Genie Lift

Serial Number Range

- from 1395 to 1301-23434
- from GL02-23435 to GL16G-80150
- from GL16G-80151 to GL16G-83799
- from GLG-83800

Part No. 115417GT
Rev A3
December 2017
Introduction

Important

Read, understand and obey the safety rules and operating instructions in the appropriate Operator's Manual on your machine before attempting any maintenance procedure.

This manual provides detailed scheduled maintenance information for the machine owner and user. It also provides troubleshooting and repair procedures for qualified service professionals.

Basic mechanical, hydraulic and electrical skills are required to perform most procedures. However, several procedures require specialized skills, tools, lifting equipment and a suitable workshop. In these instances, we strongly recommend that maintenance and repair be performed at an authorized Genie dealer service center.

Technical Publications

Genie has endeavored to deliver the highest degree of accuracy possible. However, continuous improvement of our products is a Genie policy. Therefore, product specifications are subject to change without notice.

Readers are encouraged to notify Genie of errors and send in suggestions for improvement. All communications will be carefully considered for future printings of this and all other manuals.

Contact Us:

Internet: www.genielift.com
E-mail: awp.techpub@terex.com

Serial Number Information

Genie Industries offers the following Service Manuals for these models:

<table>
<thead>
<tr>
<th>Title</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(from serial number 1395-103 to 1301-23434)</td>
<td></td>
</tr>
<tr>
<td>(from serial number GL02-23435)</td>
<td></td>
</tr>
</tbody>
</table>


Find a Manual for this Model

Go to http://www.genielift.com

Use the links to locate Service Manuals, Maintenance Manuals, Service and Repair Manuals, Parts Manuals and Operator's Manuals.

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115417 Rev A, April 2009
Third Edition, First Printing

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# Revision History

<table>
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<th>Section</th>
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</tr>
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<tr>
<td>A</td>
<td>4/2009</td>
<td></td>
<td>Initial Release</td>
</tr>
<tr>
<td>A1</td>
<td>10/2010</td>
<td>Specifications</td>
<td>Checklist A Procedures</td>
</tr>
<tr>
<td>A2</td>
<td>9/2016</td>
<td>Introduction</td>
<td>Serial Number Legend</td>
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<tr>
<td>A3</td>
<td>12/2017</td>
<td>Specifications</td>
<td>Machine Specifications</td>
</tr>
</tbody>
</table>

**Reference Examples:**

Section – Maintenance, B-3
Section – Repair Procedure, 4-2
Section – Fault Codes, All charts
Section – Schematics, Legends and schematics

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**Electronic Version**

Click on any content or procedure in the Table of Contents to view the update.
Introduction

Serial Number Legend

To August 31, 2016

1 Model
2 Model year
3 Facility code

From September 1, 2016

1 Model
2 Facility code
3 Sequence number
4 Serial label
5 Serial number (stamped on base)
Safety Rules

Danger

Failure to obey the instructions and safety rules in this manual and the appropriate Operator’s Manual on your machine will result in death or serious injury.

Many of the hazards identified in the operator’s manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

☑ You are trained and qualified to perform maintenance on this machine.

☑ You read, understand and obey:
  • manufacturer’s instructions and safety rules
  • employer’s safety rules and worksite regulations
  • applicable governmental regulations

☑ You have the appropriate tools, lifting equipment and a suitable workshop.
Safety Rules

Personal Safety
Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.

Read each procedure thoroughly. This manual and the decals on the machine, use signal words to identify the following:

Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Indicates a imminently hazardous situation which, if not avoided, will result in death or serious injury.

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Be sure to wear protective eye wear and other protective clothing if the situation warrants it.

Be aware of potential crushing hazards such as moving parts, free swinging or unsecured components when lifting or placing loads. Always wear approved steel-toed shoes.

Workplace Safety
Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.

Be sure to keep sparks, flames and lighted tobacco away from flammable and combustible materials like battery gases and engine fuels. Always have an approved fire extinguisher within easy reach.

Be sure that all tools and working areas are properly maintained and ready for use. Keep work surfaces clean and free of debris that could get into machine components and cause damage.

Be sure any forklift, overhead crane or other lifting or supporting device is fully capable of supporting and stabilizing the weight to be lifted. Use only chains or straps that are in good condition and of ample capacity.

Be sure that fasteners intended for one time use (i.e., cotter pins and self-locking nuts) are not reused. These components may fail if they are used a second time.

Be sure to properly dispose of old oil or other fluids. Use an approved container. Please be environmentally safe.

Be sure that your workshop or work area is properly ventilated and well lit.
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<th>GL-4</th>
<th>GL-8</th>
<th>GL-10</th>
<th>GL-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stowed Height</strong></td>
<td>5 ft 7.5 in</td>
<td>5 ft 7.5 in</td>
<td>6 ft 2.5 in</td>
<td>7 ft 7 in</td>
</tr>
<tr>
<td></td>
<td>1.7 m</td>
<td>1.7 m</td>
<td>2 m</td>
<td>2.3 m</td>
</tr>
<tr>
<td><strong>Ground Clearance</strong></td>
<td>0.75 in</td>
<td>0.75 in</td>
<td>0.75 in</td>
<td>0.75 in</td>
</tr>
<tr>
<td></td>
<td>1.9 cm</td>
<td>1.9 cm</td>
<td>1.9 cm</td>
<td>1.9 cm</td>
</tr>
<tr>
<td><strong>Standard Base</strong></td>
<td>24.75 in</td>
<td>24.75 in</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Width - stowed</td>
<td>63 cm</td>
<td>63 cm</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>34 in</td>
<td>34 in</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Length - stowed</td>
<td>86.4 cm</td>
<td>86.4 cm</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Length - operating</td>
<td>59 in</td>
<td>63 in</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>1.5 m</td>
<td>1.6 m</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Straddle Base</strong></td>
<td>28.75 in</td>
<td>28.75 in</td>
<td>28.75 in</td>
<td>28.75 in</td>
</tr>
<tr>
<td>Width - stowed</td>
<td>73 cm</td>
<td>73 cm</td>
<td>73 cm</td>
<td>73 cm</td>
</tr>
<tr>
<td>Width - extended</td>
<td>43.5 in</td>
<td>43.5 in</td>
<td>43.5 in</td>
<td>43.5 in</td>
</tr>
<tr>
<td></td>
<td>110.5 cm</td>
<td>110.5 cm</td>
<td>110.5 cm</td>
<td>110.5 cm</td>
</tr>
<tr>
<td>Length - operating</td>
<td>49 cm</td>
<td>49 cm</td>
<td>49 cm</td>
<td>49 cm</td>
</tr>
<tr>
<td></td>
<td>43 in</td>
<td>43 in</td>
<td>43 in</td>
<td>43 in</td>
</tr>
<tr>
<td><strong>Counterweight Base</strong></td>
<td>28.75 in</td>
<td>28.75 in</td>
<td>28.75 in</td>
<td>X</td>
</tr>
<tr>
<td>Width - stowed</td>
<td>73 cm</td>
<td>73 cm</td>
<td>73 cm</td>
<td>X</td>
</tr>
<tr>
<td>Width - extended</td>
<td>43.5 in</td>
<td>43.5 in</td>
<td>43.5 in</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>110.5 cm</td>
<td>110.5 cm</td>
<td>110.5 cm</td>
<td>X</td>
</tr>
<tr>
<td>Length - operating</td>
<td>28.5 in</td>
<td>28.5 in</td>
<td>28.5 in</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>72.4 cm</td>
<td>72.4 cm</td>
<td>72.4 cm</td>
<td>X</td>
</tr>
</tbody>
</table>

