

# Genie

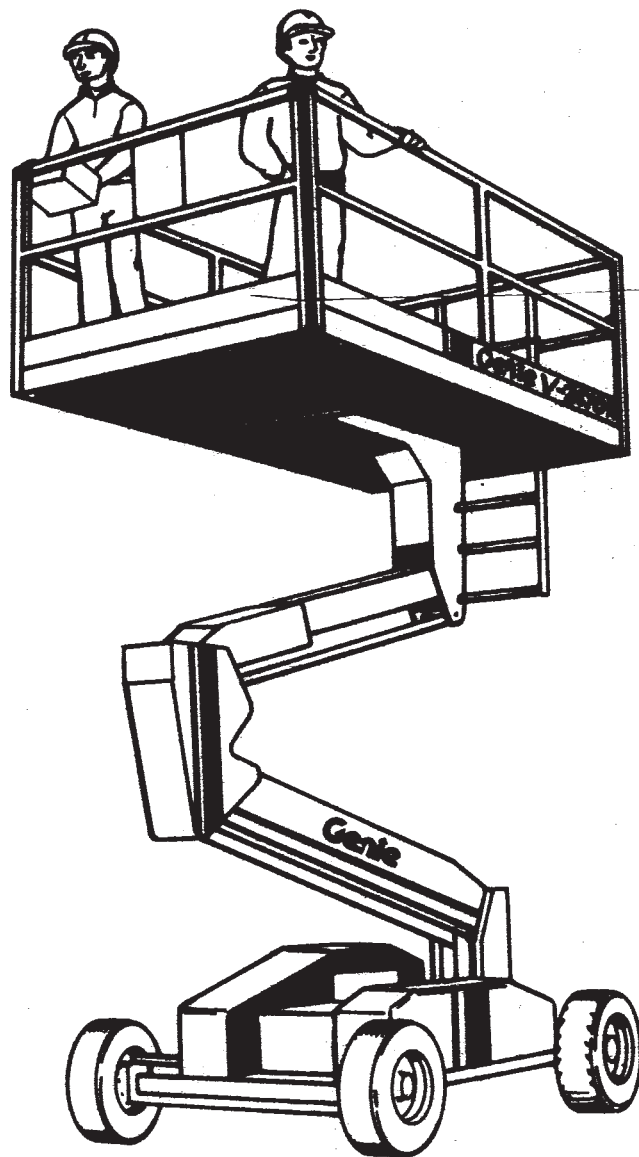
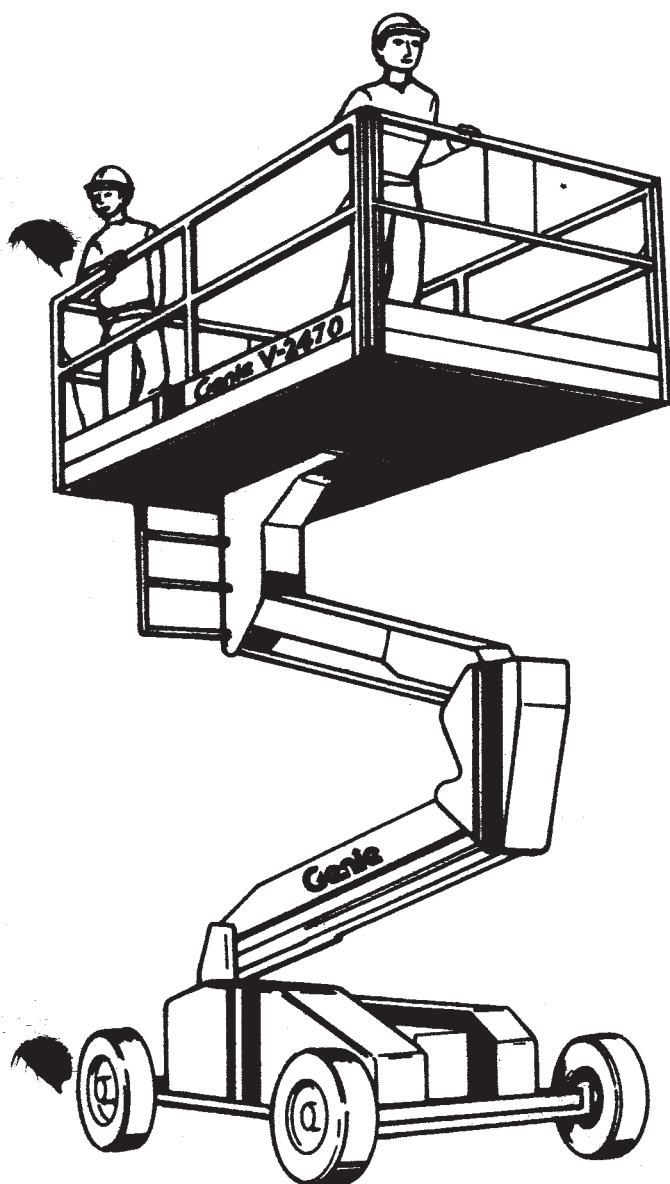
## V-2470 & V-2470RT

