

Genie Industries



Genie® Z-30/20

Genie® Z-30/20HD

Operator's Manual

before serial number 2214

First Edition, Second Printing
Part No. 19052



Contents

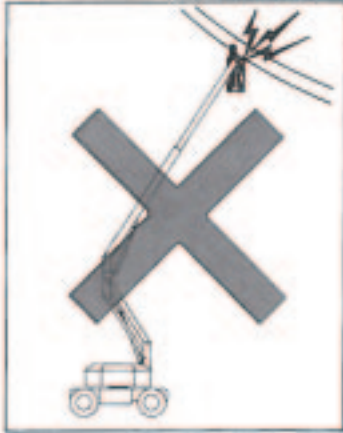
	Page
Safety Rules	3
Pre-operational & Safety Inspection	4
Operating Instructions	6
Transport	12
Maintenance & Routine Service	12
Specifications	14

SAFETY RULES & OPERATING INSTRUCTIONS

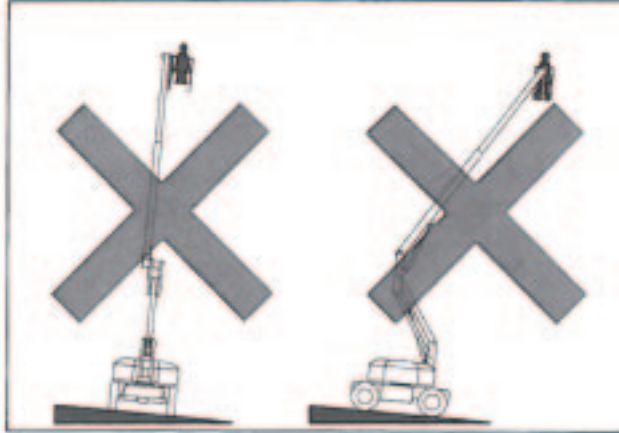
Read and understand these Safety Rules and Operating Instructions before operating the Genie Boom Z-30/20HD or the Genie Boom Z-30/20. Do not permit anyone to use the machine who does not understand the material in this document. Keep these instructions in the water-tight plastic tube on the machine at all times for operator reference.

If there is anything you do not understand, or if you have questions regarding the operation of this machine, call Genie Industries in the U.S.A., (800) 536-1800 or (425) 881-1800.

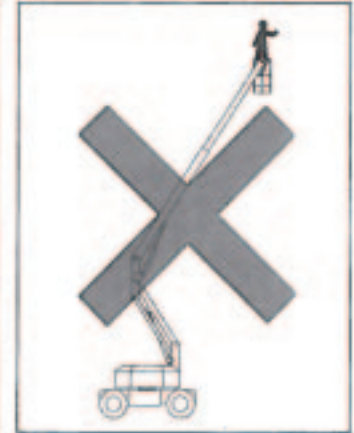
DANGER



Do not use machine or position platform within 10 feet of power lines



Do not raise platform unless machine is level



Do not stand on or place loads on guard rail

SAFETY RULES

- Before using the Genie Boom Z-30/20HD or the Genie Boom Z-30/20, thoroughly inspect machine for damage such as cracked welds, hydraulic leaks, damaged control cables, loose wires and connections or tire damage. Do not use damaged equipment. (Contact Genie Industries for instructions.) Do not change operating or safety system.
- Do not raise platform unless machine is level.
- Always survey work area for surface hazards such as holes, drop-offs, bumps and debris before elevating platform. Do not drive while elevated except on firm, level surfaces with less than 1° slope.
- Do not allow speed of machine down any slope to exceed 3 mph / 4.8 km/h (walking speed).
- Always look up and around for overhead obstructions and electrical conductors. Do not operate machine or position platform within 10 ft / 3 m of power lines. **THIS MACHINE IS NOT ELECTRICALLY INSULATED.**
- Always lower mid-rail bar across entrance after mounting platform.
- Always use OSHA required safety belts and lanyards when occupying platform.
- Do not recharge batteries near sparks or open flame; batteries that are being charged emit highly explosive hydrogen gas.
- Do not sit, stand or climb on guard rail or mid-rail.
- Do not attach overhanging loads or increase platform size.