* The 10 inch pneumatic rear wheel option will add 1 inch / 2.5 cm to these specifications.

* The 4 point caster option B will add 1 inch / 2.5 cm to these specifications.

* The counterweight base will add 1 inch / 2.5 cm to these specifications.
## Specifications

### Machine Specifications cont.

<table>
<thead>
<tr>
<th>Model</th>
<th>GL-4</th>
<th>GL-8</th>
<th>GI-10</th>
<th>GL-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Machine Weight</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard base</td>
<td>113 lbs</td>
<td>132 lbs</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>51 kg</td>
<td>60 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straddle base</td>
<td>126 lbs</td>
<td>145 lbs</td>
<td>149 lbs</td>
<td>154 lbs</td>
</tr>
<tr>
<td></td>
<td>57 kg</td>
<td>66 kg</td>
<td>68 kg</td>
<td>70 kg</td>
</tr>
<tr>
<td>Counterweight base</td>
<td>392 lbs</td>
<td>411 lbs</td>
<td>433 lbs</td>
<td>NA</td>
</tr>
<tr>
<td>Standard base</td>
<td>178 kg</td>
<td>186 kg</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>(pneumatic caster option)</td>
<td>117 lbs</td>
<td>136 lbs</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>53 kg</td>
<td>60 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straddle base (pneumatic</td>
<td>130 lbs</td>
<td>149 lbs</td>
<td>153 lbs</td>
<td>158 lbs</td>
</tr>
<tr>
<td>caster option)</td>
<td>59 kg</td>
<td>68 kg</td>
<td>69 kg</td>
<td>72 kg</td>
</tr>
<tr>
<td>Straddle base (4 point</td>
<td>137 lbs</td>
<td>158 lbs</td>
<td>162 lbs</td>
<td>167 lbs</td>
</tr>
<tr>
<td>caster option A)</td>
<td>62 kg</td>
<td>72 kg</td>
<td>74 kg</td>
<td>76 kg</td>
</tr>
<tr>
<td>Straddle base (4 point</td>
<td>139 lbs</td>
<td>160 lbs</td>
<td>164 lbs</td>
<td>169 lbs</td>
</tr>
<tr>
<td>caster option B)</td>
<td>63 kg</td>
<td>73 kg</td>
<td>75 kg</td>
<td>77 kg</td>
</tr>
</tbody>
</table>

The electric winch option will add an additional 103 lbs / 47 kg to the above machine weights.

<table>
<thead>
<tr>
<th>Forks</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>22.5 in</td>
<td>22.5 in</td>
<td>22.5 in</td>
<td>22.5 in</td>
</tr>
<tr>
<td></td>
<td>57.2 cm</td>
<td>57.2 cm</td>
<td>57.2 cm</td>
<td>57.2 cm</td>
</tr>
<tr>
<td>Width</td>
<td>20.5 in</td>
<td>20.5 in</td>
<td>20.5 in</td>
<td>20.5 in</td>
</tr>
<tr>
<td></td>
<td>52.1 cm</td>
<td>52.1 cm</td>
<td>52.1 cm</td>
<td>52.1 cm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Load Platform</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>23 in</td>
<td>23 in</td>
<td>23 in</td>
<td>23 in</td>
</tr>
<tr>
<td></td>
<td>58.4 cm</td>
<td>58.4 cm</td>
<td>58.4 cm</td>
<td>58.4 cm</td>
</tr>
<tr>
<td>Width</td>
<td>22 in</td>
<td>22 in</td>
<td>22 in</td>
<td>22 in</td>
</tr>
<tr>
<td></td>
<td>55.9 cm</td>
<td>55.9 cm</td>
<td>55.9 cm</td>
<td>55.9 cm</td>
</tr>
</tbody>
</table>
## Performance Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>GL-4</th>
<th>GL-8</th>
<th>GL-10</th>
<th>GL-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Forks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum working height Forks up</td>
<td>5 ft 11 in</td>
<td>10 ft 0.5 in</td>
<td>11 ft 8 in</td>
<td>13 ft 9.5 in</td>
</tr>
<tr>
<td>Forks down</td>
<td>1.8 m</td>
<td>3.1 m</td>
<td>3.6 m</td>
<td>4.2 m</td>
</tr>
<tr>
<td>Maximum working height Forks up</td>
<td>4 ft 1.5 in</td>
<td>8 ft 3 in</td>
<td>9 ft 10.5 in</td>
<td>12 ft</td>
</tr>
<tr>
<td>Maximum working height Forks down</td>
<td>1.3 m</td>
<td>2.5 m</td>
<td>3 m</td>
<td>3.7 m</td>
</tr>
<tr>
<td><strong>Boom</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum working height Forks up</td>
<td>5 ft 1.5 in</td>
<td>9 ft 3 in</td>
<td>10 ft 10.5 in</td>
<td>13 ft</td>
</tr>
<tr>
<td>Maximum working height Forks down</td>
<td>1.6 m</td>
<td>2.8 m</td>
<td>3.3 m</td>
<td>4 m</td>
</tr>
<tr>
<td><strong>Load Platform</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum working height Forks up</td>
<td>5 ft 1.5 in</td>
<td>9 ft 3 in</td>
<td>10 ft 10.5 in</td>
<td>13 ft</td>
</tr>
<tr>
<td>Maximum working height Forks down</td>
<td>1.6 m</td>
<td>2.8 m</td>
<td>3.3 m</td>
<td>4 m</td>
</tr>
<tr>
<td><strong>Standard Base</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum working height</td>
<td>3.5 in</td>
<td>3.5 in</td>
<td>3.5 in</td>
<td>3.5 in</td>
</tr>
<tr>
<td>Minimum working height</td>
<td>8.9 cm</td>
<td>8.9 cm</td>
<td>8.9 cm</td>
<td>8.9 cm</td>
</tr>
<tr>
<td><strong>Straddle Base</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum working height</td>
<td>3.5 in</td>
<td>3.5 in</td>
<td>3.5 in</td>
<td>3.5 in</td>
</tr>
<tr>
<td>Minimum working height</td>
<td>8.9 cm</td>
<td>8.9 cm</td>
<td>8.9 cm</td>
<td>8.9 cm</td>
</tr>
<tr>
<td><strong>Load Capacity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Forks at 14 in / 36 cm load center</td>
<td>500 lbs</td>
<td>400 lbs</td>
<td>350 lbs</td>
<td>350 lbs</td>
</tr>
<tr>
<td>at 12 in / 30.5 cm load center</td>
<td>500 lbs</td>
<td>400 lbs</td>
<td>350 lbs</td>
<td>350 lbs</td>
</tr>
<tr>
<td>Electric winch</td>
<td>90 dB</td>
<td>90 dB</td>
<td>90 dB</td>
<td>90 dB</td>
</tr>
<tr>
<td>Manual winch</td>
<td>95 dB</td>
<td>95 dB</td>
<td>90 dB</td>
<td>90 dB</td>
</tr>
<tr>
<td>Electric winch</td>
<td>90 dB</td>
<td>90 dB</td>
<td>90 dB</td>
<td>90 dB</td>
</tr>
<tr>
<td>Maximum sound level at normal operating workstations (A-weighted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SAE FASTENER TORQUE CHART

