lamp, a capacity of up to the generating set's rated output (kW) multiplied by 0.6 can be used.
- When connecting an electric drill or other power tools, pay close attention to the required starting current capacity.

When connecting ordinary power tools, a capacity of up to the generating set's rated output (kW) multiplied by 0.8 can be used.

CAUTION:



Motors and motor-driven equipment draw much greater current for starting than during operation.

An inadequate size connecting cable which cannot carry the required load can cause a voltage drop which can burn out the appliance or tool and overheat the cable.

The idle control is operated at minimum load capacity of 100W. If the load capacity is less than 100W, throw the idle control switch to the OFF position.

CAUTION:



Before connecting this generator to any building's electrical system, a licensed electrician must install an isolation (transfer) switch. Serious injury or death may result without this transfer switch.

DA-7000SS— ENGINE OPERATING INSTRUCTIONS

WARNING:



- The engine's exhaust contains harmful emissions. **ALWAYS** ventilate the exhaust when operating inside tunnels, excavations or buildings. Direct exhaust away from nearby personnel.

Before Starting

1. Be sure to disconnect the electrical load and switch the main circuit breaker to the "OFF" position prior to starting the engine.
2. Never start the engine with the main circuit breaker "ON".
3. Check the lubricating oil level prior to starting the engine. Make sure the generator is level. The oil level must be maintained between two notches on the dipstick.
4. When there is not enough lubricating oil, fill the crankcase with high grade motor oil. Use a high quality detergent oil classified CC or higher (See Table 3 on page 15).
5. Check the coolant level in the radiator and subtank. Replenish with antifreeze as necessary. Always maintain the coolant level between the **FULL** and **LOW** markings on the coolant container. Be sure that the radiator cap is fastened securely.

CAUTION:



- Check the fuel level on the fuel gauge. When fuel is low, fill the fuel tank with clean fresh unleaded automotive gasoline.
- If gasoline spillage occurs, completely

Starting

1. Turn the fuel cock lever to the "ON" position.
2. Always operate the generator with the doors in the closed position. Operation with the doors open may cause insufficient cooling to the unit, and damage may result.
3. Insert the key into the starter switch and turn it to the "RUN" position. Check to see that the Oil Pressure and Charge Lights on the "Warning Lamp Unit" are lit. If either light is not lit, check the system and wiring (refer to the Engine Operation Manual).
4. Turn the key to the **HEAT** position. When the preheat light is off, turn the key to the "**START**" position to start the engine. As soon as the engine starts, release the key. The key will automatically return to the "RUN" position.

5. During winter or when the surrounding air temperature is cold, in situations where a load start is required, turn the key to the "HEAT" position, you must wait until the preheat light goes off.
6. If the engine does not start within 10 seconds after the key is turned to the "START" position, wait for about 30 seconds and repeat the procedure as described in step 4. above.

CAUTION:



- **NEVER** turn the key to the "**START**" position while the engine is running.

7. When the engine starts, the Oil Pressure Light and Charge Light should go out. If these lights stay on, immediately stop the engine and check the system and wiring (refer to the Engine Operation Manual).
8. Let the engine idle for five minutes with the Automatic Idle Control switch in the "ON" position.
9. Check the engine for abnormal vibrations, noises and oil leakage.
10. Check the generator's output voltage by referring to the AC voltmeter on the control panel. If the meter indicates 120 volts, then 120 VAC can be obtained from the 120 V and 240V receptacles at the same time.
11. Turn the **Automatic Idle Control Switch** to either "OFF" or "ON" for full engine operation.

CAUTION:



- **NEVER** turn the key to the "**START**" position while the engine is running.

Shutdown

1. Remove the load from the generator, then place both the main and GFCI circuit breakers to the OFF position.
2. Listen for the engine speed to drop. Run at low speed for 3-5 minutes.
3. Stop the engine by turning the key to "**STOP**" position and remove the key. Turn the fuel cock lever to the "OFF" position.

General Inspection

At least daily or prior to each use, the generator should be cleaned and inspected for deficiencies. Check for loose, missing or damaged nuts, bolts or other fasteners. Also check for fuel or oil leaks.

Engine Side:

For a more detail engine maintenance schedule refer to the KUBOTA Engine Shop and Operator's Manuals.

Air Cleaner

Every 50 hours: The air cleaner employed on the KUBOTA engine Model Z482-E is a dry type, **NEVER** apply oil to it. If generator is used in severe dusty areas service air cleaner element more frequently.

1. Release the air cleaner retaining clamps (Figure 9) and remove the air cleaner element.
2. Wipe the inside of the air cleaner with a damp cloth and remove all dust and debris that may have accumulated inside air cleaner body.
3. Use compressed air to clean air filter element. Blow compressed air from the inside while turning the element.

CAUTION:



- **ALWAYS** keep the pressure of the compressed air below 99 psi.

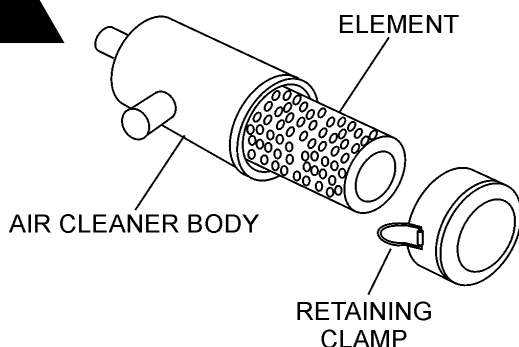


Figure 9. Air Cleaner

Cleaning the Fuel Strainer

Clean the fuel strainer if it contains dust or water. Remove dust or water in the strainer cap and wash it in gasoline. Securely fasten the fuel strainer cap so that fuel will not leak. Check the fuel strainer every 200 hours of operation or once a month.

Oil Change

Every 100 hours: Change the engine oil after the first 50 hours of operation. Always check the crankcase oil level prior to each use, or when the fuel tank is filled. Insufficient oil may cause severe damage to the engine. Make sure the generator is level when checking the oil level. The oil level must be between the two notches on the dipstick as shown in Figure X.

Oil Cartridge

Every 200 hours: Replace the engine oil filter cartridge after every 200 hours of operation.

Fuel Addition

Add diesel fuel (the grade may vary according to season and locations). Always pour through the mesh filter.

Removing Water from the Tank

After prolonged use, water and other impurities accumulate in the bottom of the tank. Occasionally remove the drain cock and drain the contents. During cold weather, the more empty area inside the tank, the easier it is for water to accumulate. This can be reduced by always keeping the tank as full as possible.

Air Removal

If air enters the fuel system of a diesel engine, starting becomes impossible. After running out of fuel, or after disassembling the fuel system, bleed the system according to the following procedure.

To restart after running out of fuel, turn the key switch to the "START" position for 15-30 seconds. Try again, if needed. This unit is equipped with an automatic air bleeding system.

Service Daily

If engine is operating in very dusty and dry grass conditions. A clogged air cleaner will result in high fuel consumption, loss of power and excessive carbon buildup in the combustion chamber.

DA-7000SS— PREPARATION FOR LONG -TERM STORAGE

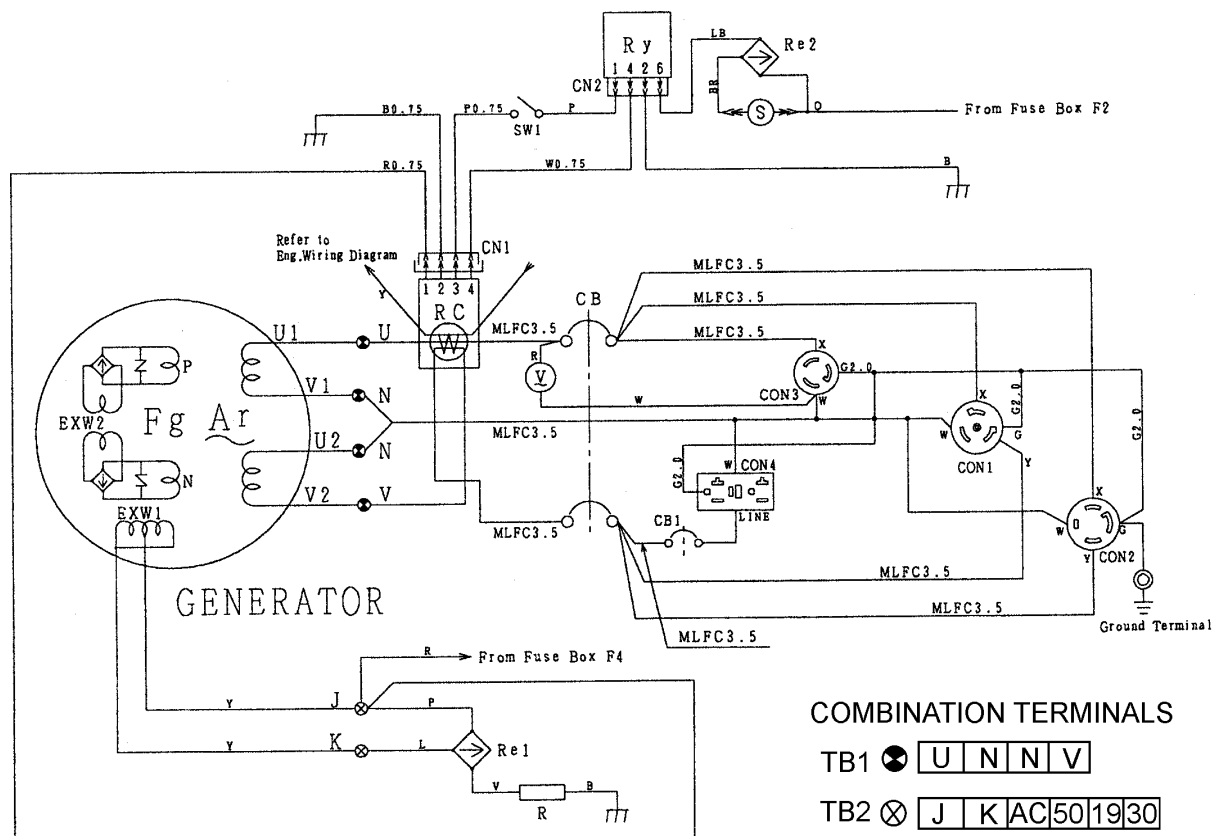
Generator Storage

For storage of the generator for over 30 days, the following is required:

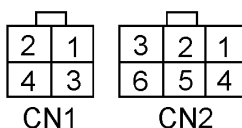
- Drain the fuel tank completely.
- Run the engine until ***all*** the gasoline in is completely consumed.
- Completely drain the oil from the crankcase and refill with fresh oil.
- Disconnect the ***negative*** battery cable from the battery.
- Clean all external parts of the generator with a cloth.
- Cover the generating set and store in a clean, dry place.

DA-7000SS—GENERATOR WIRING DIAGRAM

Generator Wiring Diagram



WIRING COLOR CODE	
SYMBOL	COLOR
B	BLACK
L	BLUE
BR	BROWN
G	GREEN
GR	GRAY
V	VIOLET
P	PINK
R	RED
W	WHITE
Y	YELLOW
LB	LIGHT BLUE
LG	LIGHT GREEN
O	ORANGE

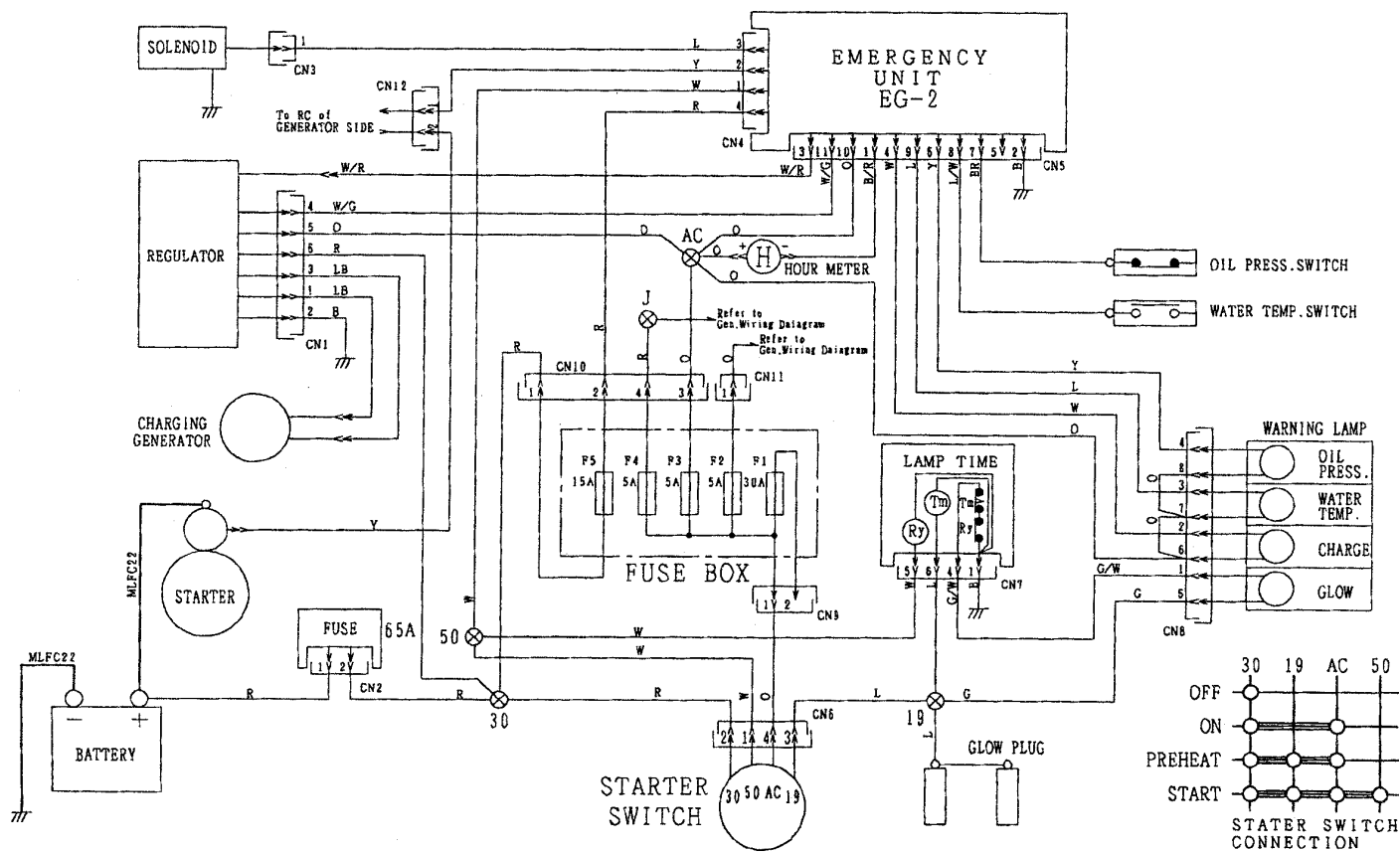


CONNECTOR
VIEWED AT
WINDING
SIDE

SYMBOL	PARTS NAME
AR	ARMATURE WINDING
Eg	FIELD WINDING
EXW1~2	EXCITATION WINDING
V	AC VOLTmeter
RE1~2	RECTIFIER
CON1	RECEPTACLE (120/240V, 50 AMP)
CON2	RECEPTACLE (120/240V, 30 AMP)
CON3	RECEPTACLE (120V, 30 AMP)
CON4	RECEPTACLE (120V, 20 AMP-GFCI)
CB	MAIN CIRCUIT BREAKER (265V, 25 AMP)
CB	GFCI CIRCUIT BREAKER (250V, 20 AMP)
SW1	IDLE CONTROL SWITCH
RC	IDLE CONTROL DEVICE
S	SOLENOID
Ry	RELAY
R	RESISTOR

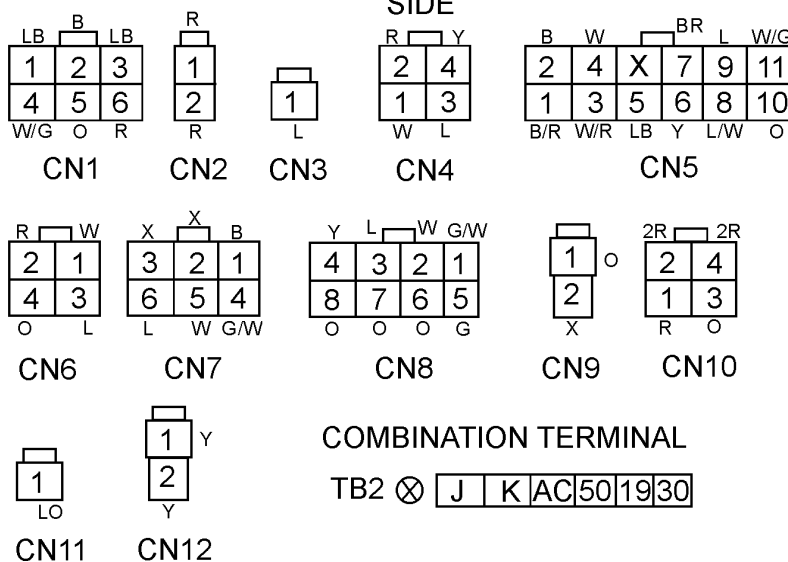
DA-7000SS—ENGINE WIRING DIAGRAM

Engine Wiring Diagram



WIRING COLOR CODE	
SYMBOL	COLOR
B	BLACK
L	BLUE
BR	BROWN
G	GREEN
GR	GRAY
V	VIOLET
P	PINK
R	RED
W	WHITE
Y	YELLOW
LB	LIGHT BLUE
LG	LIGHT GREEN
O	ORANGE

CONNECTOR VIEWED AT WINDING SIDE



DA-7000SS— TROUBLESHOOTING (ENGINE & GENERATOR)

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the

diagnosis based on the Engine and Generator Troubleshooting (Table 7) information shown below and on the proceeding page. If the problem cannot be remedied, please leave the unit just as it is and consult our company's business office or service plant.

TABLE 7. ENGINE & GENERATOR TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Engine fails to start and starter does not rotate.	Dead Battery?	Replace Battery.
	Defective Starter Switch?	Replace Switch.
	Defective Starter?	Replace Starter.
	Fuse F5 Burned Out?	Replace Fuse.
Engine fails to start and starter rotates.	Broken Pre-Heat Circuit?	Check Pre-Heat Circuit.
	No Fuel?	Add Fuel.
	Defective Wiring?	Check Wiring.
Engine starts "Idle Control Switch" is in OFF position and engine remains at low speed.	Defective Idle Control Switch?	Replace Switch.
	Idle Control Switch is in ON position?	Set Switch to OFF Position.
	Clogged Fuel Strainer?	Clean or Replace.
	Clogged Air Cleaner?	Clean or Replace.
	Defective Idle Control Device?	Replace.
	Disconnected Wiring?	Check and Repair Wiring.
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and no voltage is present in AC power source.	No Voltage Present in AC Power source	Replace Rectifier (RE1).
	Defective Rotor?	Replace Rotor.
	Defective Voltmeter?	Replace Voltmeter.
	Disconnected Wiring?	Check and Repair Wiring.
	Layer Short-Circuit in armature winding?	Replace Armature.
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and AC power voltage is too low or cannot be used.	Defective Circuit Breaker (Protector)?	Replace Circuit Breaker (Protector).
	Layer Short-Circuit, Broken Wires In Armature Winding?	Repair or Replace Armature.
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and battery discharges too soon.	Defective Engine Regulator?	Replace Regulator.
	Defective Wiring?	Repair or Replace Wiring.
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and engine seems overloaded.	Defective Alternator?	Repair or Replace Alternator.
	Damaged Alternator Bearing?	Replace Alternator Bearings.

DA-7000SS— TROUBLESHOOTING (ENGINE & GENERATOR)

TABLE 7. ENGINE & GENERATOR TROUBLESHOOTING (CONTINUED)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and engine has large vibrations. overload.	Bad Engine Installation?	Repeat Installation of of Engine.
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and engine has abnormal noise.	Loose Engine Parts?	Check All Engine Parts For Tightnes.
	Defective Alternator?	Check Alternator for Damaged Bearing or Loose Clamping Bolts.
	Defective Enclosure?	Check Enclosure Bolts for Tightness.
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and remains at high speed when Idle Control switch is placed in the ON position.	Defective Idle Control Device?	Repair or Replace Idle Control Device.
	Defective Idle Control Switch?	Replace Idle Control Switch.
	Defective Solenoid?	Replace Solenoid.
	Defective Relay?	Replace Relay.

DA-7000SS— TROUBLESHOOTING (ENGINE)

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the

diagnosis based on the Engine Troubleshooting (Table 8) information shown below and on the proceeding page. If the problem cannot be remedied, please leave the unit just as it is and consult our company's business office or service plant.

TABLE 8. ENGINE TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Engine does not start.	No fuel?	Replenish fuel.
	Air in the fuel system?	Bleed system.
	Water in the fuel system?	Remove water from fuel tank.
	Fuel pipe clogged?	Clean fuel pipe.
	Fuel filter clogged?	Clean or change fuel filter.
	Excessively high viscosity of fuel or engine oil at low temperature?	Use the specified fuel or engine oil.
	Fuel with low cetane number?	Use the specified fuel.
	Fuel leak due to loose injection pipe retaining nut?	Tighten nut.
	Incorrect injection timing?	Adjust.
	Fuel cam shaft worn?	Replace.
	Injection nozzle clogged?	Clean injection nozzle.
	Injection pump malfunctioning?	Repair or replace.
	Seizure of crankshaft, camshaft, piston, cylinder liner or bearing?	Repair or replace.
	Compression leak from cylinder?	Replace head gasket, tighten cylinder head bolt, glow plug and nozzle holder.
	Improper valve timing?	Correct or replace timing gear.
	Piston ring and liner worn?	Replace.
	Excessive valve clearance?	Adjust.
Starter does not run.	Battery discharged?	Charge battery.
	Starter malfunctioning?	Repair or replace.
	Key switch malfunctioning?	Repair or replace.
	Wiring disconnected?	Connect wiring.

DA-7000SS— TROUBLESHOOTING (ENGINE)

TABLE 8. ENGINE TROUBLESHOOTING (CONTINUED)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Engine revolution is not smooth.	Fuel filter clogged or dirty?	Clean or change.
	Air cleaner clogged?	Clean or change.
	Fuel leak due to loose injection pipe retaining nut?	Tighten nut.
	Injection pump malfunctioning?	Repair or replace.
	Incorrect nozzle opening pressure?	Adjust.
	Injection nozzle stuck or clogged?	Repair or replace.
	Fuel over flow pipe clogged?	Clean.
	Governor malfunctioning?	Repair.
Either white or blue exhaust gas is observed.	Excessive engine oil?	Reduce to the specified level.
	Piston ring and liner worn or stuck?	Repair or replace.
	Incorrect injection timing?	Adjust.
	Deficient compression?	Adjust top clearance.
Either black or dark gray exhaust gas is observed.	Overload?	Lessen the load.
	Low grade fuel used?	Use the specified fuel.
	Fuel filter clogged?	Clean or change.
	Air cleaner clogged?	Clean or change.
	Deficient nozzle injection?	Repair or replace the nozzle.
Deficient output.	Incorrect injection timing?	Adjust.
	Engine's moving parts seem to be seizing?	Repair or replace.
	Uneven fuel injection?	Repair or replace the injection pump.
	Deficient nozzle injection?	Repair or replace the nozzle.
	Compression leak?	Replace head gasket, tighten cylinder head bolt, glow plug and nozzle holder.

DA-7000SS — EXPLANATION OF CODE IN REMARKS COLUMN

How to read the marks and remarks used in this parts book.

Items Found In the “Remarks” Column

Serial Numbers-Where indicated, this indicates a serial number range (inclusive) where a particular part is used.

Model Number-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

Items Found In the “Items Number” Column

All parts with same symbol in the number column, *, #, +, %, or ■, belong to the same assembly or kit.

NOTE

If more than one of the same reference number is listed, the last one listed indicates newest (or latest) part available.

NOTE

The contents of this catalog are subject to change without notice.

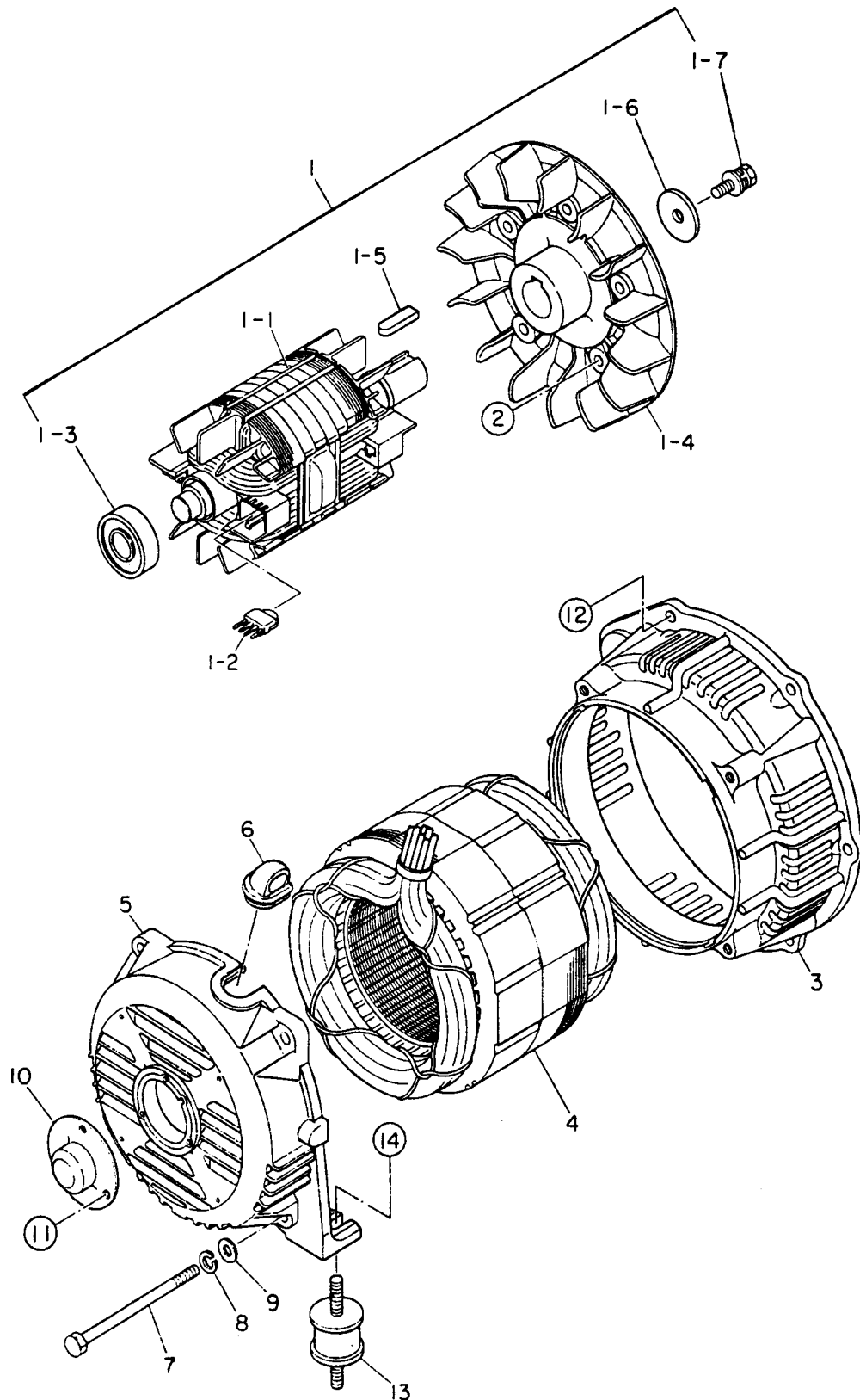
**DA-7000 W/KUBOTA Z482-EB DIESEL
ENGINE 1 TO 3 UNITS**

Qty.	P/N	Description
5	7000011221	AIR FILTER
5	1523143563	FUEL FILTER
5	7000015241	OIL FILTER
2	1980572531	FAN BELT
1	3741059110	STARTER SWITCH
5	3741055150	IGNITION KEY
1	1584139010	OIL SENDING UNIT
1	D2312500103	RADIATOR HOSE (UPPER)
1	D2312500003	RADIATOR HOSE (LOWER)
1	0810105800	FUEL CAP
1	1747260600	EMERGENCY UNIT
1	0601842463	RESISTOR
1	0602201378	AUTOMATIC VOLTAGE REGULATOR
1	0601807456	MAIN CIRCUIT BREAKER
1	0601827350	CONTROL UNIT
2	0601810830	BULB, PRE-HEAT LAMP
3	0601806640	FUSE, 65 AMP
1	1685160010	SOLENOID, STOP
4	1685165510	GLOW PLUG
2	1554383040	SWITCH, WATER TEMP.

NOTE

Part numbers on this Suggested Spare Parts List may supercede/replace the P/N shown in the text pages of this book.

GENERATOR ASSY.

