

No. 3498-35980-0

⚠ Read this handbook thoroughly and understand the whole information contained before trying to operate, inspect and service your machine!

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**OPERATING &
MAINTENANCE
INSTRUCTIONS**

SAKAI HEAVY INDUSTRIES, LTD.

**VIBRATING
ROLLER**

MODEL
SW880
SW990

From SW880 → VSW40 – 10101 ~
SW990 → VSW41 – 10101 ~

SAKAI®

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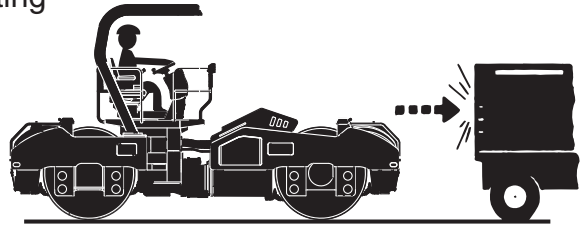
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⚠ WARNING: Negligence of these instructions can lead to accidents.

1. BASIC SAFETY PRECAUTIONS

■ Know the stopping distance.

- When traveling on a road, bear in mind the stopping distance. Avoid excessive speed, and abrupt starting and stopping, and moving in a zigzag direction.



1.3 Before Starting the Engine

■ Adjust the operator's seat to your most effective operating position.

- Sit on the operator's seat. Adjust the seat so that your back will make contact with the seat back when the brake pedal is depressed to the full extent. Check to be sure that the brake pedal can be fully depressed without difficulty when you twist your body for reverse run.

■ Secure forward and backward visibilities.

- Adjust the rear view mirrors and under mirrors for good visibility. If dirty, clean them. If damaged, replace.

■ Check that the horn, lamps and gauges work correctly.

■ Before starting, make certain that each lever is in the neutral position and the parking brake is applied.

■ When starting, sound the horn.

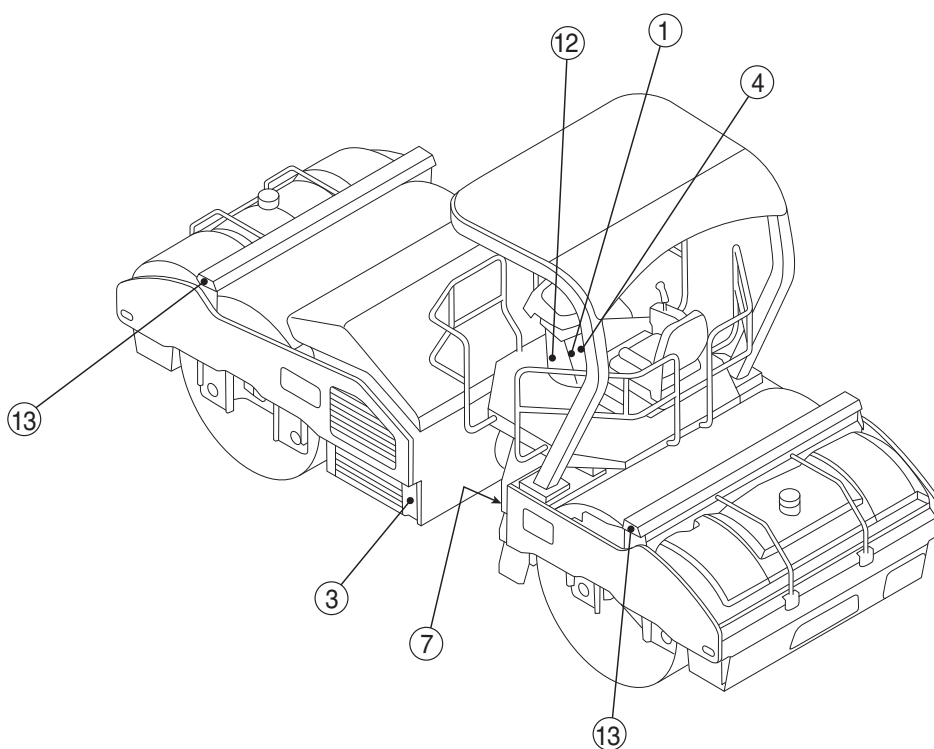
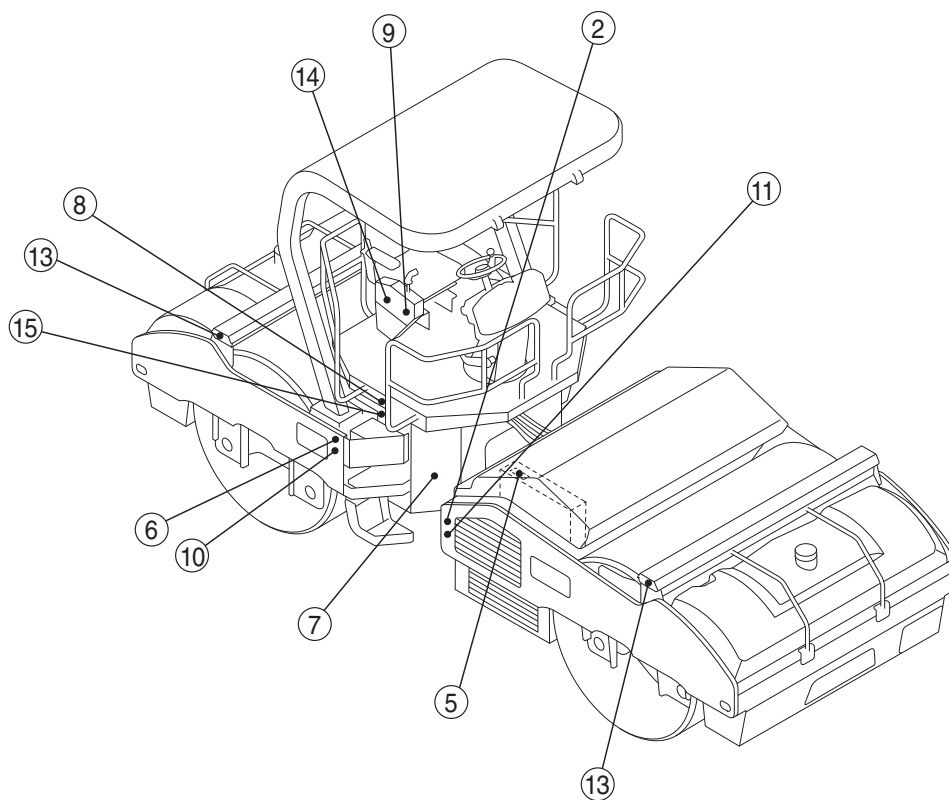
- Before starting the engine. Make sure there is no one in the immediate vicinity and there are no obstructions around the machine.