- This chart is to be used as a guide only unless noted elsewhere in this manual.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>THREAD</th>
<th>Grade 5</th>
<th>Grade 8</th>
<th>A574 High Strength Black Oxide Bolts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LUBED</td>
<td>DRY</td>
<td>LUBED</td>
</tr>
<tr>
<td>1/4</td>
<td>10</td>
<td>12</td>
<td>13,5</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>13,5</td>
<td>16</td>
<td>160</td>
</tr>
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<td>5/8</td>
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<td>19</td>
<td>27,4</td>
<td>210</td>
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<td></td>
<td>16</td>
<td>19</td>
<td>27,4</td>
<td>219</td>
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<td>1</td>
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<td>26</td>
<td>35,2</td>
<td>35</td>
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<td>35,2</td>
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<td>37</td>
<td>50,1</td>
<td>48</td>
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<td></td>
<td>37</td>
<td>50,1</td>
<td>88,6</td>
<td>50</td>
</tr>
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<td>41</td>
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<td>41</td>
<td>55,5</td>
<td>74,5</td>
<td>80</td>
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### METRIC FASTENER TORQUE CHART

- This chart is to be used as a guide only unless noted elsewhere in this manual.

<table>
<thead>
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<th>Size</th>
<th>Class 4.8</th>
<th>90, 88</th>
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<th>10, 9</th>
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</tbody>
</table>

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Genie Lift  Error! No text of specified style in document.
Scheduled Maintenance Procedures

Observe and Obey:

☑ Maintenance inspections shall be completed by a person trained and qualified on the maintenance of this machine.

☑ Scheduled maintenance inspections shall be completed daily, quarterly, and annually as specified on the Maintenance inspection Report. The frequency and extent of periodic examinations and tests may also depend on national regulations.

⚠️ Failure to perform each procedure as presented and scheduled may cause death, serious injury or substantial damage.

☑ Immediately tag and remove from service a damaged or malfunctioning machine.

☑ Repair any machine damage or malfunction before operating the machine.

☑ Use only Genie approved replacement parts.

☑ Machines that have been out of service for a period longer than 3 months must complete the quarterly inspection.

☑ Unless otherwise specified, perform each procedure with the machine in the following configuration:
  - Machine parked on a firm, level surface
  - Carriage fully lowered
  - Casters locked
  - Red Emergency Stop button pushed in to the off position (if equipped)
  - Brakes locked (if equipped)

About This Section

This section contains detailed procedures for each scheduled maintenance inspection. Each procedure includes a description, safety warnings and step-by-step instructions.

Symbols Legend

⚠️ Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠️ DANGER Indicates a imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠️ CAUTION Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

⚠️ NOTICE Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

○ Indicates that a specific result is expected after performing a series of steps.

 хр Indicates that an incorrect result has occurred after performing a series of steps.
Scheduled Maintenance Procedures

Maintenance Symbols Legend
Note: The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.

🔧 Indicates that tools will be required to perform this procedure.

🔄 Indicates that new parts will be required to perform this procedure.

➡️ Indicates that dealer service will be required to perform this procedure.

Pre-delivery Preparation Report
The pre-delivery preparation report contains checklists for each type of scheduled inspection.

Make copies for each inspection. Store completed forms as required.

Maintenance Schedule
The Scheduled Maintenance Procedures section and the Maintenance Inspection Report have been divided into subsections. Use the following chart to determine which group(s) of procedures are required to perform a scheduled inspection.

<table>
<thead>
<tr>
<th>Inspection</th>
<th>Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily or every 8 hours</td>
<td>A</td>
</tr>
<tr>
<td>Quarterly or every 250 hours</td>
<td>A + B</td>
</tr>
<tr>
<td>Annually or every 1000 hours</td>
<td>A + B + C</td>
</tr>
</tbody>
</table>

Maintenance Inspection Report
The maintenance inspection report contains checklists for each type of scheduled inspection.