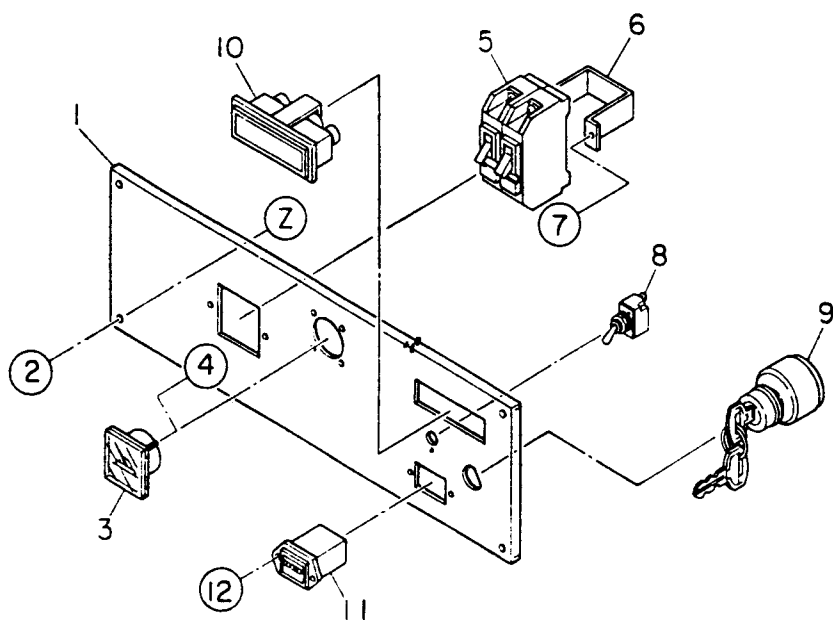
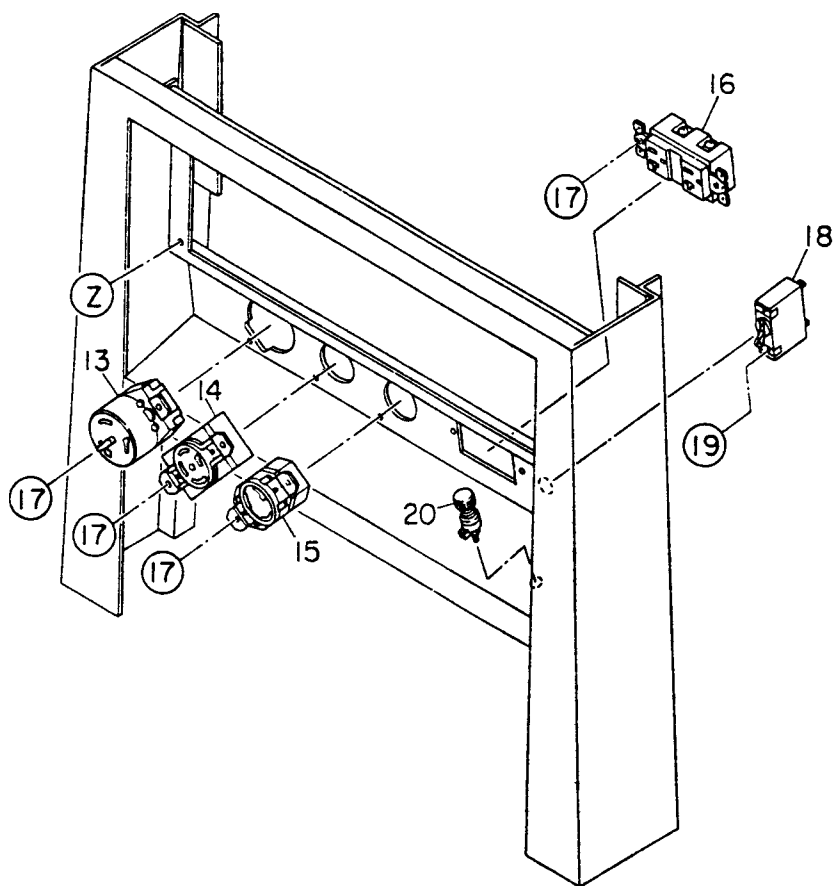


GENERATOR ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	A5110100003	Rotor Assy.	1	INCLUDES ITEMS W/★
1-1★	A5116000103	Field Assy.	1	
1-2★	7871025004	Rectifier Assy.	2	
1-3★	042006304	Bearing 6304 DOU	1	REPLACES 0071206304
1-4★	A5113100002	Fan	1	
1-5★	0171707033	Key	1	
1-6★	1991072004	Set Washer Fan	1	
1-7★	0012308020	Hex Head Bolt	1	
2	011208025	Hex Head Bolt	5	REPLACES 0012308025
3	A515510002	End Bracket	1	
4	A5136000103	Armature Assy.	1	
5	A6155000002C	End Bracket	1	REPLACES A6155000002
6	7871329514	Grommet	1	
7	7901316004	Set Bolt	4	
8	0040008000	Spring Washer	4	
9	031108160	Plain Washer	4	REPLACES 0041206000
10	A6155400104C	Cover	1	REPLACES A6155400104
11	0027106012	Machine Screw	3	
12	0012308020	Hex Head Bolt	6	
13	0805084704	Rubber Suspension	2	
14	020108060	Hex Nut	2	REPLACES 0207006000
	0801086104	Plain Washer	2	

DA-7000SS — CONTROL PANEL ASSY.

CONTROL PANEL ASSY.



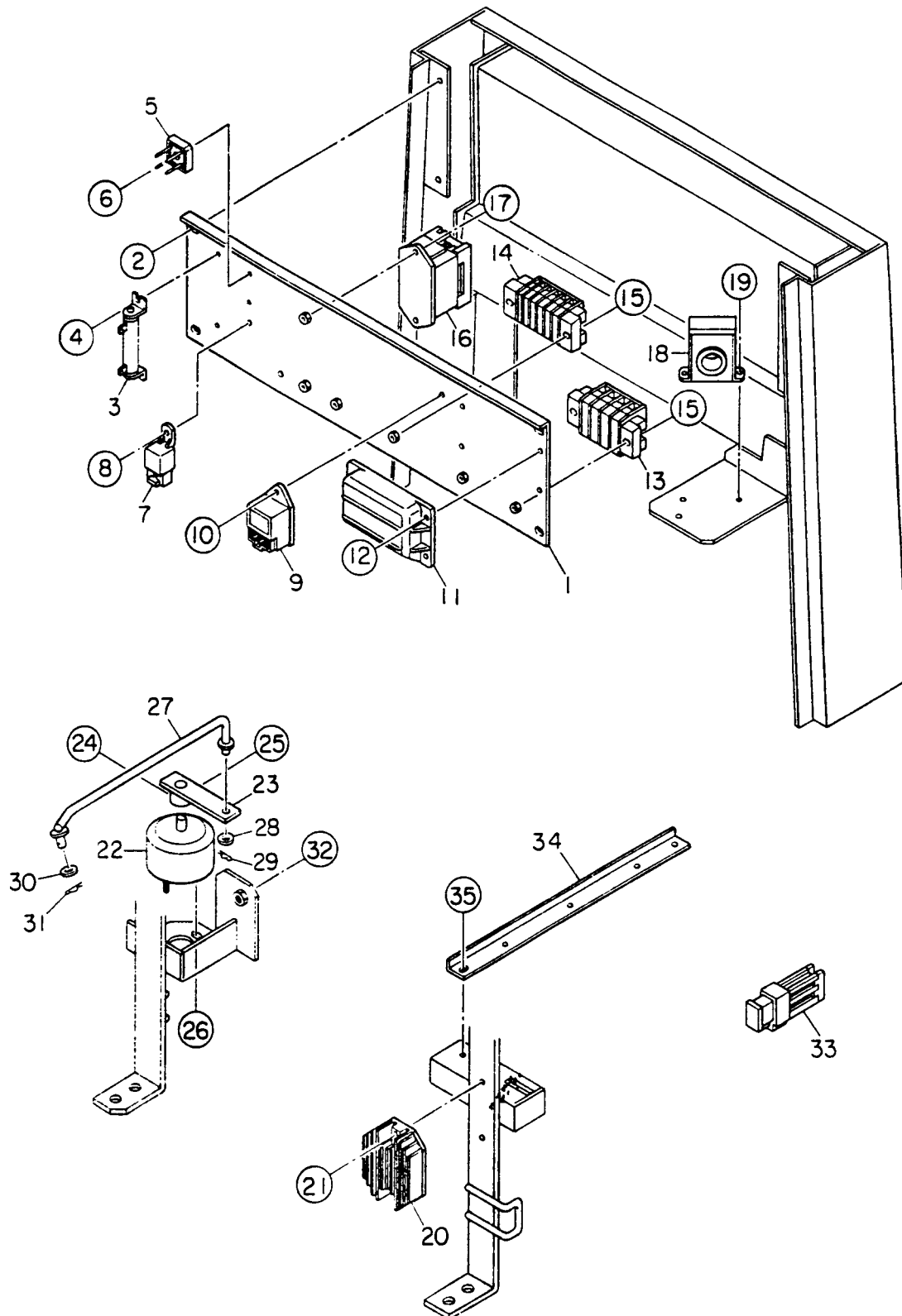
DA-7000SS — CONTROL PANEL ASSY.

CONTROL PANEL ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	A5225000303	Control Panel	1	
2	0021805020	Machine Screw	4	
3	0601800258	AC Voltmeter	1	8283 120/240V
4	0207003000	Hex Nut	2	
5	0601807456	Circuit Breaker	1	KM52 265V 25A
6	4341817004	Bracket circuit breaker	1	
7	0021004016	Machine Screw	2	
8	0601830771	Idle Control Switch	1	S1B
9	3741059110	Starter Switch	1	REPLACES 0602100077
10	0601810523	Warming Lamp Unit	1	PL-B128Q
	0601810830	Bulb	4	
11	0601800682	Hour Meter 820114	1	
12	0027403512	Machine Screw	2	
	0030003500	Hex Nut	2	
13	0601811034	Receptacle CS6369 125 250V 50A .	1	REPLACES 0601812566 CS
14	0601812529	Receptacle L14- 30R 125V 30A	1	
15	0601811031	Receptacle L5-30R 125V 30A	1	REPLACES 0601811035
16	0601812597	Receptacle 5-20R 120V 20A	1	REPLACES 0601812598 GF530EM
17	0021004010	Machine Screw	8	
	0030004000	Hex Nut	8	REPLACES 0207004000
18	0601806420	Circuit Protector AC 250V 20A	1	CP31E20
19	0027103005	Machine Screw	2	
20	0601815109	Ground Terminal	1	T-381

DA-7000SS — ELECTRIC PARTS ASSY.

ELECTRIC PARTS ASSY.



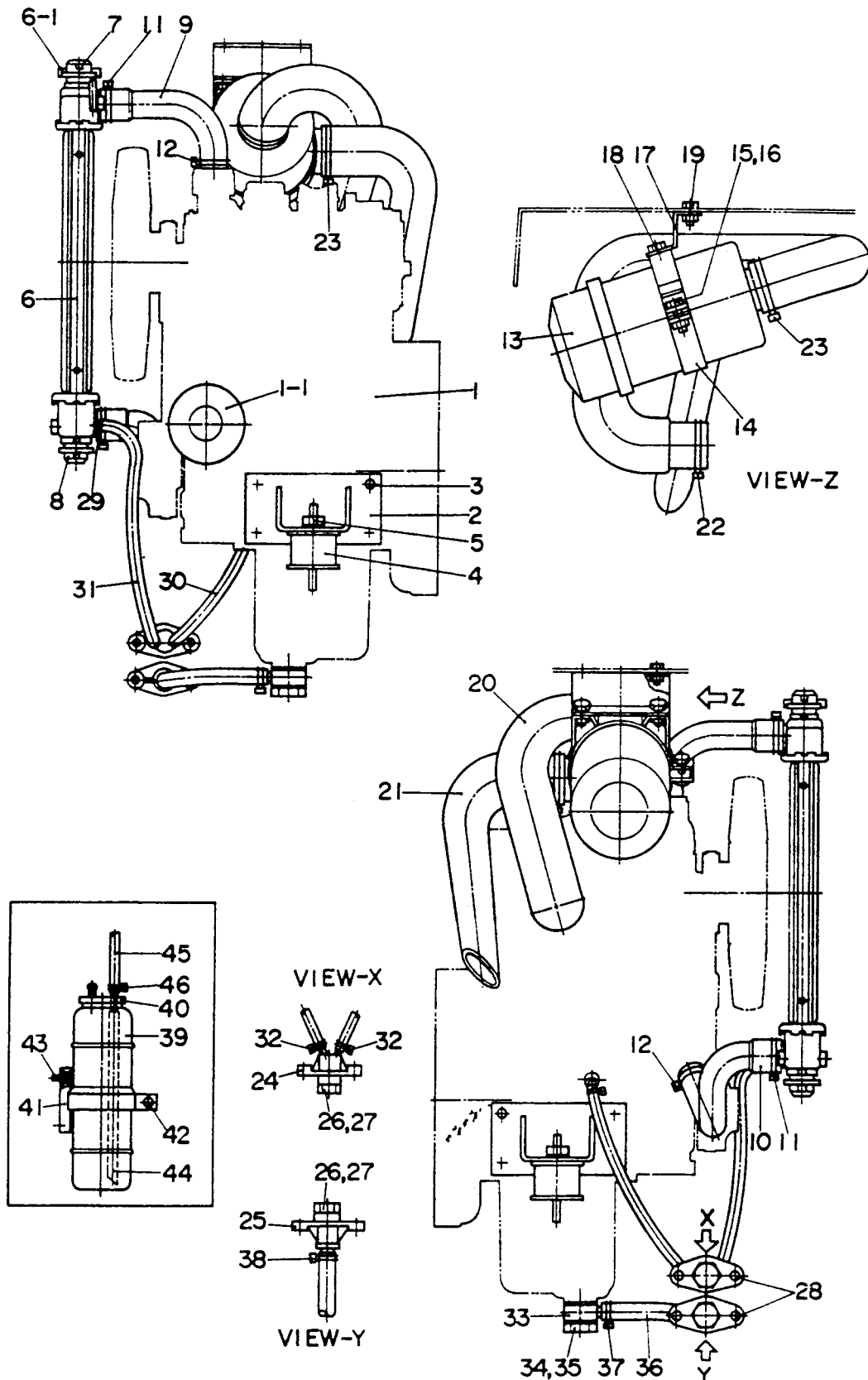
DA-7000SS — ELECTRIC PARTS ASSY.

ELECTRIC PARTS ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	A5262500203	Bracket electric parts	1	
2	0016906016	Hex Head Bolt	4	
3	0601842463	Resistor	1	GW30W 10Q
4	0027104012	Machine Screw	2	
5	0601823204	Rectifier	2	S5VB60
6	0027103020	Machine Screw	2	
7	0601823754	Relay	1	MPR-2TS
8	0027105016	Machine Screw	1	
9	1569465990	Lamp Timer	1	REPLACES 0602201273
10	0017105016	Hex Head Bolt	1	
11	1747260600	Emergency Unit	1	REPLACES 0602200475
12	0017105025	Hex Head Bolt	4	
13	0601815731	Terminal Board	1	KT-30 4P
14	0601815759	Terminal Board	1	KT-20 6P
15	0027105020	Machine Screw	4	
16	8701899004	Fuse Box	1	FB-6PS
	0601806642	Fuse	4	5A
	0601806643	Fuse	2	15A
	0601806644	Fuse	2	30A
17	0027105020	Machine Screw	2	
18	0601827350	Control Unit	1	ND-81
19	0027104010	Machine Screw	2	
20	0602201378	Regulator	1	REPLACES 1584464601
21	0017105025	Hex Head Bolt	2	
22	16226361032	Rotary Solenoid	1	REPLACES 1620150404 7SL25-22-489
23	1992636004	Arm Solenoid	1	
24	0050403020	Spring Pin	1	
25	16226361032	Hex Head Bolt	1	REPLACES 0010106025
	0030006000	Hex Nut	1	REPLACES 0030006000
26	0207206000	Hex Nut	2	
27	D235630004	Governor Rod	1	
28	031108160	Plain Washer	1	REPLACES 0041608000
29	0605010503	Snap Pin	1	SS-P8
30	0042806000	Plain Washer	1	
31	505015300	Snap Pin	1	REPLACES 0605010502 SS-P6
32	0010108050	Hex Head Bolt	1	
	020108060	Hex Nut	1	REPLACES 0207008000
33	0601806640	Fuse	1	65A
34	A5485500004	Guide	1	
35	0016906016	Hex Head Bolt	2	

DA-7000SS — ENGINE & RADIATOR ASSY.

ENGINE & RADIATOR ASSY.

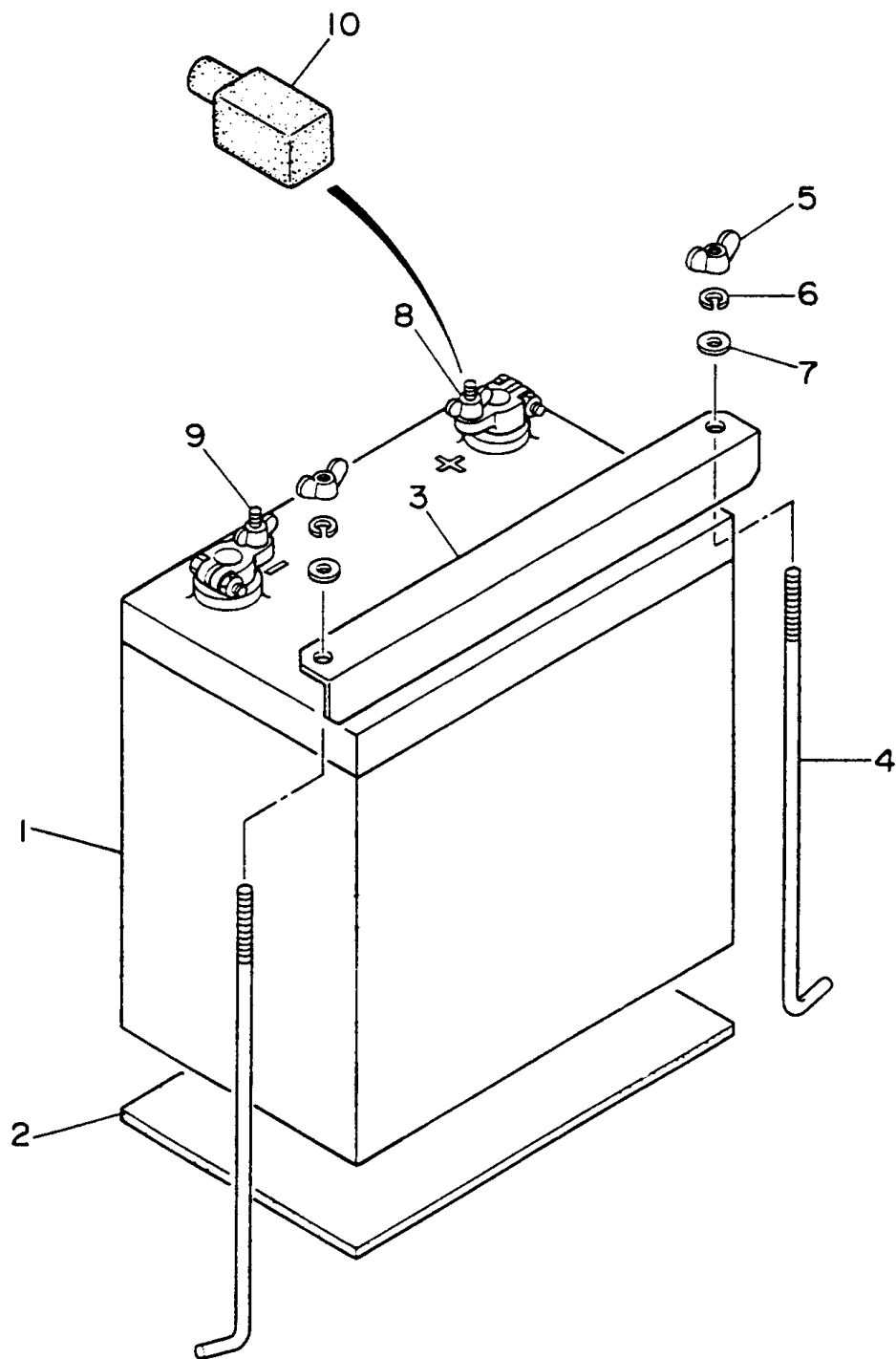


DA-7000SS — ENGINE & RADIATOR ASSY.

ENGINE & RADIATOR ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	A592520004	Engine	1	
	1980572531	Fan Belt	1	REPLACES 0602011477
1-1	7000015241	Cartridge Oil Filter	1	REPLACES 1584132430 & 0602041271
2	8745112003	Engine Foot	2	
3	0012410020	Hex Head Bolt	8	
4	7085419004	Rubber Suspension	2	
5	0207010000	Hex Nut	2	
6	0602012750	Radiator	1	INCLUDES ITEM W/#
6-1#	0602011074	Cap radiator	1	
7	8702014004	Insulator	2	
8	0605000460	Rubber Mount	2	
9	D2312500103	Radiator Hose	1	
10	D2312500003	Radiator Hose	1	
11	0605515111	Hose Band F-34	2	
12	0605515003	Hose Band F-30	2	
13	1556211081	Air Cleaner	1	REPLACES 0602046265
	3415013964	Element air cleaner	1	REPLACES 0602046374
	0222600340	Rubber Cushion	1	
15	0016908030	Hex Head Bolt	1	
16	0207008000	Hex Nut	1	
17	8742031004	Bracket air cleaner	1	
18	0016908020	Hex Head Bolt	2	
19	0016906016	Hex Head Bolt	2	
20	8742032003	Hose Air cleaner	1	
21	1612036203	Hose air cleaner	1	
22	0605515006	Hose Band F-50	1	
23	0605515021	Hose Band F-55	2	
24	1622014103	Drain Joint water	1	
25	1502025103	Drain Joint oil	1	
26	0802011104	Plug	2	
27	0150000018	O Ring A P18	2	
28	0016906016	Hex Head Bolt	4	
29	D2322400004	Hose Joint	1	
30	0199900550	Drain Hose	1	
31	0199900700	Drain Hose	1	
32	0605515094	Hose Band F-12	4	
33	0805010004	Drain Joint	1	
34	1552053004	Joint Bolt	1	
35	0602021190	Packing SW22	2	
36	0192200400	Drain Hose	1	
37	0605515081	Hose Band	1	
38	0605515003	Hose Band F-27	1	
39	0802081403	Reserve Tank	1	
40	0602081104	Cap reserve tank	1	
41	1622082104	Bracket reserve tank	1	
42	0016906025	Hex Head Bolt	1	
43	0016906016	Hex Head Bolt	2	
44	7222016304	Hose	1	
45	0199900650	Hose	1	
46	0605515094	Hose Band F-12	2	

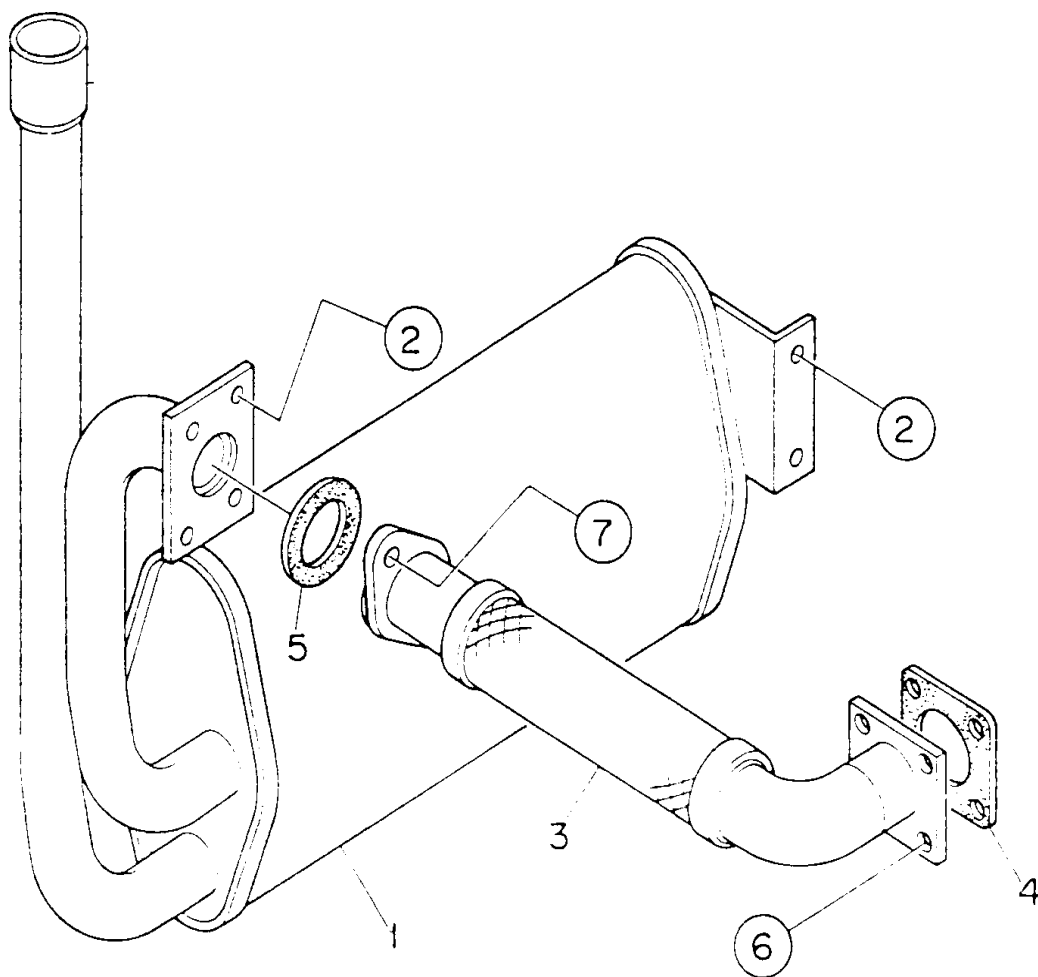
BATTERY ASSY.



BATTERY ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0167103820	Battery	1	38820R
2	1702202104	Battery Sheet	1	
3	D2345200004	Battery Band	1	
4	0805082704	Battery Bolt	2	
5	0037806000	Wing Nut	2	
6	0040006000	Spring Washer	2	
7	0041206000	Plain Washer	2	
8	0602220310	Terminal Assy.	1	No. 9P
9	0602220311	Terminal Assy.	1	No. 9N
10	0602220600	Terminal Cap	1	TC 7R

MUFFLER ASSY.



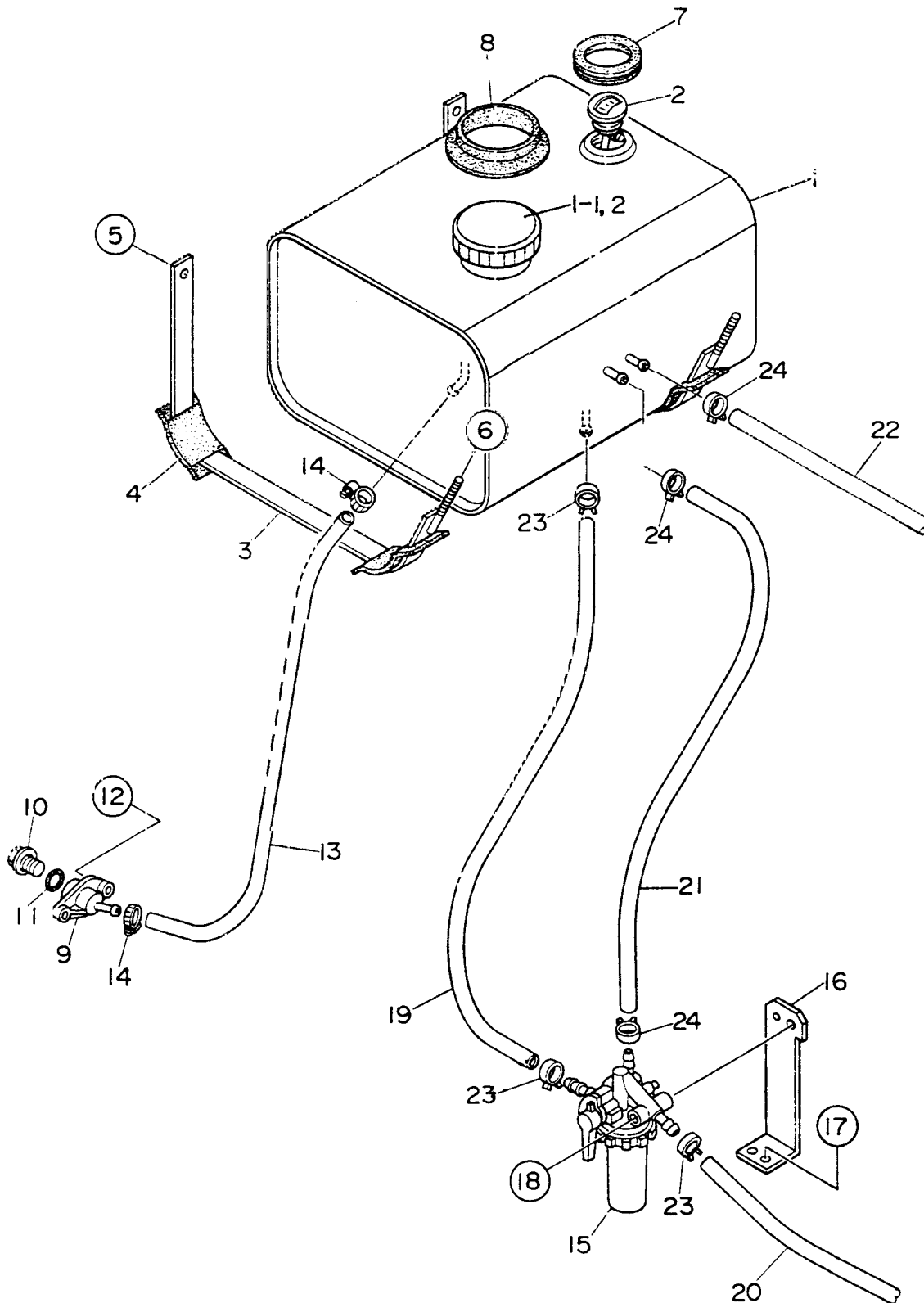
DA-7000SS — MUFFLER ASSY.

