



# ***Operator's Manual***

**Z<sup>®</sup>-60 DC**  
**Z<sup>®</sup>-60 FE**

ANSI/CSA  
North America  
South America  
Asia

with  
Maintenance  
Information

Original Instructions  
Second Edition  
First Printing  
Part No. 1292373GT

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below

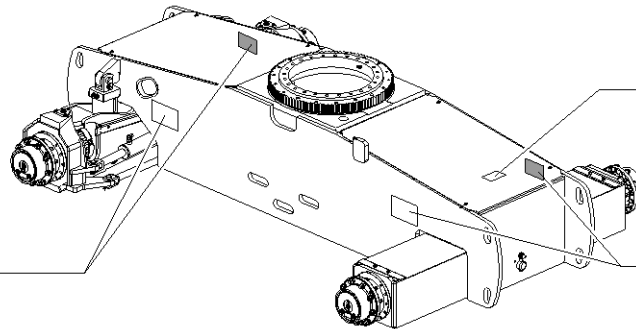


- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

# General Safety

Z-60 DC



147792

**⚠ DANGER**

**Tip-over Hazard**  
Do not use air-filled tires.

This machine is equipped with foam-filled tires. Wheel weight is critical to stability.

20000 GAH, PowerDrive
Minimum Tire Width: 14.5 in / 368 mm
Minimum Tire Height: 14.5 in / 368 mm
Max Tire Pressure: 200 psi / 13.8 bar
Cur Load: 260 lbs / 118 kg
Lifted Load: 400 lbs / 181 kg

31060

**⚠ DANGER**

**Tip-over Hazard**  
Airing or changing tire on machine will result in machine tip-over. Machine tip-over will result in death or serious injury.

Do not alter or disable tire methods.

147792

**⚠ DANGER**

**Tip-over Hazard**  
Do not use air-filled tires.

This machine is equipped with foam-filled tires. Wheel weight is critical to stability.

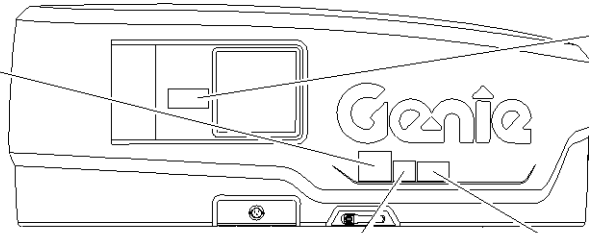
20000 GAH, PowerDrive
Minimum Tire Width: 14.5 in / 368 mm
Minimum Tire Height: 14.5 in / 368 mm
Max Tire Pressure: 200 psi / 13.8 bar
Cur Load: 260 lbs / 118 kg
Lifted Load: 400 lbs / 181 kg

31788

**⚠ DANGER**

**Electrocution Hazard**  
Failure to disconnect all power to the machine will result in death or serious injury.

Do not touch any electrical parts of the machine while the machine is powered on.



114390

**⚠ DANGER**

**Tip-over Hazard**  
Failure to disconnect all power to the machine will result in death or serious injury.

97865

**⚠ WARNING**

**Electrocution Hazard**  
Failure to disconnect all power to the machine will result in death or serious injury.

Disconnect all the battery before performing service on the machine.

1256543

**⚠ WARNING**

**Electrocution Hazard**  
Failure to disconnect all power to the machine will result in death or serious injury.

Power to battery not disabled powered on.