Make copies of the Maintenance Inspection Report to use for each inspection. Maintain completed forms for a minimum of 4 years or in compliance with your employer, jobsite and governmental regulations and requirements.
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Pre-Delivery Preparation Report

Fundamentals
It is the responsibility of the owner or dealer to perform the Pre-delivery Preparation.

The Pre-delivery Preparation is performed prior to each delivery. The inspection is designed to discover if anything is apparently wrong with a machine before it is put into service.

A damaged or modified machine must never be used. If damage or any variation from factory delivered condition is 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.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Instructions
Use the operator's manual on your machine.

The Pre-delivery Preparation consists of completing the Pre-operation Inspection, the Maintenance items and the Function Tests.

Use this form to record the results. Place a check in the appropriate box after each part is completed. Follow the instructions in the operator's manual.

If any inspection receives an N, remove the machine from service, repair and re-inspect it. After repair, place a check in the R box.

Legend
Y = yes, acceptable
N = no, remove from service
R = repaired

Comments

<table>
<thead>
<tr>
<th>Pre-delivery Preparation</th>
<th>Y</th>
<th>N</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-operation inspection completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance items completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function tests completed</td>
<td></td>
<td></td>
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</tbody>
</table>

Model

Serial number

Date

Machine owner

Inspected by (print)

Inspector signature

Inspector title

Inspector company
# Maintenance Inspection Report

## Instructions

- Make copies of this report to use for each inspection.
- Select the appropriate checklist(s) for the type of inspection(s) to perform.

<table>
<thead>
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<th>Frequency</th>
<th>Checklist(s)</th>
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<tbody>
<tr>
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<td>Quarterly or every 250 hours</td>
<td>A + B</td>
</tr>
<tr>
<td>Annually or every 1000 hours</td>
<td>A + B + C</td>
</tr>
</tbody>
</table>

- Place a check in the appropriate box after each inspection procedure is completed.
- Use the step-by-step procedures in this section to learn how to perform these inspections.
- If any inspection receives an "N." tag and remove the machine from service, repair and re-inspect it. After repair, place a check in the "R" box.

## Legend

- Y = yes, acceptable
- N = no, remove from service
- R = repaired

## Checklist A

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Y</th>
<th>N</th>
<th>R</th>
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<tbody>
<tr>
<td>A-1 Inspect the manuals and decals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-2 Pre-operation inspection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-3 Function tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-4 Inspect the channels</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>A-5 Inspect cable and pulleys</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-6 Inspect casters and wheels</td>
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## Checklist B

<table>
<thead>
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<th>N</th>
<th>R</th>
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</thead>
<tbody>
<tr>
<td>B-1 Battery</td>
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<tr>
<td>B-2 Electrical wiring</td>
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<td></td>
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<tr>
<td>B-3 Electric winch maintenance</td>
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<tr>
<td>B-4 Carriage hold-down</td>
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<tr>
<td>B-5 Inspect welds</td>
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<tr>
<td>B-6 Clean channels</td>
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<tr>
<td>B-7 Inspect and lubricate manual winch</td>
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## Checklist C

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<tr>
<td>C-1 Caster and wheels</td>
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<tr>
<td>C-2 Winch friction disks</td>
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<tr>
<td>C-3 Inspect painted surfaces</td>
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</table>

## Comments
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Checklist A Procedures

A-1 Inspect the Manuals and Decals

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Maintaining the operator’s and safety manuals in good condition is essential to safe machine operation. Manuals are included with each machine and should be stored in the container provided in the platform. An illegible or missing manual will not provide safety and operational information necessary for a safe operating condition.

In addition, maintaining all of the safety and instructional decals in good condition is mandatory for safe machine operation. Decals alert operators and personnel to the many possible hazards associated with using this machine. They also provide users with operation and maintenance information. An illegible decal will fail to alert personnel of a procedure or hazard and could result in unsafe operating conditions.

1. Check to make sure that the operator’s, safety and responsibilities manuals are present and complete in the storage container on the platform.

2. Examine the pages of each manual to be sure that they are legible and in good condition.
   - Result: The operator’s manual is appropriate for the machine and all manuals are legible and in good condition.
   - Result: The operator’s manual is not appropriate for the machine or all manuals are not in good condition or is illegible. Remove the machine from service until the manual is replaced.

3. Open the operator’s manual to the decals inspection section. Carefully and thoroughly inspect all decals on the machine for legibility and damage.
   - Result: The machine is equipped with all required decals, and all decals are legible and in good condition.
   - Result: The machine is not equipped with all required decals, or one or more decals are illegible or in poor condition. Remove the machine from service until the decals are replaced.

4. Always return the manuals to the storage container after use.

Note: Contact your authorized Genie distributor or Genie if replacement manuals or decals are needed.
A-2
Perform Pre-operation Inspection

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Completing a Pre-operation Inspection is essential to safe machine operation. The Pre-operation Inspection is a visual inspection performed by the operator prior to each work shift. The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests. The Pre-operation Inspection also serves to determine if routine maintenance procedures are required.

Complete information to perform this procedure is available in the appropriate operator's manual. Refer to the Operator's Manual on your machine.

A-3
Perform Function Tests

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Completing the function tests is essential to safe machine operation. Function tests are designed to discover any malfunctions before the machine is put into service. A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service.

Complete information to perform this procedure is available in the appropriate operator's manual. Refer to the Operator's Manual on your machine.
Checklist A Procedures

A-4
Inspect the Channels

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Detection of damage to the inner and outer frame channels is essential for safe machine operation. An unsafe working condition exists if the channels are damaged and do not operate smoothly, free of hesitation and binding. A daily check of the channels allows the inspector to identify changes in the operating condition of the unit that might indicate damage.

1 Visually inspect each channel for the following:
   - Dents, gauges or abrasions
   - Bends or warping
   - Excessive wear
2 Raise and lower the carriage through a complete cycle.
   ᵇ Result: The carriage and inner frame (if equipped) should raise and lower smoothly, free of hesitation and binding.

A-5
Inspect the Cable and Cable Pulleys

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Detection of damage to the cable or pulleys is essential for safe machine operation. An unsafe working condition exists if these components are damaged and do not operate smoothly. A daily check of this system allows the inspector to identify changes in the operating condition that might indicate damage.

