

PARTS AND OPERATION MANUAL

MQ POWER DUELWELD™ WELDER/AC GENERATOR MODEL BLW-400SSW

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S/N 5308765~

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WARNING



CALIFORNIA — Proposition 65 Warning

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



WARNING



CALIFORNIA Proposition 65 Warning

This product contains or produces chemicals known to the State of California to cause cancer and birth defects (or other reproductive harm).

DCL160

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

800/835-2551 or 310/537-3700

FAX: 310/638-8046

WARRANTY DEPARTMENT

800/835-2551 or 310/537-3700

FAX: 310/638-8046

MAIN

800/421-1244 or 310/537-3700

FAX: 310/537-3927

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NOTE

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

- 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%

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for Domestic USA
Dealers Only**

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extra savings!**

**UPS
Special**
For faxed orders only

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.

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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 BLW-400SSW Welder/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, welding shield, ventilator, steel-toed boots and other protective devices required by the job.



- **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 MQ Power 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 welder/AC 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 welder/AC generator requires an adequate free flow of cooling air. Never operate the welder/AC 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 welder/AC generator engine and may cause injury to people. The engine gives off **DEADLY** carbon monoxide gas.

CAUTION:



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 welder/AC 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.

RULES FOR SAFE OPERATION

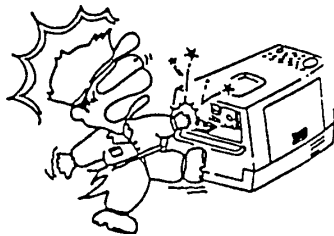
CAUTION:



This welder/AC generator is a source of providing **LETHAL** high voltages. **Never** permit unqualified personnel-especially children to operate the welder/AC generator.

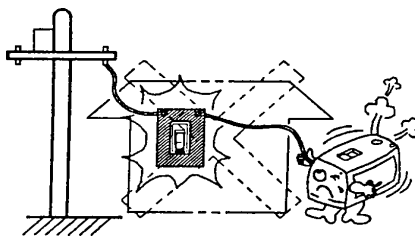
- This welder/AC generator is equipped with a **ground terminal** for your protection. Always complete the grounding path from the welder/AC generator to an external grounding source.
- **NEVER** operate this welder/AC generator, or handle any electrical equipment while standing in **water, while bare foot, while hands are wet, or in the rain**. *Dangerous electrical shock could occur causing severe bodily harm or even death.*
- This welder/AC generator requires an adequate free flow of cooling air. Never operate the welder/AC 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 welder/AC generator and may cause injury to people.
- **Arc rays can cause blindness. Always wear protective shield when welding.**

CAUTION:



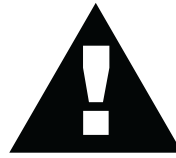
- **NEVER** touch output terminals or electrode during operation. This is extremely dangerous. Always stop the machine when contact with the output terminals and welding electrode.

CAUTION:



- **Never** connect the welder/AC generator to house wiring. This is illegal and very dangerous. Electrical shock could occur causing damage to the welder/AC generator and bodily harm even death.

CAUTION:



- **Never** use damaged or worn cables when connecting power tools or equipment to the welder/AC generator. Make sure power connecting cables are securely connected to the generator's output terminals. Insufficient tightening of the terminal connections may cause damage to the welder/AC generator and electrical shock.

CAUTION:



DO NOT touch or open coolant drain plug, radiator cap, or engine oil drain plug while the welder/AC generator is running. Always allow sufficient time for the engine and generator to cool before performing maintenance.

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.

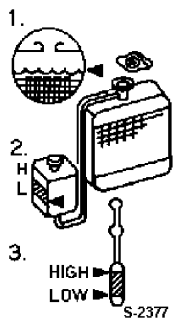
Maintenance Safety

- **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, coolant and fuel filters.
- **DO NOT** use plastic containers to dispose of hazardous waste.
- **DO NOT** pour waste, oil, coolant or fuel directly onto the ground, down a drain or into any water source.

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.



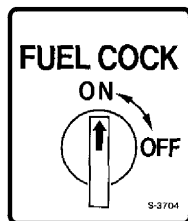
P/N 6390671104

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.

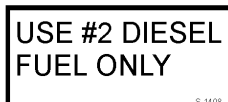
P/N 0820610404



P/N 1630680104



P/N 1630610504



P/N 1630680004

OPERATING PROCEDURE

Multiphase DC Welder/AC Generator

1. Check Oil, Water, and Fuel levels.
2. Set "SINGLE/DUAL" Current Range Selector Switch to either "SINGLE" or "DUAL" operation.
3. Turn the Automatic Control switch to "ON".
4. Insert the key in the Starter Switch.
5. Turn the key to "RUN". The Oil Pressure Alarm lamp should be lit.
6. Turn the key to "HEAT". When the preheat lamp extinguish, turn the key to "START" to start the engine. AVOID HIGH SPEEDS IMMEDIATELY AFTER STARTING.
7. When the engine starts, the Oil Pressure Alarm lamp should go out.
8. Let the engine idle for more than 5 minutes with the Automatic Control switch in "ON" position.
9. Turn the Automatic Control switch to either "ON" or "OFF" for full engine operation.
10. After working, let the engine run for 5 minutes with the Automatic Control switch in "ON" position. NEVER STOP THE ENGINE SUDDENLY EXCEPT IN AN EMERGENCY.
11. Stop the engine by turning the key in the Starter Switch to "STOP" and remove the key.

S-4175

P/N 7960610103

OIL DRAIN

S-1410

P/N 1630645004

COOLANT DRAIN

S-1404

P/N 1630647004

FUEL DRAIN

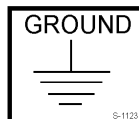
S-3060

P/N 7810680104

G.F.C.I.

D92200100

P/N D9522001004

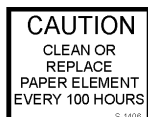


P/N 0800628504

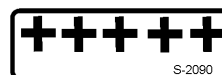
GROUND
for G.F.C.I.

S-3821

P/N 7670624004



P/N 1630610404



P/N 0600689404



P/N 0800689504

COOLING
WATER


S-3091

P/N 7810680204


NAMEPLATE

CONTACT MQ
SERVICE DEPT.

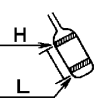
OPERATION AND SAFETY DECALS

 <p>S-4984</p>	<p>WARNING</p> <ul style="list-style-type: none"> ● Only operate machine in well ventilated areas. ● Do not inhale exhaust gases.
	<p>DANGEROUS GAS</p> <p>Only qualified personnel should install, use, or service this equipment.</p>

P/N 8700611804

 <p>S-4985</p>	<p>DANGER</p> <ul style="list-style-type: none"> ● Do not touch output terminals or internal wiring while unit is operating. ● Turn off power before servicing.
	<p>ELECTRICAL SHOCK HAZARD</p> <p>Only qualified personnel should install, use, or service this equipment.</p>

P/N 8700611904

<p>CAUTION</p> <p>Before starting the engine, check that the oil level is within the indicated operating range. If the level is above the H mark or below the L mark, it is important to correct before operating to avoid damage.</p>	<p>OIL LEVEL GAUGE</p> 
---	--

P/N 8700611524



P/N 16306 10304

DANGER EXPLOSIVE GASES
Cigarettes, flames or sparks could cause battery to explode. Always shield eyes and face from battery. Do not charge or use dooster cables or adjust post connections without proper instruction and training.

KEEP VENT CAPS TIGHT AND LEVEL





POISON CAUSES SEVERE BURNS
Contains sulfuric acid. Avoid contact with skin, eyes or clothing. In event of accident flush with water and call a physician immediately.

KEEP OUT OF REACH OF CHILDREN

P/N 0820650604

<p>WARNING</p> <p>CALIFORNIA Proposition 65 Warning</p> <p>This product contains or produces chemicals known to the State of California to cause cancer and birth defects (or other reproductive harm).</p> <p>DCL160</p>

P/N DCL160

<p>⚠ DANGER ⚠ CAUTION</p>		<ul style="list-style-type: none"> ● Read the instruction manual carefully before operating the unit. ● This machine must be installed, operated, and serviced only by a qualified person with sufficient knowledge and skill for safety. ● Do not allow people to be near the welder or welding site.
<p>Cautions on Welding Operation</p>	<p>Never remove or cover this label.</p>	
<p>⚠ DANGER</p> 	<p>Voltage can burn or kill!</p> <ul style="list-style-type: none"> ● Never touch electrical parts in the machine during operation, as it may lead to burn or death due to electrical shock. Stop engine before touching the output terminals for cable connection or before servicing. ● Never touch the machine especially when your body or the machine is wet. ● Ask a qualified person to ground the welder and base metal. ● Use dry welding gloves. 	<p>⚠ DANGER</p>  <p>Fume or gas due to welding may harm human's health!</p> <ul style="list-style-type: none"> ● Install ventilator or use respirator according to laws and regulations. ● If site is tight, install ventilator, use respirator, or perform cutting under supervision. ● Do not perform welding operation near site of fat-removing, rinsing, or spraying. ● Use respirator for welding a coated steel sheet. ● Use respirator for welding in the bottom of oil tank or vessel in order to protect against oxygen starvation.
<p>⚠ DANGER</p> 	<p>Welding can cause fire or explosion!</p> <ul style="list-style-type: none"> ● Remove inflammables or inflammable gas away from welding site. ● Install protective curtain around welding site to shield arc rays and spatters. ● Never weld airtight tank or pipe. ● Place a fire extinguisher near welding site. 	<p>⚠ CAUTION</p>  <p>Arc rays, spatters and slags may harm your eyes, and noise may damage your ears!</p> <ul style="list-style-type: none"> ● Use a shield with proper shade of filter. ● Wear proper gloves, long-sleeve shirts and foot protection. ● Use ear protector if noise level is high. <p>D91210020</p>

P/N D9512100203

BLW-400SSW — SPECIFICATIONS

Table 1. Specifications

Welder Specifications		
Model	BLW-400SSW	
Type	Brushless, revolving, field type generator	
Armature Connection	Single	Dual
Rated Current	350A	175A
Rated Voltage	34V	27V
Range of Current	70~400A	35~200A
Generator Specifications		
Frequency	60 Hz	
Speed	3600 rpm	
Max. Output	14kW	
Rated Output	12.5kW	
Voltage	120/240 V	
Engine Specifications		
Model	KUBOTA V 1205	
Type	4 Cycle, water-cooled, in line, overhead valve	
No. of Cylinders	4 cylinders	
Bore x Stroke	2.8 in. x 2.9 in. (72 mm x 73.6 mm)	
Rated Output	31.5HP/3600 rpm	
Displacement	73 cu. in. (1198 cc)	
Starting	Electric	
Coolant Capacity	1.3 gal. (5 liters)	
Lube Oil Capacity	1.6 gal. (6 liters)	
Fuel Consumption	Welding 2 gal. (5L)/hr AC Power 2.1 gal. (7.9L)/hr	
Fuel Capacity	Approx. 10.6 gal (40 liters)	
Fuel type	#2 Diesel Fuel	
Battery	12V- 70AH	

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.

BLW-400SSW FAMILIARIZATION

Generator

The MQ Power Model BLW-400 welder/AC generator can provide 400 amps of welding current with a single operator or 200 amps of welding current simultaneously with two operators. When used as a welder/AC generator it can provide a maximum of 6,000 watts of power.

Control Panel

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

- One GFCI 120 volt receptacle, 20 amp
- One 120 volt receptacle, 30 amp
- One 120/240 volt receptacle, 30 amp
- 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 welder/AC generator, it will cause a complete unit shut down.

Battery Charge Indicator

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

Water Temperature Indicator

This unit is equipped with an apparatus that signals an indicator 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 Indicator

If low oil pressure is detected while operating the welder/AC generator, the engine protection system will shut down the engine.

If this condition (low oil pressure) should occur, please refer to the engine troubleshooting table (page 44) in this manual.

Excitation System

The BLW-400SSW Welder/AC 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 welder/AC 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 BLW-400SSW is powered by a 4-cycle KUBOTA **diesel** engine. This engine is designed to meet every performance requirement for welder/AC generator. Reference Table 1, page 10 for engine specifications.

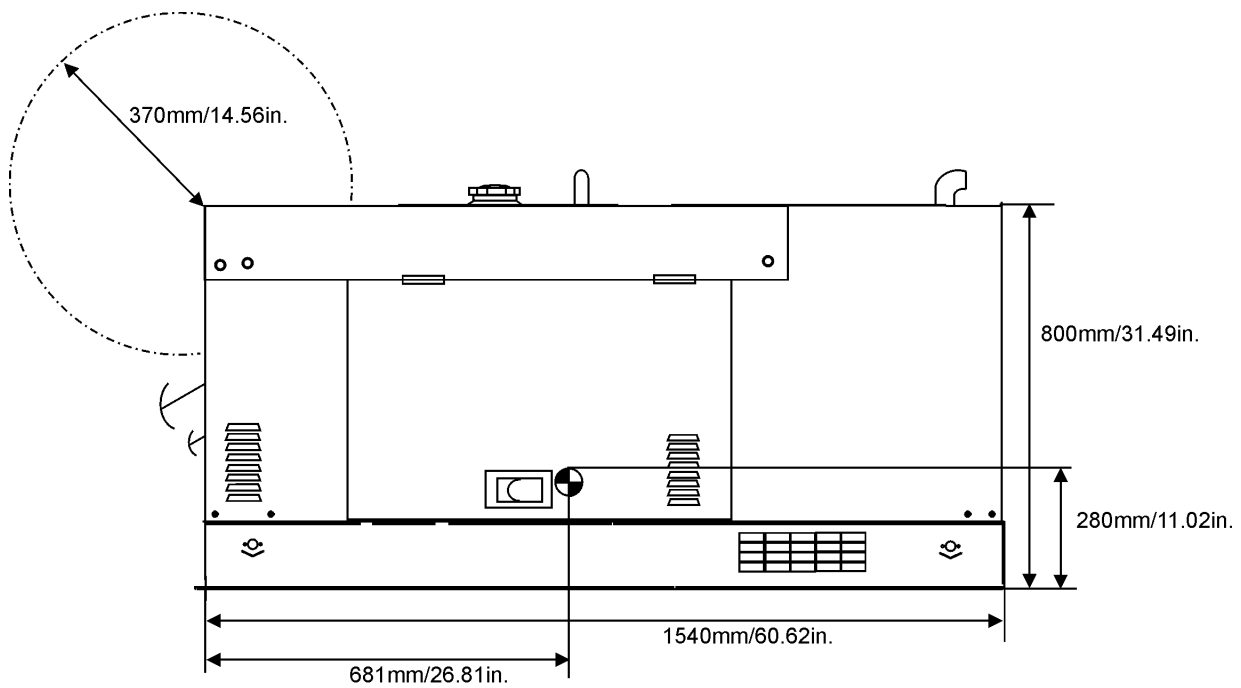
In keeping with MQ Power's policy of constantly improving its products, the specifications quoted herein are subject to change without prior notice.

Idle Control Switch

The BLW-400SSW Welder/AC 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.

BLW-400SSW — DIMENSIONS



Center of Gravity

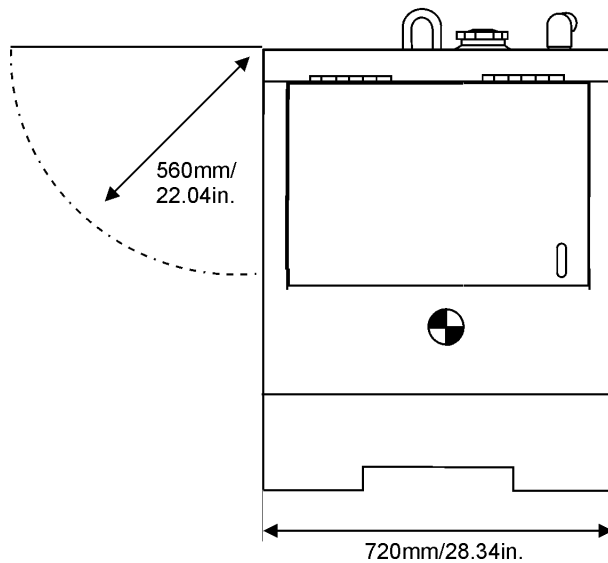


Figure 1. BLW-400SSW Dimensions

CAUTION:



ALWAYS make sure the trailer is in good operating condition. Check the tires for proper inflation and wear. Also check the wheel lug nuts for proper tightness.

Explanation of Chart:

This section is intended to provide the user with trailer service and maintenance information. The service and maintenance guidelines referenced in this section apply a wide range of trailers. Remember periodic inspection of the trailer will ensure safe towing of the equipment and will prevent damage to the equipment and personal injury.

It is the purpose of this section to cover the major maintenance components of the trailer. The following trailer components will be discussed in this section:

- Brakes
- Tires
- Lug Nut Torquing
- Suspension
- Electrical
- Brake Troubleshooting Tables

Use the following definitions with reading Table 2.

1. **Fuel Cell** - Provides an adequate amount of fuel for the equipment in use. Fuel cells must be empty when transporting equipment.
2. **Braking System** - System employed in stopping the trailer. Typical braking systems are electric, surge, hydraulic, hydraulic-surge and air.
3. **GVWR**- Gross Vehicle Weight Rating (GVWR), is the maximum number of pounds the trailer can carry, including the fuel cell (empty).
4. **Frame Length** - This measurement is from the ball hitch to the rear bumper (reflector).
5. **Frame Width** - This measurement is from fender to fender.
6. **Jack Stand** - Trailer support device with maximum pound requirement from the tongue of the trailer.
7. **Coupler** - Type of hitch used on the trailer for towing.
8. **Tire Size** - Indicates the diameter of the tire in inches (10,12,14, etc.), and the width in millimeters (175,185,205, etc.). The tire diameter must match the diameter of the tire rim.
9. **Tire Ply** - The tire ply (layers) number is rated in letters; 2-ply,4-ply,6-ply, etc.
10. **Wheel Hub** - The wheel hub is connected to the trailer's axle.
11. **Tire Rim** - Tires mounted on a tire rim. The tire rim must match the size of the tire.
12. **Lug Nuts** - Used to secure the wheel to the wheel hub. Always use a torque wrench to tighten down the lug nuts. See Table 4 and Figure 5 or lug nut tightening and sequence.
13. **Axle** - Indicates the maximum weight the axle can support in pounds, and the diameter of the axle expressed in inches (see Table 3). Please note that some trailers have a double axle. This will be shown as 2-6000 lbs., meaning two axles with a total weight capacity of 6000 pounds.
14. **Suspension** - Protects the trailer chassis from shocks transmitted through the wheels. Types of suspension used are leaf, Q-flex, and air ride.
15. **Electrical** - Electrical connectors (looms) are provided with the trailer so the brake lights and turn signals can be connected to the towing vehicle.
16. **Application** - Indicates which units can be employed on a particular trailer.

BLW-400SSW — TRAILER-SPECIFICATIONS

Table 2. Specifications

MODEL	APPLICATION	FUEL CELL	BRAKE SYSTEM	GVWR	FRAME LENGTH	FRAME WIDTH	JACK STAND
TRLR-10-15	TLG-12, DCA15, TLW-300	NO	NO	1900LBS	96"	50"	800LB. FULL TILT WHEEL
TRLR-10X	TLG-12, DCA15, TLW-300	NO	NO	1900LBS	96"	50"	800LB. FULL TILT WHEEL
TRLR-10XF	TLG-12, DCA15, TLW-300	51 GAL	NO	1900LBS	96"	50"	800LB. FULL TILT WHEEL
TRLR-225W	DCA-10	NO	NO	2200LBS	85"	42"	800LB. FULL TILT WHEEL
BLW-400	BLW-400	NO	ELECTRIC	2700LBS	W/MAST 154" W/O 124"	55" (78" TALL)	800LB. FULL TILT WHEEL
TRLR-15XF	DCA-15	41 GAL	NO	2700LBS	124"	55"	800LB. FULL TILT WHEEL
TRLR-50X	DCA-25	NO	NO	2700LBS	124"	55"	800LB. FULL TILT WHEEL
TRLR-50XF	DCA-25	41 GAL	NO	2700LBS	124"	55"	800LB. FULL TILT WHEEL
TRLR-25SBT	DCA-25	NO	NO	2990LBS	120"	66"	800LB. FULL TILT WHEEL
TRLR-70W	DCA-45, -60, 70	NO	SURGE	7000LBS	186"	77"	2000LB. FLAT PAD
TRLR-70X	DCA-45, -60, 70	OPT	SURGE	7000LBS	138"	66"	2000LB. FLAT PAD
TRLR-70XF	DCA-45, -60, 70	53 GAL	SURGE	7000LBS	138"	66"	2000LB. FLAT PAD
TRLR-100XF	DCA-100, 125	150 GAL	HYDRAULIC SURGE	7000LBS	190"	76"	2000LB. FLAT PAD
TRLR-85/125	DCA-85, 100, 125	145 GAL	HYDRAULIC	10000LBS	186"	77"	2000LB. FLAT PAD
TRLR-150XF	DCA-150, 180	200 GAL	HYDRAULIC SURGE	11160LBS	204"	84"	5000 LB. FLAT PAD
TRLR-220XF	DCA-220	250 GAL	HYDRAULIC SURGE	14000LBS	222"	83"	5000 LB. FLAT PAD
TRLR-300XF	DCA-300	250 GAL	HYDRAULIC SURGE	18000LBS	238"	83"	5000 LB. FLAT PAD
TRLR-400XF	DCA-400	350 GAL	ELECTRIC	18000LBS	238"	83"	5000 LB. FLAT PAD
TRLR-600XF	DCA-600, 800	550 GAL	AIR	30000LBS	384"	96"	5000 LB. FLAT PAD
TRLR-800SX	DCA-600, 800	550 GAL	AIR	30000LBS	384"	96"	5000 LB. FLAT PAD

BLW-400SSW — TRAILER-SPECIFICATIONS

Table 2. Specifications (Con't)

MODEL	COUPLER	TIRES	WHEELS	AXLE	HUBS	SUSPENSION	ELECTRICAL
TRLR-10-15W	2" BALL CLASS 2 ADJUSTABLE	175-13C	13"X4.50"	2200# 2X2	5 LUG	3 LEAF	4 WIRE LOOM W/ 4 POLE FLAT
TRLR-10X	2" BALL CLASS 2 ADJUSTABLE	175-13C	13"X4.5"	2200#2X2	5 LUG	3 LEAF	4 POLE FLAT
TRLR-10XF	2" BALL CLASS 2 ADJUSTABLE	175-13C	13"X4.5"	2200#2X2	5 LUG	3 LEAF	4 POLE FLAT
TRLR-225W	2" BALL CLASS 2 ADJUSTABLE	175-13B	13X4.5"	2200#2X2	5 LUG	Q FLEX	4 POLE FLAT
BLW 400	2" BALL CLASS 2 ADJUSTABLE	175-13C	13 X 4.5"	2200#2X2	5 LUG	3 LEAF	4 POLE FLAT
TRLR-15XF	2" BALL CLASS	B78-13LRC	13"X4.50"	3500# 2-1/2"	5 LUG	4 LEAF	4 POLE RUBBER FLAT
TRLR-50X	2" BALL CLASS	B78-13LRC	13"X4.50"	3500lbs. 2-3/8"	5 LUG	4 LEAF	4 POLE RUBBER FLAT
TRLR-50XF	2" BALL CLASS	B78-13LRC	13"X4.50"	3500lbs. 2-3/8"	5 LUG	4 LEAF	4 POLE RUBBER FLAT
TRLR-70W	2" BALL CLASS 3" ADJUSTABLE	205-14C BIAS (4)	14"X5"	3500lbs. 3"	5 LUG	5 LEAF	4 POLE RUBBER FLAT
TRLR-70X	2" BALL CLASS 3" ADJUSTABLE	205-14C BIAS (4)	14"X5"	3500lbs 3"	5 LUG	5 LEAF	4 POLE RUBBER FLAT
TRLR-70XF	2" BALL CLASS 3" ADJUSTABLE	205-14C BIAS (4)	14"X5"	3500lbs. 3"	5 LUG	5 LEAF	4 POLE RUBBER FLAT
TRLR-100XF	ADJUSTABLE 2-5/6 OPT 3" EYE	205-15C BIAS (4)	14"X5.5"	3500lbs 3"	5 LUG	5 LEAF	4 WIRE LOOM
TRLR-85/125	ADJUSTABLE 2-5/6 OPT 3" EYE	ST225/75R15D RADIAL (4)	14"x6"	(2)-6000lbs	6 LUG	7 LEAF	4 WIRE LOOM
TRLR-150XF	3" BALL EYE	750-16 E BIAS (4)	16"X7"	(2)-6000lbs	8 LUG	7 LEAF	4 WIRE LOOM
TRLR-220XF	3" EYE ADJUSTABLE	ST235/85R16E RADIAL(4)	16"X7"	(2)-7000lbs	8 LUG	Q FLEX	4 WIRE LOOM
TRLR-300XF	3" EYE ADJUSTABLE	ST235/85R16E RADIAL(6)	16"X7"	(2)-6000lbs	8 LUG	Q FLEX	4 WIRE LOOM
TRLR-400XF	3" EYE ADJUSTABLE	ST235/85R16E RADIAL(6)	16"X7"	(3)-7000lbs.	8 LUG	Q FLEX	4 WIRE LOOM
TRLR-600XF	5TH WHEEL	ST215/75R17.5H RADIAL (8)	16"X7"	(3)-10000lbs	8 LUG	7 LEAF	6 WIRE LOOM
TRLR-800AR	5TH WHEEL	ST215/75R17.5H RADIAL (8)	16"X7"	(3)-10000lbs	8 LUG	AIR-RIDE	6 WIRE LOOM

Brakes

If your trailer has a braking system, the brakes should be inspected the first 200 miles of operation. This will allow the brake shoes and drums to seat properly. After the first 200 mile interval, inspect the brakes every 3,000 miles. If driving over rough terrain, inspect the brakes more frequently.

Electric Brakes

Electrically actuated brakes (Figure 2) are similar to hydraulic brakes. The basic difference is that hydraulic brakes are actuated by an electromagnet.

Listed below are some of the advantages that electric brakes have over hydraulic brakes:

- Brake system can be manually adjusted to provide the corrected braking capability for varying road and load conditions
- Brake system can be modulated to provide more or less braking force, thus easing the brake load on the towing vehicle
- Brake system has very little lag time between the time the vehicle's brakes are actuated and the trailer's brakes are actuated
- Brake system can provide an independent emergency brake system

Remember in order to properly synchronize the tow vehicle's braking to the trailer's braking, can only be accomplished by road testing. Brake lockup, grabbiness or harshness is due to lack of synchronization between the tow vehicle and the trailer being towed or under-adjusted brakes.

Before any brake synchronizations adjustments can be made, the trailer brakes should be burnished-in by applying the brakes 20-30 times with approximately a 20 m.p.h. decrease in speed, e.g. 40 m.p.h. to 20 m.p.h. Allow ample time for brakes to cool between application. This allows the brake shoes to slightly be seated into the brake drum surface.

Figure 2 displays the major electric brake components that will require inspection and maintenance. Please inspect these components as required.

Electric Brake Adjustment

1. Place the trailer on jack stands. Make sure the jack stands are placed on secure level ground.
2. Check the wheel and drum for free rotation.
3. Remove the adjusting hole cover from the adjusting slot at the bottom brake backing plate.
4. With a screwdriver or standard adjusting tool, rotate the star wheel of the adjuster assembly to expand the brake shoes.
5. Adjust the brake shoes outward until the pressure of the lining against the wheel drum makes the wheel difficult to turn.
6. Rotate the star wheel in the opposite direction until the wheel rotates freely with slight lining drag.
7. Replace the adjusting hole cover and lower the trailer to the ground.
8. Repeat steps 1 through 6 on the remaining brakes.

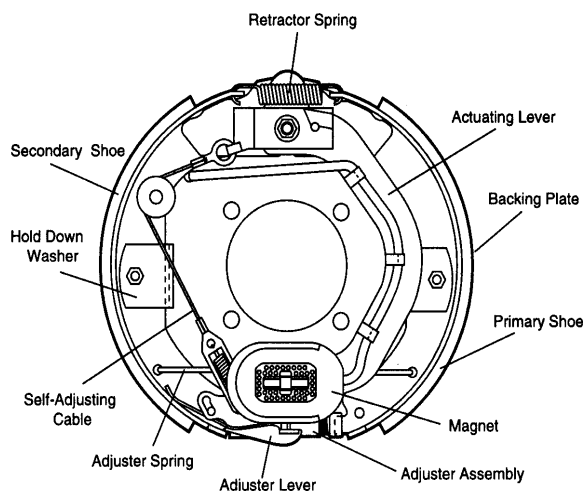


Figure 2. Electrical Brake Components

BLW-400SSW —TRAILER SAFETY GUIDELINES

Tires/Wheels/Lug Nuts

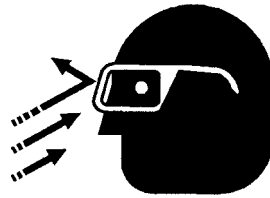
Tires and wheels are a very important and critical components of the trailer. When specifying or replacing the trailer wheels it is important the wheels, tires, and axle are properly matched.

CAUTION:



DO NOT attempt to repair or modify a wheel. DO NOT install in inner tube to correct a leak through the rim. If the rim is cracked, the air pressure in

the inner tube may cause pieces of the rim to explode (break off) with great force and cause serious eye or bodily injury.

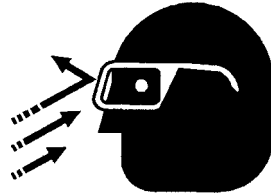
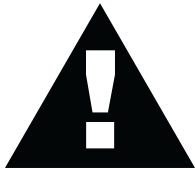


Tire Wear/Inflation

Tire inflation pressure is the most important factor in tire life. Pressure should be checked cold before operation DO NOT bleed air from tires when they are hot. Check inflation pressure weekly during use to insure the maximum tire life and tread wear.

Table 3 (Tire Wear Troubleshooting) will help pinpoint the causes and solutions of tire wear problems.

CAUTION:



NOTE

ALWAYS wear safety glasses when removing or installing force fitted parts. Failure to comply may result in serious injury.

TABLE 3. TIRE WEAR TROUBLESHOOTING

WEAR PATTERN		CAUSE	SOLUTION
	Center Wear	Over Inflation.	Adjust pressure to particular load per tire manufacturer.
	Edge Wear	Under Inflation.	Adjust pressure to particular load per tire manufacturer.
	Side Wear	Loss of camber or overloading.	Make sure load does not exceed axle rating. Align wheels.
	Toe Wear	Incorrect toe-in.	Align wheels.
	Cupping	Out-of-balance.	Check bearing adjustment and balance tires.
	Flat Spots	Wheel lockup & tire skidding.	Avoid sudden stops when possible and adjust brakes.

Suspension

The leaf suspension springs and associated components (Figure 3) should be visually inspected every 6,000 miles for signs of excessive wear, elongation of bolt holes, and loosening of fasteners. Replace all damaged parts (suspension) immediately. Torqued suspension components as detailed in Table 4.

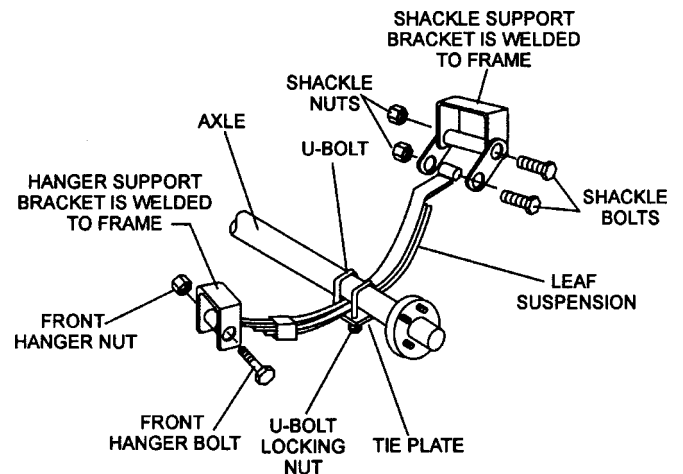


Figure 3. Major Suspension Components

BLW-400SSW —TRAILER SAFETY GUIDELINES

Table 4. Suspension Torque Requirements

Item	Torque (Ft.-Lbs.)
3/8" U-BOLT	MIN-30 MAX-35
7/16" U-BOLT	MIN-45 MAX-60
1/2" U-BOLT	MIN-45 MAX-60
SHACKLE BOLT SPRING EYE BOLT	SNUG FIT ONLY. PARTS MUST ROTATE FREELY. LOCKING NUTS OR COTTER PINS ARE PROVIDED TO RETAIN NUT-BOLT ASSEMBLY.
SHOULDER TYPE SHACKLE BOLT	MIN-30 MAX-50

Lug Nut Torque Requirements

It is extremely important to apply and maintain proper wheel mounting torque on the trailer. Be sure to use only the fasteners matched to the cone angle of the wheel. Proper procedure for attachment of the wheels is as follows:

1. Start all wheel lug nuts by hand.
2. Torque all lug nuts in sequence. See Figure 4. **DO NOT** torque the wheel lug nuts all the way down. Tighten each lug nut in 3 separate passes as defined by Table 5.
3. After first road use, retorque all lug nuts in sequence. Check all wheel lug nuts periodically.

Table 5. Tire Torque Requirements

Wheel Size	First Pass FT-LBS	Second Pass FT-LBS	Third Pass FT-LBS
12"	20-25	35-40	50-65
13"	20-25	35-40	50-65
14"	20-25	50-60	90-120
15"	20-25	50-60	90-120
16"	20-25	50-60	90-120

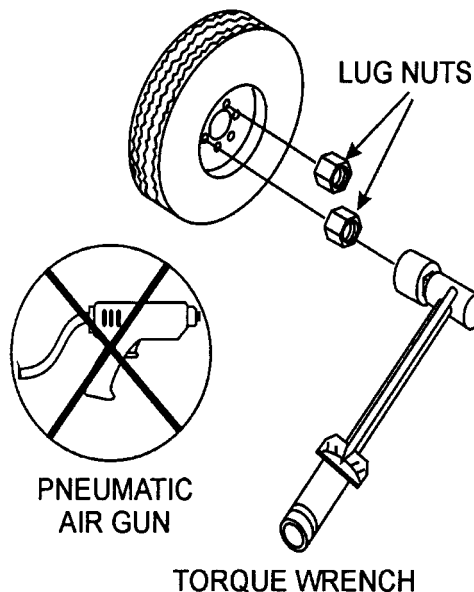
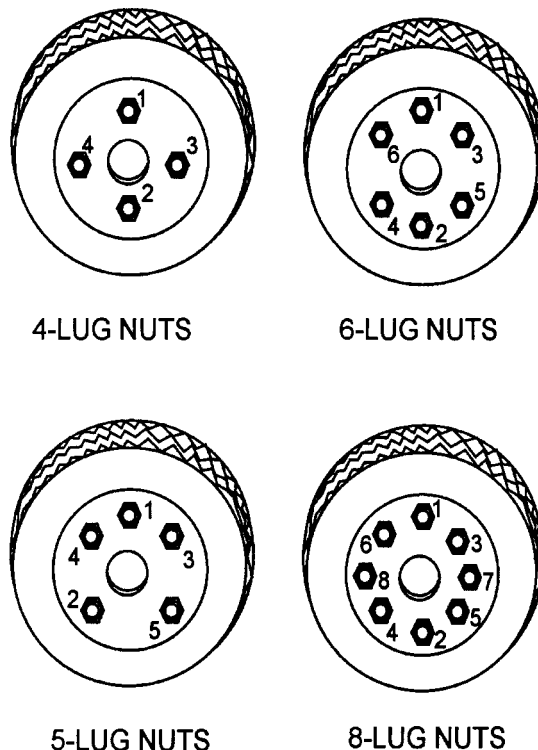


Figure 4. Wheel Lug Nuts Tightening Sequence

NOTE

NEVER use an pneumatic air gun to tighten wheel lug nuts.

BLW-400SSW —TRAILER-WIRING DIAGRAM

TRAILER SIDE

TOWING VEHICLE SIDE

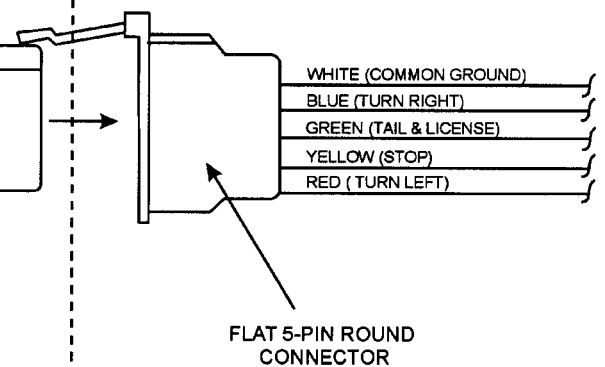
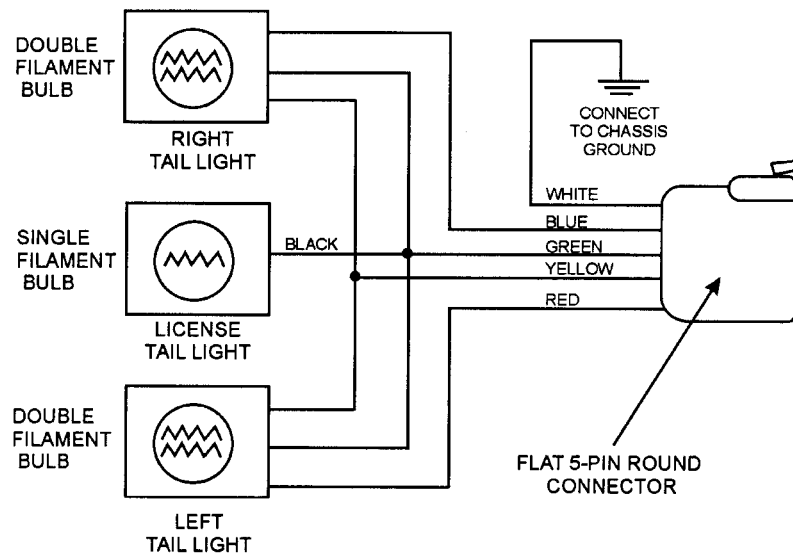
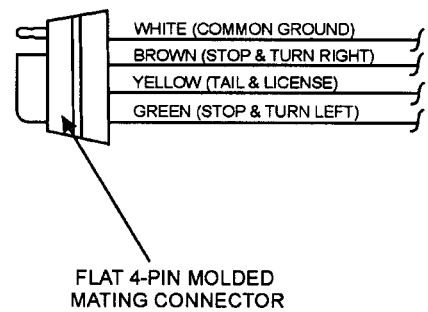
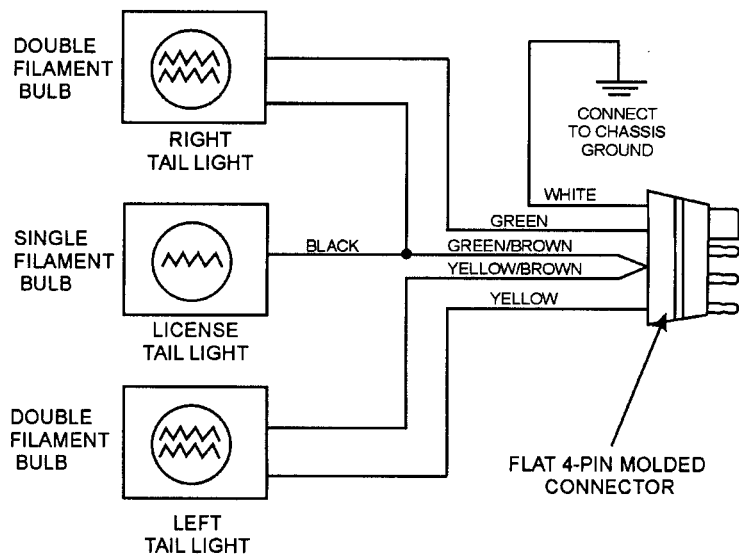


Table 6. Electric Brake Troubleshooting

Symptom	Possible Cause	Solution
No Brakes or Intermittent Brakes	Any open circuits or broken wires?	Find and correct.
	Any short circuits?	Find and correct.
	Faulty controller?	Test and correct.
	Any loose connections?	Find and repair.
	Ground wire secure?	Find and secure.
Weak Brakes or Brakes Pull to One Side	Grease or oil on magnets or linings?	Clean or replace.
	Connections corroded?	Clean and correct cause of corrosion.
	Brake drums scored or grooved?	Machine or replace.
	Brakes synchronized?	Correct.
Locking Brakes	Brake components loose, bent or broken?	Replace components.
	Brake drums out-of-round?	Replace.
Noisy Brakes	System lubricated?	Lubricate.
	Brake components correct?	Replace and correct.
Dragging Brakes	Bearings of the wheel adjusted?	Adjust.