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1. BASIC SAFETY PRECAUTIONS


SW880,SW990



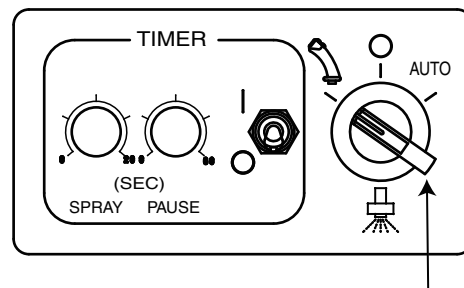
Spray mode selector switch / Spray switch / Spray timer switch / Spray timer dial

Spray mode selector switch

 position : Spray system can be controlled by the blue button switch on the F-N-R lever.

 position : Spray system is shut off.


AUTO position : Spray system is actuated when the F-N-R lever is in the forward or reverse position and deactivated when the F-N-R lever is moved to the Neutral position.

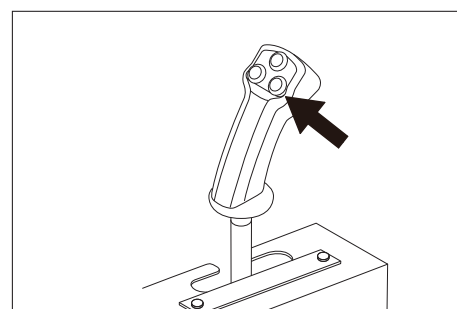


Spray mode selector switch

Spray switch


The spray sprinkler switch is integrated on the F-R lever. The blue button toggles the spray system on and off. Spray pumps will turn on when the blue button is depressed once and then turn off when the blue button is depressed a second time. Be sure to hold the button for at least one full second in order for it to engage.

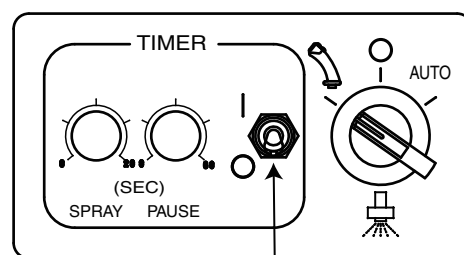
It works only when the “ Spray mode selector switch ” is set in the “  ” position.



Spray timer switch

 position : Spray timer is activated.

 position : Spray timer is shut off.