MUFFLER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	D2332100003	MUFFLER	1	
2	0016908020	HEX. HEAD BOLT	4	
3	D2335000003	EXHAUST PIPE	1	
4	1526312371	GASKET	1	REPLACES 1526312371
5	1502336004	GASKET	1	
6	0207008000	HEX. NUT	4	
7	0016908035	HEX. HEAD BOLT	2	

DA-7000SS — FUEL TANK ASSY.

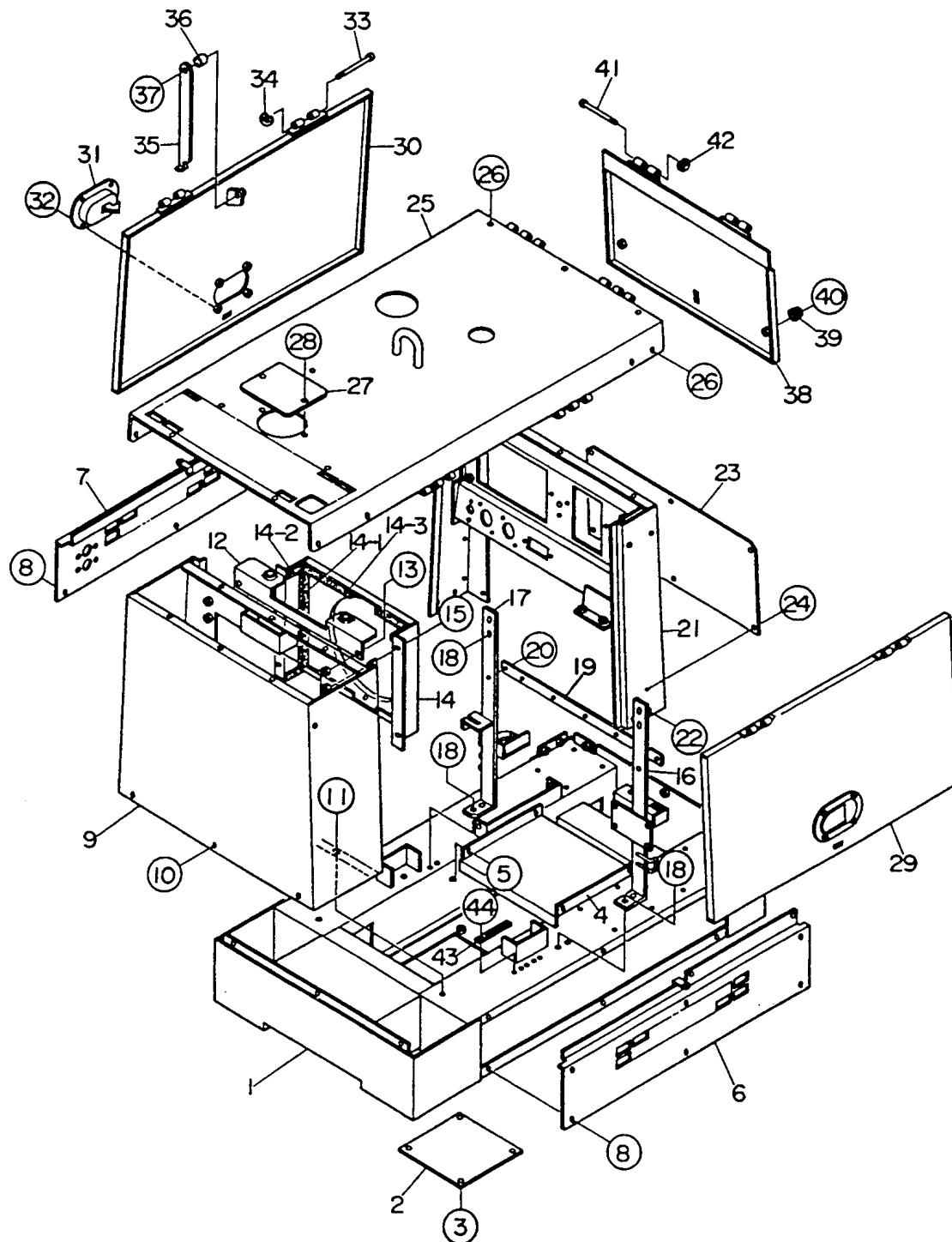
FUEL TANK ASSY.



FUEL TANK ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	D2365000013	FUEL TANK	1	
	0810105800	CAP, FUEL TANK	1	
	0810105900	FUEL FILTER	1	
2	0602125033	FUEL GAUGE	1	CJ-39A
3	D2365200004	TANK BAND	2	
4	0805003414	PAD, TANK BANK	4	
5	0016906016	HEX. HEAD BOLT	2	
6	0207308000	HEX. NUT	2	
7	D1490600104	RUBBER SEAL	1	
8	1615511204	RUBBER SEAL	1	
9	7812014003	DRAIN JOINT	1	
10	0802011104	PLUG	1	
11	0150000018	O RING A P18	1	
12	0016906016	HEX. HEAD BOLT	2	
13	0199900670	DRAIN HOSE	1	
14	0605515094	HOSE BAND F-12	2	
15	1553143010	FUEL FILTER ASSY.	1	REPLACES 0602042460 AND 1553143012
	1523143560	ELEMENT, FUEL FILTER	1	REPLACES 0602042171 AND 1523143563
16	D2368700004	BRACKET, FUEL FILTER	1	
17	0016906016	HEX. HEAD BOLT	2	
18	0016908065	HEX. HEAD BOLT	1	
19	0966180240	SUCTION HOSE	1	REPLACES 0605513158
20	0966180400	SUCTION HOSE	1	REPLACES 0605513101
21	0966140320	RETURN HOSE	1	REPLACES 0605514101
22	0966140240	RETURN HOSE	1	REPLACES 0605514102
23	1491142750	HOSE BAND	4	REPLACES 0605515070
24	1024442320	HOSE BAND	4	REPLACES 0605515072

ENCLOSURE ASSY

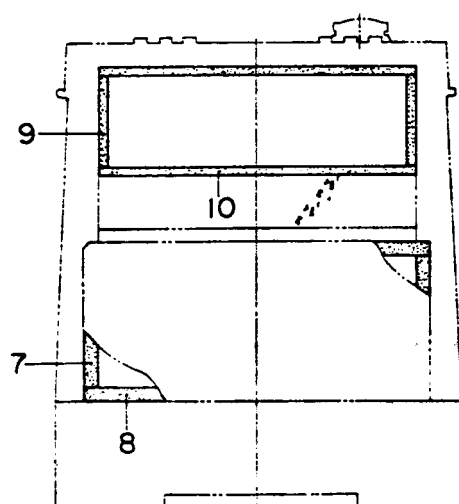
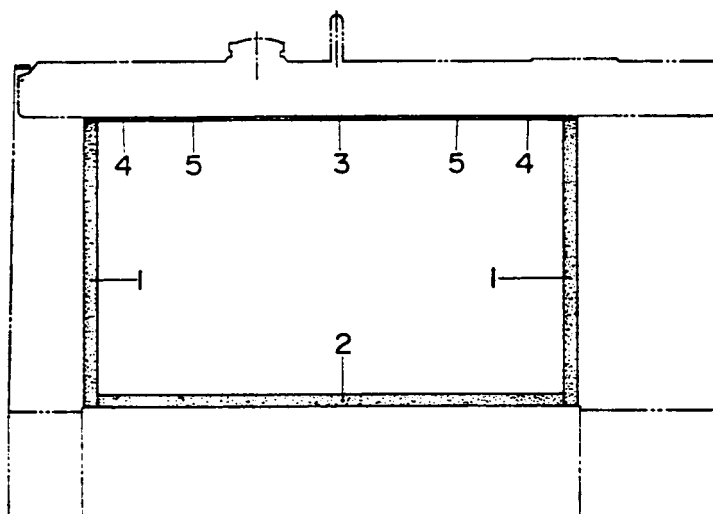
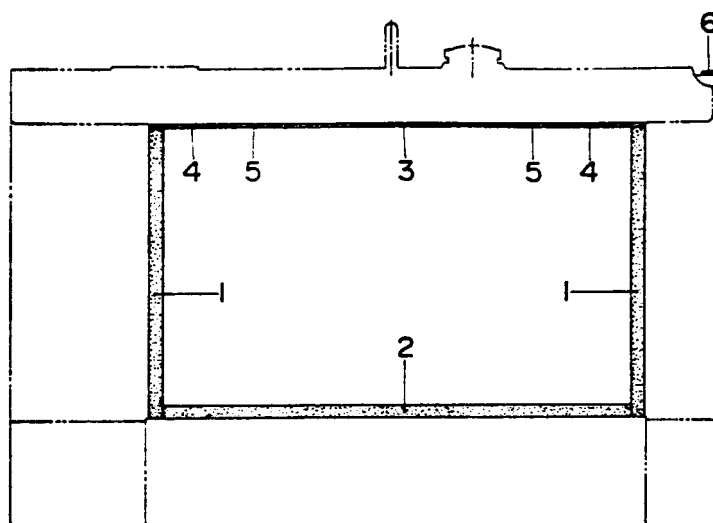


ENCLOSURE ASSY

NO	PART NO	PART NAME	QTY.	REMARKS
1	A5415000202	Base	1	
2	D2415100004	Floor Panel	1	
3	0016906016	Hex Head Bolt	4	
4	A5415600104	Duct	1	
5	0016906016	Hex Head Bolt	4	
6	D2455200113	Splasher Panel	1	
7	D2455200003	Splasher Panel	1	
8	0016906016	Hex Head Bolt	12	
9	D2425000012	Front Frame	1	
	0220900340	Rubber Seal	2	
10	0016906016	Hex Head Bolt	3	
11	0016908020	Hex Head Bolt	2	
12	D2312100004	Bracket radiator	1	
13	0016906016	Hex Head Bolt	2	
14	D2312300013	Fan Shroud	1	
14-1	D2492200004	Lining	1	
14-2	0221700050	Lining	4	
14-3	0221900165	Lining	4	
15	0016906016	Hex Head Bolt	4	
16	A5435300203	Hanger	1	
17	A5435300403	Hanger	1	
18	0012310025	Hex Head Bolt	8	
19	D2485500015	Harness Guide	1	
20	0016906016	Hex Head Bolt	2	
21	A5445000102	Rear Frame	1	
22	0016906016	Hex Head Bolt	4	
23	D2445300004	Cover rear frame	1	
24	0016906016	Hex Head Bolt	6	
25	A5465000102	Roof Panel	1	
26	0016906016	Hex Head Bolt	15	
27	8432081004	Cover radiator cap	1	
28	0016906016	Hex Head Bolt	2	
29	D245500113	Side Door	1	
	A5495400704	Lining	1	
30	D2455000013	Side Door	1	
	A5495400704	Lining	1	
31	0605010215	Door Handle	2	
32	0021805016	Machine Screw	8	
33	0810014704	Pin	4	
34	0080200004	Snap Ring	4	
35	D2455700004	Door Stay	2	
36	7835088004	Collar	2	
37	0016908020	Hex Head Bolt	2	
38	A5445200003	Rear Door	1	
39	0601851613	Stopper	2	CP 30FF15A
41	0810014704	pin	2	
42	0080200004	Snap Ring	2	
43	8511864604	Terminal Plate	1	
44	0016906016	Hex Head Bolt	5	

DA-7000SS — ENCLOSURE (RUBBER SEALS)

ENCLOSURE (RUBBER SEALS)



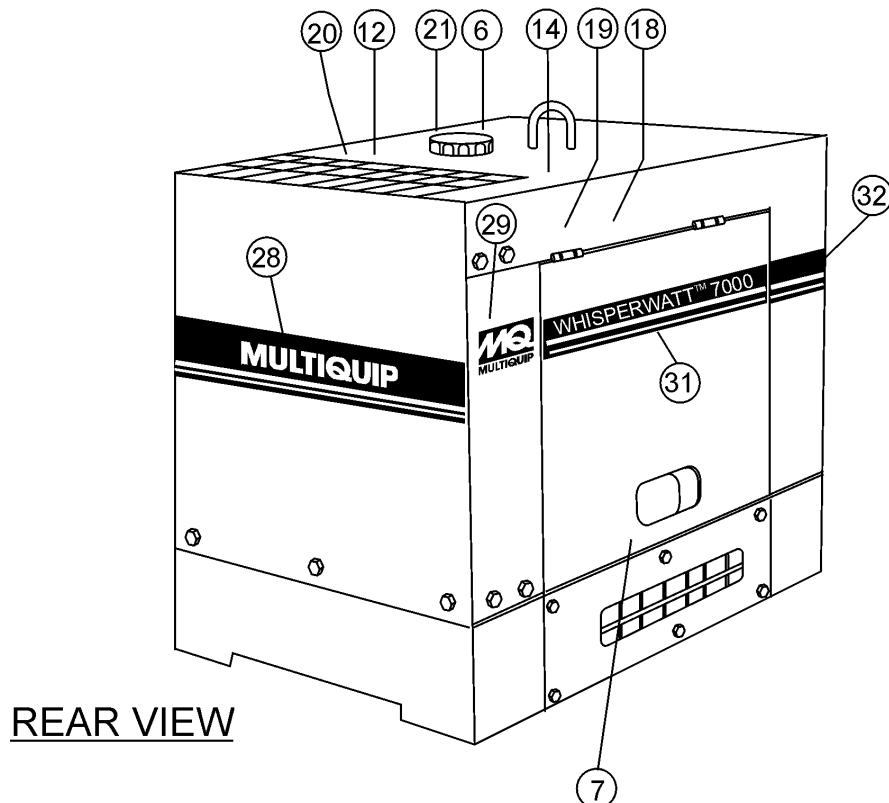
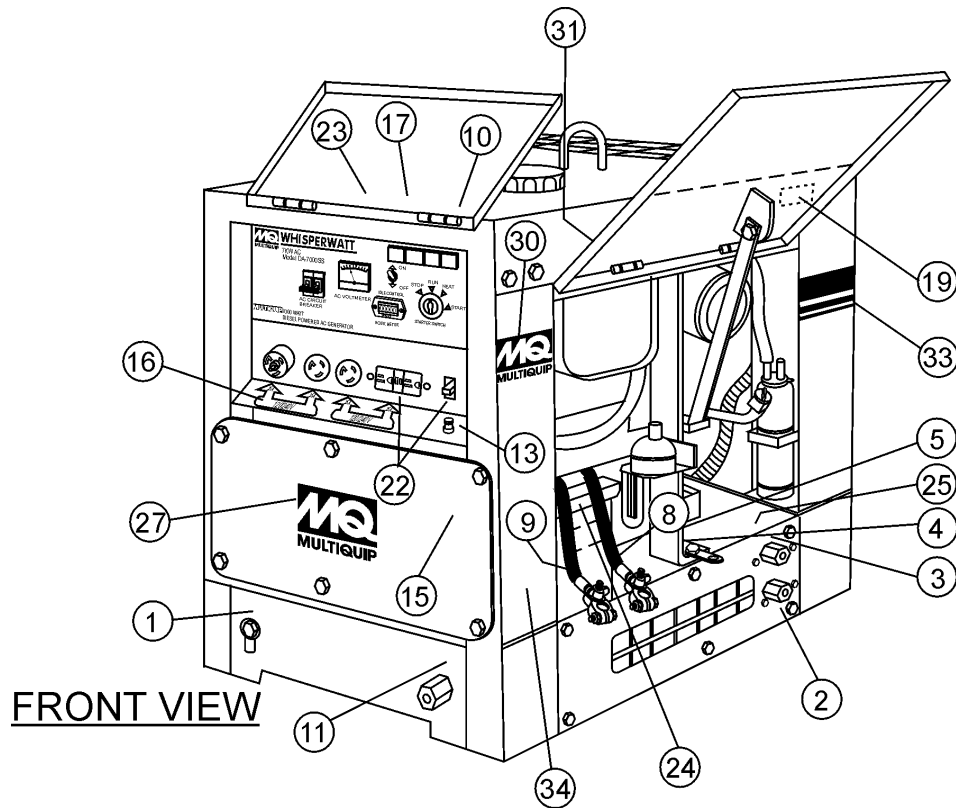
DA-7000SS — ENCLOSURE (RUBBER SEALS)

ENCLOSURE (RUBBER SEALS)

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0229400470	RUBBER SEAL	4	
2	0229400760	RUBBER SEAL	2	
3	0222900325	RUBBER SEAL	2	
4	0222900125	RUBBER SEAL	4	
5	0222600100	RUBBER SEAL	4	
6	0228300600	RUBBER SEAL	1	
7	0228300200	RUBBER SEAL	2	
8	0228300550	RUBBER SEAL	2	
9	0227600130	RUBBER SEAL	2	
10	0227600500	RUBBER SEAL	2	

DA-7000SS — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS



DA-7000SS — NAMEPLATE AND DECALS

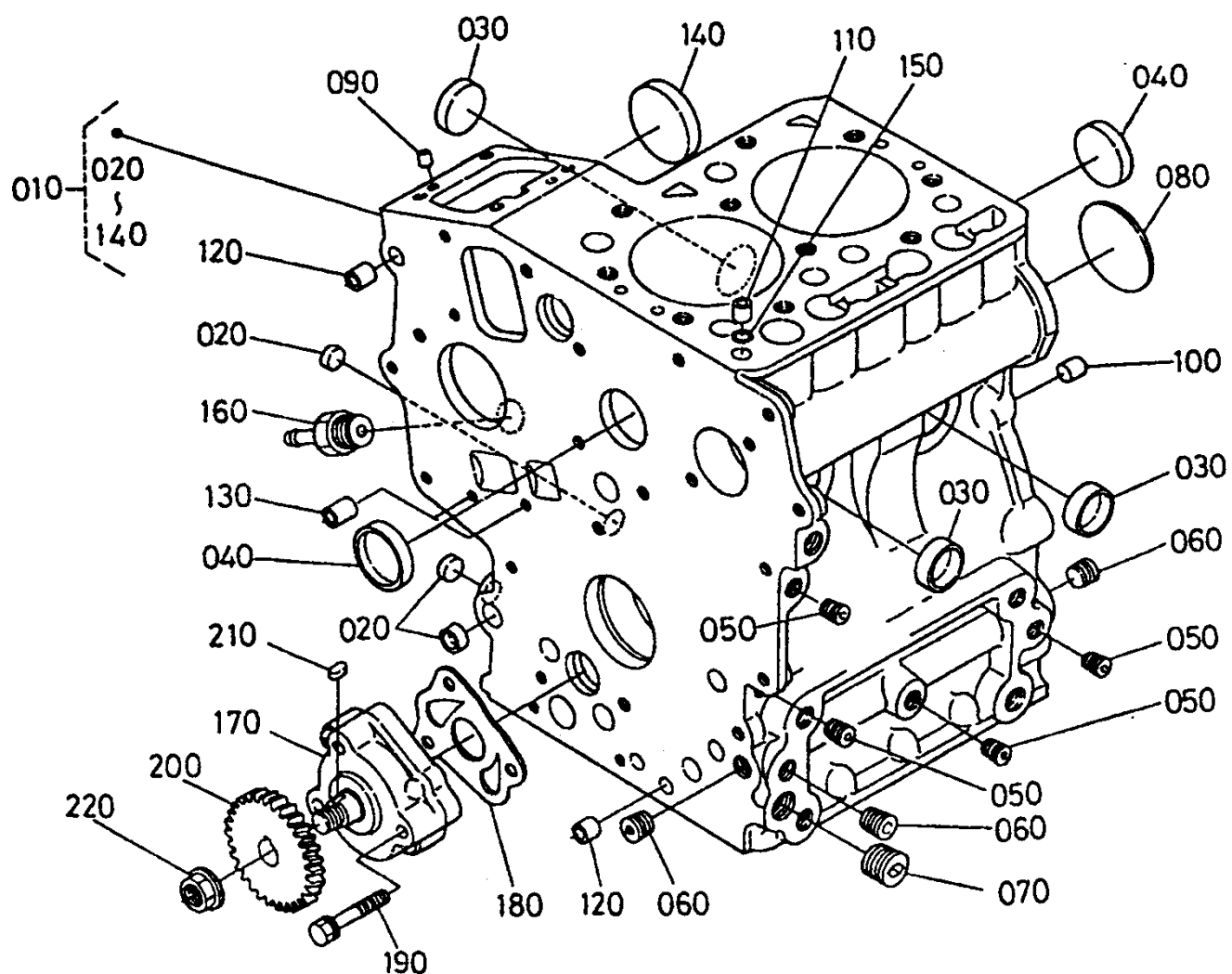
NAMEPLATE AND DECALS

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	0800628504	Decal: Ground	1	S1123
2*	1630645004	Decal: Oil Drain	1	S1403
3*	1630647004	Decal: Coolant Drain	1	S1404
4*	1630610404	Decal: Caution (Paper Element)	1	S1406
5*	1630680104	Decal: Fuel Cock	1	S1407
6*	1630680004	Decal: Use 2 Diesel Fuel Only	1	S1408
7*	1630610504	Decal: Caution (Doors Open)	2	S1409
8*	0600689404	Decal: Battery Positive	1	S2090
9*	0800689504	Decal: Battery Negative	1	S2091
10*	6390671104	Decal: Important Check Daily	1	S2377
11*	7810680104	Decal: Fuel Drain	1	S3060
12*	7810680204	Decal: Cooling Water	1	S3061
13*	8700611603	Decal: Ground For G. F. C. I.	1	S3821 REPLACES 7670624004
14*	8700611804	Decal: Warning Dangerous Gas	1	S4984
15*	8700611904	Decal: Danger Electrical Shock Hazard	1	S4985
16*	A5552000003	Decal: AC Power Output	1	REPLACES A55200000
17*	A5552000103	Decal: Operating Procedure	1	REPLACES A55200010
18*	B9504000304	Decal: Caution Hot Parts	1	REPLACES B90400030
19*	B9504000404	Decal: Warning Moving Parts	2	REPLACES B90400040
20*	B9504100104	Decal: Warning Hot Coolant	1	REPLACES B90410010
21*	B9504500004	Decal: Warning Diesel Fuel	1	REPLACES B90450000
22*	7670624004	Decal: G. F. C. I.	2	REPLACES D92200100
23*	0820610404	Decal: Warning (Transfer Switch)	1	
24*	0820650604	Decal: Danger Explosive Gases (Battery)	1	
25*	8700611524	Decal: Caution Oil Level Gauge	1	
26*	8700625504	Decal: Fuse Box	1	
27*	A556200004	Decal: MQ	1	REPLACES A56200000
28*	A5562100003	Decal: Stripe Multiquip	1	REPLACES A56210000
29*	A5562100104	Decal: Stripe MQ	1	REPLACES A56210010
30*	A5562100204	Decal: Stripe MQ	1	REPLACES A56210020
31*	A5562100303	Decal: Stripe Whisperwatt	2	REPLACES A56210030
32*	A5562100404	Decal: Stripe	1	REPLACES A56210040
33*	A5562100504	Decal: Stripe	1	REPLACES A56210050
34		PLATE, SERIAL NO.	1	CONTACT MQ SERVICE DEPT
				WITH MODEL AND S/N
	DCLDA7000SS	KIT, DECAL	1	INCLUDES ITEMS W/*

SEE DECAL ILLUSTRATIONS ON PAGES 8 AND 9.

KUBOTA Z482-EB ENGINE — CRANKCASE ASSY.

CRANKCASE ASSY.



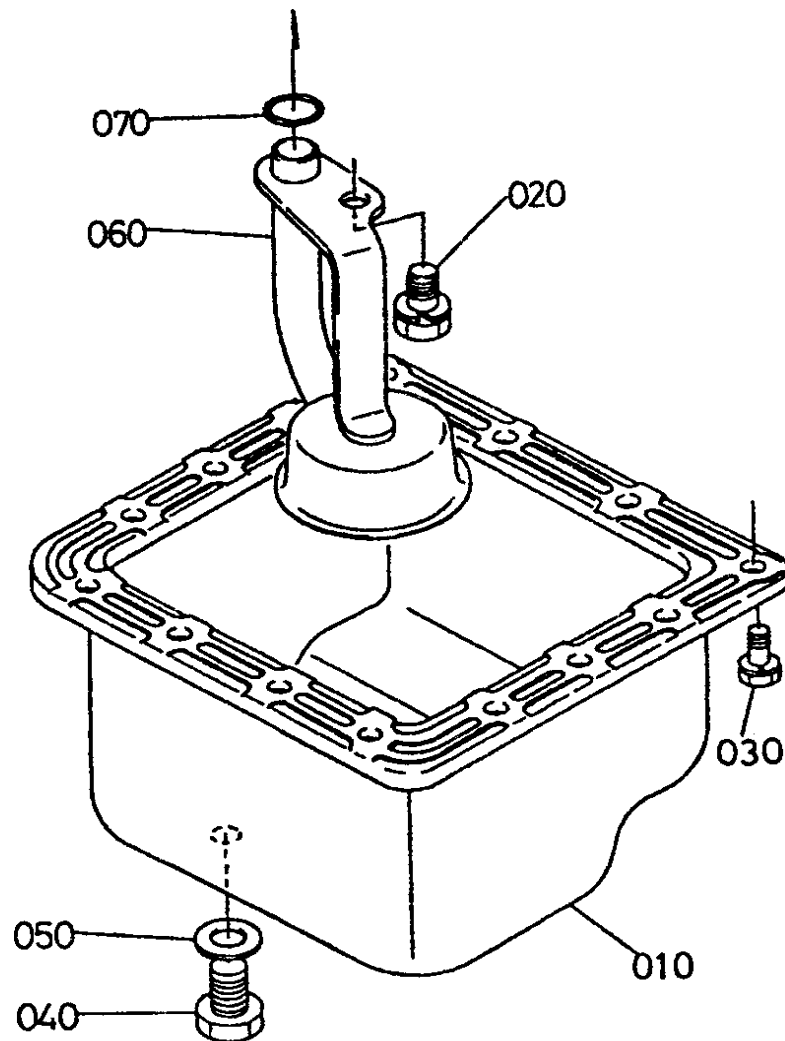
KUBOTA Z482-EB ENGINE — CRANKCASE ASSY.

CRANKCASE ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
010	1685101012	COMP. CRANKCASE	1	INCLUDES ITEMS W/*
020*	1685196260	CAP, SEALING	3	
030*	1685196270	CAP, SEALING	3	
040*	1545196270	CAP, SEALING	2	
050*	1526196010	PLUG	4	
060*	1552106030	PLUG	1	
070*	1552196030	PLUG	1	
080*	1526196160	PLUG, EXPANSION	1	
090*	0501200508	PIN, STRAIGHT	2	
100*	0501200814	PIN, STRAIGHT	2	
110*	1522133650	PIN, PIPE	1	
120*	1523133960	PIN, PIPE	2	
130*	1733159190	PIN, PIPE	2	
140*	1685116212	COVER, FUEL CAMSHAFT	1	
150	1522133700	O RING	1	
160	1584773130	JOINT, DRAIN PIPE	1	
170	1685135010	ASSY PUMP, OIL	1	
180	1685135152	GASKET, OIL PUMP NA	1	
190	1584191050	BOLT	3	
200	1584135660	GEAR, OIL PUMP DRIVE	1	
210	0571200408	KEY, FEATHER	1	
220	0278350100	NUT, FLANGE	1	

KUBOTA Z482-EB ENGINE — OIL PAN ASSY.

OIL PAN ASSY.