Towing Safety Precautions

CAUTION :



Check with your county or state safety towing regulations department before towing your generator. Vehicle towing codes and regulations can vary from state to state.

To reduce the possibility of an accident while transporting the generator on public roads, always make sure the trailer (Figure 5) and the towing vehicle are in good operating condition and both units are mechanically sound.

The following list of suggestions should be used when towing your generator:

- Make sure the hitch and coupling of the towing vehicle are rated equal to, or greater than the trailer "gross vehicle weight rating" (GVWR).
- **ALWAYS** inspect the hitch and coupling for wear. **NEVER** tow a trailer with defective hitches, couplings, chains etc.
- Check the tire air pressure on both the towing vehicle and the trailer. Also check the tire tread wear on both vehicles.
- **ALWAYS** make sure the trailer is equipped with a "Safety Chain".
- **ALWAYS** attach trailer's safety chain to bumper of towing vehicle.
- **ALWAYS** make sure the vehicle and trailer directional, backup, brake, and trailer lights are connected and are working properly.
- The maximum speed (unless otherwise posted) for highway towing is **45 MPH**. Recommended off-road towing is not to exceed **10 MPH** or less, depending on type of terrain.
- Place *chocked blocks* underneath wheel to prevent **rolling**, while parked.
- Place *support blocks* underneath the trailer's bumper to prevent **tipping**, while parked.
- Use the trailer's hand winch to adjust the height of the trailer, then insert locking pin to lock wheel stand in place, while parked.
- Avoid sudden stops and starts. This can cause skidding, or jackknifing. Smooth, gradual starts and stops will improve gas mileage.
- Avoid sharp turns to prevent rolling.
- Remove wheel stand when transporting.
- **DO NOT** transport generator with fuel in tank.

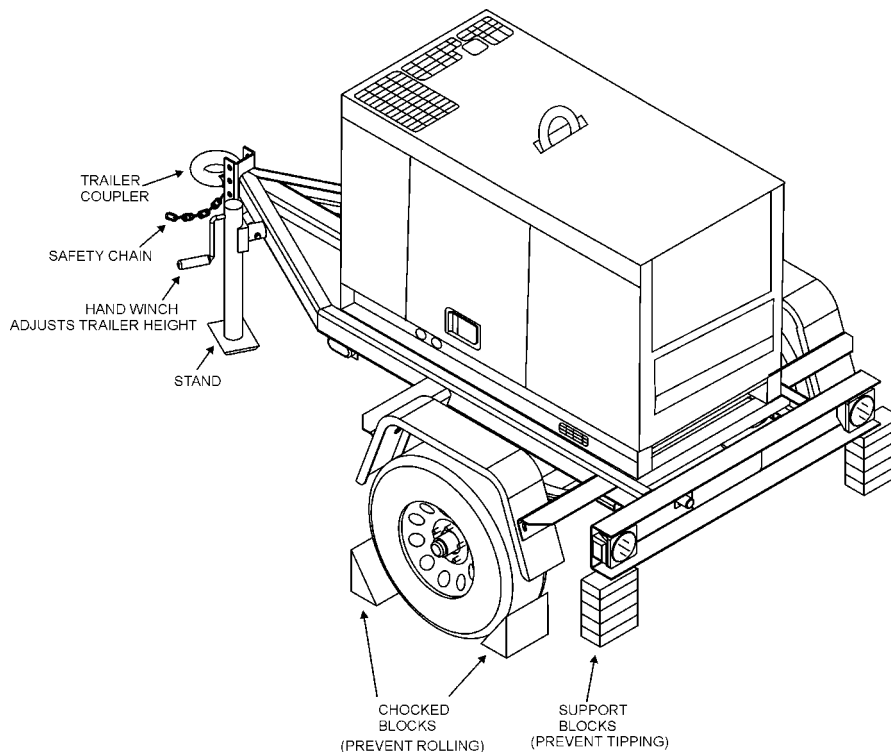
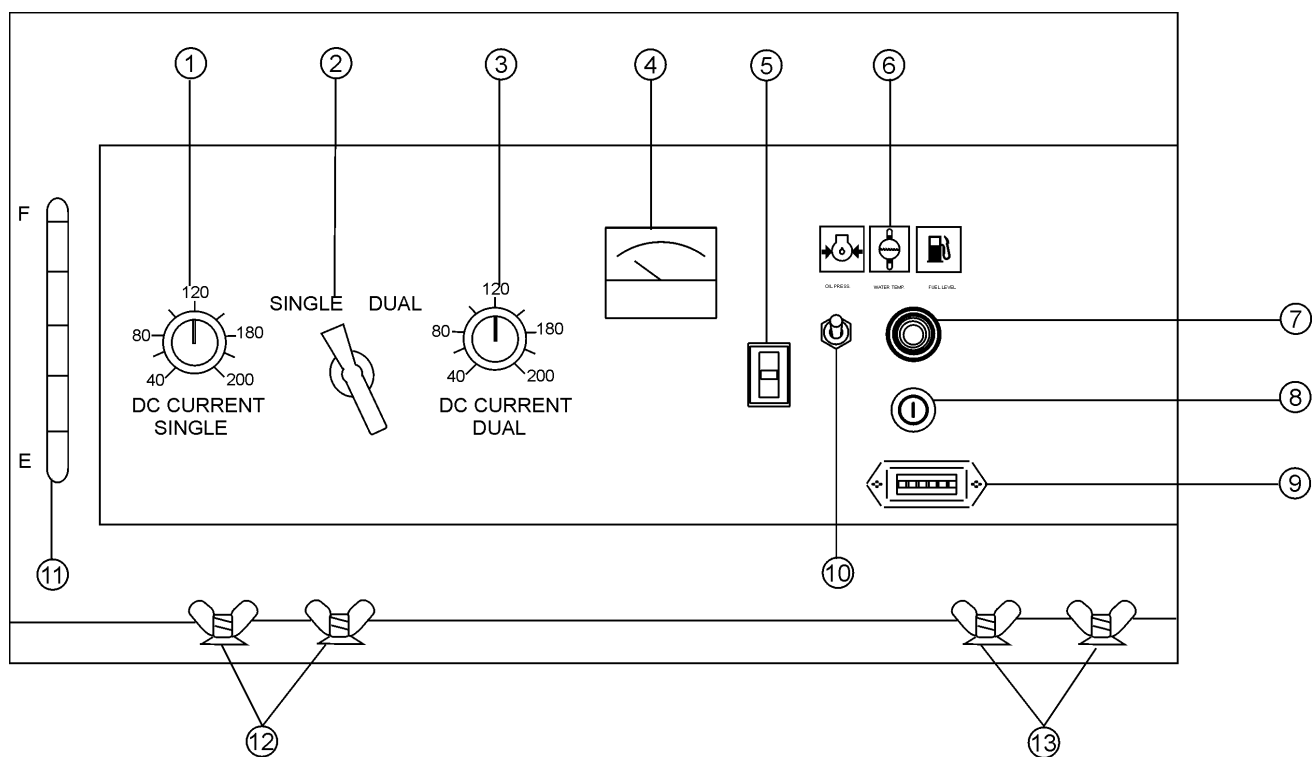


Figure 5. Welder/AC Generator and Towing Trailer

BLW-400SSW — CONTROLS AND INDICATORS



NO	ITEM
1	DC CURRENT CONTROL
2	CURRENT RANGE SELECTOR
3	DUAL CURRENT CONTROL
4	AC VOLTMETER
5	AC CIRCUIT BREAKER
6	ENGINE WARNING INDICATOR
7	PREHEAT INDICATOR
8	STARTER SWITCH
9	HOUR METER
10	IDLE SWITCH
11	FUEL LEVEL INDICATOR
12	DC WELDING OUTPUT TERMINAL (SINGLE)
13	DC WELDING OUTPUT TERMINAL (DUAL)

Figure 6. Controls and Indicators

Figure 6 shows the location of the controls and indicators. The functions of each control or indicator is described below.

1. **DC Current Selector/Single-**Use to select current when using welder for single operator.
2. **Current Range Selector-** Use to select for single or dual welding operators.
3. **DC Current Selector/Dual-** Use to select current when using welder for dual operators.
4. **AC Voltmeter-**Indicates the output of total voltage with welder and/or generator.
5. **AC Circuit Breaker-** This 53 amp main circuit breaker will shut down current if welder/generator is overloaded.
6. **Engine Indicator Lamps-** Lights red when the following conditions occur:
 - Low Oil Pressure
 - High Water Temperature
 - Electrical System Is Not Charging Properly
7. **Preheat Indicator-**Indicates the engine is warmed up for welding/adding load.
8. **Ignition Switch –** With key inserted turn clockwise to start engine.
9. **Hour Meter –** Indicates number of hours machine has been in use or hours engine was run.
10. **Idle Switch-** Turn on for rpms to automatically adjust rpms when a load is added.
11. **Fuel Gauge –** Indicates the amount of fuel in the fuel tank.

BLW-400SSW — OUTPUT TERMINAL OVERVIEW

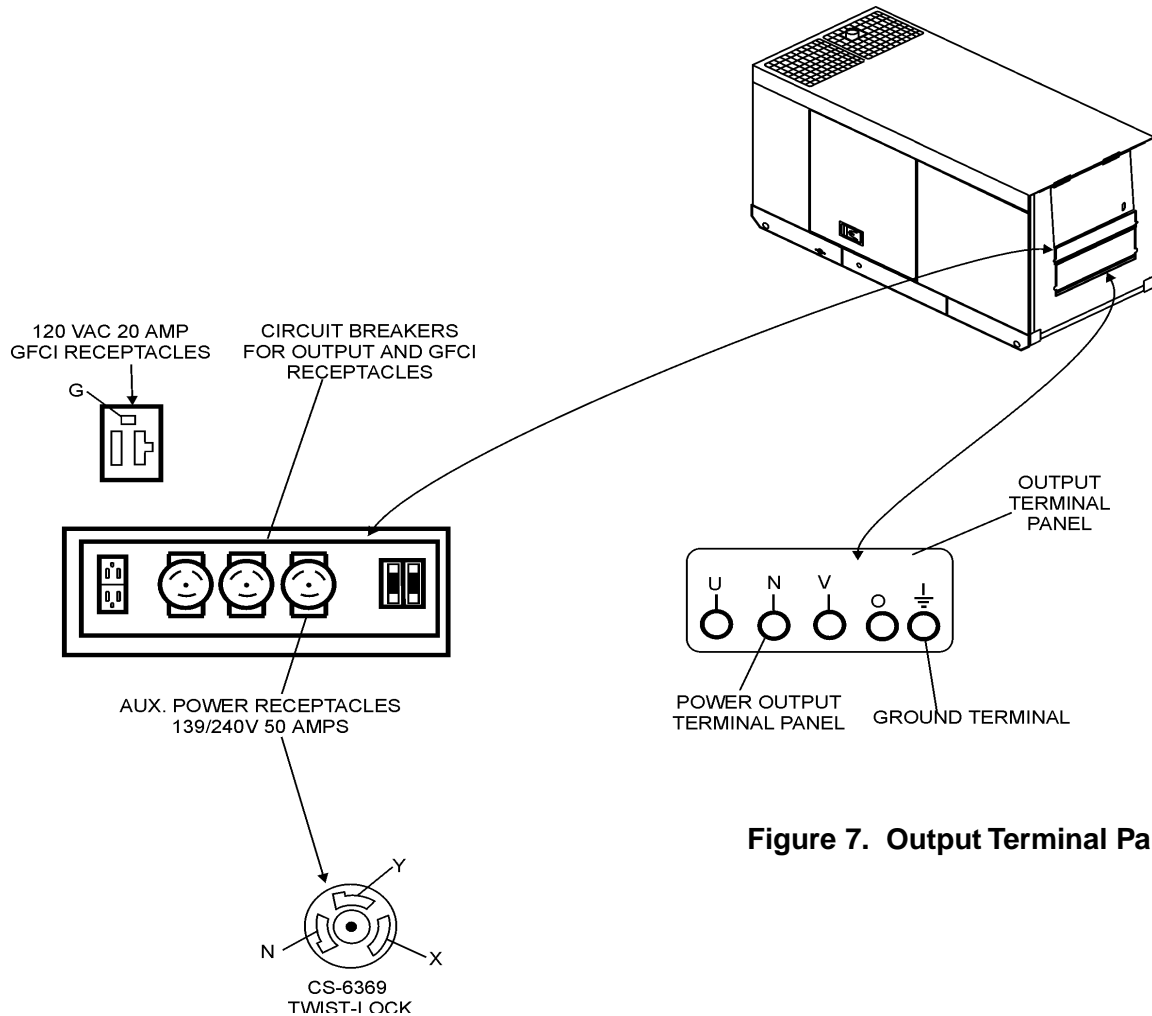


Figure 7. Output Terminal Panel

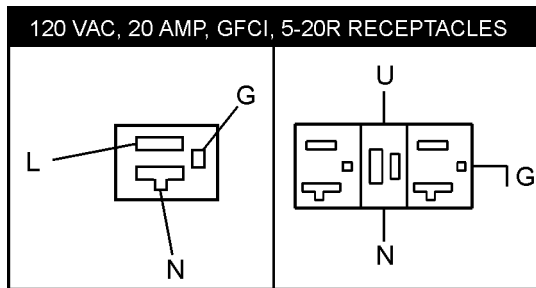


Figure 8. Duplex Receptacle Detail

120 Volt Receptacle

One GFCI Duplex Nema 5-20R (120V, 20 Amp) receptacle is provided on the output terminal. This receptacle can be used anytime the generator is in operation. The receptacle is controlled by the circuit breaker located on the control panel.

The reset button is for the GFCI when the circuit is tripped. Pressing the "Test Button" (See Figure 9) in the center of this receptacle will check the GFCI function. The receptacle should be tested at least once a month.

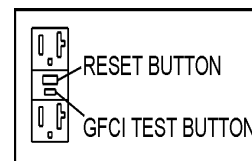


Figure 9. GFCI Test Button

BLW-400SSW — OUTPUT TERMINAL OVERVIEW

Output Terminal Panel Available Voltages

The BLW-400SSW is a single phase generator only. It is able to supply both 120 volt and 240 volt.

Maximum Amps

The BLW-400SSW can provide 41.7 amps at 120 or 240 volts. **Do not exceed the maximum amps!**

120V Hard Wire Hookup

The output terminal panel, when supplying single phase 120 volts, will provide two circuits available at 41.7 amps with any two wires plus the ground. (See Figure 10 below.)

240V Hard Wire Hookup

The output terminal panel, when supplying single phase 240 volts, will provide one circuit available at 41.7 amps with two wires plus the ground. (See Figure 11 below.)

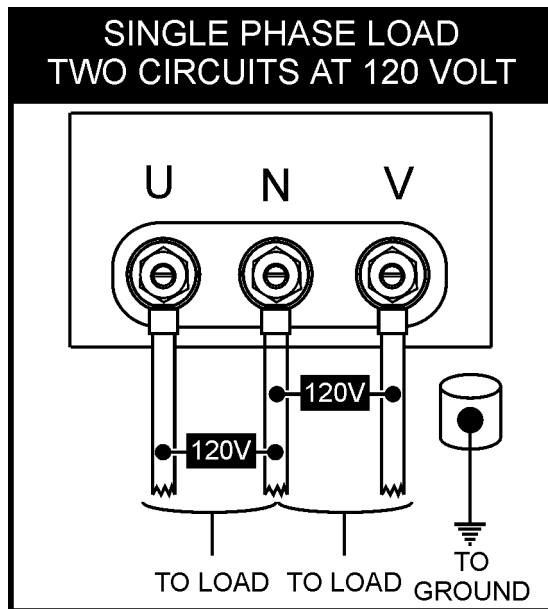


Figure 10. Hard Wire Hookup for 120 Volt

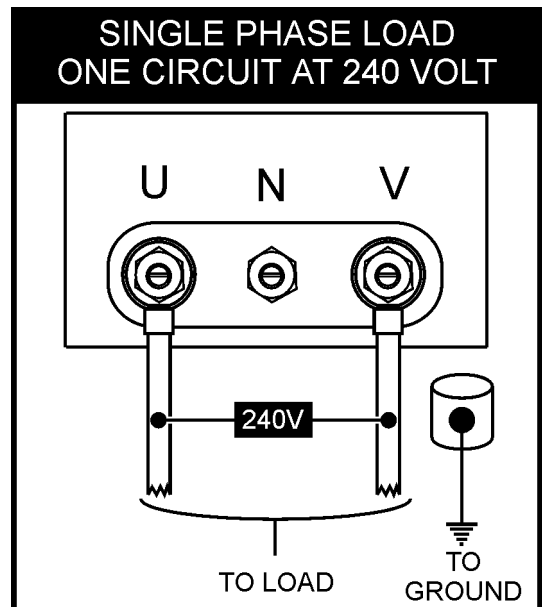


Figure 11. Hard Wire Hookup for 240 Volt

NOTE

When using plural single phase voltages, make sure to balance the load on each of the single phase legs.

Outdoor Installation

Install the welder/AC generator in a location where it will not be exposed to rain or sunshine. Make sure the Welder/AC generator is on secure level ground so it cannot slide or shift around. Also install the welder/AC generator so 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.

Foreign materials such as dust, sand, lint and abrasive materials will cause excessive wear to engine and alternator parts.

CAUTION :



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

Indoor Installation

Exhaust gases from diesel 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 and cause the engine to heat excessively.

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

CAUTION :



An electric shock may 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 electrical shock.

General Inspection Prior to Operation

The BLW-400SSW utilizes a welder/AC 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 welder/AC generator should always be used to connect 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 welder/AC generator from an overload, a 3-pole, 53 amp, *main* circuit breaker is provided. In addition 2-two pole, 25 amp breaker is provided for the G.F.C.I. receptacles. 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 welder/AC 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 welder/AC generator and point of use (load) is held to a minimum. Use the cable selection chart (Table 7) as a guide for selecting proper cable size.

Table 7. 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.	
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 welder/AC 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 12) on the dipstick. See Table 8 for proper selection of engine oil.

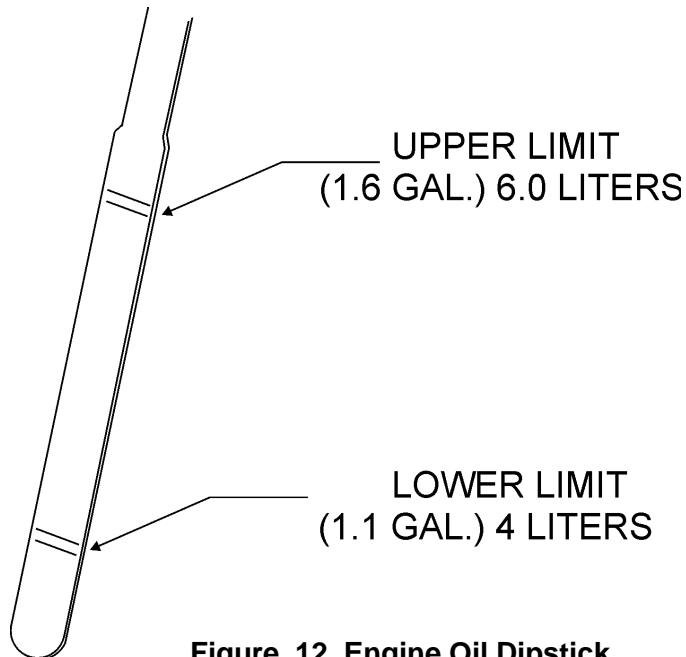


Figure 12. Engine Oil Dipstick

Fuel

Fill the fuel tank with clean diesel fuel. 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. Fuel spillage on a hot engine can cause a fire or explosion. If fuel 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 *Kobota Engine Operator's Manual* for further details.

Table 8. 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 antifreeze 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 9 for engine, radiator and reserve tank coolant capacities. Make sure the coolant level in the reserve tank is always between the "H" and the "L" markings.

Table 9. Coolant Capacity	
Engine and Radiator	1.1 Gal. (4.16L)
Reserve Tank	0.2 Gal. (0.75L)

Operation in Freezing Weather

When operating in freezing weather, be certain that the proper amount of antifreeze has been added. See Table 10 for antifreeze operating temperatures.

Table 10. 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 antifreeze is mixed with water, the antifreeze 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.

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 Operator's Manual*.

The fan belt tension is proper if the fan belt (Figure 5) bends 7 to 9 mm (0.28- to 0.35 in.) when depressed with the thumb as shown in Figure 13 below.

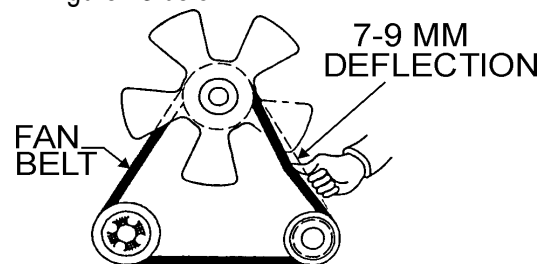


Figure 13. Fan Belt Tension

CAUTION :



Never place hands near the belts or fan while the welder/AC generator is running.

Air Cleaner

Periodic cleaning/replacement is necessary. Inspect it in accordance with the *Kobota Engine Operator's 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.

Single Phase Load

Always be sure to check the nameplate on the welder/AC generator and equipment to insure the wattage, amperage and frequency requirements are satisfactorily supplied by the welder/AC 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 welder/AC generator is 1.0. See Table 11 below when connecting loads.

Table 11. 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
Common power tools	0.8

- 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.

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, change the idle control switch to the "OFF" position.

CAUTION:



Before connecting this welder/AC 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.

When connecting ordinary power tools, a capacity of up to the generating set's rated output (kW) multiplied by 0.8 can be used. Use Table 12 below for proper welding electrode size for power capacity.

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.

Table 12. Electrode and AC Power Capacity

Welding Electrode Size	AC Power Source Capacity
0	14kW
3/32" TO 1/8"	6kW
5/32"	4kW
3/16"	2kW
7/32" TO 1/4"	1kW

BLW-400SSW—WELDER OPERATING INSTRUCTIONS

Welding Cables and Polarities

Connect the welding cables (Figure 14) to the welder's output terminals located on the control panel. The output terminals have (+) and (-) polarities. Select the appropriate polarities according to the application (See Welding Applications, Table 13).

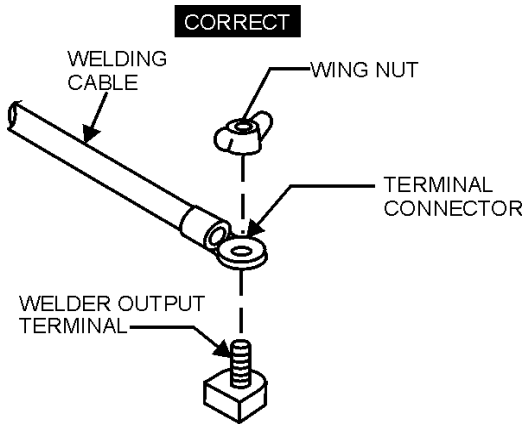


Figure 14. Electrode Cable Connection (Correct)

NOTE
ALWAYS attach terminal connectors at the end of each cable. **NEVER** connect exposed or frayed wires (Figure 15) directly to the terminals. Exposed wiring may cause shocks or di-electric breakdown from poor contact.

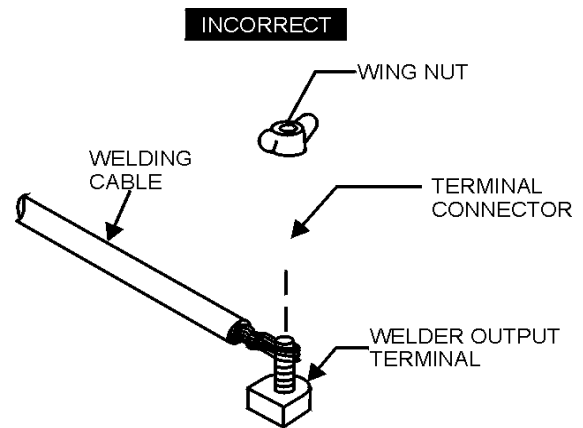


Figure 15. Electrode Cable Connection (Incorrect)

Table 13. Welding Applications

POLARITY	WELDING METHOD	TYPICAL APPLICATIONS
Straight Polarity	(+) ... Ground Clamp (Base Metal)	Welding steel materials for general structures, and thickness plates Air gouging
	(-) ... Electrode Holder	Arc welding for copper alloy
Reverse Polarity	(+) ... Electrode Holder	Build-up welding
	(-) ... Ground Clamp (Base Metal)	Arc welding of thin plates Arc welding of stainless steel

BLW-400SSW—WELDER OPERATING INSTRUCTIONS

Duty Cycle

The welder is rated at 100% duty cycle at 350 amps. However, the duty cycle depends upon the welding current and number of operators. Select the appropriate duty cycle from Table 14 to prevent overload.

Table 14. Duty Cycle

Duty Cycle %		100	75
Current (A)	SINGLE	350 or less	400
	DUAL	170 or less	200

FIVE ESSENTIALS FOR PROPER WELDING PROCEDURES

Besides the steady sizzling sound that a correct arc produces, the shape of the molten pool and the movement of the metal at the rear of the pool serve as a guide in checking weld quality. In a correctly made deposit, the ripples produced on the bead will be uniform and the bead will be smooth, with no overlap or undercut.

1. Correct Electrode Size

The correct choice of electrode size involves consideration of a variety of factors. Such as the type, position, and preparation of the joint, the ability of the electrode to carry high current values without injury to the weld metal or loss of deposition efficiency. The mass of work metal and its ability to maintain its original properties after welding, the characteristics of the assembly with reference to effect of stresses set up by heat application, the practicability of heat treatment before and/or after welding, the specific requirements as to welding quality and the cost of achieving the desired results.

2. Correct Current

If current on equipment is too high or too low, you are certain to be disappointed in your weld. If too high, the electrode melts too fast and your molten pool is large and irregular. If too low, there is not enough heat to melt the base metal and your molten pool will be too small, will pile up, and look irregular.

3. Correct Arc Length

If the arc is too long or voltage too high the metal melts off the electrode in large globules which wobble from side to side as the arc wavers, giving a wide, spattered and irregular bead—with poor fusion between original metal and deposited metal.

If the arc is too short or voltage too low, there is not enough heat to melt the base metal properly and the electrode quite often sticks to the work. This gives a high, uneven bead, having irregular ripples and poor fusion.

4. Correct Travel Speed

When your speed is too fast: your pool does not last long enough, impurities and gas is locked in. The bead is narrow and ripples pointed. When speed is too slow: the metal piles up, the bead is high and wide, with a rather straight ripple.

5. Correct Electrode Angle

The electrode angle is of particular importance in fillet welding and deep groove welding. Generally speaking, when making a fillet weld, the electrode should be held so that it bisects the angle between the plates and is perpendicular to the line of weld. If under cut occurs in the vertical member lowers the angle of the arc and directs the arc toward the vertical member.

CAUTION :



Always wear welding shield with correct filter shade when welding.

NOTE

Under the above conditions, the **welder** can supply a welding current of 120 amps, and the **welder/AC generator** can supply up to 3 kW of power at either 120 or 240 volts.

BLW-400SSW— START-UP INSTRUCTIONS

START UP INSTRUCTIONS

1. Check the oil level before starting the engine. Replenish if necessary. Use specified oil as indicated on page 28, Table 8.
2. Check the coolant level in the radiator and subtank. Always maintain the antifreeze level between the 'Full' and 'Low' level. Fasten the radiator cap securely.

CAUTION:



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

3. Check the fuel level and replenish as necessary. Turn the fuel cock lever to the 'ON' position (Figure 16) located inside the engine compartment.

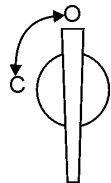


Figure 16. Fuel Cock 'ON' position

4. Connect load and welding apparatus to output terminals (Figure 17). Check the circuit breakers are in the 'OFF' position.

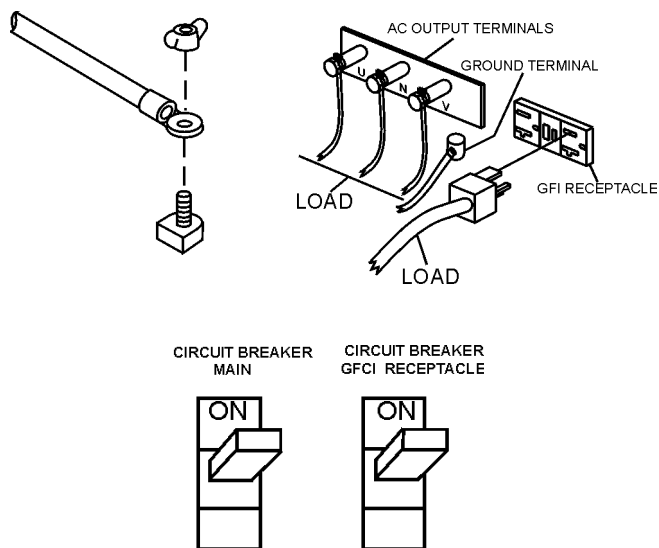


Figure 17. Terminal Connection and Circuit Breakers

5. Connect the battery cables to the battery with red terminal to positive and black to negative (Figure 18). **DO NOT CONNECT IN REVERSE.**

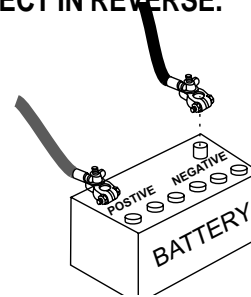


Figure 18. Battery connection

6. Set the "Current Range Selector" switch (Figure 19) to 'Single' for one operator or 'Dual' for two operators.

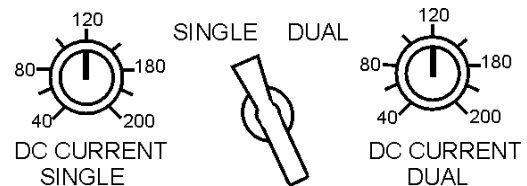


Figure 19. Current Range Selector Switch

7. Always operate the welder with the doors closed (Figure 20). Operation with the doors open may cause insufficient cooling to the unit, and may damage the unit.

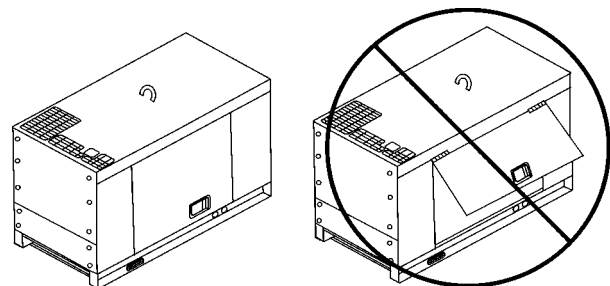


Figure 20. Doors in closed position

BLW-400SSW— START-UP INSTRUCTIONS

8. Turn the Automatic Idle Control switch to the 'OFF' position (Figure 21).



Figure 21. Automatic Idle Control Switch in 'OFF' position

9. Insert the key into the starter switch and turn the 'Run' position (Figure 22). The oil pressure light will temporarily turn on.

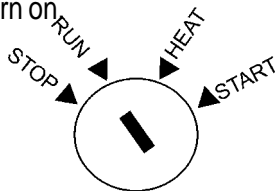


Figure 22. Starter Switch to 'RUN' position

10. Turn the key further to the 'Heat' position. The preheat light will go on (Figure 23). Once the light turns off, the engine is ready to operate.

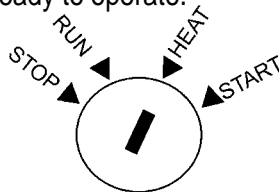


Figure 23. Starter Switch to 'HEAT' position

11. Turn the key to the 'Start' position (Figure 24) to start the engine, then release the key. Check the engine indicators. If the oil pressure is still on, turn off the engine and check the oil. If the engine does not start within 10 seconds after the key is turned to the 'Start' position, release the key, and wait 30 seconds. Repeat procedure above.

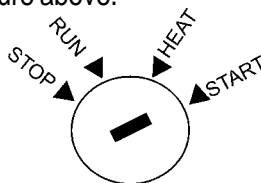


Figure 24. Starter Switch to 'START' position

CAUTION:



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

12. Switch the engine idle switch to 'On' and let engine idle for about 5 minutes. Check the engine for abnormal vibrations or sounds. Turn the engine idle switch to either 'Off' or keep in 'On (Figure 25)' position for full engine operation.



Figure 25. Automatic Idle Control Switch in the 'ON' position

13. Once the engine is running and operating properly, switch the circuit breakers to 'ON' position (Figure 26).

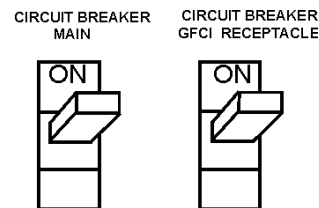


Figure 26. Circuit Breaker in 'ON' position

14. Check the voltmeter and adjust to proper voltage needed for operation (Figure 27).

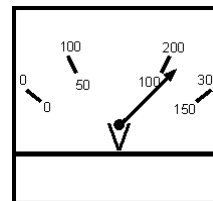


Figure 27. AC Voltmeter with load

Shutdown

1. Switch the circuit breakers to 'OFF' position (Figure 28).

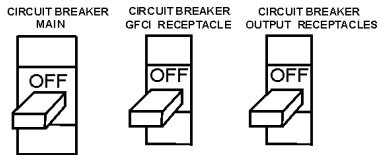


Figure 28. Main and receptacle circuit breakers

2. Switch the Idle Control switch to 'OFF' position (Figure 29). Let engine run for 5 minutes in idle mode.



Figure 29. Idle Control Switch

3. Turn the key switch to 'STOP' position (Figure 30).

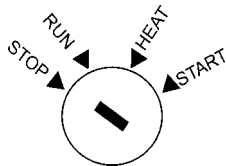


Figure 30. Key switch set to 'STOP' position

4. Remove welding apparatus and output terminal loads from welder/generator set.
5. Turn the fuel cock to closed position.

Emergency Shut-Down

To stop during an emergency, turn the key switch to 'STOP' position.

CAUTION :



Do not shut down the welder/generator set by shutting off the engine except in an emergency.

General Inspection

At least daily or prior to each use, the welder/AC 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 the air cleaner. If welder/AC generator is used in severe dusty areas service air cleaner element more frequently.

1. Release the air cleaner retaining clamps (Figure 31) and remove the air cleaner element.
2. Wipe the inside of the air cleaner with a clamp 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.

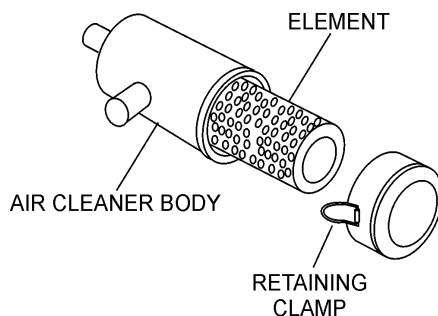


Figure 31. Air Cleaner

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.

Generator Storage

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

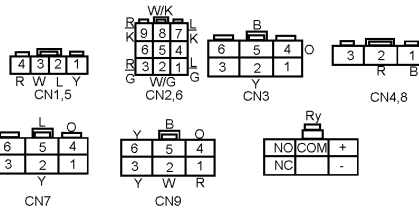
- Drain the fuel tank completely.
- Run the engine until **all** the gasoline is completely consumed.
- Completely drain the oil from the crankcase and refill with fresh oil.
- Disconnect the **negative** battery cable from the battery.
- Clean all external parts of the welder/AC generator with a cloth.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

BLW-400SSW —GENERATOR WIRING DIAGRAM

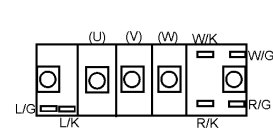
- SYMBOL PART NAME**
 + - OUTPUT TERMINAL, WELDING
 L1, L2 REACTOR
 SW 1 CURRENT RANGE SELECTOR
 SCR1, 2 THYRISTORS
 Re1, 2 RECTIFIERS
 SC1,2 CONTROL UNIT, THYRISTOR
 VR 1, 2 CURRENT CONTROL

COMBINATION TERMINAL

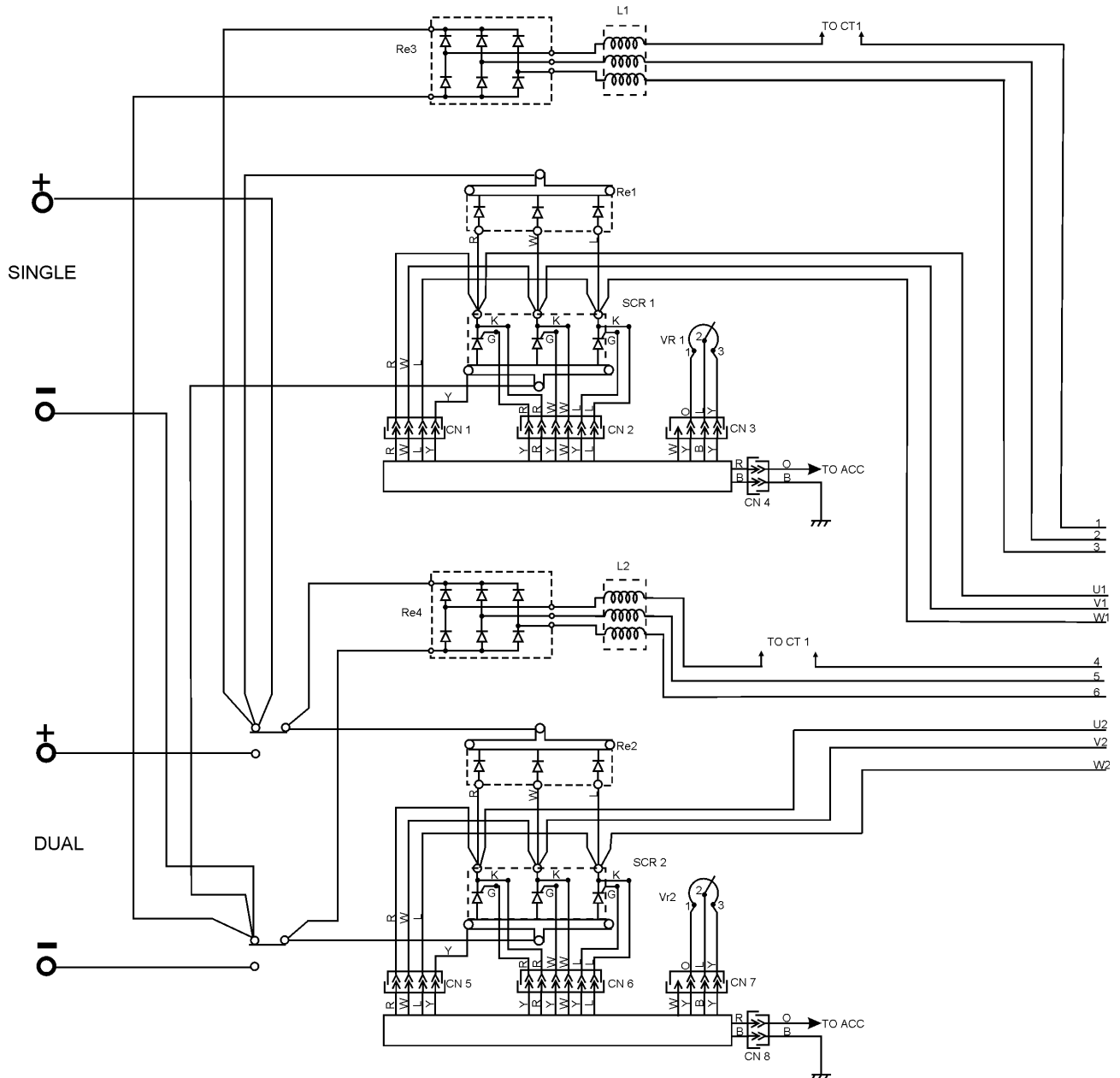
19	30	50	ACC	J	K
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CONNECTOR
(VIEW FROM INSERTING WIRE SIDE)

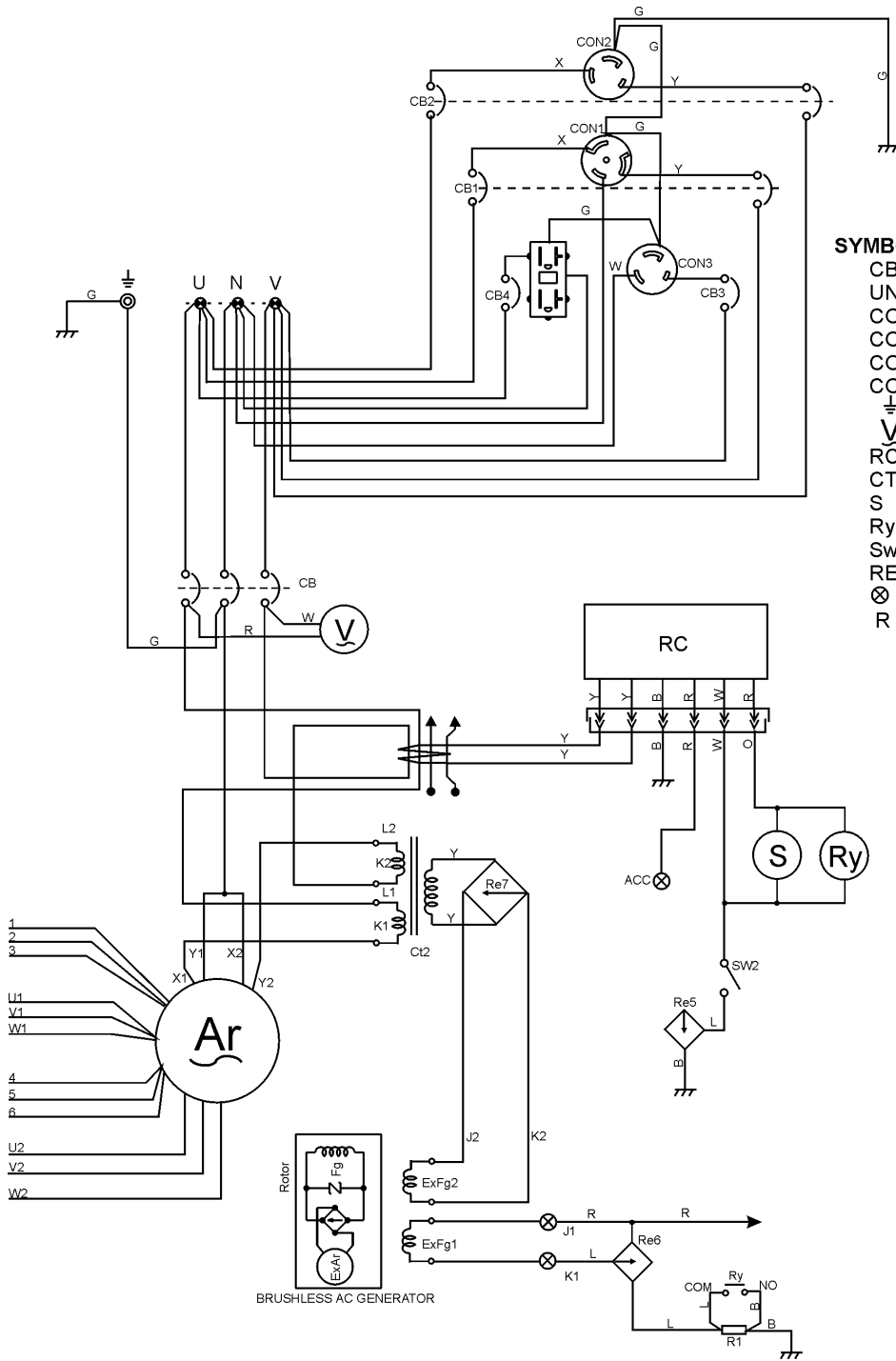


THYRISTORS



SEE NEXT PAGE

BLW-400SSW —GENERATOR WIRING DIAGRAM



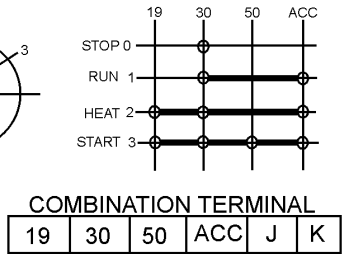
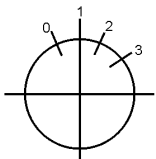
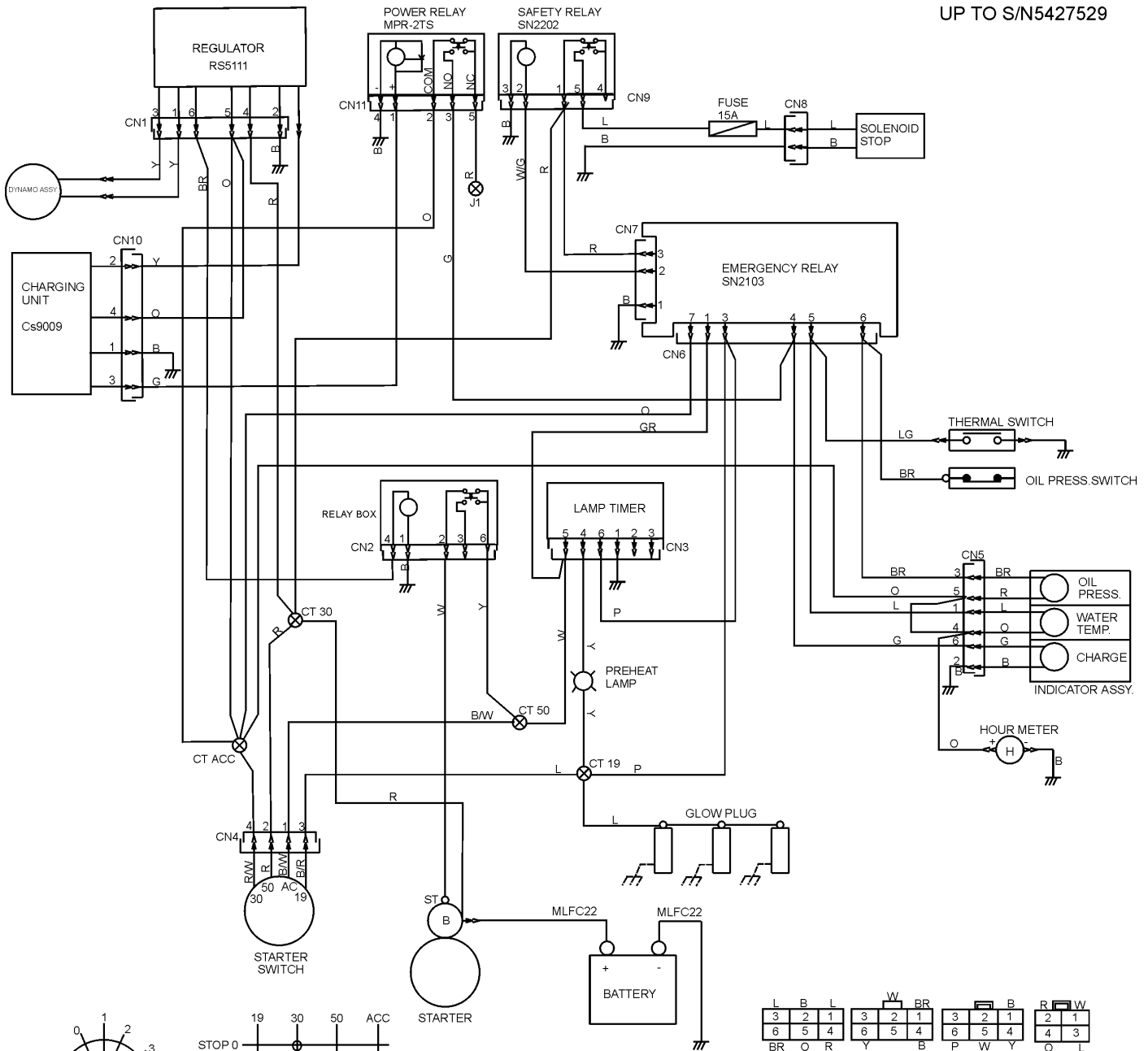
SYMBOL	PART NAME
CB	CIRCUIT BREAKER
UNV	OUTPUT TERMINAL
CON1	RECEPTACLE (120/240V)
CON2	RECEPTACLE (240V)
CON3	RECEPTACLE (120V)
CON4	RECEPTACLE (120V GFCI)
⊥	GROUND TERMINAL
V	AC VOLTMETER
RC	CONTROL UNIT, IDLE CONTROL
CT	CURRENT TRANSFORMER
S	ROTARY SOLENOID
Ry	RELAY
Sw2	SWITCH, IDLE CONTROL
RE	RECTIFIER
⊗	TERMINAL BOARD
R	RESISTOR

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

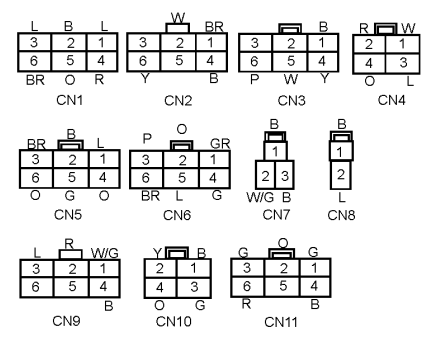
SEE PREVIOUS PAGE

BLW-400SSW —ENGINE WIRING DIAGRAM

UP TO S/N5427529



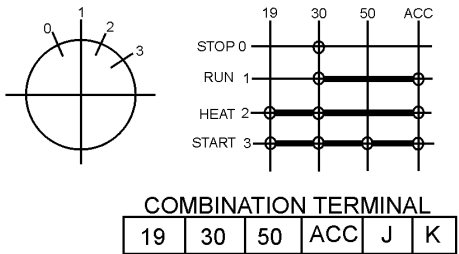
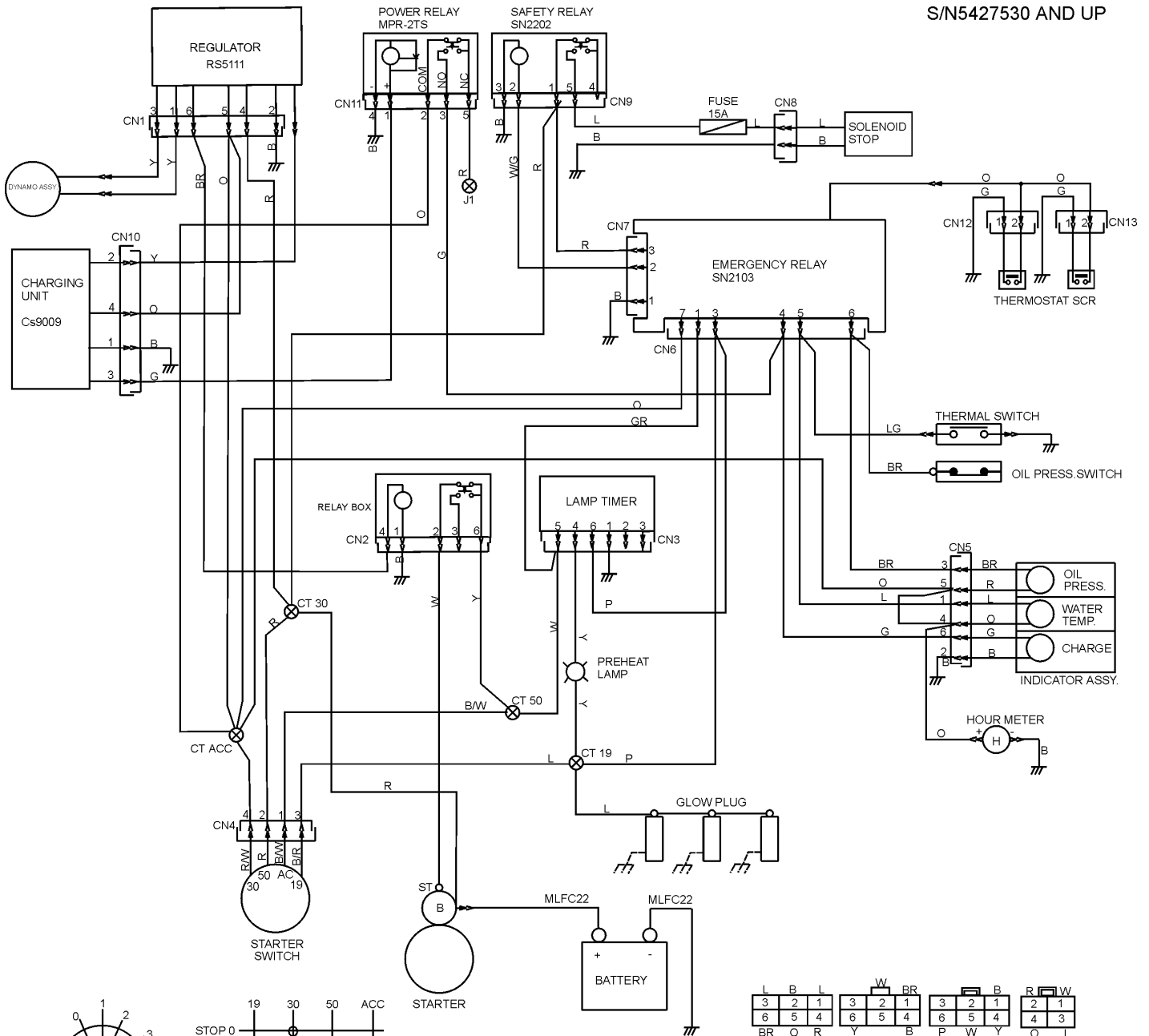
COLOR CODE	
MARK	WIRE COLOR
B	BLACK
L	BLUE
BR	BROWN
G	GREEN
GR	GRAY
V	VIOLET
P	PINK
R	RED
W	WHITE
Y	YELLOW
LB	LT. BLUE
LG	LT. GREEN
O	ORANGE



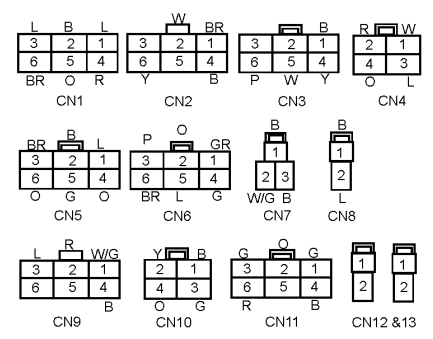
CONNECTOR VIEW AT WIRING SIDE

BLW-400SSW —ENGINE WIRING DIAGRAM

S/N5427530 AND UP



COLOR CODE	
MARK	WIRE COLOR
B	BLACK
L	BLUE
BR	BROWN
G	GREEN
GR	GRAY
V	VIOLET
P	PINK
R	RED
W	WHITE
Y	YELLOW
LB	LT. BLUE
LG	LT. GREEN
O	ORANGE



BLW-400SSW — 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 15) information shown below and on the preceding 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 15. ENGINE TROUBLESHOOTING (PART 1)

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.	

TABLE 15. ENGINE TROUBLESHOOTING (PART 2)

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.

BLW-400SSW — TROUBLESHOOTING (ENGINE)

TABLE 15. ENGINE TROUBLESHOOTING (PART 3)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
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 and remains at low speed.	Clogged fuel strainer?	Clean or replace.
	Clogged air cleaner?	Clean or replace.
	Disconnected wiring?	Check and repair wiring.
Starter does not run.	Battery discharged?	Charge battery.
	Starter malfunctioning?	Repair or replace.
	Key switch malfunctioning?	Repair or replace.
	Wiring disconnected?	Connect wiring.
	Fuse F5 burned out?	Replace fuse.
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 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 speed rises and battery discharges too soon.	Defective engine regulator?	Replace regulator.
	Defective wiring?	Repair or replace wiring.
Engine speed rises and engine seems overloaded.	Defective alternator?	Repair or replace alternator.
	Damaged alternator bearing?	Replace alternator bearings.
Engine starts and "Idle Control Switch" is in OFF position. Engine speed rises and engine has large vibrations. Overloads.	Bad engine installation?	Repeat installation 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 tightness.
	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.

BLW-400SSW — TROUBLESHOOTING (WELDER)

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 Welder Troubleshooting (Table 16) information shown below and on the proceeding page. If the problem cannot be remedied, consult our company's business office or service plant.

TABLE 16. WELDER TROUBLESHOOTING		
SYMPTOM	POSSIBLE PROBLEM	SOLUTION
AC voltage is not present in generator's AC section or welding section	Low speed?	Refer to "Engine remains at low speed" section.
	Defective resistor (R)?	Replace resistor.
	Defective field controller?	Replace 'Field Controller'.
	Defective rotor?	Replace rotor.
	Defective wiring?	Repair wiring.
	Blown fuse F3?	Replace fuse.
Poor welding and low voltage in AC power section.	Defective field controller?	Replace 'Field Controller'.
	Defective rotor?	Replace rotor.
	Low speed?	Refer to "Engine remains at low speed" section.
	Layer short-circuit in armature winding?	Replace armature.
	Defective wiring?	Repair wiring.
AC power is normal but there is no welding capability. Voltage adjustment is in-operative.	Defective current transformer?	Replace transformer, CT1, CT2, or CT3.
	Defective field controller?	Replace 'Field Controller'.
	Defective rectifier(RE)?	Replace rectifier.
	Defective reactor (DCL or L1 or L2)?	Replace reactor.
	Inadequate length and thickness of welding cable.	See table 2 for correct welding cable.
	Layer short-circuit in armature winding?	Replace armature.
	Defective wiring?	Repair wiring.
	Defective selector switch?	Replace S1 switch.
AC power is too low or cannot be used, but welding is normal.	Defective circuit breaker?	Replace circuit breaker.
	Layer short-circuit in armature winding (AC side)?	Replace armature.
	Defective wiring?	Repair wiring.
	Defective field controller?	Replace 'Field Controller'.
Battery discharges too soon.	Defective engine regulator?	Replace regulator.
	Defective wiring?	Repair wiring.
	Defective ignition switch?	Replace ignition switch.

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

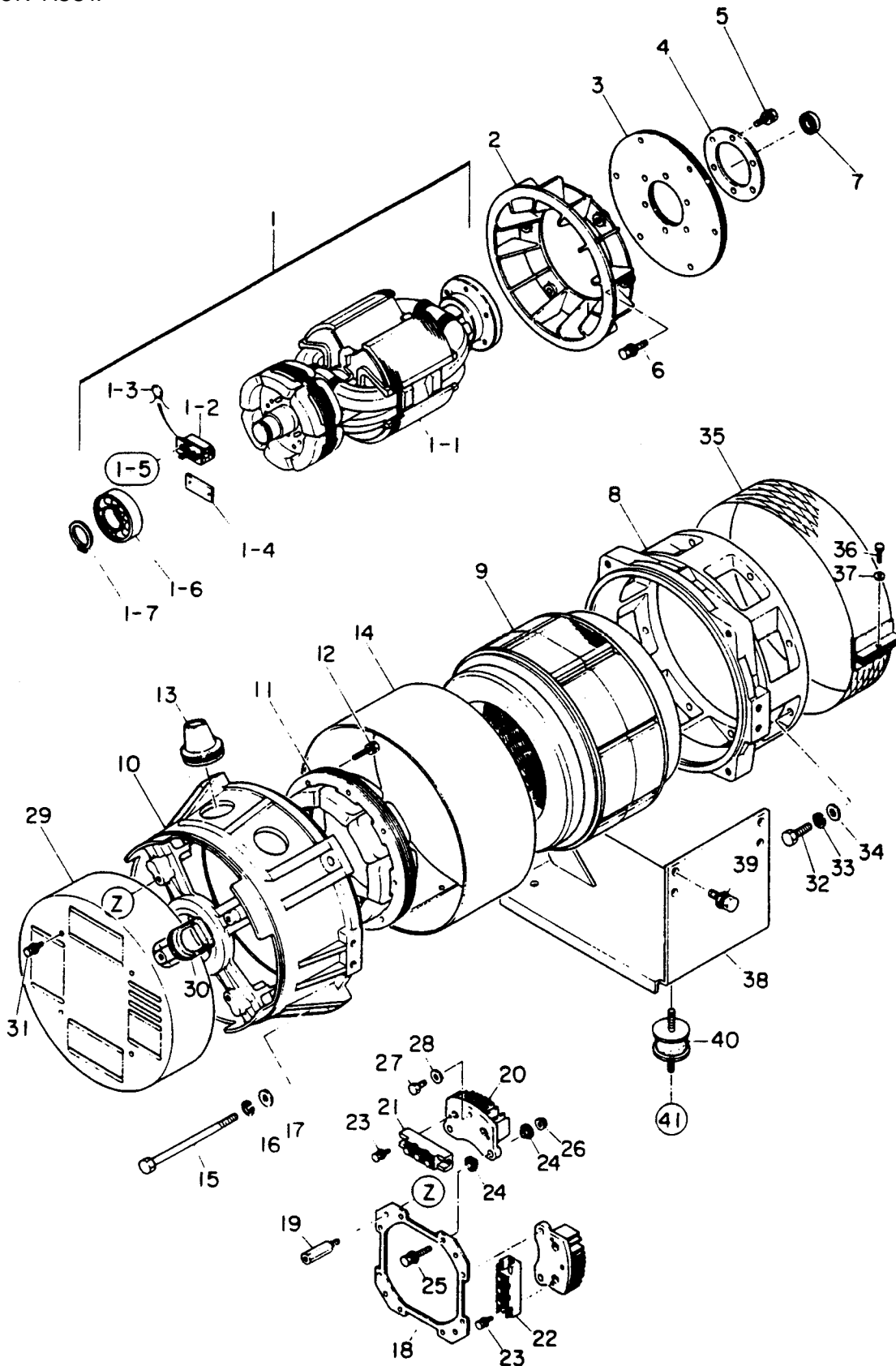
The contents of this parts catalog are subject to change without notice.

BLW-400SSW W/KUBOTA V1205 DIESEL ENGINE 1 TO 3 UNITS

Qty.	P/N	Description
1	0601840073	RHEOSTAT VOLTAGE REGULATOR
1	0601840103	KNOB, RHEOSTAT
1	1628672940	RADIATOR HOSE, UPPER
1	1628672850	RADIATOR HOSE, LOWER
1	1624173350	RADIATOR HOSE, BYPASS UP TO S/N5427529
1	1G32172851	RADIATOR HOSE, LOWER S/N5427530~
5	1627132090	OIL FILTER
5	1627143560	FUEL FILTER
5	P535362	AIR ELEMENT
1	1584139010	UNIT, OIL PRESSURE
1	1753883040	UNIT, WATER TEMPERATURE
5	0601810207	BULB
1	0601810248	BULB, PREHEAT
1	1624197010	FAN BELT
2	2741055150	IGNITION KEY
1	0801840104	INSULATOR WASHER
1	0801840004	INSULATOR WASHER
1	0601803043	CURRENT RANGE SELECTOR SWITCH
1	0601803115	KNOB
1	0601802609	CIRCUIT BREAKER
1	1790150203	ROTARY SOLENOID
1	0601820038	RECTIFIER
1	1621849004	OUTPUT TERMINAL
1	8830200900	SLOW DOWN
1	0845500104	FUEL CAP
1	0601823820	FIELD CONTROL UNIT
1	7961808903	REACTOR

BLW-400SSW --- GENERATOR ASSY.

GENERATOR ASSY.



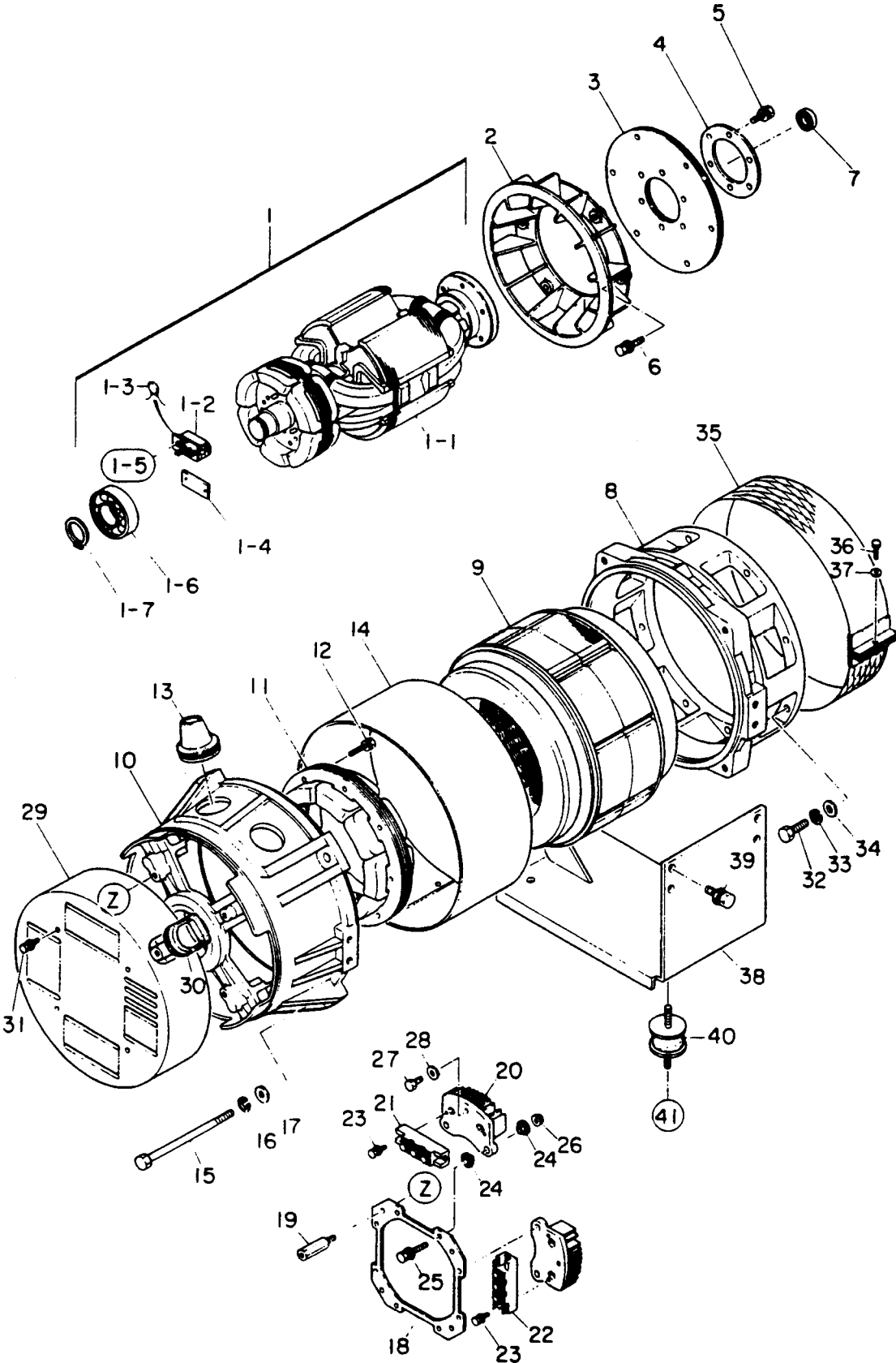
BLW-400SSW ---GENERATOR ASSY.

GENERATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7961000003	ROTOR ASSY	1	
1-1	7961000003	FIELD ASSY.....	1	REPLACES 7961040003
1-2	7961025004	RECTIFIER	1	
1-3	0601822640	SURGE ABSORBER	1	RNR15G471K
1-4	7961048004	BALANCING PLATE	1	
1-5	0021004035	MACHINE SCREW	4	
	0030004000	HEX. NUT	4	REPLACES 0207004000
	0040004000	LOCK WASHER	4	
	031104080	PLAIN WASHER	4	REPLACES 0041204000
1-6	0070806307	BEARING	1	6307DDUC3; REPLACES 0071906307
1-7	0080000035	SNAP RING	1	
2	7611070003	FAN	1	
3	7611611003	COUPLING DISK	4	
4	3311612004	WASHER, COUPLING HUB	1	
5	011208025	HEX. HEAD BOLT	6	REPLACES 0012808025
6	0012308030	HEX. HEAD BOLT	6	
7	0070506803	BEARING	1	6803ZZ
8	7961315112	COUPLING HOUSING	1	
9	7961341303	ARMATURE ASSY.	1	
10	7961315312	END BRACKET	1	
11	7961350103	FIELD ASSY. EXCITER	1	
12	0017106035	HEX. HEAD BOLT	4	
13	0845041804	GROMMET	2	
14	7961334004	COVER	1	
15	7611317504	SET BOLT	4	
16	0040012000	LOCK WASHER	4	
17	031112230	PLAIN WASHER	4	REPLACES 0041212000
18	7961843504	BRACKET, RECTIFIER	1	
19	7961516204	JOINT	4	
20	7961844603	FIN	4	REPLACES 7961844503 AND 7961844603A
21	0601823281	RECTIFIER	2	RM100SZ6S
22	0601821147	THYRISTOR	2	TM100SZM
23	0017105016	HEX. HEAD BOLT	8	
24	1031890004	INSULATOR WASHER	16	
25	011208035	HEX. HEAD BOLT	8	REPLACES 0017108035
26	020108060	HEX. NUT	8	REPLACES 0207208000
27	0019008010	HEX. HEAD BOLT	4	
28	0041408000	PLAIN WASHER	4	
29	7961331103	COVER	1	

BLW-400SSW --- GENERATOR ASSY.

GENERATOR ASSY.



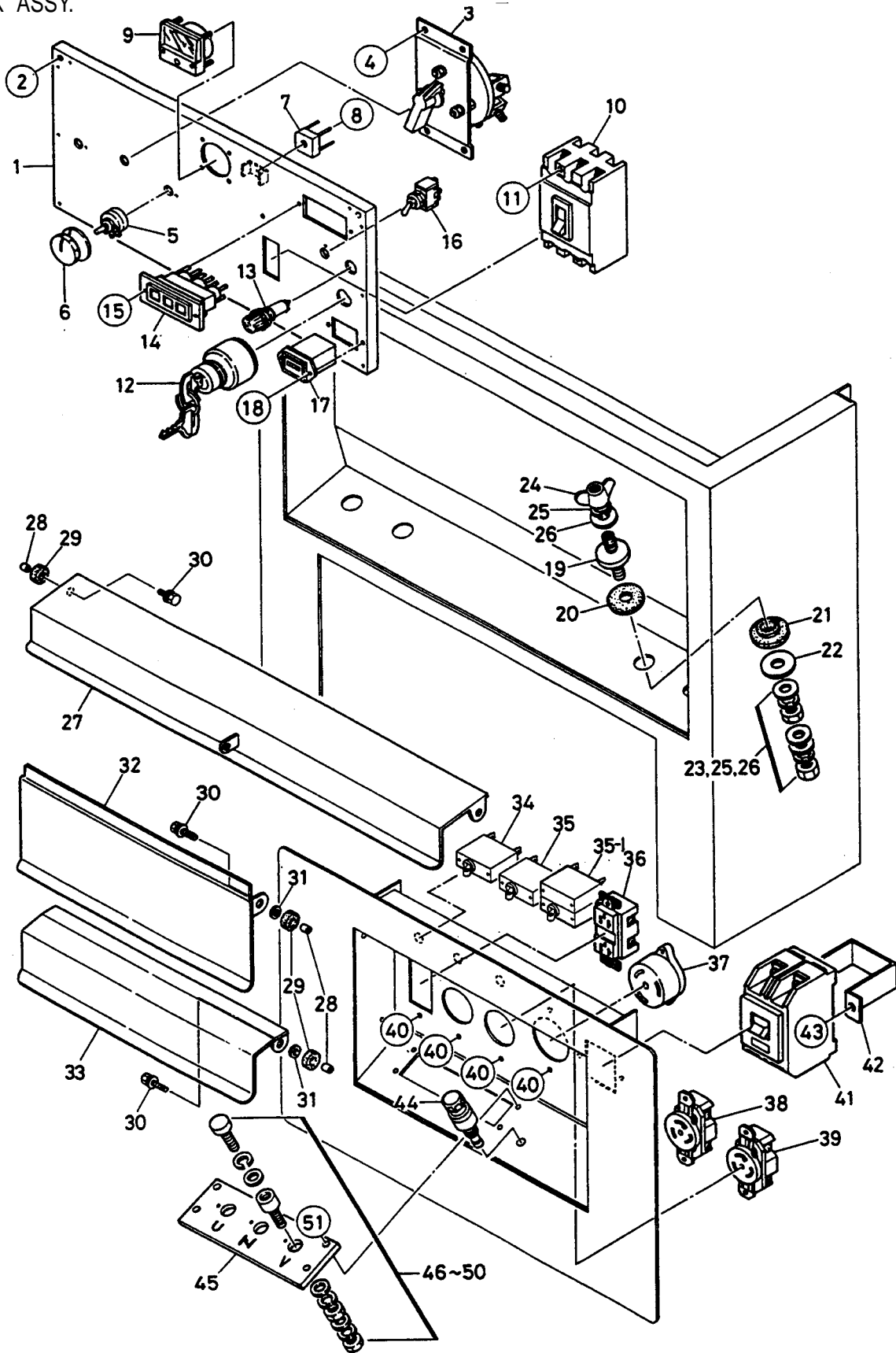
BLW-400SSW ---GENERATOR ASSY.

GENERATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
30	W1961324003	GROMMET	2	
31	0017106016	HEX.HEAD BOLT	8	
32	0010010035	HEX. HEAD BOLT	8	
33	0040010000	LOCK WASHER	8	
34	031110160	PLAIN WASHER	8	REPLACES 0041210000
35	7961332003	COVER	1	
36	0010106030	HEX. HEAD BOLT	1	
37	952404470	PLAIN WASHER	1	REPLACES 0041206000
38	7961320613	GENERATOR FOOT	1	
39	012212030	HEX. HEAD BOLT	8	REPLACES 0017112030
40	0805083904	RUBBER SUSPENSION	2	
41	0207001000	HEX. NUT	4	
42	0601831052	THERMAL SWITCH	2	S/N5427530~
43	0021303006	MACHINE SCREW	4	S/N5427530~

BLW-400SSW --- CONTROL BOX ASSY.

CONTROL BOX ASSY.



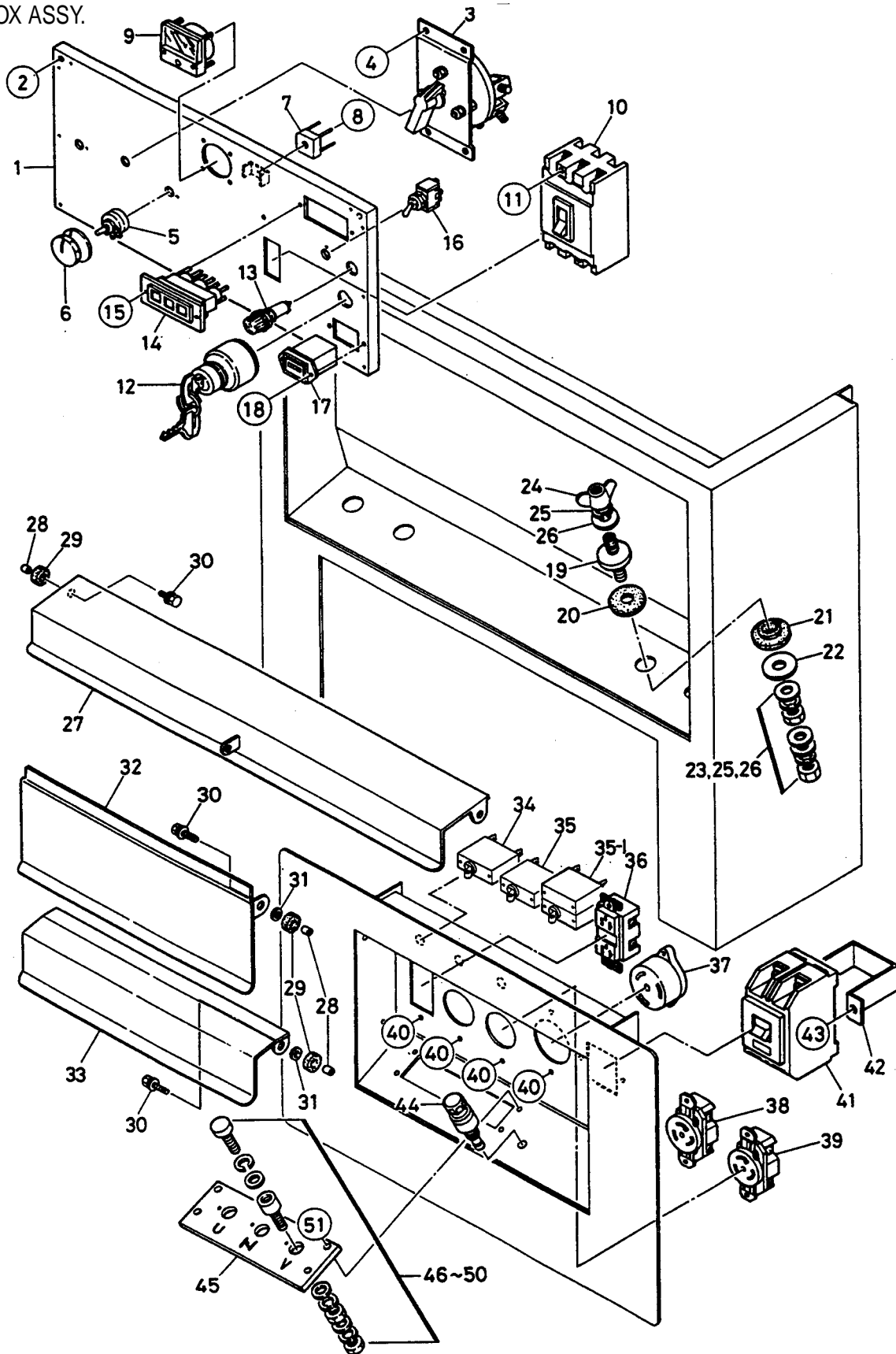
BLW-400SSW --- CONTROL BOX ASSY.

CONTROL BOX ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7961822703	CONTROL PANEL	1	
2	0021506030	MACHINE SCREW	2	
3	0601803043	CURRENT RANGE SELECTOR	1	SK2022L
4	0017106016	HEX. HEAD BOLT	4	
5	0601840065	CURRENT REGULATOR	2	RV24YN20SB10K OHM
6	0601840103	KNOB	1	
7	0601823204	RECTIFIER	1	S5VB60
8	0027103016	MACHINE SCREW	1	
9	0601800281	AC VOLTMETER	1	SCF-5A0~300V(0~150v)
10	0601806528	CIRCUIT BREAKER	1	SC100SC,3P,53A
11	0021004075	MACHINE SCREW	2	
	0040004000	LOCK WASHER	2	
	031104080	PLAIN WASHER	2	REPLACES 0041204000
12	3741059110	STARTER SWITCH	1	REPLACES 3741059113 AND 0602100077
13	0602103092	PREHEAT LAMP	1	
	0601810248	BULB	1	
14	0602115050	INDICATOR ASSY	1	PLB123A
	0601810207	BULB	3	
15	0027105016	MACHINE SCREW	2	
16	0601830735	SWITCH, SLOW DOWN	1	ET110A12
17	0601800680	HOUR METER	1	15113
18	0027103516	MACHINE SCREW	2	
	0030003500	HEX. NUT	2	
19	0801888204	OUTPUT TERMINAL	4	
20	0801840104	INSULATOR WASHER	4	
21	0801840004	INSULATOR WASHER	4	
22	6109170	SET WASHER. OUTPUT TERMINAL	4	REPLACES 0801841204
23	0039312000	HEX. NUT	8	REPLACES 0039512000
24	0038812000	WING NUT	4	
25	0040012000	LOCK WASHER	12	
26	0041412000	PLAIN WASHER	16	
27	7961865703	COVER, OUTPUT TERMINAL	1	
	7961866104	RUBBER SHEET	1	
28	0821800014	COLLAR	6	
29	0805088004	RUBBER WASHER	3	
30	011606025	HEX. HEAD BOLT	6	REPLACES 0017106025
31	952404470	PLAIN WASHER	2	REPLACES 0041606000
32	7671865003	COVER, OUTPUT TERMINAL	1	
	7671865504	RUBBER SHEET	1	
33	7671865113	COVER, OUTPUT TERMINAL	1	
	7671865604	RUBBER SHEET	1	
34	0601806423	CIRCUIT BREAKER	1	CP31E/20N
35	0601806424	CIRCUIT BREAKER	1	CP31E/30N
35-1	0601806425	CIRCUIT BREAKER	1	CP32E/30N

BLW-400SSW --- CONTROL BOX ASSY.

