

4. OPERATING PROCEDURES

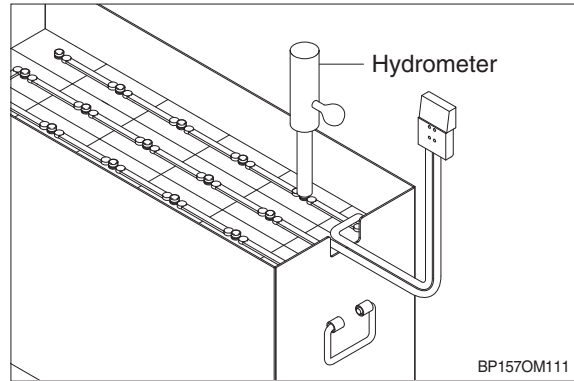
1. CHECKS PRIOR TO TRACTOR

- 1) Inspection of battery make sure that the battery has been fully charged.

- Voltage : 48V
- Specific gravity of electrolyte :
1.28 (at 20°C)

Make sure that the electrolyte level is satisfactory.

Make sure that there is no loose connecting plug. For handling refer to "Instruction manual for battery".

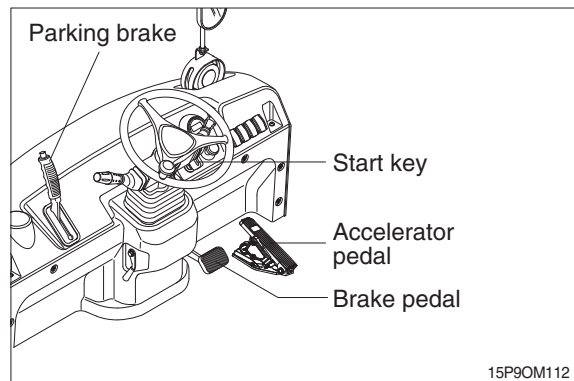


- 2) Check the tightness on bolts of drive/idle wheels.
- 3) **Check of brake**
Check the brake pedal for pedaling allowance, and the parking brake for braking efficiency.
- 4) Check of steering system
Check that the steering wheel has no play.

2. OPERATION

1) STARTING/TRAVELLING/STOPPING

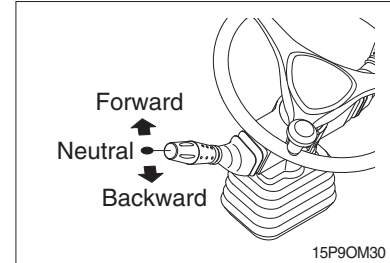
- (1) With the direction control lever placed to the neutral position, make sure the parking brake is located at the operating position.
- (2) With the accelerator pedal released insert the start key into the key switch.
- (3) When the start key turned to "ON" position, the drive control circuit of the F.E.T (Field Effect Transistor) is connected.
- (4) Place the direction control lever to the "Forward" position, and release the parking brake lever, thereby the starting preparations are complete.
- (5) Step on the accelerator pedal slowly to start the battery tractor.
- (6) The travelling speed can be obtained optionally from almost zero-speed to the full-speed according to the degree of the pedal stepped on.
- (7) Even if the accelerator pedal is stepped on suddenly, the tractor will start smoothly without applying any notable shock.
- (8) The fine movement and inching operations are also readily available, therefore, neither the resistor will be heated and burnt, nor the electric power be wasted as in the case with the battery tractor of resistance system even if the tractor is operated for a long time.



- (9) When stopping the tractor, release the accelerator pedal, and step on the brake pedal at the same time to stop the tractor at the desired place.
- (10) In parking the tractor, turn the direction control lever to the neutral position.
- Be sure to pull out the ignition key, and apply the parking brake before leaving the tractor.

2) ELECTRIC BRAKING

- (1) Turn the direction control lever to the direction opposite to the travelling one to apply the electric brake.
- (2) The electric braking efficiency is varied by the degree of the accelerator pedal stepped on. Bear in mind that fully stepping on the accelerator pedal will cause the brake to apply suddenly.
- (3) When applying the electric brake while descending a downward slope, turn the direction control lever to the direction opposite to the travelling one at a place where the tractor arrives at the slope, and step on the accelerator pedal slightly to descend the slope, while adjusting the pedaling condition of the accelerator pedal.
- (4) If the accelerator pedal is stepped on further more continuously after stopping the tractor by the electric brake, the tractor will run in the opposite direction. This operation allows the tractor to turn quickly.