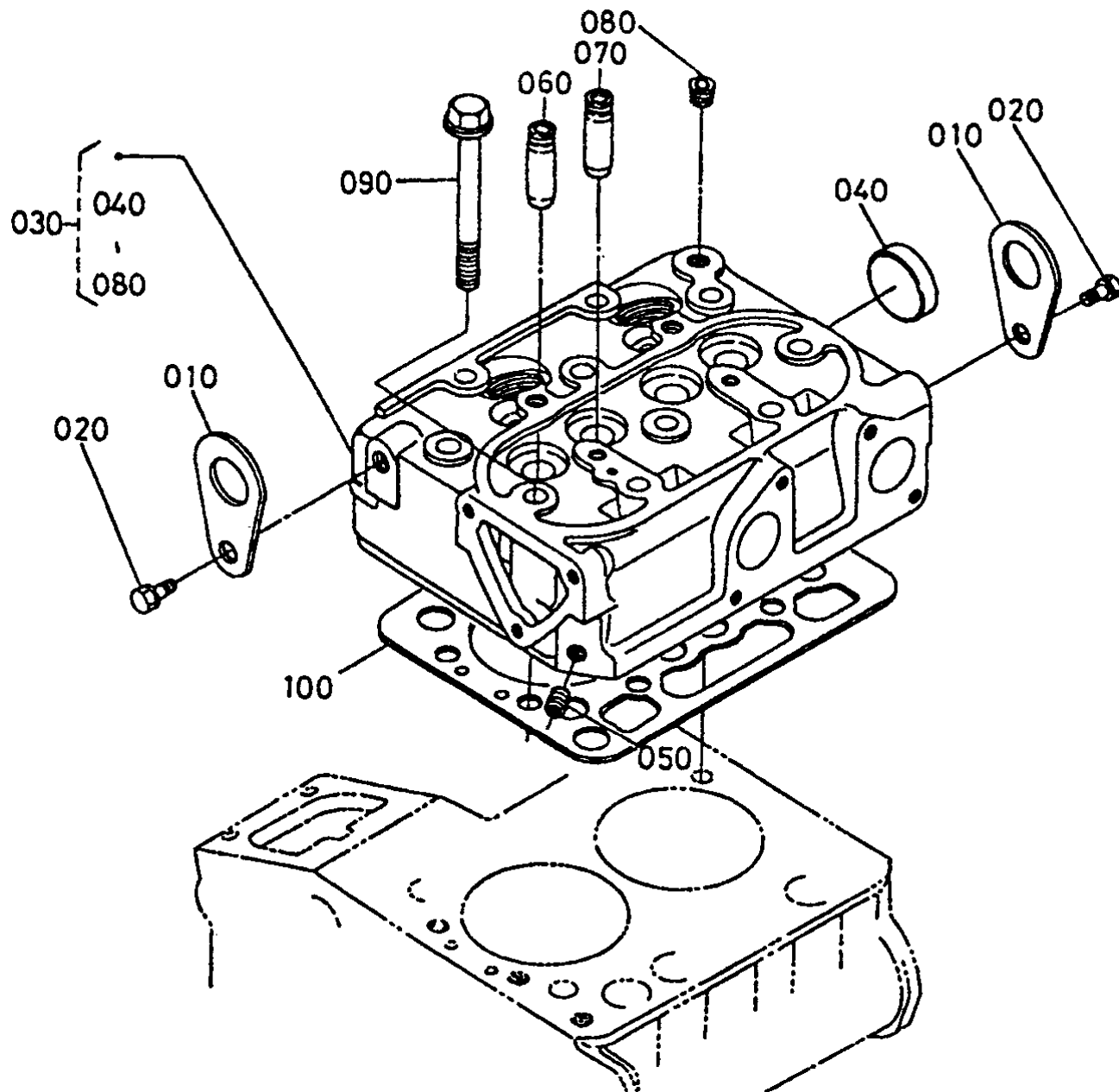
KUBOTA Z482-EB ENGINE — OIL PAN ASSY.

OIL PAN ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1756101500	COMP. OIL PAN	1	
020	0112360814	BOLT	1	
030	0102350612	BOLT	14	
040	1654133750	PLUG, DRAIN	1	
050	1545196670	GASKET	1	
060	1685132110	FILTER, OIL	1	
070	0481400160	O RING	1	

KUBOTA Z482-EB ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.



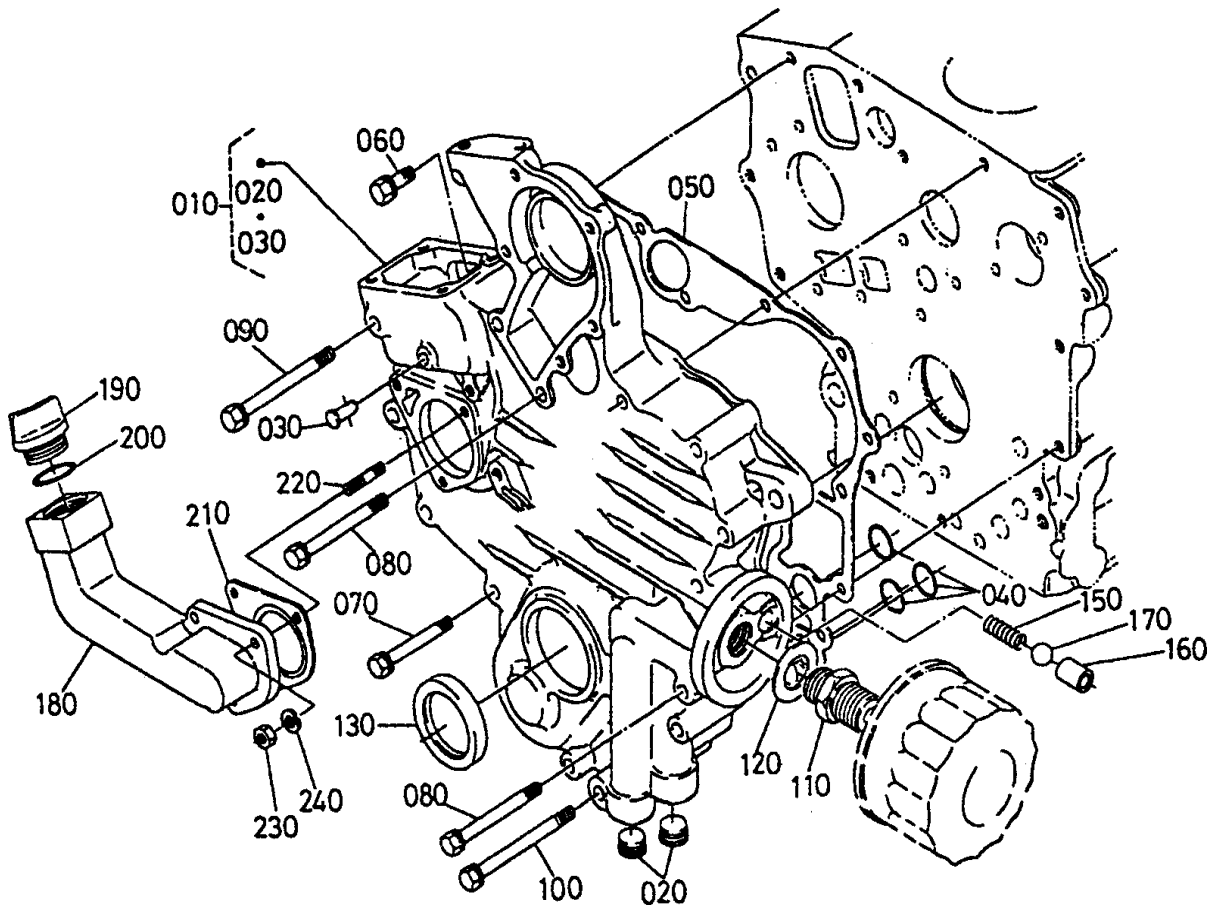
KUBOTA Z482-EB ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1522101750	HOOK, ENGINE	2	
020	0112360816	BOLT	2	
030	1685503042	COMP. CYLINDER HEAD	1	INCLUDES ITEMS W/*
040*	1532196260	CAP, SEALING	1	
050*	1526196010	PLUG	1	
060*	1584113540	GUIDE, INLET VALVE	2	
070*	1584113560	GUIDE, EXHAUST VALVE	2	
080	1584196020	PLUG	1	
090	1460103450	BOLT, CYLINDER HEAD	10	
100	1685103310	GASKET, CYLINDER HEAD	1	

KUBOTA Z482-EB ENGINE — GEAR CASE ASSY.

GEAR CASE ASSY.



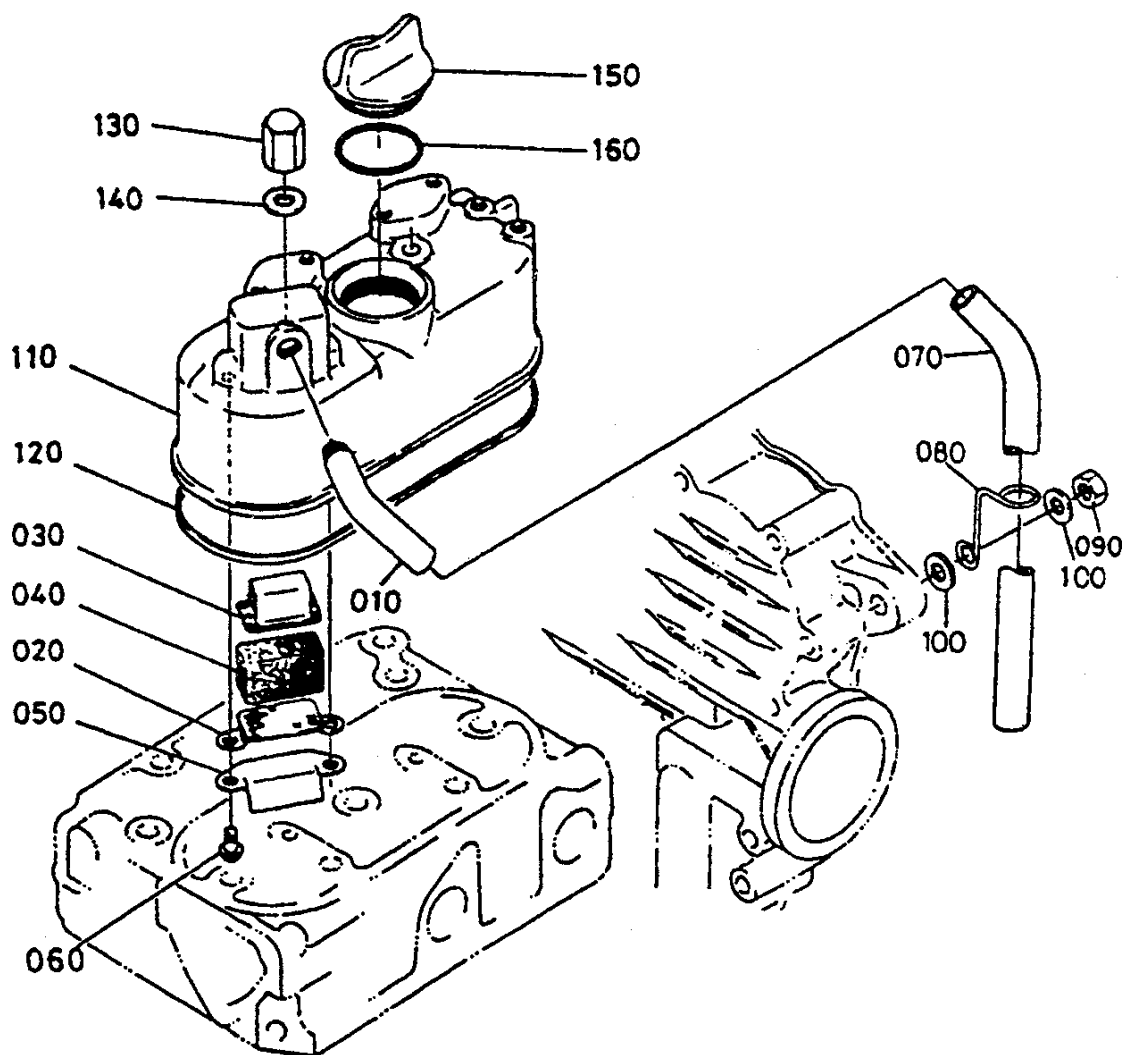
KUBOTA Z482-EB ENGINE — GEAR CASE ASSY.

GEAR CASE ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
010	1687504024	COMP. CASE, GEAR	1	INCLUDES ITEMS W/★
020★	1685196010	PLUG	2	
030★	1584156280	PIN, START SPRING	1	
040	04814061300	O RING	3	
050	1586204132	GASKET, GEAR CASE NA	1	
060	0102350618	BOLT	1	
070	0102360650	BOLT	8	
080	1584191010	BOLT	5	
090	0102350670	BOLT	1	
100	0102350675	BOLT	1	
110	1524132290	JOINT, PIPE	1	
120	1584194010	WASHER, PLAIN	1	
130	1587704140	SEAL, OIL	1	
150	1685136950	SPRING	1	
160	1584136930	SEAT, VALVE	1	
170	0771503211	BALL	1	
180	1584633110	FLANGE, OIL FILLER	1	
190	1381133140	PLUG, OIL FILLER	1	
200	0481106230	O RING	1	
210	1946188132	GASKET, H/M GEAR CASE	1	
220	1522188210	STUD	3	
230	0205650060	NUT	3	
240	0451260060	WASHER, SPRING	3	

KUBOTA Z482-EB ENGINE — HEAD COVER ASSY.

HEAD COVER ASSY.



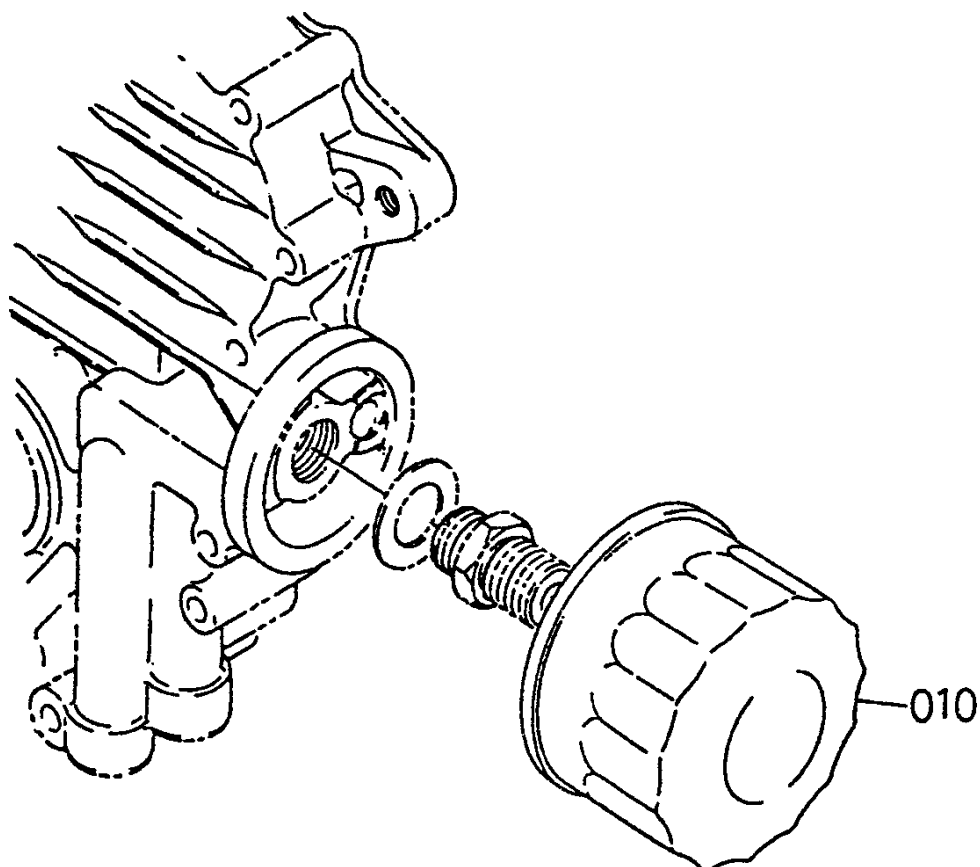
KUBOTA Z482-EB ENGINE — HEAD COVER ASSY.

HEAD COVER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1588105550	JOINT, BREATHER PIPE	1	
020	1584105140	PLATE, BREATHER ELEMENT	1	
030	1584105150	PLATE, BREATHER ELEMENT	1	
040	1584105670	ELEMENT, BREATHER	1	
050	1584105370	OIL SHIELD, BREATHER	1	
060	1686193310	SCREW	2	
070	1584705512	PIPE, BREATHER	1	
080	1584105590	CLAMP, PIPE	1	
090	0211450080	NUT	1	
100	0401360080	WASHER, PLAIN	2	
110	1685114512	COVER, CYLINDER HEAD	1	
120	1685114522	GASKET, HEAD COVER	1	
130	1584114620	NUT, CAP	2	
140	1560196650	GASKET	2	
150	1585233140	PLUG, OIL FILLER	1	
160	1481150300	O RING	1	

KUBOTA Z482-EB ENGINE — OIL FILTER ASSY.

OIL FILTER ASSY.



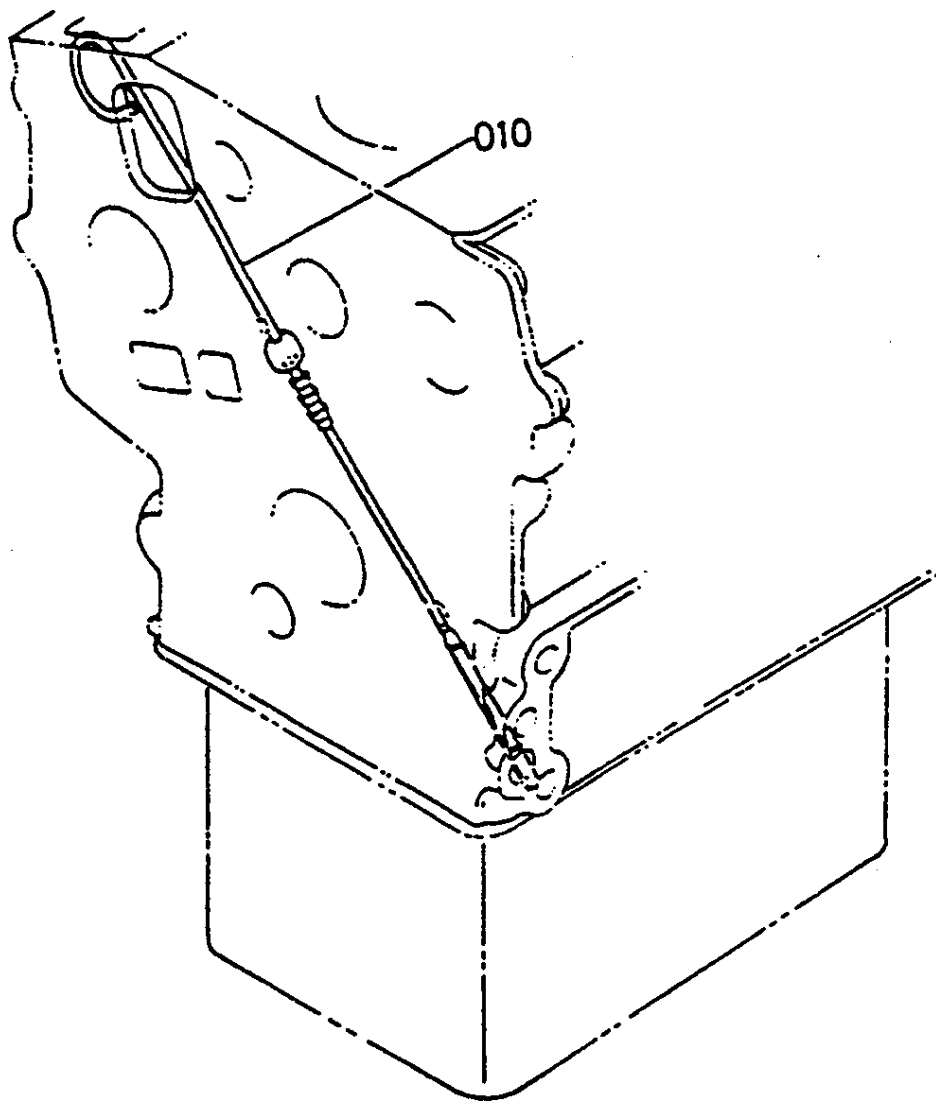
KUBOTA Z482-EB ENGINE — OIL FILTER ASSY.

OIL FILTER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	7000015241	CARTRIDGE, OIL FILTER	1	REPLACES 1585399170

KUBOTA Z482-EB ENGINE — DIPSTICK & GUIDE ASSY.

DIPSTICK & GUIDE ASSY.



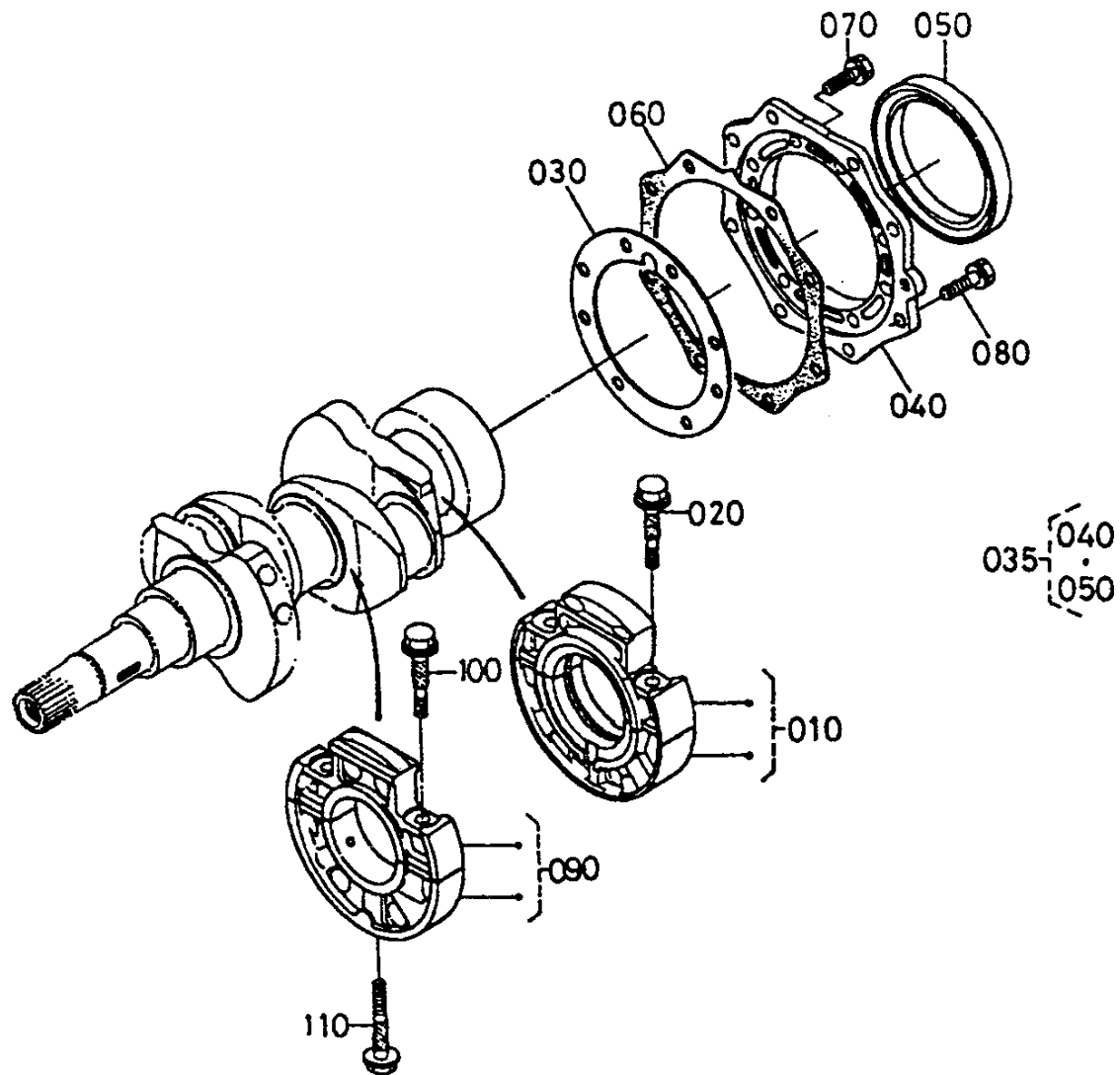
KUBOTA Z482-EB ENGINE — DIPSTICK & GUIDE ASSY.

DIPSTICK & GUIDE ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1685136410	GAUGE, OIL	1	

KUBOTA Z482-EB ENGINE — MAIN BEARING CASE ASSY.

MAIN BEARING CASE ASSY.



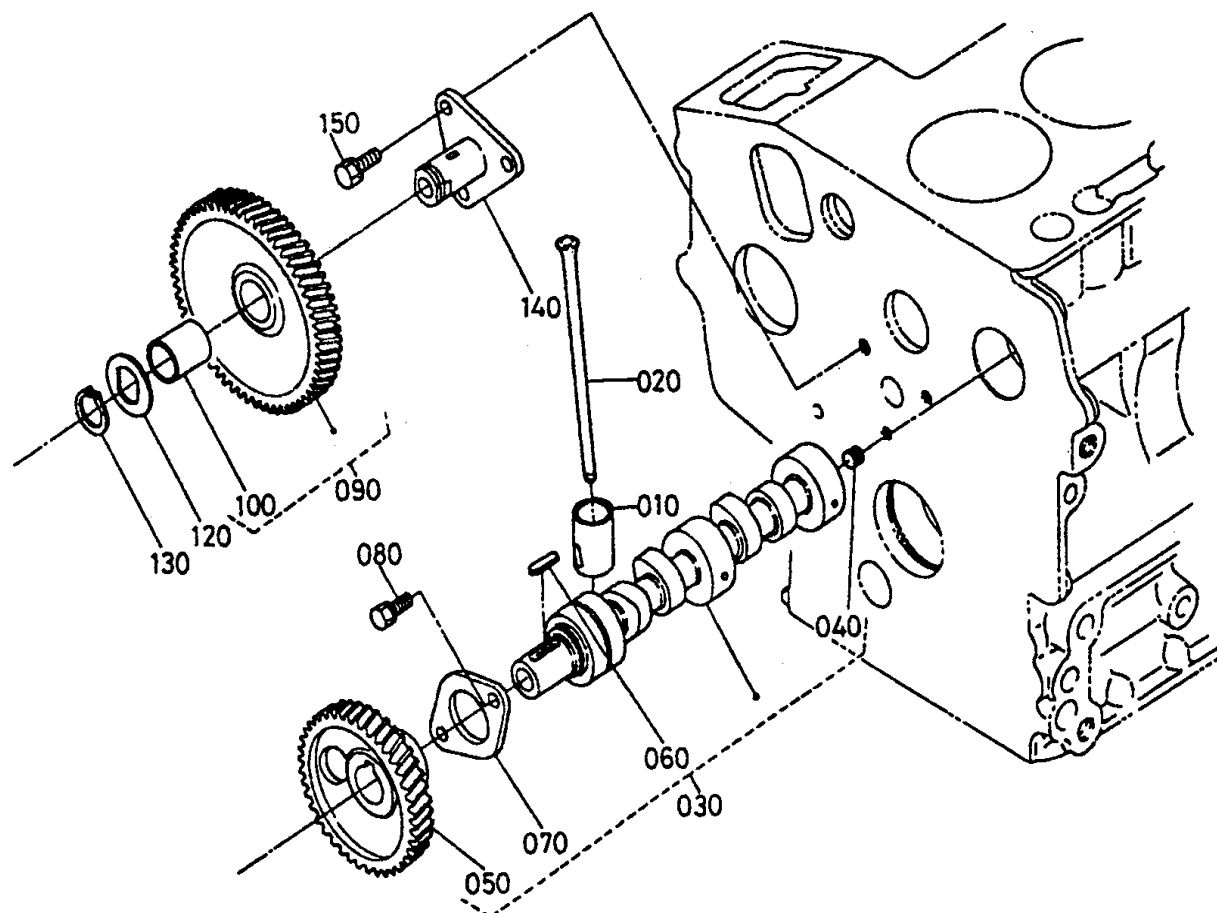
KUBOTA Z482-EB ENGINE — MAIN BEARING CASE ASSY.

MAIN BEARING CASE ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1685104092	ASSY. CASE, MAIN BEARING	1	
020	1584104540	BOLT, BEARING CASE	2	
030	1585204360	GASKET, BEARING CASE	1	
035	1584104800	ASSY. COVER, BRG CASE	1	INCLUDES ITEMS W/%
040%	1584104810	COVER, BEARING CASE	1	
050%	1921599160	SEAL, OIL	1	
060	1584104822	GASKET	1	
070	0102350620	BOLT	8	
080	0102350622	BOLT	8	
090	1685104040	ASSY. CASE, MAIN BEARING	1	
100	1584104540	BOLT, BEARING CASE	2	
110	1584104562	BOLT, BEARING CASE	1	

KUBOTA Z482-EB ENGINE — CAMSHAFT & IDLE GEAR ASSY.

CAMSHAFT & IDLE GEAR SHAFT ASSY.



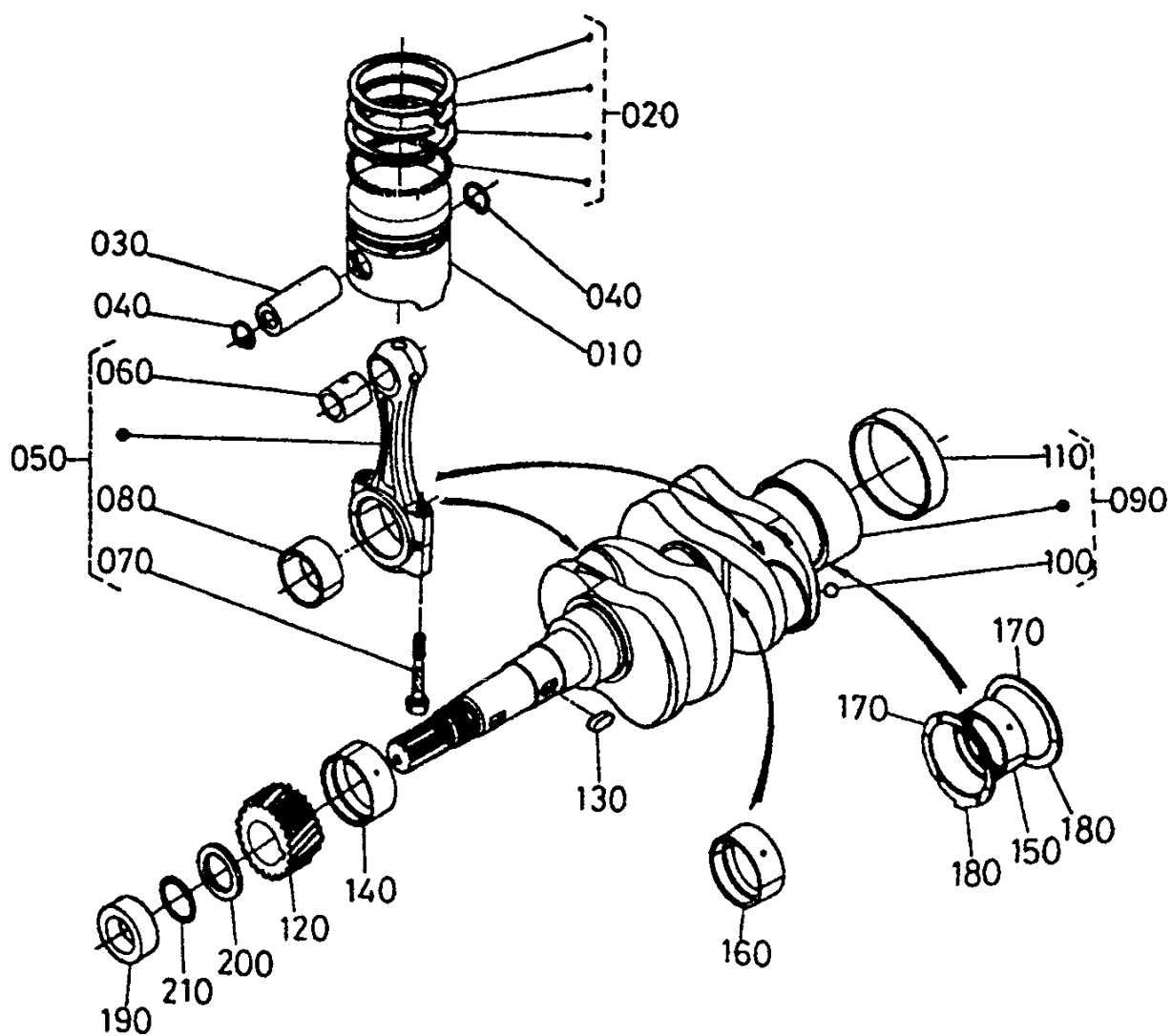
KUBOTA Z482-EB ENGINE — CAMSHAFT & IDLE GEAR ASSY.