# VERTICAL LIFTS

# SERVICE

# AND

# PARTS MANUAL



Part No. 25184

## CONGRATULATIONS!

---

You now own the most stable and durable vertical lift on the market today--a Genie Vertical Lift. Genie takes pride in designing products that stand for quality, value, and service. You can be assured that your new Genie Vertical Lift will offer all of these.

This manual has been prepared to assist you with the initial unpacking and operation of your new Genie Vertical Lift. In addition, this manual will illustrate how to transport and troubleshoot the machine, as well as how to perform periodic maintenance.

We have tried to answer all possible questions and project any service situation that you might encounter. But, as with any publication of this type, we cannot guarantee that it is all inclusive. If you have a question or situation that has not been addressed in this manual, please contact us. WE RELY ON YOUR FEEDBACK!

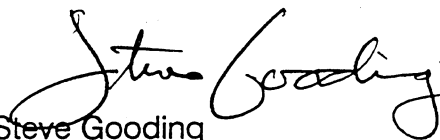
Write: GENIE INDUSTRIES  
Attention: Service Manager  
18340 North East 76th Street  
P.O. Box 69  
Redmond, WA 98073-0069

Call: Toll free, 800-426-8089  
In Washington state (206) 881-1800

Once again, congratulations on the purchase of your new Genie Vertical Lift. We are confident it will provide you with quality, value and years of service.

Sincerely,

GENIE INDUSTRIES



Steve Gooding  
Genie Service Department Manager

## TABLE OF CONTENTS

---

	Page
<b>1. INTRODUCTION AND GENERAL INFORMATION</b>	
1.1 Purpose.....	1.01
1.2 Item Description.....	1.02
1.3 Identification.....	1.03
1.4 Operation.....	1.05
<b>2. SAFETY</b>	
2.1 Mandatory Precautions.....	2.01
<b>3. OPERATING INSTRUCTIONS</b>	
3.1 Unpacking.....	3.01
3.2 Preoperation Inspection.....	3.02
3.3 Operating Instructions.....	3.06
3.4 V-2470 Transport.....	3.07
3.5 V-2470RT Transport.....	3.10
3.6 V-2470 Theory Of Operation.....	3.13
3.7 V-2470RT Theory Of Operation.....	3.17
<b>4. MAINTENANCE</b>	
4.1 Maintenance Schedule.....	4.01
4.2 Consumable Materials.....	4.04
4.3 Specifications.....	4.05
4.4 Torque Requirements.....	4.07
4.5 Troubleshooting.....	4.09
<b>5. SCHEMATICS AND DIAGRAMS</b>	
5.1 Hydraulic Schematics.....	5.01
5.2 Electrical Schematics And Diagrams.....	5.04
5.3 Parts Reference Guide.....	5.19
<b>6. MANUFACTURERS APPENDICES</b>	
6.1 Component List.....	6.01