WARNING: FAILURE TO UNDERSTAND AND FOLLOW ALL SAFETY RULES AND OPERATING INSTRUCTIONS MIGHT RESULT IN SERIOUS INJURY OR DEATH.

PRE-OPERATIONAL & SAFETY INSPECTION

- Open module covers. (Photos 1, 2, 3, & 4)
- Visually inspect machine for any damage or missing parts.
- Check that platform is secured, with all fasteners in place.
- Check hydraulic oil level with platform fully lowered and boom completely retracted. Oil should be within 1 inch / 2.5 cm of tank top. (Photo 5) IMPORTANT: If hydraulic oil is required, use only Shell Tellus No. 46 or equivalent.
- Check battery fluid level. CAUTION: To ensure proper battery care, add battery fluid only after charging.
- Check battery terminals for tightness of connectors and cleanliness. (Photo 6)
- Check battery charger to verify that output meter indicates charging current. (Photo 7)
- Check tires daily. Maintain 45 psi (310 kPa) air pressure. Make sure all lug nuts are securely tightened. Torque lug nuts to 65 -75 ft-lbs / 289 - 334 Nm. (Photo 8)
- After preceding checks have been completed, operate machine from the ground through all functions to check that machine and controls are in safe working condition. (Photo 9)

CAREFULLY STUDY INSTRUCTIONS ON THE PREVIOUS PAGE



1-Open module cover



2-Open module cover



3-Open module cover



4-Open module cover



5-Check hydraulic oil



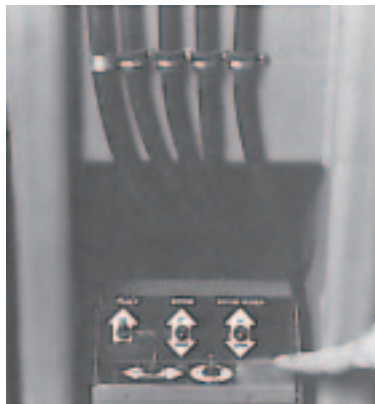
6-Check battery terminals



7-Check battery charger



8-Check tires and wheels



9-Operate machine from ground

OPERATING INSTRUCTIONS

UNDERSTAND FUNCTIONS OF ALL CONTROLS BEFORE OPERATING MACHINE

TURNING ON MACHINE

- Select POWER ON mode on control console. (Photo 10)

ACTIVATING EMERGENCY STOP

- To de-activate lift and drive controls at the platform and set machine parking brake, close EMERGENCY STOP red toggle switch cover. (Photo 11)

DRIVING DOWN A RAMP

- Before driving down a ramp, make sure that platform is fully retracted and lowered. (Photo 12)
- Select DRIVE mode on control console. (Photo 13)
- Press down on foot switch. (Photo 14)
- Release service brake and allow machine to coast by moving accelerator lever slightly off center. (Photo 15)
- After coasting a few feet, apply service brake and bring machine to a FULL STOP by returning accelerator lever to the neutral position and releasing foot switch.
- Repeat above three steps until machine is at the bottom of ramp.
- **WARNING:** The steeper the ramp, the less distance machine should be allowed to coast. NEVER allow speed of machine down any ramp to exceed 3 mph / 4.8 km/h (walking speed). BEFORE speed becomes excessive, apply service brake and bring machine to a FULL STOP by returning accelerator lever to the neutral position and releasing foot switch.

TRAVELING WITH PLATFORM DOWN - LEVEL SURFACE

- Maximum travel speed is attainable only when platform is down.
- Always check to be sure route is clear of persons and obstructions.
- Select DRIVE mode on control console. (Photo 13)
- Press down on foot switch. (Photo 14)
- To change speed, move accelerator lever slowly forward or backward. (Photo 15)
- To slow down, move accelerator lever to the opposite direction that the machine is traveling.
- To stop, apply service brake by returning accelerator lever to the neutral position and releasing foot switch.

STEERING

- Always check to be sure area around wheels is clear of persons and obstructions.
- Select DRIVE mode on control console. (Photo 13)
- Operate steering toggle switch left or right as required. (Photo 16)
- NOTE: Steering is not self-centering-to return wheels to straight ahead position use toggle switch.