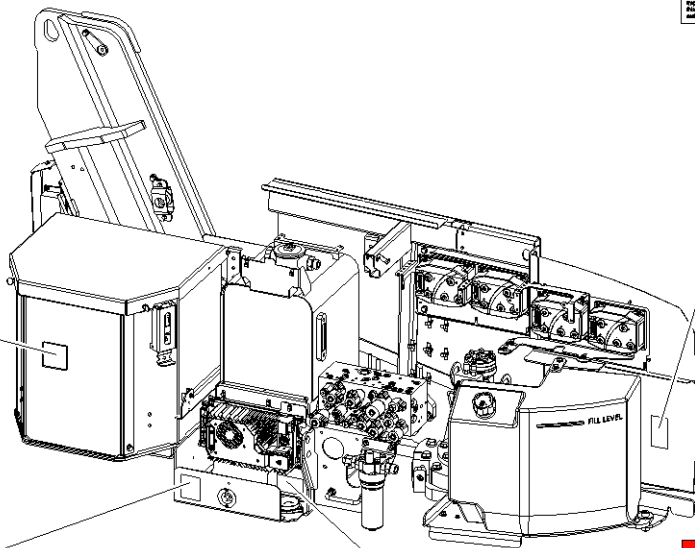
1269254

**⚠ DANGER**

**Tip-over Hazard**  
Failure to maintain balance with proper weight distribution will result in death or serious injury.

Machine will only be used as equipment and is not to be used as a crane. Capacity must be maintained at all times. Do not exceed the rated capacity of the machine.

1 200 lbs / 907 kg
1 200 lbs / 544 kg



1267121

**⚠ WARNING**

**Tip-over Hazard**  
Failure to maintain balance with proper weight distribution will result in death or serious injury.

Capacity limit must not be exceeded when using attachments.

31508

**⚠ DANGER**

**Electrocution Hazard**  
Failure to disconnect all power to the machine will result in death or serious injury.

Disconnect all the battery before performing service on the machine.

82314

**⚠ DANGER**

**Tip-over Hazard**  
Airing or disabling angle sensor can result in machine tip-over. Machine tip-over will result in death or serious injury.

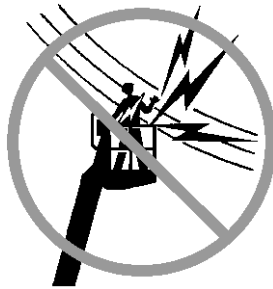
Do not move, alter or disable angle sensor.



# Work Area Safety

## ⚠ Electrocutation Hazards

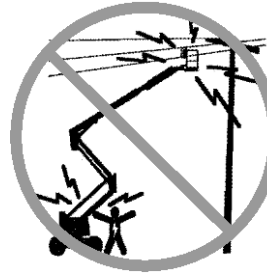
This machine is not electrically insulated and will not provide protection from contact with or proximity to electrical current.



Obey all local and governmental regulations regarding required clearance from electrical power lines. At a minimum, the required clearance contained in the chart below must be followed.

Line Voltage	Required Clearance	
0 to 50KV	10 ft	3.05 m
50 to 200KV	15 ft	4.60 m
200 to 350KV	20 ft	6.10 m
350 to 500KV	25 ft	7.62 m
500 to 750KV	35 ft	10.67 m
750 to 1000KV	45 ft	13.72 m

Allow for platform movement, electrical line sway or sag, and beware of strong or gusty winds.



Keep away from the machine if it contacts energized power lines. Personnel on the ground or in the platform must not touch or operate the machine until energized power lines are shut off.

Do not operate the machine during lightning or storms.

Do not use the machine as a ground for welding.