---

# INTRODUCTION

---

## 1.1 PURPOSE

---

This manual provides instructions for the operation and maintenance of the Genie Vertical Lift models V-2470 & V-2470RT. After reading this manual be sure to keep it as a ready reference. If you require further information:

Write: GENIE INDUSTRIES  
Attn: Customer Service Department  
18340 N.E. 76th Street  
P.O. Box 69  
Redmond, WA 98073-0069

Call: Toll free, 800-426-8089  
In Washington state (206) 881-1800

Telex: 152351

Fax: (206) 885-4638

We are happy to help you and answer any questions you may have about your Genie Vertical Lift.

All information, illustrations and product descriptions contained in this manual are valid at the time of publication.

Genie Industries reserves the right to make changes in design, additions to, or improvements on any Genie products without imposing any obligation upon itself to install them on previously manufactured products.

## 1.2 ITEM DESCRIPTION

---

### Physical

The Genie Vertical Lift V-2470 & V-2470RT are two person self-propelled, integral frame, elevating work platforms. The machines are capable of elevating personnel, along with their tools and materials, to a platform height of 24 ft. (7.3 m).

**V-2470:** Obstacle clearance is 6 in. (152 mm). High center clearance is 8.25 in. (210 mm). The V-2470 has a stowed height of 7 ft. 9 in. (2.4 m) and a chassis width of 70 in. (1.78 m).

**V-2470RT:** Obstacle clearance is 8.25 in. (210 mm). High center clearance is 10.75 in. (273 mm). The V-2470RT has a stowed height of 7 ft. 11 in. (2.41 m) and a chassis width of 74 in. (1.88 m).

### Power

Power for all machine functions on the Genie V-2470 is provided by stored electrical energy. Power for the machine functions on the Genie V-2470RT is provided by a dual fuel internal combustion engine. All machine functions (for both machines) are operated by a hydraulic pump. The pump supplies hydraulic oil to the machine function actuators (elevate cylinder, steering cylinder, and drive motors) allowing the machine to elevate, steer and drive.

### Movement


With the platform fully lowered, the machines have a variable drive speed of 0-3 mph (0-4.8 km/h). Drive speed decreases to 0.8 mph (1.3 km/h) when traveling with the platform elevated.

**V-2470:** Gradeability is 25%. When the wheels are turned to maximum in either direction, the Genie V-2470 has an outside turning radius of 16 ft. (4.9 m) and inside turning radius of 8 ft. (2.4 m).

**V-2470RT:** Gradeability is 35%. When the wheels are turned to maximum in either direction, the Genie V-2470RT has an outside turning radius of 17 ft. (5.2 m) and inside turning radius of 9 ft. (2.7 m).

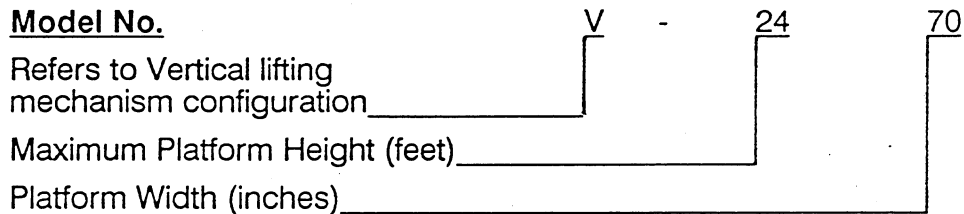
**Note:** For a complete description of Genie Vertical Lift machine functions, refer to sections 3.6 and/or 3.7, Theory of Operation.

