OPERATORS’ GUIDE

REL-GRD Series
“THE DOOGIE DRIVER”
GROUND ROD DRIVER

The REL-GRD SERIES Hydraulic Ground Rod Drivers from RELIABLE EQUIPMENT has been designed to drive 1/2 - 5/8, 3/4, and 1 inch galvanized ground rods FAST.

REL-GRD-5/8  Drive 1/2”- 5/8” Ground Rod
REL-GRD-3/4  Drive 3/4” Ground Rod
REL-GRD-1  Drive 1” Ground Rod

WARNING
All information found in this guide must be read and understood before use or testing of this tool.
Failure to read and understand these warnings and safe handling instructions could result in severe personal injury and or death.

NOTICE
Sizes, weights and tool specifications listed in this manual are subject to change without notice. Please consult factory for information and updates.

RELIABLE EQUIPMENT
& SERVICE CO., INC.

REL-GRD-Series Manual  11-14
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REGISTRATION
UPON RECEIPT OF THIS TOOL, COMPLETE THE REGISTRATION BELOW.

COMPANY __________________________________________________________
ADDRESS ___________________________________________________________
_____________________________________________________________________
PHONE _________________________   FAX ______________________________
SERIAL NUMBER ______________________________________________________
DATE OF PURCHASE _________________________________________________
DEALER NAME _______________________________________________________

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This symbol indicates items of extreme importance. Safety of user and others may be in jeopardy if these instructions are not read and understood.
REL-GRD SERIES
“THE DOOGIEDRIVER”
GROUND ROD DRIVERS

The REL-GRD Series Hydraulic Ground Rod Drivers from RELIABLE EQUIPMENT have been designed to drive 1/2 - 5/8, 3/4, or 1 inch galvanized ground rods FAST. Cushioned “Comfort Grip” handles run the length of the tool body providing two handed control while reducing operator fatigue. The REL-GRD will operate from any Open- or Closed-Center hydraulic system. 70 inch whips with a remote in-line ON/OFF valve provides convenient access to control for accurate drive depth. The integral lifting eye allows the driver to be lifted and suspended above the rod reducing operator strain. Flush face quick disconnect couplers are factory installed, so you may use the tool right out of the box. Please specify model when ordering.

REL-GRD-5/8    Drive 1/2"- 5/8" Ground Rod
REL-GRD-3/4    Drive 3/4" Ground Rod
REL-GRD-1     Drive 1" Ground Rod

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>2000 psi Max.</td>
</tr>
<tr>
<td>Flow</td>
<td>5-8 gpm (18-30 lpm)</td>
</tr>
<tr>
<td>Whip Set</td>
<td>70 inches (178 cm)</td>
</tr>
<tr>
<td>Ports</td>
<td>9/16 - 18 SAE O-Ring</td>
</tr>
<tr>
<td>Weight</td>
<td>60 lbs. (27.2 kg)</td>
</tr>
<tr>
<td>Length</td>
<td>25 1/2 inches (654 mm)</td>
</tr>
</tbody>
</table>

301 Ivyland Road • Warminster, PA 18974
Phone: 800-966-3530 • Fax: 215-357-9193
Visit us on the web at www.Reliable-Equip.com
BEFORE USING THIS TOOL, READ THE WARNINGS and the recommended practices described in this manual. Failure by the operator to read and fully understand these warnings will leave this person unqualified to use and operate this tool. Property damage, severe personal injury, and/or death could result by not following these warnings.

These warnings will appear in appropriate locations when they are pertinent to the particular subject being shown. Read each one carefully and follow them strictly.

Eye Protection

**WARNING**
Always wear eye protection to avoid injury from flying debris or hydraulic oil leaks. Failure to do so can result in serious personal injury.

Dust Mask

**WARNING**
Always wear a dust mask. Failure to observe this warning may result in serious health issues and/or breathing difficulty.

Hard Hat

**WARNING**
Always wear a hard hat to avoid injury from falling debris. Failure to do so can result in serious personal injury.

Foot Protection

**WARNING**
Always wear foot protection. Failure to do so can result in serious personal injury.

Hearing Protection

**WARNING**
Always wear hearing protection, to avoid hearing loss due to long term exposure to high noise levels.

Protective Gloves

**WARNING**
Always wear protective gloves Failure to do so can result in serious personal injury.
Safe Operation & Care

USE THIS TOOL FOR ITS INTENDED PURPOSE ONLY
Any other use can result in injury or property damage.

INSPECT TOOL BEFORE USE. Replace any worn, damaged or missing parts. A damaged or improperly assembled tool may malfunction, injuring operator and/or nearby personnel.

INSPECT HYDRAULIC HOSES AND COUPLINGS before each use. Repair or replace if any cracking, leakage, wear or damage is found. Worn or damaged hoses may fail resulting in personal injury or property damage.

CLEAR WORK AREA of all bystanders and unnecessary personnel before operating this tool.

KEEP ALL PARTS OF THE BODY AWAY FROM MOVING PARTS.
Failure to observe this warning could result in serious injury.

Safety

DO NOT attempt to make any changes to any of the component parts or accessories when connected to the power source.

DO NOT adjust, inspect, or clean tool while the tool is connected to the power source. The tool could accidentally start up and cause serious injury.

DO NOT lock the tool in the On Position. In an emergency, serious damage or injury could occur during the time required to stop the tool.

Oil Injection Injury

Hydraulic oil or fluid under the skin is a serious injury. Oil under pressure can penetrate the skin and may cause dismemberment or loss of life. Seek medical assistance immediately if such an injury should occur.

Always wear safety gloves, eye protection and all required safety equipment when operating or handling this tool.
DO NOT use fingers or hands to attempt to locate a leak.
DO NOT handle hoses or couplers while system is pressurized.
NEVER open or service the system before depressurizing.
**Burn Hazard**

*WARNING*

Do Not connect or disconnect tool, hoses or fittings while power source is running or while hydraulic fluid is hot. Hot hydraulic fluid may cause serious burns. Failure to observe this warning could result in serious injury.

**Electrical Shock Hazard**

*WARNING*

Use only certified nonconductive hoses and fittings. Always wear and use the necessary clothing, equipment and safety practices to protect against electrical shock. Failure to follow these rules can result in serious personal injury or death.

**Vibration Hazard**

*CAUTION*

Apply just enough pressure to control the tool operation. Applying excess pressure to the tool may cause operator discomfort or temporary numbness. Failure to observe this warning could result in serious injury.

**Safe Handling**

*CAUTION*

HYDRAULIC FLUID MAY CAUSE SKIN IRRITATION.

Prevent hydraulic fluid from making contact with skin.

IN THE EVENT OF SKIN CONTACT immediately wash thoroughly. Failure to observe this warning could result in injury.

**General Safety**

*CAUTION*

Ensure that all fellow employees and bystanders are clear and protected from possible injury caused by this tool or the operations being performed. Persons in close proximity could be injured and property damaged if the tool were to malfunction. This tool should always be used within the limits and purposes stated by the product manufacturer. Abuse or usage beyond the manufacturers’ intended purposes could cause damage to the tool and severe injury to the operator.
TOOL SPECIFICATIONS

Overall Length (W/O HOSES) ............................................. 25 1/2 in.
Handle Width ........................................................................... 8.0 in.
Weight ..................................................................................... 44 lbs.

HYDRAULIC POWER SOURCE SPECIFICATIONS
The following requirements are essential for the safe operation of this tool.

Hydraulic System ................................................................. Open- or Closed- Center
Flow Range ........................................................................... 6 gpm Minimum
.......................................................................................... 7 gpm Optimum
.......................................................................................... 8 gpm Maximum
Operating Pressure .................................................... 1,800 - 2,200 psi
Filtration .................................................................................. 10 Micron Nominal
Back Pressure ................................................................. 200 psi Maximum*
Pressure Port Thread .................................................. 3/4-16 Female SAE O-Ring
Return Port Thread ...................................................... 3/4-16 Female SAE O-Ring

* 200 psi (1,379 kPa) is the maximum agreed standard for the HTMA (Hydraulic Tool Manufacturers Association).

If you have any questions regarding the information in this manual contact RELIABLE EQUIPMENT at the address, phone or fax numbers on page 3.

WARNING

These specifications must be strictly adhered to for the safe and effective operation of this tool.

HYDRAULIC FLOW MUST NOT EXCEED 8 GPM
LIMIT RELIEF SETTINGS TO 2,000 PSI (13,790 kPa)

Any deviation can result in severe injury or death to the operator and or extraneous personnel.
HOSES AND FITTINGS

There exists the potential for shock in using anything other than certified nonconductive hoses and hydraulic oil with dielectric properties, when using system components near energized electrical lines.

Failure to recognize these conditions could cause electrocution.

Hoses and fittings used with this tool must comply with S.A.E. J1273 which covers recommended practice for selection, installation, and maintenance of hose and hose assemblies. The correct hoses and fittings are available from your supplier.