## ⚠ Tip-over Hazards

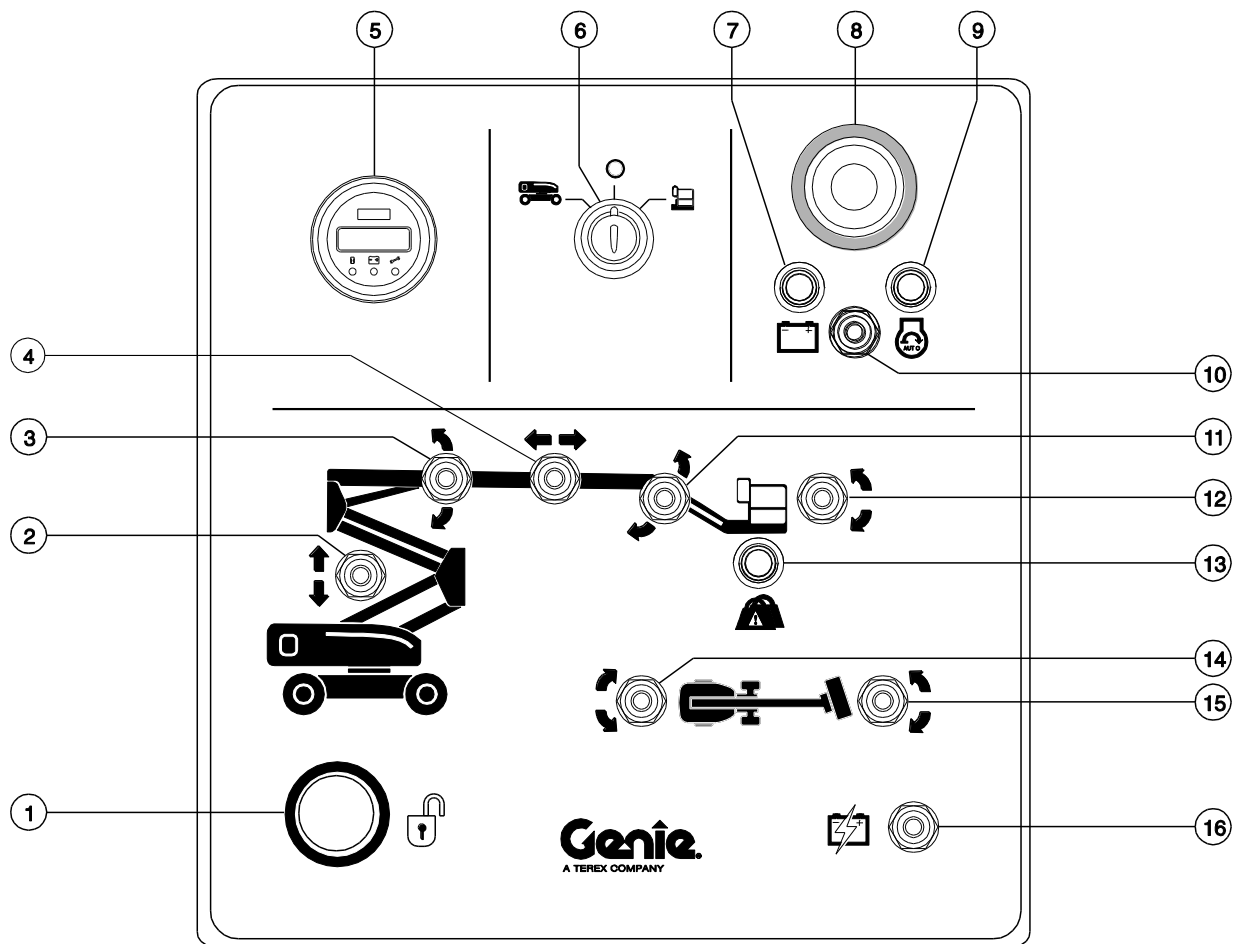
Occupants, equipment and materials shall not exceed the maximum platform capacity or the maximum platform capacity of the platform extension.

<b>Maximum platform capacity</b>	500 lbs	227 kg
<b>Maximum occupants</b>	2	

The weight of options and accessories, such as pipe cradles, panel cradles and welders, will reduce the rated platform capacity and must be subtracted from the platform capacity. See the decals with the options and accessories.

If using accessories, read, understand and obey the decals, instructions and manuals with the accessory.

# Controls



## Ground Control Panel

- |   |  |
|---|--|
| <p>1 Function enable button</p> <p>Press and hold the function enable button to enable the functions on the ground control panel to operate.</p>  | <p>3 Primary boom up/down switch</p> <p>Move the primary boom up/down switch up and the boom will raise. Move the primary boom up/down switch down and the boom will lower.</p>  |
| <p>2 Secondary boom up/down switch</p> <p>Move the secondary boom up/down switch up and the secondary boom will raise. Move secondary boom up/down switch down and the secondary boom will lower.</p> | <p>4 Primary boom extend/retract switch</p> <p>Move the primary boom extend/retract switch to the right and the primary boom will extend. Move the boom extend/retract switch to the left and the primary boom will retract.</p> |

# Inspections



---

## Do Not Operate Unless:

- You learn and practice the principles of safe machine operation contained in this operator's manual.
  - 1 Avoid hazardous situations.
  - 2 Always perform a pre-operation inspection.
  - 3 Always perform function tests prior to use.**

**Know and understand the function tests before going on to the next section.**

- 4 Inspect the workplace.
- 5 Only use the machine as it was intended.