### 1.3 IDENTIFICATION

<b>Genie Industries</b>	
MODEL NO. [ ]	SERIAL NO [ ]
RATED WORK LOAD [ ]	LBS.
PLATFORM HEIGHT [ ]	FT.
NOMINAL OPERATING VOLTAGE [ ]	VOLTS
MAX. HYDRAULIC SYSTEM PRESSURE [ ]	PSI.
THIS EQUIPMENT COMPLIES WITH ANSI STANDARD A92. [ ]	
BEFORE OPERATING, READ AND UNDERSTAND ALL OPERATIONS AND SAFETY INFORMATION IN MANUAL AND ALL INFORMATION ON THIS PLACARD.	
INSPECT EQUIPMENT FOR DAMAGE AND EXCESSIVE WEAR DAILY BEFORE USE REPORT ANY DEFECTS IMMEDIATELY AND DO NOT USE EQUIPMENT UNTIL CORRECTED.	
THIS EQUIPMENT IS NOT ELECTRICALLY INSULATED.	
	18340 North East 76th Street, P.O. Box 69 Redmond, Washington U.S.A. 98073-0069 (206) 881-1800 - Cable "Genieoist" Telex 152351
	45228

The identification plate (above) is attached to the base weldment (at the time of manufacture) of every Genie Vertical Lift. Refer to the following page for a complete description of each item listed on the plate.

Section 1.3 Identification Continued



**NOTE:** The "RT" (Rough Terrain) designation on the Genie V-2470RT does not appear on the identification plate.

**Serial No.**

This number identifies a particular machine with reference to the original owner. This number should always be referred to when requesting information or ordering service parts for the machine.

**Rated Work Load**

This is the maximum distributed platform capacity. It designates the maximum safe load which can be evenly distributed on the platform at any elevation.

**Platform Height**

This is the maximum attainable platform height and is measured from level ground surface to the floor of the platform.

**Nominal Operating Voltage**

The number stamped into this box designates the voltage at which the unit operates.

**Maximum Hydraulic System Pressure**

This is the maximum achievable operating hydraulic pressure.

**ANSI**

This is the standard of the AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) the machine complies to.



## 1.4 OPERATION

---

The Genie V-2470 & V-2470RT are controlled from the platform control station. This control station consists of a DRIVE Forward/Reverse joystick, a DRIVE SPEED High/Low toggle switch (Genie V-2470 only), STEER Left/Right toggle switch, an ELEVATE Up/Down toggle switch, and on the Genie V-2470RT a START/CHOKE toggle switch.

To operate the machine, the operator turns the key switch to the PLATFORM position and pulls up on the red POWER On/Off button located on the ground control station. The operator may now enter the platform and pull up on the platform control station POWER On/Off button. The Genie V-2470 is now operational. Follow the above instructions for the Genie V-2470RT and add these simple steps: Select the desired fuel (on the ground control station), then actuate the Start/Choke toggle switch to the proper position. The Genie V-2470RT should now be operational.

The machine may then be driven to the work location, and the platform elevated to the task. The chassis may be repositioned while the platform is elevated by driving the machine to the desired position.

**IMPORTANT:** NEVER ELEVATE THE PLATFORM OR DRIVE THE MACHINE WITH THE PLATFORM ELEVATED UNLESS THE MACHINE IS ON A FIRM LEVEL SURFACE.

The ground control station provides controls for the elevate functions, and on the Genie V-2470RT, controls for START/CHOKE and FUEL Select.

In the event of a control circuit or hydraulic system power loss, the machine incorporates a manual lowering valve, located on the elevate cylinder.

At the end of each day the key switch should be turned off. The integral battery charger on the Genie V-2470 should be connected to the appropriate AC power source, and the fuel levels on the Genie V-2470RT should be checked.

**Note:** Refer to the Vertical Lift Operating Instructions in Section 3.3 for detailed instructions on Vertical Lift operation.

**Genie V-2470 & V-2470RT Operating and Maintenance Manual - Safety**

# **SAFETY**

---

SAFETY