CAMSHAFT & IDLE GEAR SHAFT ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1685115550	TAPPET	4	
020	1685115110	PUSH ROD	4	
030	1584116015	ASSY. CAMSHAFT	1	INCLUDES ITEMS W/*
040*	1552193610	SCREW, SET	1	
050*	1686416510	GEAR, CAM	1	
060*	0571200518	KEY, FEATHER	1	
070*	1584116270	STOPPER, CAMSHAFT	1	
080	0102350612	BOLT	2	
090	1587524013	COMP. GEAR, IDLE	1	INCLUDES ITEMS W/#
100#	1587524282	BUSH	1	
120	1587524370	COLLAR, IDLE GEAR	1	
130	1587524320	RING, SNAP	1	
140	1587524250	SHAFT, IDLE GEAR	1	
150	0102350614	BOLT	3	

KUBOTA Z482-EB ENGINE — PISTON & CRANKSHAFT ASSY.

PISTON & CRANKSHAFT ASSY.



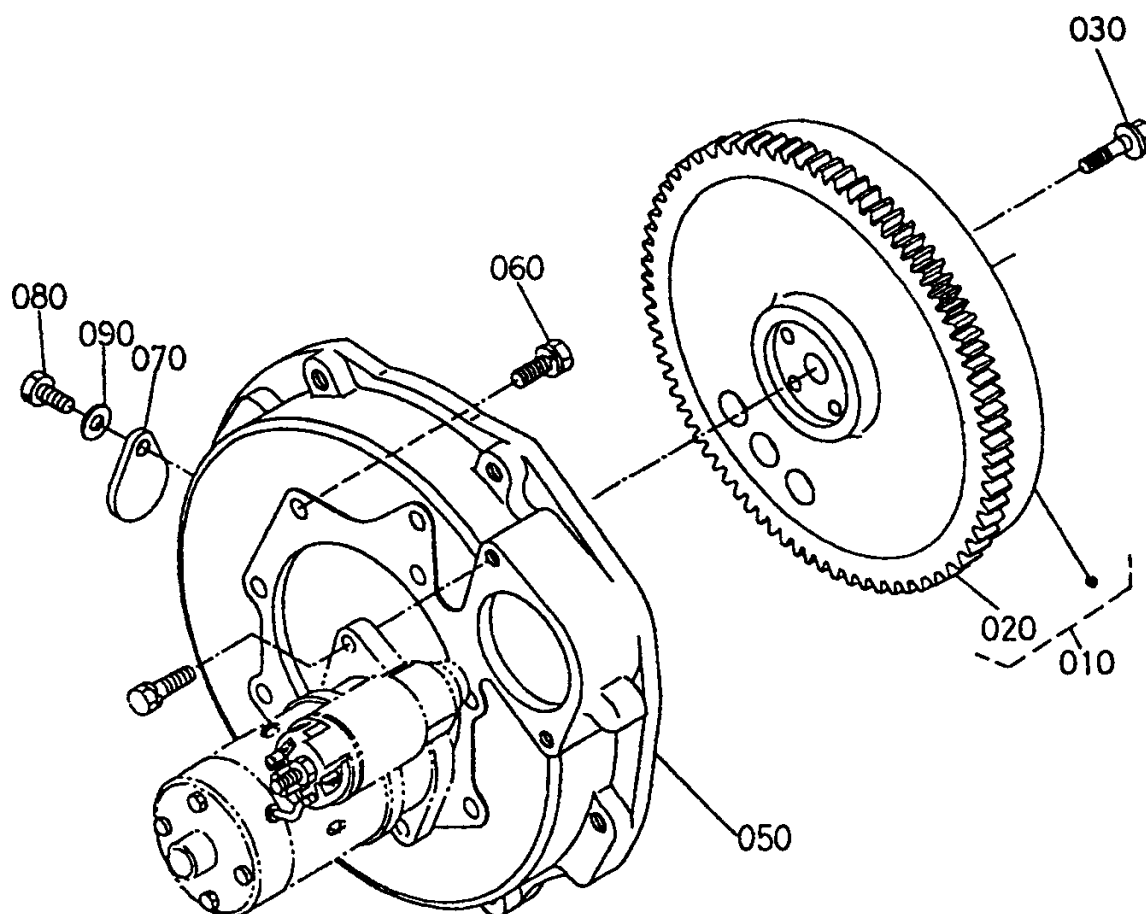
KUBOTA Z482-EB ENGINE — PISTON & CRANKSHAFT ASSY.

PISTON & CRANKSHAFT ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1685121112	PISTON STD	2	
010	1685121900	PISTON +0.25MM	2	
020	1685321050	ASSY. PISTON RING STD	2	
020	1685321090	ASSY. PISTON RING +0.25MM	2	
030	1685121310	PIN, PISTON	2	
040	1526121330	AIR CLIP, PISTON PIN	4	
050	1685122010	ASSY. CONNECTING ROD	2	INCLUDES ITEMS W/*
060*	1685121980	BUSH, PISTON PIN	2	
070*	1685122140	BOLT, CONNECTING ROD	4	
080*	1685122320	METAL, CRANKPIN M STD SET	2	
080	1586122970	METAL, CRANKPIN -0.20MM SET	2	
080	1586122980	METAL, CRANKPIN -0.40MM SET	2	
090	1685323030	ASSY. CRANKSHAFT	1	INCLUDES ITEMS W/#
100#	0771503207	BALL	2	
110#	1921523280	SLEEVE, CRANKSHAFT	1	
120	1584124110	GEAR, CRANK	1	
130	0571200515	KEY, FEATHER	1	
140	1586123470	METAL, CRANKSHAFT STD	1	
140	1586123910	METAL, CRANKSHAFT -0.20MM	1	
140	1586123920	METAL, CRANKSHAFT -0.40MM	1	
150	1686123480	METAL, CRANKSHAFT M STD SET	1	
150	1569423930	METAL, CRANKSHAFT -0.20MMSET	1	
150	1569423940	METAL, CRANKSHAFT -0.40MMSET	1	
160	1686123490	METAL, CRANKSHAFT STD SET	1	
160	1586123860	METAL, CRANKSHAFT -0.20MM SET	1	
160	1586123870	METAL, CRANKSHAFT -0.40MM SET	1	
170	1526123530	METAL, SIDE STD	2	
170	1526123950	METAL, SIDE +0.20MM	2	
170	1526123960	METAL, SIDE +0.40MM	2	
180	1526123540	METAL, SIDE STD	2	
180	1526123970	METAL, SIDE +0.20MM	2	
180	1526123980	METAL, SIDE +0.40MM	2	
190	1584123250	COLLAR, CRANKSHAFT	1	
200	1588123310	SLINGER, OIL	1	
210	0481416220	O RING	1	

KUBOTA Z482-EB ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.



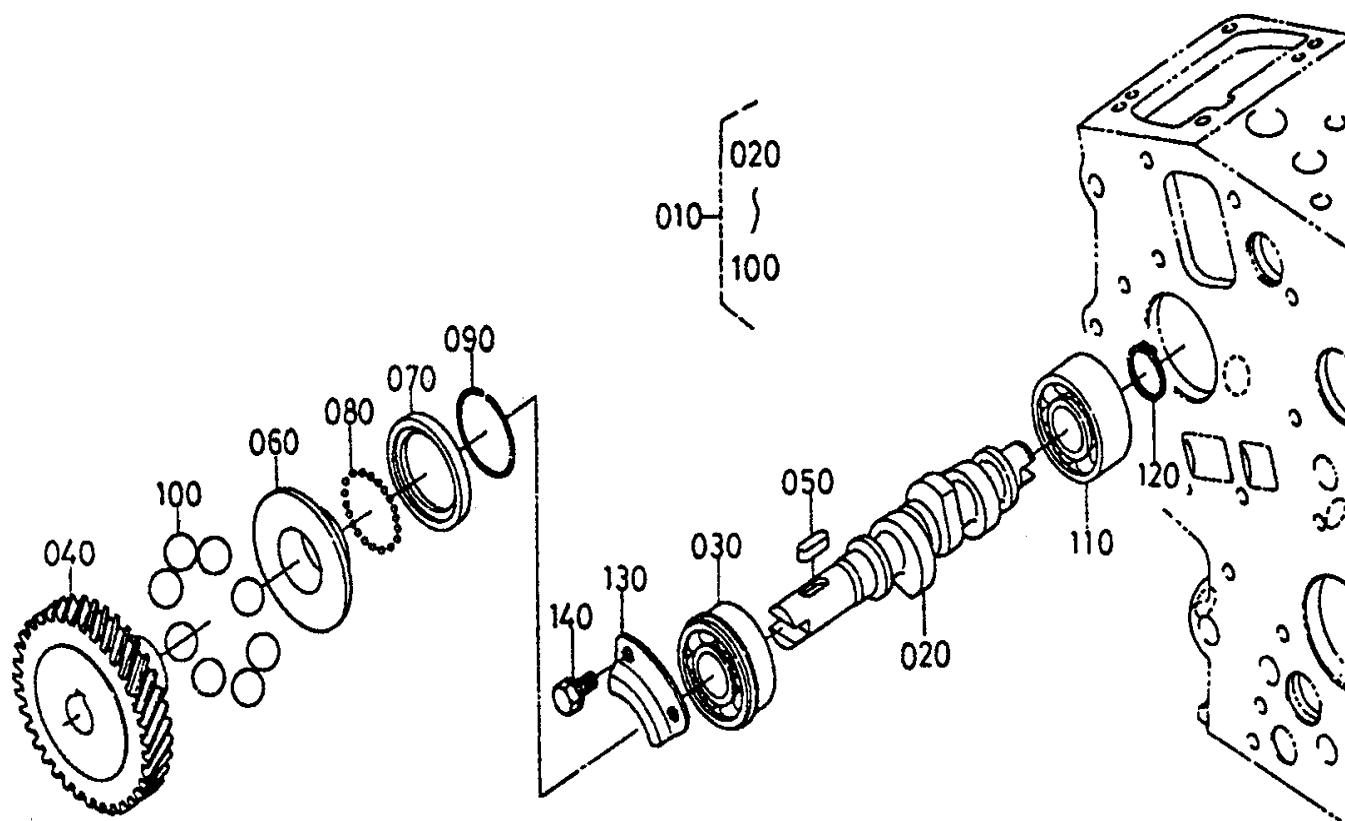
KUBOTA Z482-EB ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
010	1685125010	COMP. FLYWHEEL	1	INCLUDES ITEMS W/#
020#	1685163820	GEAR, RING	1	
030	1585225160	BOLT, FLYWHEEL	5	
050	1584704612	HOUSING, FLYWHEEL	1	
060	0112350820	BOLT	10	
070	3122014170	COVER	1	
080	0112360814	BOLT	1	
090	0401360080	WASHER, PLAIN	1	

KUBOTA Z482-EB ENGINE — FUEL CAMSHAFT & GOV. SHAFT ASSY.

FUEL CAMSHAFT & GOVERNOR SHAFT ASSY.



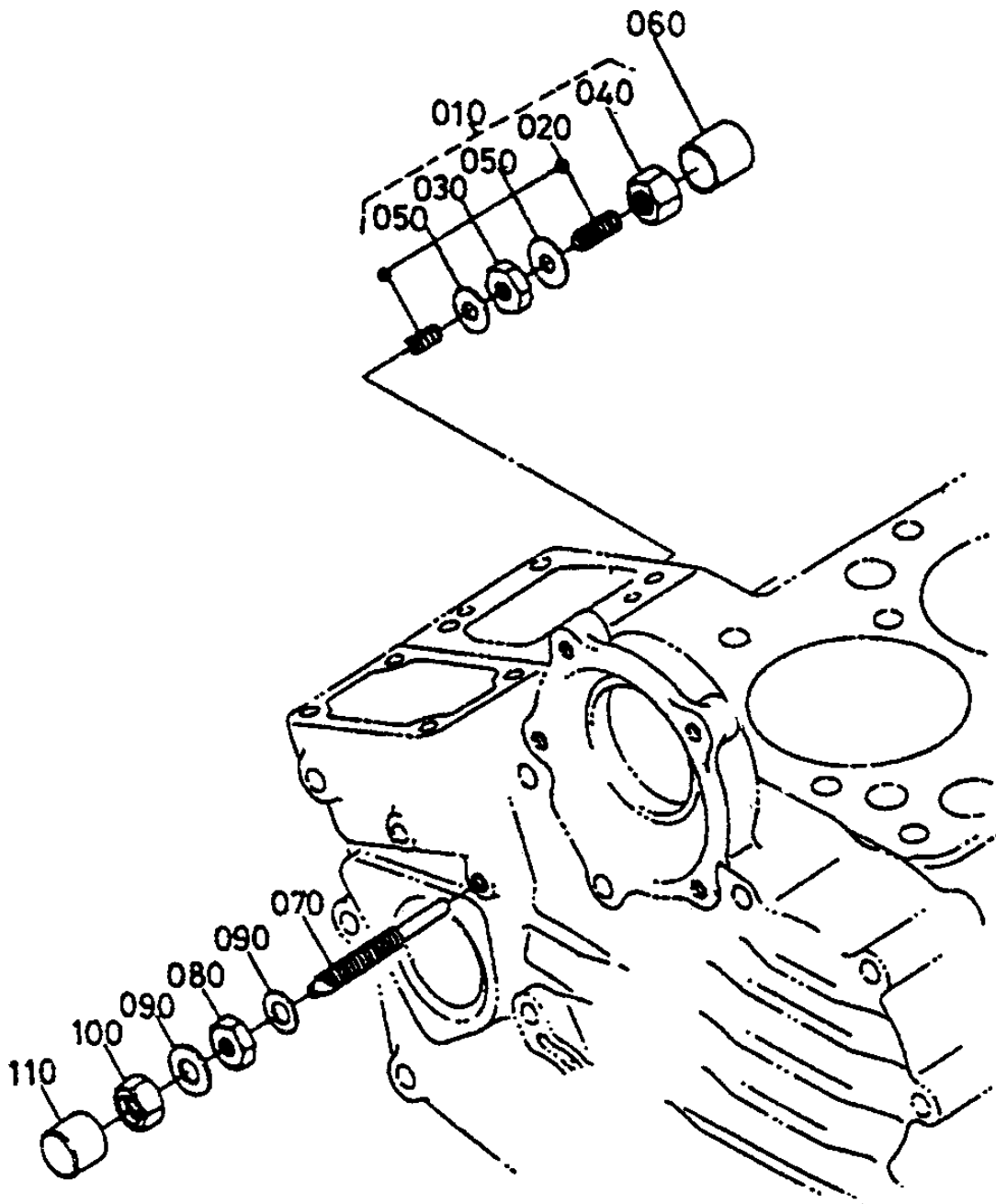
KUBOTA Z482-EB ENGINE — FUEL CAMSHAFT & GOV. SHAFT ASSY.

FUEL CAMSHAFT & GOVERNOR SHAFT ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
010	1685116020	ASSY. CAMSHAFT, FUEL	1	INCLUDES ITEMS W/#
020#	1584116172	CAMSHAFT, FUEL	1	
030#	0815306203	BEARING, BALL	1	
040#	1685151150	GEAR, INJECTION PUMP	1	
050#	0571200515	KEY, FEATHER	1	
060#	1584155450	SLEEVE, GOVERNOR	1	
070#	1584155690	CASE, GOVERNOR BALL	1	
080#	0771500801	BALL	32	
090#	1526155470	CIR-CLIP, GOVERNOR SLEEVE	1	
100#	0771503217	BALL	8	
110	0810306203	BEARING, BALL	1	
120	0461200170	CIR CLIP, EXTERNAL	1	
130	1584116320	STOPPER, FUEL. CAMSHAFT	1	
140	0102350612	BOLT	2	

KUBOTA Z482-EB ENGINE — ENGINE STOP LEVER ASSY.

ENGINE STOP LEVER ASSY.



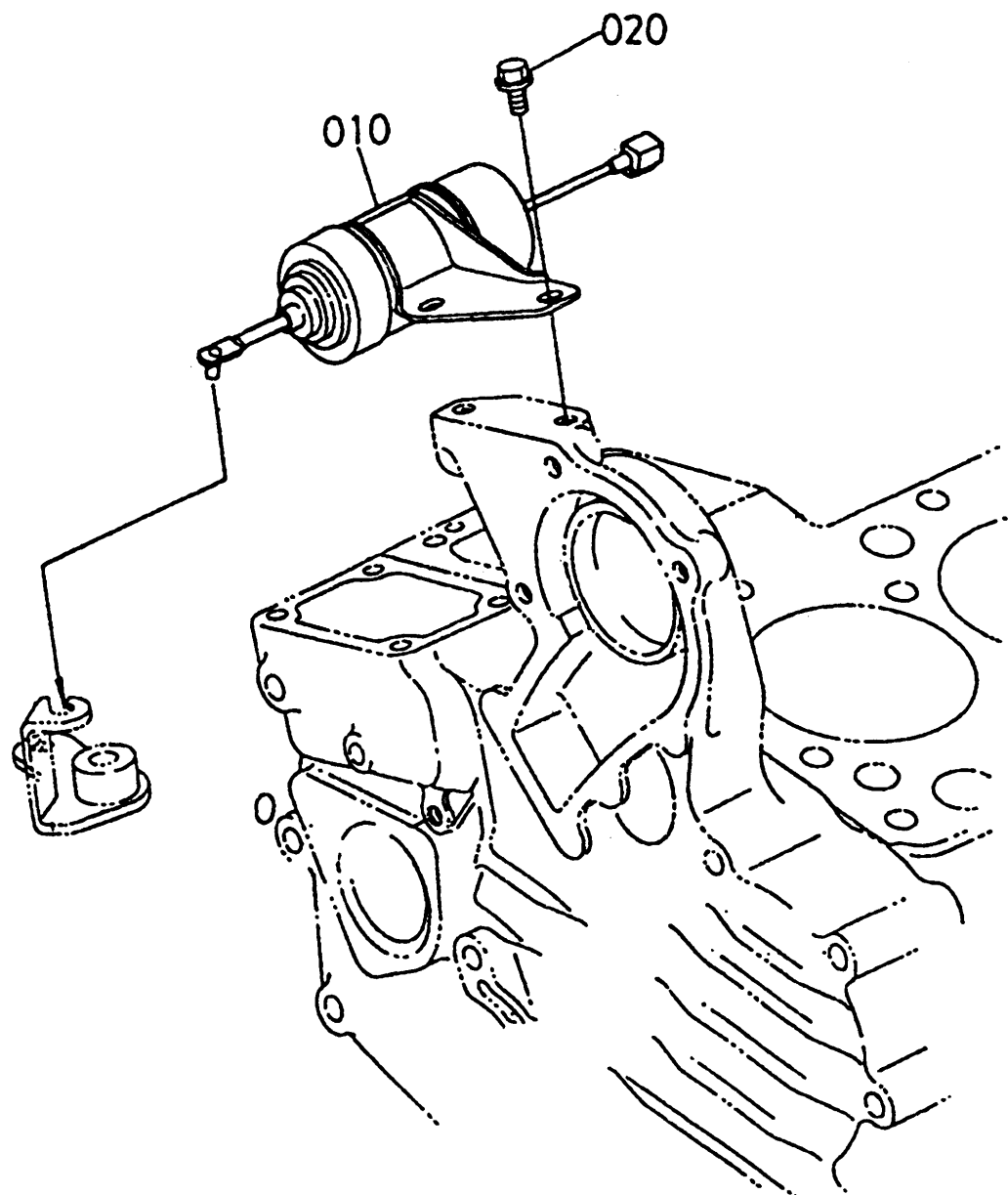
KUBOTA Z482-EB ENGINE — ENGINE STOP LEVER ASSY.

ENGINE STOP LEVER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1584154092	ASSY. APPARATUS, IDLE	1	INCLUDES ITEMS W/#
020#	1584154100	ASSY. BOLT, ADJUSTING	1	
030#	1526192020	NUT	1	
040#	1584154220	NUT, CAP	1	
050#	1502133660	GASKET	2	
060	1584154270	CAP	1	
070	1584154122	BOLT, ADJUSTING	1	
080	1G03154210	NUT, LOCK	1	
090	156019665	GASKET	2	
100	1584192330	NUT, CAP	1	
110	1G02154290	PIPE, LOCK	1	

KUBOTA Z482-EB ENGINE — STOP SOLENOID ASSY.

STOP SOLENOID ASSY.



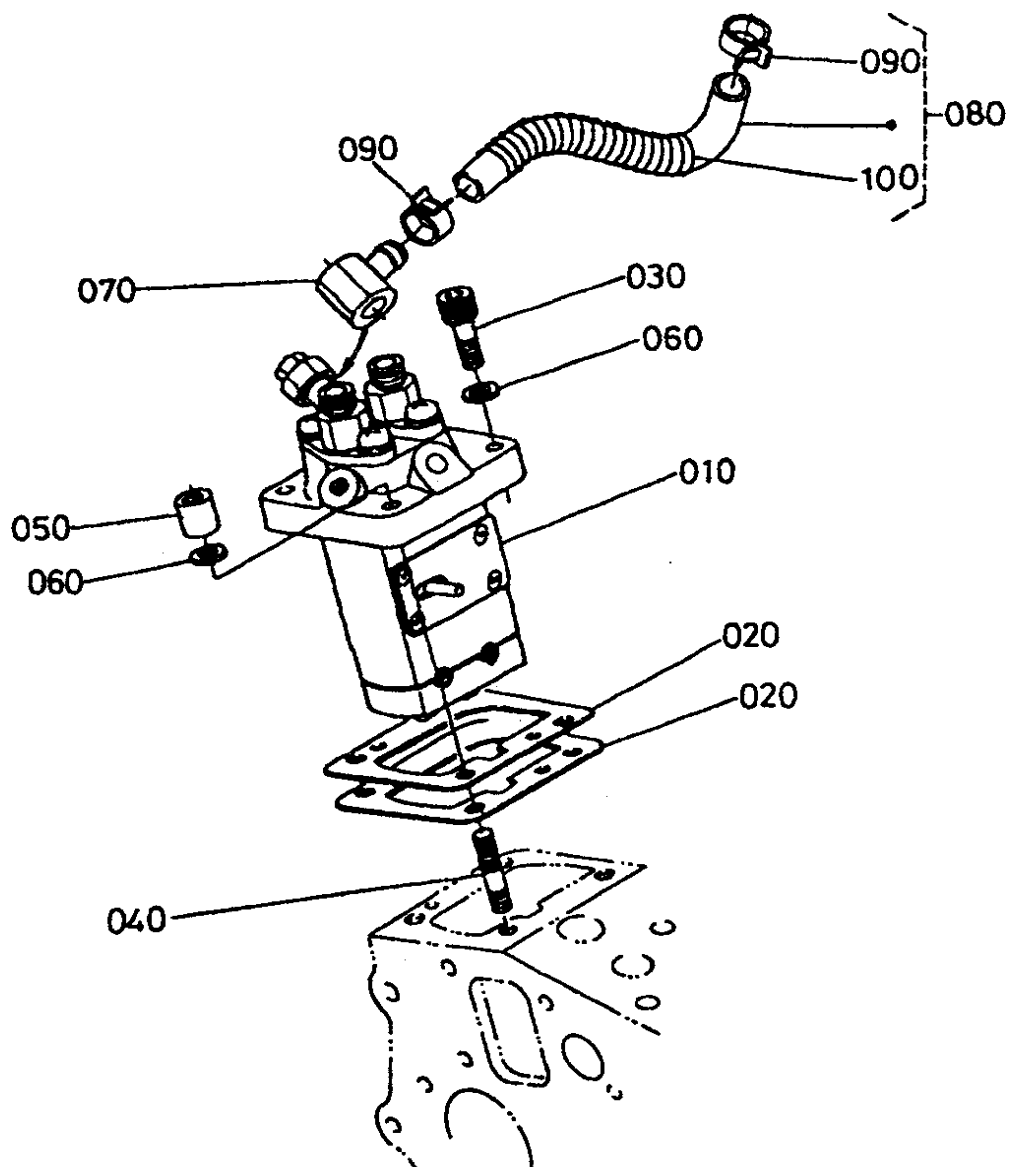
KUBOTA Z482-EB ENGINE — STOP SOLENOID ASSY.

STOP SOLENOID ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1685160010	SOLENOID, STOP	1	
020	0175450612	BOLT, FLANGE	2	

KUBOTA Z482-EB ENGINE — INJECTION PUMP 1 ASSY.

INJECTION PUMP 1 ASSY.



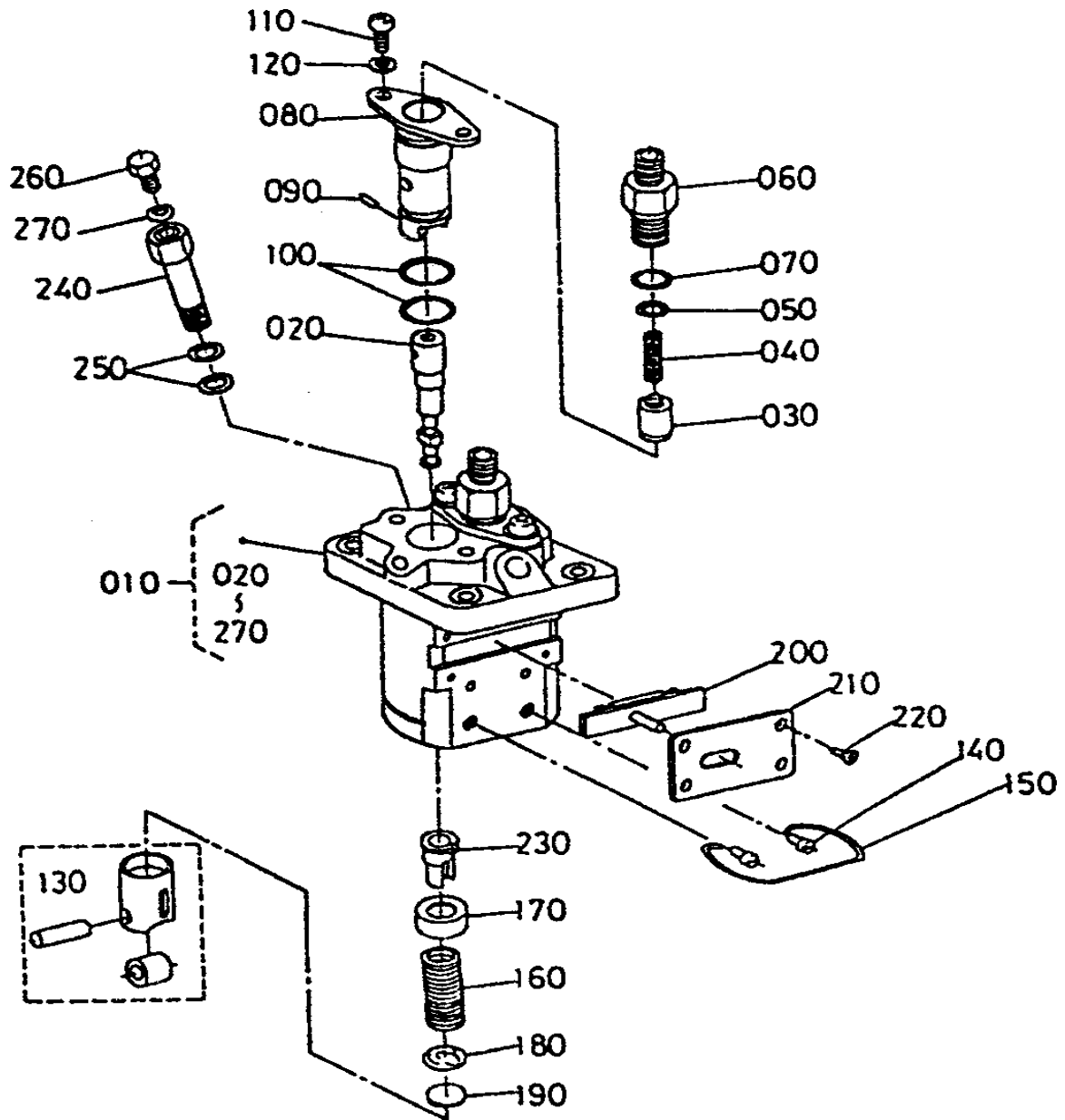
KUBOTA Z482-EB ENGINE — INJECTION PUMP 1 ASSY.

