



TECHNICAL PUBLICATIONS

# **Operator's Manual**

# **QuickLok Inversion Drum**

Issue 1.0

960-3100

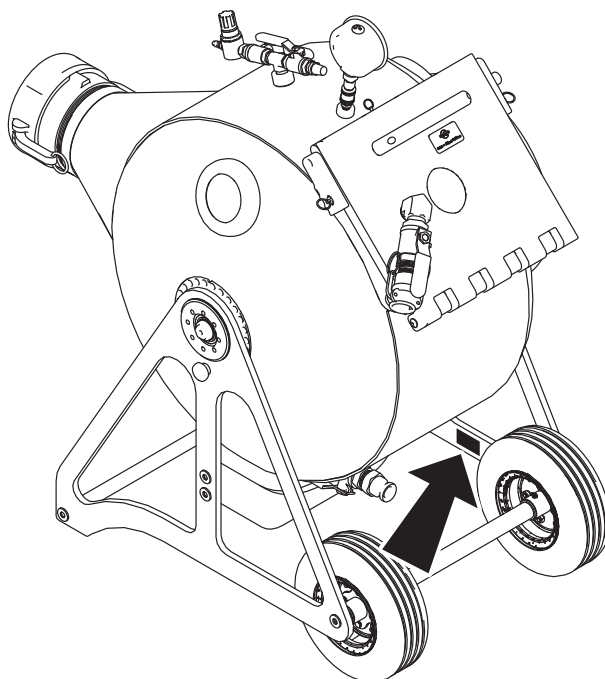
# Overview

## Chapter Contents

<b>Serial Number Location . . . . .</b>	<b>2</b>
<b>Intended Use . . . . .</b>	<b>3</b>
<b>Equipment Modification . . . . .</b>	<b>3</b>
<b>Unit Components . . . . .</b>	<b>4</b>
<b>Operator Orientation. . . . .</b>	<b>5</b>
<b>About This Manual . . . . .</b>	<b>6</b>
• Bulleted Lists. . . . .	.6
• Numbered Lists . . . . .	.6

## Serial Number Location

Record serial numbers and date of purchase in spaces provided.



J76om001h.eps

Model Number	
Serial Number	
Date of purchase	

## **Intended Use**

The QuickLok Inversion Drum line is intended to install and cure liners for use in cured in place pipe (CIPP) operations. The maximum install distance for the D125-QL is 70-300' (21-91.4m) and 110-300' (33-91.4m) for the D225-QL. Maximum product diameter is 8" (20.32cm). Maximum curing temperature is 212°F (100°C). They are capable of steam, hot water, and ambient curing.

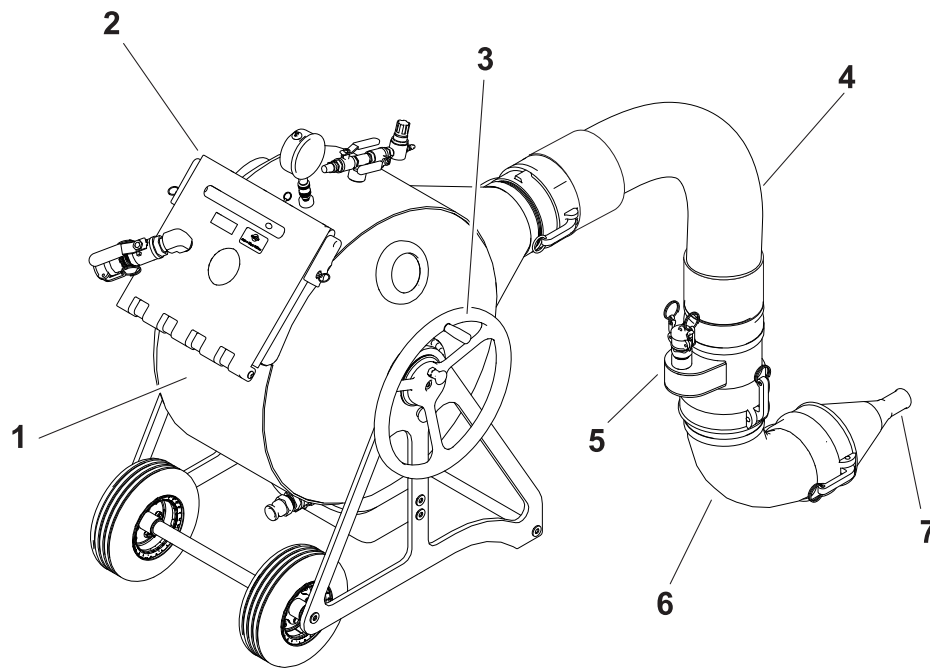
The unit is designed for operation in temperatures from 32° to 100° F (0° to 37.8° C). Contact your HammerHead® dealer for provisions required for operating in extreme temperatures. Use in any other way is considered contrary to the intended use.

The inversion drum should be operated, serviced, and repaired only by persons familiar with its particular characteristics and acquainted with the relevant safety procedures.

## **Equipment Modification**

This equipment was designed and built in accordance with applicable standards and regulations. Modification of equipment could mean that it will no longer meet regulations and may not function properly or in accordance with the operating instructions. Modification of equipment should only be made by competent personnel possessing knowledge of applicable standards, regulations, equipment design functionality/requirements and any required specialized testing.