## Function Test Fundamentals

The function tests are designed to discover any malfunctions before the machine is put into service. The operator must follow the step-by-step instructions to test all machine functions.

A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service. Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

After repairs are completed, the operator must perform a pre-operation inspection and function tests again before putting the machine into service.

# Inspections



## Do Not Operate Unless:

- You learn and practice the principles of safe machine operation contained in this operator's manual.
  - 1 Avoid hazardous situations.
  - 2 Always perform a pre-operation inspection.
  - 3 Always perform function tests prior to use.
  - 4 Inspect the workplace.**

**Know and understand the workplace inspection before going on to the next section.**
  - 5 Only use the machine as it was intended.

## Workplace Inspection Checklist

Be aware of and avoid the following hazardous situations:

- drop-offs or holes
- bumps, floor obstructions, or debris
- sloped surfaces
- unstable or slippery surfaces
- overhead obstructions and high voltage conductors
- hazardous locations
- inadequate surface support to withstand all load forces imposed by the machine
- wind and weather conditions
- the presence of unauthorized personnel
- other possible unsafe conditions

## Workplace Inspection Fundamentals

The workplace inspection helps the operator determine if the workplace is suitable for safe machine operation. It should be performed by the operator prior to moving the machine to the workplace.

It is the operator's responsibility to read and remember the workplace hazards, then watch for and avoid them while moving, setting up, and operating the machine.

# Operating Instructions

## Machine Operation

FE models can be operated with or without the engine running.

- 1 Turn the key switch to ground or platform control.
- 2 Be sure both battery packs are connected before operating the machine.
- 3 Be sure both ground and platform control red Emergency Stop buttons are pulled out to the on position.

## Emergency Stop

Push in the red Emergency Stop button to the off position at the ground controls or the platform controls to stop all functions.

Repair any function that operates when either red Emergency Stop button is pushed in.

Selecting and operating the ground controls will override the platform red Emergency Stop button.

## Auxiliary Power

Use auxiliary power if the primary power source fails.

- 1 Turn the key switch to ground or platform control.
- 2 Pull out the red Emergency Stop button to the on position.
- 3 Press down the foot switch when using the controls from the platform.
- 4 Simultaneously hold the auxiliary power switch to either side and activate the desired function.



## FE Models: Starting the Engine

### From the ground control panel:

- 1 Turn the key switch to ground control.
- 2 Be sure both ground and platform control red Emergency Stop buttons are pulled out to the on position.
- 3 Move the machine mode select switch to hybrid mode.
- 4 Push the function enable button to start the engine.



### From the platform control panel:

- 5 Turn the key switch to platform control.
- 6 Be sure both ground and platform control red Emergency Stop buttons are pulled out to the on position.
- 7 Move the machine mode select switch to hybrid mode.
- 8 Press down the foot switch to start the engine.

If the engine fails to start after 15 seconds of cranking, determine the cause and repair any malfunction. Wait 60 seconds before trying to start again.

In cold conditions, 20°F/-6°C and below, warm the engine for 5 minutes before operating to prevent hydraulic system damage.

In extreme cold conditions, 0°F/-18°C and below, machines should be equipped with optional cold start kits. Attempting to start the engine when temperatures are below 0°F/-18°C may require the use of a booster battery.

---

# Operating Instructions

## After Each Use

- 1 Select a safe parking location—firm level surface, clear of obstruction and traffic.
- 2 Retract and lower the boom to the stowed position.
- 3 Rotate the turntable so that the boom is between the non-steer wheels.
- 4 Turn the key switch to the off position and remove the key to secure from unauthorized use.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL