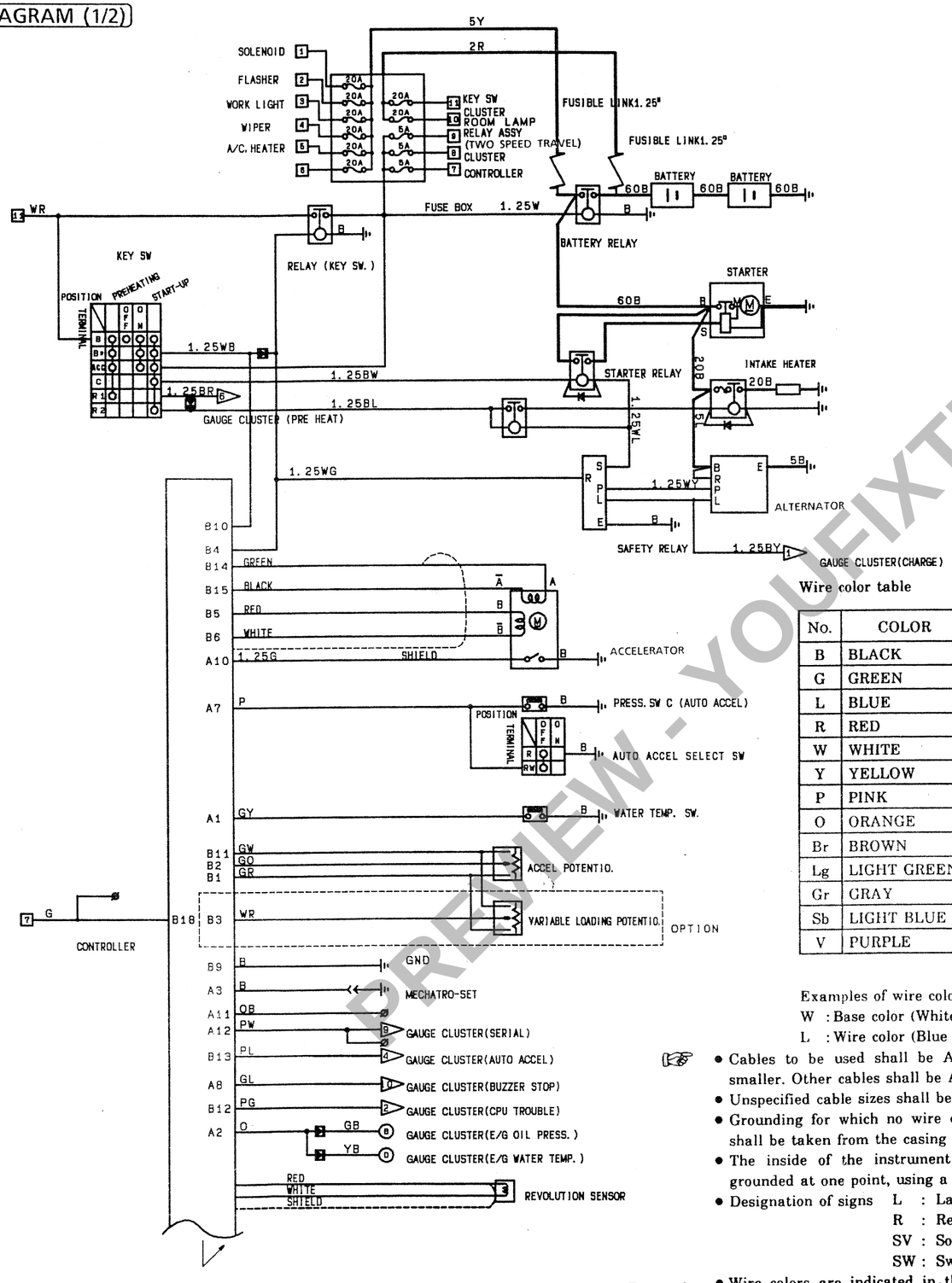
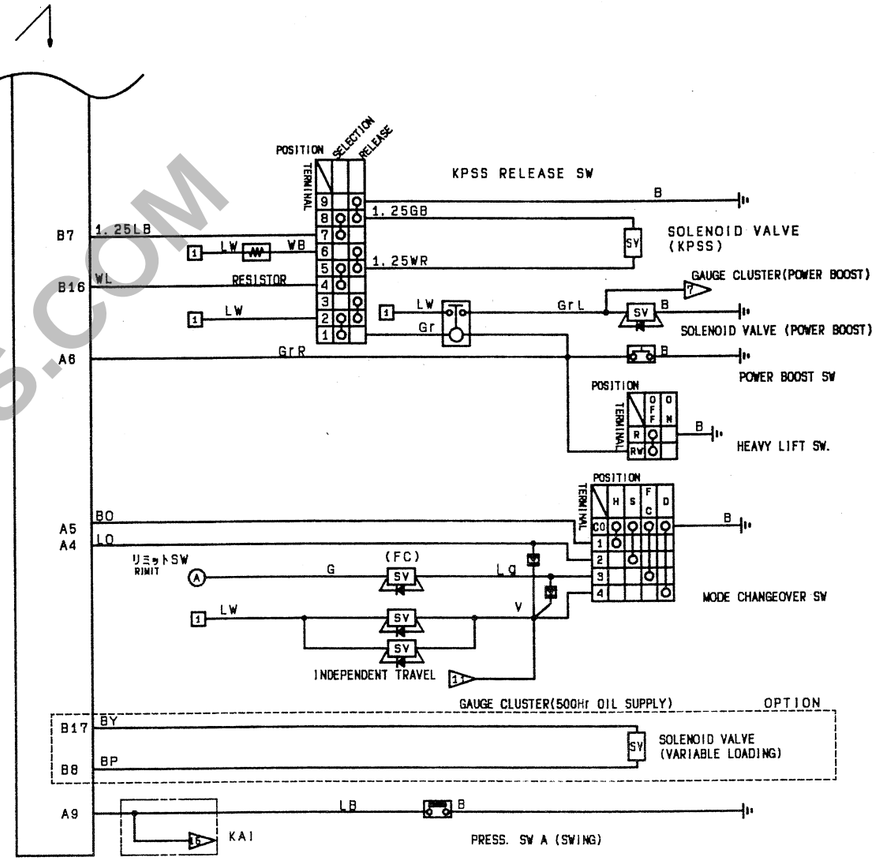
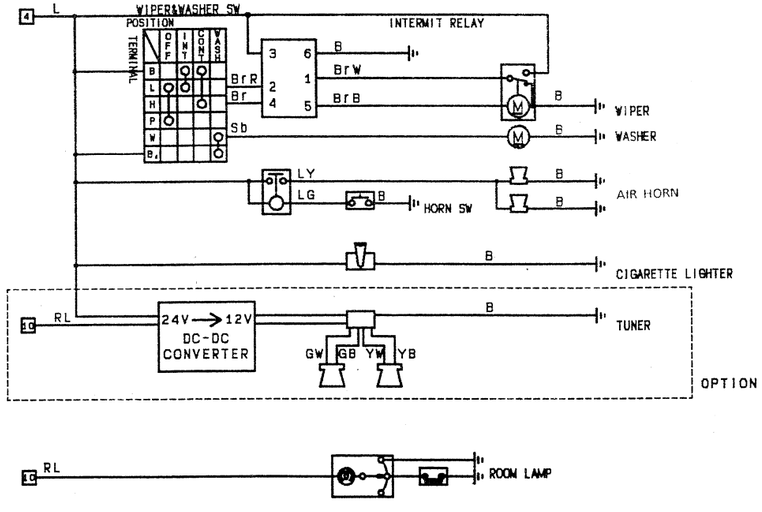
ELECTRIC CIRCUIT DIAGRAM (1/2)