CAREFULLY STUDY INSTRUCTIONS ON THE PREVIOUS PAGE



10-POWER ON mode



11-EMERGENCY STOP



12-Boom retracted and lowered



13-DRIVE mode



14-Foot switch



15-Accelerator lever



16-Steering switch

OPERATION INSTRUCTIONS (continued)

LEVELING PLATFORM (Z-30/20)

- Before raising or lowering platform, always disengage platform locking pin so that platform will self-level. To disengage locking pin, pull knob and turn 90° in either direction. (Photo 17)
- When desired working position is reached, engage platform locking pin by turning knob until pin locks in place.
- Always drive machine with platform in the locked position.

PLATFORM ROTATION (Z-30/20HD)

- Platform may be rotated to desired working position by turning the manual hand crank in either a clockwise or counter-clockwise direction. (Photo 18)

RAISING BOOM RISER

- Check for overhead obstructions.
- Select LIFT mode on control console. (Photo 19)
- Operate BOOM RISER UP toggle switch on control console. (Photo 20)
- BOOM RISER operates independently of BOOM UP or BOOM EXTEND.

RAISING BOOM

- Select LIFT mode on control console. (Photo 19)
- Operate BOOM UP toggle switch on control console. (Photo 21)
- NOTE: BOOM UP operates independently of BOOM RISER or BOOM EXTEND.

EXTENDING BOOM

- Select LIFT mode on control console. (Photo 19)
- Operate BOOM EXTEND toggle switch on control console. (Photo 22)
- BOOM EXTEND operates independently of BOOM RISER or BOOM UP.

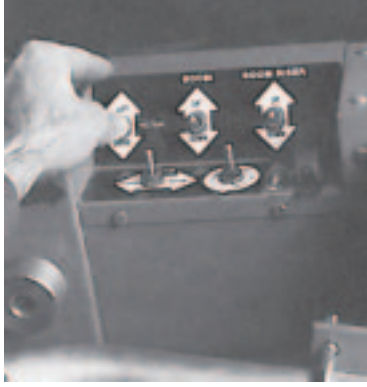
CAREFULLY STUDY INSTRUCTIONS ON THE PREVIOUS PAGE



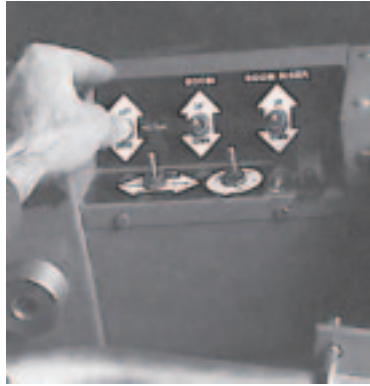
17-Platform locking pin



18-Platform rotation



19-LIFT mode



20-BOOM RISER UP



21-BOOM UP



22-BOOM EXTEND

OPERATION INSTRUCTIONS (continued)

ROTATING TURRET

- Check for obstructions around turret turntable and platform.
- Select LIFT mode on control console. (Photo 19)
- Operate TURRET ROTATION toggle switch on control console. (Photo 23) Turret will rotate in either direction.

TRAVELING WITH PLATFORM UP - LEVEL SURFACE

- With platform up, machine travel speed is restricted.
- Always check to be sure route is clear of persons and obstructions.
- Select DRIVE mode on control console. (Photo 13)
- Press down on foot switch. (Photo 14)
- To change speed, move accelerator lever slowly forward or backward. (Photo 15)
- To slow down, move accelerator lever to the opposite direction that the machine is traveling.
- To stop, apply service brake by returning accelerator lever to the neutral position and releasing foot switch.

RETRACTING BOOM

- Select LIFT mode on control console. (Photo 19)
- Operate BOOM RETRACT toggle switch on control console. (Photo 24)
- BOOM RETRACT operates independently of BOOM RISER or BOOM DOWN.