CONTROL BOX ASSY.



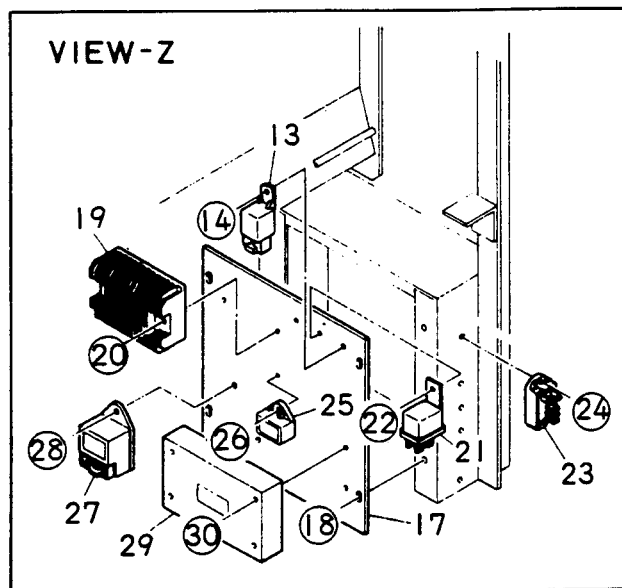
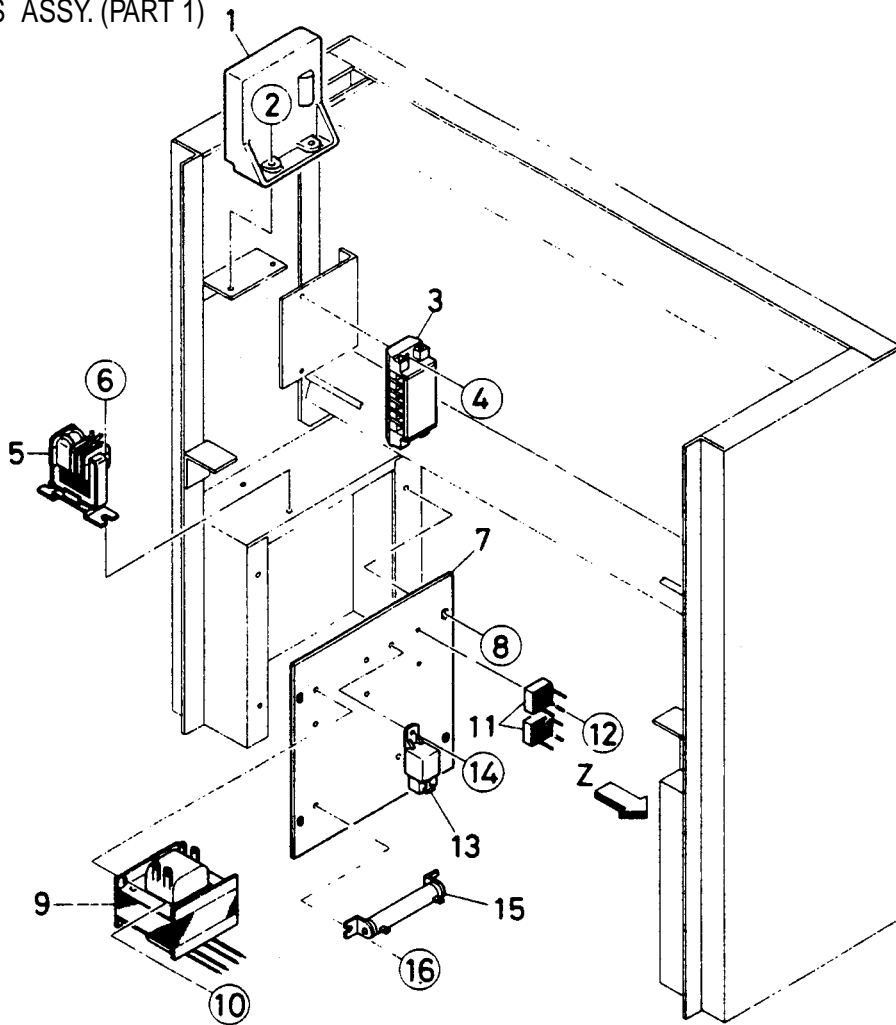
BLW-400SSW --- CONTROL BOX ASSY.

CONTROL BOX ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
	0027103006	MACHINE SCREW	6	
36	0601811034	RECEPTACLE, AUX. POWER	1	CS6369 125/250V50A
37	0601812597	RECEPTACLE, AUX. POWER	1	5-20R125V20A
38	0601811031	RECEPTACLE, AUX. POWER	1	L5-30R125V30A
39	0601811033	RECEPTACLE, AUX. POWER	1	L6-30R250V30A
40	0027104012	MACHINE SCREW	8	
	030004000	HEX. NUT	8	REPLACES 0207004000
41	0601805874	CIRCUIT BREAKER	1	KM-52,2P,50A
42	4341817004	BRACKET, CIRCUIT BREAKER	1	
43	0027104030	MACHINE SCREW	2	
44	0601815171	GROUND TERMINAL	1	BTTT
45	7561860104	SET BOARD, OUTPUT TERMINAL	1	
46	D5235000004	OUTPUT TERMINAL	3	
47	014208020	HEX.HEAD BOLT	3	REPLACES 0019008020
48	0039308000	HEX. NUT	6	
49	0040008000	LOCK WASHER	9	
50	0041408000	PLAIN WASHER	9	
51	011606025	HEX. HEAD BOLT	4	REPLACES 0017106025

BLW-400SSW --- CONTROL PARTS ASSY. (PART 1)

CONTROL PARTS ASSY. (PART 1)



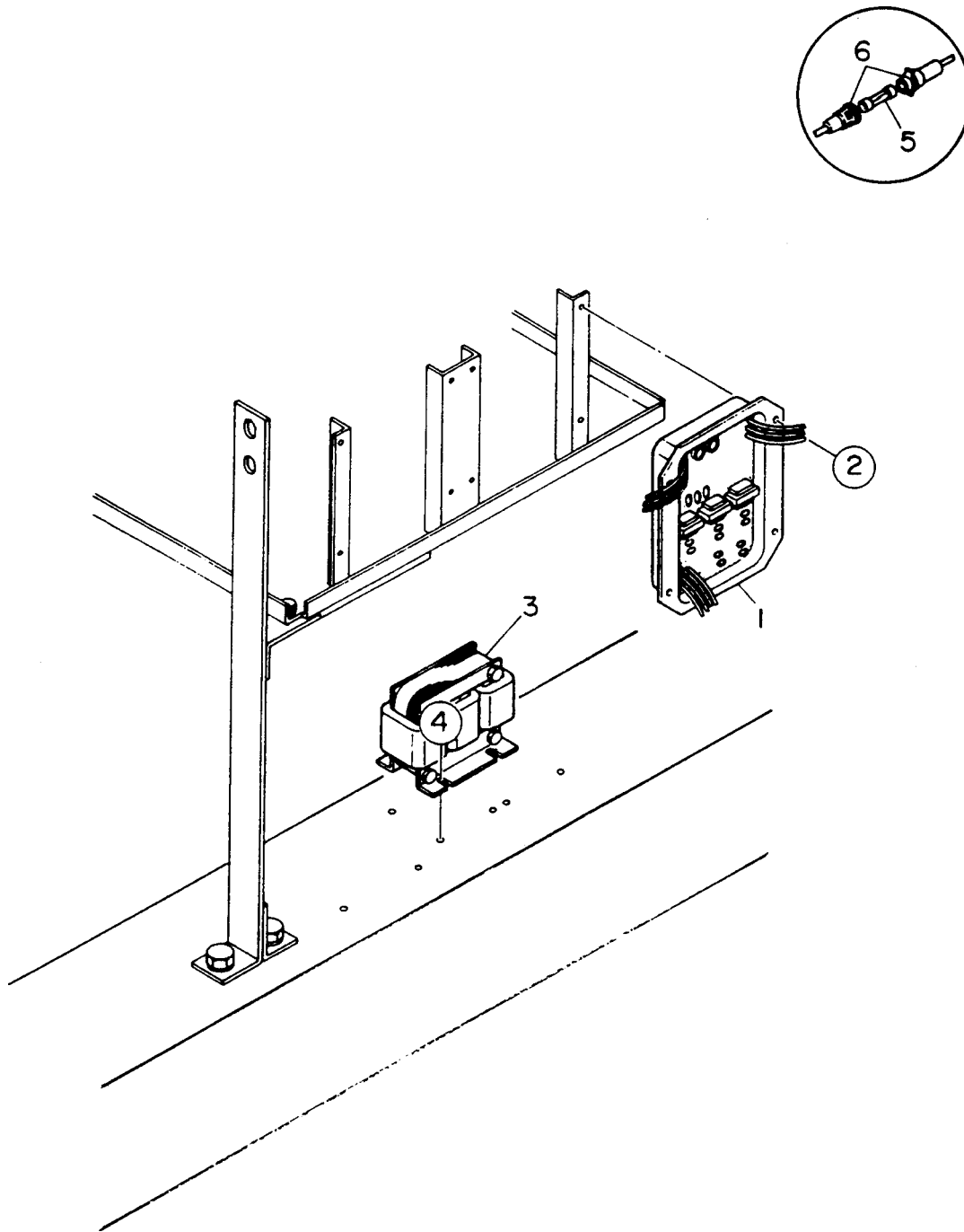
BLW-400SSW --- CONTROL PARTS ASSY. (PART 1)

CONTROL PARTS ASSY. (PART 1)

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	8830200900	SLOW DOWN	1	NC70
2	0017105015	HEX.HEAD BOLT	2	
3	0601815759	TERMINAL BOARD	1	KT206P
4	0027105020	MACHINE SCREW	2	
5	0601804211	CURRENT TRANSFORMER	1	MCT100Y
6	0027104010	MACHINE SCREW	2	
7	7961833504	BRACKET, ELECTRIC PARTS	1	
8	0017106016	HEX. HEAD BOLT	4	
9	7961808803	CURRENT TRANSFORMER	1	
10	0017105016	HEX. HEAD BOLT	4	
11	0601820038	RECTIFIER	2	S15VB60
12	0027103020	MACHINE SCREW	2	
13	0601823754	RELAY	2	MPR2TS
14	55885	HEX. HEAD BOLT	2	REPLACES 0017105010
15	0601842379	RESISTOR	1	GG40W4 OHM
16	0027104010	MACHINE SCREW	2	
17	7961833704	BRACKET, ELECTRIC PARTS	1	S/N5300001 TO 5315787
	7961833714	BRACKET, ELECTRIC PARTS	1	S/N7315788~
18	0017106016	HEX. HEAD BOLT	4	
19	1518164602	REGULATOR	1	REPLACES 0602201374
20	0021005030	MACHINE SCREW	2	
	0040005000	LOCK WASHER	2	
	0041205000	PLAIN WASHER	2	
21	1518160200	SAFETY RELAY	2	UPTO 5315787; REPLACES 0602200370
	0602202562	RELAY BOX	2	S/N5315788~;6644655261
22	0027105010	MACHINE SCREW	2	
23	0601820083	RECTIFIER	2	
24	0021304015	MACHINE SCREW	4	REPLACES 0027104015
25	0601821322	RECTIFIER	1	RM30TBH
26	0027104015	MACHINE SCREW	4	
27	1518160191	INDICATOR UNIT	1	REPLACES 0602201275
28	0027105016	MACHINE SCREW	1	
29	1569465991	LAMP TIMER	1	REPLACES 0602201273
30	0027105016	MACHINE SCREW	1	
31	1511660261	EMERGENCY RELAY	1	UP TO S/N5427529; REPLACES 0602200470
	1539360261	EMERGENCY RELAY	1	S/N5427530~; REPLACES 0602200473
32	0021005040	MACHINE SCREW	4	
	0041205000	LOCK WASHER	4	
	0041205000	PLAIN WASHER	4	
33	1790150203	ROTARY SOLENOID	1	
34	6722631004	SOLENOID ARM	1	
35	0010006020	HEX. HEAD BOLT	1	
36	0030006000	HEX. NUT	1	
37	0207206000	HEX. NUT	2	
38	7962152204	GOVERNOR ROD	1	
39	0041206000	PLAIN WASHER	2	
40	0605010502	SNAP PIN	2	

BLW-400SSW --- CONTROL PARTS ASSY. (PART 2)

CONTROL PARTS ASSY. (PART 2)



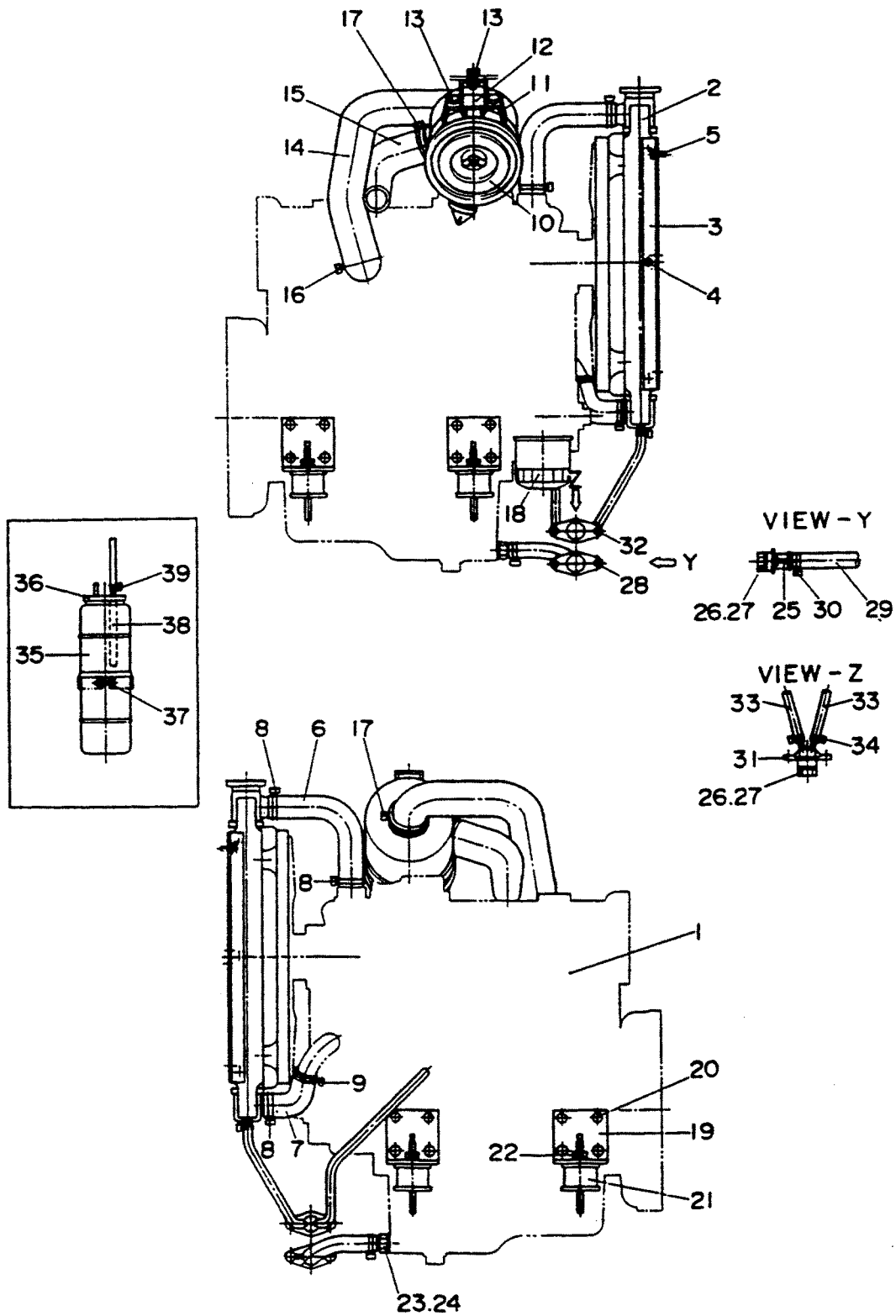
BLW-400SSW --- CONTROL PARTS ASSY. (PART 2)

CONTROL PARTS ASSY. (PART 2)

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0601823820	CONTROL UNIT, THYRISTOR	2	FC90B
2	0017105016	HEX. HEAD BOLT	8	
3	7961808903	REACTOR	2	
4	0017106016	HEX. HEAD BOLT	8	
5	29411150000	FUSE	1	15A; REPLACES 0601802135
6	0601802265	FUSE HOLDER	1	

BLW-400SSW ENGINE AND RADIATOR ASSY.

ENGINE AND RADIATOR ASSY.



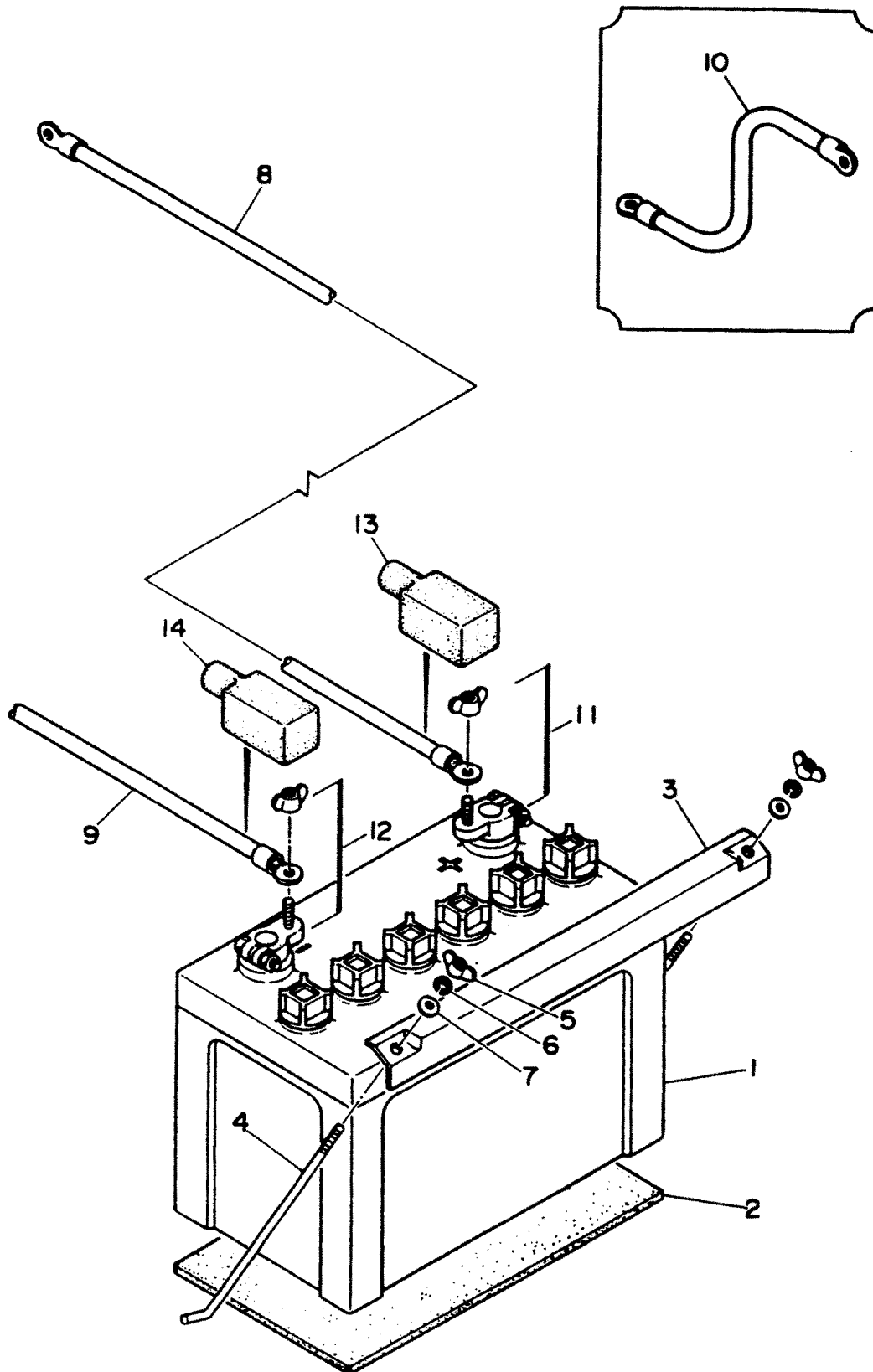
BLW-400SSW ENGINE AND RADIATOR ASSY.

ENGINE AND RADIATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7960150004	ENGINE	1	KUBOTA V1205
2	1753872060	RADIATOR	1	REPLACES 0602011973
3	7962012504	BRACKET, RADIATOR	2	
4	011006010	HEX.HEAD BOLT	6	REPLACES 0017106010
5	0017106016	HEX.HEAD BOLT	6	
6	1628672940	RADIATOR HOSE	1	REPLACES 0602014563
7	1628672850	RADIATOR HOSE	1	UP TO S/N5427529;REPLACES 0602014495
	1G32172851	RADIATOR HOSE	1	S/N5427530~; REPLACES 0602014669
8	1584172960	HOSE BAND	3	REPLACES 1584172961 AND 0602014370
9	3620082720	HOSE BAND	1	REPLACES 3620082721 AND 0602014375
10	0602046278	AIR CLEANER	1	1753811011
	0602046371	ELEMENT, AIR CLEANER	1	1754111081;P535362
11	1538111250	BAND, AIR CLEANER	1	REPLACES 1500036931 AND 0602040573
12	7962031003	BRACKET, AIR CLEANER	1	
13	0602014302	HEX.HEAD BOLT	4	REPLACES 0017108020
14	7962036003	HOSE, AIR CLEANER	1	
15	6722036103	HOSE, AIR CLEANER	1	
16	0602014302	HOSE BAND	1	REPLACES 0605515021
17	0605515001	HOSE BAND	1	
18	1627132090	CARTRIDGE,OIL FILTER	1	REPLACES 1627132091 AND 0602041174
19	7965112103	ENGINE FOOT	4	
20	0012410020	HEX. HEAD BOLT	16	
21	0805083904	RUBBER SUSPENSION	4	
22	0207010000	HEX. NUT	8	
23	7962054004	DRAIN JOINT	1	
24	0602021196	PACKING	1	REPLACES 0602021191
25	15020251036	DRAIN JOINT	1	REPLACES 1502025103
26	0802011104	PLUG	2	
27	0150000018	O RING	2	
28	0017106016	HEX.HEAD BOLT	2	
29	MM409211	DRAIN HOSE	1	REPLACES 0192200450
30	0605515003	HOSE BAND	2	
31	1622014103	DRAIN JOINT	1	
32	0017106016	HEX.HEAD BOLT	2	
33	0199901000	DRAIN HOSE	2	
34	0605515094	HOSE BAND	4	
35	0802081403	RESERVE TANK	1	
36	0802081104	BRACKET, RESERVE TANK	1	
37	0017106025	HEX. HEAD BOLT	1	
38	7222016304	HOSE	1	
39	0605515094	HOSE BAND	3	

BLW-400SSW --- BATTERY ASSY.

BATTERY ASSY.



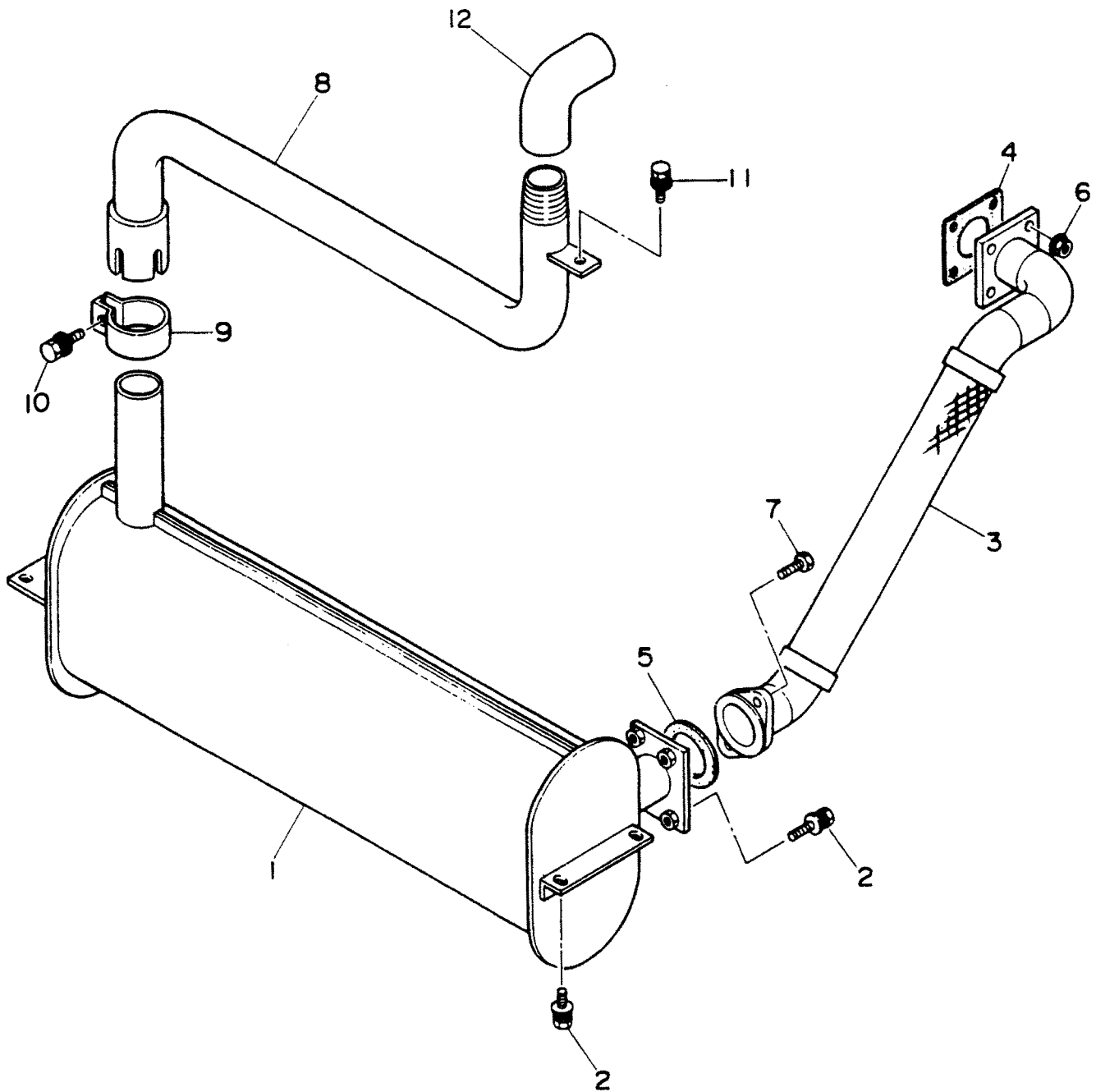
BLW-400SSW --- BATTERY ASSY.

BATTERY ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0160012100	BATTERY	1	REPLACES 0168306531; 65D31R
2	7612251004	BATTERY SHEET	1	
3	0805001703A	BATTERY BAND	1	REPLACES 0805087103
4	7962252004	BATTERY BOLT	2	
5	0037808000	WING NUT	2	
6	0040008000	LOCK WASHER	2	
7	0041208000	PLAIN WASHER	2	
8		BATTERY CABLE	1	MAKE LOCALLY
9		BATTERY CABLE	1	MAKE LOCALLY
10		EARTH CABLE	1	MAKE LOCALLY
11	0602220310	TERMINAL ASSY.	1	
12	0602220311	TERMINAL ASSY.	1	
13	0845040414	TERMINAL CAP	1	REPLACES 0602220600
14	0845041304	TERMINAL CAP	1	REPLACES 0602220601

BLW-400SSW --- MUFFLER ASSY.

MUFFLER ASSY.



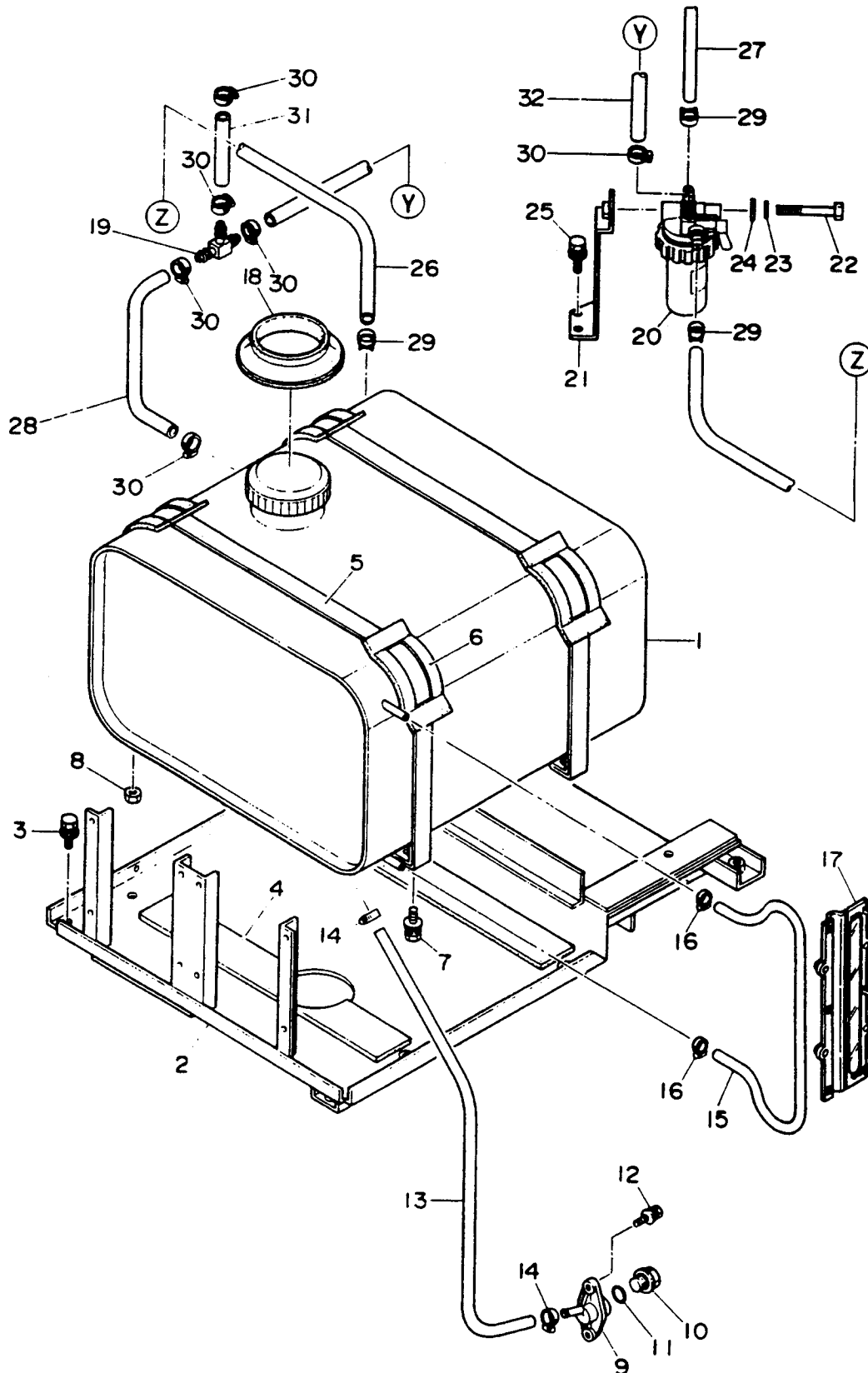
BLW-400SSW --- MUFFLER ASSY.

MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7962310102	MUFFLER	1	
2	0017108020	HEX. HEAD BOLT	6	
3	7962350013	EXHAUST PIPE	1	
4	0602320071	GASKET	1	..... 1537112371
5	1502336004	GASKET	1	
6	0207208000	HEX.NUT	4	
7	0017108030	HEX.HEAD BOLT	2	
8	7962355203	EXHAUST PIPE	1	
9	3312320004	PIPE BAND	1	
10	0017108035	HEX. HEAD BOLT	1	
11	0017108020	HEX.HEAD BOLT	1	
12	0130012000	ELBOW	1	

BLW-400SSW --- FUEL TANK ASSY.

FUEL TANK ASSY.



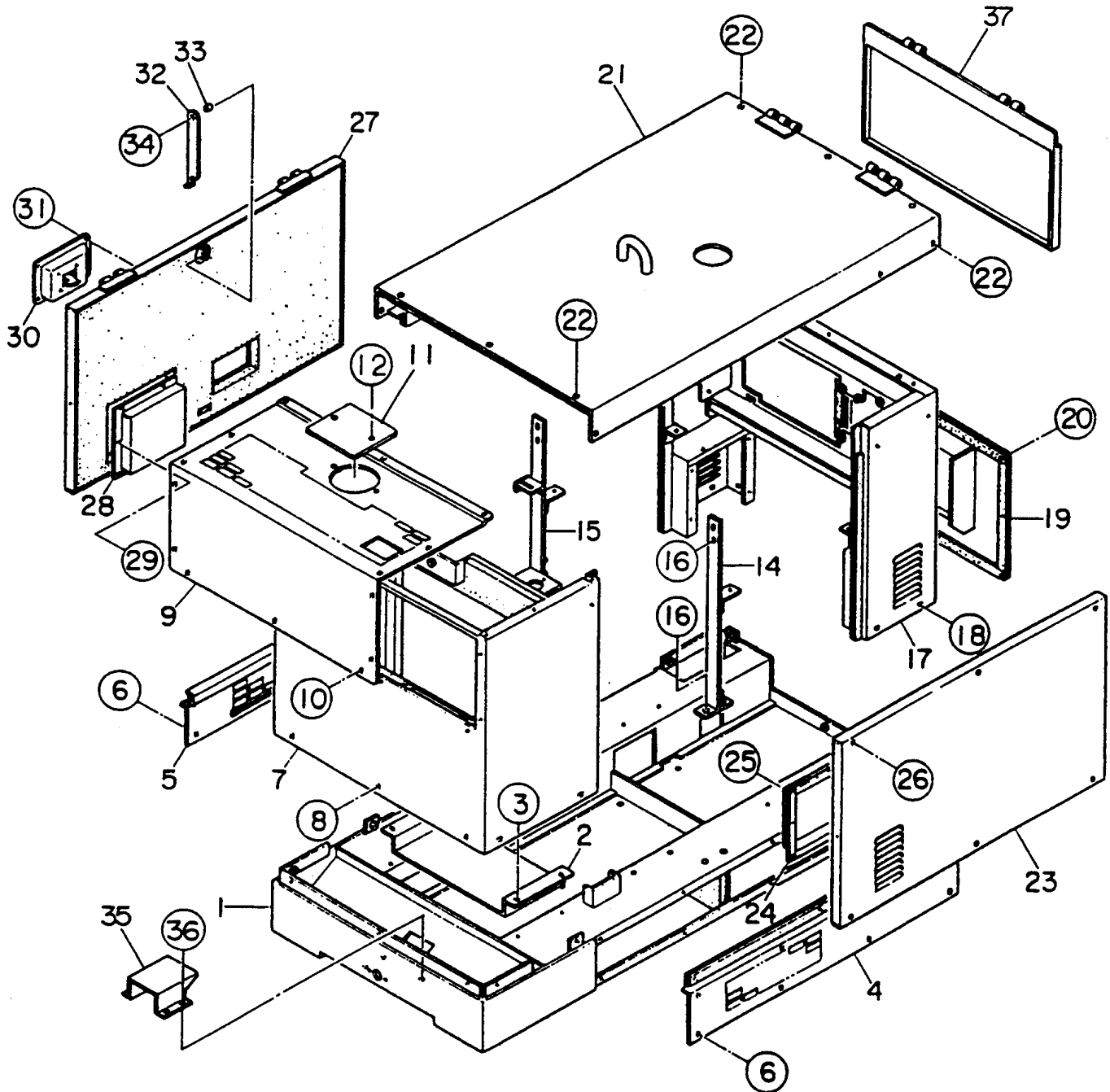
BLW-400SSW --- FUEL TANK ASSY.

FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7965510203	FUEL TANK	1	
	0845500104	CAP, FUEL TANK	1	
	0810105400	FUEL FILTER	1	
2	7965525102	BRACKET, FUEL TANK	1	
3	0017108020	HEX. HEAD BOLT	4	
4	1555527004	TANK SHEET	2	
5	7965523104	TANK BAND	2	
6	0805003404	PAD, TANK SHEET	4	
7	0017108020	HEX. HEAD BOLT	2	
8	0030008000	HEX.NUT	2	
9	7812014003	DRAIN JOINT	1	
10	0802011104	PLUG	1	
11	015000018	O RING	1	
12	0017106016	HEX. HEAD BOLT	2	
13	0199901000	DRAIN HOSE	1	
14	0605515094	HOSE BAND	1	
15	7815513014	HOSE, FUEL GAUGE	1	
16	0605515005	HOSE BAND	1	
17	7815511203	BRACKET	1	
18	1615511204	RUBBER SEAL	1	
19	1510142570	T JOINT	1	REPLACES 1510142572 AND 0603306695
20	1627143010	FUEL FILTER	1	REPLACES 1627143012 AND 0602042066
	1627143560	BRACKET, FUEL FILTER	1	REPLACES 1627143561 AND 0602042176
21	7962037004	BRACKET, FUEL FILTER	1	
22	0010008060	HEX. HEAD BOLT	1	
23	004000800	LOCK WASHER	1	
24	0041208000	PLAIN WASHER	1	
25	0017108020	HEX. HEAD BOLT	2	
26	0605513171	SUCTION HOSE	1	0966170500
27	0605513172	SUCTION HOSE	1	0966170360
28	0605514060	RETURN HOSE	1	1753842021
29	1491142750	HOSE BAND	4	REPLACES 1491142751 AND 0605515070
30	1024442320	HOSE BAND	6	REPLACES 1497114751 AND 0605515072
31	0605514050	RETURN HOSE	1	1758242031
32	0561110020	RETURN HOSE	1	REPLACES 6641658302 AND 0605514061

BLW-400SSW --- ENCLOSURE ASSY.

ENCLOSURE ASSY.



BLW-400SSW --- ENCLOSURE ASSY.