## Unit Components



J76om002h.eps

- 1. Inversion drum
- 2. Door
- 3. Hand wheel\*\*
- 4. Inversion hose\*

- 5. Return pickup valve\*
- 6. Elbow\*
- 7. Nozzle

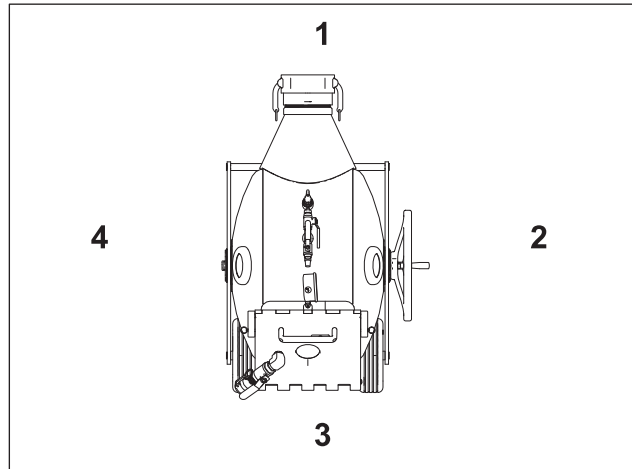
\*Optional

\*\*Can be installed on left or right side of inversion drum

## Operator Orientation

**IMPORTANT:** Top view of unit is shown.

1. Front of unit
2. Right side of unit
3. Rear of unit
4. Left side of unit

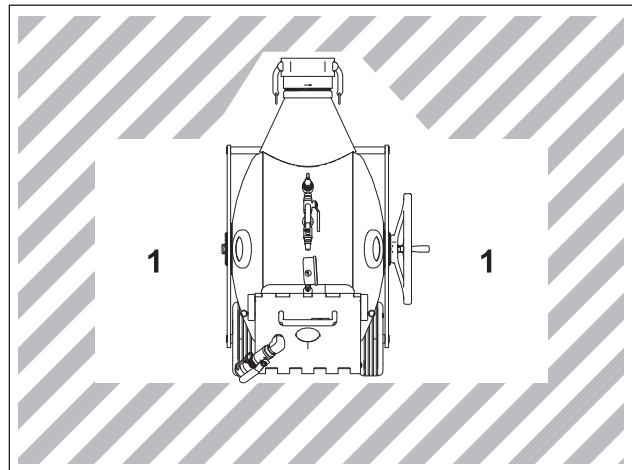


j76om003h.eps

## Operating Area

**IMPORTANT:** Top view of unit is shown.

Operator should stand only in the location marked by number 1.



j76om004h.eps

## **About This Manual**

This manual contains information for the proper use of this machine. See **Operation Overview** for basic operating procedures. Cross references such as "See page 50" will direct you to detailed procedures.

### **Bulleted Lists**

Bulleted lists provide helpful or important information or contain procedures that do not have to be performed in a specific order.

### **Numbered Lists**

Numbered lists contain illustration callouts or list steps that must be performed in order.

## **Foreword**

This manual is an important part of your equipment. It provides safety information and operation instructions to help you use and maintain your HammerHead® equipment.

Read this manual before using your equipment. Keep it with the equipment at all times for future reference. If you sell your equipment, be sure to give this manual to the new owner.

If you need a replacement copy, contact your HammerHead dealer. If you need assistance in locating a dealer, visit our website at **[www.hammerheadtrenchless.com](http://www.hammerheadtrenchless.com)** or write to the following address:

HammerHead Trenchless Equipment  
500 South C.P. Avenue  
Lake Mills, WI 53551  
USA

The descriptions and specifications in this manual are subject to change without notice. Earth Tool Company LLC reserves the right to improve equipment. Some product improvements may have taken place after this manual was published. For the latest information on HammerHead equipment, see your HammerHead dealer.

Thank you for buying and using HammerHead equipment.



A CHARLES MACHINE WORKS COMPANY

**QuickLok Inversion Drum  
Operator's Manual**

**Issue number 1.0/OM-2/19**

**Part number 960-3100**

**Copyright 2019  
by Earth Tool Company LLC**



HammerHead is a registered trademark of Earth Tool Company LLC.

This product and its use may be covered by one or more patents at <http://patents.charlesmachine.works>.

# Contents

	<b>Overview</b> machine serial number, information about the type of work this machine is designed to perform, basic machine components, and how to use this manual	<b>1</b>
	<b>Foreword</b> part number, revision level, and publication date of this manual, and factory contact information	<b>7</b>
	<b>Safety</b> machine safety alerts and emergency procedures	<b>11</b>
	<b>Controls</b> machine controls and indicators and how to use them	<b>15</b>
	<b>Prepare</b> procedures for inspecting and classifying the jobsite, planning the installation, and preparing the jobsite for work	<b>19</b>
	<b>Transport</b> procedures for lifting and hauling	<b>25</b>
	<b>Operate</b> procedures for operating the equipment	<b>27</b>
	<b>Systems and Equipment</b> hoses, nozzles, adapters, and elbows	<b>35</b>
	<b>Complete the Job</b> procedures for restoring the jobsite and storing equipment	<b>37</b>
	<b>Service</b> service intervals and instructions for this machine including lubrication, replacement of wear items, and basic maintenance	<b>39</b>
	<b>Specifications</b> machine specifications including weights, measurements, power ratings, and fluid capacities	<b>43</b>
	<b>Support</b> the warranty policy for this machine, and procedures for obtaining warranty consideration and training	<b>45</b>



### **Service Record**

a record of major service performed on the machine

**47**

# Safety

## Chapter Contents

Guidelines . . . . .	12
Safety Alert Classifications . . . . .	11
Machine Safety Alerts. . . . .	12

## Guidelines

When you see this safety alert sign, carefully read and follow all instructions.

**YOUR SAFETY IS AT STAKE.** Read this entire section before using your equipment.


Follow these guidelines before operating any jobsite equipment:


- Complete proper training and read operator's manual before using equipment.
- Mark proposed path with white paint and have underground utilities located before working. In the US or Canada, call 811 (US) or 888-258-0808 (US and Canada). Also contact any local utilities that do not participate in the One-Call service. In countries that do not have a One-Call service, contact all local utility companies to have underground utilities located.
- Classify jobsite based on its hazards and use correct tools and machinery, safety equipment, and work methods for jobsite.
- Mark jobsite clearly and keep spectators away.
- Wear personal protective equipment.
- Review jobsite hazards, safety and emergency procedures, and individual responsibilities with all personnel before work begins. Safety Data Sheets (SDS) are available at [www.hammerheadtrenchless.com/parts & services](http://www.hammerheadtrenchless.com/parts&services).
- Fully inspect equipment before operating. Repair or replace any worn or damaged parts. Replace missing or damaged safety shields and safety signs. Contact your HammerHead® dealer for assistance.
- Use equipment carefully. Stop operation and investigate anything that does not look or feel right.
- Do not operate unit where flammable gas may be present.
- Only operate equipment in well-ventilated areas.
- Contact your HammerHead dealer if you have any question about operation, maintenance, or equipment use.


## Safety Alert Classifications

These classifications and the icons defined on the following pages work together to alert you to situations which could be harmful to you, jobsite bystanders or your equipment. When you see these words and icons in the book or on the machine, carefully read and follow all instructions. **YOUR SAFETY IS AT STAKE.**

Watch for the three safety alert levels: **DANGER**, **WARNING** and **CAUTION**. Learn what each level means.

 **DANGER** indicates a hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

 **WARNING** indicates a hazardous situation that, if not avoided, could result in death or serious injury.

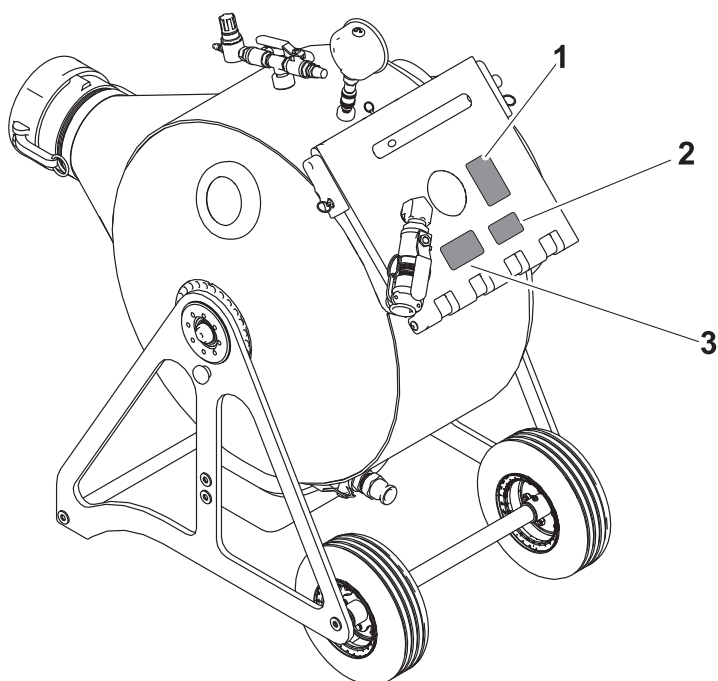
 **CAUTION** indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

Watch for two other words: **NOTICE** and **IMPORTANT**.

**NOTICE** indicates information considered important, but not hazard-related (e.g., messages relating to property damage).

**IMPORTANT** can help you do a better job or make your job easier in some way.

## Machine Safety Alerts



Decal\_HH\_InversionDrum.eps

1



**⚠ CAUTION**

Hot parts. Contact can cause burns. Do not touch until cool. Wear gloves.

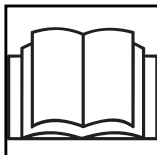
2



**⚠ WARNING**

Jobsite hazards could cause death or serious injury. Use correct equipment and work methods. Use and maintain proper safety equipment.

3



**⚠ WARNING**

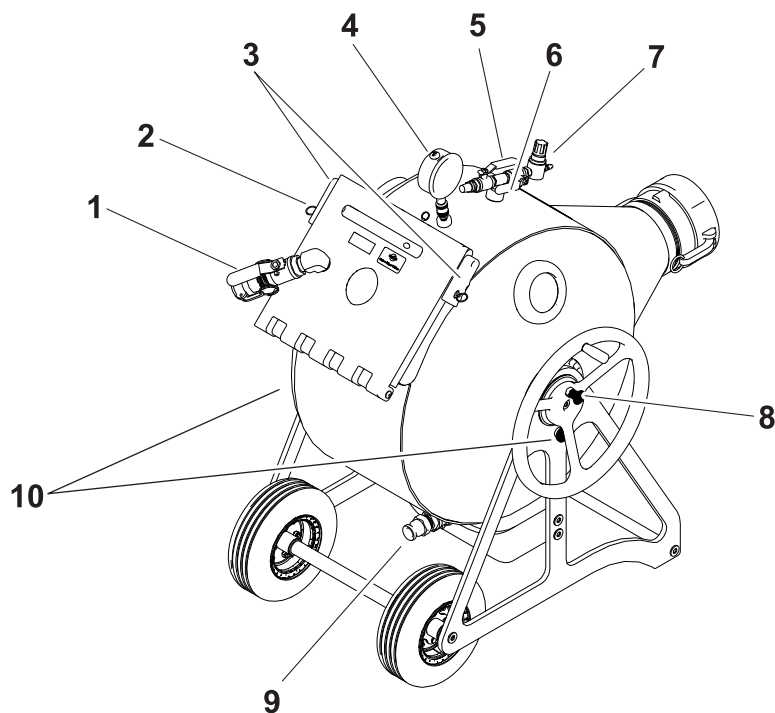
Read operator's manual. Follow safety rules and know how to use all controls. Your safety is at stake.

# Controls

## Chapter Contents

Controls . . . . .	16
--------------------	----

## Controls




J76om005h.eps

- |                          |                        |
|--------------------------|------------------------|
| 1. Water inlet valve     | 6. Air inlet valve     |
| 2. Door latch lock pin   | 7. Air inlet regulator |
| 3. Door latch handles    | 8. Hand wheel lock     |
| 4. Pressure gauge        | 9. Water return/drain  |
| 5. Pressure relief valve | 10. Drum angle pins    |

Item	Description	Notes
1. Water inlet valve	To enable water flow to drum, turn left.  To stop water flow to drum, turn right.	
2. Door latch lock pin	To lock door handles, insert pin.	
3. Door latch handles	To open door, lift both handles.	

## QuickLok Inversion Drum Operator's Manual Controls

Item	Description	Notes
<b>4. Pressure gauge</b>  <p>Gauge.eps</p>	Displays air pressure in drum.	Maximum pressure is 25 psi (1.72 bar).
<b>5. Pressure relief valve</b>	<p>To relieve drum pressure, turn left.</p> <p>To close, turn right.</p>	
<b>6. Air inlet valve</b>	<p>To allow airflow to drum, turn left.</p> <p>To stop airflow to drum, turn right.</p>	
<b>7. Air inlet regulator</b>	<p>To increase pressure, turn right.</p> <p>To decrease pressure, turn left.</p>	
<b>8. Hand wheel lock</b>	<p>To lock drum wheel, push in and turn one-quarter turn right.</p> <p>To unlock drum wheel, pull out and turn one-quarter turn left.</p>	
<b>9. Water return/drain</b>	<p>To drain, turn left.</p> <p>To close, turn right.</p>	Can be used to connect return hose during hot water curing.
<b>10. Drum angle pins</b>	<p>To change drum angle, unscrew both pins and tilt drum.</p> <p>To lock drum in place, screw pins in.</p>	



# Prepare

## Chapter Contents

<b>Gather Information . . . . .</b>	<b>20</b>
• Review Job Plan . . . . .	20
• Notify One-Call Services . . . . .	20
• Arrange for Traffic Control . . . . .	20
• Plan for Emergency Services . . . . .	20
<b>Inspect Site . . . . .</b>	<b>21</b>
<b>Prepare Jobsite . . . . .</b>	<b>21</b>
<b>Check Supplies and Prepare Equipment . . . . .</b>	<b>22</b>
• Check Supplies . . . . .	22
• Prepare Equipment . . . . .	22
<b>Prepare Jobsite . . . . .</b>	<b>23</b>
• Dig Entry Pit . . . . .	23

## **Gather Information**

A successful job begins before you dig. The first step in planning is reviewing information already available about the job and jobsite.

### **Review Job Plan**

Review blueprints or other plans. Check for information about existing or planned structures, elevations, or proposed work that may be taking place at the same time.

### **Notify One-Call Services**

Mark proposed path with white paint and have underground utilities located before working.

- In the US or Canada, call 811 (US) or 888-258-0808 (US and Canada). Also contact any local utilities that do not participate in the One-Call service.
- In countries that do not have a One-Call service, contact all local utility companies to have underground utilities located.

### **Arrange for Traffic Control**

If working near a road or other traffic area, contact local authorities about safety procedures and regulations.

### **Plan for Emergency Services**

Have the telephone numbers for local emergency and medical facilities on hand. Check that you will have access to a telephone.

## Inspect Site

- Follow U.S. Department of Labor regulations on excavating and trenching (Part 1926, Subpart P) and other similar regulations.
- Mark proposed path with white paint and have underground utilities located before working. In the US or Canada, call 811 (US) or 888-258-0808 (US and Canada). Also contact any local utilities that do not participate in the One-Call service. In countries that do not have a One-Call service, contact all local utility companies to have underground utilities located.
- Inspect jobsite and perimeter for evidence of underground hazards, such as:
  - “Buried utility” notices
  - Utility facilities without overhead lines
  - Gas or water meters
  - Junction boxes
  - Drop boxes
  - Light poles
  - Manhole covers
  - Sunken ground
- Mark location of all buried utilities and obstructions.

## Prepare Jobsite



**WARNING** Jobsite hazards could cause death or serious injury. Use correct equipment and work methods. Use and maintain proper safety equipment.

### To help avoid injury:

- Expose lines by hand before digging.
- All vegetation near operator's station must be removed. Contact with trees, shrubs, or weeds during electrical strike could result in electrocution.

Ensure area where unit will be operated is on level and firm ground.

## Check Supplies and Prepare Equipment

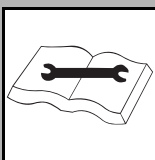
### Check Supplies

- personal protective equipment, such as hard hat and safety glasses
- drum nozzles
- air compressor
- hoses
- air hoses
- liner oil and applicator
- resin
- hardener
- duct tape
- rubber bands
- liner
- calibration tube
- return hose
- pull tape
- hose clamps

### Prepare Equipment

#### Condition and Function

- all controls

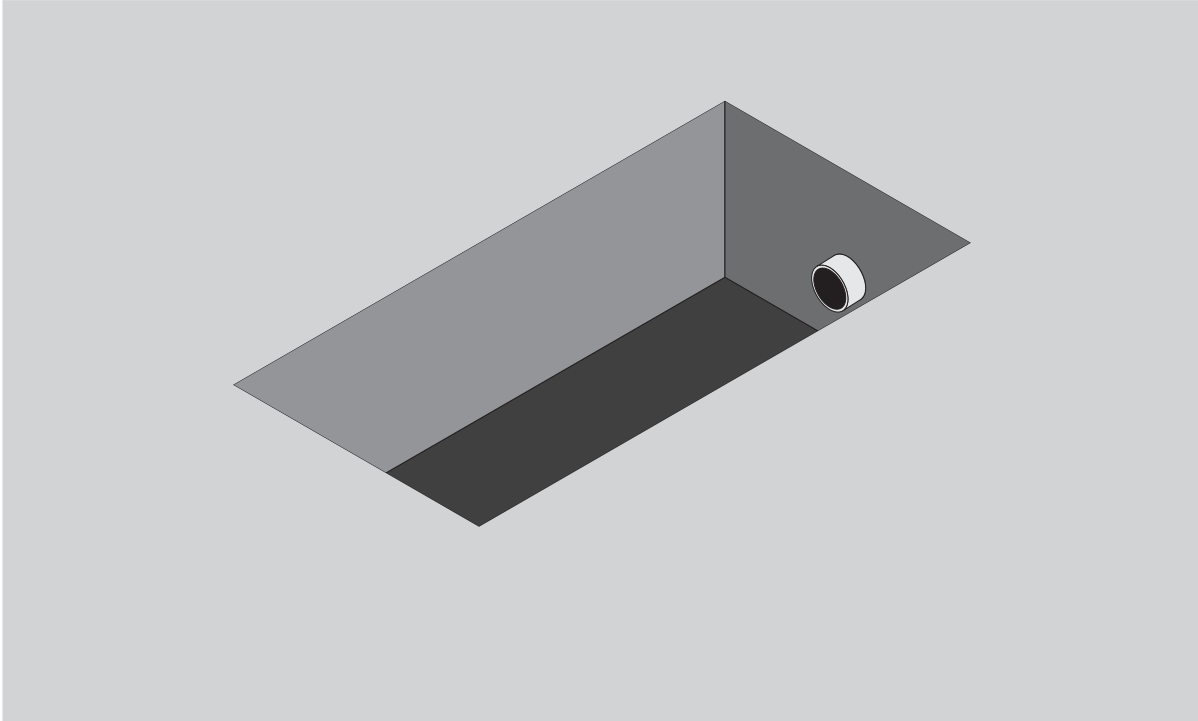


**⚠ WARNING** Improper control function could cause death or serious injury. If control does not work as described in instructions, stop machine and have it serviced.

- couplers and fittings
- hoses and valves

## **Prepare Jobsite**

### **Dig Entry Pit**



Pit.eps

**NOTICE:** Follow U.S. Department of Labor regulations on excavating and trenching (Part 1926, Subpart P) and other similar regulations.

Ensure length and width of the pit is long enough to accommodate inversion hose, elbow, and pickup valve.



# Transport

## Chapter Contents

Lift .....	26
Tie Down .....	26

## **Lift**

Use equipment capable of supporting the unit's size and weight. See "Specifications" on page 43 for weight of unit.

## **Tie Down**

When tying down drum, use extra caution to prevent any movement during sudden take-offs and stops. Secure the system in a way that prevents movement to the system.