LOWERING PLATFORM

- Check for obstructions below platform.
- Select LIFT mode on control console. (Photo 19)
- Operate BOOM DOWN toggle switch to descend. (Photo 25)
- Operate BOOM RISER DOWN toggle switch to descend. (Photo 26)

EMERGENCY/GROUND LEVEL CONTROLS

- IF PLATFORM FAILS TO RETRACT OR DESCEND, NEVER CLIMB DOWN BOOM ASSEMBLY. Ask a person on the ground to actuate proper emergency controls to retract, rotate and lower platform. These controls are located at front of turntable. (Photo 27)

CAREFULLY STUDY INSTRUCTIONS ON THE PREVIOUS PAGE



13-DRIVE mode



14-Foot switch



15-Accelerator lever



19-LIFT mode



23-TURRET ROTATION



24-BOOM RETRACT



25-BOOM DOWN



26-BOOM RISER DOWN



27-Emergency controls

TRANSPORT

LIFTING

- Weight of Genie Boom Z-30/20HD is approximately 9,000 lbs / 4082 kg. Weight of Genie Boom Z-30/20 is approximately 5,500 lbs / 2495 kg.
- Use fork truck pockets provided on either side of machine under counterbalance weights. (Photo 28)

SECURING TO TRUCK OR TRAILER FOR ROAD TRANSIT

- Before transporting machine, insert pin in transportation lock hole. (Photo 29)
- Use chains or straps of ample load capacity.
- Always chock wheels on truck or trailer bed. (Photo 30)
- Use tie points on chassis for anchoring down to truck or trailer bed. (Photo 31)

MAINTENANCE & ROUTINE SERVICE

BATTERY MAINTENANCE

- Check the battery fluid level daily, especially if machine is being used in a warm, dry climate. (Photo 32)
- Charge batteries at the end of each work shift, or sooner, if the batteries have been discharged.

TO CHARGE BATTERIES

- Leave battery pack cover open during all charging. Dangerous gases are present during charging. Keep in well ventilated area. (Photo 4)
- Connect charge A.C. cord to a properly grounded 115 volt, 60 HZ power supply which has adequate circuit breaker or fuse protection. (Photo 33)
- Charge rate will vary from 20 to 29 amps depending on the state of discharge of the batteries. Charge rate will taper gradually to a finish rate of 5 to 10 amps when all cells are good.
- Charger turns off automatically when batteries are fully charged.
- Replace defective cords or wires immediately.
- Keep all charger ventilation openings free from obstructions.
- Keep battery tops free of moist, greasy film.

CAUTION

- This charger is for use on battery systems of the type and capacity specified on the charger name plate (36 volt). Use otherwise will damage charger and/or batteries.
- Do not expose charger to rain.
- For best battery life, follow detailed instructions in battery manufacturer's owners manual.
- **DANGER:** Never perform service on machine while platform or boom linkage is elevated.

CAREFULLY STUDY INSTRUCTIONS ON THE PREVIOUS PAGE



4-Open module cover



28-Fork truck pockets



29-Insert transport locking pin



309-Chock wheels



31-Tie down



32-Check battery fluid



33-Connect charge cord

* Required Maintenance Service				
SERVICE OPERATION	* Daily	SERVICE INTERVAL		
		* Monthly or Every 50 hours	* Every 6 months or Every 250 hours	* Every 2 Yrs. or Every 1000 hrs.
Check battery fluid level	●			
Charge batteries	●			
Check hydraulic fluid level	●			
Check lug nuts	●			
Check parking brake for proper function and adjustment		●		
Grease and lubricate		●		
Change hydraulic filter			●	
Change hydraulic fluid				●
Check electric motor brushes				●

• For complete list of required Maintenance Service consult the "Genie Boom Operating and Maintenance Manual."

Z-30/20HD Specifications		
Height, working maximum	38 ft	11.58 m
Height, platform maximum	31 ft	9.45 m
Height, stowed	6 ft 7 in	2 m
Horizontal reach, maximum	20 ft	6.1 m
Width	5 ft 11 in	1.8 m
Length, stowed	16 ft 6 in	5.03 m
Maximum load capacity 46 inch (117 cm) platform	500 lb	227 kg
Wheelbase	6 ft	1.83 m
Turning radius (outside)	14 ft	4.26 m
Turning radius (inside)	7 ft	2.13 m
Turntable rotation (degrees)	360°	
Turntable tailswing	0	
Power source	8 6V 220AH Batteries	
Drive speeds		
Drive speed, stowed	0 - 4 mph	0 - 6.5 km/h
Drive speed, raised	0 - 0.6 mph	0 - 1 km/h
Controls	SCR	
Platform dimensions, (length x width)	48 in x 30 in 121 cm x 76 cm	
Platform leveling	self-leveling	
Platform rotation	150°	

AC outlet in platform	standard	
Hydraulic pressure (maximum) (boom functions)	2000 psi	138 bar
Tire size	11LT-15	
Gradeability	20%	(11°)
Ground clearance	5 1/2 in	14 cm
Hydraulic tank capacity	2.5 gallons	9.5 liters
Weight	8500 lbs	3855 kg

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice or obligation.