3) REGEN BRAKE

- (1) Regen brake provides vehicle braking by controlling the motor as a generator and returning the generated energy back to the battery.
- (2) A direction change of joystick will initiate regen braking at a level set by the direction brake current level. Braking effort is proportional to the position of joystick movement.

3. PRECAUTIONS ON OPERATION

1) OPERATION OF DISPLAY

- (1) Being a communication device, it will be operated with user intervention based on signals received from a motor controller.
- (2) Upon initial power-up, the instrument will go through a self-diagnostic routine. And then, the LCD will display "Battery charge level" and "Hour meter" normally.
- (3) The hour meter does not use a battery to retain the accumulated time. Rather, it detects when power has been removed and stores the accumulated time in non-volatile memory. The memory will store the accumulated time without power.



2) PRECAUTIONS ON OPERATION

- (1) If the tractor has become inoperative during travelling, turn the start key to the stop position, and restart the tractor by turning the start key to "ON" position.

If this procedure fails to travel the tractor, contact the service shop.

- (2) Pay constant caution to the braking efficiency.
- (3) Also, pay caution to the vibration, change in weight, etc. of the steering wheel.
- (4) Care must be taken to the sound generated from the motor and the accelerator system.
- (5) Travelling the tractor continuously with some doubtful things uncorrected may result in a serious accident. When any doubtful thing is suspected, stop the operation immediately to examine the cause.
- (6) Working on electrical systems is potentially dangerous.

You should protect yourself against uncontrolled operation, high current arcs, and outgassing from lead acid batteries.

- **Uncontrolled operation**

Some conditions could cause the motor to run out of control.

Disconnect the motor or jack up the vehicle and get the drive wheels off the ground before attempting any work on the motor control circuitry.

- **High current Arcs**

Batteries can supply very high power, and arcing can occur if they are short circuited.

Always open the battery circuit before working on the motor control circuit.

Wear safety glasses, and properly insulated tools to prevent shorts.

- **Lead Acid batteries**

Charging or discharging generates hydrogen gas, which can build up in and around the batteries.

Follow the battery manufacture's safety recommendations.

Always wear safety glass.

4. OPERATING SAFELY

Safe operation is the responsibility of the operator.

1) Watch where you are going. Don't go if you can't see...

- (1) Before driving, check all around to be sure that your intended path of travel is clear of obstructions and pedestrians.

▲ LOOK WHERE YOU DRIVE. Watch out for pedestrians, other vehicles, obstructions, and drop-offs.

- (2) Do not allow anyone to stand or pass between the tractor and towing load.
Watch for people in your work area even if your tractor has warning lights or alarms. They may not watch for you.
- (3) Sound horn at intersections and wherever vision is obstructed.
Do not drive a tractor up to anyone standing in front of the tractor.

2) Protect yourself and those around you...

- (1) Operate the tractor only from the designated operator's position. Stay within the confines of the tractor profile dimensions. Keep all body parts inside the operator's compartment and away from the danger of passing obstructions. Keep under overhead guard if equipped..
- ※ **An overhead guard is intended to offer protection to the operator from falling objects, but cannot protect against every possible impact.**

3) No riders...

- (1) Do not carry passengers. The operator is the only one who should be on the tractor.

4) Always be in full control of your tractor...

- (1) Never operate a tractor if you are not in the designated operator's position.
- (2) Never operate a tractor when your hands and feet are wet or greasy.
- (3) Always pick the smoothest travel route for your tractor. Avoid bumps, holes, slick, spots, and loose objects or debris in your path that may cause the tractor to swerve or tip. If these conditions are unavoidable, slow down and carefully drive past them. Slow down for wet or slippery surfaces.
- (4) Avoid any sudden movement.
Start, stop, travel, steer, and brake smoothly.
- (5) Operate your tractor under all conditions at a speed that will permit it to be brought safely to a stop.