INJECTION PUMP 1 ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1600151010	ASSY PUMP, INJECTION	1	
020	1600152090	SHIM, INJECTION PUMP	1	
020	1600152110	SHIM, INJECTION PUMP	1	
020	1600152120	SHIM, INJECTION PUMP	1	
030	0131110620	BOLT, HEX-SOC-HD	3	
040	1584191500	STUD	1	
050	1584192320	NUT, CAP	1	
060	0451260060	WASHER, SPRING	4	
070	1584195680	JOINT, EYE	1	
080	1526342010	ASSY. PIPE, FUEL	1	INCLUDES ITEMS W/#
090#	1491142750	CLIP, PIPE	2	
100#	6659154250	SPRING, PIPE PROTECT	1	

KUBOTA Z482-EB ENGINE — INJECTION PUMP 2 ASSY.

INJECTION PUMP 2 ASSY.



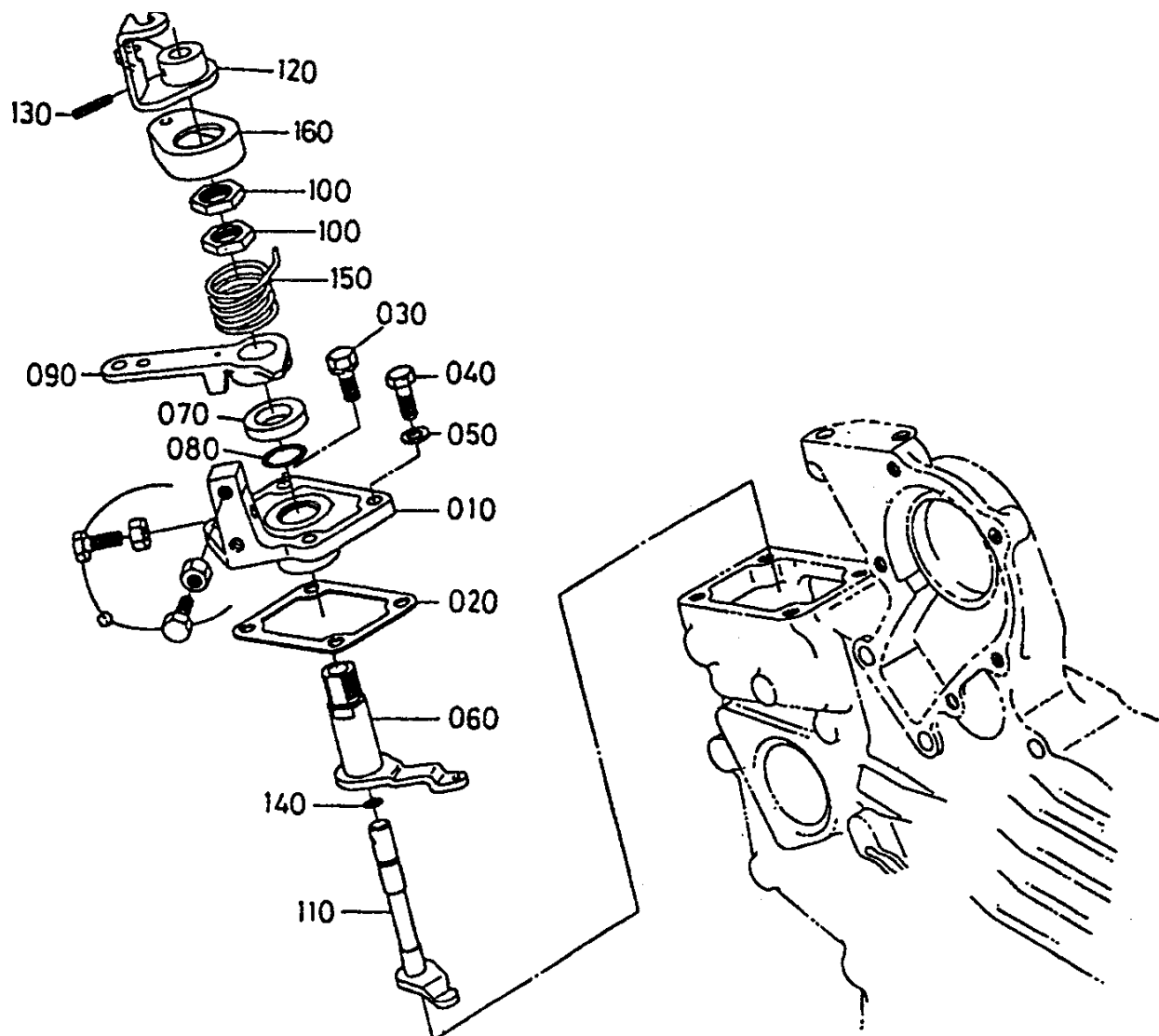
KUBOTA Z 482-EB ENGINE—INJECTION PUMP ASSY. 2

INJECTION PUMP ASSY. 2

NO	PART NO	PART NAME	QTY.	REMARKS
010	1600151010	ASSY. PUMP, INJECTION	1	INCLUDES ITEMS W/#
020#	1685151050	PLUNGER, PUMP	2	
030#	1584151030	VALVE, DELIVERY	2	
040#	1584151230	SPRING, DELIV. VALVE	2	
050#	1584151240	GASKET, DELIV. VALVE	2	
060#	1685151220	HOLDER, DELIV. VALVE	2	
070#	1584196760	O RING	2	
080#	1584151560	FLANGE, SLEEVE	2	
090#	1584194570	PIN, JOINT	2	
100#	1584151200	O RING	4	
110#	1586291430	SCREW	4	
120#	1585251470	WASHER	4	
130#	1584151070	ASSY. TAPPET	2	
140#	1584151250	PIN, TAPPET GUIDE	2	
150#	1584151430	PIN, CLAMP	1	
160#	1584151280	SPRING, PLUNGER	2	
170#	1584151270	SEAT, SPRING UPPER	2	
180#	1584151290	SEAT, SPRING LOWER	2	
190#	1584151490	SHIM	1	
200#	1584151060	SHIM	1	
210#	1584151540	PLATE	1	
220#	1584193110	SCREW, CSK-HD	4	
230#	1584151380	SLEEVE, CONTROL	2	
240#	1584151320	SCREW, FOLLOW	1	
250#	1584196650	GASKET	2	
260#	1584151350	SCREW	1	
270#	1584196660	GASKET	1	

KUBOTA Z482-EB ENGINE — SPEED CONTROL PLATE ASSY.

SPEED CONTROL PLATE ASSY.



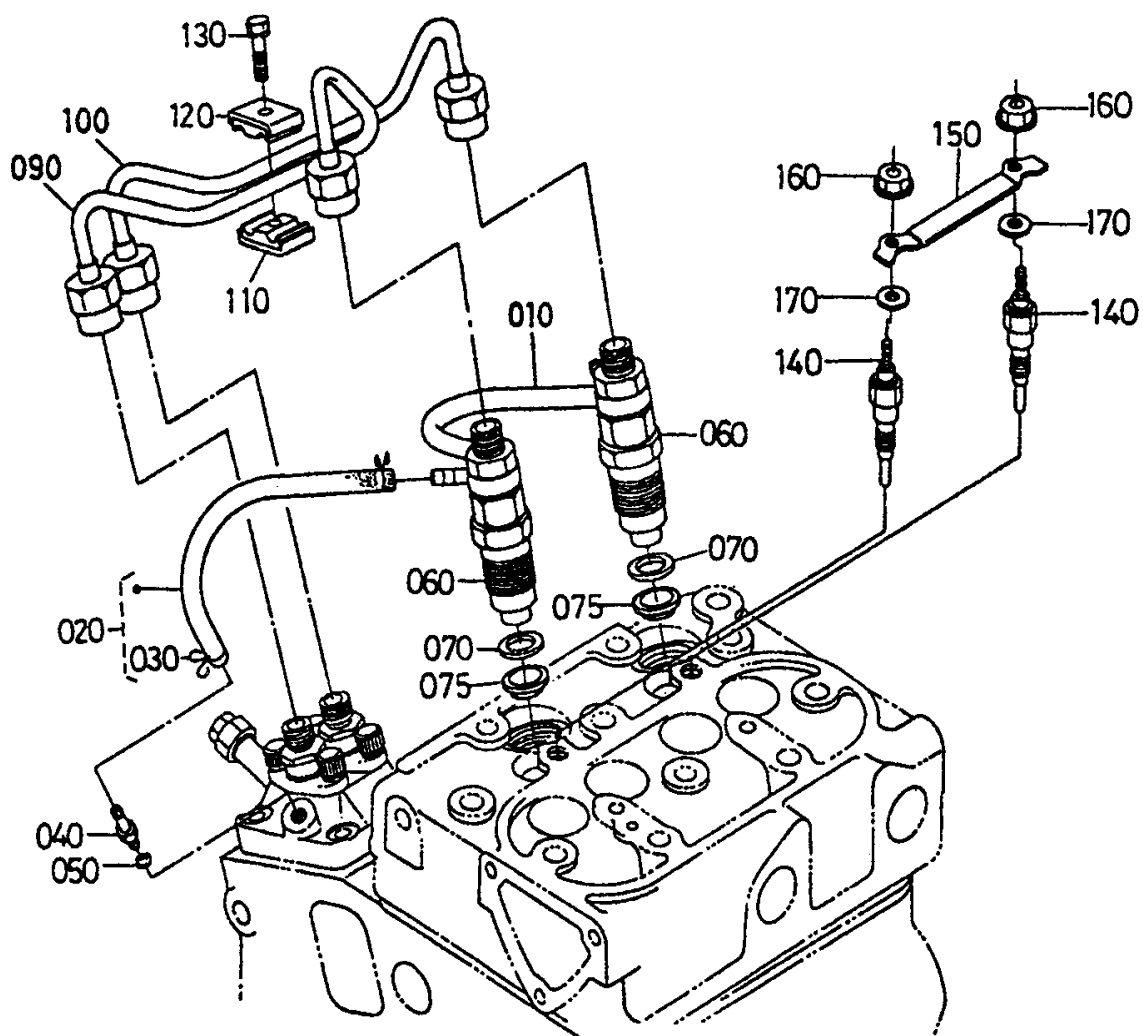
KUBOTA Z482-EB ENGINE — SPEED CONTROL PLATE ASSY.

SPEED CONTROL PLATE ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1584157110	PLATE, SPEED CONTROL	1	
020	1584157212	GASKET, CONTROL PLATE	1	
030	0102350618	BOLT	2	
040	0105350618	BOLT	2	
050	1560196650	GASKET	2	
060	1584156110	LEVER, GOVERNOR	1	
070	1584157240	COLLAR	1	
080	0481410160	O RING	1	
090	1666757150	LEVER, SPEED CONTROL	1	
100	1584192010	NUT, SPEED CONTROL	2	
110	1687857740	SHAFT, LEVER	1	
120	1685157720	LEVER, ENGINE STOP	1	
130	0541100318	PIN, SPRING	1	
140	0481410070	O RING	1	
150	1687857920	SPRING, RETURN	1	
160	1686657300	CAP	1	

KUBOTA Z482-EB ENGINE — NOZZLE HOLDER & GLOW ASSY.

NOZZLE HOLDER & GLOW PLUG ASSY.



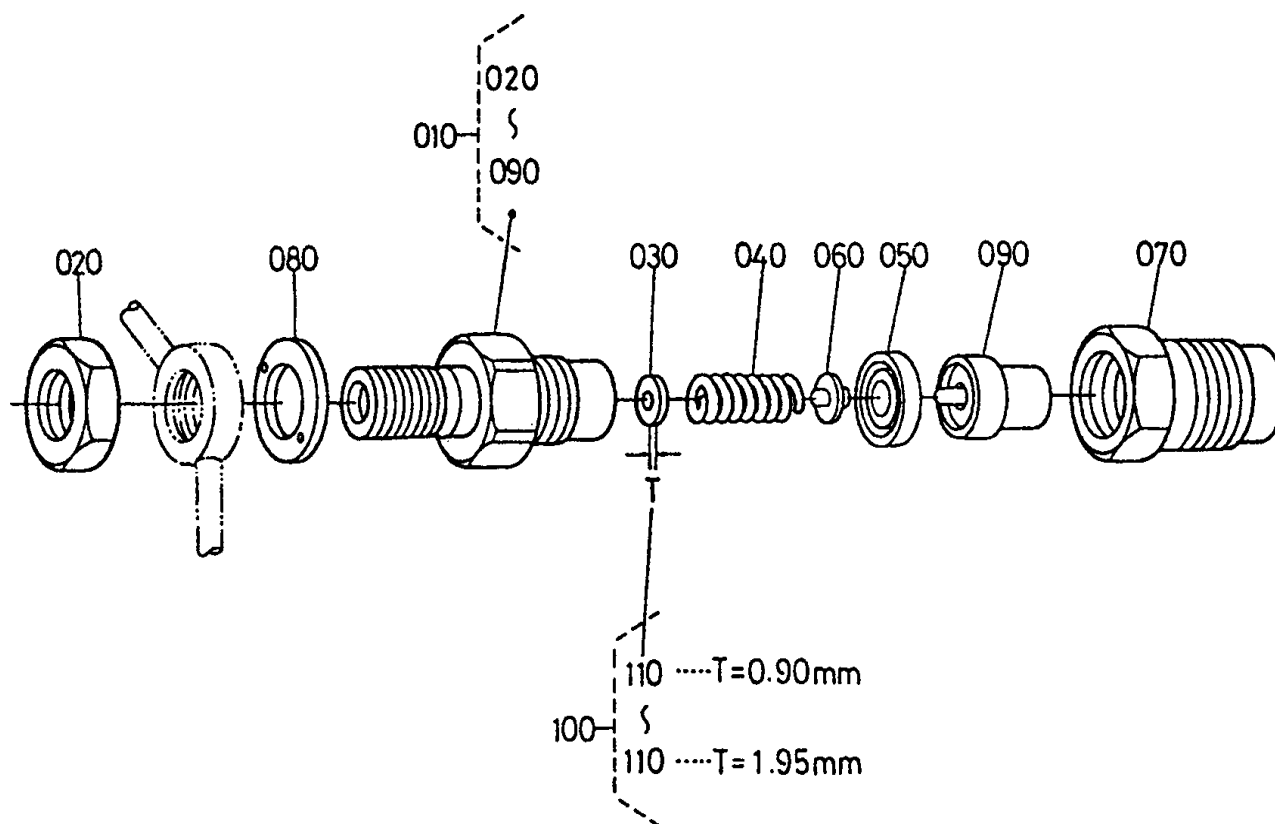
KUBOTA Z482-EB ENGINE — NOZZLE HOLDER & GLOW ASSY.

NOZZLE HOLDER & GLOW PLUG ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1585242502	ASSY. PIPE, OVER FLOW	1	
020	1584142500	ASSY. PIPE, OVER FLOW	1	INCLUDES ITEMS W/#
030#	1497142750	CLIP, PIPE	2	
040	1584151360	SCREW, AIR BREATHER	1	
050	1560196650	GASKET	1	
060	1600153000	ASSY. HOLDER, NOZZLE	2	
070	1584153622	GASKET	2	
075	1907753650	SEAL, HEAT	2	
090	1685153712	PIPE, INJECTION	1	
100	1685153722	PIPE, INJECTION	1	
110	1584153850	CLAMP, PIPE	1	
120	1584153860	CLAMP, PIPE	1	
130	0302450520	SCREW, WITH WASHER	1	
140	1685165510	GLOW PLUG	2	
150	1685165560	CORD, GLOW PLUG	1	
160	0276150040	NUT, FLANGE	2	
170	0401360040	WASHER, PLAIN	2	

KUBOTA Z482-EB ENGINE — NOZZLE HOLDER ASSY.

NOZZLE HOLDER ASSY.



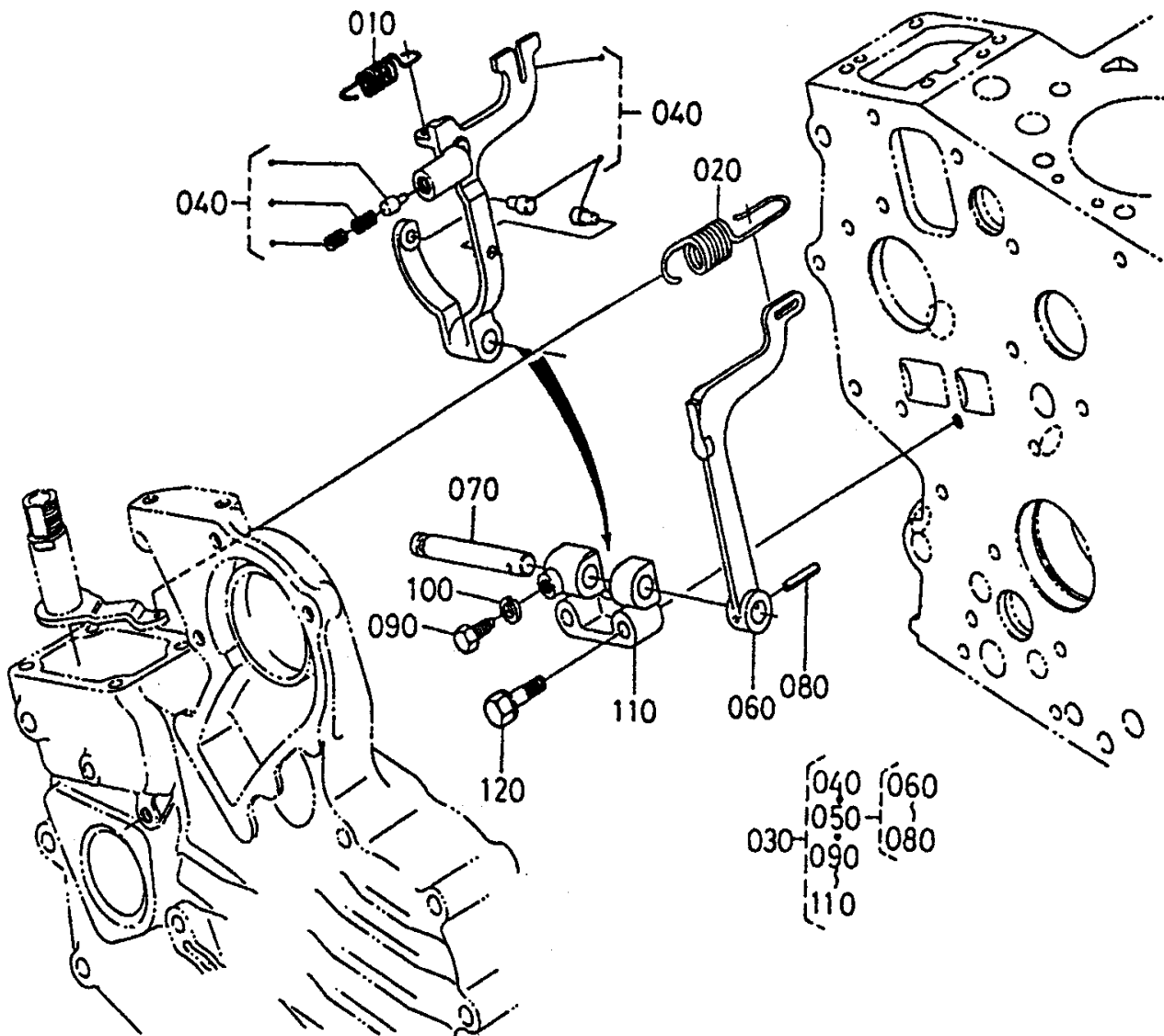
KUBOTA Z482-EB ENGINE — NOZZLE HOLDER ASSY.

NOZZLE HOLDER ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
10	1600153000	ASSY. HOLDER, NOZZLE	2	INCLUDES ITEMS W/#
20#	1584192030	NUT	2	
30#	1584153230	WASHER, ADJUSTING	2	
40#	1584153170	SPRING, NOZZLE	2	
50#	1584153350	PIECE, DISTANCE	2	
60#	1584153160	PUSH ROD	2	
70#	1647553280	NUT, NOZZLE	2	
80#	1584194040	WASHER	2	
90#	1685153610	PIECE NOZZLE	2	
100	1584198100	ASSY. WASHER, ADJUST	2	OPTION
110	1584153230	WASHER, ADJUSTING	2	0.900MM
110	1584198510	WASHER, ADJUSTING	2	0.925MM
110	1584198520	WASHER, ADJUSTING	2	0.950MM
110	1584198530	WASHER, ADJUSTING	2	0.975MM
110	1584198540	WASHER, ADJUSTING	2	1.000MM
110	1584198550	WASHER, ADJUSTING	2	1.025MM
110	1584198560	WASHER, ADJUSTING	2	1.050MM
110	1584198570	WASHER, ADJUSTING	2	1.075MM
110	1584198580	WASHER, ADJUSTING	2	1.100MM
110	1584198590	WASHER, ADJUSTING	2	1.125MM
110	1584198600	WASHER, ADJUSTING	2	1.150MM
110	1584198610	WASHER, ADJUSTING	2	1.175MM
110	1584198620	WASHER, ADJUSTING	2	1.200MM
110	1584198630	WASHER, ADJUSTING	2	1.225MM
110	1584198640	WASHER, ADJUSTING	2	1.250MM
110	1584198650	WASHER, ADJUSTING	2	1.275MM
110	1584198660	WASHER, ADJUSTING	2	1.300MM
110	1584198670	WASHER, ADJUSTING	2	1.325MM
110	1584198680	WASHER, ADJUSTING	2	1.350MM
110	1584198690	WASHER, ADJUSTING	2	1.375MM
110	1584198700	WASHER, ADJUSTING	2	1.400MM
110	1584198710	WASHER, ADJUSTING	2	1.425MM
110	1584198720	WASHER, ADJUSTING	2	1.450MM
110	1584198730	WASHER, ADJUSTING	2	1.475MM
110	1584198740	WASHER, ADJUSTING	2	1.500MM
110	1584198750	WASHER, ADJUSTING	2	1.525MM
110	1584198760	WASHER, ADJUSTING	2	1.550MM
110	1584198770	WASHER, ADJUSTING	2	1.575MM
110	1584198780	WASHER, ADJUSTING	2	1.600MM
110	1584198790	WASHER, ADJUSTING	2	1.625MM
110	1584198800	WASHER, ADJUSTING	2	1.650MM
110	1584198810	WASHER, ADJUSTING	2	1.675MM
110	1584198820	WASHER, ADJUSTING	2	1.700MM
110	1584198830	WASHER, ADJUSTING	2	1.725MM
110	1584198840	WASHER, ADJUSTING	2	1.750MM
110	1584198850	WASHER, ADJUSTING	2	1.775MM
110	1584198860	WASHER, ADJUSTING	2	1.800MM
110	1584198870	WASHER, ADJUSTING	2	1.825MM
110	1584198880	WASHER, ADJUSTING	2	1.850MM
110	1584198890	WASHER, ADJUSTING	2	1.875MM
110	1584198900	WASHER, ADJUSTING	2	1.900MM
110	1584198910	WASHER, ADJUSTING	2	1.925MM
110	1584198920	WASHER, ADJUSTING	2	1.950MM

KUBOTA Z482-EB ENGINE — FORK LEVER ASSY.

FORK LEVER ASSY



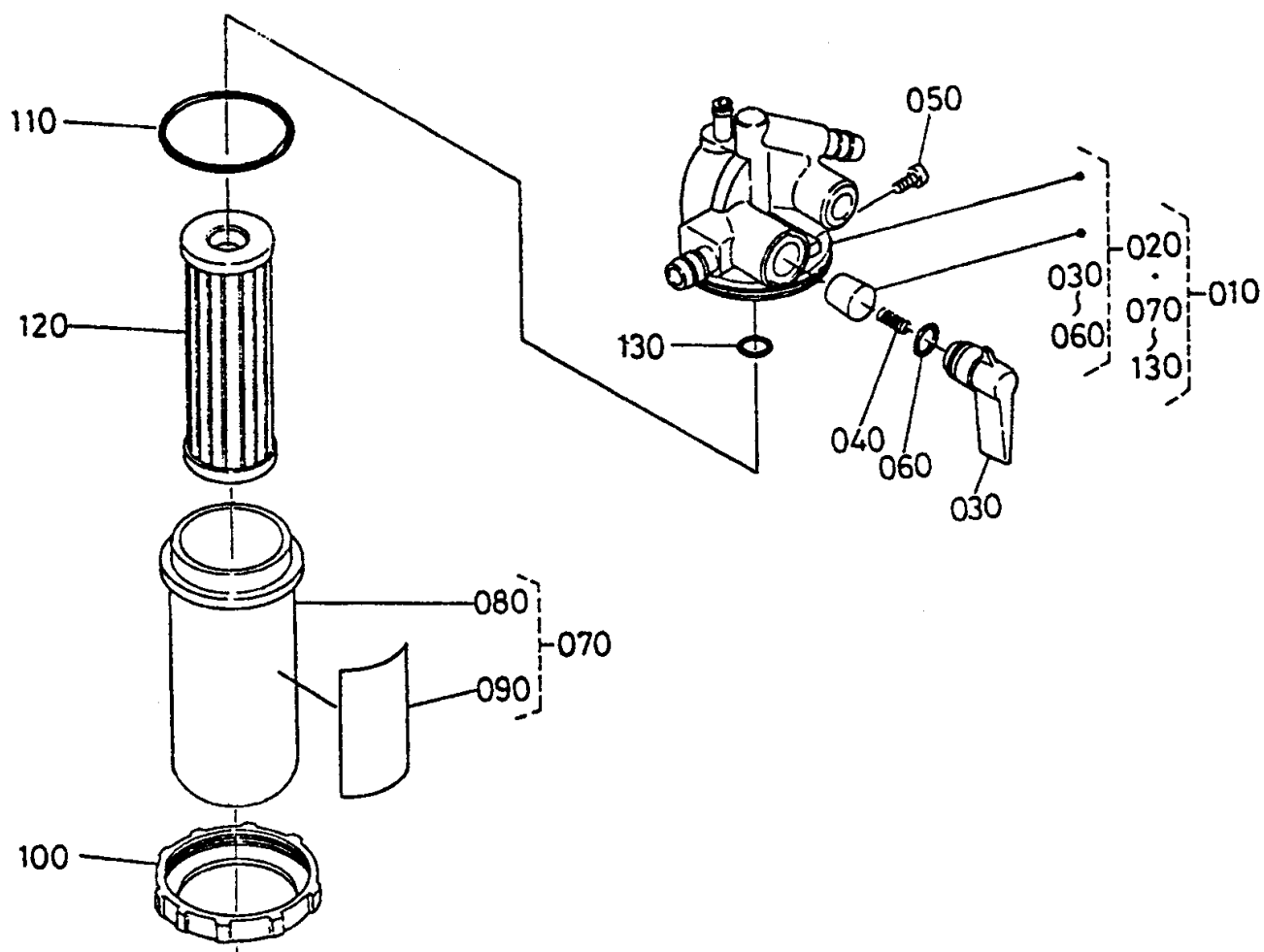
KUBOTA Z482-EB ENGINE — FORK LEVER ASSY.

FORK LEVER ASSY

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1685156480	SPRING, START	1	
020	1946156410	SPRING, GOVERNOR	1	
030	1600056050	ASSY. LEVER, FORK	1	INCLUDES ITEMS/#
040#	1600056040	COMP. LEVER, FORK	1	
050#	1584156060	ASSY. LEVER, FORK	1	INCLUDES ITEMS W/%
060#%	1584156130	LEVER, FORK	1	
070#%	1584156150	SHAFT, FORK LEVER	1	
080#%	0541100318	PIN, SPRING	1	
090#	1526166410	BOLT	1	
100#	0451260050	WASHER, SPRING	1	
110#	1584156230	HOLDER, FORK LEVER	1	
120	0102350635	BOLT	2	

KUBOTA Z482-EB ENGINE — FUEL FILTER ASSY.

FUEL FILTER ASSY.