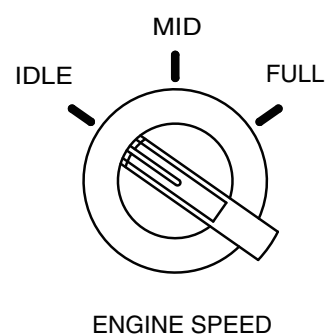
Spray timer switch

2.3.2 Starting the engine

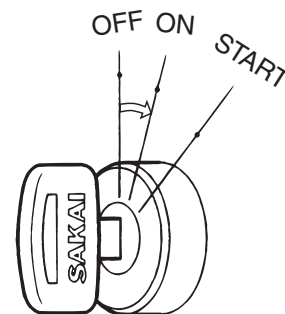
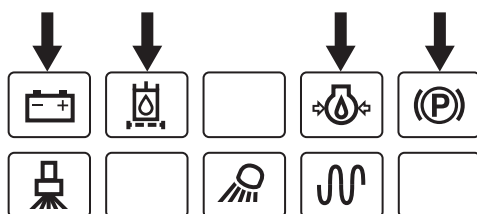
⚠ WARNING

- Check that there are no people or obstacles around the vehicle and beep the horn before starting the engine.
- Set the Forward-Neutral-Reverse (F-N-R) lever in the neutral position and press down the parking brake switch before starting the engine.

1) Select IDLE position of Engine speed selector switch.



2) Turn the starter switch to the ON position and check that the warning lamps and parking brake indicator lamp on the monitor display are on.



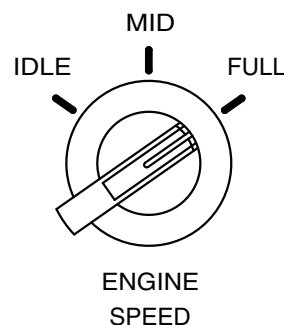
Also the “ Engine Check ” lamp lights up for approx. 2 sec. and goes out.


ENGINE
CHECK




2.4 Vibratory Operation

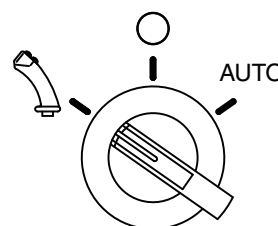
- 1) Select FULL position of Engine speed selector switch. Appropriate vibration force is engaged when the Engine Speed selector is in the FULL position.




- 2) Select  or AUTO position of Vibration mode selector switch.


 position : Vibration can be controlled by the vibration switch on the F-N-R lever.


AUTO position : Vibration is automatically engaged when the F-N-R lever is moved into the forward or reverse positions.

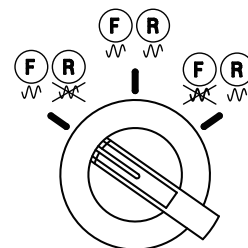


- 3) Select Vibration drum of Vibration drum selector switch.


 position : Only the front drum will vibrate.


 position : Both drums will vibrate.

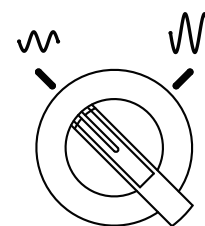
 position : Only the rear drum will vibrate.



- 4) Select Vibration amplitude

 position : Low amplitude vibration.

 position : High amplitude vibration.



NOTE: Selection is applied only when the F-N-R lever is in the neutral position.

- Soils
- Slag
- Soft rock
- Roller compacted concrete

Layers to be compacted

- Surface course, Binder course
- Base course
- Subgrade
- Embankment
- Shoulder
- Sidewalk

2.10 After Operation

Check for the coolant temperature, engine oil pressure and fuel level.

Follow the procedures below to prevent the machine from falling into an unworkable condition the following morning caused by muds and other extraneous matter on the drum, or frozen drums:

- 1) Remove soil and water from the machine. Muds can get into the seals together with water drops on the hydraulic cylinder piston rod. Damaged seals will result.
- 2) Park the machine on a hard and dry surface. If such a place is not available, cover the ground with hard plates.
- 3) Low temperature will cause a significant reduction of battery efficiency. Cover batteries or take them off the machine and store in a warm place for the following day's operation.
- 4) To prevent freezing, drain water from the spray system (See Water spray system on page 51).

IMPORTANT

Insufficient draining of water can cause damage to the machine.