Wire color table

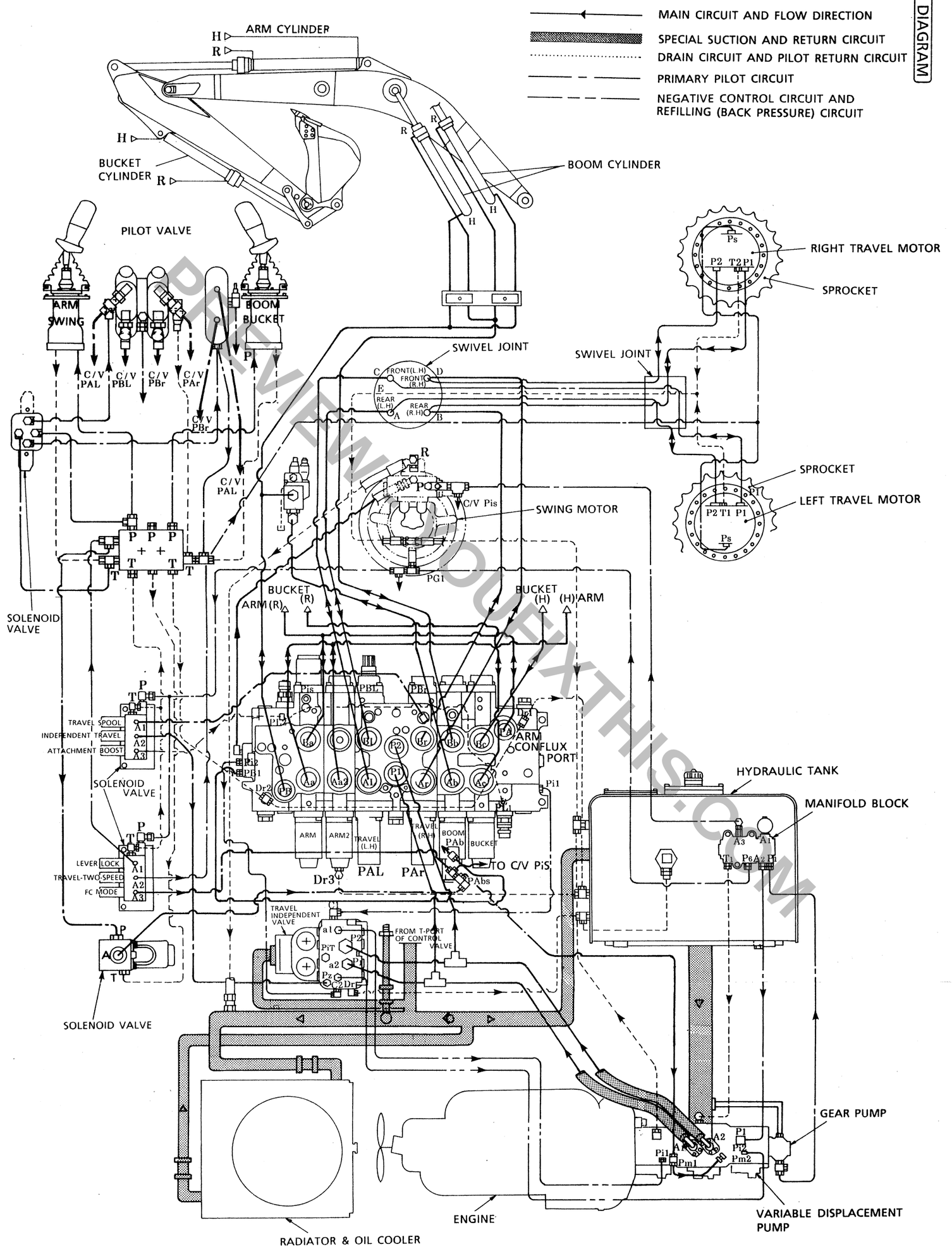
No.	COLOR
B	BLACK
G	GREEN
L	BLUE
R	RED
W	WHITE
Y	YELLOW
P	PINK
O	ORANGE
Br	BROWN
Lg	LIGHT GREEN
Gr	GRAY
Sb	LIGHT BLUE
V	PURPLE

Examples of wire color
W : Base color (White)
L : Wire color (Blue line)

- Cables to be used shall be AVS 1.25mm² or smaller. Other cables shall be AV.
- Unspecified cable sizes shall be 0.85mm².
- Grounding for which no wire color is specified shall be taken from the casing of equipment.
- The inside of the instrument panel shall be grounded at one point, using a specified bolt.
- Designation of signs L : Lamp
  R : Relay
  SV : Solenoid valve
  SW : Switch
- Wire colors are indicated in the order of base color and wire color (striped color).

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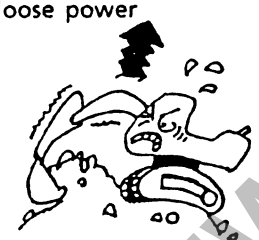
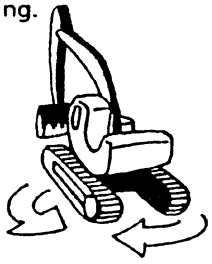
CHAPTER 8. TROUBLESHOOTING

⚠ WARNING

Do not operate or maintain this machine until you read thoroughly the Operation and Maintenance Manual and understand the instructions.

Improper operation or maintenance of the machine may cause an accident and could result in serious injury or death.

Any minor trouble, if left uncorrected, can bring about a serious failure and cost tremendous amounts of time and expense. Always fix problems immediately. The following table lists malfunctions which may occur, check points, and necessary action. Follow the instructions given.

System	Trouble	Cause	Action
Operation	All operating speeds are slow or power is lost. 	● Low hydraulic oil level	Fill oil to a specified level
		● Air leaking into the suction pipe	Retighten the suction pipe hose clamp or replace the hose
		● Hydraulic pump damaged	Repair or replace
		● Pilot gear pump damaged	Repair pump or replace
		● Main relief valve is not adjusted correctly	Adjust valve or replace
		● Pilot relief valve is not adjusted correctly	Adjust valve or replace
	A specific cylinder functions improperly or loose power 	● Cylinder seal is damaged	Repair or replace
		● Control valve or overload valve functions incorrectly	Repair or replace
		● There are signs of air in the cylinder	Bleed air from cylinder
		● Pilot valve is damaged	Repair or replace
		● Pilot valve piping is loose	Retighten
	The cylinder position will not hold when the operating lever is in neutral. 	● Cylinder seal is scored	Repair or replace
		● Control valve or overload valve is damaged	Repair or replace
		● Overload valve is not operating	Reduce the load
		● Pilot valve is damaged	Repair or replace
	Machine does not swing. 	● Brake valve is not working	Repair or replace
		● Hydraulic motor (swing) is not working	Repair or replace
		● Swing gear is damaged	Repair or replace
		● Swing bearing is damaged	Repair or replace
		● Pilot valve is not working	Repair or replace
		● Swing reduction unit is damaged	Repair or replace

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REGULAR MAINTENANCE ITEMS AND INTERVALS

The table below indicates maintenance items with lubrication and replacement intervals and are based on operating hours.
For additional information on maintenance procedures, refer to "Regular Maintenance Procedure".

☞ For the location and intervals of the following ports, see the lubrication chart or page 4 – 7.

Symbols and their messages:
▨ ····· Necessary regular inspection item
※ ····· Only initial inspection is performed.
○ ····· Inspection and / or maintenance is needed.

Device	Grouping by type of work	Item \ Interval	No.	Pre-work check 8H	Week 50H	Month 120H	250H	6 month 500H	12 month 1.000H	2.000H	Oil & grease (parts to be replaced)	Applicable page
Engine	Oil, grease and water	Change engine oil	2		※			○			Engine oil	4 - 12
		Cleaning radiator and change cooling	13					○			City water (L.L.C.)	4 - 25
		Fan drive and tension pulley grease						○			Grease	4 - 11
	Elments	Replacing the air cleaner element	D						○		Element	4 - 23
		Replacing the engine oil filter	E		※			○			Cartridge	4 - 13
		Replacing the fuel filter	F					○			Cartridge	4 - 21
		Cleaning the fuel feed pump filter	G					○			Filter	
	Inspection & maintenance	Checking engine oil		○							Replenish	4 - 12
		Startability, exhaust color, noise		○								
		Checking for loose or damaged V-belts		○								4 - 24
		Checking the radiator coolant level		○								4 - 24
		Oil and coolant leakage, hose damage		○								
		Checking tightness, compression and valve clearance							○			
		Fuel level/leakage, hose damage		○							Light oil	4 - 20
		Radiator / oil cooler clogging		○								4 - 25
		Drain water separator			○							4 - 21

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SPECIFICATIONS AND PERFORMANCE

■ SPEED AND CLIMBING ABILITY

Item \ Model	SK300-III · SK300LC-III
Swing speed	10.5rpm
Travel speed	5.5 / 3.7km / h (3.4 / 2.3 MPH)
Gradeabilicy	35° (70%)

■ ENGINE

Model		Mitsubishi 6 D22-T
Type		Water-cooled 4-cycle, direct injection diesel engine with turbo-charger
Number of cylinder - Bore x Stroke		6 - 130mm(5.118in) x 140mm(5.511in)
Total displacement		11,149c.c. (680cuin)
Rated output power/revolution	JISD1005 Net	230HP / 1,750rpm
	SAEJ1349 Net	230HP / 1,750rpm / 169KW / 1750rpm
	DIN 6270 Net	230HP/1,750rpm
Maximum torque/revolution	JISD1005 Net	101kgf·m / 1200rpm
	SAEJ1349 Net	731lb·ft / 1,200rpm
	DIN 6270 Net	101kgf·m / 1200rpm

■ HYDRAULIC COMPONENTS

Hydraulic pump	Double-pump variable displacement, axial piston + gear pump
Hydraulic motor (swing)	Axial piston motor
Hydraulic motor (travel)	Axial piston motor
Control valve	6-section multiple control valve + 1-section control valve (swing)
Cylinders (boom, arm, and bucket)	Double acting cylinder
Return filter	Safety valve containing filter type
Oil cooler	Air-cooled type

■ WEIGHT

Unit : kg (lbs)

Item \ Model	SK300-III		SK300LC-III	
Fully-equipped weight	29,200(64,400)	30,100(66,400)	30,200(66,600)	31,100 (68,600)
Upper machinery	13,200 (29,100)	←	←	←
Lower machinery (with 600mm (24") groser shoe)	10,400 (22,900)	—	11,400 (25,100)	—
Lower machinery (with 800mm (32") groser shoe)	—	11,300 (24,900)	—	12,300 (27,100)
Attachment 〔 6.47m(21ft 3in) boom + 3.14m (10ft 4in) arm + 1.2m³ (1.57 cuyd) bucket 〕	5,600 (12,340)	←	←	←

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CHAPTER 3. OPERATION

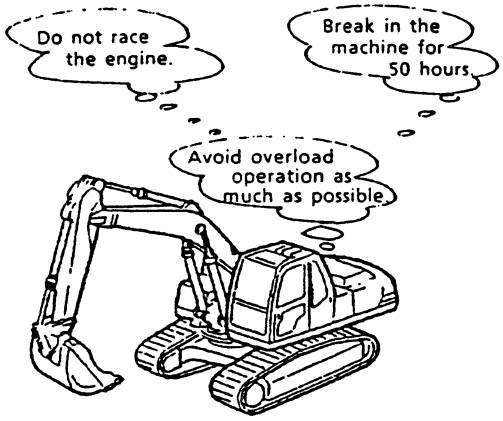
⚠ WARNING

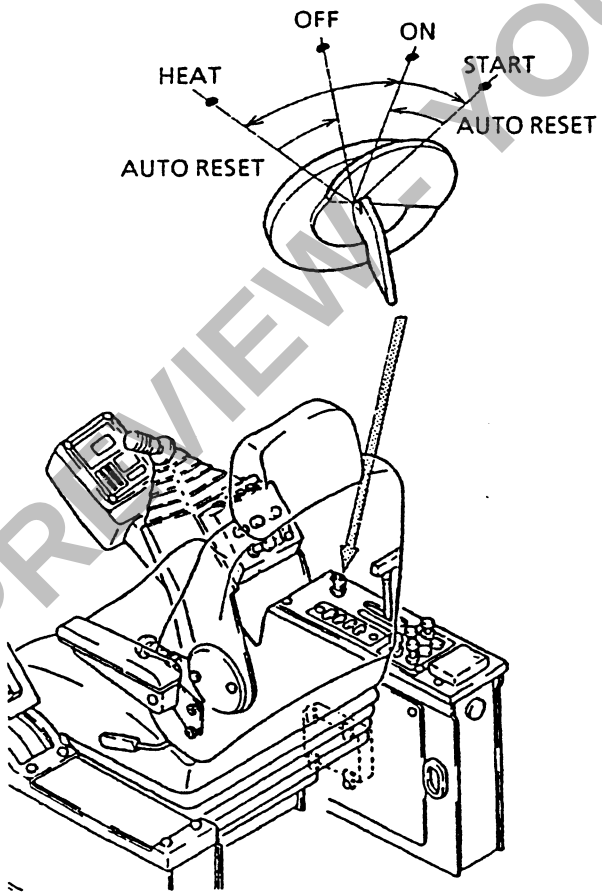
Do not operate or maintain this machine until you read thoroughly the Operation and Maintenance Manual and understand the instructions.

Improper operation or maintenance of the machine may cause an accident and could result in serious injury or death.

STARTING AND STOPPING THE ENGINE

Always inspect the machine before starting work. For the points of inspection, refer to "maintenance."





■ HANDLING A NEW MACHINE

Poor handling of a new machine will have adverse effect on its service life and performance.

■ CORRECT WARM-UP

Precautions for the first 50 hours of operation

1. Check the coolant, engine oil, and hydraulic oil level and inspect for leakage before starting the machine each day.
2. Periodically check and regrease the grease points.
3. Periodically retighten the cap screws.
4. Warm up the machine sufficiently; then operate the machine with about an 80% load.
5. Verify that the machine operates normally.

■ STARTING THE ENGINE

Start the engine as follows:

1. Before starting the engine, observe your surroundings.
2. Move the throttle lever to "Lo" position.
3. Insert the key and turn it to the "ON" position.
4. Sound the horn to warn persons in the vicinity.
5. Start the engine by turning the key to "START".

☞ If the engine does not start even though you turn the key to the START position, wait for about 2 minutes and then try again. To prevent damaging the starter, do not continue turning the key for more than 15 seconds at a time.

6. After starting engine

   After starting the engine, release the key immediately.

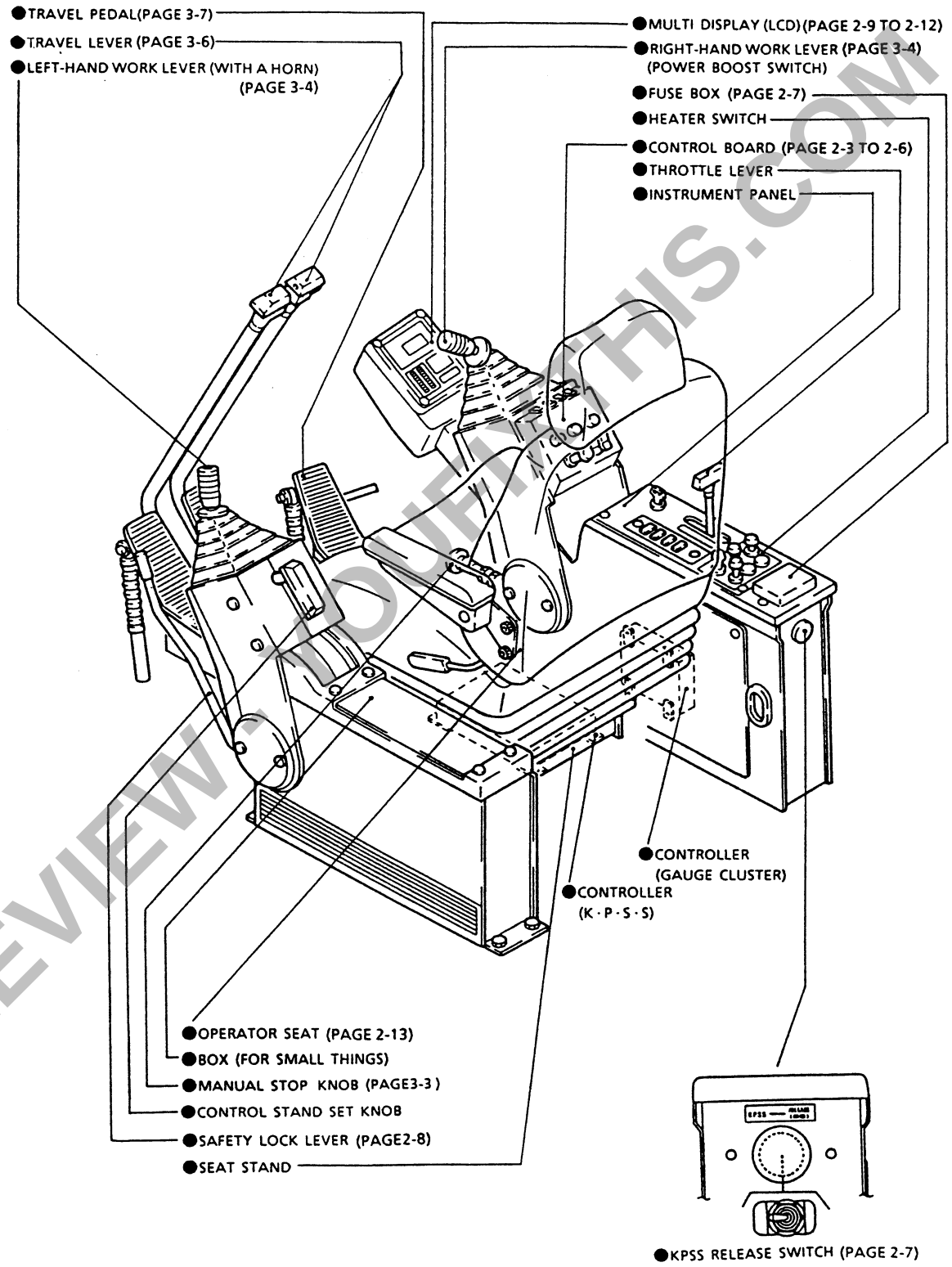
   The key will return to "ON" by itself.

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ARRANGEMENT OF OPERATING CONTROLS

The operating levers of this operating console are an ISO type (left swing lever type) and are explained below:



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CHAPTER 9. BREAKER & OPTIONAL ATTACHMENTS

⚠ WARNING

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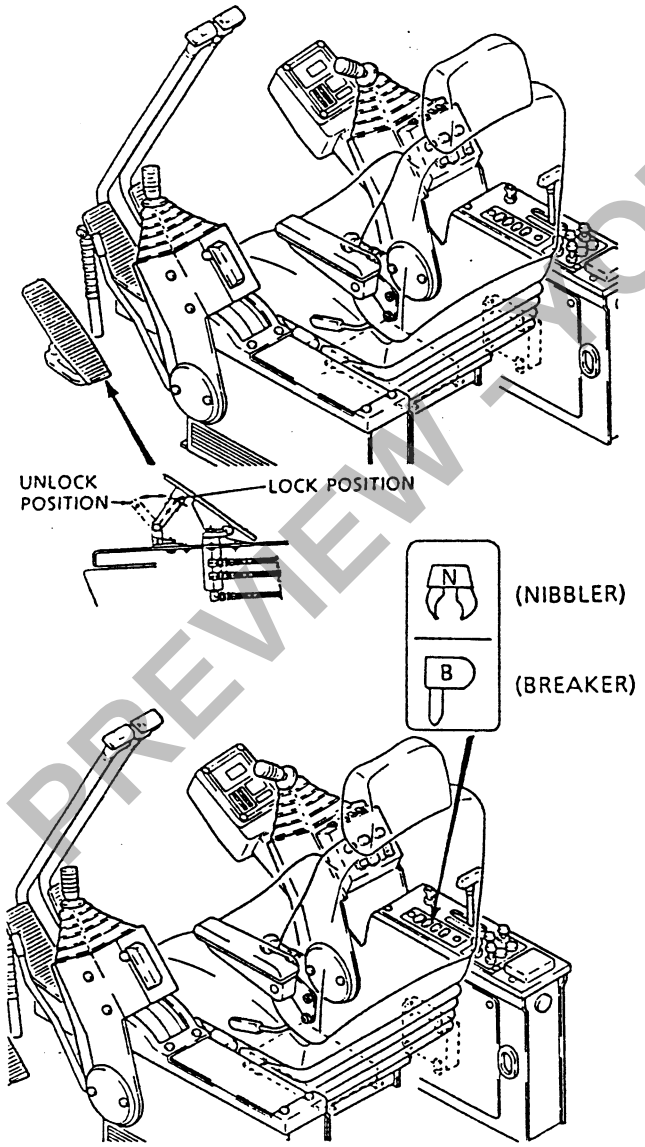
HYDRAULIC BREAKER

■ MOUNTING AND MATCHING THE HYDRAULIC BREAKER

When mounting the breaker on the hydraulic excavator, it is necessary to match stability, hydraulic pressure, and oil quantity for each breaker. To select hydraulic breakers, call your dealer or service shop.

⚠ CAUTION

Before using the hydraulic breaker, thoroughly read the Hydraulic Breaker Operation Manual to obtain maximum efficiency without damage to the excavator or the breaker.



■ Operating Procedure

- Pedal device

Execute operation by the use of the foot-operated pedal located on the front left on the cab floor.

Depress pedal	Action (impact)
Let your foot off the pedal.	Stop action (impact)

- Pedal lock device

The pedal lock device is installed to the pedal and has a locked position that prevents the pedal from operating when the lock lever is operated and an unlocked position that frees the pedal.

⚠ CAUTION

Set the lock lever to the unlocked position when using a breaker. Set the lock lever to the locked position where a breaker is not used.

- Nibbler / breaker select switch

Because this machine has a breaker flow control system for optimal breaker flow, push the "B" side of the switch to use the breaker. Push the "N" side to use the nibbler.

☞ If you select "N" (nibbler) while the breaker is attached, a large amount of hydraulic oil will flow into the breaker, possibly causing it to malfunction. Be careful when using the nibbler / breaker switch.

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CHAPTER 5. TRANSPORTATION

⚠ WARNING

Do not operate or maintain this machine until you read thoroughly the Operation and Maintenance Manual and understand the instructions.

Improper operation or maintenance of the machine may cause an accident and could result in serious injury or death.

■ PREPARING FOR TRANSPORTATION!

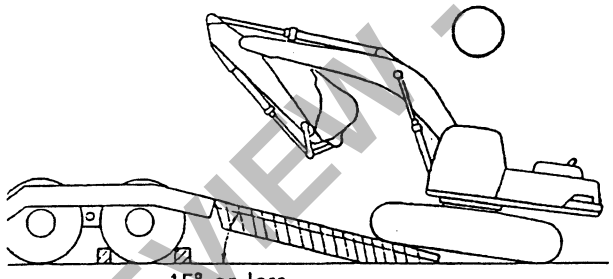
- When preparing to transport your machine, establish the weight total height, total width, total length, travel speed and ground contact pressure. This information is located in Chapter 4 under "Reference Documents".
- Investigate road width, bridge and road conditions, and the amount of traffic on the route you are planning to take. Require necessary permits from appropriate governmental agencies according to the road traffic act, the road transport vehicle act, vehicle limitation act and other laws.

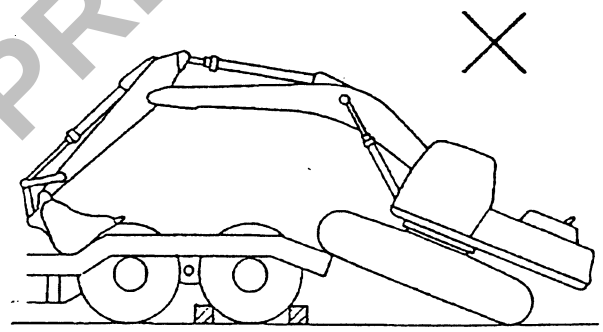
⚠ WARNING

Auto accel system will increase engine speed automatically when you operate the control lever and / or travel pedals with Auto accel switch ON.
When loading and unloading machine from truck or working in close quarters always turn "OFF" auto accel switch to prevent any possibility of sudden movement of machine, which could result in serious accident.

⚠ WARNING

Auto accel control will increase engine speed automatically when you operate the control levers and /or travel pedals with auto accel switch on.
When loading and unloading machine from truck or working in close quarters always turn auto accel switch off to prevent any possibility of sudden movement of machine, which could result in serious accident.
Set the travel speed control switch to LOW SPEED before loading the machine. Never operate this switch when loading the machine on a trailer. Do not use one pedal travel for loading or unloading this machine from a track trailer.





Precautions during machine loading / unloading

1. Use a level surface when loading and unloading.
2. Always use a ramp with proper length, width, strength, and slope. Do not load/unload by using the front attachment; this is dangerous! Also use braces when it rains to prevent sliding.
3. Restrict the ramp to a slope of 15° or less.

⚠ CAUTION

Use 1st speed and FC mode when loading or unloading.

4. Before loading or unloading, make sure the machine faces straight forward the ramp. Once on the ramp, do not operate levers other than the travel levers because of the danger of losing machine balance.

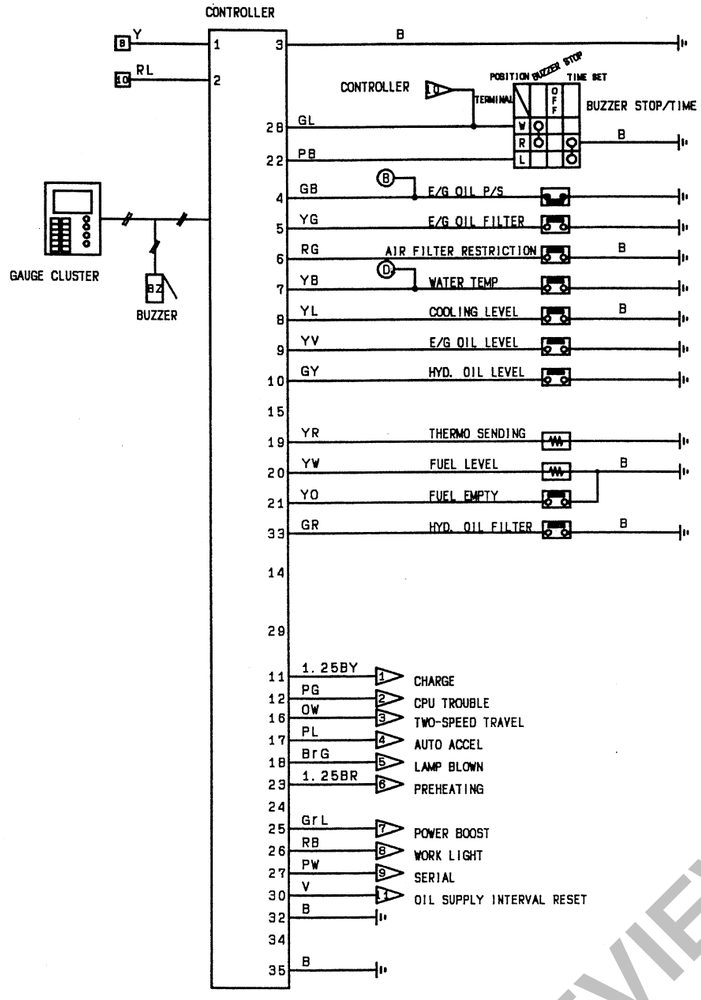
⚠ CAUTION

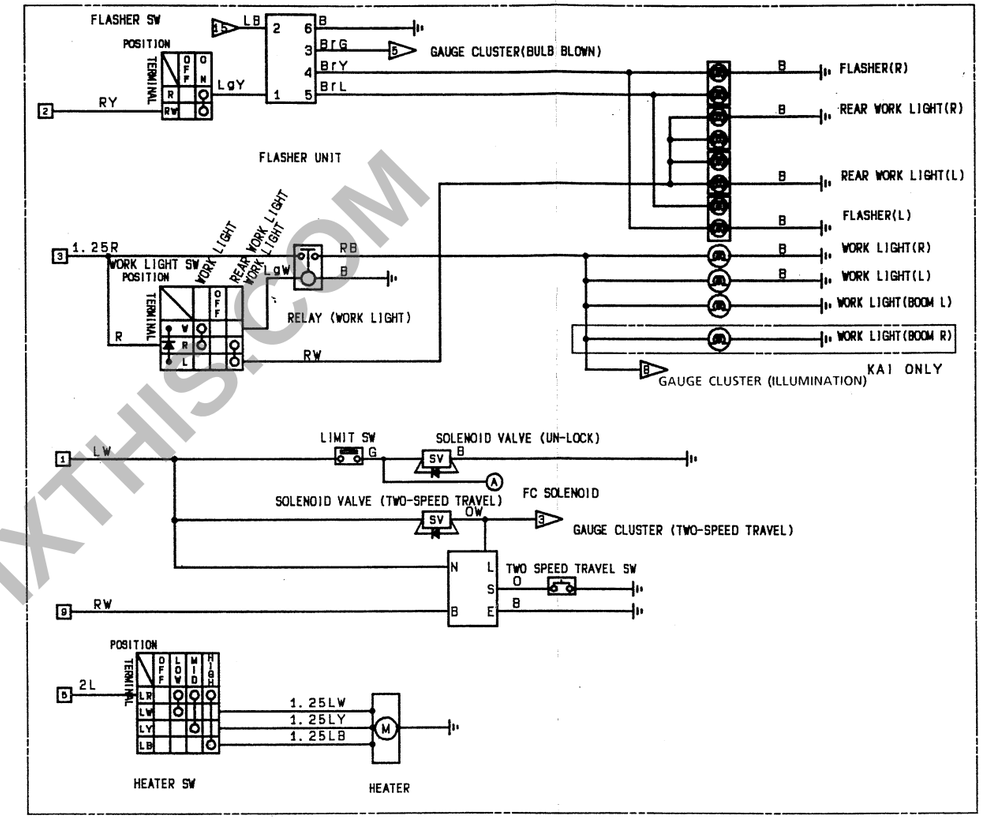
Be careful at the point where the transporting vehicle connects to the ramp, because the machine's center of gravity changes suddenly.

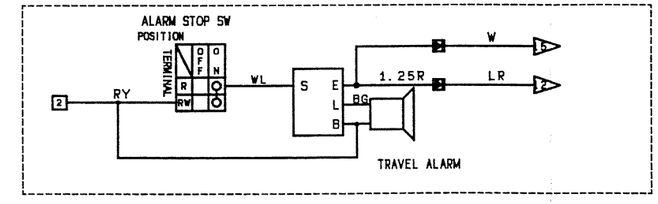
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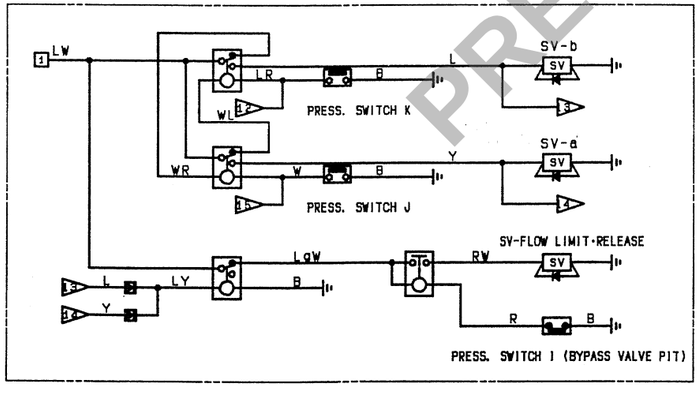
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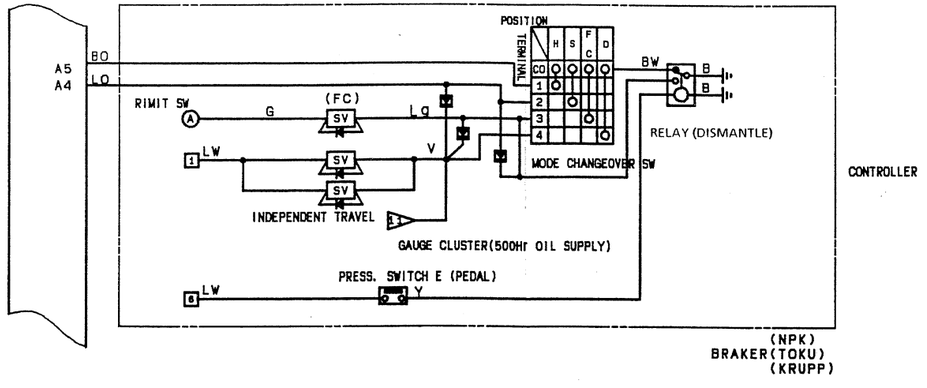
ELECTRIC CIRCUIT DIAGRAM (2/2)





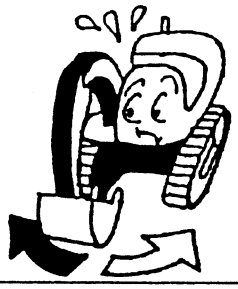
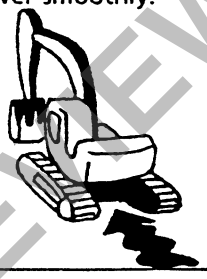
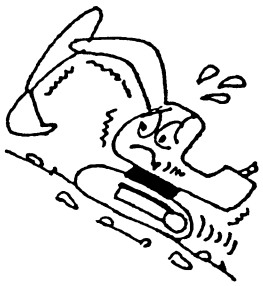






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System	Trouble	Cause	Action
Operation	Swing speed is slow. 	● Brake valve is not working ● Control valve is not working ● Hydraulic motor (swing) is not working ● Hydraulic pump is not working	Repair or replace Repair or replace Repair or replace Repair or replace
	Abnormal sound occurs when swinging. 	● Insufficient lubrication of swing gear and bearings enough? ● Low oil level in the swing reduction unit	Refill grease Refill
	When swing action is stopped, the machine drifts and is hard to control. 	● Brake valve malfunctions ● Set pressure of brake valve is incorrect ● Brake lining is worn	Repair or replace Repair or replace Adjust or replace
Travel	Machine does not travel smoothly. 	● Too much track tension ● Dirty track links and shoes ● Brake valve is not working ● Travel reduction unit is damaged	Adjust tension Clean Repair or replace Repair or replace
	Traveling power is insufficient. 	● Hydraulic pump is damaged ● Poor engine performance ● Main relief valve pressure is set incorrectly ● Low hydraulic oil level ● Hydraulic motor (travel) is not working ● Brake valve is not working ● O-ring or seal in swivel joint is scored or oil is leaking	Repair or replace Repair or replace Adjust Refill to specified level Repair Repair or replace Repair or replace

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Device	Grouping by type of work	Item \ Interval	No.	Pre-work check 8H	Week 50H	Month 120H	250H	6 month 500H	12 month 1.000H	2.000H	Oil & grease (parts to be replaced)	Applicable page
Engine	Inspection & maintenace	Cleaning the air cleaner element	D					○				4-23
		Drain water from fuel tank		○								4-20
		Check and adjust the injection timing							○			
		Check and maintain injection pressure and condition of injection nozzle							○			
Hydraulic devices	Oil supply	Replace hydraulic oil Clean the hydraulic oil tank	1							○	Hydraulic oil	4-18
	Elements	Replace the hydraulic oil return filter element	A		※			○			Element	4-17
		Clean the suction strainer	B							○	Strainer	4-19
		Clean or replace the manifold block filter element	C							○	Filter	4-19
	Inspection & maintenace	Check the oil level of the hydraulic oil tank		○								4-17
		Check function of hydraulic components. Check or abnormal noise		○								
		Check for oil leaks and damaged hydraulic hoses, tubes and joints		○								
Upper frame	Lubrication	Replace gear oil in the reduction unit for the swing motor	6					※		○	Gear oil	4-14
		Lubricate the universal joint of the operating lever	8			○					Grease	4-11
		Lubricate slewing ring gear	10					○			Grease	4-10
		Replace grease in the grease bath	12							○	Grease	4-11
	Inspection & maintenace	Lever operation, play, and power		○								
		Check for proper operation of swing brake		○								
		Cap screw / nut looseness / absence		○								4-36
		Deformation, damage, noise		○								

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