

E10 Electric Excavator Quick Start Guide

Green Machine System – Operator Controls & Maintenance

OFF



ON

Power Key Switch

OFF – position for stopping the motor and inserting or removing the key.

ON – position in which the motor is running. All electrical equipment is functional.

When motor turns on after turning the key on, lock down safety levers to activate main machine controls. **All main controls work exactly the same as a diesel machine.**

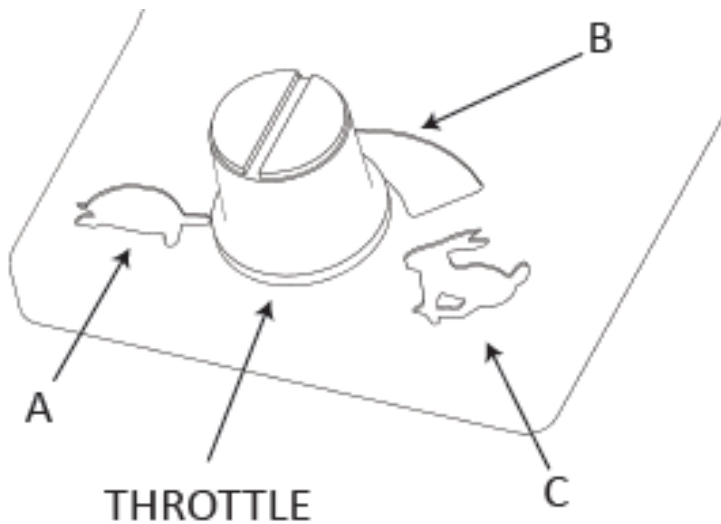
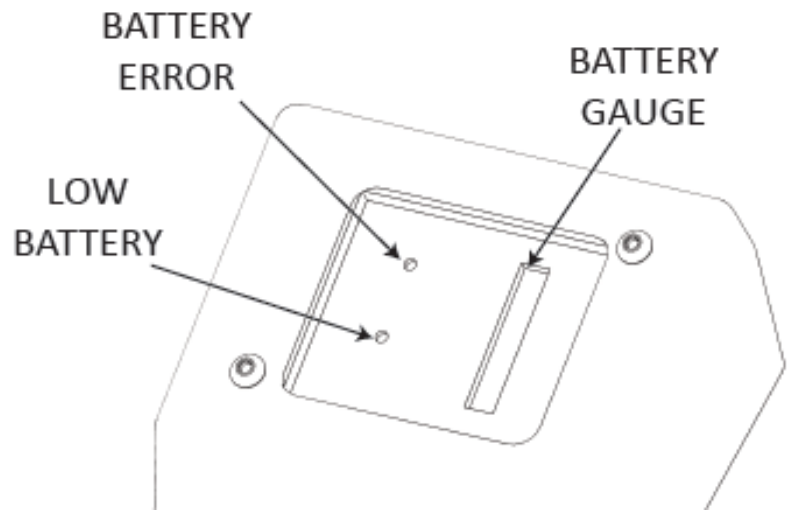


Display

Battery Gauge – shows the amount of battery remaining, like a fuel gauge.

Low Battery – orange light turns on when the battery level reaches 10%.

Battery Error – red light turns on if there is an error in the battery system.



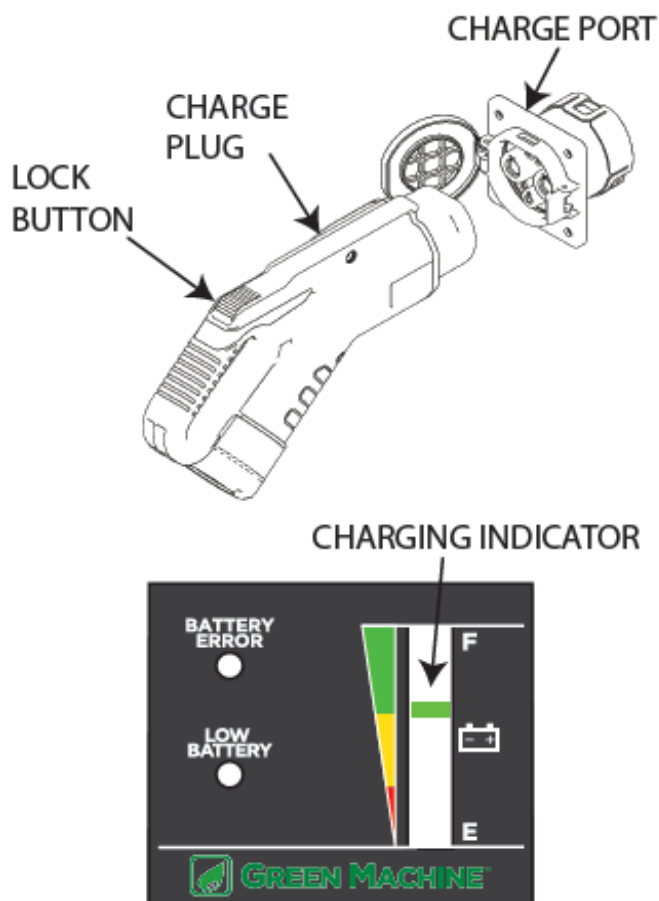
Throttle

This controls the motor speed.

A – Motor is stopped.

B – Motor is at medium speed.

C – Motor is at maximum speed.



Charging Guide

Follow the instructions below to properly charge the E10 machine.

The E10 machine can only be charged with the GME-stock charge cable sent with the machine.