1 Visually inspect all cable components for the following:
   - Frayed or broken wire strands
   - Kinks in the cable
   - Corrosion
   - Paint or foreign materials
   - Split or cracked swaged end
   - Cable is properly secured to the winch
   - Cable is properly secured to the upper inner frame casting (GL8, GL10 and GL12)
   - Cable is properly secured to the cable anchor (GL4)
   - Cable is on all pulleys
   - No broken or damaged pulleys
   - No unusual or excessive pulley wear
A-6
Inspect the Casters and Wheels

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Maintaining the casters and wheels in good condition is essential to safe operation and good performance. Casters or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion. Extremely dirty conditions may require that the wheels and casters be inspected more often.

1. Unlock the brake (if equipped) and move the machine on a firm smooth surface and check that the casters and wheels roll smoothly, free of hesitation and binding.

2. **Models with Pneumatic Wheel**: Check the tire pressure with an air pressure gauge and add air as needed.

<table>
<thead>
<tr>
<th>Specification</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Pneumatic tires</td>
<td>50 psi</td>
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<tr>
<td></td>
<td>3.4 bar</td>
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</tbody>
</table>
Checklist B Procedures

B-1
Inspect the Battery -Models with Electric Winch

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Proper battery condition is essential to good machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in component damage and hazardous conditions.

**WARNING**
Electrocution/burn hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

**WARNING**
Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

1 Put on protective clothing and eye wear.
2 Be sure that the battery cable connections are free of corrosion.

Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate corrosion on the battery terminals and cables.

3 Be sure that the battery retainers and cable connections are tight.
4 Fully charge the battery. Allow the battery to rest 24 hours before performing this procedure to allow the battery cells to equalize.
5 Remove the battery vent caps and check the specific gravity of each battery cell with a hydrometer. Note the results.
6 Check the ambient air temperature and adjust the specific gravity reading for each cell as follows:
   - Add 0.004 to the reading of each cell for every 10° / 5.5° C above 80° F / 26.7° C.
   - Subtract 0.004 from the reading of each cell for every 10° / 5.5° C below 80° F / 26.7° C.

   ☑ Result: All battery cells display an adjusted specific gravity of 1.277 or higher. The battery is fully charged. Proceed to step 12.

   ☑ Result: One or more battery cells display a specific gravity of 1.217 or below. Proceed to step 9.

7 Perform an equalizing charge OR fully charge the batteries and allow the battery to rest at least 6 hours.
8 Remove the battery vent caps and check the specific gravity of each battery cell with a hydrometer. Note the results.
9 Check the ambient air temperature and adjust the specific gravity reading for each cell as follows:
   - Add 0.004 to the reading of each cell for every 10° / 5.5° C above 80° F / 26.7° C.
   - Subtract 0.004 from the reading of each cell for every 10° / 5.5° C below 80° F / 26.7° C.

   ☑ Result: All battery cells display a specific gravity of 1.277 or greater. The battery is fully charged. Proceed to step 10.

   ☑ Result: The difference in specific gravity readings between cells is greater than 0.1 OR the specific gravity of one or more cells is less than 1.217. Replace the battery.

10 Check the battery acid level. If needed, replenish with distilled water to 1/8 inch / 3 mm below the bottom of the battery fill tube. Do not overfill.
11 Install the vent caps and neutralize any electrolyte that may have spilled.
Checklist B Procedures

B-2  Inspect the Electrical Wiring - Models with Electric Winch

Genie requires that this procedure be performed every 250 hours or quarterly, whichever comes first.

Maintaining electrical wiring in good condition is essential to safe operation and good machine performance. Failure to find and replace burnt, chafed, corroded or pinched wires could result in unsafe operating conditions and may cause component damage.

**WARNING**  Electrocution/burn hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

1. Inspect the following areas for burnt, chafed, pinched, corroded and loose wires:
   - Control panel
   - Battery pack
   - Remote control
   - Channel frame

B-3  Perform Electric Winch Maintenance

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Required maintenance procedures and additional winch information is available in the Owner Manual for Rule Winches (Rule part number W-1013).

**Owner Manual for Rule Winches**
Genie part number 85220
Checklist B Procedures

B-4 Inspect the Carriage Hold-down Bar

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Detection of damage to the carriage hold-down bar assembly is essential to safe machine operation. An unsafe working condition exists if the system is damaged and does not operate properly.

1. Fully lower the carriage.
2. Rotate the carriage hold-down bar over the carriage.
3. Raise the carriage.
   ☒ Result: The carriage should not move.
   
   **NOTICE** Component Damage Hazard. Do not apply too much force on the carriage. Raise it only enough to check the resistance against the hold-down bar.

4. Visually inspect the assembly for damage.

B-5 Inspect All Welds

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Weld inspections are essential to safe machine operation and good machine performance. Failure to locate and repair damage may result in an unsafe operating condition.

1. Visually inspect the welds in the following locations:
   - Base and base components
   - Legs
   - Carriage
   - Forks
   - Boom (if equipped)
B-6

Clean the Channels

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Clean inner (if equipped) and outer frame channels are essential to good machine performance and safe operation. Extremely dirty conditions may require that the channels be cleaned more often.

1. Raise the carriage to the maximum height.
2. Visually inspect the inner (if equipped) and outer frame channels for debris or foreign material. If necessary, use a mild cleaning solvent to clean the channels.
3. If needed, lubricate the inner (if equipped) and outer channels with a dry silicone spray or silicone wax.

B-7

Inspect and Lubricate the Manual Winch

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Maintaining the winch is essential to good machine performance and safe operation. An unsafe working condition exists if the winch has excessive wear and/or does not operate smoothly, free of hesitation and binding.

1. Carefully lubricate the pivot point on the ratchet pawl with 30W oil.

**CAUTION**

Bodily Injury Hazard. Over-lubrication of the ratchet pawl may result in oil coming in contact with the surface of the winch brake disk or the winch pressure plate, leading to an unsafe working condition. Do not allow any oil on the brake or pressure plate.

2. Inspect the brake disks for excessive wear. Replace if pad is less than 1/16 inch /1.5 mm thick.
3. Inspect the pinion shaft bushings for excessive wear. Replace if wall thickness of bushing is less than specified.