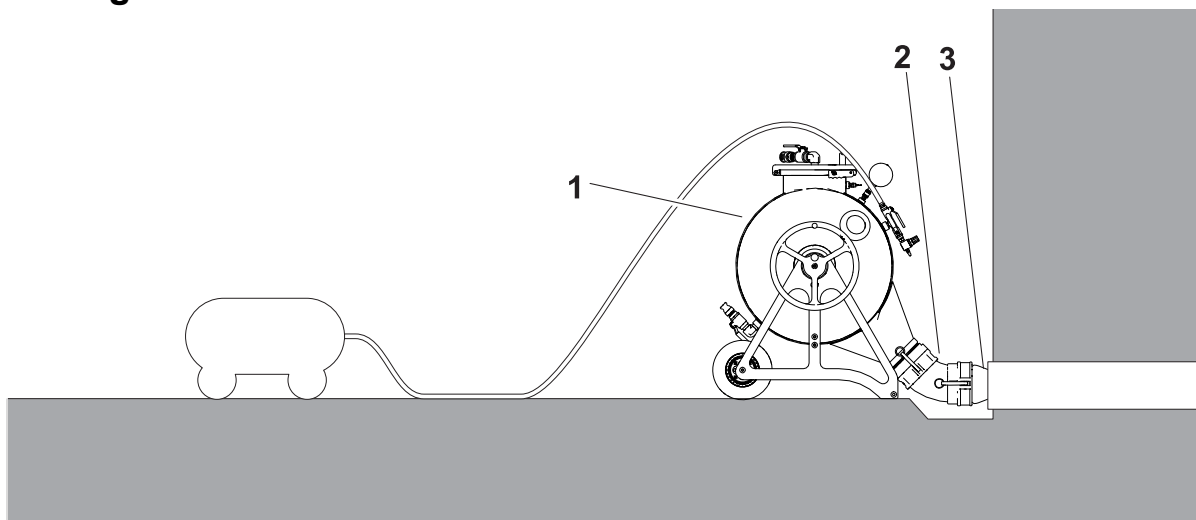
# Operate

## Chapter Contents

<b>Set Up and Configure . . . . .</b>	<b>28</b>
• Working without Inversion Hose . . . . .	28
• Working with Inversion Hose. . . . .	28
• Prepare Drum . . . . .	29
<b>Deploy Liner . . . . .</b>	<b>30</b>
<b>Calibration Tube and Recirculation Hose. . . . .</b>	<b>31</b>
• Wrap . . . . .	31
• Deploy. . . . .	31
<b>Shut Down . . . . .</b>	<b>33</b>

## Set Up and Configure

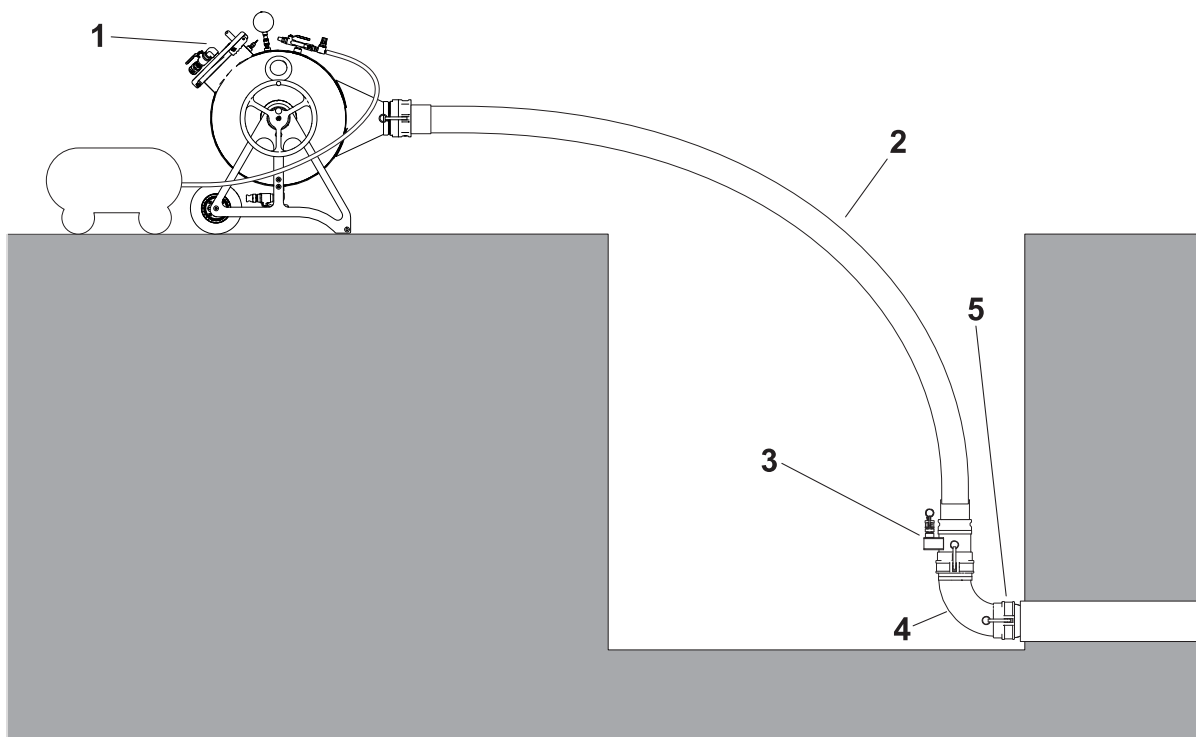
### Working without Inversion Hose



J76om007h.eps

If working without inversion hose, connect drum (1), elbow (2, optional), and nozzle (3), as shown.

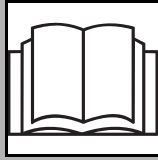
### Working with Inversion Hose



J76om008h.eps

If working with inversion hose, connect drum (1), inversion hose (2), return pickup valve (3, optional), elbow (4, optional), and nozzle (5) as shown.

## Prepare Drum



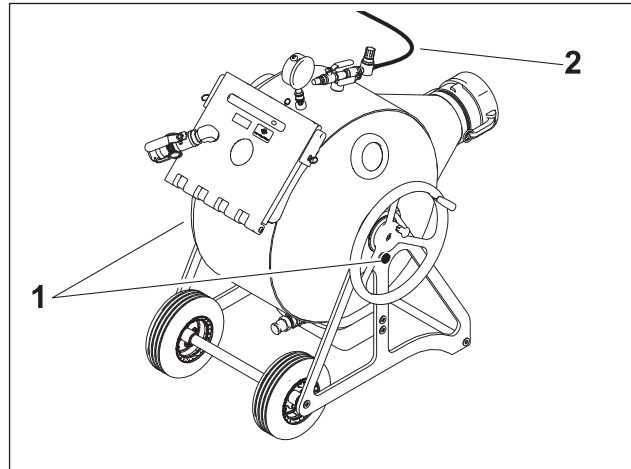
**⚠ WARNING**

Misuse of machine can cause death or serious injury. Read and

understand operator's manual and all other safety instructions before use.