WARNING: Failure to comply with these warnings could result in severe bodily injury.

UNIT/HOSE CONNECTIONS

ALWAYS SHUT OFF pump/power source and move flow selector to OFF before connecting or disconnecting system components.

ALWAYS DEPRESSURIZE hydraulic system before slowly disconnecting this unit or any of the systems components.

ALWAYS TIGHTEN couplings completely. Loose or improperly tightened couplings will not allow fluid to pass through the hose creating a blockage in the supply or return line.

ALWAYS INSPECT HOSES AND CONNECTORS before connection to tool. Replace or repair if any leakage is evident. Leakage is a sign of deterioration in component parts. Worn or leaking parts must be repaired or replaced, or tool damage or severe injury could result.

HOSE INSTALLATION

Care must be taken to assure the correct connection of the hoses to the pressure “P” and return “T” ports.

Connect the return hose to the return port on the power source, then to the return “T” port on the tool.

Connect the pressure hose to the pressure port “P” on the tool, then to the pressure port on the power source.

Operation with hydraulic flow reversed can cause malfunction. Failure to fully comply can result in tool damage, injury, or death.
PRE-OPERATION OF TOOL

DO NOT connect hoses or fittings to this unit before completing all of the instructions in this section.

Ensure power source is **OFF**, and hydraulic flow is lever is turned **OFF**.

Failure to comply with this warning can result in severe injury or death.

Before attempting to run or use the tool, check all connections, including hoses, and couplings.

Ensure that valve is moving freely.

Wear all safety items required and make sure that the working area is clear of obstructions and non essential personnel.

Set the Valve to Open- or Closed-Center, according to which system the power supply pump provides. It is important to know which type of power system is supplying the tool so that the REL-GRD-1 can be properly set.

All these items are crucial to the safe operating procedure of the REL-GRD-1.

**Tool Set-up for Open-Center or Closed-Center Systems**

**Model REL-GRD-1** (Refer to the illustration in Figure 1A above.)

This model is factory configured for Open-Center operation. (as shown above)

Connect pressure and return from power source to OC ports on valve as shown above.

**Valve Conversion for Closed-Center Operation:** (Refer to Figure 1B above)

Rotate valve 180°. Connect return & pressure hoses from REL-GRD-1 to OC ports on valve.

Connect return and pressure from power source to the CC ports on valve as shown above.
GROUND ROD DRIVER OPERATION

There are a number of safety items that need to be addressed when using the tool. Seek out the supervisor for basic instruction in handling the tool. Some basic problems are easily overcome by knowing the rules of operation.

Make sure that the correct anvil for the rod size being driven is inserted. (5/8” from Factory)

Inspect, set-up and connect the tool as described on the previous pages.

Start the hydraulic power source.

Allow the power source to run for a few minutes to warm the hydraulic fluid.

Slide the ground rod into the driver.

Raise the rod and driver to a vertical position and ensure adequate down pressure is applied.

NOTE: Due to the weight and raised position of the rod and the driver, it is recommended that the lifting procedure be performed by two persons for lift and transport.

Activate control valve or control spool to the ON position. (Refer to Figure 1A or 1B)

Firmly grasp the tube with both hands. Ensure proper footing and balance.

Apply light downward pressure to the REL-GRD driver.

WARNING: Driver operation does not require excessive pressure. Excess pressure may cause operator discomfort, fatigue or numbness.

Operator must maintain a firm grip and proper balance, controlling the tool with both hands at all times. Failure to maintain control of the tool could result in severe personal injury or death.

When finishing with the operation, move the control spool to the OFF position.

Move the flow lever on the power source to the OFF position.

Stop the hydraulic power source.

WARNING: DO NOT disconnect the tool, hoses, or fittings while the tool is running, hot, or under pressure. Serious injury or burns could result.

DISCONNECT HOSES

Move the flow lever on the power source to the OFF position.

Stop the hydraulic power source.

Disconnect the pressure hose from the pressure “P” port on the power source, then disconnect the hose from the pressure port on the tool.

Disconnect the return hose from the return “T” port on the tool, then disconnect the hose from the return port on the power source.

Install dust caps on all connectors to prevent dirt and contaminants from entering the hydraulic system.
MAINTENANCE

The life, reliability, and safety of the tool is dependent on proper maintenance.

DAILY MAINTENANCE

Clean all surfaces including handle, trigger, valve, fittings, hoses and housing.