Z-30/20 Specifications

Height, working maximum	37 ft	11.28 m
Height, platform maximum	30 ft	9.14 m
Height, stowed	6 ft 7 in	2 m
Horizontal reach, maximum	20 ft	6.1 m
Width	5 ft 11 in	1.8 m
Length, stowed	13 ft 6 in	4.11 m
Maximum load capacity 46 inch (117 cm) platform	300 lb	136 kg
Wheelbase	6 ft	1.83 m
Turning radius (outside)	14 ft	4.26 m
Turning radius (inside)	7 ft	2.13 m
Turntable rotation (degrees)		360°
Turntable tailswing		0
Power source	8 6V 220AH Batteries	

Drive speeds

Drive speed, stowed	0 - 4 mph	0 - 6.5 km/h
Drive speed, raised	0 - 0.6 mph	0 - 1 km/h
Controls	SCR	
Platform dimensions, (length x width)	4 foot	
	48 in x 30 in	121 cm x 76 cm
Platform leveling	gravity	

AC outlet in platform	standard	
Hydraulic pressure (maximum) (boom functions)	2000 psi	138 bar
Tire size	7:00 x 15 LT	
Gradeability	25%	(14°)
Ground clearance	5 1/2 in	14 cm
Hydraulic tank capacity	2.5 gallons	9.5 liters
Weight	5500 lbs	2495 kg

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice or obligation.

WARRANTY

GENIE INDUSTRIES, INC. standard warranty for your Genie Booms covers repairs or adjustment of manufactured and installed parts and equipment which prove defective in material or workmanship for a specified period from the effective date of warranty, but only such defects as results from normal use. Coverage periods are as follows;

- Structural steel components and bushings..... 5 years
- Hydraulic componentry..... 3 years
- Electric componentry..... 1 year
- Batteries..... 90 days
(100% replacement warranty from date unit ships from manufacturer)

Items specifically not covered under warranty and/or exceptions to warranty include:

- Tires
- Covers
- Filters

Repairs required as a result of the following are not covered under warranty:

- Damage from environment:
 - . airborne fallout
 - . chemicals
 - . salt
 - . sandblasting
 - . job-site hazards
 - . lightning
 - . floods
 - . other acts of God
- Damage due to alterations, misuse or accidents:
 - . fire
 - . accidents
 - . abuse
 - . negligence
 - . objects striking the machine
 - . misuse of machine
 - . adjustments to components not complying to Genie specifications
- Damage resulting from improper maintenance or failure to follow established maintenance schedule.
- Damage to the finished appearance from normal deterioration due to use and exposure.

Seller's liability shall be limited to the repair or replacement of the defective material or workmanship at its factory or authorized service center. Buyer shall be responsible for all freight charges required for the repair.

SELLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND SPECIFICALLY MAKES NO WARRANTY AS TO MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE.

Qualification for warranty coverage is conditioned upon completion and filing of a "Product Warranty Registration" form within 30 days of original invoice, or from the date the equipment is first put into service, whichever comes first, and upon prompt notice of the claimed defect. Receipt of the "Product Warranty Registration" form by Genie Industries establishes the effective date of warranty. Seller must be given an opportunity to examine any defect before any alteration is made.

Seller reserves the right to make any changes in design or add any improvements on its basic product or any accessories thereto at any time without incurring any obligation to install such improvements on any Genie Booms or accessory previously purchased.

This warranty supersedes all other warranties, stated or published.

For more information regarding this warranty, please contact the Genie Customer Service Department toll free at 800-536-1800.

All other manufacturers' warranties in excess of Genie warranty will be assigned to purchaser.