3. PERIODIC MAINTENANCE

System or Mechanism	Part name	Periodical replacement maintenance part	Replacement period	Remarks
1.Brake system	Master cylinder	Seals (rubber parts)	2 years	Adopted machines only
	Wheel cylinder	Seals (rubber parts)	2 years	//
	Brake piping parts	Brake hose	2 years	
		Air hose	2 years	Adopted machines only
	Operating parts	Cable	4 years	//
2. Steering system	Orbitrol	Seals (rubber parts)	2 years	
	Hydraulic piping parts	Hydraulic hose	2 years	
	Steering cylinder	Seals (rubber parts)	2 years	
	Hydraulic pump	Seals (rubber parts)	4 years	
3. Power transmission system (inclusive of axle)	Axle	Seals (rubber parts)	4 years	Adopted machines only
	Travel pump	Seals (rubber parts)	4 years	//
	Travel motor	Seals (rubber parts)	4 years	//
	Hydraulic piping parts	Hydraulic hose	4 years	//
	Isolation rubber	Isolation rubber itself	4 years	//
4. Fuel system	Piping parts	Fuel hose	4 years	
5. Engine related	Engine mounting parts	Isolation rubber	4 years	
	Seals (rubber parts)	Packing and others	4 years	
	Drive parts	V-belt	2 years	
6. Cooling system	Piping parts	Radiator hose	2 years	
7. Control related parts	Cable	Cable	4 years	Adopted machines only

⚠ CAUTION

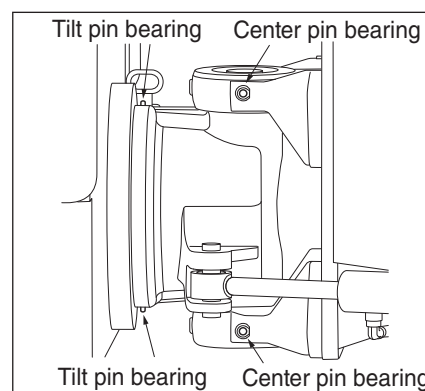
- **With a new machine, change the engine oil and change the engine oil filter elements after 50 hours of operation for the first time only. (Refer to page 74).**
- **When trouble occurs in the location indicated by the indicator lamp on the dashboard display, sensor will work and the corresponding lamp comes on. If this occurs, conduct necessary service regardless of the periodic service interval recommendation.**
 - 1) **The hydraulic filter (line filter) warning lamp ⇨ Replace elements**
- **Check the electric wiring at a regular interval not exceeding one month:**
 - 1) **Damage to the wire harness and loose clamps**
 - 2) **Loose sockets**
 - 3) **Function of electrical systems**

3. PERIODIC MAINTENANCE

②③ Tilt pin bearing

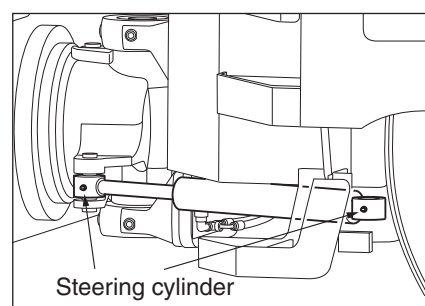
②④ Center pin bearing

Grease lubricate two locations.



②⑤ Steering cylinder : 2 pieces

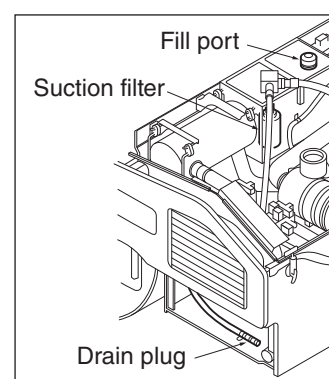
Grease lubricate four locations.



(5) Every 1000 hours

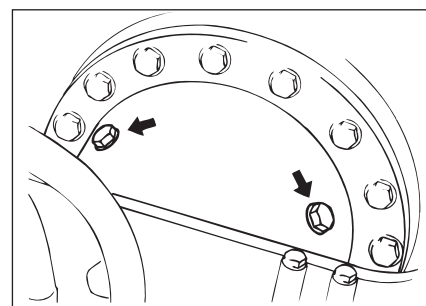
③ Hydraulic oil tank

- 1) Remove the drain plug, and drain oil while it is warm.
- 2) Clean inside of the tank, and fill fresh oil to the specified level.
- 3) Start and run the engine at idling for 2 to 5 minutes. When the hydraulic oil has become free from air bubbles, stop the engine and recheck the oil level.



①① Gear case / Wheel motor

- 1) Position it so that drain plug comes to the bottom.
- 2) While oil is warm, drain it with drain plug and level plug removed.
- 3) Rotate the roll so that drain port comes to top (or side) and level plug to side (or top). Feed oil until it overflows from the level port.
- 4) Replace the drain plug and level plug to original positions.



⚠ WARNING

When draining a hot oil, use care not to get burned.

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