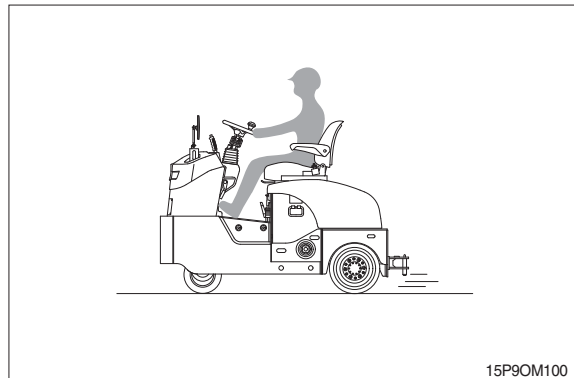
5) Grades, ramps, and inclines...

- (1) Use special care when operating on ramps, inclines, and uneven areas. Travel slowly. Travel straight up and down. Do not turn or drive at an angle across an incline or ramp. Do not attempt to operate on grades in excess of those specified and/or recommended by the manufacturer.
- (2) Always brake with the right foot pedal (Not with the inching pedal) when travelling down incline.

6) Practice safe operation every time you use your tractor...

- (1) Careful driving and operation is your responsibility. Be completely familiar with all the safe driving and towing techniques in this Operator's Manual. Use common sense. Drive carefully; do not indulge in stunt driving or horseplay. Observe traffic rules. Watch for people and hazards. Slow down, be in full control of your tractor at all times.
- (2) Follow the instructions in this manual to avoid damage to your tractor or the possibility of injury to yourself or others.
- (3) During your work, observe all functions of your tractor. This allows you to immediately recognize a problem or irregularity that could affect the safe operation of your tractor.
- (4) Periodically check the gauges and warning indicator lights in the instrument panel to be sure they indicate a normal condition. If an abnormal condition appears bring the machine to a safe condition and safe location, shut off the starting switch immediately and report the problem.

⚠ Do not continue to operate a tractor that has a malfunction. Stop and have it fixed.



5. SHUT DOWN PROCEDURE

※ **Always leave your tractor in a safe condition.**

1) When you leave your tractor, or park it, follow these safety rules

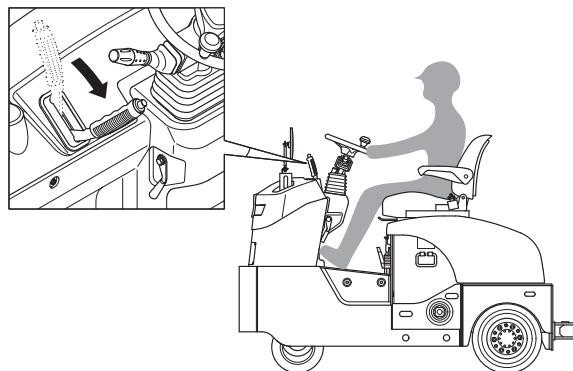
- (1) Park in a safe area away from normal traffic.
- (2) Never park on a grade.
- (3) Never park in areas that block emergency routes or equipment, access to fire aisles, or stairways and fire equipment.

2) Before leaving the operator's position

- (1) Bring the tractor to a complete stop.
- (2) Put the directional control lever in the NEUTRAL position.
- (3) Pull the parking brake lever to the LOCK position.

3) In addition, when leaving the tractor unattended

- (1) Turn the starting switch to the OFF position and remove the key.
- (2) Block the wheels, if the tractor must be left on an incline or you have any doubt about the tractor moving from a safe position.



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6. SOLID TIRE

- 1) Do not travel more than 25 km/hr (16 mph).
- 2) Do not travel further than 8 km (5 miles) in an hour.
- 3) Do not drive on the road for automobile.
- 4) After continuous traveling radiates enough the heat of tire. (e.g. 1 hour radiation of the heat after 2 hours continuous traveling)
- 5) In case of a tow truck do not continue to travel further than 2 km (1.25 miles).

⚠ Our warranty does not cover any damages caused by excessive driving.