Inspect tool for wear and damage.
Worn or damaged parts can cause malfunction during operation.

Inspect for cracked hoses and leaking fittings.

Check fluid level of the power source reservoir frequently.

All the above items must be replaced with new parts if signs of wear are evident.

FLUID CONTAMINATION: Cover the ends of fittings with a dust cap when disconnected. This will help keep the fluid from contamination.

MONTHLY MAINTENANCE: Inspect per Appendix A, SAE Standard J1273, 5/86 for hose or fitting damage such as wear, cracks or leakage, replace the necessary parts.

NOTE: Keep Label Set clean and legible. Replace decals when necessary. Part #RL27400

WARNING
BEFORE USING THIS PRODUCT READ THE SAFETY WARNINGS
and recommended practices described in the manual. Failure by the operator to read and fully understand the warnings will leave this person unqualified to use and operate the tool.

Failure to observe all warnings and instructions could result in property damage, severe personal injury, and/or death.

This tool is factory configured for Open-Center Tool Systems. Convert for Closed-Center Use

Rotate the valve 180°. Connect from tamper to OC ports on valve.
Connect return and pressure from power source to the CC ports on valve.

Failure to observe all warnings could result in property damage, severe injury, and/or death.

HYDRAULIC FLUIDS

All hydraulic fluids that meet these listed specifications or the listed HTMA specifications may be used for this tool.

S. U. S.

@ 100° F (38° C) .......................................................... 140 TO 225

@ 210° F (99° C) .......................................................... 40 minimum

FLASH POINT .................................................. 340° F min. (170° C min.)

POUR POINT .................................................. -30° F min. (-34° C min.)
### REL-GRD SERIES - GROUND ROD DRIVER - Parts List

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PART #</th>
<th>QTY</th>
<th>DESCRIPTION</th>
<th>DRAWING</th>
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<td>2</td>
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<td>BUSHING, PISTON</td>
<td>FIG. 1</td>
</tr>
<tr>
<td>3</td>
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<td>END PLUG</td>
<td>FIG. 2</td>
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<td>4</td>
<td>R48004</td>
<td>1</td>
<td>INSERT</td>
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<td>R48005</td>
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<td>SPRING, SHUTTLE</td>
<td>FIG. 2</td>
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<td>6</td>
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<td>SHUTTLE SPOOL</td>
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<td>7</td>
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<td>PLUNGER</td>
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<td>8</td>
<td>R48008</td>
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<td>BUSHING, PLUNGER</td>
<td>FIG. 2</td>
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<tr>
<td>9</td>
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<td>O-RING, PLUNGER BUSHING</td>
<td>FIG. 2</td>
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<td>10</td>
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<td>O-RING, END PLUG</td>
<td>FIG. 2</td>
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<td>11</td>
<td>R48011</td>
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<td>PISTON</td>
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<tr>
<td>12</td>
<td>R48012</td>
<td>1</td>
<td>ACCUMULATOR</td>
<td>FIG. 1</td>
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<tr>
<td>13</td>
<td>R48013</td>
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<td>O-RING, INSERT</td>
<td>FIG. 1</td>
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<tr>
<td>14</td>
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<td>O-RING, VALVE BODY</td>
<td>FIG. 1</td>
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<td>15</td>
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<td>16</td>
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<td>18</td>
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<tr>
<td>19</td>
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<td>GLAND</td>
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<td>20</td>
<td>R48020</td>
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<td>O-RING, GLAND</td>
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<td>21</td>
<td>R48021</td>
<td>2</td>
<td>BACK-UP RING</td>
<td>FIG. 2</td>
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<tr>
<td>22</td>
<td>R48022</td>
<td>3</td>
<td>U-CUP</td>
<td>FIG. 1 &amp; FIG. 2</td>
</tr>
<tr>
<td>23</td>
<td>R48023</td>
<td>1</td>
<td>WIPER</td>
<td>FIG. 2</td>
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<tr>
<td>24</td>
<td>R48024</td>
<td>1</td>
<td>RAM</td>
<td>FIG. 2</td>
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<tr>
<td>25</td>
<td>R48025</td>
<td>2</td>
<td>SET SCREW, 1/4 LG</td>
<td>FIG. 1 &amp; FIG. 2</td>
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<tr>
<td>26</td>
<td>R48026</td>
<td>5</td>
<td>PLUG</td>
<td>FIG. 1 &amp; FIG. 2</td>
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<tr>
<td>27</td>
<td>R48027</td>
<td>2</td>
<td>ROD, HANDLE</td>
<td>FIG. 3</td>
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<tr>
<td>28</td>
<td>R48028</td>
<td>1</td>
<td>END CAP</td>
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<td>29</td>
<td>R48048</td>
<td>2</td>
<td>CUSHION GRIP</td>
<td>FIG. 3</td>
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<td>FRONT HOUSING, ASSY</td>
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<td>32</td>
<td>R48032</td>
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<td>34</td>
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<td>35</td>
<td>R48035</td>
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<td>ANVIL, 5/8 INCH</td>
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<td>36</td>
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<td>ANVIL, 3/4 INCH</td>
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<td>37</td>
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<td>38</td>
<td>R48036</td>
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<td>VALVE SPOOL</td>
<td>FIG. 1</td>
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<td>39</td>
<td>R48037</td>
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<td>40</td>
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<td>R48039</td>
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<td>LIFTING PLATE</td>
<td>FIG. 1</td>
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<td>42</td>
<td>R48040</td>
<td>1</td>
<td>SLEEVE</td>
<td>FIG. 3</td>
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<td>43</td>
<td>R48041</td>
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<td>SCREW, FRONT HOUSING 2-3/4 LG</td>
<td>FIG. 3</td>
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<td>44</td>
<td>R48042</td>
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<td>SCREW, LIFTING PLATE 4 LG</td>
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<td>45</td>
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<td>SCREW, HANDLE 1-1/4 LG</td>
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<tr>
<td>46</td>
<td>R48044</td>
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<td>PLUG, ACCUMULATOR</td>
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<tr>
<td>47</td>
<td>R48045</td>
<td>12</td>
<td>LOCK WASHER</td>
<td>FIG. 1 &amp; FIG. 3</td>
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<tr>
<td>51</td>
<td>R48052</td>
<td>1</td>
<td>DAMPENER</td>
<td>FIG. 2</td>
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* R48100 1 SEAL KIT (* ITEMS INCLUDED)
# R27600 - IN LINE REMOTE ON/OFF VALVE - Parts List