ENCLOSURE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7965111202	BASE	1	
	7965910104	LINING	1	
2	7965118104	PANEL	1	
3	0017106016	HEX. HEAD BOLT	4	
4	7965181303	SPLASHER PANEL	1	
	7965981104	LINING	1	
5	7965181503A	SPLASHER PANEL	1	REPLACES 7965181503
	7965981104	LINING	1	
6	0017106016	HEX. HEAD BOLT	16	
7	7965121202	FRONT FRAME	1	
	7965920203	LINING	1	
8	0017108020	HEX.HEAD BOLT	7	
9	7965125213	COVER, FRONT FRAME	1	
	7965920604	LINING	1	
10	0017108020	HEX. HEAD BOLT	11	
11	8432081004	COVER	1	
12	0017108020	HEX. HEAD BOLT	2	
13	0199901000	DRAIN HOSE	1	
14	7965133403	HANGER	1	
15	7965133503	HANGER	1	
16	0017112030	HEX. HEAD BOLT	8	
17	7965141202	REAR FRAME	1	
18	0017108020	HEX. HEAD BOLT	6	
19	7965155223	COVER, REAR FRAME	1	
20	0017108020	HEX. HEAD BOLT	9	
21	7965161202	ROOF PANEL	1	
	7965960103	LINING	1	
22	0017108020	HEX. HEAD BOLT	12	
23	7965172003	SIDE PANEL	1	
	7965971504	LINING	1	
24	7965178504	DUCT	1	
25	0207206000	HEX. NUT	5	
26	0010008045	HEX.HEAD BOLT	6	
	0040008000	LOCK WASHER	6	
	0041208000	PLAIN WASHER	6	
27	7965171503	SIDE DOOR	1	
	7965971606	LINING	1	
28	7965178504	DUCT	1	
29	0207206000	HEX. NUT	5	
30	0825007362	DOOR HANDLE	1	
31	0021806016	MACHINE SCREW	4	
32	7835186014	DOOR STAY	1	
33	7835088004	COLLAR	1	
34	00017108020	HEX. HEAD BOLT	1	
35	7965116503	COVER, BASE	1	
36	0017106016	HEX. HEAD BOLT	4	
37	7965143003	DOOR, REAR FRAME	1	

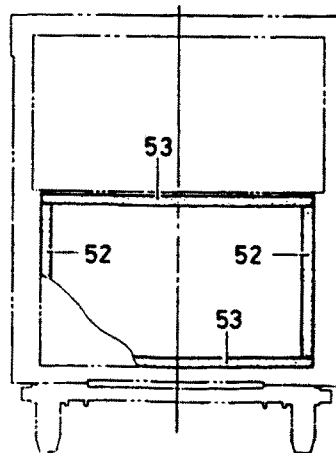
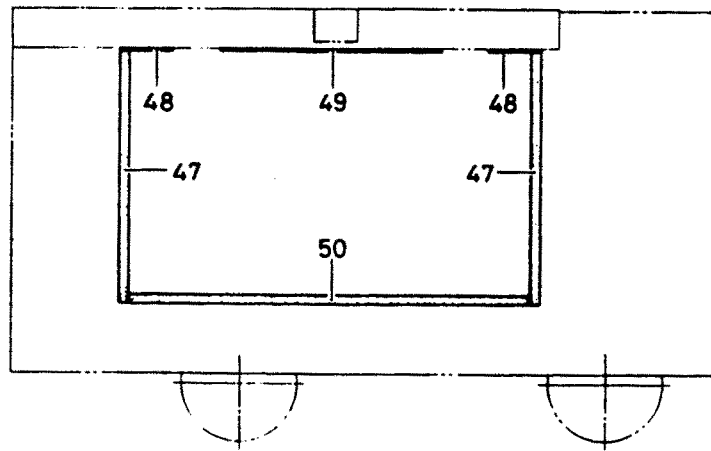
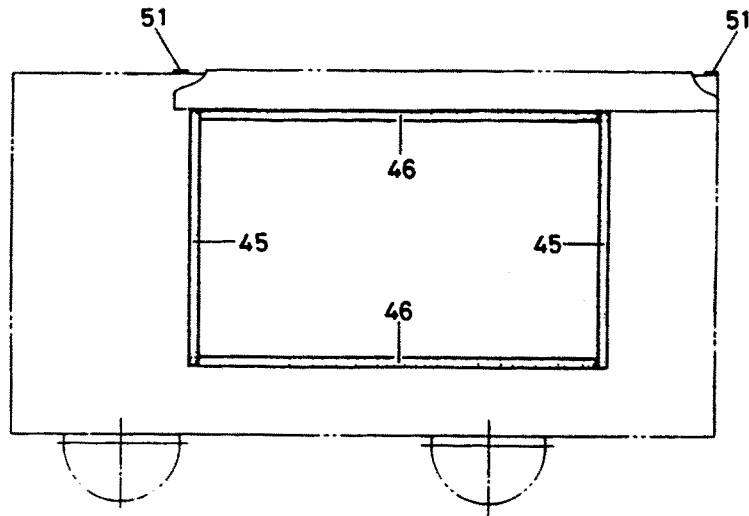
THE PART NUMBER SHOWN IS TEAL. ADD THE FOLLOWING LETTERS AFTER THE PART NUMBER WHEN ORDERING ANY PAINTED PANEL TO INDICATED COLOR OF UNIT:

MQW-WHITE
MQSK-SCARLET/RED
MQNEWGR-LIGHT BLUE

THE SERIAL NUMBER MAY BE REQUIRED.

BLW-400SSW --- RUBBER SEAL ASSY.

RUBBER SEAL ASSY.

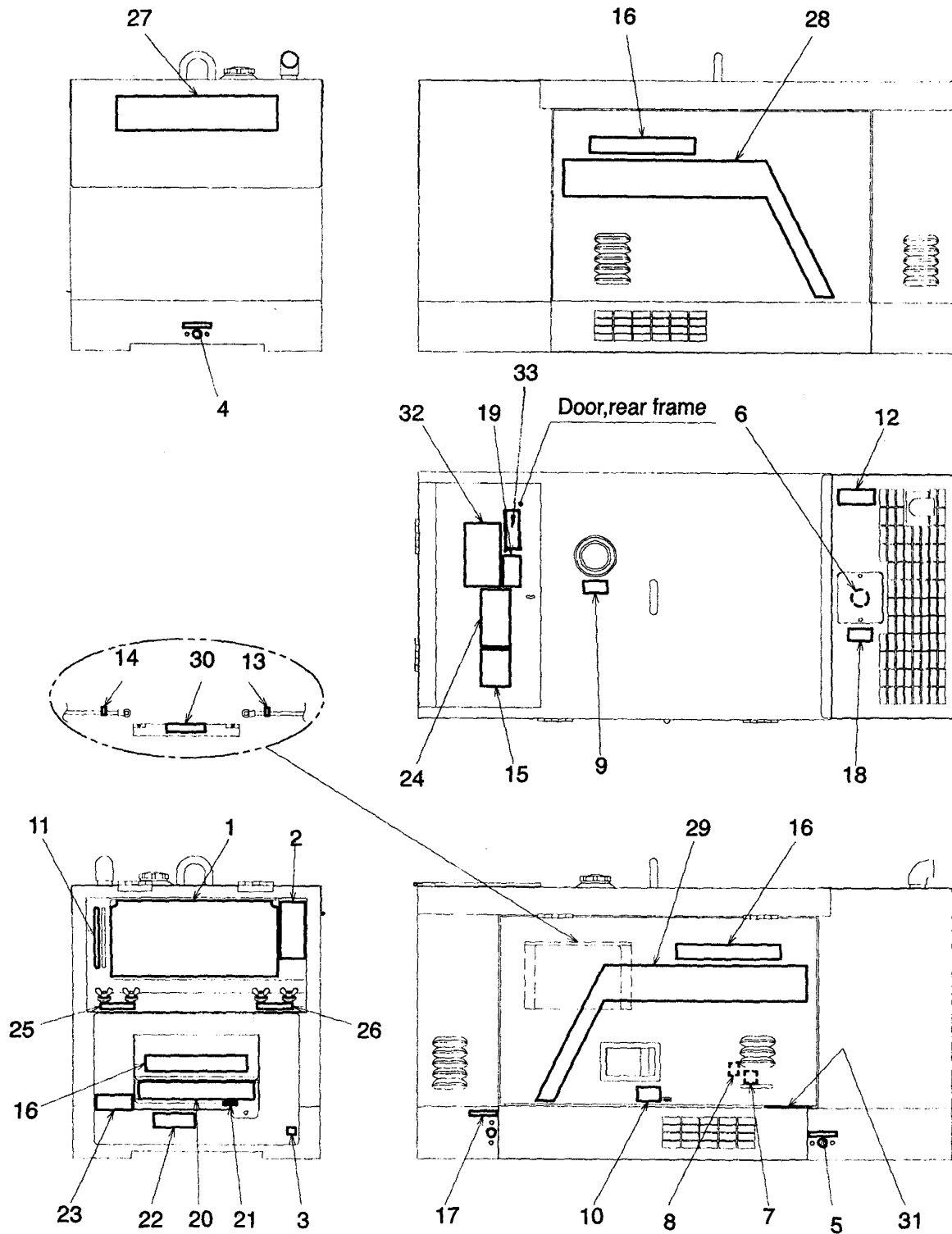


BLW-400SSW --- RUBBER SEAL ASSY.

RUBBER SEAL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
45	0225000565	RUBBER SEAL	2	
46	0225000875	RUBBER SEAL	2	
47	0229400560	RUBBER SEAL	2	
48	0229400115	RUBBER SEAL	2	
49	0229400490	RUBBER SEAL	1	
50	0229400880	RUBBER SEAL	1	
51	0229200710	RUBBER SEAL	2	
52	0229200330	RUBBER SEAL	2	
53	0229200600	RUBBER SEAL	2	

DECAL ASSY.

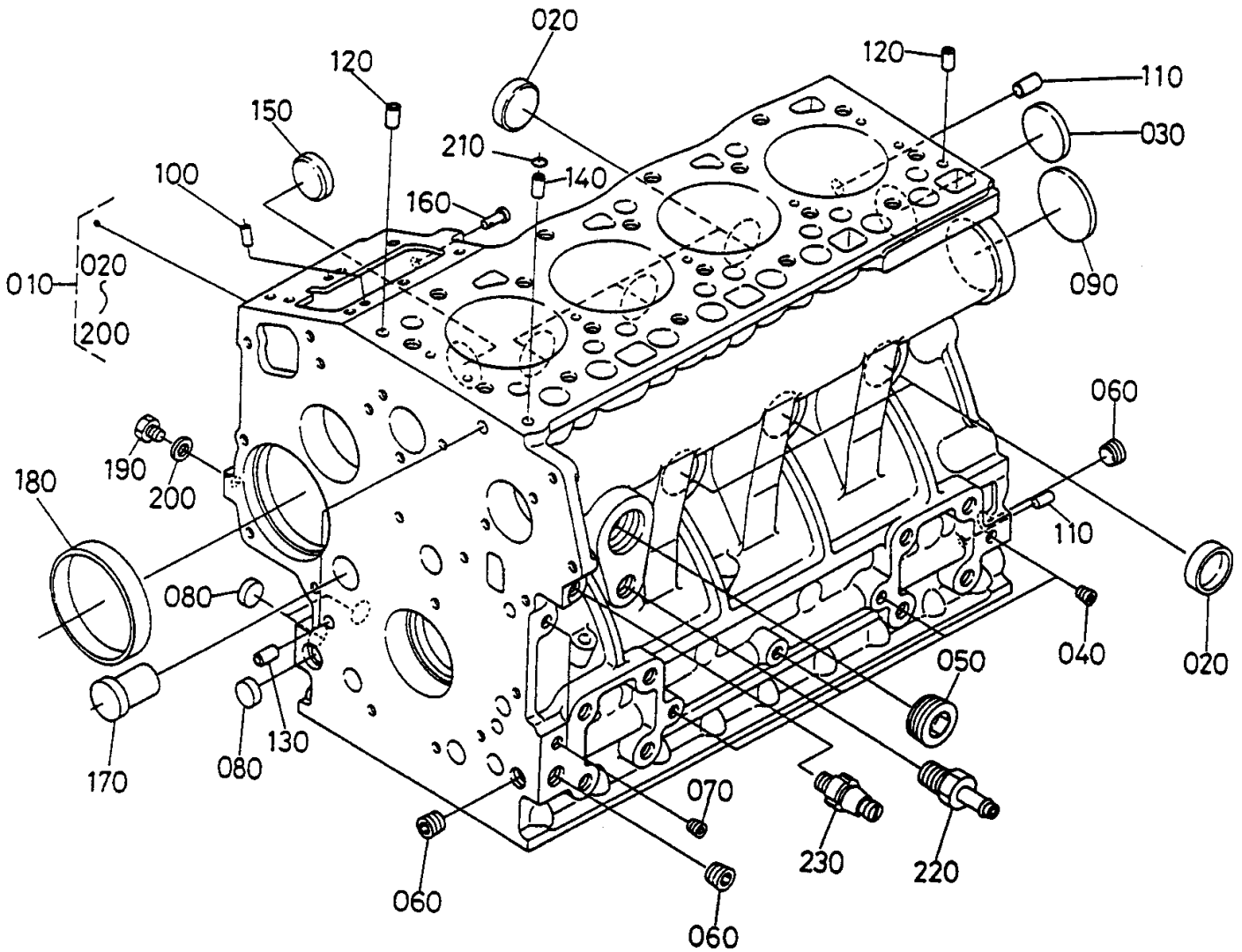


DECAL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7960562002	PLATE; MAIN NAME LATE	1	N5245B
2	7960542504	DECAL; MQ	1	N5287
3	0800628504	DECAL; GROUND	1	S1123
4	1630645004	DECAL; OIL DRAIN	1	S1403
5	1630647004	DECAL; WATER DRAIN	1	S1404
6	1630610304	DECAL; CAUTION RADIATOR	1	S1405
7	1630610404	DECAL; CAUTION FUEL FILTER	1	S1406
8	1630680104	DECAL; FUEL COCK	1	S1407
9	1630680004	DECAL; NO.2 DIESEL FUEL	1	S1408
10	1630610504	DECAL; CAUTION DOOR	1	S1409
11	0800650804	DECAL; FUEL GAUGE	1	S1765
12	8700611804	DECAL; WARNING EXHAUST GAS	1	S4984
13	0800689404	DECAL; BATTERY (+)	1	S2091
14	0800689504	DECAL; BATTERY (-)	1	S2377
15	6390671104	DECAL; CHECK DAILY	1	S2377
16	D2562200104	MQ STICKER	1	D26220010
17	7810680104	DECAL; FUEL DRAIN	1	S3060
18	7810680204	DECAL; COOLING WATER	1	S3061
19	0820610404	DECAL; WARNING	1	S3627
20	D5520000003	DECAL; OUTPUT TERMINAL	1	D52000000
21	7670624004	DECAL; GROUND FOR GFCI	1	S3821
22	7670654004	DECAL; SINGLE PHASE OUTPUT TERMINAL ..	1	S3823A
23	8700611904	DECAL; DANGER ELECTRICAL SHOCK	1	S4985
24	7960610103	DECAL; OPERATING PROCEDURE	1	S4175
25	7960630004	DECAL; SINGLE OUTPUT TERMINAL	1	S4176
26	7960630104	DECAL; DUAL OUTPUT TERMINAL	1	S4177
27	D556200002	FRONT STICKER	1	D56200000
28	D5562100002	STRIPE (L)	1	D56210000A
29	D5562100102	STRIPE (R)	1	D56210010A
30	0820650604	DECAL; CAUTION BATTERY	1	YUASASTCL7B
31	8700611524	DECAL; OIL LEVEL GAUGE	1	S4926B
32	D9512100203	DECAL; WARNING (WELDER SED)	1	D91210020
33	D9522100204	DECAL; WARNING-PROPOSITION 65	1	D92210020

KUBOTA V1205B --- CRANKCASE ASSY.

CRANKCASE ASSY.



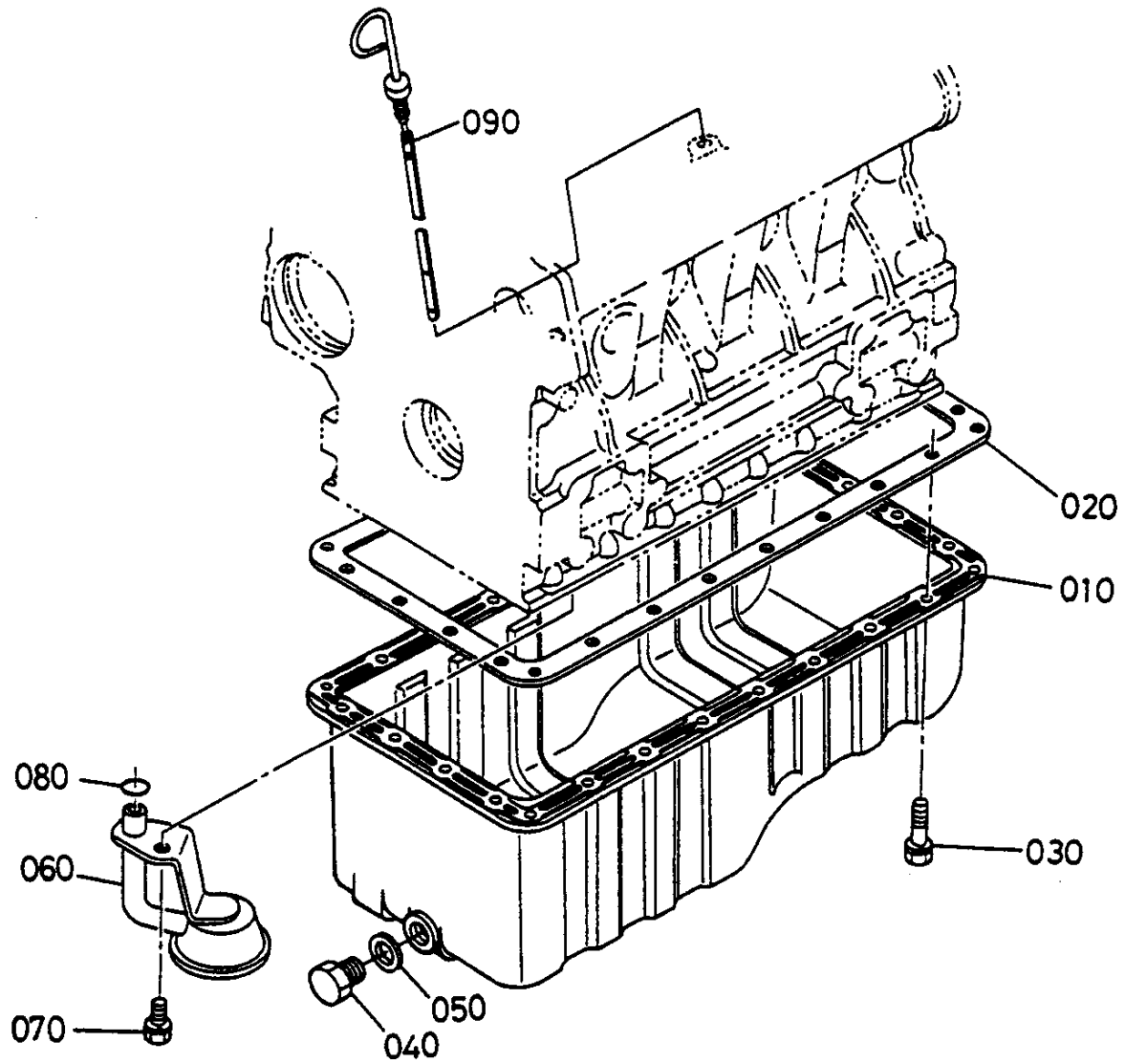
KUBOTA V1205B --- CRANKCASE ASSY.

CRANKCASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1753801010	COMP. CRANKCASE	1	INCLUDES ITEMS W/*
020*	1545196270	CAP, SEALING	6	
030*	1522103490	CAP, SEALING	1	
040*	1526193010	PLUG	4	
050*	1627196020	PLUG	1	
060*	1624196010	PLUG	3	
070*	1552193020	PLUG	2	
080*	0631175018	PLUG	3	
090*	1627196160	PLUG	1	
100*	0501200508	STRAIGHT PIN	2	
110*	0501200814	STRAIGHT PIN	2	
120*	0501200610	STRAIGHT PIN	2	
130*	1523133960	PIPE PIN	2	
140*	1624133650	PIPE PIN	1	
150*	1624196262	PLUG	1	REPLACES 1624196260
160*	1522156280	START SPRING PIN	1	
170*	1628296010	PLUG	1	
180*	1627155350	GOVERNOR GEAR BUSHING	1	
190*	1522133610	PLUG	1	
200*	1502133660	GASKET	1	
210	1522133700	O RING	1	
220	1584773130	JOINT, DRAIN PIPE	1	
230	1584139010	OIL SWITCH	1	

KUBOTA V1205B --- OIL PAN ASSY.

OIL PAN ASSY.



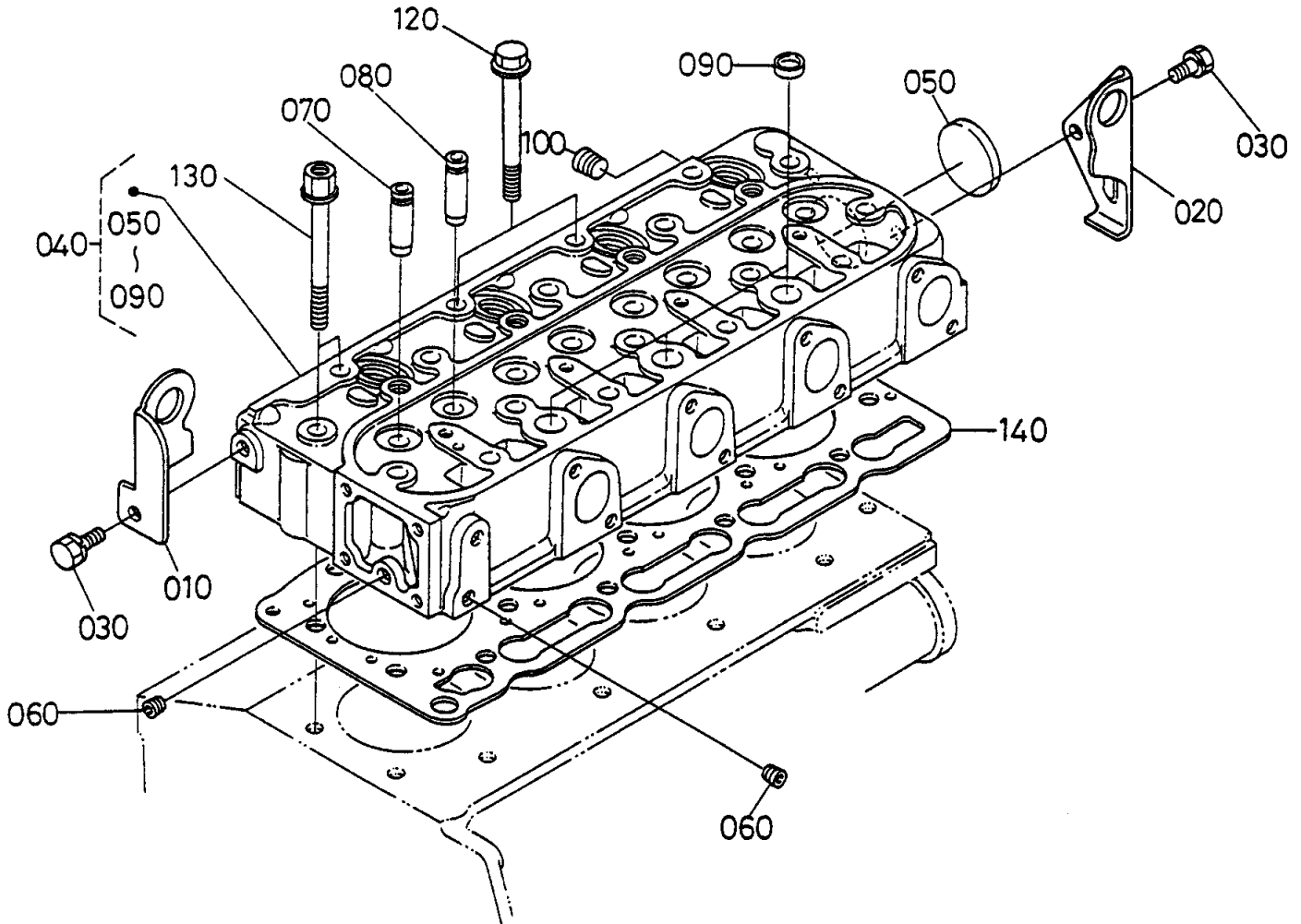
KUBOTA V1205B --- OIL PAN ASSY.

OIL PAN ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1628201500	COMP. OIL PAN	1	
020	1629901620	GASKET, OIL PAN	1	REPLACES 1624101620
030	0102350612	BOLT	26	
040	1522133750	PLUG	1	
050	7000065259	GASKET	1	REPLACES 1510933660
060	1624132110	OIL FILTER	1	
070	0112350816	BOLT	1	
080	0481100160	O RING	1	
090	1625936410	OIL GAUGE	1	

KUBOTA V1205B --- CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.



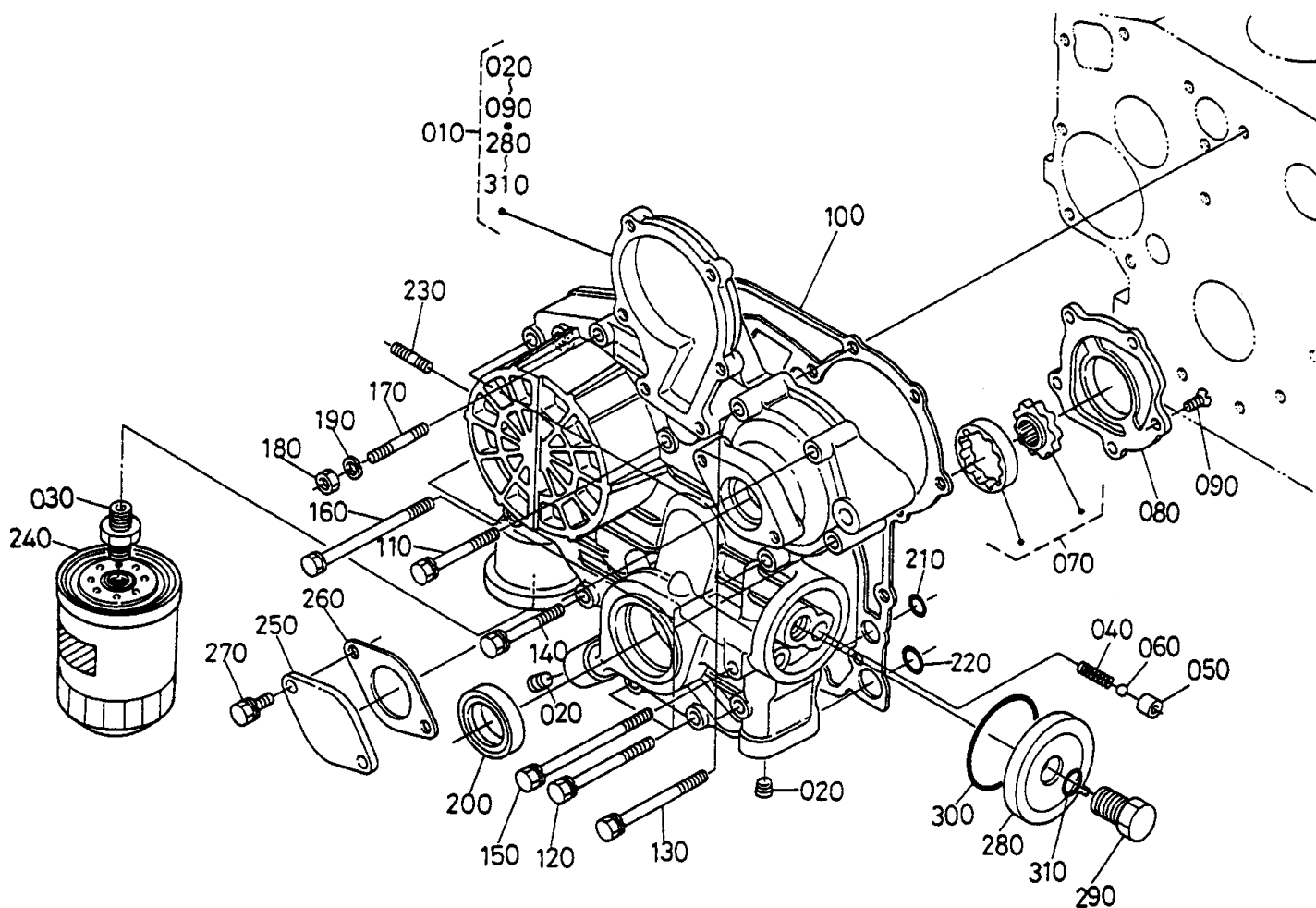
KUBOTA V1205B --- CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1624101750	HOOK, ENGINE	1	
020	1624101770	HOOK, ENGINE	1	
030	0112350814	BOLT	2	
040	1624503040	COMP. CYLINDER HEAD	1	INCLUDES ITEMS W/*;REPLACES 1624503042
050*	1532196260	CAP, SEALING	1	
060*	1526196010	PLUG	2	
070*	1624113540	GUIDE, INLET VALVE	4	
080*	1624113560	GUIDE, EXHAUST VALVE	4	
090*	1526103370	CAP, SEALING	3	
100	1584196020	PLUG	1	
120	1624103450	BOLT, CYLINDER HEAD	16	
130	1627103450	BOLT, CYLINDER HEAD	2	
140	1624103310	GASKET, CYLINDER HEAD	1	

KUBOTA V1205B --- GEAR CASE ASSY.

GEAR CASE ASSY.



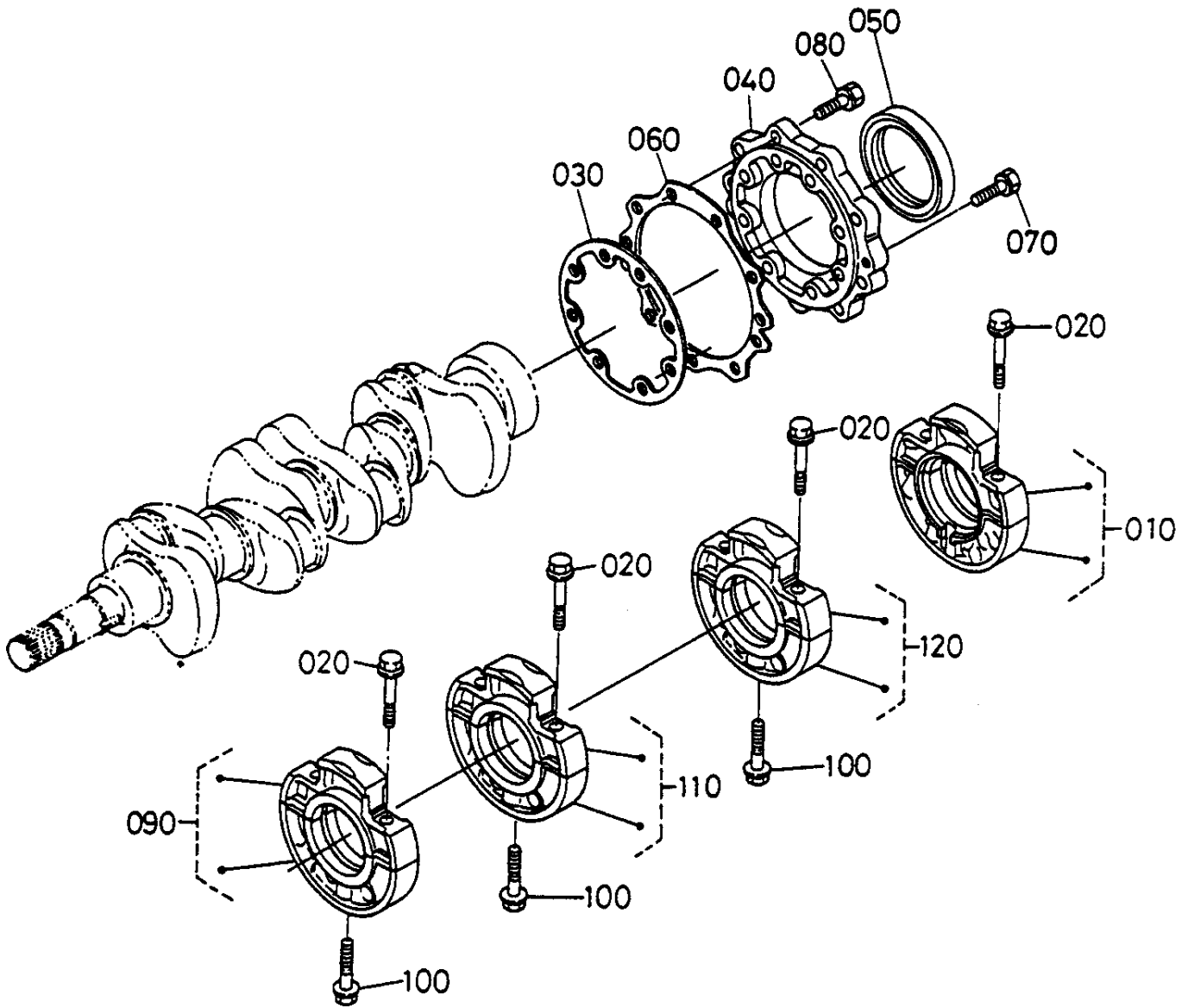
KUBOTA V1205B --- GEAR CASE ASSY.

GEAR CASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1758204020	COMP. CASE, GEAR	1	INCLUDES ITEMS W/*
020*	1733196040	PLUG	4	
030*	1524132290	JOINT, PIPE	1	
040*	1624136950	SPRING	1	
050*	1624136930	SEAT, VALVE	1	
060*	0771500201	BALL	1	
070*	1624135070	OIL PUMP ROTOR ASSY.	1	
080*	1625935132	OIL PUMP COVER	1	
090*	1624193120	SCREW	5	
100	1626404130	GASKET, GEAR CASE	1	REPLACES 1624104130
110	0102350645	BOLT	3	
120	0102350650	BOLT	4	
130	0102350655	BOLT	2	
140	1584191040	BOLT	1	
150	1624191040	BOLT	2	
160	1625991040	BOLT	1	
170	0151350645	STUD	1	
180	0205650060	NUT	1	
190	030206150	LOCK WASHER	1	REPLACES 0451250060
200	1625904210	OIL SEAL	1	
210	0481106100	O RING	2	
220	0481100150	O RING	2	
230	0151350616	STUD	2	
240	1627132090	OIL CARTRIDGE ASSY.	1	
250	1628583340	COVER	1	
260	1626488130	GASKET, HOUR METER UNIT	1	REPLACES 1624188130
270	0102350616	BOLT	2	
280	1625932882	COVER	1	
290	1625932900	BOLT	1	
300	0481450600	O RING	1	
310	0481100150	O RING	1	

KUBOTA V1205B --- MAIN BEARING CASE ASSY.

MAIN BEARING CASE ASSY.



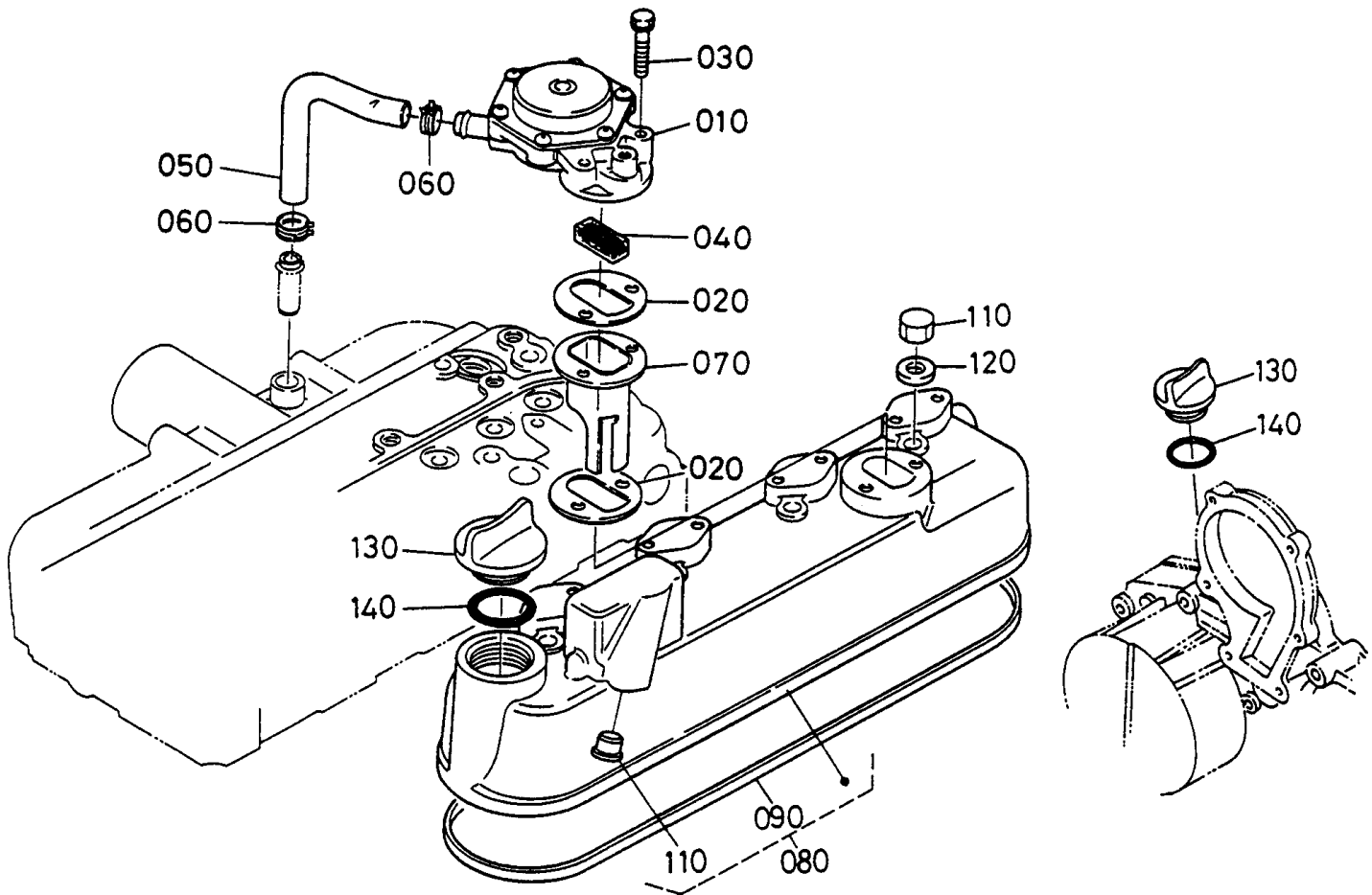
KUBOTA V1205B --- MAIN BEARING CASE ASSY.

MAIN BEARING CASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1624104092	ASSY. CASE, MAIN BRG.	1	
020	1624104540	BOLT, BEARING CASE	8	
030	1626404360	GASKET, BRG. CASE	1	REPLACES 1624104360
040	1624104810	COVER, BEARING CASE	1	
050	1624104460	OIL SEAL	1	
060	1626404820	GASKET, BRG. CASE COVER	1	REPLACES 1624104820
070	0102350625	BOLT	8	
080	0102350620	BOLT	9	
090	1627104040	ASSY. CASE, MAIN BRG.	1	
100	1624104560	BOLT, BEARING CASE	1	
110	1627104050	ASSY. CASE, MAIN BRG.	1	
120	1627104060	ASSY. CASE, MAIN BRG.	1	

KUBOTA V1205B --- HEAD COVER ASSY.

HEAD COVER ASSY.