**To help avoid injury:**

- Wear hard hat, safety glasses, and other protective equipment required by job.
- Do not wear jewelry or loose clothing that can catch on controls.
- Clear the area around the unit of all bystanders.
- Stay 3 ft (0.91 m) away from unit during operation, unless standing in operating area.



j76om010h.eps

1. Attach drum handle to left or right side of drum.
2. Use drum angle pins on both sides of drum (1) to adjust angle of drum nozzle to accommodate pit angle.
3. Close all valves.
4. Connect air hose to inlet valve (2).

**NOTICE:** For large air compressors, use high flow adapter. See "Systems and Equipment" on page 35.

5. Wrap nozzle with duct tape, ensuring opening is not obstructed.

## Deploy Liner

**IMPORTANT:** For information on preparing liner, see Installation and Procedures Guide.

1. Seal end of liner closest to spindle with rubber bands.
2. Wrap liner around spindle, spraying with mineral oil.

**IMPORTANT:**

- Wrap with seam facing ground.
- Do not use vegetable oil or equivalent.

3. Feed end of liner through nozzle so 3" (7.62 cm) sticks out.
4. Fold liner over nozzle and secure with hose clamps.
5. Ensure drum wheel is unlocked. See "Hand wheel lock" on page 17.
6. Close and latch drum door.
7. Unfold drum wheel handle.

**IMPORTANT:** Stow handle when not in use.

8. Open air valve slowly, keeping pressure as low as possible. Liner will begin to invert. See "Air inlet valve" on page 17.



**⚠ WARNING**

Pressurized fluid or air. Contact can cause death or serious injury. Refer to operator's manual for correct use. 270-6035

**To help avoid injury:** Keep pressure below 25 psi (1.72 bar).

9. Control process using drum wheel. When wheel begins to spin freely, stow handle.
10. Monitor through windows to ensure no bends occur in hose. If bends are present, increase pressure slightly. If target pipe has elbows, more pressure may be required for those sections.

**NOTICE:** Keep pressure below 25 psi (1.72 bar).

11. When liner is fully extended, pressure should read zero.
12. Turn air inlet valve to off position.
13. Depressurize drum. See "Pressure relief valve" on page 17.
14. Disconnect liner from drum nozzle.

## Calibration Tube and Recirculation Hose

Calibration tube is for use with closed end inversion jobs.

**IMPORTANT:** For information on curing methods, see Installation and Procedures Guide.

### Wrap

1. Connect pull tape and recirculation hose to calibration hose.

**IMPORTANT:** For preparation instructions for calibration tube, recirculation hose, and pull tape, see Installation and Procedures Guide.

2. Securely tie pull tape to spindle.
3. Lay loose end of recirculation hose on top of pull tape and wrap around spindle. Ensure pull tape is closest to spindle.
4. Wrap calibration tube around spindle. Ensure seam will be on top when deployed.

### Deploy

1. Feed end of calibration tube through nozzle so 4" (10.16 cm) sticks out.
2. Fold calibration tube over nozzle and secure with hose clamps.
3. Ensure drum wheel is unlocked.
4. Close and lock drum door.
5. Open air valve slowly, keeping pressure as low as possible.

**NOTICE:** Keep pressure below 25 psi (1.72 bar).

6. Control process using drum wheel. When wheel begins to spin freely, stow handle.

**IMPORTANT:** Stow wheel handle when not in use.

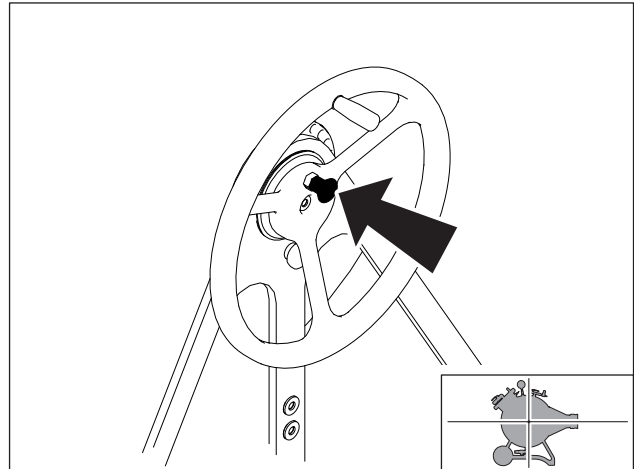
7. Monitor through windows to ensure no bends occur in tube. If bends are present, increase pressure. If target pipe has elbows, more pressure may be required for those sections.
8. When pull tape loses tension, calibration tube is fully extended. Turn air inlet valve to off position.

## ***QuickLok Inversion Drum Operator's Manual***

### ***Deploy Liner***

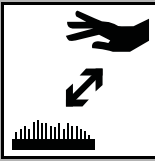
---

9. Turn wheel so there is slight tension on pull tape. Lock in place using wheel lock (shown).
10. Turn air inlet valve to off position.
11. Depressurize drum. See "Pressure relief valve" on page 17.



j76om019h.eps

## Shut Down



**CAUTION**

Hot parts. Contact can cause burns. Do not touch until cool. Wear gloves. 275-355 (2-P), 273-423 (2-P)

1. With system cool, depressurize drum and unlatch door. See "Pressure relief valve" on page 17.
2. If water or steam was used, drain system. See "Water return/drain" on page 17.
3. Disconnect air compressor.
4. Disconnect recirculation hose from water valve.
5. Unfold drum wheel handle.