### Bushing Specification

<table>
<thead>
<tr>
<th>Bushing Specification</th>
<th>Small bushing</th>
<th>Large bushing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.172 inch</td>
<td>0.109 inch</td>
</tr>
<tr>
<td></td>
<td>4.34 mm</td>
<td>2.76 mm</td>
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</tbody>
</table>
C-1
Lubricate the Casters and Wheels

Genie specifications require that this procedure be performed every 1000 hours or annually, whichever comes first.

Regular application of lubrication to the Caster or Wheel is essential to good machine performance and service life. Extremely dirty conditions may require that the casters and wheels be inspected and lubricated more often.

1 Visually inspect each caster and wheel for cuts, cracks or unusual wear.
2 Move the machine on a flat, smooth surface to confirm the casters and wheels roll smoothly, free of hesitation and binding.
3 Pump grease into the caster or wheel until it can be seen coming out of the bearing gap.

Grease Specification
Chevron Ultra-duty grease, EP NLGI 1 (lithium based) or equivalent
C-2  Inspect the Safety Brake System (if equipped)

Genie specifications require that this procedure be performed every 1000 hours or annually, whichever comes first.

Maintaining the winch is essential to good machine performance and safe operation. An unsafe working condition exists if the winch has excessive wear and/or does not operate smoothly, free of hesitation and binding.

1 Replace the winch brake disks and lubricate the winch shaft. Refer to Repair Procedure, How to Disassemble the Manual Winch.

C-3  Inspect the Painted Surfaces

Genie specifications require that this procedure be performed every 1000 hours or annually, whichever comes first.

Inspecting the painted surfaces of your machine is essential to safe operation and long machine life. An unsafe working condition exists if there is damage to painted surfaces that is not corrected.

1 Visually inspect all painted surfaces for the following conditions:
   • Blistering
   • Rust
   • Peeling
   • Fading
   • Corrosion

Note: Replace any component that is damaged.
Repair Procedures

Observe and Obey:

☑️ Repair procedures shall be completed by a person trained and qualified on the repair of this machine.
☑️ Immediately tag and remove from service a damaged or malfunctioning machine.
☑️ Repair any machine damage or malfunction before operating the machine.

Before Repairs Start:

☑️ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.
☑️ Be sure that all necessary tools and parts are available and ready for use.
☑️ Use only Genie approved replacement parts.
☑️ Read each procedure completely and adhere to the instructions. Attempting shortcuts may produce hazardous conditions.

Machine Configuration:

☑️ Unless otherwise specified, perform each repair procedure with the machine in the following configuration:
  • Machine parked on a firm, level surface
  • Carriage in the stowed position
  • Casters locked
  • Red Emergency Stop button in the off position (if equipped)
  • Brake locked (if equipped)
  • All external AC power supply disconnected from the machine (models with electric winch)

About This Section

Most of the procedures in this section should only be performed by trained service professional in a suitably equipped workshop. Select the appropriate repair procedure after troubleshooting the problem.

Perform disassembly procedures to the point where repairs can be completed. Then to re-assemble, perform the disassembly steps in reverse order.

Symbols Legend

Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠️ DANGER

Indicates a imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠️ CAUTION

Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

⚠️ NOTICE

Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

○ Indicates that a specific result is expected after performing a series of steps.
☑️ Indicates that an incorrect result has occurred after performing a series of steps.
1-1
How to Disassemble the GL
-Models Equipped with a Manual
Winch

1 Remove the load handling attachment from the carriage.
2 Fully lower the carriage.

Models with counterweight base:
3 Support the base counterweights with a proper lifting device.
4 Remove the counterweight retaining fasteners from the base and remove the counterweight from the base.

All models:
5 Using proper lifting techniques, lay the machine over onto a table or other suitable work surface.

6 Remove the legs from the machine.
7 Remove the jam nut from the winch drum bolt and remove the winch drum cover.
8 Remove the cable retaining fastener from the winch drum and remove the cable from the drum.

Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

9 GL-4 models: Remove the cable mounting fastener from the handle bracket.

GL-8, GL-10 and GL-12 models: Remove the cable mounting fastener from the upper inner frame casting.

CAUTION Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

10 Remove the base mounting fasteners from the outer frame channels and remove the base from the machine.

11 GL-4 models: Remove the carriage from the outer frame.
GL-8, GL-10 and GL-12: Remove the inner frames from the outer frame. Remove the carriage from the outer frame. Proceed to step 14.

Note: After removing the carriage, note the location of the roller wheel buttons, on the carriage roller wheels.

12 Remove the mounting fasteners from the lower inner frame casting and remove the lower casting from the inner frame.

13 Remove the carriage from the inner frame.

Note: After removing the carriage, note the location of the roller wheel buttons, on the carriage roller wheels.

14 If necessary, remove the hold-down bar, winch mounting plate, handle and loading wheel bracket.

Note: When installing the cable, be sure the cable thimble is centered below the upper pulley (GL-8, GL-10 and GL-12 models).

Note: For proper cable routing, see Repair Procedure, How to Replace the Lifting Cable.
Base Assembly

1-2 How to Disassemble the Winch

1 Remove the load handling attachment from the carriage.
2 Fully lower the carriage.
3 Disconnect the battery from the machine.

[WARNING] Electrocution/burn hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

4 Remove the battery and battery charger from the machine.

Models with counterweight base:
5 Support the base counterweights with a proper lifting device.
6 Remove the counterweight retaining fasteners from the base and remove the counterweight from the base.

All models:
7 Using proper lifting techniques, lay the machine over onto a table or other suitable work surface.

8 Remove the legs from the machine.

9 GL-4 models: Remove the cable mounting fastener from the handle bracket.
10 GL-8, GL-10 and GL-12 models: Remove the cable mounting fastener from the upper inner frame casting.
11 Remove the mounting fasteners from the electric winch cover.
12 Tag and disconnect the wiring from the electric winch cover and remove the electric winch cover from the machine.
13 Remove the old cable following instructions in the Owner's Manual for Rule Winches (Rule part number W-1013).

Owner Manual for Rule Winches
Genie part number 85220


Remove the base mounting fasteners from the outer frame channels and remove the base from the machine.

13 Remove the limit switch mounting fasteners and remove the limit switch from the machine.
14 GL-4 models: Remove the carriage from the outer frame. Proceed to step 21.