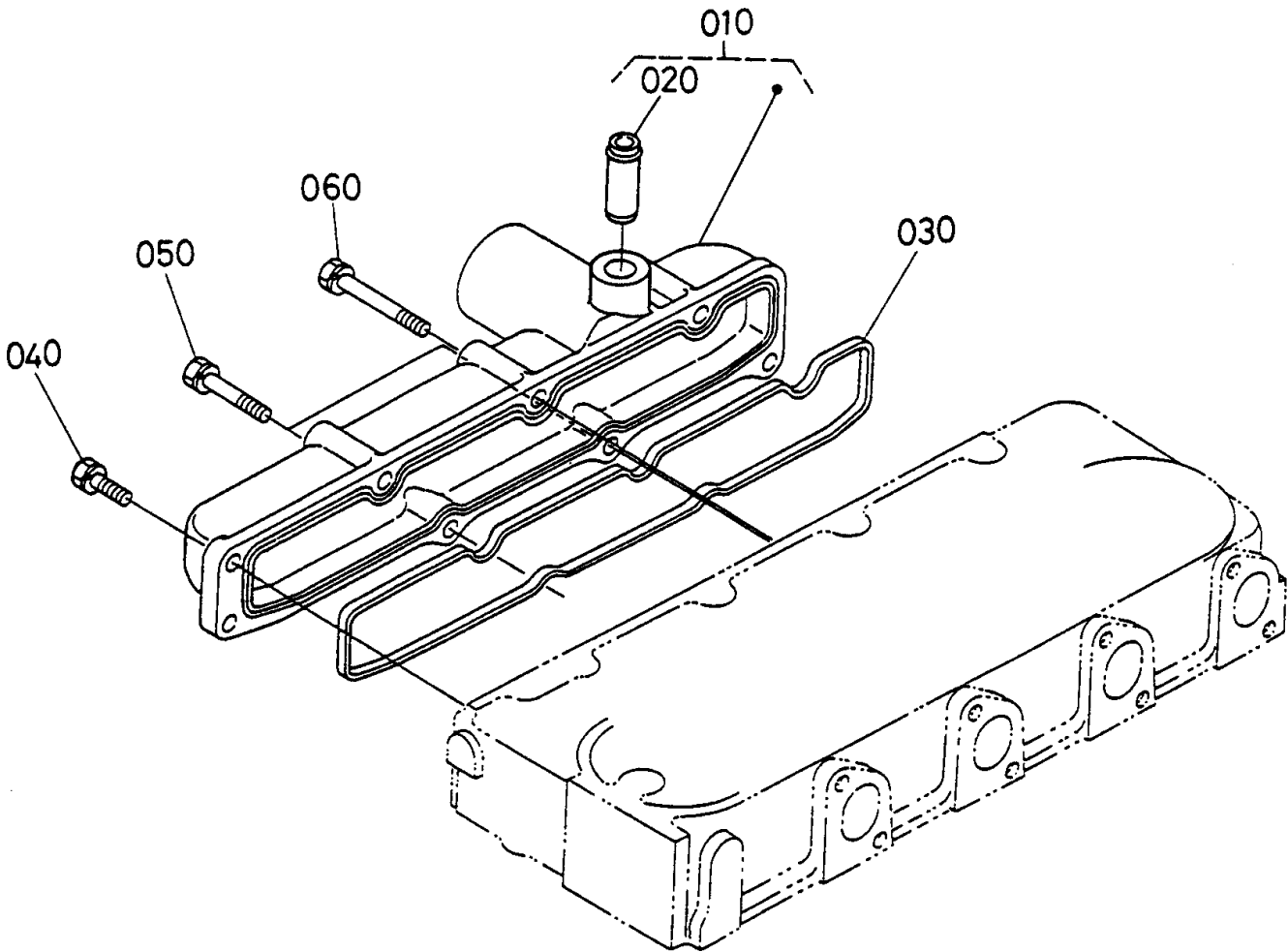
KUBOTA V1205B --- HEAD COVER ASSY.

HEAD COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1625905020	COMP. BREATHER	1	
020	1625905130	GASKET, BREATHER	2	
030	0102350635	BOLT	2	
040	1584105670	ELEMENT, BREATHER	1	
050	1625905510	PIPE, BREATHER	1	
060	1624133510	BAND, PIPE	2	
070	1625914490	PLATE	1	
080	1625914502	ASSY. COVER, CYLINDER	1	INCL. ITEMS W/*
090*	1624114520	GASKET, HEAD COVER	1	
100	1625996010	PLUG	1	
110*	1595292330	NUT, CAP	4	
120	1595196660	GASKET	4	
130	1522133140	PLUG, OIL FILTER	2	
140	1481150300	O RING	2	

KUBOTA V1205B --- INLET MANIFOLD ASSY.

INLET MANIFOLD ASSY.



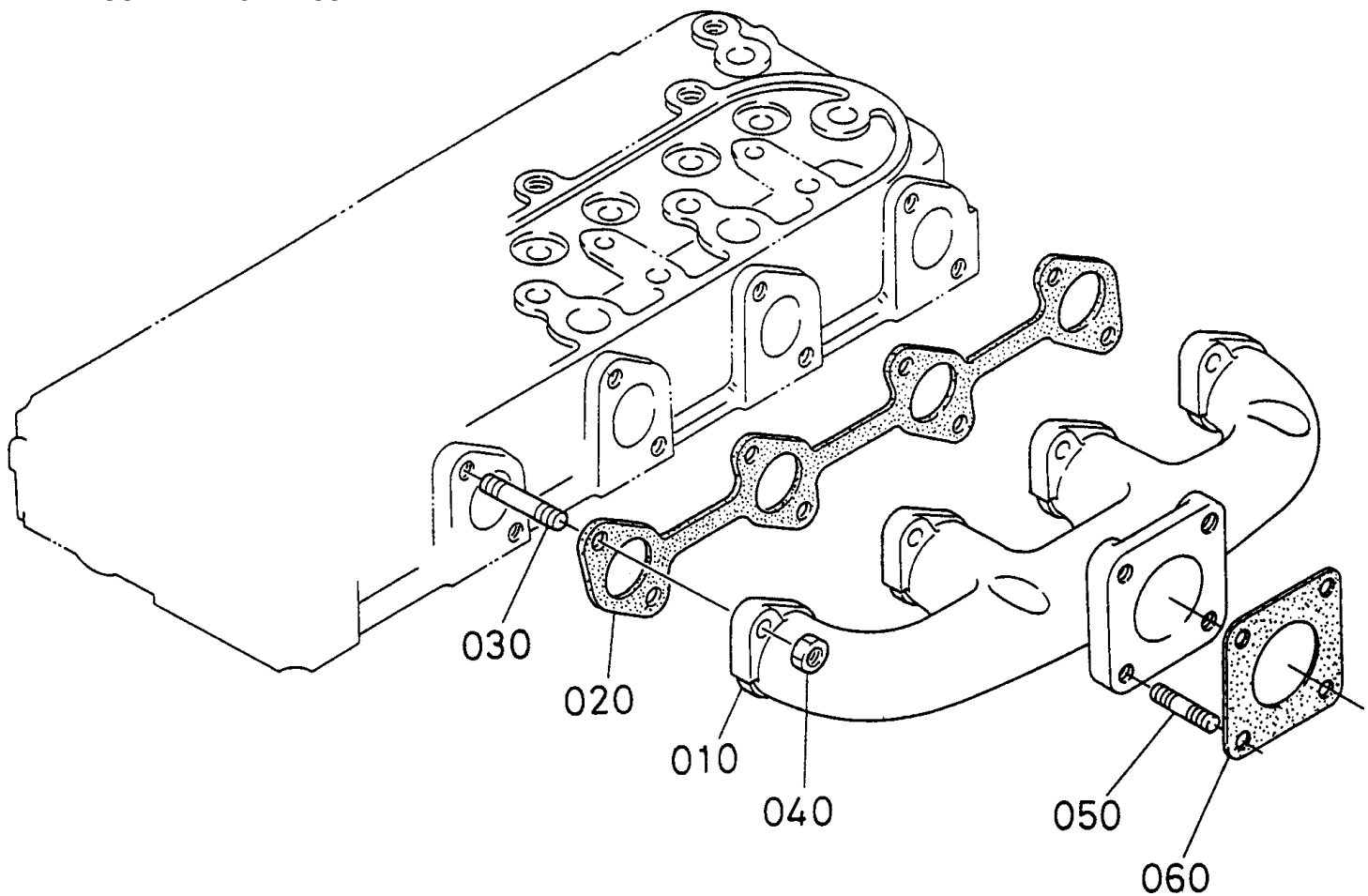
KUBOTA V1205B --- INLET MANIFOLD ASSY.

INLET MANIFOLD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1625911800	COMP. INLET MANIFOLD	1	
020	1624105550	JOINT, BREATHER PIPE	1	
030	1624111820	GASKET, IN-MANIFOLD	1	
040	0102350618	BOLT	3	
050	0102350630	BOLT	2	
060	0102350650	BOLT	3	

KUBOTA V1205B --- EXHAUST MANIFOLD ASSY.

EXHAUST MANIFOLD ASSY.



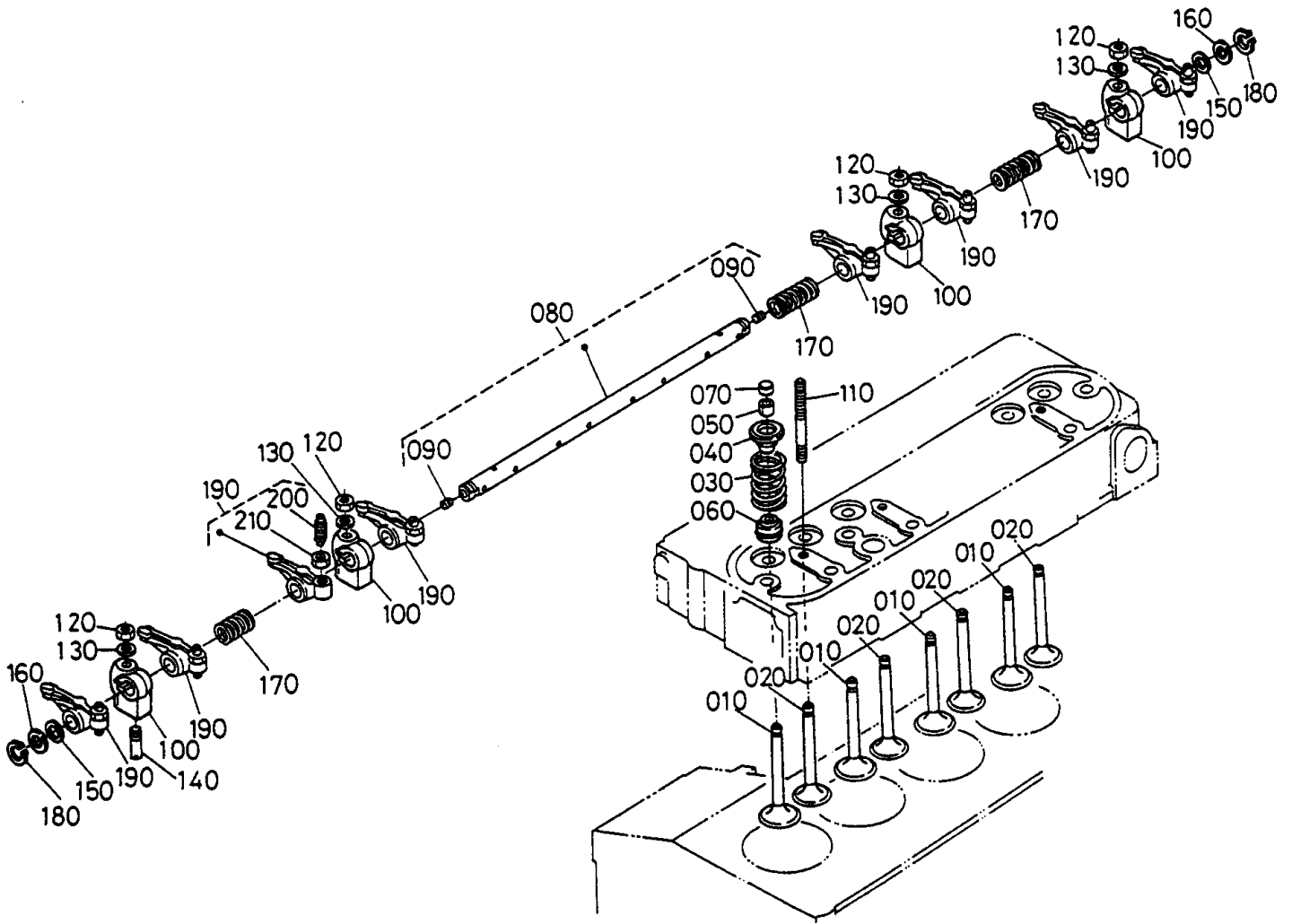
KUBOTA V1205B --- EXHAUST MANIFOLD ASSY.

EXHAUST MANIFOLD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1721512310	MANIFOLD, EXHAUST	1	
020	1629912360	GASKET, EX-MANIFOLD	1	REPLACES 1624112360
030	1624191490	STUD	8	
040	1627192010	NUT	8	REPLACES 1624192010
050	0151350822	STUD	4	
060	1526312370	GASKET, MUFFLER	1	REPLACES 1537112370

KUBOTA V1205B --- ROCKER ARM VALVE ASSY.

ROCKER ARM VALVE ASSY.



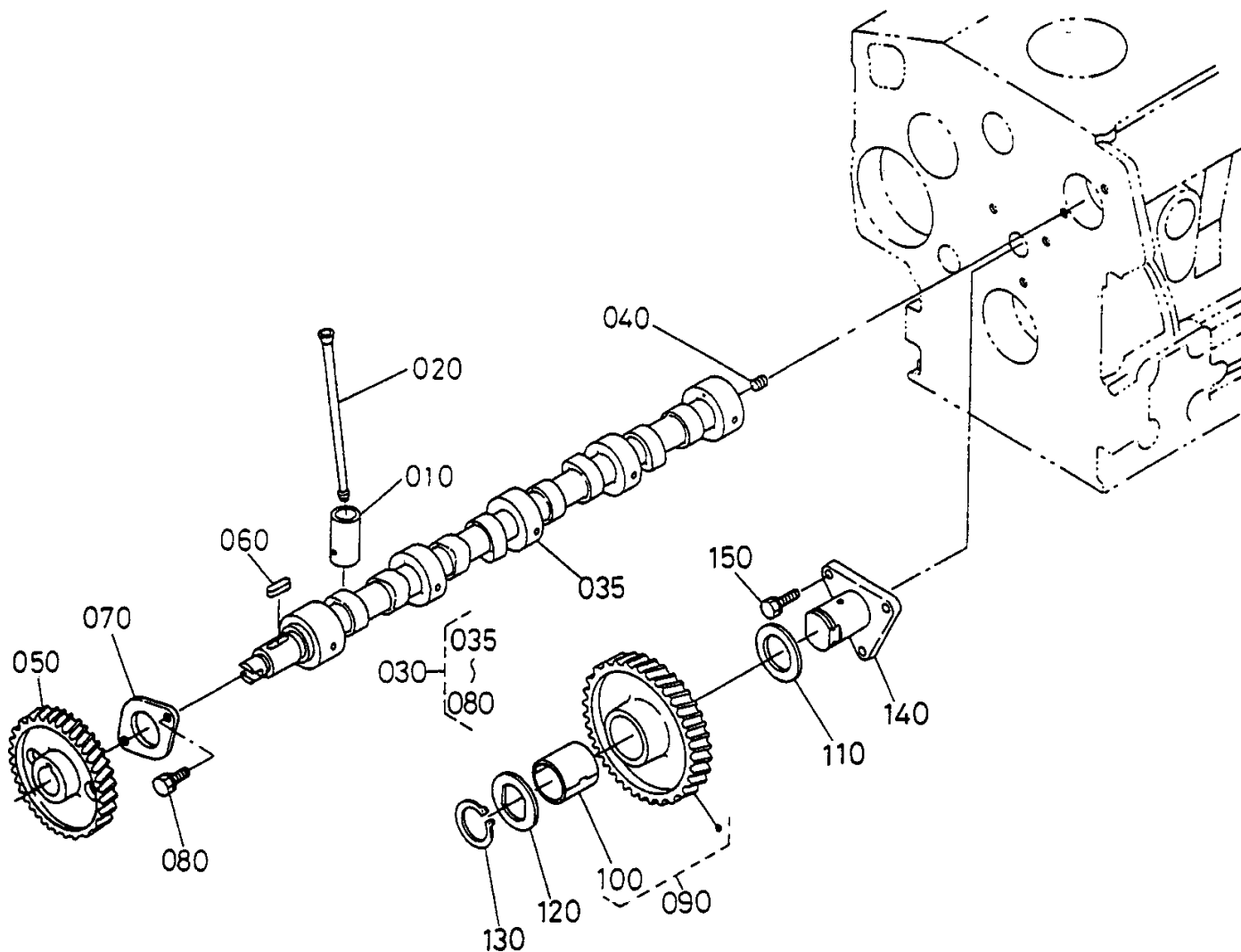
KUBOTA V1205B --- ROCKER ARM VALVE ASSY.

ROCKER ARM VALVE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1624113110	INLET VALVE	4	
020	1629913120	EXHAUST VALVE	4	
030	1627113240	VALVE SPRING	8	
040	1624113330	VALVE SPRING RETAINER	8	
050	1526113360	VALVE SPRING COLLET	8.....	SET
060	1624113150	VALVE STEM SEAL	8	
070	1624113280	VALVE CAP	8.....	REPLACES 1526113280
080	1624114050	ROCKER ARM SHAFT ASSY.	1	
090	0341050606	SET SCREW	2	
100	1624114350	ROCKER ARM BRACKET	4	
110	1624114410	STUD	4	
120	1526192010	NUT	4	
130	1526194010	PLAIN WASHER	4	
140	1526114420	SET SCREW	1	
150	1624114430	WASHER	2	
160	1624114440	WASHER	2	
170	1624114310	ROCKER ARM SPRING	3	
180	0461200120	EXT. CIRCLE CLIP	2	
190	1624114030	ROCKER ARM ASSY.	8	
200	1624114230	ADJUSTING SCREW	8	
210	1624114240	NUT	8	

KUBOTA V1205B --- CAMSHAFT ASSY.

CAMSHAFT ASSY.



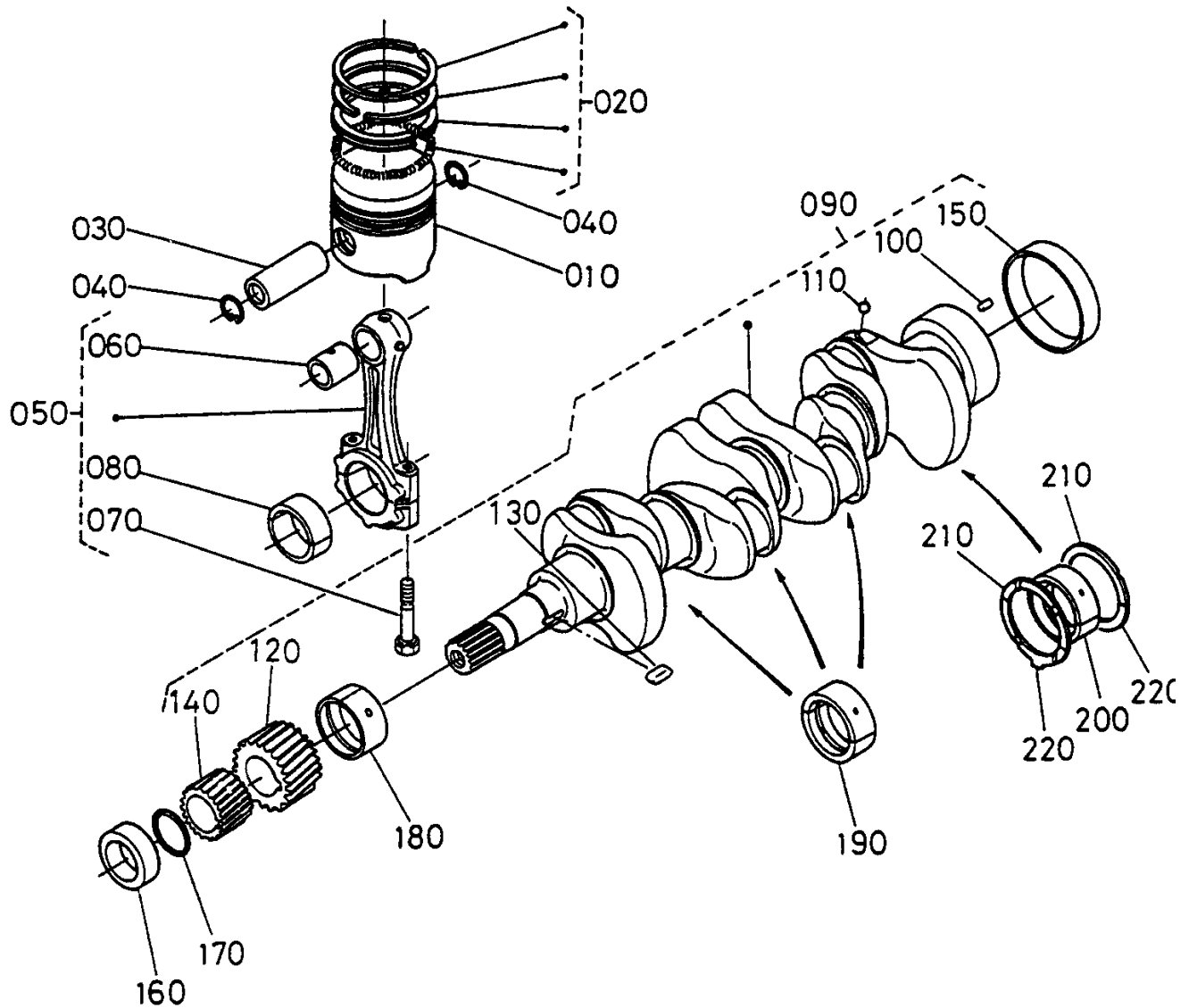
KUBOTA V1205B --- CAMSHAFT ASSY.

CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1526115550	TAPPET	8	
020	1624115110	PUSH ROD	8	
030	1627116010	CAMSHAFT ASSY.	1	INCL. ITEMS W/*
035*	1627116150	CAMSHAFT	1	
040*	1552193610	SET SCREW	1	
050*	1624116510	CAMSHAFT GEAR	1	
060*	0571200518	FEATHER KEY	1	
070*	1624116270	CAMSHAFT STOPPER	1	
080*	0102350614	BOLT	2	
090	1627124010	COMP. IDLE GEAR	1	INCL. ITEMS W/#
100#	1627124980	IDLE GEAR BUSHING	1	
110	1624124360	IDLE GEAR COLLAR	1	
120	1624124370	IDLE GEAR COLLAR	1	
130	1624124320	IDLE GEAR CIRCLE CLIP	1	
140	1624124250	IDLE GEAR SHAFT	1	
150	0102350616	BOLT	3	

KUBOTA V1205B--- PISTON CRANKSHAFT ASSY.

PISTON CRANKSHAFT ASSY.



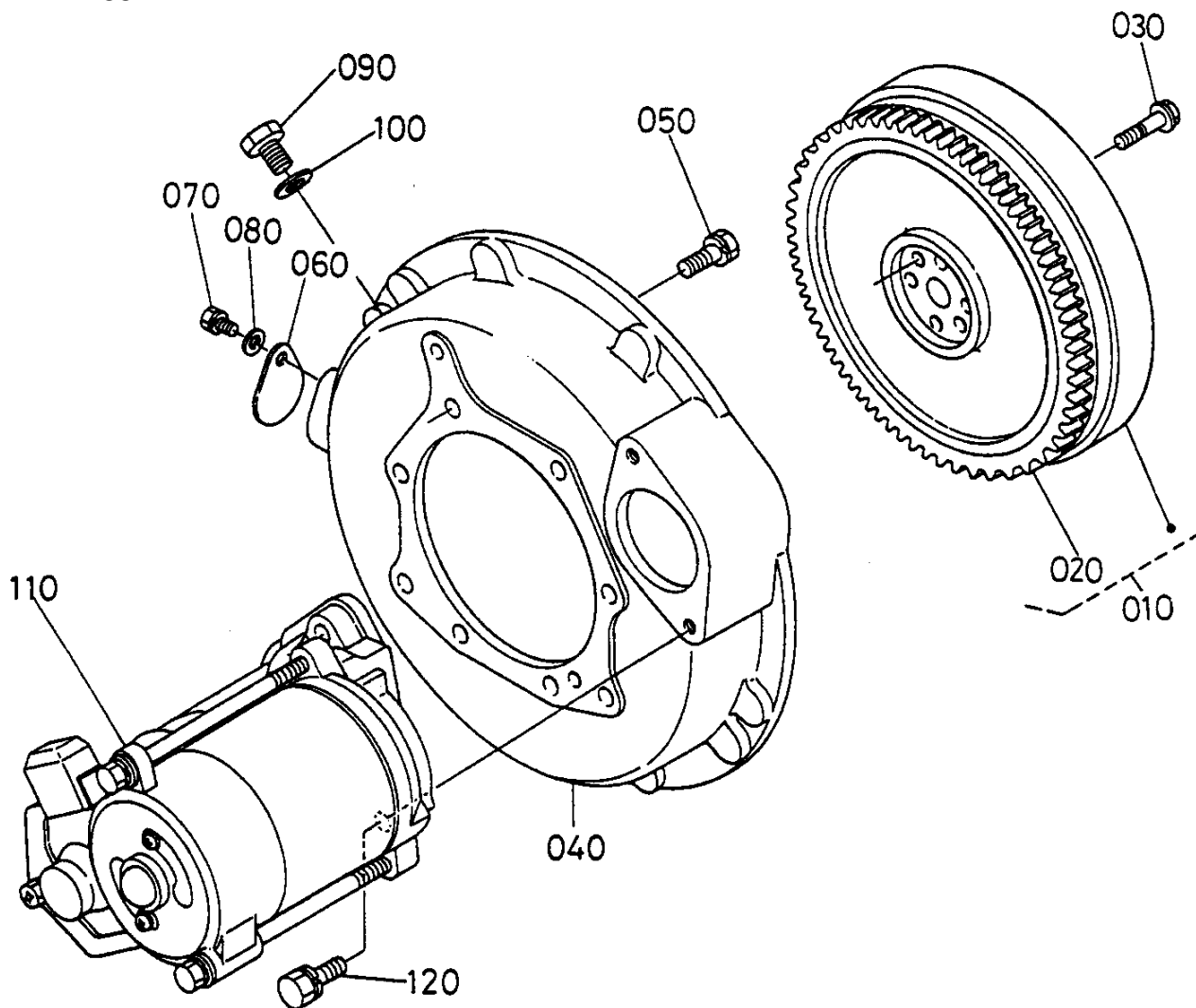
KUBOTA V1205B --- PISTON CRANKSHAFT ASSY.

PISTON CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1622421110	PISTON	4	STD; REPLACES 1622121110
010	1622121910	PISTON	4	+0.5MM
020	1590121050	PISTON RING ASSY.	4	STD
020	1590121090	PISTON RING ASSY.	4	+0.5MM
030	1624121310	PISTON PIN	4	
040	1624121330	CIRCLE CLIP, PISTON PIN	8	
050	1624122013	CONNECTING ROD ASSY.	4	INCL. ITEMS W/*;REPLACES 1624122012
060*	1624121980	PISTON PIN BUSHING	1	
070*	1624122140	CONNECTING ROD BOLT	8	
080*	1624122310	METAL, CRANKPIN	4	STD SET
080	1624122970	METAL, CRANKPIN	4	- 0.2MM SET
080	1624122980	METAL CRANKPIN	4	- 0.4MM SET
090	1624123010	COMP. CRANKSHAFT	1	INCL. ITEMS W/#
100#	0501200508	STRAIGHT PIN	1	
110#	0771500401	BALL	4	
120#	1624124110	CRANKSHAFT GEAR	1	
130#	1627195230	KEY	1	
140#	1624135630	OIL PUMP DRIVE GEAR	1	
150#	1624123280	CRANKSHAFT SLEEVE	1	
160	1624123250	CRANKSHAFT COLLAR	1	
170	0481110280	O RING	1	
180	1624123470	METAL CRANKSHAFT	1	STD
180	1624123910	METAL, CRANKSHAFT	1	-0.2MM
180	1624123920	METAL, CRANKSHAFT	1	-0.4MM
190	1624123480	METAL, CRANKSHAFT	3	STD SET
190	1624123930	METAL, CRANKSHAFT	3	-0.2MM SET
190	1624123940	METAL, CRANKSHAFT	3	-0.4MM SET
200	1624123490	METAL, CRANKSHAFT	1	STD SET
200	1624123860	METAL, CRANKSHAFT	1	-0.2MM SET
200	1624123870	METAL, CRANKSHAFT	1	-0.4MM SET
210	1552123530	METAL, SIDE	2	STD
210	1552123950	METAL, SIDE	2	+0.2MM
210	1552123960	METAL, SIDE	2	+0.4MM
220	1920223540	METAL, SIDE	2	STD
220	1920223970	METAL, SIDE	2	+0.2MM
220	1920223980	METAL, SIDE	2	+0.4MM

KUBOTA V1205B --- FLYWHEEL ASSY.

FLYWHEEL ASSY.



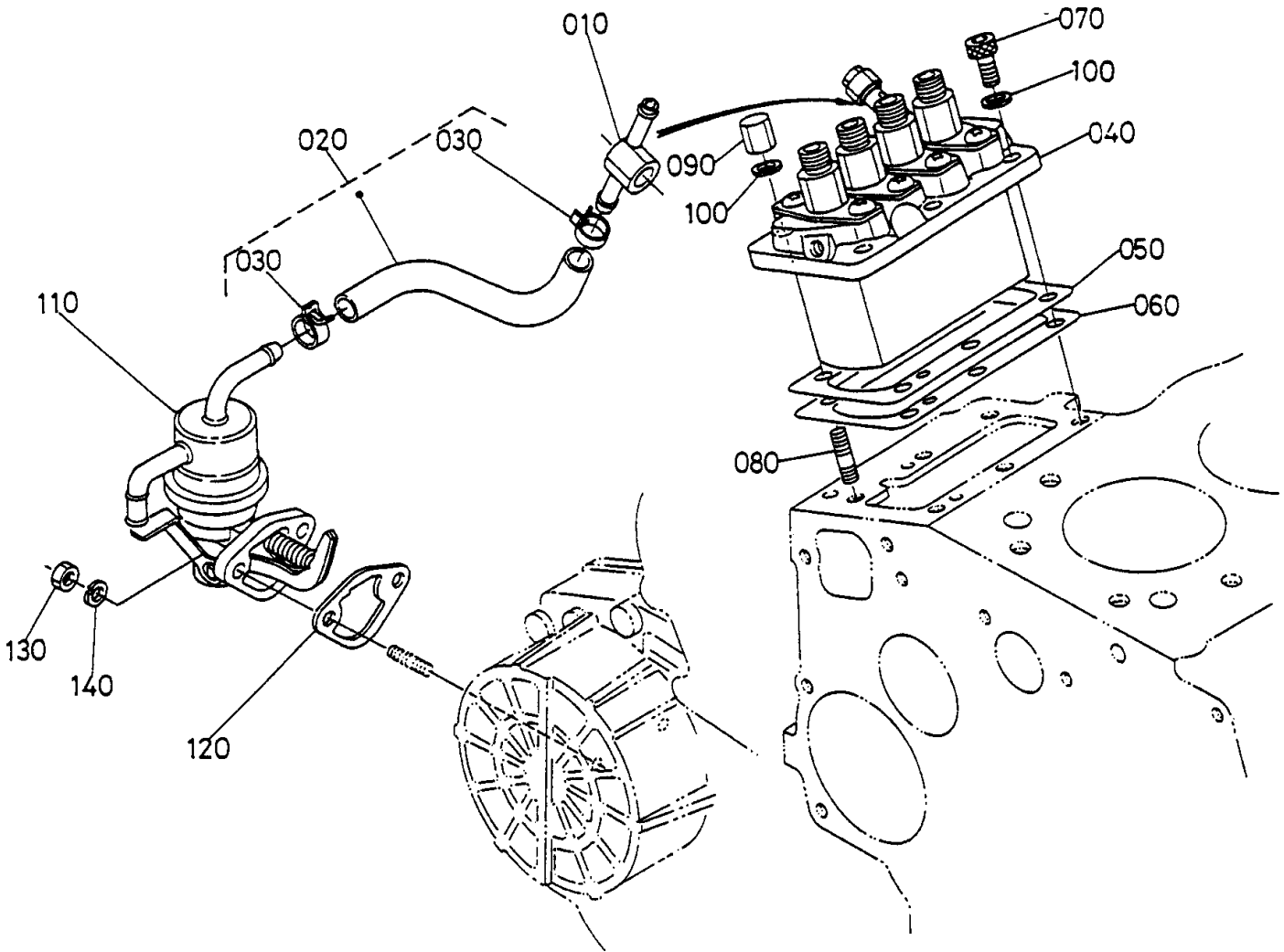
KUBOTA V1205B --- FLYWHEEL ASSY.

FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1753825010	COMP. FLYWHEEL	1	INCL. ITEMS W/*
020*	1626163820	GEAR, RING	1	REPLACES 1523163820
030	1627125160	BOLT, FLYWHEEL	6	
040	1721504610	HOUSING, FLYWHEEL	1	
050	1526191190	BOLT	8	
060	3122014172	COVER	1	REPLACES 3122014170
070	0112350814	BOLT	1	
080	0401350080	PLAIN WASHER	1	
090	0117351825	BOLT	1	
100	0401350180	PLAIN WASHER	1	
110	1628563010	STARTER ASSY.	1	REPLACES 1627163010
120	0112350830	BOLT	2	

KUBOTA V1205B --- INJECTION PUMP ASSY.

INJECTION PUMP ASSY.



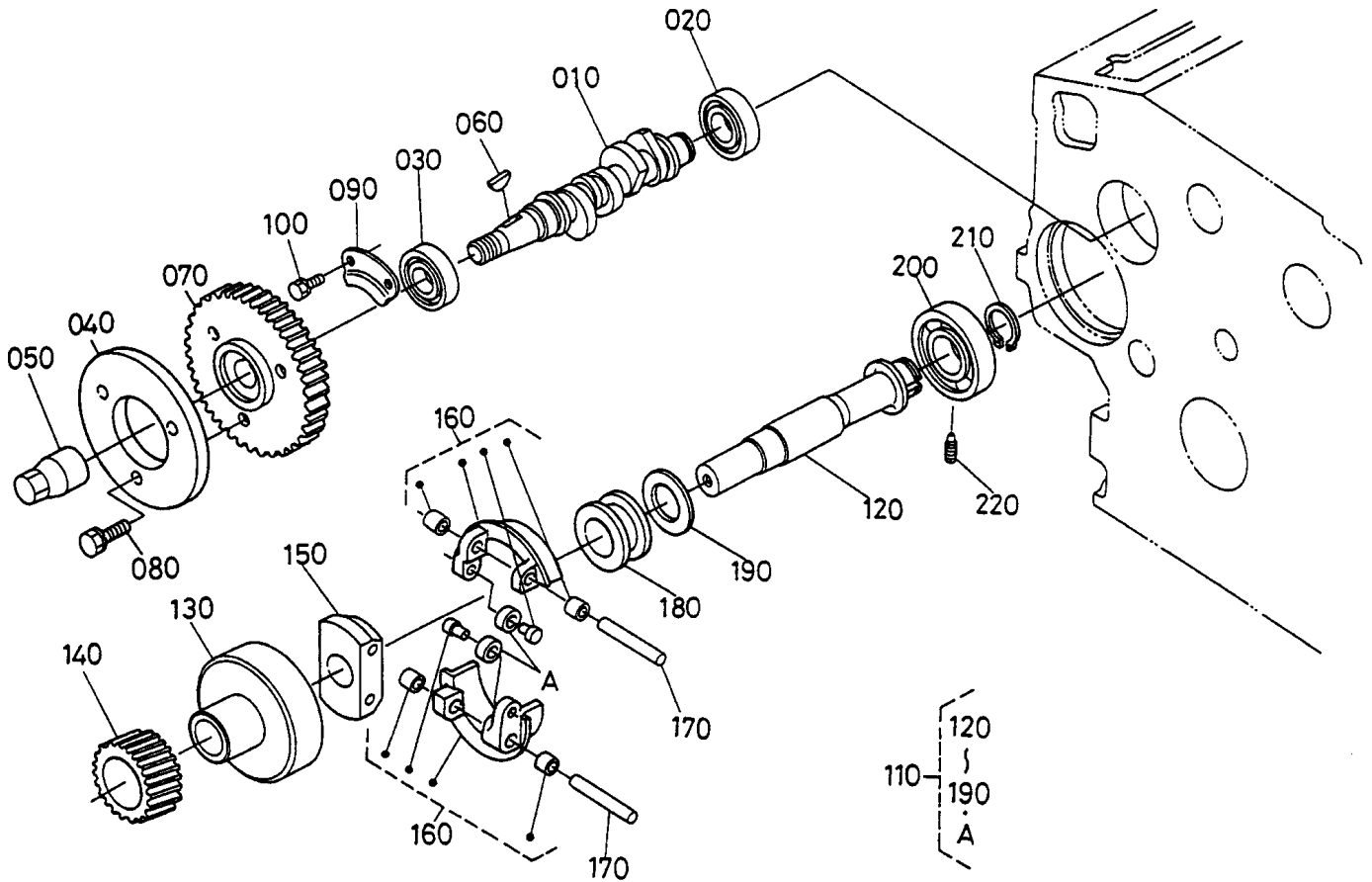
KUBOTA V1205B --- INJECTION PUMP ASSY.

INJECTION PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1627195690	JOINT	1	
020	1624142010	FUEL PIPE ASSY.	1	INCL. ITEMS W/*
030*	1624142750	PIPE BAND	2	
040	1628551010	INJECTION PUMP ASSY.	1	
050	1588152110	INJECTION PUMP SHIM	1	
060	1624152110	INJECTION PUMP SHIM	2	
070	0131110620	BOLT	3	
080	1584191500	STUD	3	
090	1584192320	CAP NUT	3	
100	030206150	LOCK WASHER	6	REPLACES 0451250060
110	1628552032	FUEL PUMP ASSY.	1	REPLACES 1628552030
120	1626452140	FUEL PUMP GASKET	1	REPLACES 1584152140
130	0205650060	NUT	2	
140	030206150	LOCK WASHER	2	REPLACES 0451250060

KUBOTA V1205B --- FUEL CAMSHAFT ASSY.

FUEL CAMSHAFT ASSY.



1

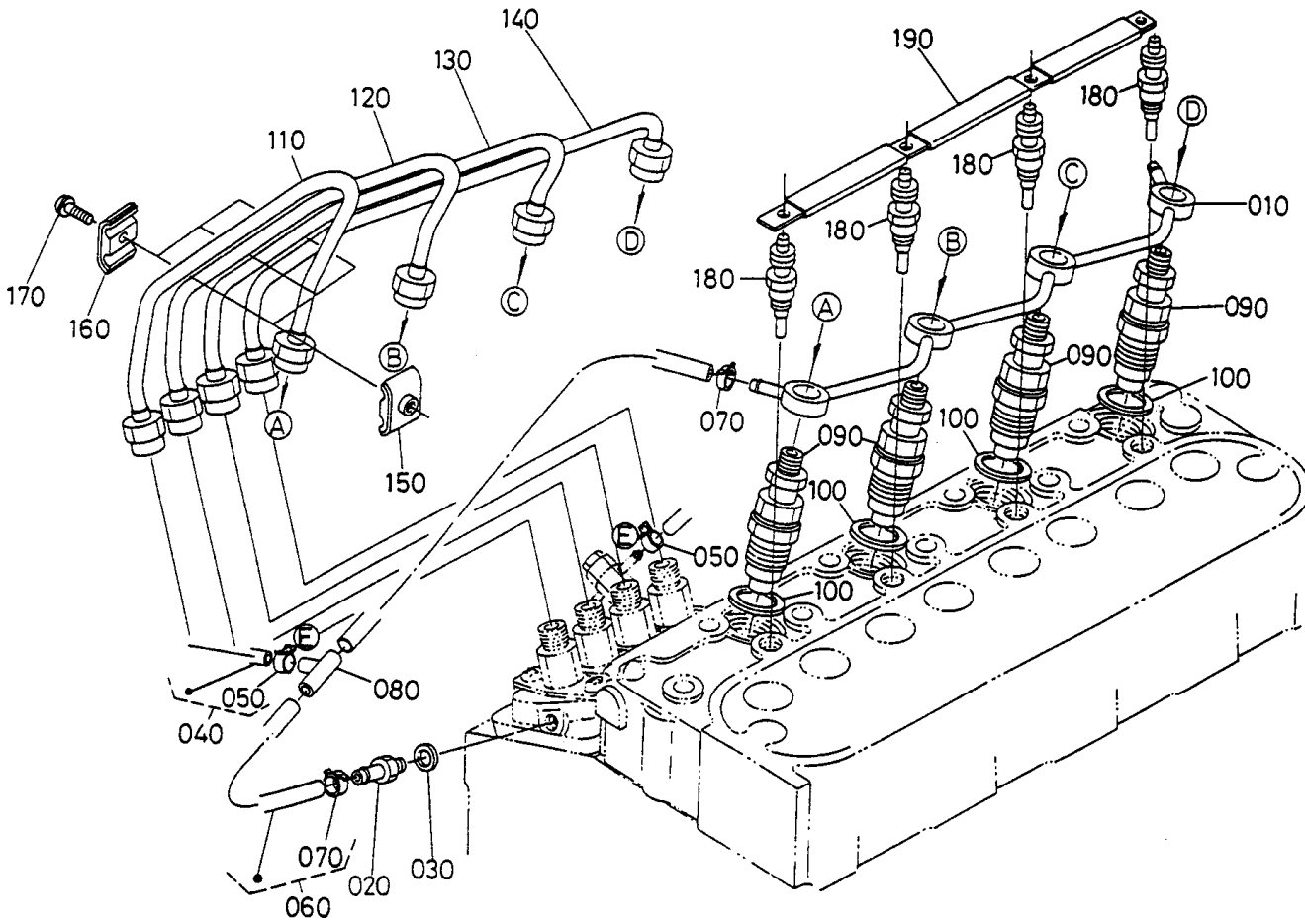
KUBOTA V1205B --- FUEL CAMSHAFT ASSY.