1. Turn off key switch.
2. Plug charge cable into 12A, 120VAC outlet and insert charge gun into charge port located on the machine's back end.
3. **Be sure the gun is fully seated in the port.**
4. Indicator on charger display will blink when charging begins. **If indicator does not blink, check that gun is fully seated.**
5. **To stop charging**, press the lock button on the charge gun and remove the charge gun from the charge port.

Any time the E10 is not in use for >24 hours, leave the machine on-charge until next use. This includes long-term storage for weeks or months – leave the machine on-charge until next use. Charging will automatically stop when the battery is full.

The E10 will not run while charging. The drive system is deactivated while charging to prevent operation while connected to the charger.

Recharge the E10 as often as possible. When work is complete, plug in the E10 and recharge regardless of the battery level.

Towing

E10 weight:

2843 lb (1290 kg)

Load securement:

3/8" grade 70 transport chain with 3/8" ratchet binders 1x15' chain, 4x10' chains.

TROUBLESHOOTING

1. Machine won't charge
 - a. Ensure there is no damage to the charging cable or charge port and ensure both are clean.
 - b. Ensure that you're getting AC power from the wall.
 - c. Remove the charging cable from the machine and check that the machine turns on when the key turns on. If the machine doesn't power on, then refer to Step 2.
 - d. Ensure there isn't an active battery error - the battery error light battery display will be **solid red**. If there is an active battery error, refer to Step 5.
 - e. The machine will not charge if the battery temperature is either too cold ($<-4^{\circ}\text{F}/-20^{\circ}\text{C}$) or too hot ($>110^{\circ}\text{F}/45^{\circ}\text{C}$). If too cold, move the machine into a warmer space. If too hot, wait for the battery to cool down before charging. Leave the charger plugged into the machine – when the battery warms up/cool down, the machine will automatically begin charging.
2. Machine won't turn on when the key is turned to ON
 - a. If the machine doesn't power on when the key is turned on (i.e. no displays light up), then check the 12V battery to ensure it is supplying proper 12V to the system. If the 12V battery is dead, then swap out the 12V battery or use a 12V charger to recharge the battery.
 - b. The machine will not turn on if the battery temperature is either too cold ($<-4^{\circ}\text{F}/-20^{\circ}\text{C}$) or too hot ($>110^{\circ}\text{F}/45^{\circ}\text{C}$). If too cold, move the machine into a warmer space. If too hot, wait for the battery to cool down before turning on.
 - c. If the machine receives power when turning on the key but the motor controls aren't functioning, then refer to Step 3.
 - d. Ensure there isn't an active battery error - the battery error light battery display will be **solid red**. If there is an active battery error, refer to Step 5.
3. Motor won't turn on when machine is on
 - a. Ensure the safety lever switch is locked all the way in the down position.
 - b. Ensure the throttle is turned high enough to turn on the motor.
 - c. Ensure there is no external or internal damage to the throttle or its supporting connections.
 - d. Ensure there isn't an active battery error - the battery error light battery display will be **solid red**. If there is an active battery error, refer to Step 5.
4. Error light turns on (**solid red**) but machine still functions (non-critical error)
 - a. If main machine functions are unaffected, then try turning the machine off then on again. If that does not solve the issue, then turn the battery disconnect switch off then on again. If the error persists, contact GME Customer Support. The machine may still be used as long as it is operating normally and as long as there is no damage to the machine, battery, or any electrical connections.
5. Error light turns on but machine **will not** function (critical error)
 - a. If there is an active battery error, try turning the machine off then on again. If that does not solve the issue, then turn the battery disconnect switch off then on again. If the error persists, contact GME Support.

If none of these troubleshooting steps resolve the issue, **please contact Green Machine Customer Support at 716-968-8658 ext. 303**. Be ready to provide your company information, GME Serial Number of the machine/affected unit(s), the battery level, and hours on machine in addition to all details regarding the experienced issue(s).

Frequently Asked Questions

1. Does the Green Machine work the same as a diesel excavator?

Yes. All the controls work exactly the same, including the variable speed throttle. The hydraulic system is exactly the same as a diesel machine.

2. Can I operate the Green Machine in the rain?

Yes. You can operate the Green Machine in rain, dust, or any other condition that you would use a diesel machine.

3. Can I operate and charge the Green Machine in the cold?

Yes. The Green Machine can run or charge in temperatures down to -4°F (-20°C).

4. Does the Green Machine create any sparks?

No. The motor in the Green Machine is brushless, so it does not create any sparks. The battery and power electronics are sealed from the environment.

5. Is the Green Machine's battery safe from fires?

Yes. There are many types of Li-ion cells. Some are more volatile than others. The cells used in the Green Machine battery have been safety tested not to catch fire or explode from being shorted, crushed, dropped, overcharged, or overheated.

6. Do I need a special charge outlet?

No. The E10 charger will plug into a standard 120V/12A AC outlet.

7. Can I charge the E10 while it is operating?

No. Charging while operating is not currently supported.

8. Should I run the battery all the way down each time I use the machine?

No. the Li-ion batteries used in the Green Machine do not have "memory" like some other batteries. Use as little of the battery as you need, and then plug the machine back in to charge.

9. Do I need to unplug the Green Machine when it is done charging?

No. The Green Machine will automatically stop charging when it is done, even if it is still plugged in.

10. Will I hurt the battery if I run it down to zero?

No. The battery can be run to zero without being harmed.

11. How should I store the Green Machine?

Any time the Green Machine is not in use for more than 24 hours, connect the charger and leave the charger plugged in to the wall outlet. This includes long term storage for weeks or months.

12. Is there any maintenance I need to perform on the Green Machine?

Not on the electric drive system. The brushless electric motor does not need maintenance. The battery is automatically maintained by a sophisticated battery management system. Refer to the operator and service manual for scheduled hydraulic/machine maintenance.