Note: After removing the carriage, note the location of the roller wheel buttons, on the carriage roller wheels.
15 GL-8, GL-10 and GL-12 models: Remove the mounting fasteners from the lower inner frame casting and remove the lower casting from the inner frame.

16 Remove the carriage from the inner frame.

17 Remove the mounting fasteners from the lower inner frame casting and remove the lower casting from the inner frame.

18 Tag and disconnect the wiring from the electric winch.

19 Remove the electric winch mounting fasteners and remove the electric winch from the machine.

20 Remove the carriage from the inner frame. Note: After removing the carriage, note the location of the roller wheel buttons, on the carriage roller wheels.

21 If necessary, remove the hold-down bar, winch mounting plate, limit switch mounting bracket, handle and loading wheel bracket. Note: For proper cable routing, refer to Repair Procedure, How to Replace the Lifting Cable.

1-3 How to Disassemble the Manual Winch

Note: Refer to the illustration, Winch Assembly, for an exploded view.

1 Fully lower the carriage

2 Remove the jam nut from the winch drum bolt. Remove the winch drum cover from the machine.

3 Remove the cable retaining fastener from the winch drum and remove the cable from the drum.

**CAUTION** Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

4 Remove the handle adaptor nut and spring. Remove the handle adaptor from the machine.

5 Remove the handle from the pinion shaft.

6 Remove the drum bolt and remove the drum from winch.

7 Remove the retaining ring from the pinion shaft.

8 Slide the pinion shaft toward the carriage and remove the pressure plate, ratchet gear and brake face.

9 Remove the pinion shaft from the winch housing.

10 Remove both pinion bushings. Use a soft metal drift equal to the outside diameter of each bushing and tap with rubber mallet.

**NOTICE** Component damage hazard. Place a block between the walls of the winch housing to prevent the housing from bending while removing the bushings.

11 If necessary, remove the winch housing from the machine.
Base Assembly

1-4
How to Assemble the Manual Winch

1. Place one side of the winch housing over a vise. Open the vise until it is wider than the outside diameter of the pinion shaft bushing.

2. Insert a soft metal drift through the opposite bushing hole. Tap the drift with a rubber mallet to push the bushing into place.

3. Carefully lubricate the pivot point on the ratchet pawl with 30W oil.

4. Install the winch housing onto the machine. Be sure the winch drum is towards the right.

5. Insert the threaded end of the pinion shaft through the large bushing. Then insert the other end of the pinion shaft through the small bushing.

6. Push the pinion shaft toward the small bushing. Install the brake disk, ratchet gear and pressure plate.

7. Push the pinion shaft toward the large bushing. Install the pinion shaft retaining ring.

8. Install the handle adaptor, spring and handle adaptor mounting nut. Tighten the mounting nut. Do not overtighten the nut.

9. Lubricate the outside of the drum spacer that goes through the cable drum with automotive grease. Insert the drum spacer into the cable drum.

10. Install the cable drum so that the drum gears mesh with the ratchet gears on the pinion shaft.

11. Install the drum bolt through the winch housing and drum with the head of the drum bolt on the small bushing side of winch.

Note: Refer to the illustration, Winch Assembly, for an exploded view.

Note: Use a piece of flat bar in between the drift and the bushing to prevent any damage to the bushing.

Note: Repeat steps 1 and 2 to insert the other bushing.

Note: The teeth on the ratchet gear must curve away from the drum.

Note: Push the ratchet pawl outwards while pushing the pinion shaft through the large bushing. Be sure the ratchet pawl is in firm contact with the ratchet gear and all parts move freely.

Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

CAUTION

Note: Over-lubrication of the ratchet pawl may result in oil coming in contact with the surface of the winch brake disk or the winch pressure plate, leading to an unsafe working condition. Do not allow any oil on the brake or pressure plate.
12 From the winch side of the machine, wrap the cable 1 time counterclockwise around the winch drum. Thread the cable through the oblong hole and attach it to the winch drum with the cable retaining fastener.

13 While holding the cable tie on the drum, rotate the winch until all the cable is spooled onto the drum neatly and evenly. Be sure there are at least 4 wraps of cable on the winch drum.

**NOTICE** Component damage hazard. Improperly wound cable may result in poor winch performance and accelerate cable wear. Be sure the cable winds onto the winch drum evenly.
## Base Assembly

### Manual Winch Assembly - ANSI

<table>
<thead>
<tr>
<th>Index No.</th>
<th>Description</th>
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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Ratchet Pawl Kit</td>
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<td>Lock Pin</td>
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<tr>
<td>2</td>
<td>Cable Drum</td>
<td>14</td>
<td>Handle Adapter Nut</td>
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<td>3</td>
<td>Carriage Bolt</td>
<td>15</td>
<td>Winch Handle Spring</td>
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<td>4</td>
<td>Hex Nut</td>
<td>16</td>
<td>Handle Adapter</td>
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<td>5</td>
<td>Gear Cover</td>
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<td>Pinion Shaft Bushing</td>
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<td>Cable Keeper</td>
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<td>Disk Brake</td>
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<td>9</td>
<td>Lock Nut</td>
<td>21</td>
<td>Drive Shaft Assembly</td>
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<td>Winch Nut</td>
<td>22</td>
<td>Retaining Ring</td>
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<tr>
<td>11</td>
<td>Winch Handle Assembly</td>
<td>23</td>
<td>Pinion Shaft Bushing</td>
</tr>
<tr>
<td>12</td>
<td>Flat Washer</td>
<td></td>
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</tr>
</tbody>
</table>

![Diagram of Manual Winch Assembly](image-url)
1-5
How to Replace the Lifting Pulley

1 Fully lower the carriage.
2 Unwind the cable from the winch drum. Do not remove the cable.

⚠️ CAUTION
Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

3 Remove the pulley mounting fastener and remove the pulley from the machine.
4 Wrap the cable around the new pulley and install the pulley on to the machine.

Note: Be sure not to twist the cable when installing the new pulley.

1-6
How to Replace the Lifting Cable

How to Replace the Lifting Cable

Models with manual winch:
1 Fully lower the carriage.
2 Remove the jam nut from the winch drum bolt and remove the winch drum cover.
3 Remove the cable retaining fastener from the winch drum and unwind the cable from the winch drum.