FUEL CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1624116170	FUEL CAMSHAFT	1	
020	0810306202	BALL BEARING	1	
030	0810306204	BALL BEARING	1	
040	1624151110	CAM, FUEL	1	
050	1624192330	CAP NUT	1	
060	1624195230	WOODRUFF KEY	1	
070	1753851150	INJECTION PUMP GEAR	1	
080	0102350618	BOLT	3	
090	1624116320	STOPPER	1	
100	0102350612	BOLT	2	
110	1628255012	GOVERNOR SHAFT ASSY.	1	.....INCL. ITEMS W/*
120*	1627155310	GOVERNOR SHAFT	1	
130*	1624155390	GOVERNOR SHAFT HOLDER	1	
140*	1628255320	GOVERNOR GEAR	1	
150*	1624155270	GOVERNOR WEIGHT HOLDER	1	
160*	1624155060	GOVERNOR WEIGHT COMP.	2	
170*	1624155260	GOVERNOR WEIGHT SHAFT	2	
180*	1624155450	GOVERNOR SLEEVE	1	
190*	1624155462	THRUST WASHER	1	
200	0810106304	BALL BEARING	1	
210	1627155410	CIRCLE CLIP, GOVERNOR SHAFT	1	
220	1624155554	SET SCREW	1	

KUBOTA V1205B --- NOZZLE HOLDER ASSY.

NOZZLE HOLDER ASSY.



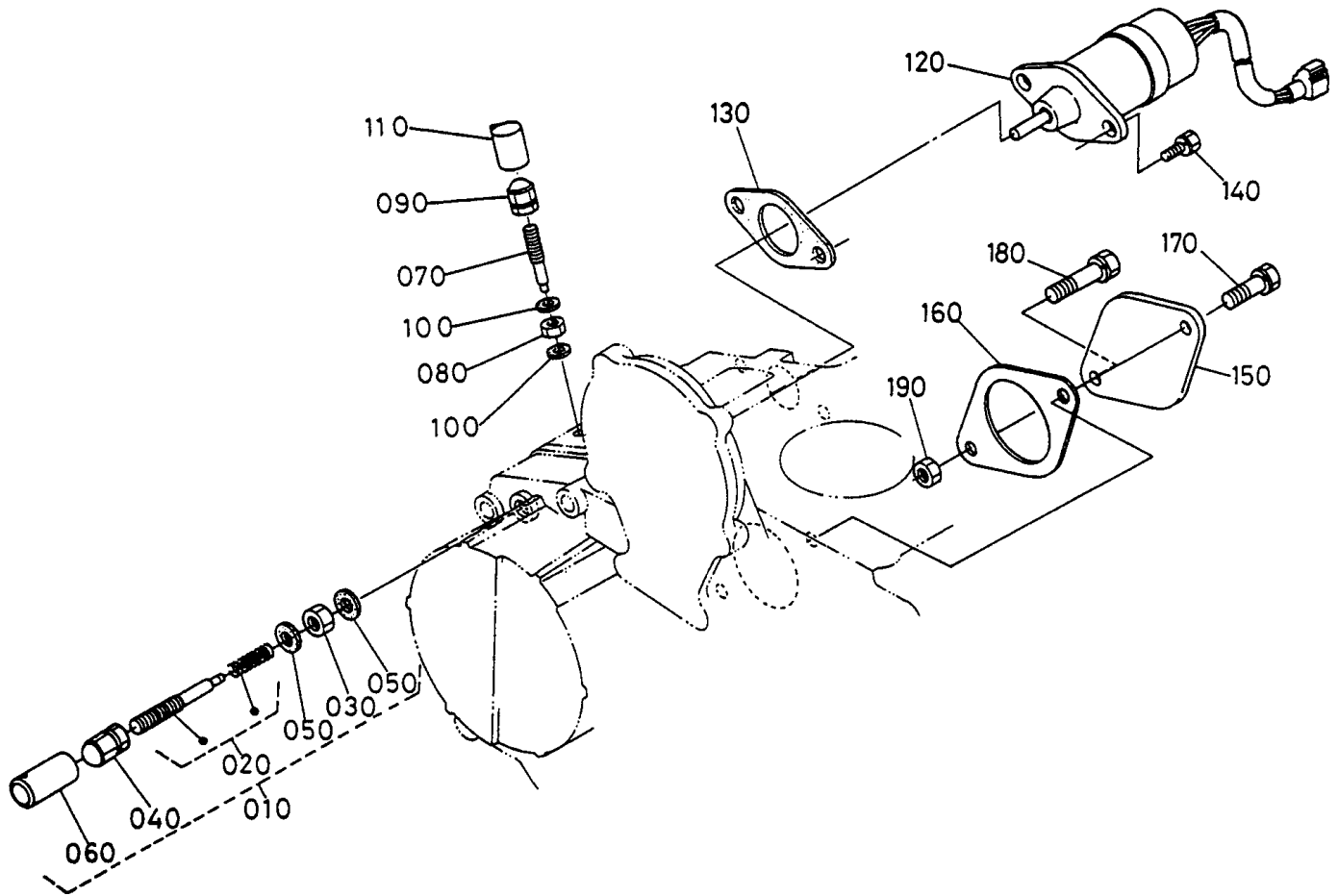
KUBOTA V1205B --- NOZZLE HOLDER ASSY.

NOZZLE HOLDER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1627142502	OVER FLOW PIPE ASSY.	1	REPLACES 1627142500
020	1584151360	SCREW	1	
030	1560196650	GASKET	1	
040	1753842020	OVER FLOW PIPE ASSY.	1	
050	1624142320	PIPE BAND	2	
060	1758242030	OVER FLOW PIPE ASSY.	2	
070	1624142320	PIPE BAND	4	
080	1510142570	PIPE JOINT	1	
090	1647553000	NOZZLE HOLDER ASSY.	4	
100	1584153622	GASKET	4	REPLACES 1584153620
110	1627153710	INJECTION PIPE	1	
120	1627153722	INJECTION PIPE	1	REPLACES 1627153720
130	1627153712	INJECTION PIPE	1	REPLACES 1627153730
140	1627153742	INJECTION PIPE	1	REPLACES 1627153740
150	1584153850	PIPE CLAMP	3	
160	1584153860	PIPE CLAMP	3	
170	0302450520	WASHER AND SCREW	3	
180	1624165512	GLOW PLUG	4	REPLACES 1624165510
190	1627165560	GLOW PLUG CORD	1	

KUBOTA V1205B --- IDLING APPARATUS ASSY.

IDLING APPARATUS ASSY.



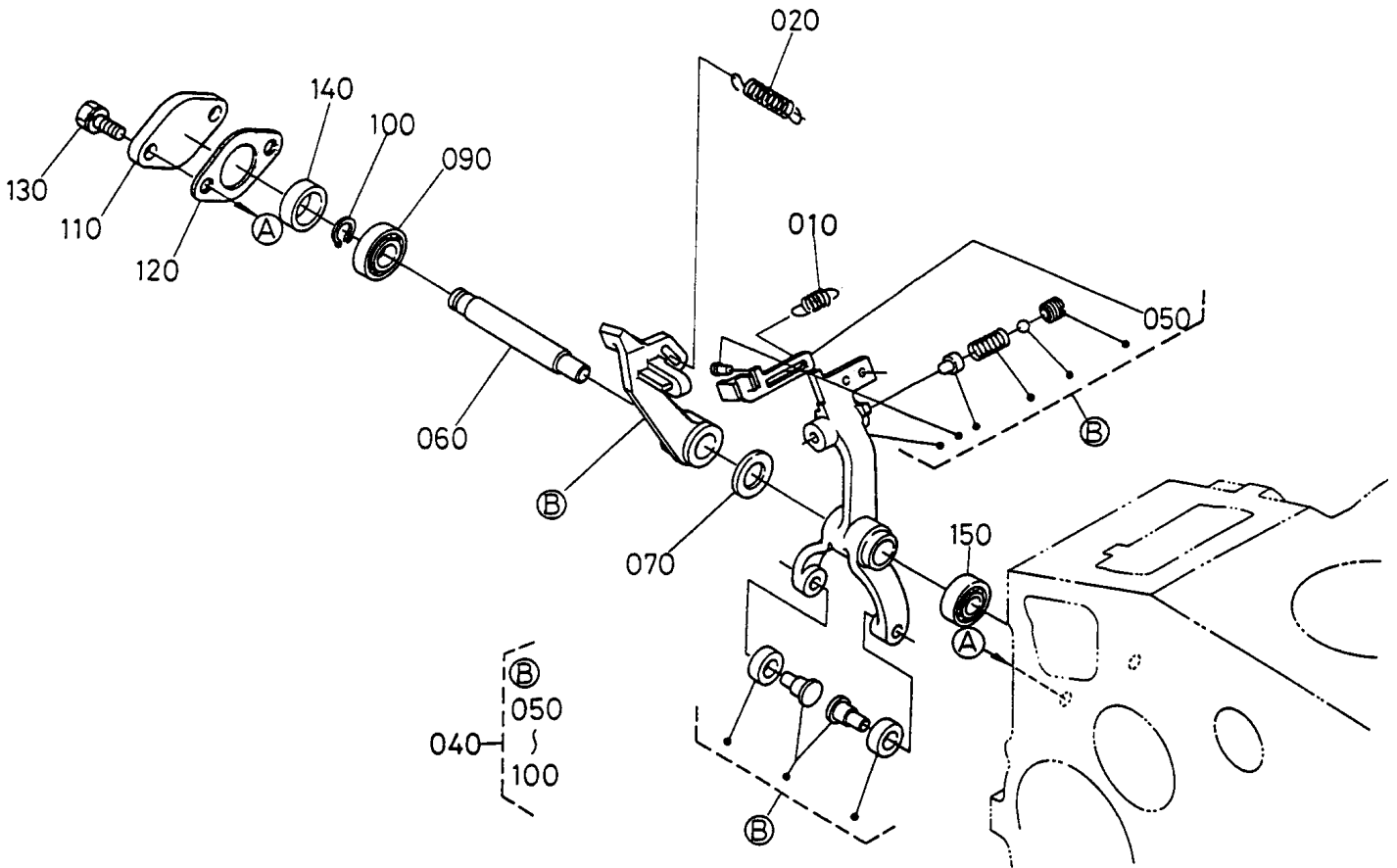
KUBOTA V1205B --- IDLING APPARATUS ASSY.

IDLING APPARATUS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1625954090	IDLE APPARATUS ASSY.	1	INCL. ITEMS W/*
020*	1625954100	ADJUSTING BOLT ASSY.	1	
030*	1584192020	NUT	1	
040*	1584192330	CAP NUT	1	
050*	1560196650	GASKET	2	
060*	1624154420	CAP	1	
070	1624154120	ADJUSTING BOLT	1	
080	1584192020	NUT	1	
090	1584192330	CAP NUT	1	
100	1560196650	GASKET	2	
110	1624154420	CAP	1	
120	1627160012	SOLENOID ASSY.	1	REPLACES 1627160010
130	1629960150	SOLENOID COVER GASKET	1	REPLACES 1627160150
140	0102350612	BOLT	2	
150	1628283150	PUMP COVER	1	
160	1628283110	PACKING	1	
170	0112350820	BOLT	1	
180	0112350832	BOLT	1	
190	0215650080	NUT	1	

KUBOTA V1205B --- GOVERNOR ASSY.

GOVERNOR ASSY.



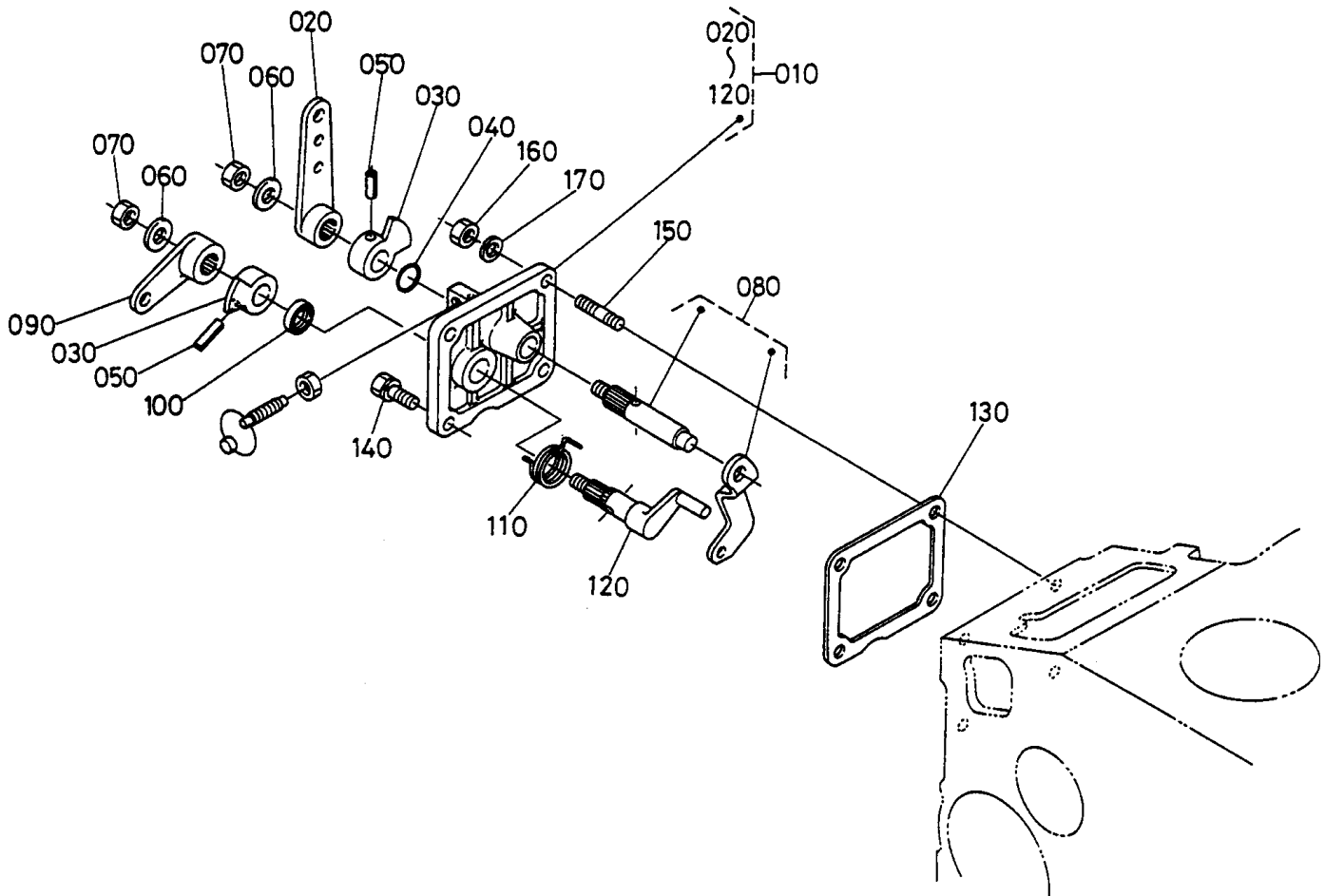
KUBOTA V1205B --- GOVERNOR ASSY.

GOVERNOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1628556480	START SPRING	1	
020	1628556410	GOVERNOR SPRING	1	
040	1625756052	FORK LEVER ASSY.	1	..... INCL. ITEMS W/*
050*	1626156210	THRUST LEVER	1	
060*	1624156153	FORK LEVER SHAFT	1	
070*	1624194010	PLAIN WASHER	1	
090*	1624156330	BALL BEARING	1	
100*	0461200090	CIRCLE CLIP, EXTERNAL	1	
110	1624156250	FORK LEVER SHAFT COVER	1	
120	1624156260	GASKET	1	
130	0102350614	BOLT	2	
140	1624156210	COLLAR	1	
150	1624156340	BALL BEARING	1	

KUBOTA V1205B --- SPEED CONTROL PLATE ASSY.

SPEED CONTROL PLATE ASSY.



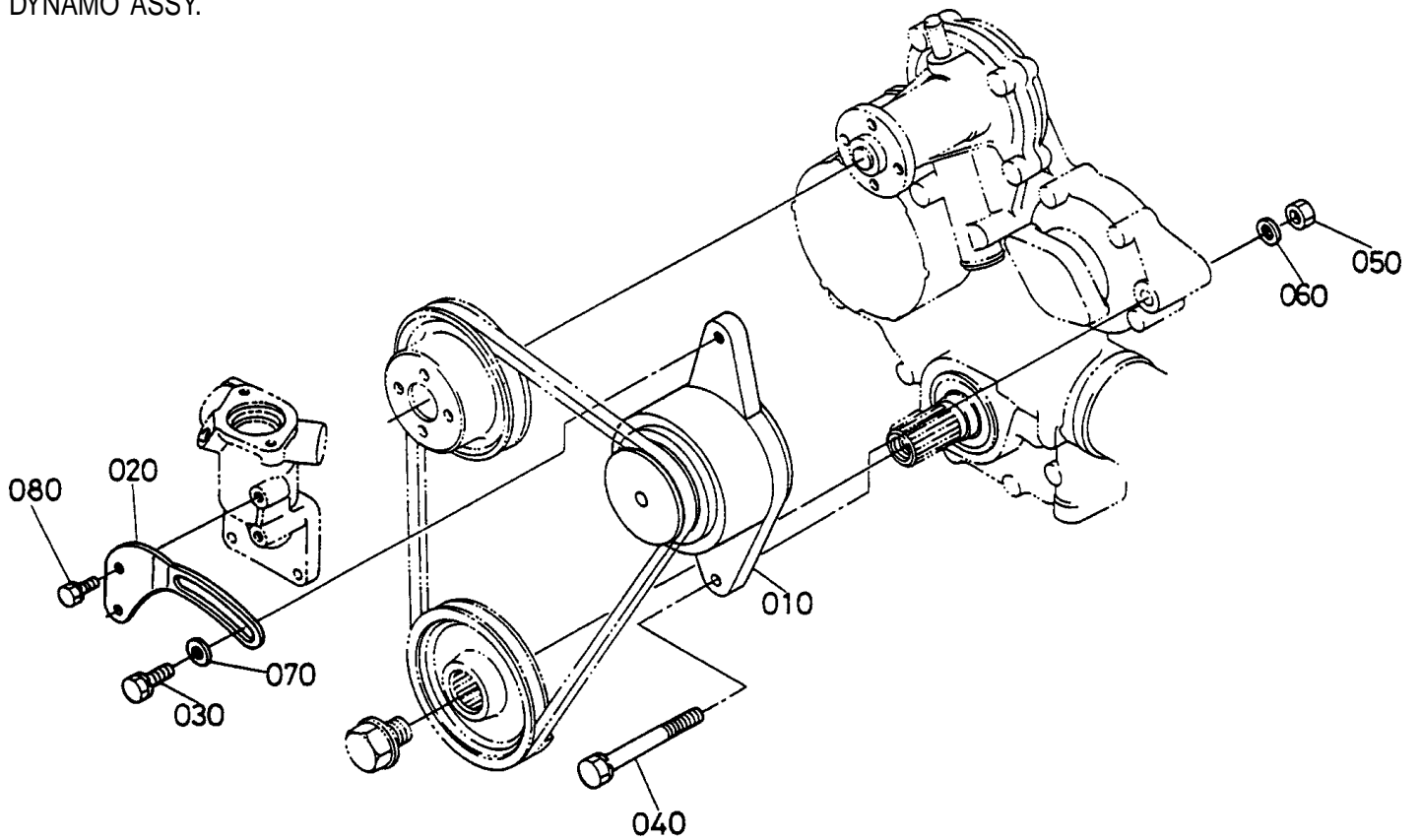
KUBOTA V1205B --- SPEED CONTROL PLATE ASSY.

SPEED CONTROL PLATE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1758257010	CONTROL PLATE ASSY.	1	INCL. ITEMS W/*
020*	1627157150	SPEED CONTROL LEVER	1	
030*	1624157160	SPEED CONTROL LEVER	2	
040*	0481100100	O RING	1	
050*	0541100420	SPRING PIN	2	
060*	1624194020	PLAIN WASHER	2	
070*	1624192020	NUT	2	
080*	1627156023	GOVERNOR COMP. LEVER	1	
090*	1627157720	ENGINE STOP LEVER	1	
100*	1547157980	OIL SEAL	1	
110*	1622257510	RETURN SPRING	1	
120*	1627157740	STOP LEVER SHAFT	1	
130	1624157210	GASKET	1	
140	0102350616	BOLT	2	
150	0151350616	STUD	2	
160	0205650060	NUT	2	
170	030206150	LOCK WASHER	2	REPLACES 0451250060

KUBOTA V1205B --- DYNAMO ASSY.

DYNAMO ASSY.



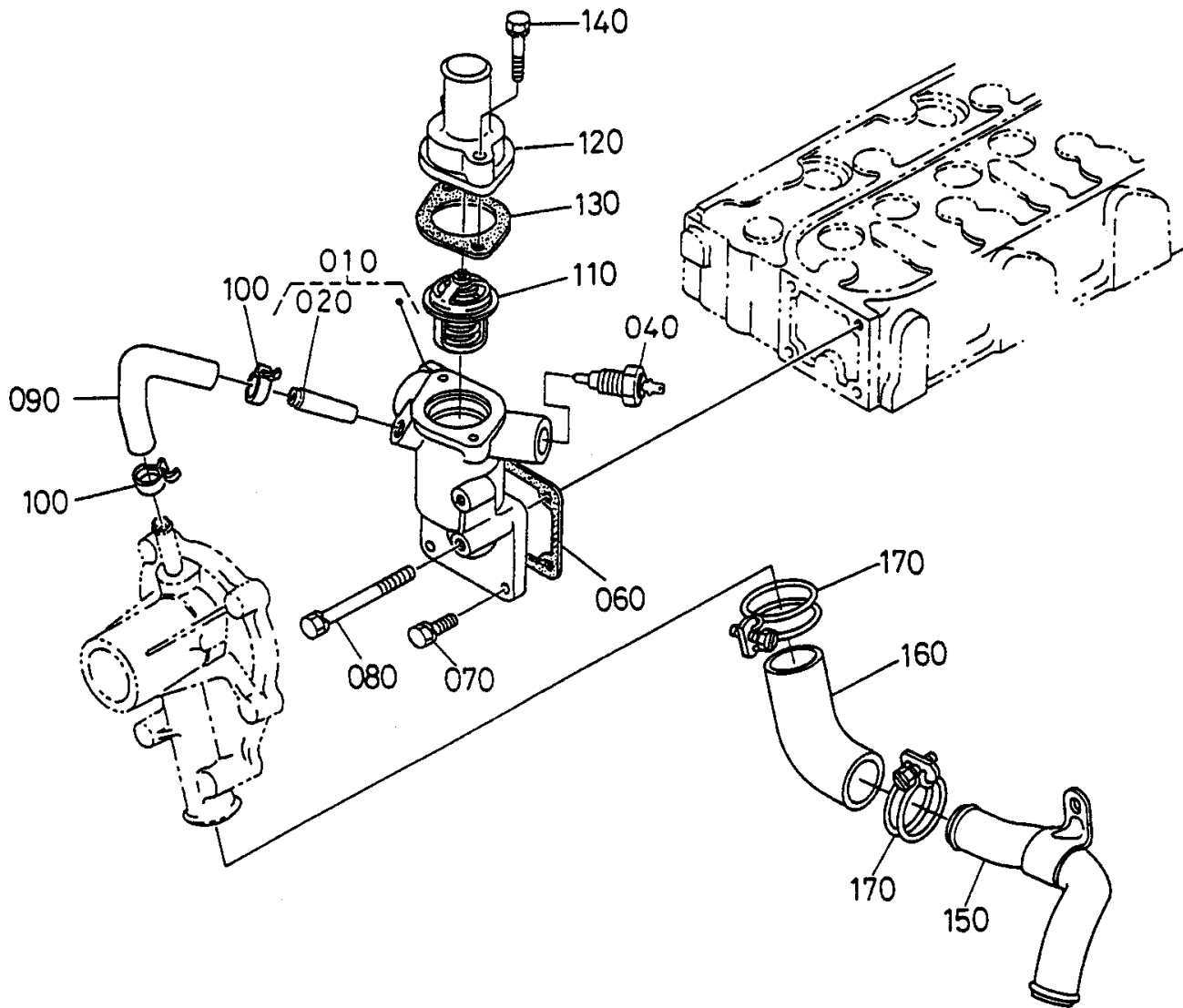
KUBOTA V1205B --- DYNAMO ASSY.

DYNAMO ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1553164013	DYNAMO ASSY.	1	
020	1622564420	DYNAMO STAY	1	
030	0112350825	BOLT	1	
040	0112350855	BOLT	1	
050	0205650080	NUT	1	
060	0401350080	PLAIN WASHER	1	
070	0401550080	PLAIN WASHER	1	
080	0102350616	BOLT	1	

KUBOTA V1205B --- WATER FLANGE ASSY.

WATER FLANGE ASSY.



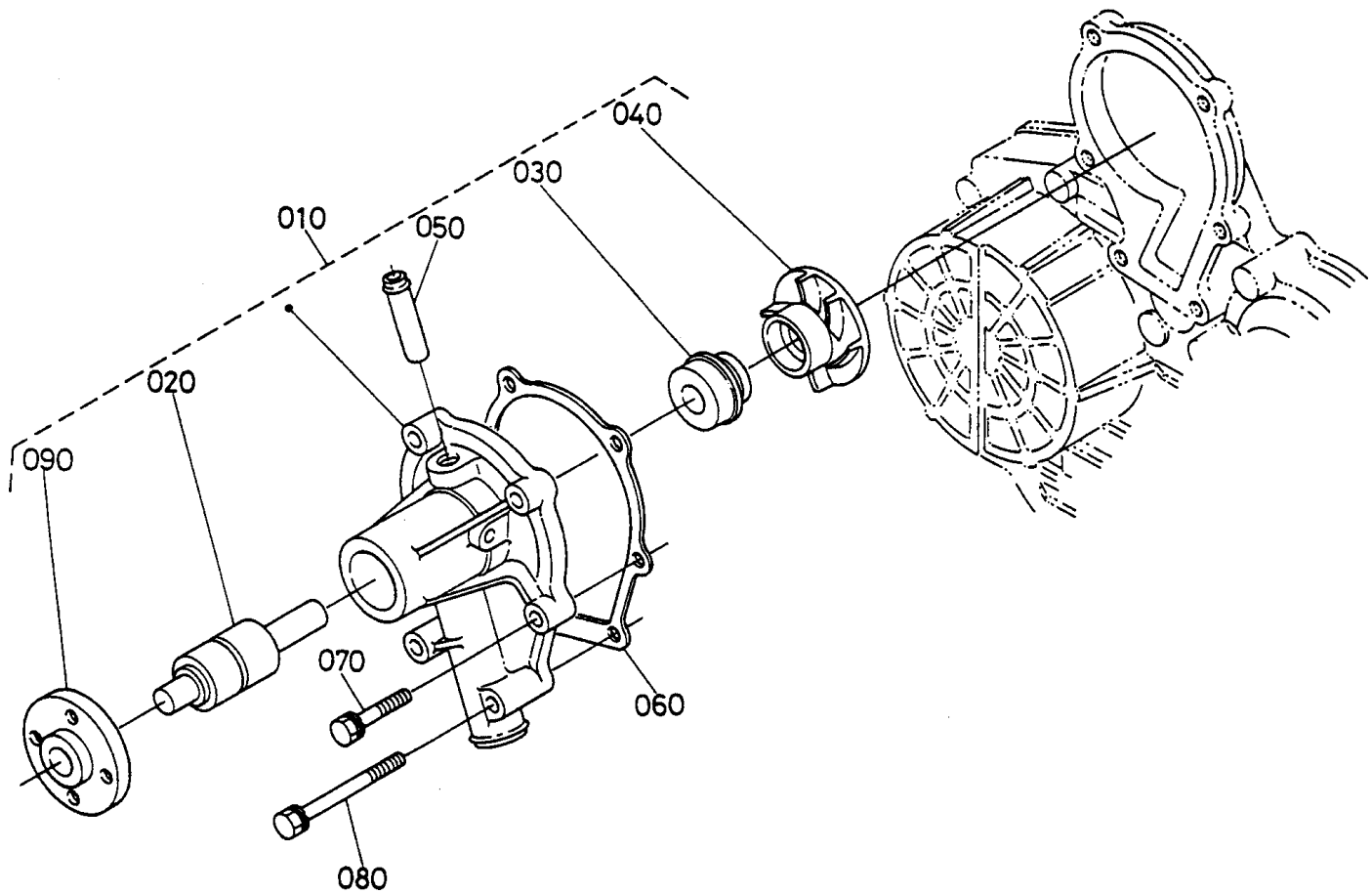
KUBOTA V1205B --- WATER FLANGE ASSY.

WATER FLANGE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1622272700	COMP. FLANGE, WATER	1	
020	1624173340	PIPE, WATER RETURN	1	
040	1753883040	THERMOMETER SWITCH	1	
060	1626472920	WATER FLANGE GASKET	1	REPLACES 1624172920
070	0102350616	BOLT	1	
080	0102350655	BOLT	1	
090	1624173350	WATER RETURN PIPE	1	
100	1624173360	PIPE BAND	2	
110	1920373010	THERMOSTAT ASSY.	1	
120	1627173260	THERMOSTAT COVER	1	
130	1567673270	GASKET	1	REPLACES 1553173270
140	0102350630	BOLT	2	
150	1628572860	WATER PIPE	1	
160	1624172870	WATER PIPE	2	
170	3620082720	CLAMP	2	

KUBOTA V1205B --- WATER PUMP ASSY.

WATER PUMP ASSY.

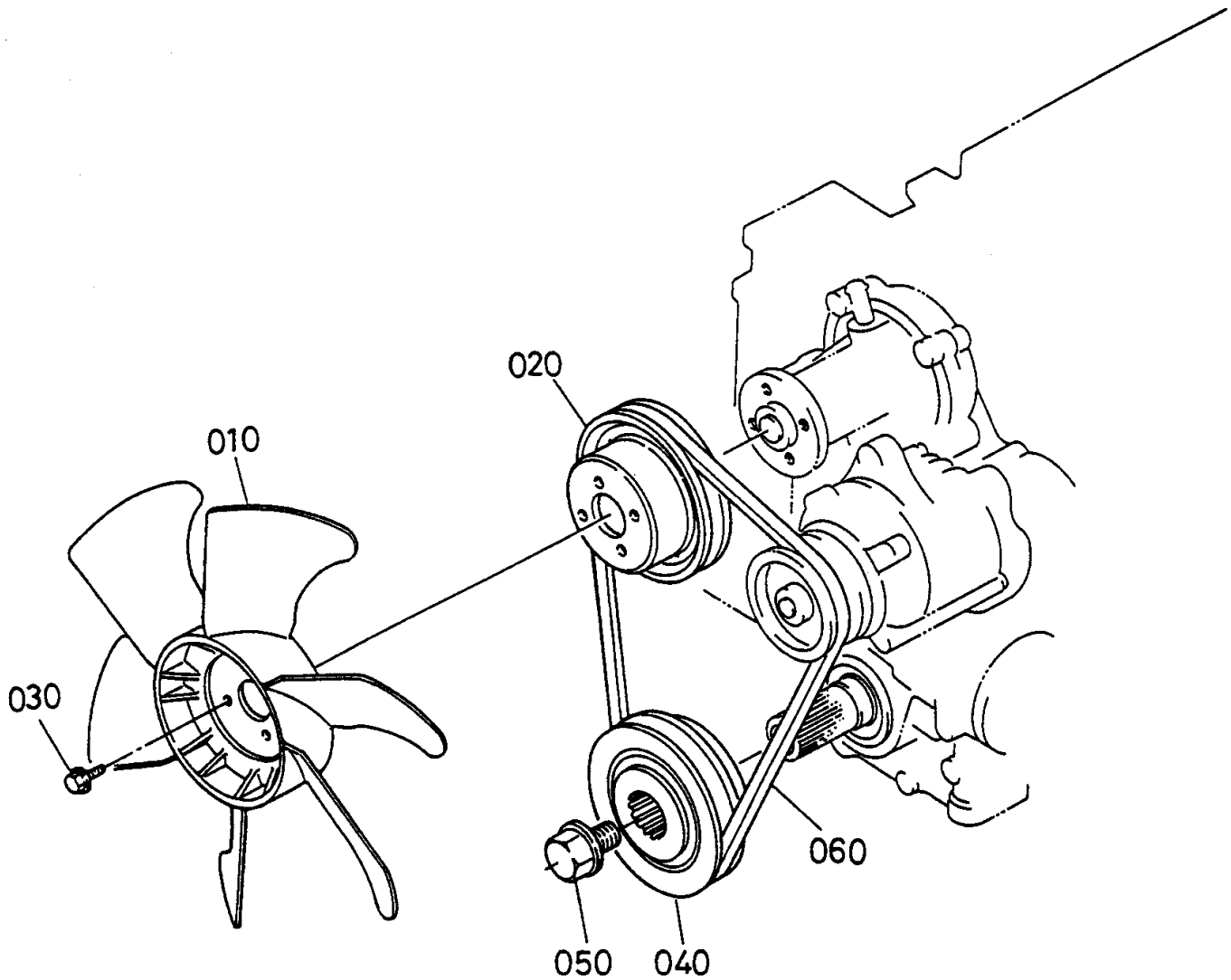


KUBOTA V1205B --- WATER PUMP ASSY.

WATER PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1625973032	WATER PUMP ASSY.	1	INCLUDES ITEMS W/*;REPLACES 1625973030
020*	1625973550	BALL BEARING	1	
030*	1548173050	MECHANICAL SEAL ASSY.	1	
040*	1625973510	WATER PUMP IMPELLER	1	
050*	1624173340	WATER RETURN PIPE	1	
060	1623973430	WATER PUMP GASKET	1	REPLACES 1625973430
070	0102350630	BOLT	4	
080	0102350680	BOLT	2	
090	1625973520	FLANGE, WATER PUMP	1	

FAN ASSY.



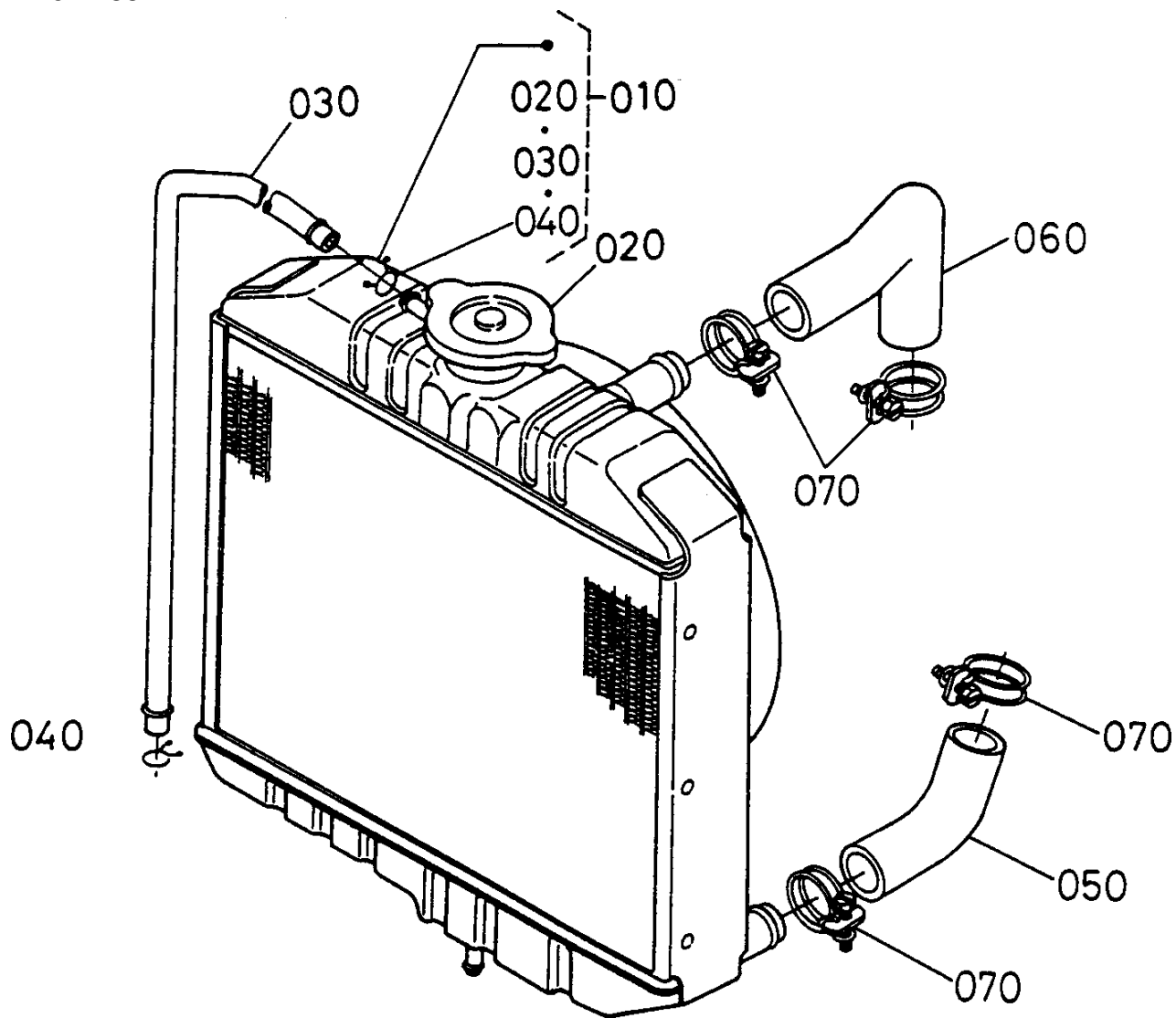
KUBOTA V1205B --- FAN ASSY.

FAN ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1727474110	FAN	1	REPLACES 1625974112
020	1624174250	FAN PULLEY	1	
030	175450612	FLANGE BOLT	4	
040	1753874280	FAN DRIVE PULLEY	1	
050	1624191020	BOLT	1	
060	1624197010	V BELT	1	

KUBOTA V1205B --- RADIATOR ASSY.

RADIATOR ASSY.