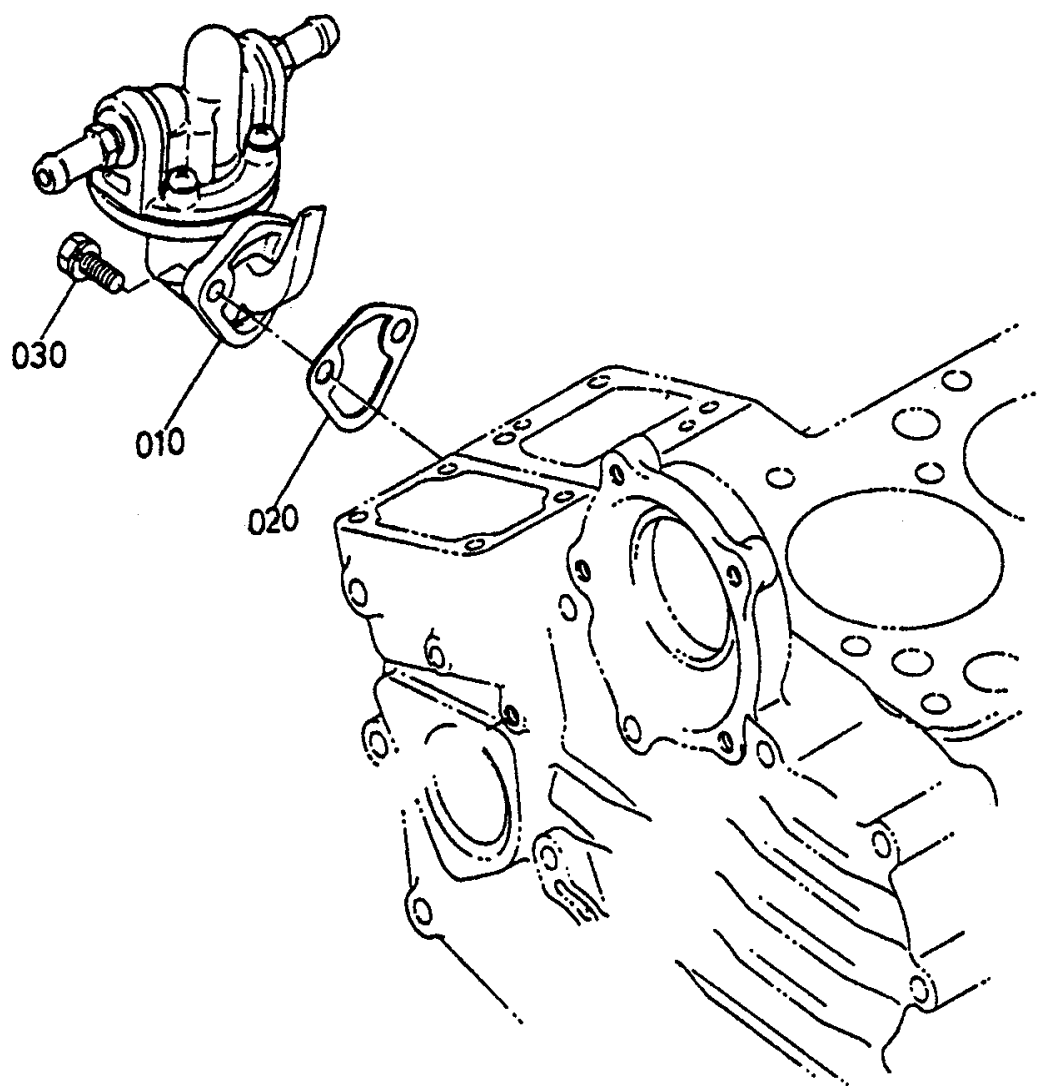
KUBOTA Z482-EB ENGINE — FUEL FILTER ASSY.

FUEL FILTER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1553143010	FILTER, FUEL ASSY.	1	INCLUDES ITEMS W/* REPLACES 1553143012
020*	1553143110	COMP. BODY, COCK	1	INCLUDES ITEMS W/#
030*#	1430143522	LEVER, COCK	1	
040*#	1430143820	SPRING, VALVE	1	
050*#	1430143830	SCREW, SET	1	
060*#	1430143840	O RING, LEVER	1	
070*	1539343100	ASSY CUP, FILTER	1	INCLUDES ITEMS W/%
080*%	1539343580	CUP, FILTER	1	
090*%	1687388430	LABEL, FUEL	1	
100*	1430143590	RING, RETAINING	1	
110*	1430143650	O RING, FILTER CUP	1	
120*	1523143560	ELEMENT, FUEL FILTER	1	REPLACES 1523143563
130*	1430143570	O RING, FILTER	1	

KUBOTA Z482-EB ENGINE—FUEL PUMP ASSY.

FUEL PUMP ASSY.



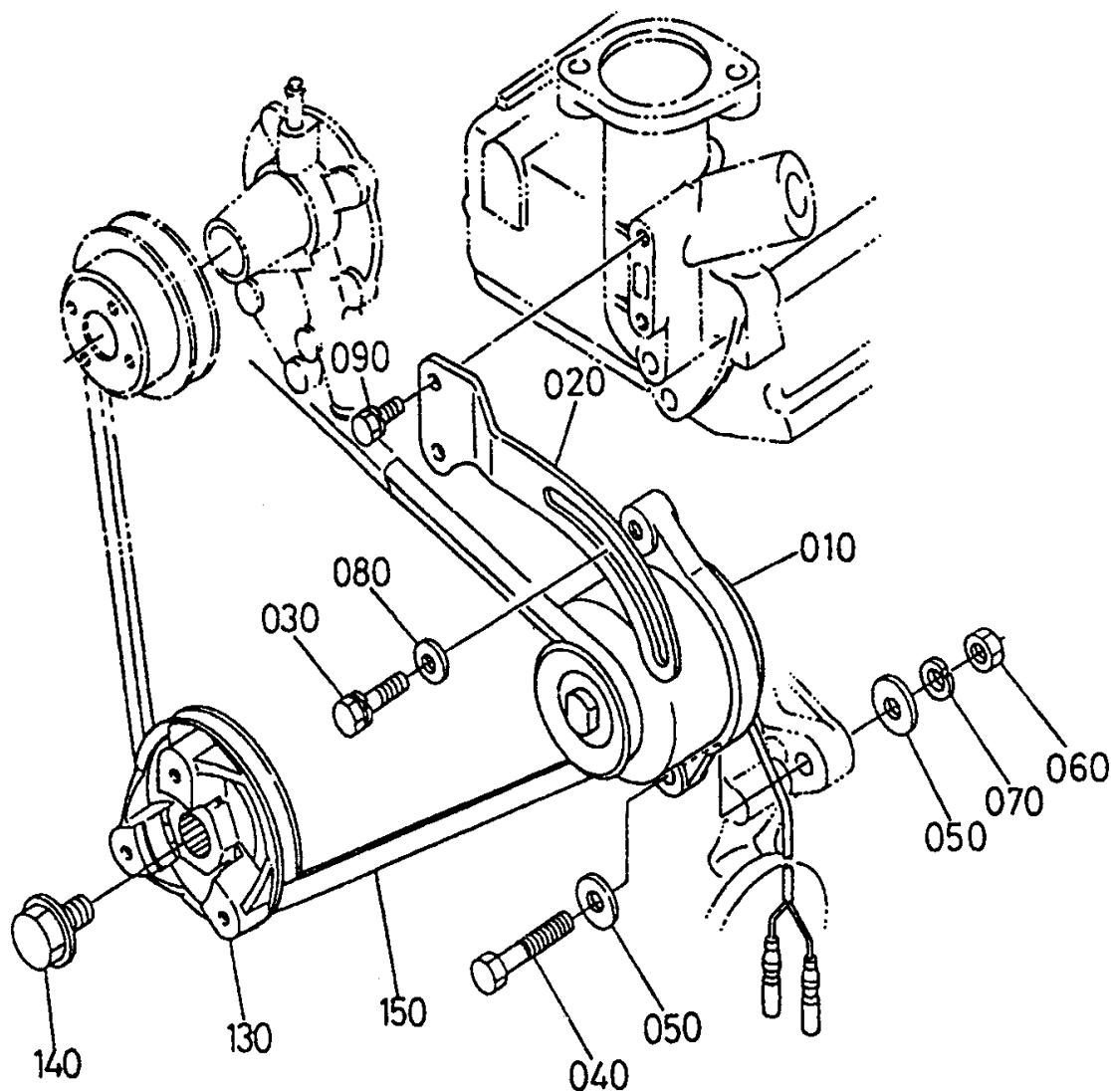
KUBOTA Z482-EB ENGINE — FUEL PUMP ASSY.

FUEL PUMP ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1582152030	ASSY. PUMP, FUEL	1	
020	1626452140	GASKET, FUEL PUMP	1	
030	0102350616	BOLT	2	

KUBOTA Z482-EB ENGINE — DYNAMO & PULLEY ASSY.

DYNAMO & PULLEY ASSY.



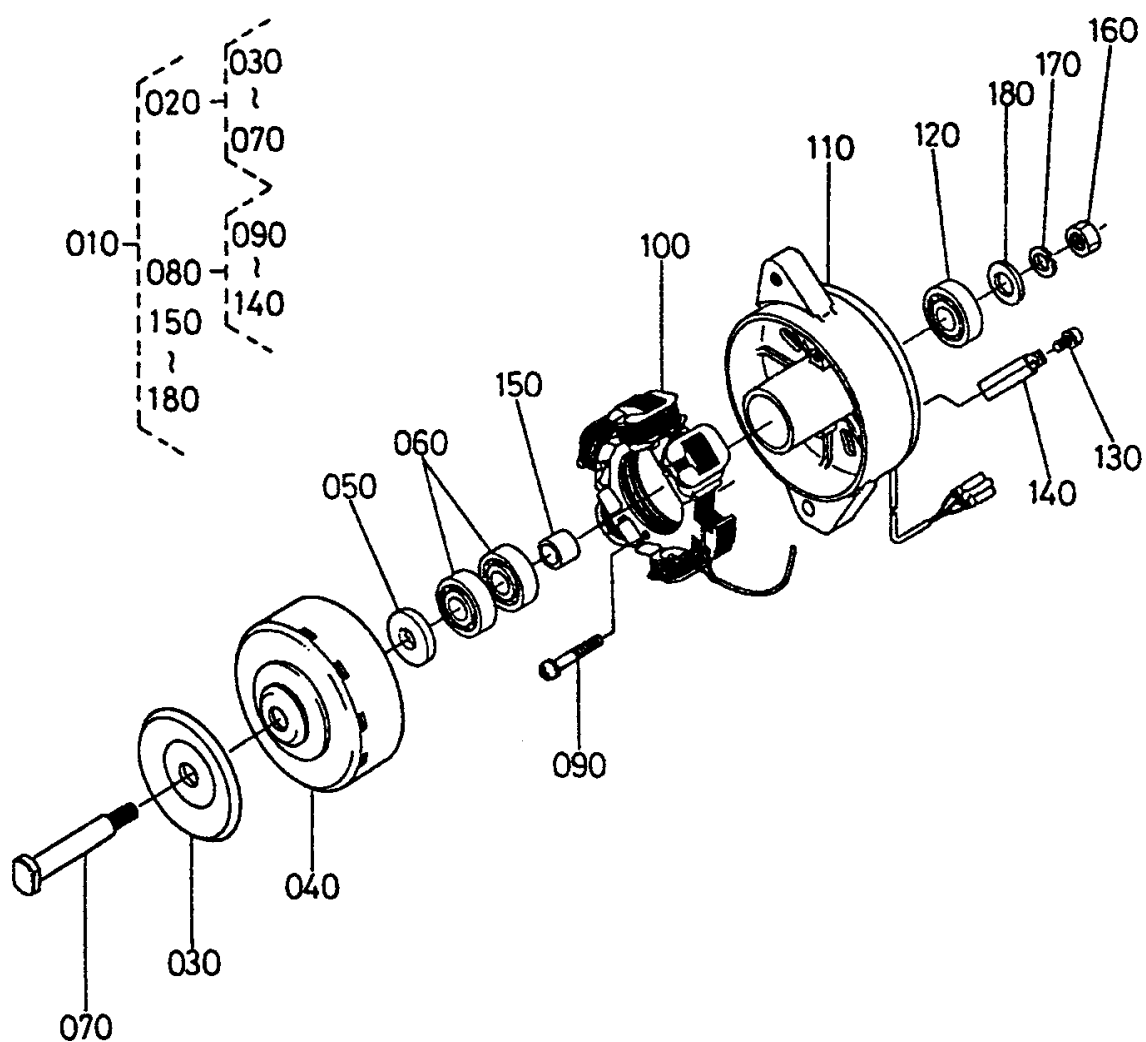
KUBOTA Z482-EB ENGINE — DYNAMO & PULLEY ASSY.

DYNAMO & PULLEY ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1753164010	ASSY. DYNAMO	1	
020	1259964420	STAY, DYNAMO	1	
030	0112350830	BOLT	1	
040	0115350855	BOLT	1	
050	0401360080	WASHER, PLAIN	2	
060	0211450080	NUT	1	
070	0451260080	WASHER, SPRING	1	
080	0401560080	WASHER, PLAIN	1	
090	0102350616	BOLT	2	
130	1685174280	PULLEY, FAN DRIVE	1	
140	1588191030	BOLT	1	
150	1980572530	BELT, FAN	1	 34.5 IN

KUBOTA Z482-EB ENGINE — DYNAMO ASSY.

DYNAMO ASSY.



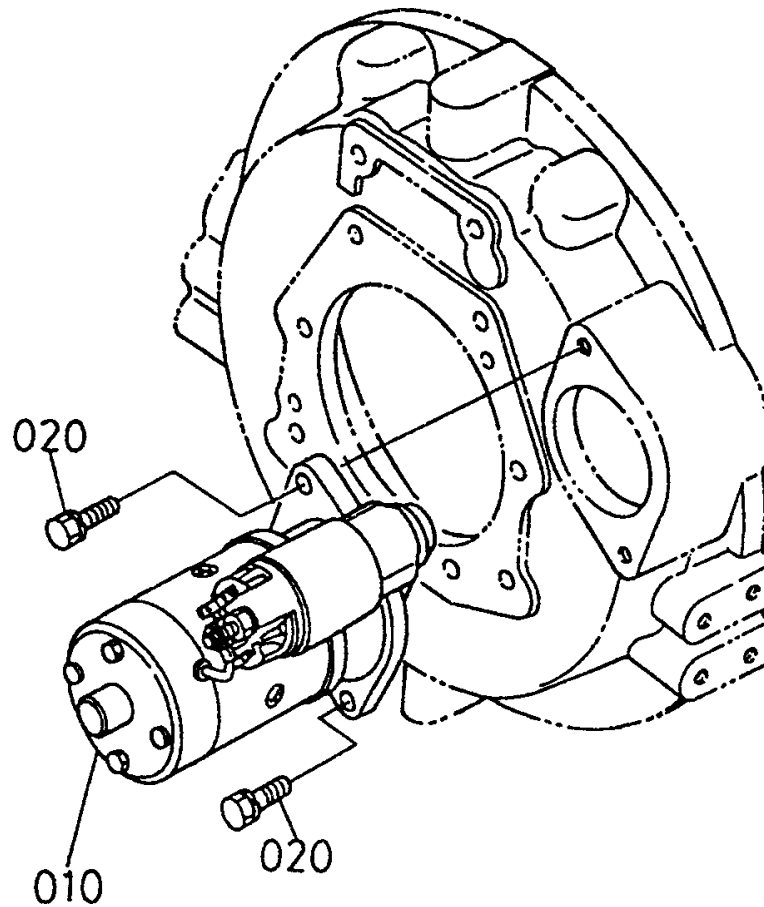
KUBOTA Z482-EB ENGINE — DYNAMO ASSY.

DYNAMO ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
010	1753164010	ASSY. DYNAMO	1	INCLUDES ITEMS W/%
020%	1553164122	COMP. FLYWHEEL	1	INCLUDES ITEMS W/#
030%#	1553164110	PULLEY	1	
040%#	1553164040	FLYWHEEL	1	
050%#	6C04082860	COLLAR	1	
060%#	1553174180	BEARING, BALL	2	
070%#	1553174140	SHAFT, FAN	1	
080%	1553164363	COMP. STATOR	1	INCLUDES ITEMS W/*
090%*	1526193010	SCREW, ROUND HEAD	2	
100%*	1553164292	STATOR	1	
110%*	1553164072	PLATE	1	
120%*	1553174180	BEARING, BALL	1	
130%*	1553193010	SCREW, ROUND HEAD	1	
140%*	1553164190	CLAMP, CORD	1	
150%	1526164150	COLLAR	1	
160%	1526192030	NUT	1	
170%	1526194070	WASHER, SPRING	1	
180%	1526194020	WASHER, PLAIN	1	

KUBOTA Z482-EB ENGINE — STARTER 1 ASSY.

STARTER 1 ASSY.



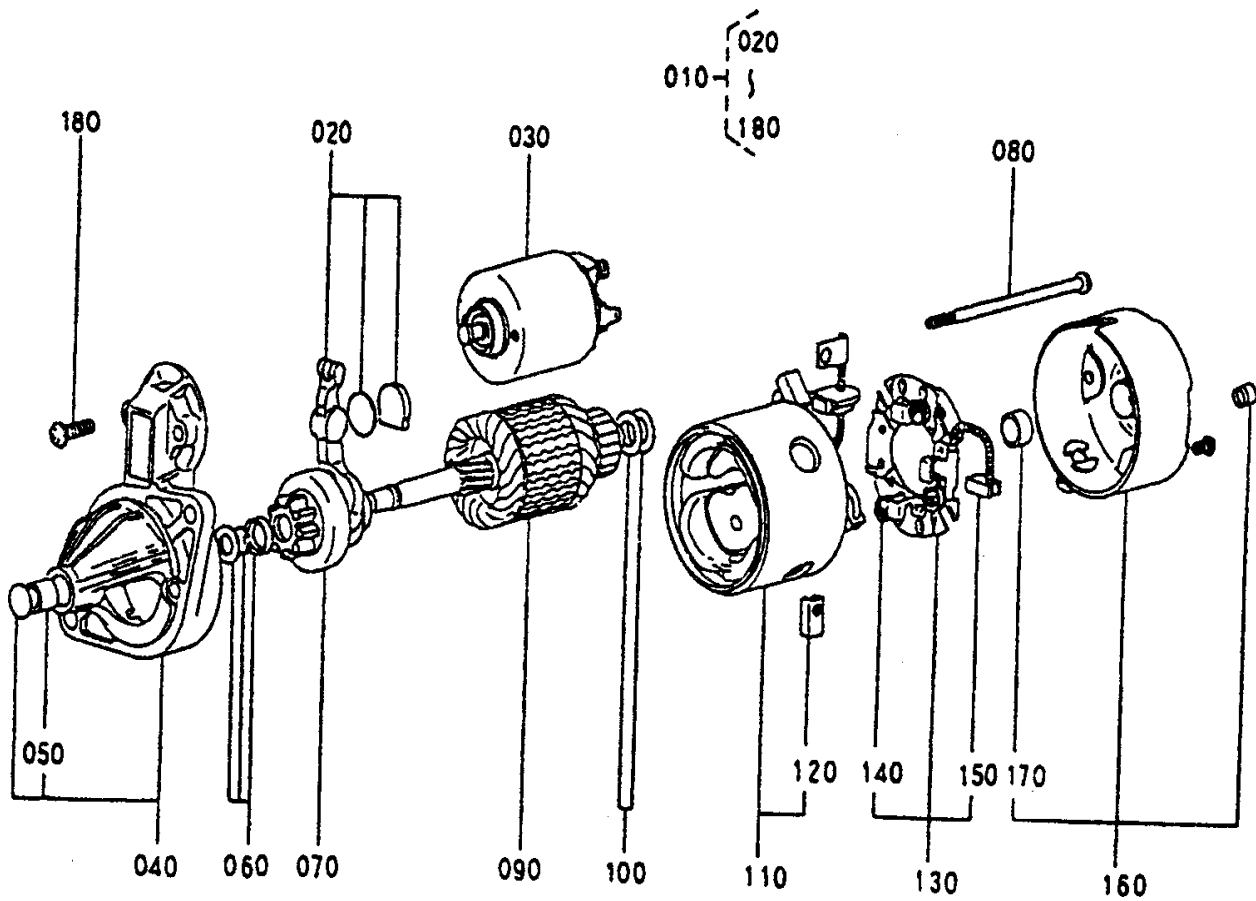
KUBOTA Z482-EB ENGINE — STARTER 1 ASSY.

STARTER 1 ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1983763010	ASSY. STARTER	1	
020	0112350825	BOLT	2	

KUBOTA Z482-EB ENGINE — STARTER 2 ASSY.

STARTER 2 ASSY.



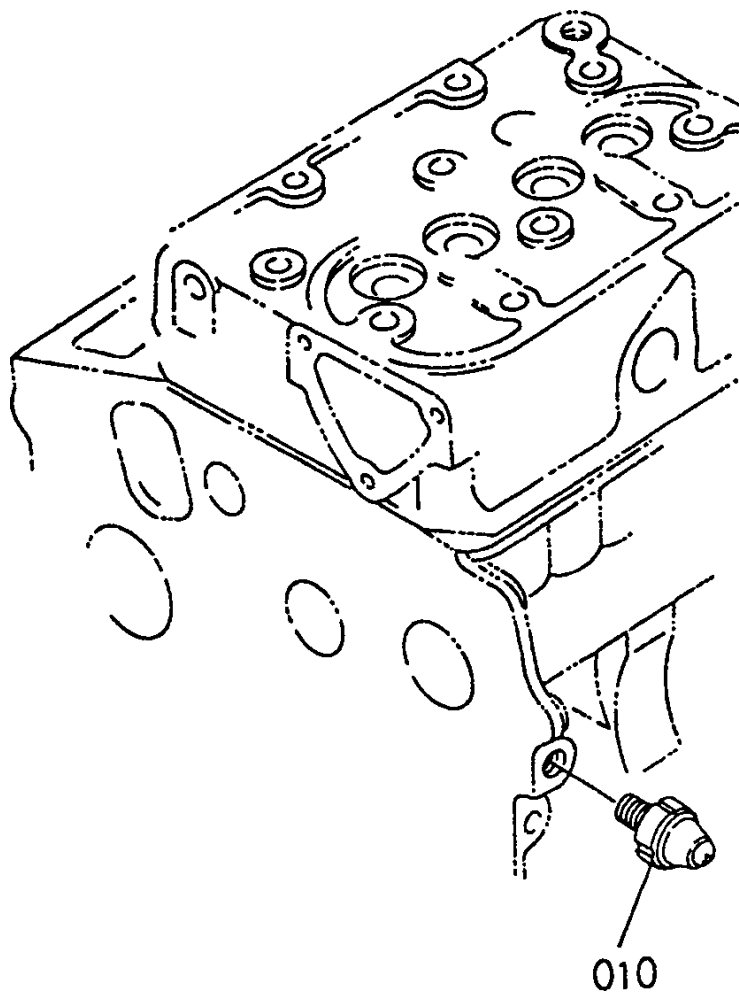
KUBOTA Z482-EB ENGINE — STARTER 2 ASSY.

STARTER 2 ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
010	1983763010	ASSY. STARTER	1	INCLUDES ITEMS W/*
020*	1983763050	LEVER, DRIVE	1	
030*	1585263020	SWITCH, MAGNETIC	1	
040*	1983763030	FRAME, DRIVE END	1	INCLUDES ITEMS W/#
050*#	1585263240	BUSH	1	
060*	1983763150	STOPPER	1	
070*	1983763040	CLUTCH, OVER RUNNING	1	
080*	1983763320	BOLT	2	
090*	1983763070	ARMATURE	1	
100*	1585263410	WASHER, ADJUSTING	1	
110*	1983763080	ASSY. YOKE	1	INCLUDES ITEMS W/%
120*%	1585263360	BRUSH	2	
130*	1585263380	HOLDER, BRUSH ASSY.	1	INCLUDES ITEMS W/+
140*+	1585263390	SPRING, BRUSH	3	
150*+	1585263370	BRUSH	1	
160*	1983763200	FRAME, END	1	INCLUDES ITEM W/\$
170*\$	1585263250	BUSH	1	
180*	1585293310	SCREW, PAN-HEAD	1	

KUBOTA Z 482-EB ENGINE — OIL SWITCH ASSY.

OIL SWITCH ASSY.



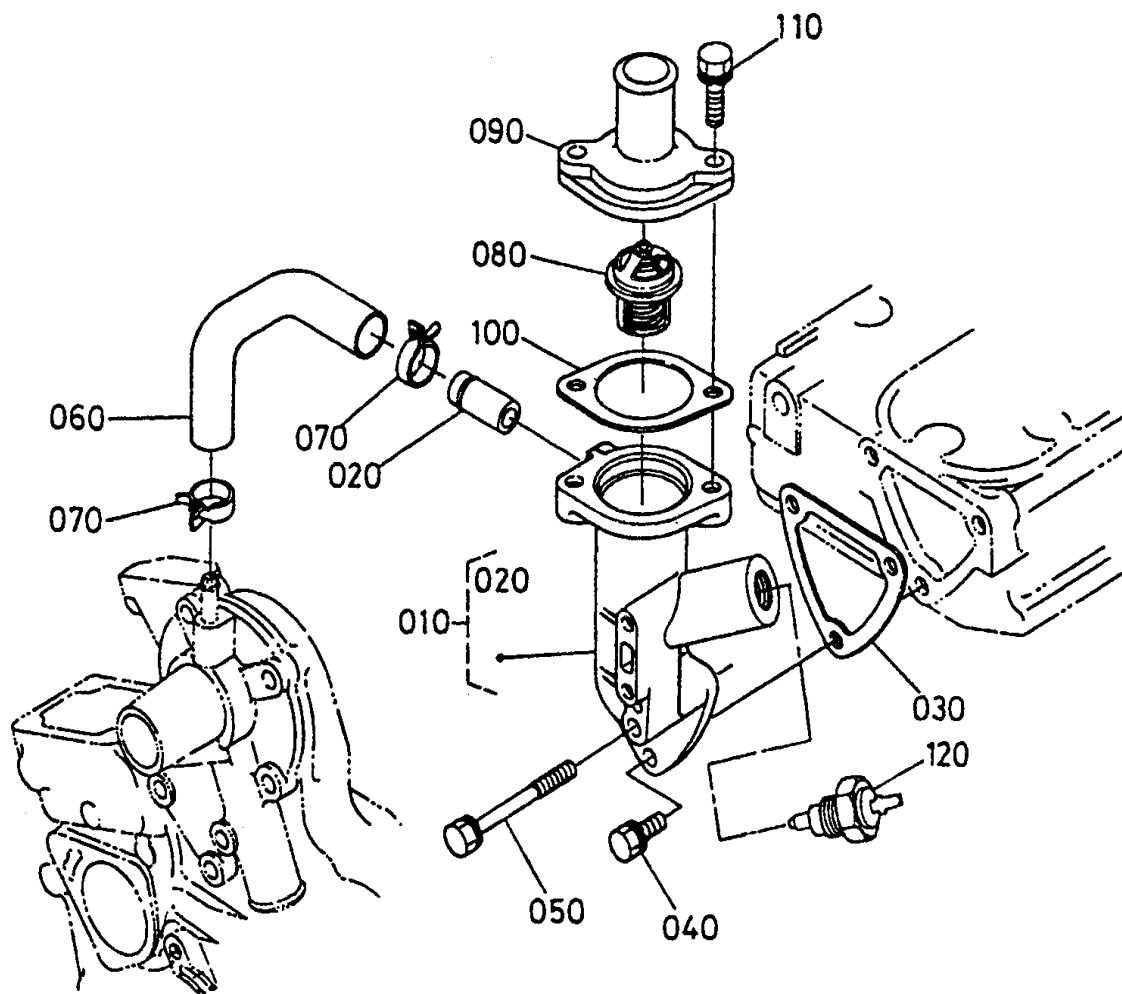
KUBOTA Z 482-EB ENGINE — OIL SWITCH ASSY.

OIL SWITCH ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1584139010	SWITCH, OIL	1	

KUBOTA Z482-EB ENGINE — WATER FLANGE & THERMOSTAT ASSY.

WATER FLANGE & THERMOSTAT ASSY.



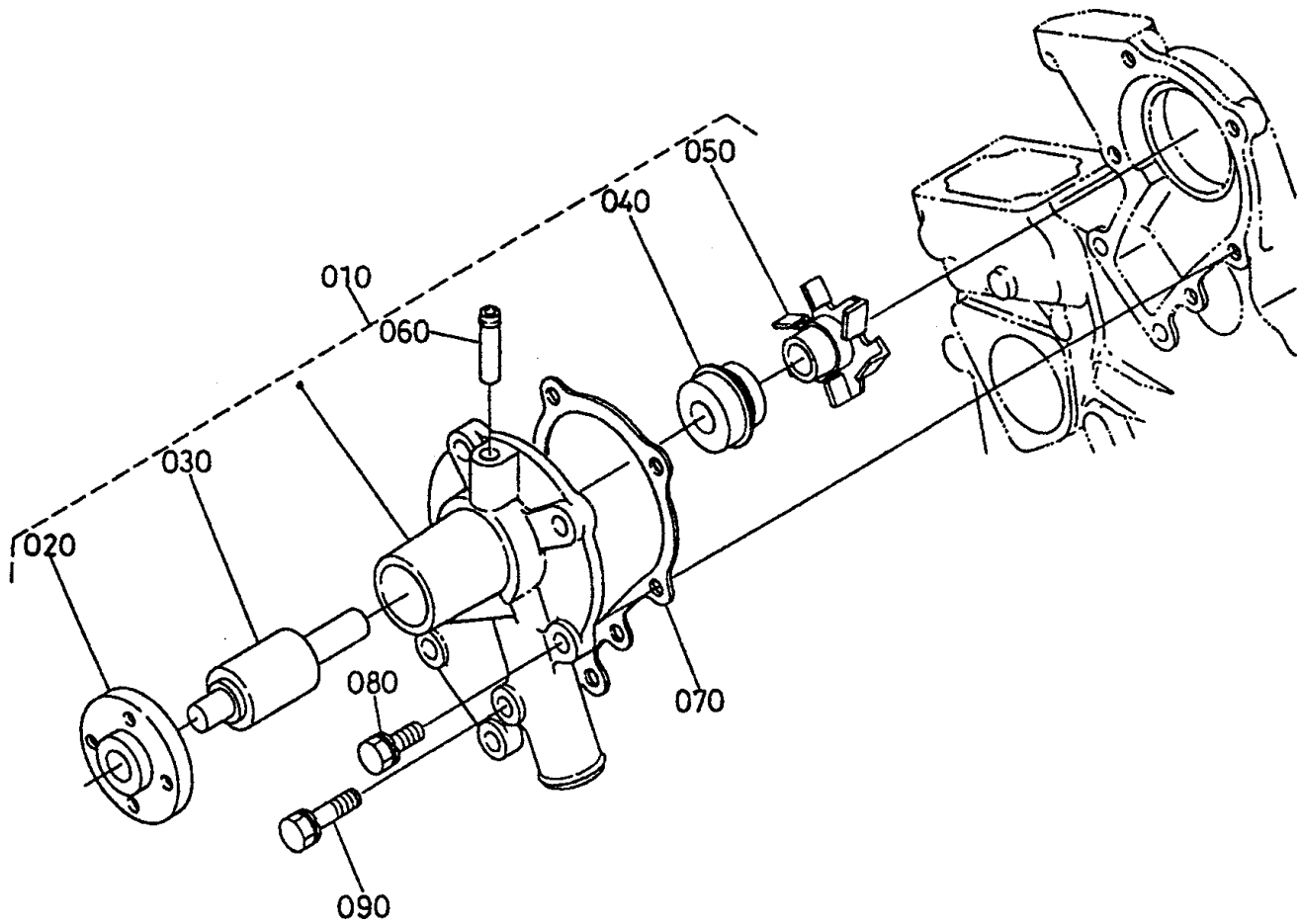
KUBOTA Z482-EB ENGINE — WATER FLANGE & THERMOSTAT ASSY.