The numbers on the illustration correspond to the steps in Repair Procedure, How to Replace the Lifting Cable.
Base Assembly

4 GL-4 models: Remove the cable mounting fastener from the handle bracket. Pull all the cable out of the machine.

GL-8, GL-10 and GL-12 models: Remove the cable mounting fastener from the upper inner frame casting. Pull all the cable out of the machine.

5 GL-4 models: Attach the new cable to the handle bracket.

Note: When installing the cable, be sure the cable thimble (swaged end) is centered below the upper pulley.

Facing the carriage side of the machine:

6 Thread the cable through the cable slot and then through the carriage pulley, from front to back. Pull all the cable through the pulley.

GL-8, GL-10 and GL-12 models:

7 Thread the cable through the upper inner frame pulley, from back to front. Pull all the cable through the pulley.

8 From front to back, thread the cable through the cable slot in front of the carriage pulley through the lower inner frame pulley. Pull all the cable through the pulley.

All models:

9 From front to back, thread the cable through the handle weldment pulley. Pull all the cable through the pulley.

10 From the winch side of the machine, wrap the cable 1 time counterclockwise around the winch drum. Thread the cable through the oblong hole and attach it to the winch drum with the cable retaining fastener.

11 While holding the cable tie on the drum, rotate the winch until all the cable is spooled onto the drum. Be sure there are at least 4 wraps of cable on the winch drum.
Models with electric winch:
1. Remove the load handling attachment from the carriage.
2. Fully lower the carriage.
3. Push in the red Emergency Stop button to the off position.
4. Disconnect the battery from the machine.

**WARNING**
Electrocution/burn hazard.
Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

5. Remove the battery and battery charger from the machine.
6. Remove the winch cover fasteners.
7. Tag and disconnect the winch wiring and remove the winch cover.
8. Remove the old cable following instructions in the Owner’s Manual for Rule Winches (Rule part number W-1013).

---

**Owner Manual for Rule Winches**
Genie part number 85220

**CAUTION**
Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

Install the new cable following the instructions in the Owner’s Manual for Rule Winches.

9. Connect the winch wiring and install the winch cover on to the machine.

---

Models with counterweight base:
3. Support the base counterweights with a proper lifting device.
4. Remove the counterweight retaining fasteners from the base and remove the counterweight from the base.

---

Models with electric winch:
5. Push in the red Emergency Stop button to the off position.
6. Disconnect the battery from the machine.

**WARNING**
Electrocution/burn hazard.
Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

7. Remove the battery and battery charger from the machine.

---

All models:
8. Using proper lifting techniques, lay the machine over onto a table or other suitable work surface.
9 Remove the legs from the base.

10 Remove the base mounting fasteners from the outer frame channels. Then remove the base from the machine.

11 **GL-8, GL-10, GL-12**: Slide the inner frame out the bottom of the outer frame approximately 6 inches / 15 cm.

12 Use a soft metal drift to remove the glide button.

13 Press the new glide button in place until it is fully seated.

---

**1-8 How to Adjust the Brake (if equipped)**

Note: Refer to the illustration, *Rear Wheel Brake Assembly (option)*, for an exploded view.

1 Rotate the brake pedal to the up or unlocked position.

2 Loosen the clamping bolts from all three of the brake cams.

3 Rotate both of the wheel-brake cams until they contact the tires. Tighten the brake cam clamping bolts.

4 With the pedal up, rotate the brake cam rod until there is approximately 1/4 inch of gap between the wheel and the wheel-brake cam. Tighten the center brake cam clamping bolt.

5 Check the brake for proper activation.

Note: Apply enough force to the brake pedal to lock the brakes in place. After the brakes are engaged, the brakes should hold the wheels in place with enough force to keep the wheels from turning.
## Rear Wheel Brake Assembly (option)

<table>
<thead>
<tr>
<th>Index No.</th>
<th>Description</th>
<th>Index No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Screw</td>
<td>14</td>
<td>Brake Linkage Spring</td>
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<td>2</td>
<td>Lock Washer</td>
<td>15</td>
<td>Axle Tube</td>
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<tr>
<td>3</td>
<td>Nut</td>
<td>16</td>
<td>Spring Retaining Washer</td>
</tr>
<tr>
<td>4</td>
<td>Stair Roller Mount Bracket, Right Side</td>
<td>17</td>
<td>Screw</td>
</tr>
<tr>
<td>5</td>
<td>Stair Roller Spacer</td>
<td>18</td>
<td>Flat Washer</td>
</tr>
<tr>
<td>6</td>
<td>Stair Roller</td>
<td>19</td>
<td>Solid Rubber Wheel</td>
</tr>
<tr>
<td>7</td>
<td>Brake Cam Rod</td>
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<td>Screw</td>
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<td>8</td>
<td>Stair Roller Mount Bracket, Left Side</td>
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<td>Brake Pivot Plate</td>
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![Diagram of Rear Wheel Brake Assembly](image-url)
Schematics

Observe and Obey:

- Troubleshooting and repair procedures shall be completed by a person trained and qualified on the repair of this machine.
- Immediately tag and remove from service a damaged or malfunctioning machine.
- Repair any machine damage or malfunction before operating the machine.

Before Troubleshooting:

- Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.
- Be sure that all necessary tools and test equipment are available and ready for use.

About This Section

An illustration legend precedes the electrical schematics.

Electrical Schematics

**WARNING**
Electrocution/burn hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

General Repair Process
Electrical Symbols Legend - Models with Electric Winch

- **HANDLE ASSEMBLY**
- **BATTERY CHARGER**
- **CIRCUITS CROSSING NO CONNECTION**
- **6V DC BATTERY**
- **CIRCUIT BREAKER**
- **CONNECTION NO TERMINAL**
- **RED EMERGENCY STOP BUTTON NORMALLY CLOSED**
- **CONNECTOR**
- **LS20 LIMIT SWITCH**
- **WINCH**

**Legend**:
- QD1 (+) Quick Disconnect (+)
- QD1 (-) Quick Disconnect (-)
- SOLENOID
California Proposition 65

⚠️ WARNING
Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. These chemicals can be emitted from or contained in other various parts and systems, fluids and some component wear by-products. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your equipment and vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment or vehicle and after operation. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.