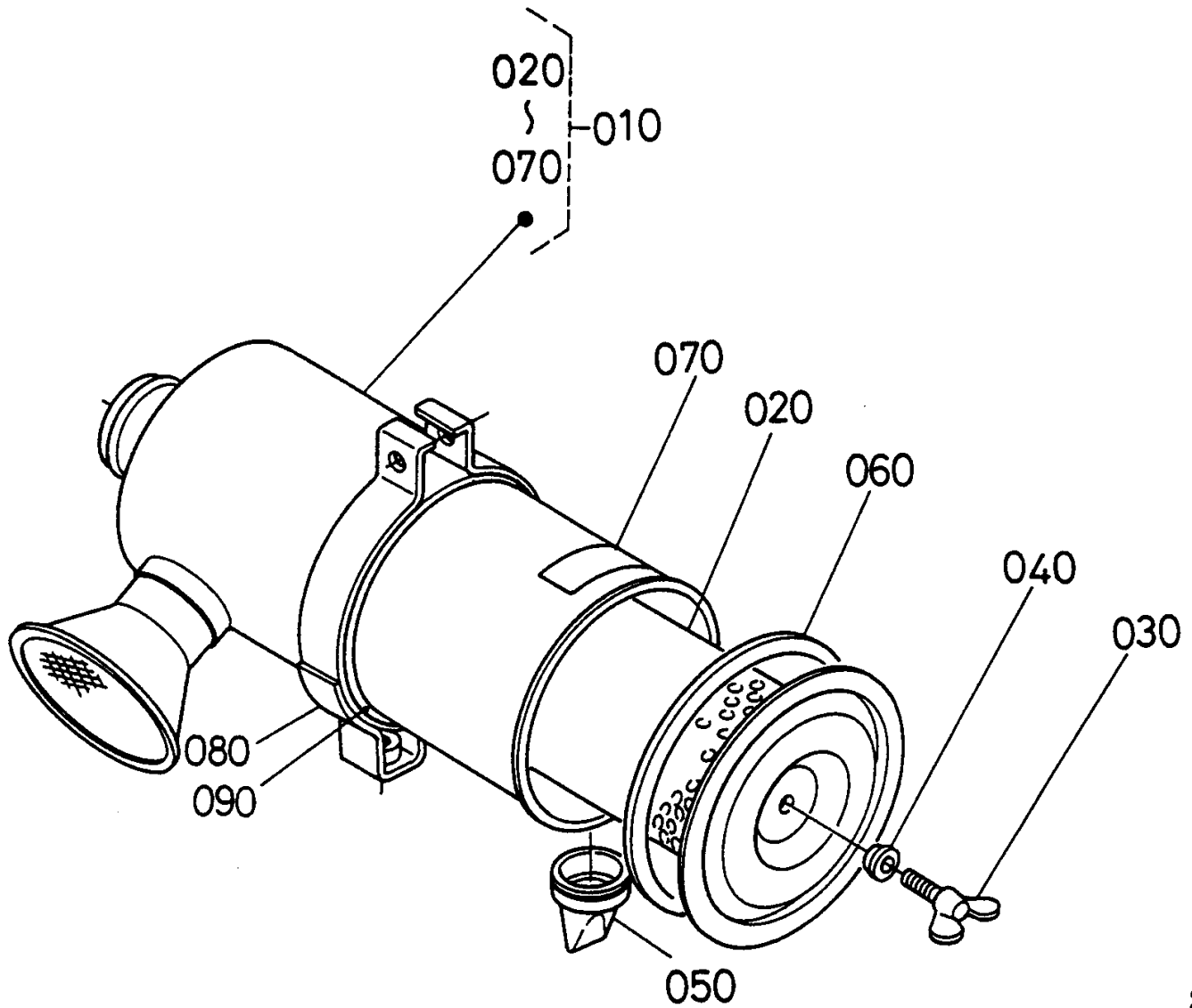
KUBOTA V1205B --- RADIATOR ASSY.

RADIATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1753872060	RADIATOR ASSY.	1	INCLUDES ITEMS W/*
020*	1527272020	CAP ASSY.	1	
030*	1562172710	WATER OVER FLOW PIPE	1	
040*	1550172470	PIPE CLIP	2	
050	1628672850	WATER PIPE	1	
060	1628672940	WATER PIPE	1	
070	3620082720	CLAMP	4	

KUBOTA V1205B --- AIR CLEANER ASSY.

AIR CLEANER ASSY.



205

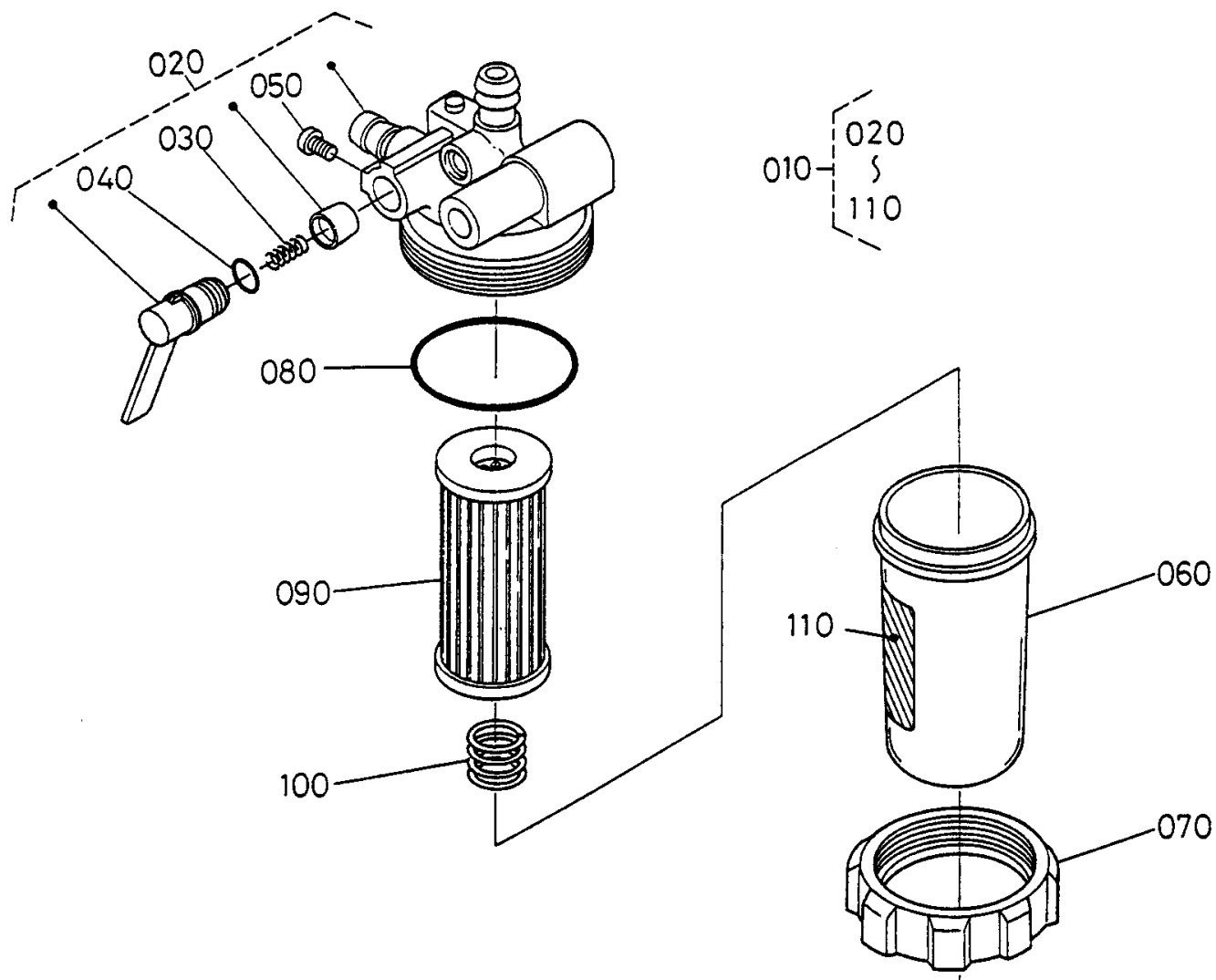
KUBOTA V1205B--- AIR CLEANER ASSY.

AIR CLEANER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1753811010	AIR CLEANER ASSY.	1	INCLUDES ITEMS W/*
020*	1574111080	CLEANER ELEMENT ASSY.	1	
030*	1574192620	WING BOLT	1	
040*	1574194430	GASKET ASSY.	1	
050*	1574111470	VALVE	1	
060*	1574111170	GASKET	1	
070*	1627187450	A/C ELEMENT LABEL	1	
080	1538111250	AIR CLEANER BAND	1	REPLACES 1500036930
090	1500036920	CUSHION	1	

KUBOTA V1205B --- FUEL FILTER COMPONENT ASSY.

FUEL FILTER COMPONENT ASSY.



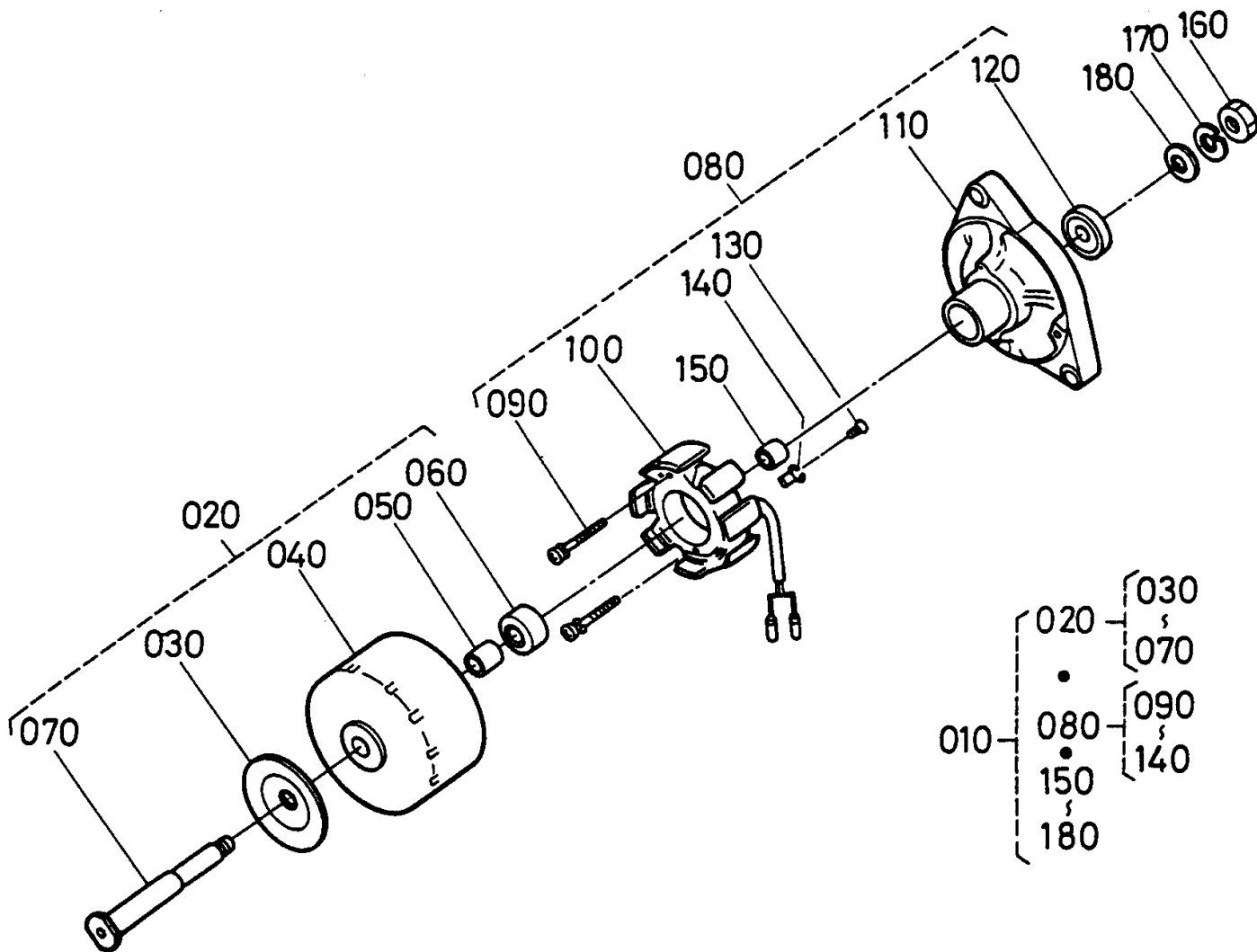
KUBOTA V1205B --- FUEL FILTER COMPONENT ASSY.

FUEL FILTER COMPONENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1758243010	FUEL FILTER ASSY.	1	INCLUDES ITEMS W/*
020*	1758243510	BODY	1	INCLUDES ITEMS W/#
030*#	1430143820	VALVE SPRING	1	
040*#	1430143840	LEVER O RING	1	
050*#	1430143830	SCREW	1	
060*	1627143580	FILTER CUP	1	
070*	1627143590	RETAINING RING	1	
080*	1627143570	FILTER O RING	1	
090*	1627143560	ELEMENT ASSY.	1	
100*	1627143930	SPRING	1	
110*	1556787460	FUEL FILTER LABEL	1	

KUBOTA V1205B --- DYNAMO COMPONENT ASSY.

DYNAMO COMPONENT ASSY.



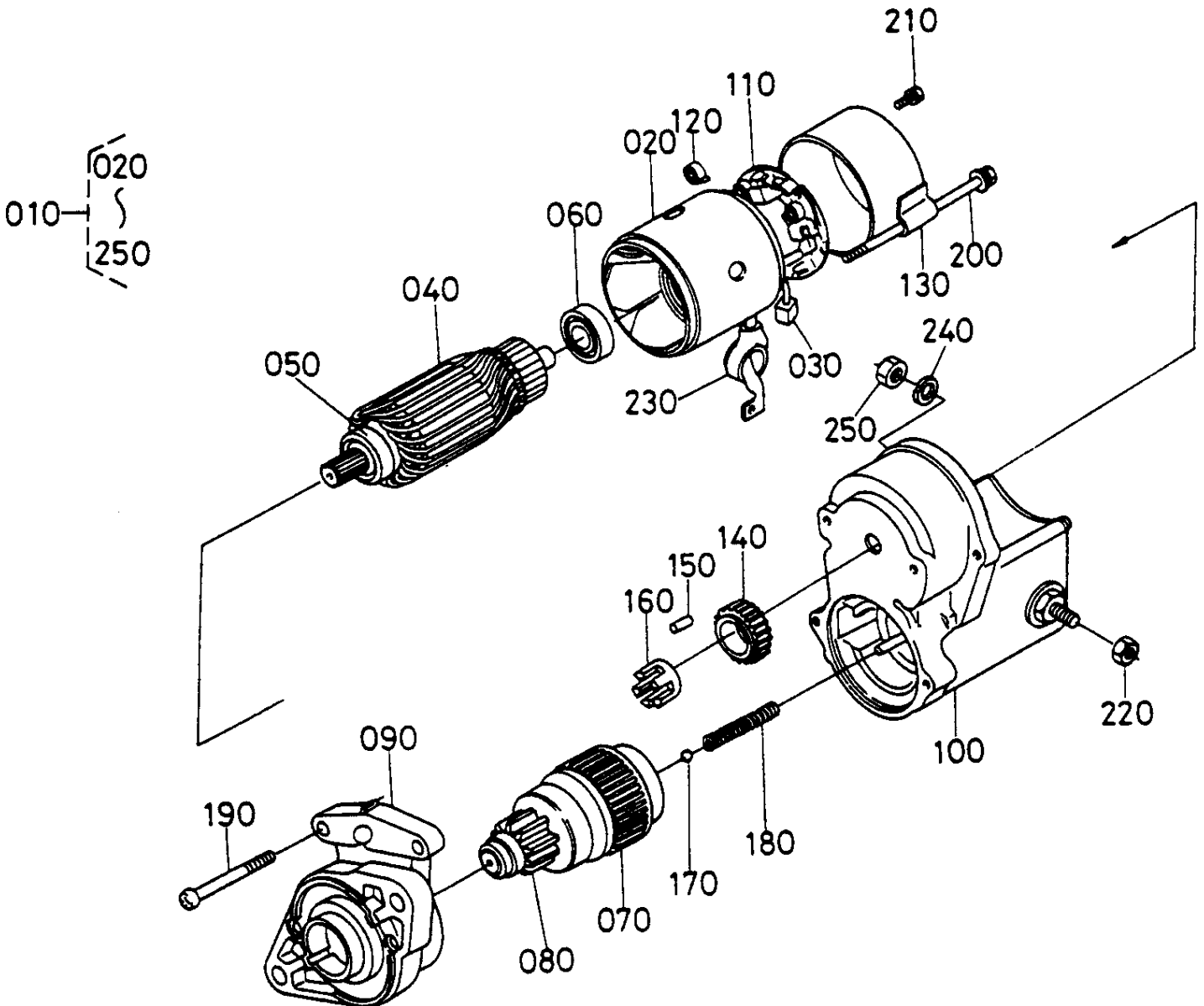
KUBOTA V1205B --- DYNAMO COMPONENT ASSY.

DYNAMO COMPONENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1553164013	DYNAMO ASSY.	1	INCLUDES ITEMS W/*
020*	1553164122	STATOR COMP.	1	INCLUDES ITEMS W/#
030*#	1553164110	PULLEY	1	
040*#	1553164040	ROTOR	1	
050*#	1553164140	COLLAR	1	
060*#	1553174180	BALL BEARING	2	
070*#	1553174140	FAN SHAFT	1	
080*	1553164363	STRATOR COMP.	1	INCLUDES ITEMS W/%
090*%	1526493010	ROUND HEAD SCREW	2	
100*%	1553164292	STATOR	1	
110*%	1553164072	PLATE	1	
120*%	0814106201	BALL BEARING	1	REPLACES 1553174180
130*%	1553193010	ROUND HEAD SCREW	1	
140*%	1553164190	CORD CLAMP	1	
150*	1526164150	COLLAR	1	
160*	1526192030	NUT	1	
170*	1526194070	LOCK WASHER	1	
180*	1526194020	PLAIN WASHER	1	

KUBOTA V1205B --- STARTER COMPONENT ASSY.

STARTER COMPONENT ASSY.



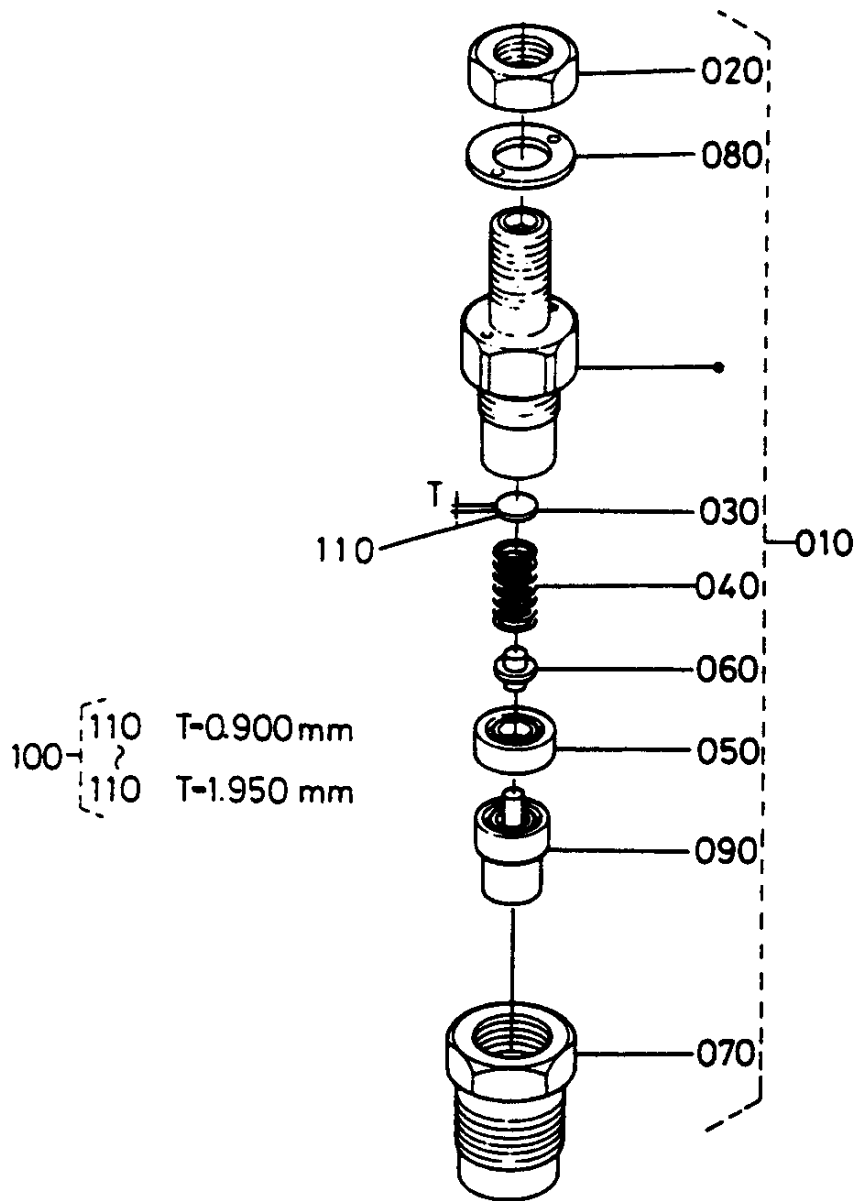
KUBOTA V1205B --- STARTER COMPONENT ASSY.

STARTER COMPONENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1627163010	STARTER ASSY.	1	INCLUDES ITEMS W/*
020*	1627163080	YOKE	1	
030*	1550163370	BRUSH	2	
040*	1627163070	ARMATURE	1	
050*	1550463530	BALL BEARING	1	
060*	1627163530	BALL BEARING	1	
070*	1550463040	CLUTCH	1	
080*	1627163140	BEVEL PINION	1	
090*	1550463030	HOUSING	1	
100*	1550163020	MAGNETIC SWITCH	1	
110*	1627163380	BRUSH HOLDER	1	
120*	1540163390	BRUSH SPRING	4	
130*	1550163200	END FRAME	1	
140*	1540163270	GEAR	1	
150*	1921263100	ROLLER	5	
160*	1921263110	RETAINER	1	
170*	1921297130	BALL	1	
180*	1921263120	SPRING	1	
190*	1550193310	PAN HEAD SCREW	2	
200*	1550163320	THROUGHT BOLT	2	
210*	1550191020	BOLT	2	
220*	1396392010	HEXAGON NUT	1	
230*	1550463120	CORD COVER	1	
240*	0451290080	LOCK WASHER	1	REPLACES 0451250080
250*	1961692010	HEXAGON NUT	1	

KUBOTA V1205B --- NOZZLE HOLDER COMPONENT ASSY.

NOZZLE HOLDER COMPONENT ASSY.



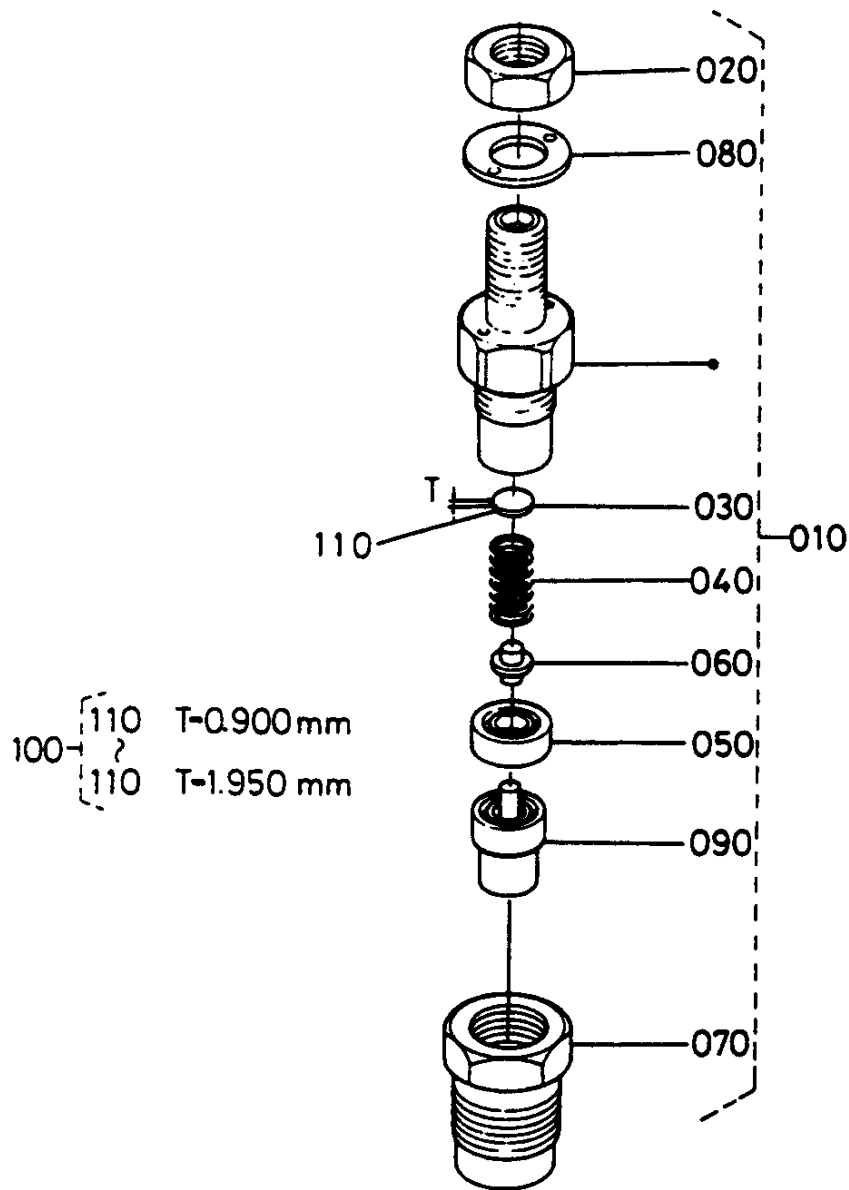
KUBOTA V1205B --- NOZZLE HOLDER COMPONENT ASSY.

NOZZLE HOLDER COMPONENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1647553000	NOZZLE HOLDER ASSY.	4	INCLUDES ITEMS W/*
020*	1584192030	NUT	4	
030*	1584153230	ADJUSTING WASHER	4	
040*	0647553170	NOZZLE SPRING	4	
050*	1584153350	DISTANCE PIECE	4	
060*	1584153160	PUSH ROD	4	
070*	1647553280	NOZZLE NUT	4	
080*	1584194040	WASHER	4	
090*	1626153610	NOZZLE PIECE	4	
100	1584198100	WASHER ASSY.	4	INCLUDES ITEMS W/#
110#	1584153230	ADJUSTING WASHER	4	0.900MM
110#	1584198510	ADJUSTING WASHER	4	0.925MM
110#	1584198520	ADJUSTING WASHER	4	0.950MM
110#	1584198530	ADJUSTING WASHER	4	0.975MM
110#	1584198540	ADJUSTING WASHER	4	1.000MM
110#	1584198550	ADJUSTING WASHER	4	1.025MM
110#	1584198560	ADJUSTING WASHER	4	1.050MM
110#	1584198570	ADJUSTING WASHER	4	1.075MM
110#	1584198580	ADJUSTING WASHER	4	1.100MM
110#	1584198590	ADJUSTING WASHER	4	1.125MM
110#	1584198600	ADJUSTING WASHER	4	1.150MM
110#	1584198610	ADJUSTING WASHER	4	1.175MM
110#	1584198620	ADJUSTING WASHER	4	1.200MM
110#	1584198630	ADJUSTING WASHER	4	1.225MM
110#	1584198640	ADJUSTING WASHER	4	1.250MM
110#	1584198650	ADJUSTING WASHER	4	1.275MM
110#	1584198660	ADJUSTING WASHER	4	1.300MM
110#	1584198670	ADJUSTING WASHER	4	1.325MM
110#	1584198680	ADJUSTING WASHER	4	1.350MM
110#	1584198690	ADJUSTING WASHER	4	1.375MM
110#	1584198700	ADJUSTING WASHER	4	1.400MM
110#	1584198710	ADJUSTING WASHER	4	1.425MM
110#	1584198720	ADJUSTING WASHER	4	1.450MM
110#	1584198730	ADJUSTING WASHER	4	1.475MM
110#	1584198740	ADJUSTING WASHER	4	1.500MM
110#	1584198750	ADJUSTING WASHER	4	1.525MM
110#	1584198760	ADJUSTING WASHER	4	1.550MM
110#	1584198770	ADJUSTING WASHER	4	1.575MM
110#	1584198780	ADJUSTING WASHER	4	1.600MM
110#	1584198790	ADJUSTING WASHER	4	1.625MM
110#	1584198800	ADJUSTING WASHER	4	1.650MM

KUBOTA V1205B --- NOZZLE HOLDER COMPONENT ASSY.

NOZZLE HOLDER COMPONENT ASSY.



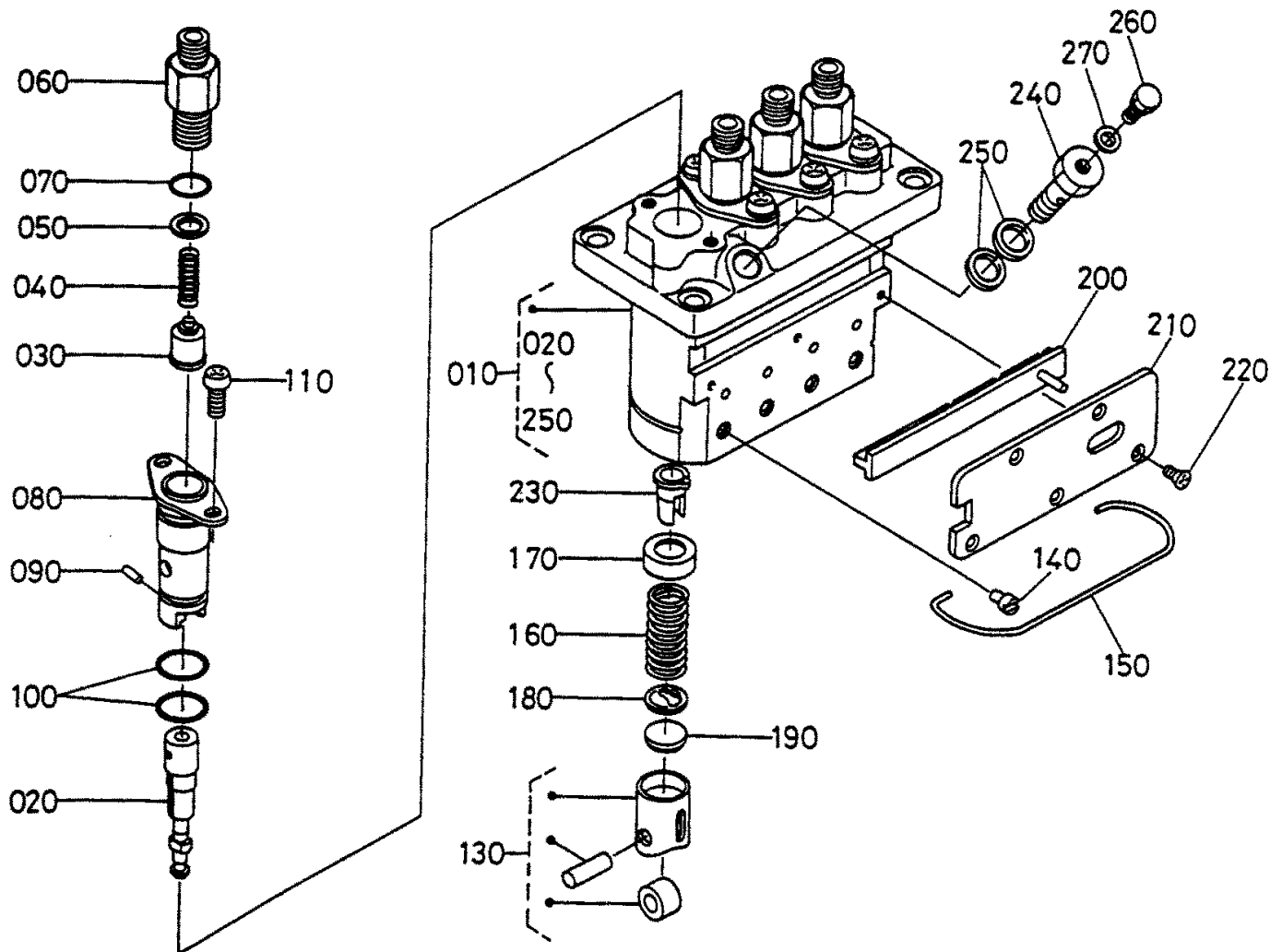
KUBOTA V1205B --- NOZZLE HOLDER COMPONENT ASSY.

NOZZLE HOLDER COMPONENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>Q</u>	<u>TY.</u>	<u>REMARKS</u>
110#	1584198810	ADJUSTING WASHER	4	.....	1.675MM
110#	1584198820	ADJUSTING WASHER	4	.....	1.700MM
110#	1584198830	ADJUSTING WASHER	4	.....	1.725MM
110#	1584198840	ADJUSTING WASHER	4	.....	1.750MM
110#	1584198850	ADJUSTING WASHER	4	.....	1.775MM
110#	1584198860	ADJUSTING WASHER	4	.....	1.800MM
110#	1584198870	ADJUSTING WASHER	4	.....	1.825MM
110#	1584198880	ADJUSTING WASHER	4	.....	1.850MM
110#	1584198890	ADJUSTING WASHER	4	.....	1.875MM
110#	1584198900	ADJUSTING WASHER	4	.....	1.900MM
110#	1584198910	ADJUSTING WASHER	4	.....	1.925MM
110#	1584198920	ADJUSTING WASHER	4	.....	1.950MM

KUBOTA V1205B --- INJECTION PUMP COMPONENTS ASSY.

INJECTION PUMP COMPONENTS ASSY.



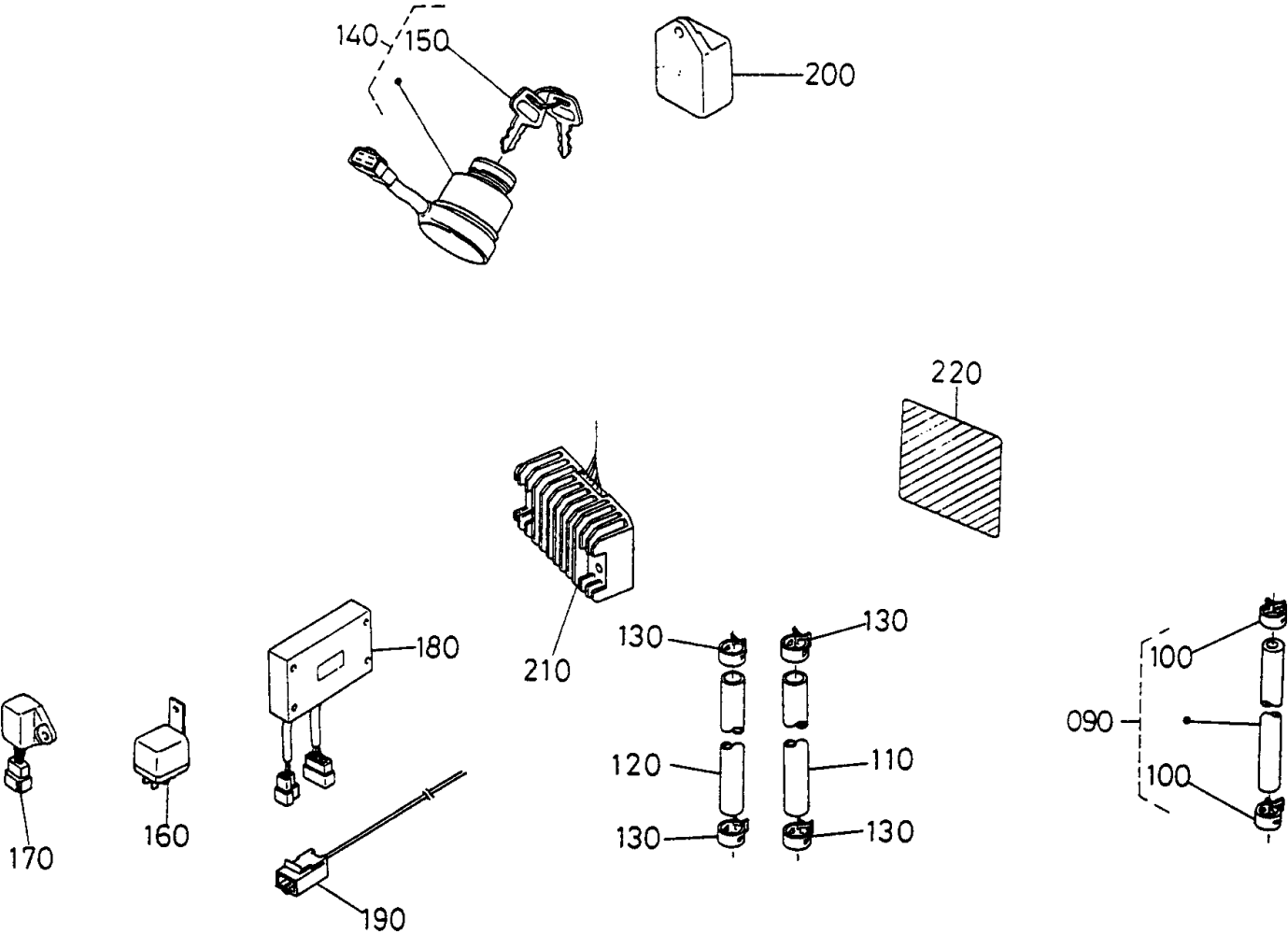
KUBOTA V1205B --- INJECTION PUMP COMPONENTS ASSY.

INJECTION PUMP COMPONENTS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
010	1628551010	INJECTION PUMP ASSY.	1	INCLUDES ITEMS W/*
020*	1628251050	PUMP PLUNGER	4	
030*	1584151030	DELIVERY VALVE	4	
040*	1584151230	DELIVERY VALVE SPRING	4	
050*	1584151240	DELIVERY VALVE GASKET	4	
060*	1627151220	DELIVERY VALVE HOLDER	4	
070*	1584196760	O RING	4	
080*	1584151560	SLEEVE FLANGE	4	
090*	1584194570	JOINT PIN	4	
100*	1584151200	O RING	8	
110*	1586291430	SCREW	8	
130*	1584151070	TAPPET ASSY.	4	
140*	1584151250	TAPPET GUIDE PIN	4	
150*	1627151430	CLAMP PIN	1	
160*	1584151280	PLUNGER SPRING	4	
170*	1584151270	UPPER SEAT SPRING	4	
180*	1584151290	LOWER SEAT SPRING	4	
190*	1584151490	SHIM	1	
200*	1627151060	CONTROL RACK	1	
210*	1627151540	PLATE	1	
220*	1584193110	SCREW	5	
230*	1584151380	CONTROL SLEEVE	4	
240*	1628551320	HOLLOW SCREW	1	
250*	1584196650	GASKET	2	
260	1584151350	SCREW	1	
270	1584196660	GASKET	1	

KUBOTA V1205B --- ACCESSORIES

ACCESSORIES ASSY.



KUBOTA V1205B --- ACCESSORIES

ACCESSORIES ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>ITEM</u>	<u>QTY.</u>	<u>REMARKS</u>
090	1753842500	OVER FLOW PIPE ASSY.	1	INCLUDES ITEMS W/*
100*	1024442320	PIPE CLIP	2	REPLACES 1497142750
110	0966170500	FUEL TUBE	1	
130	1491142750	PIPE CLIP	4	
140	3741059110	STARTER SWITCH ASSY.	1	INCLUDES ITEMS W/#
150#	374105510	KEY, STARTER SWITCH	2	
160	1518160190	INDICATOR UNIT, CH/GE	1	
170	1518160200	RELAY	2	REPLACES 1518160220
180	151160260	RELAY	1	
190	151165760	WIRE HARNESS	1	
200	1569465990	TIMER LIGHT	1	
210	1518164602	COMP.REGULATOR	1	
220	1624787112	NAME PLATE	1	

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.

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.
2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
 - a. The parts numbers and descriptions must match the current parts price list.
 - b. The list must be typed or computer generated.
 - c. The list must state the reason(s) for the return.
 - d. The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
 - e. The list must include the name and phone number of the person requesting the RMA.
3. A copy of the Return Material Authorization must accompany the return shipment.

4. Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.
5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.
6. The following items are not returnable:
 - a. Obsolete parts. (If an item is listed in the parts price book as being replaced by another item, it is obsolete.)
 - b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
 - c. Anyline item with an extended dealer net price of less than \$5.00.
 - d. Special order items.
 - e. Electrical components.
 - f. Paint, chemicals, and lubricants.
 - g. Decals and paper products.
 - h. Items purchased in kits.
7. The sender will be notified of any material received that is not acceptable.
8. Such material will be held for 5 working days from notification, pending instructions. If a reply is not received within 5 days, the material will be returned to the sender at his expense.
9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.
10. In cases where an item is accepted for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.
11. Credit issued will be applied to future purchases only.

PRICING AND REBATES

Prices are subject to change without prior notice. Price changes are effective on a specific date and all orders received 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.

LIMITATIONS OF SELLER'S LIABILITY

Multiquip shall not be liable here under 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. A part 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.

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

*800/835-2551 or 310/537-3700
FAX: 310/638-8046*

WARRANTY DEPARTMENT

*800/835-2551 or 310/537-3700
FAX: 310/638-8046*

MAIN

*800/421-1244 or 310/537-3700
FAX: 310/537-3927*

Manufactured for Multiquip Inc.
by
DENYO MANUFACTURING, CO., USA



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