<table>
<thead>
<tr>
<th></th>
<th>Part Description</th>
<th>Quantity</th>
<th>Part Number</th>
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<tbody>
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<td>1</td>
<td>VALVE BODY</td>
<td>1</td>
<td>R27601</td>
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<tr>
<td>2</td>
<td>SPOOL</td>
<td>1</td>
<td>R27602</td>
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<td>O-RING</td>
<td>2</td>
<td>R27052</td>
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<tr>
<td>4</td>
<td>BUTTON</td>
<td>2</td>
<td>13138</td>
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<tr>
<td>5</td>
<td>SCREW</td>
<td>2</td>
<td>13139</td>
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<td>R27030A</td>
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<td>O-RING</td>
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<td>R27074</td>
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<tr>
<td>9</td>
<td>RETURN LINE ADAPTER (LARGE)</td>
<td>4</td>
<td>R27073</td>
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<tr>
<td>10</td>
<td>PRESSURE LINE ADAPTER</td>
<td>2</td>
<td>R27071</td>
</tr>
<tr>
<td>11</td>
<td>HOSE ASSEMBLY, OUTSIDE (70 inches)</td>
<td>1</td>
<td>R48150</td>
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<tr>
<td>12</td>
<td>HOSE ASSEMBLY, INSIDE (69 inches)</td>
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<td>R48151</td>
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<td>13</td>
<td>PORT ADAPTER</td>
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<td>8-3/8AOEG-S</td>
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## TESTING AND CHARGING THE ACCUMULATOR

Testing or charging the accumulator will require a commercially available Nitrogen bottle equipped with a charging and gauging assembly. (min. 600 psi required)

1. Remove the two (2) screws connecting the handles to the Lifting Plate.
2. Remove the four (4) screws connecting the Lifting Plate to the Valve Body as well as the Valve Body to the Tool Body.
3. Lift the Valve Body off of the Tool Body.
4. Remove the Accumulator Assembly from the Valve Body and Tool Body.
5. Remove the Plastic Dampener and Valve Stem Cover from the Accumulator base and thread the charge valve onto the Accumulator.
6. Gauge the content of the Accumulator.
7. Charge as required or replace with a pre-charged Accumulator.
8. Re-assemble the Ground Rod Driver.
TROUBLE SHOOTING

Determine the source (i.e. tool or hydraulic system) of the problem before trouble shooting.