WATER FLANGE & THERMOSTAT ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1687572700	COMP. FLANGE, WATER	1	
020	1624173370	PIPE, WATER RETURN	1	NCLUDES ITEMS W/*
030*	1584172922	GASKET, WATER FLANGE	1	I
040	0102350616	BOLT	2	
050	0102360650	BOLT	4	
060	1685173350	PIPE, WATER RETURN	1	
070	1624173360	BAND, PIPE	2	
080	1553173010	ASSY. THERMOSTAT	1	
090	1584173260	COVER, THERMOSTAT	1	
100	1685173270	GASKET, THERMOSTAT	1	
110	0102350622	BOLT	2	
120	1554383040	SWITCH, THERMOMETER	1	

KUBOTA Z482-EB ENGINE — WATER PUMP ASSY.

WATER PUMP ASSY.



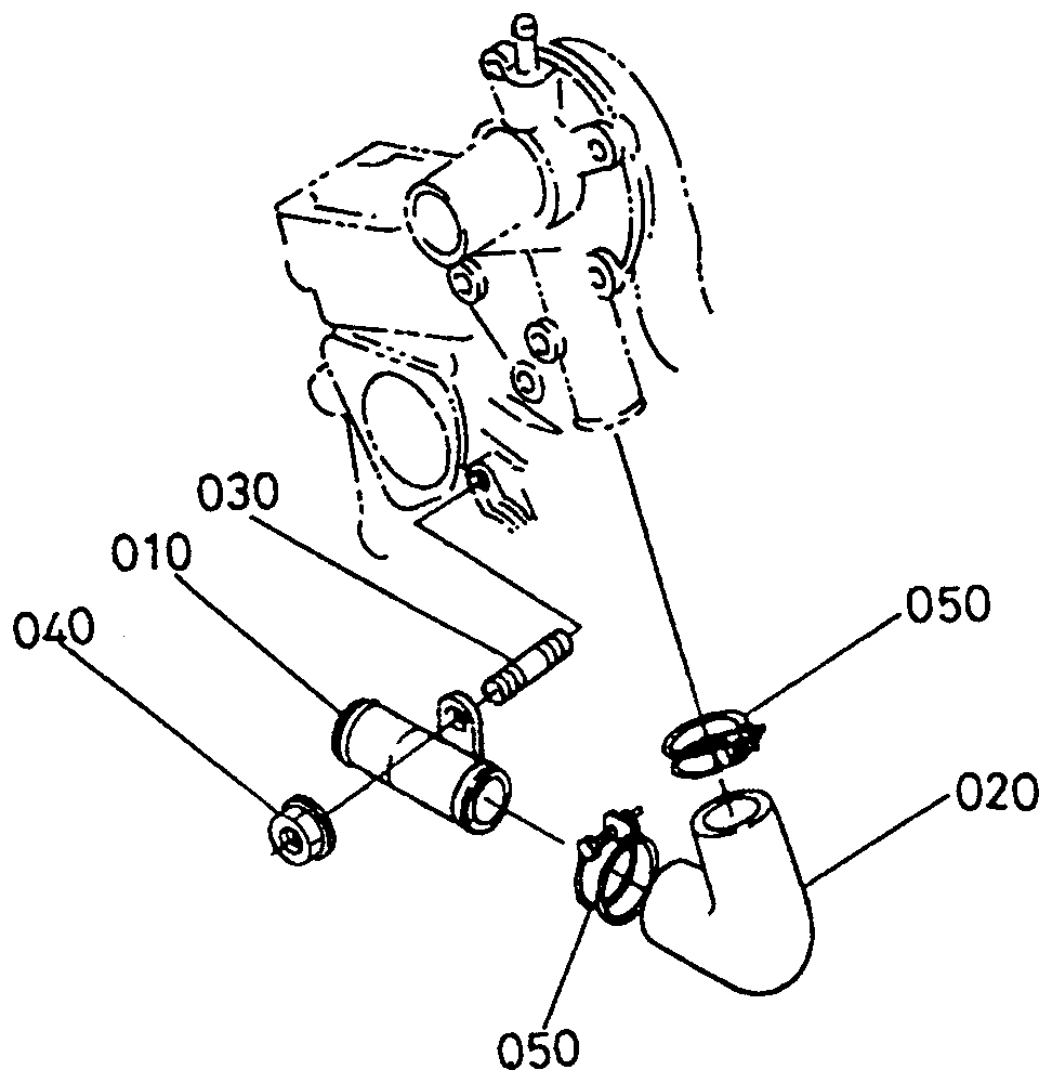
KUBOTA Z482-EB ENGINE — WATER PUMP ASSY.

WATER PUMP ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1988373030	ASSY. PUMP, WATER	1	INCLUDES ITEMS W/★
020★	1585273520	FLANGE, WATER PUMP	1	
030★	1585273550	BEARING	1	
040★	1548173050	ASSY. SEAL, MECHANICAL	1	
050★	1988373510	IMPELLER, WATER PUMP	1	
060★	1585273340	PIPE, WATER RETURN	1	
070	1588173432	GASKET, WATER PUMP NA	1	
080	0102350622	BOLT	4	
090	0102350638	BOLT	1	

KUBOTA Z482-EB ENGINE — WATER PIPE ASSY.

WATER PIPE ASSY.



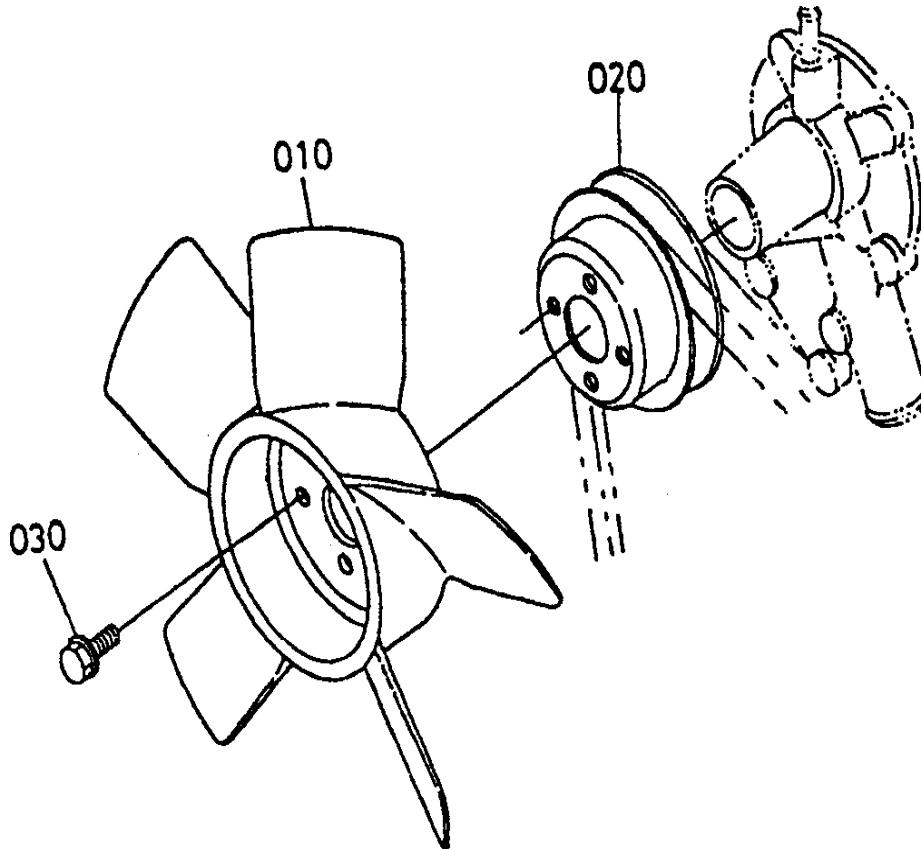
KUBOTA Z482-EB ENGINE — WATER PIPE ASSY.

WATER PIPE ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1584172860	PIPE, WATER	1	
020	1588172870	PIPE, WATER	1	
030	1584191510	STUD	1	
040	0275150060	NUT, FLANGE	1	
050	0931889030	CLAMP, HOSE	2	

KUBOTA Z482-EB ENGINE — FAN ASSY.

FAN ASSY.



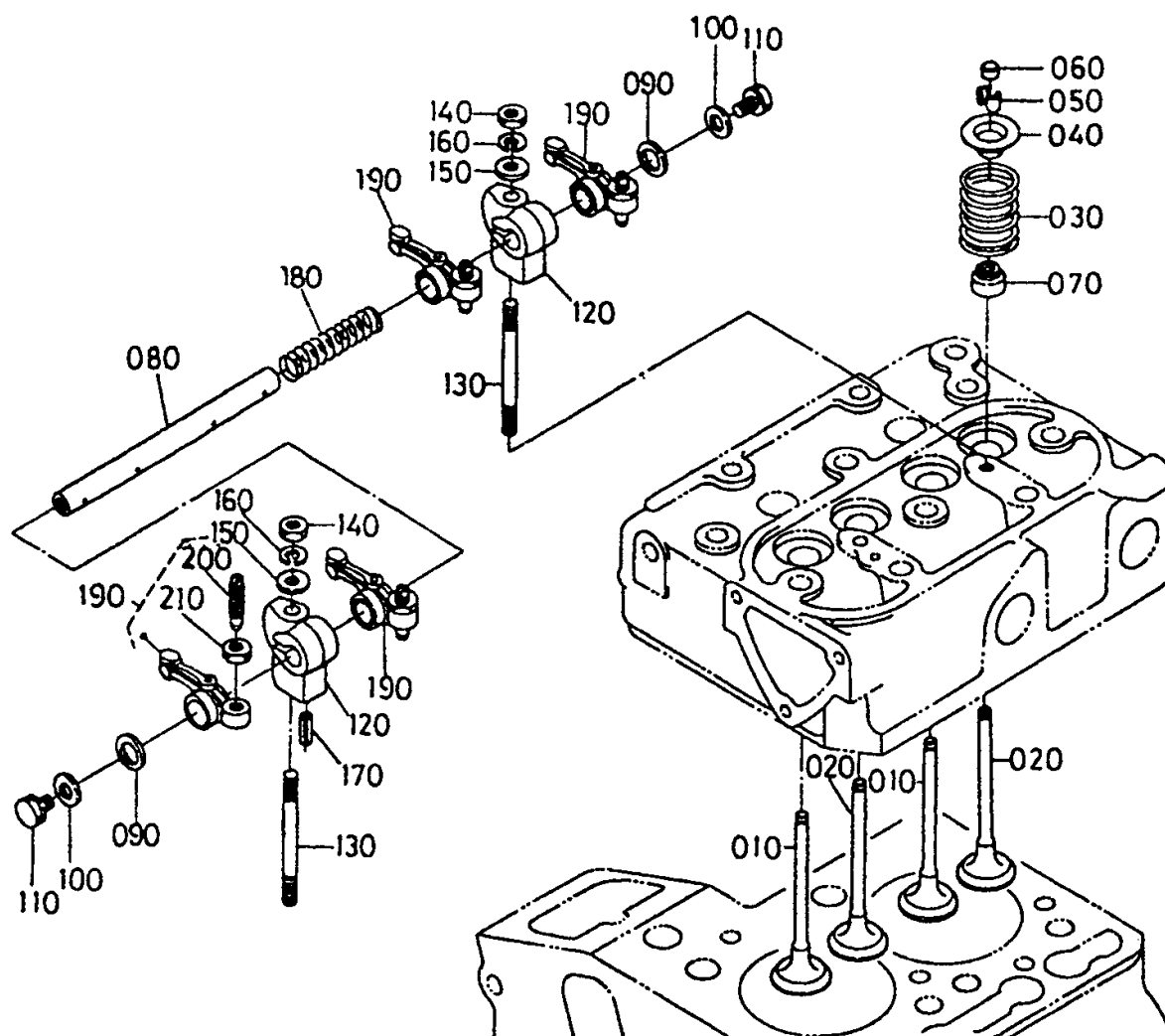
KUBOTA Z482-EB ENGINE — FAN ASSY.

FAN ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1586774112	FAN	1	
020	1584174250	PULLEY, FAN	1	
030	0175450610	BOLT, FLANGE	4	

KUBOTA Z482-EB ENGINE — VALVE & ROCKER ARM ASSY.

VALVE & ROCKER ARM ASSY.



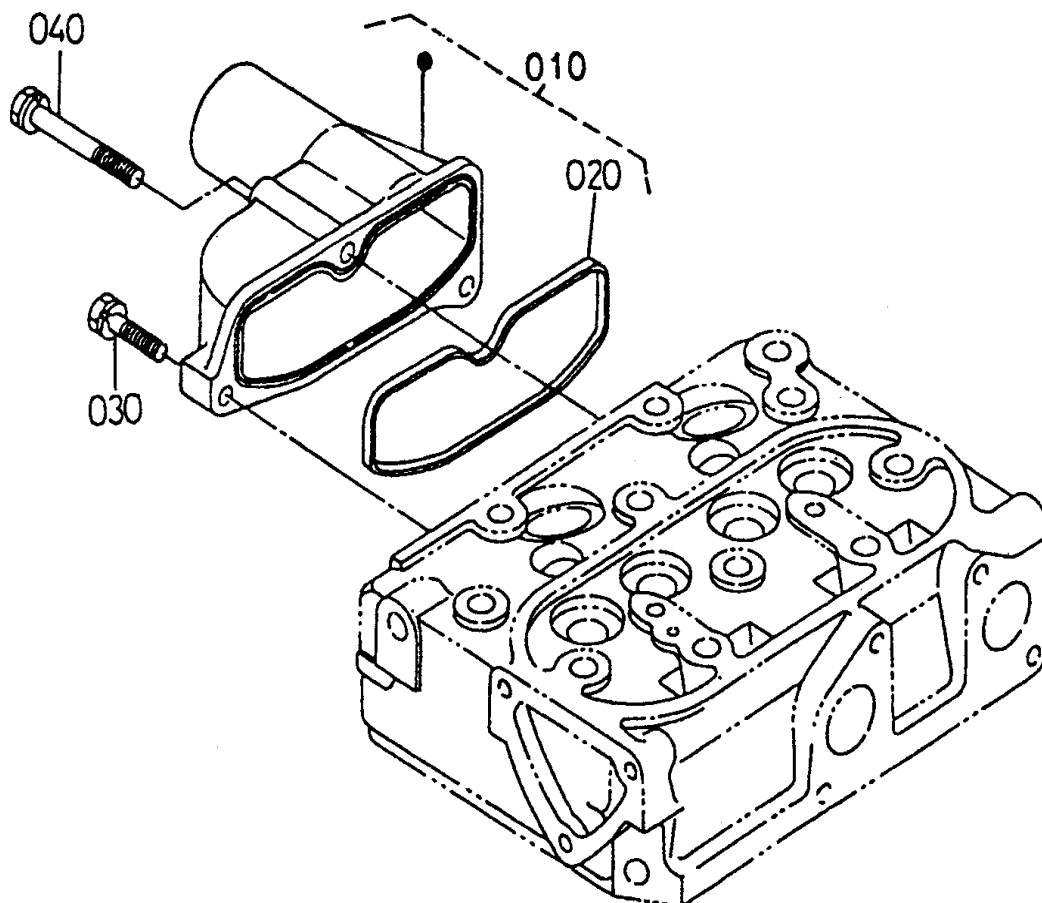
KUBOTA Z482-EB ENGINE — VALVE & ROCKER ARM ASSY.

VALVE & ROCKER ARM ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1460113110	VALVE, INLET	2	
020	146013120	VALVE, EXHAUST	2	
030	1460113240	SPRING, VALVE	4	
040	1460113330	RETAINER, SPRING	4	
050	1460113360	COLLET, VALVE SPRING SET	4	
060	1685113280	CAP, VALVE	4	
070	1584113150	SEAL, VALVE STEM	4	
080	1584114263	SHAFT, ROCKER ARM	1	
090	1687114430	WASHER	2	
100	1584194022	WASHER, PLAIN	2	
110	0102350610	BOLT	2	
120	1584114350	BRACKET, ROCKER ARM	2	
130	1460114410	STUD	2	
140	0205650060	NUT	2	
150	0401250060	WASHER, PLAIN	2	
160	0451260060	WASHER, SPRING	2	
170	0541100420	PIN, SPRING	1	
180	1460114310	SPRING, ROCKER ARM	1	
190	1584114030	ASSY. ROCKER ARM	4	INCLUDES ITEMS W/★
200★	1584114230	SCREW, ADJUSTING	4	
210★	1460114240	NUT	4	

KUBOTA Z482-EB ENGINE — INLET MANIFOLD ASSY.

INLET MANIFOLD ASSY.



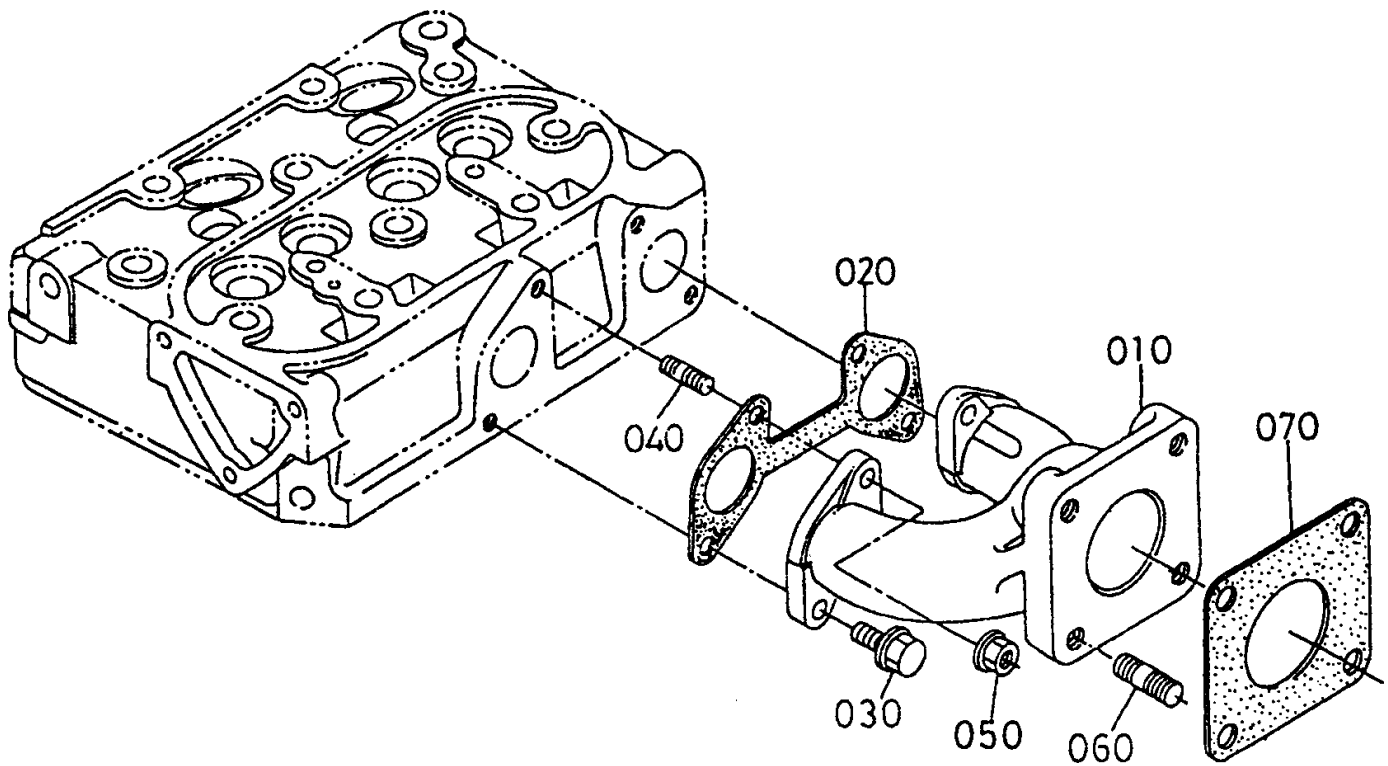
KUBOTA Z482-EB ENGINE — INLET MANIFOLD ASSY.

INLET MANIFOLD ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1584111770	ASSY. MANIFOLD, INLET	1	INCLUDES ITEMS W/★
020★	1584111820	GASKET, IN-MANIFOLD	1	
030	0102350618	BOLT	2	
040	0102350645	BOLT	1	

KUBOTA Z482-EB ENGINE — EXHAUST MANIFOLD ASSY.

EXHAUST MANIFOLD ASSY.



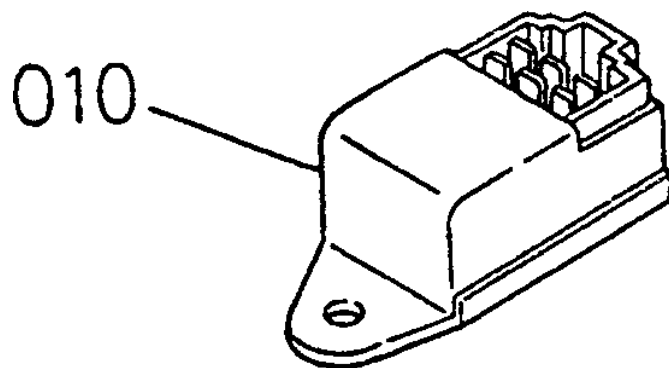
KUBOTA Z482-EB ENGINE — EXHAUST MANIFOLD ASSY.

EXHAUST MANIFOLD ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1584112313	MANIFOLD, EXHAUST	1	
020	1584112360	GASKET	1	
030	0175950616	BOLT, UBS	2	
040	0151350618	STUD	2	
050	0275650060	NUT, UBS	2	
060	0151350822	STUD	4	
070	1526312370	GASKET, MUFFLER	1	

KUBOTA Z482-EB ENGINE — GLOW PLUG/GLOW LAMP & TIMER ASSY.

GLOW PLUG/GLOW LAMP & TIMER ASSY.



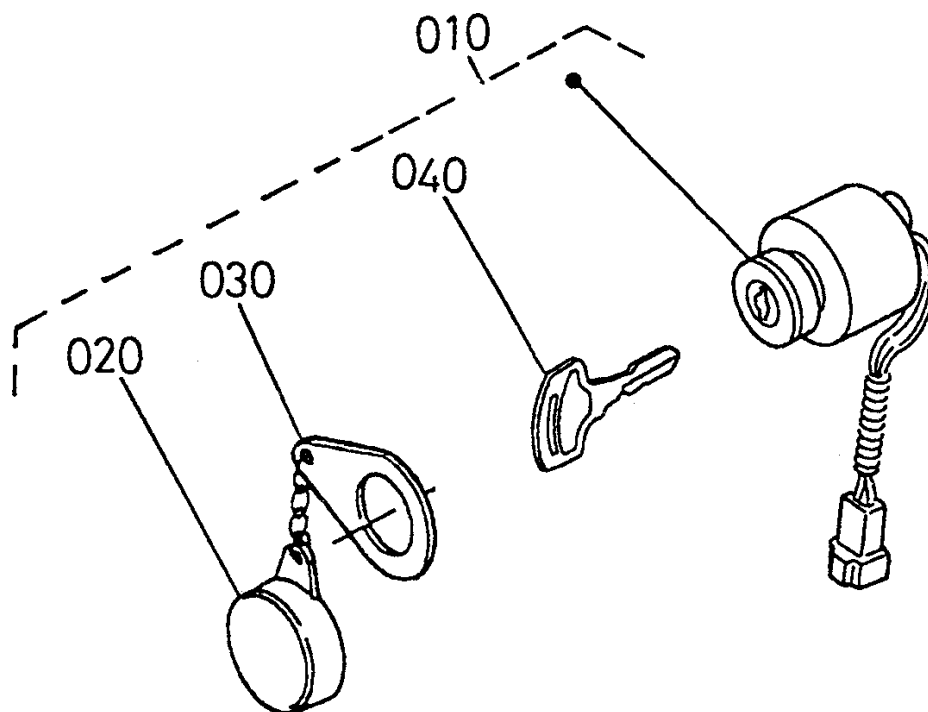
KUBOTA Z482-EB ENGINE — GLOW PLUG/GLOW LAMP & TIMER ASSY.

GLOW PLUG/GLOW LAMP & TIMER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1569465990	TIMER, GLOW LAMP	1	

KUBOTA Z482-EB ENGINE — STARTER SWITCH ASSY.

STARTER SWITCH ASSY.



KUBOTA Z482-EB ENGINE — STARTER SWITCH ASSY.

STARTER SWITCH ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
010	3741059110	ASSY. SWITCH, STARTER	1	INCLUDES ITEMS W/%
020%	3741055180	CAP, STARTER SWITCH	1	
030%	6641655170	WASHER	1	
040%	3741055150	KEY, STARTER	1	

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 10 days.

FREIGHT POLICY

All parts orders will be shipped collect or prepaid with the charges added to the invoice. All shipments are F.O.B. Point of origin. Multiquip's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

MINIMUM ORDER

The minimum charge for orders from Multiquip is \$15.00 net. Customers will be asked for instructions regarding handling of orders not meeting this requirement. If possible, additional fast moving parts will be added to the order to total \$15.00 minimum.

RETURNED GOODS POLICY

Return shipments will be accepted and credit will be allowed, subject to the following provisions:

1. A Returned Material Authorization must be approved by Multiquip prior to shipment. A copy of the Authorization must accompany the shipment to the designated Warehouse. A copy of the original Multiquip invoice to the customer must also accompany the shipment.
2. Parts being returned must be listed as currently supplied on the current parts list.
3. Parts must be in new and resalable condition, in the original Multiquip package, with Multiquip part numbers clearly marked.

4. Any item with a list price of \$1.00 or less will not be accepted.
5. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, filters, etc.) that are over six months old will not be accepted.
6. Special order items are not returnable for credit.
7. Engine parts other than 2-cycle engine parts will not be accepted.
8. Credit on returned parts will be issued at dealer net price at time of original purchase, less a 15% restocking charge.
9. Credit issued will be applied to future purchases only.
10. All parts must be returned freight prepaid to Multiquip's designated receiving point. Freight is at the sender's expense.

The sender will be notified of any material received not meeting the above provisions. Such material will be held for 30 days from notification, pending instructions. If a reply is not received within 30 days, the material will be returned to the seller at his expense.

PRICING AND REBATES

Prices are subject to change without prior notice.

Price changes are effective on a specific date and all shipments on or after that date will be billed at the revised price.

Rebates for price declines and added charges for price increases will not be made for stock on hand at the time of any price change.

Multiquip reserves the right to quote and sell direct to Government agencies, and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

SPECIAL EXPEDITING SERVICE

A \$20.00 to \$50.00 surcharge will be added to the invoice for special handling including bus shipments, insured parcel post or in cases where Multiquip must personally deliver the parts to the carrier.

LIMITATION OF SELLER'S LIABILITY

Multiquip shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed, and in no event shall Multiquip be liable for loss of profit or good will or for any other special, consequential or incidental damages.

LIMITATION OF WARRANTIES

No warranties, express or implied, are made in connection with the sale of parts or trade accessories nor as to any engine not manufactured by Multiquip. Such warranties made in connection with the sale of new, complete units are made exclusively by a statement of warranty packaged with such units, and Multiquip neither assumes nor authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. Apart from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.

[illegible]

PARTS AND OPERATION MANUAL

HERE'S HOW TO GET HELP

*PLEASE HAVE THE MODEL AND SERIAL NUMBER
ON-HAND WHEN CALLING*

PARTS DEPARTMENT

800-427-1244 or 310-537-3700

FAX: 800-672-7877 or 310-637-3284

SERVICE DEPARTMENT/TECHNICAL ASSISTANCE

800-478-1244 or 310-537-3700

FAX: 310- 537-4259

WARRANTY DEPARTMENT

888-661-4279, or 310-661-4279

FAX: 310- 537-1173

MAIN

800-421-1244 or 310-537-3700

FAX: 310-537-3927



MULTIQUIP INC.

POST OFFICE BOX 6254

CARSON, CA 90749

310-537-3700 • 800-421-1244

FAX: 310-537-3927

E-MAIL: mq@multiquip.com

WWW: multiquip.com

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