NOTE: A mis-charged accumulator may contribute to a variety of tool inconsistencies. Please refer to the Accumulator Recharging Procedures on page ____ of this manual.

Will not run
- Ram is restricting hydraulic fluid ........................................ Apply light load to Ram by placing tool onto rod and raising to the vertical position.
- Improper power source .................................................. Verify power source meets specifications
- Low hydraulic fluid ...................................................... Check fluid level
- Incorrect viscosity ....................................................... Use recommended fluid
- Tool damaged ................................................................. Disassemble and replace damaged parts
- Hoses incorrectly connected ......................................... Switch hoses (see hose connection in this manual)
- Dirt in tool ........................................................................ Disassemble, clean and repair

Tool runs slow
- Power supply not functioning correctly .......................... Reset to operator manual specs.
- Fluid not warmed to correct temp .................................. Allow tool a warm-up period
- Fluid viscosity too high .................................................. See recommended viscosity
- Air in hydraulic system ............................................... Check hoses for breaks, leaks, or loose connections
- Hydraulic fluid level low ................................................. Fill to level. Check for leaks
- Tool components loose ............................................... Tighten component hardware
- Worn or damaged components ..................................... Replace worn or damaged components

Tool runs too fast
- Power supply not functioning correctly .......................... Reset to operator manual specs.
- Excessive downward pressure ....................................... Do not apply downward pressure.

Tool operation is erratic
- Hydraulic fluid not warm ............................................... Allow oil to warm up
- Dirt or contaminants in tool ............................................ Clean and reassemble
- Air in system .............................................................. Check hoses for breaks, leaks, or loose connections

Tool runs continuously
- Tool locked in “ON” position ......................................... Release trigger lever lock

Valve operation is difficult
- Tool valve spool dirty .................................................... Clean up spool so that spool slides freely
- Components worn or damaged ..................................... Replace damaged components

Tool runs hot
- Low fluid level ............................................................ Fill pump reservoir to correct level
- Fluid viscosity incorrect ................................................ Use recommended fluid
- Fluid dirty ................................................................. Drain tank, flush, and replace fluid
- Power supply not functioning correctly .......................... Reset to operator manual specs
- Worn or damaged O-rings or gaskets .............................. Replace worn or damaged components
- Hydraulic fluid level low ............................................... Fill to level. Check for leaks

Tool is erratic
- Hydraulic fluid not warm ............................................... Allow oil to warm up
- Dirt or contaminants in tool ............................................ Clean and reassemble
- Air in system .............................................................. Check hoses for breaks, leaks, or loose connections

Tool leaks hydraulic fluid
- Worn or damaged seals ................................................ Disassemble and replace worn or damaged seals
- Components loose ........................................................ Tighten component hardware

Tool lacks power
- Control valve leaking ................................................... Worn part or seal rings
READ BEFORE DISASSEMBLY

SAFETY

**WARNING**

DO NOT attempt to make any changes to any of the component parts or accessories when connected to the power source.

DO NOT adjust, inspect, or clean tool while the tool is connected to the power source. The tool could accidentally start up and cause serious injury.

Before disassembly, disconnect hoses as described in this manual. Any residual pressure within the unit can and will spray at high velocity, injuring the person doing the disassembly. Hot or pressurized hydraulic fluid will cause serious injury or death. **Complete disassembly is not recommended.** Return the unit to an authorized dealer for total disassembly and/or repair.

All maintenance or disassembly should take place on a flat, clean work surface covered with towels or wipers so as to have a clean space for the disassembled parts.

Inspect each part during disassembly for wear, scratches, and cuts. Discard the worn or damaged parts and replace with new factory authorized parts.

O-rings are sensitive to sharp edges. Inspect closely for cuts or damage. A small cut will cause a leak. When assembling or disassembling O-rings, use hydraulic fluid as a lubricant to aid disassembly or installation.

The REL-GRD is dedicated to the memory of Doug Phillips.

**“THE DOOGIE DRIVER”**

Doug Phillips was a dedicated salesman, and a long time advocate for the production of a RELIABLE Ground Rod Driver.

We are sorry that Doug never got to introduce this tool to his customers, but we are convinced that the **“Doogie Driver”** will live up to his expectations.
O-Rings are sealed into recesses in the End Cap

NOTE
Orientation of Piston must be as shown.
### MAINTENANCE RECORD

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<th>Date</th>
<th>Parts or Service Required</th>
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If you have any questions regarding the information in this manual please contact **RELIABLE EQUIPMENT** at the address, phone or fax numbers shown below.

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