**IMPORTANT:** Stow handle when not in use.

6. Reel in calibration tube and recirculation hose.
7. Remove hoses from drum spindle and untie pull tape.



# Systems and Equipment

## Chapter Contents

<b>Adapters . . . . .</b>	<b>36</b>
<b>Elbows . . . . .</b>	<b>36</b>
<b>Hose . . . . .</b>	<b>36</b>
<b>Nozzles. . . . .</b>	<b>36</b>

## Adapters

Description	Use	P/N
Male-male cam lock adapter	connects female cam lock nozzles to drum	922-4922
Return pickup	for use with inversion hose while hot water curing	922-4930
High flow adapter	adapts air valve for use with larger air compressors	922-9006, 922-1185

## Elbows

45° and 90° elbows are available to fit the job. For options, contact your HammerHead® dealer.

## Hose

If operating drum out of pit or more than 3' (0.91 m) from target pipe, a 6" camlock inversion hose is available. Contact your HammerHead dealer.

## Nozzles

Evaluate jobsite to determine nozzle size necessary for job. Nozzles available for use with pipe between 2" (5.08 cm) and 8" (20.32 cm). For options, contact your HammerHead dealer.

# Complete the Job

## Chapter Contents

Stow Components . . . . .	38
Restore Jobsite . . . . .	38
Stow Tools . . . . .	38

## **Stow Components**

Load unit as specified to transport. See "Transport" on page 25 for more information.

## **Restore Jobsite**

Fill in installation, bursting and service connection pits.

## **Stow Tools**

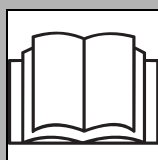
Make sure all accessories and tools are loaded and properly secured.

# Service

## Chapter Contents

Service Precautions . . . . .	40
Recommended Lubricants/Service Key . . . . .	40
As Needed . . . . .	41

## Service Precautions



Read operator's manual. Know how to use all controls.  
Your safety is at stake.

**To help avoid injury:**

- Wear personal protective equipment.
- Use only approved service parts.

## Recommended Lubricants/Service Key

Item	Description		
EPG	Extreme-Pressure Grease		
	Check level of fluid or lubricant		Check condition
	Filter		Change, replace, adjust, service or test

Proper lubrication and maintenance protects HammerHead® equipment from damage and failure. Service intervals listed are minimum requirements. In extreme conditions, service machine more frequently. Use only recommended lubricants.

### NOTICE:

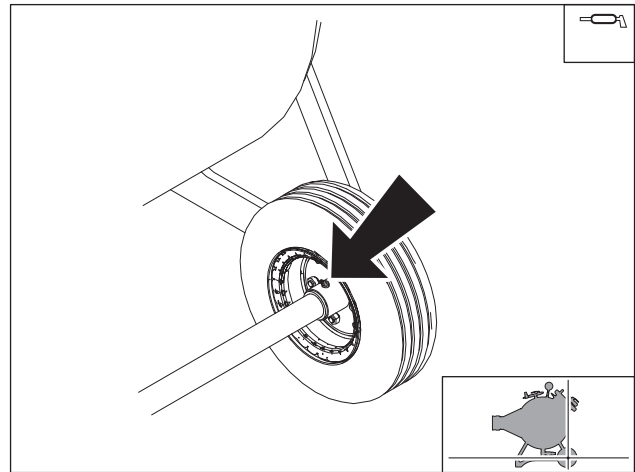
- Use only genuine HammerHead parts and approved lubricants to maintain warranty.
- Use the "Service Record" on page 47 to record all required service to your machine.

## As Needed

Tasks	Notes
Grease wheels	EPG
Check valves and hoses	

### Grease Wheels

Grease wheels with EPG at zerks (shown).



j76om017h.eps

## Check Valves and Hoses



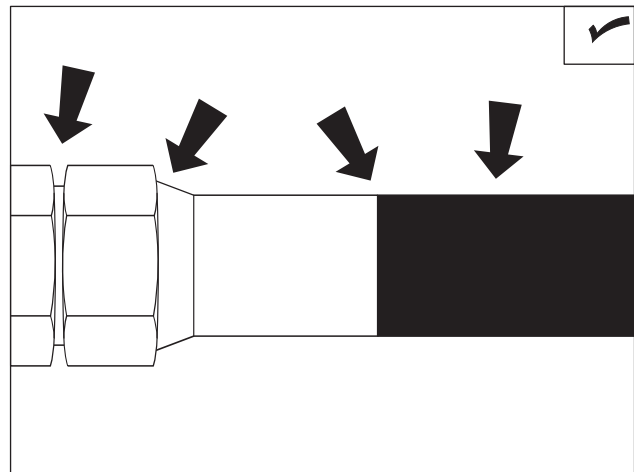
**⚠ WARNING**

Pressurized fluid or air could pierce skin and cause severe injury. Refer to operator's manual for proper use. 270-6035

**To help avoid injury:**

- Use a piece of cardboard or wood, rather than hands, to search for leaks.
- Wear protective clothing, including gloves and eye protection.
- Before using system, check that all connections are tight and all lines are undamaged.

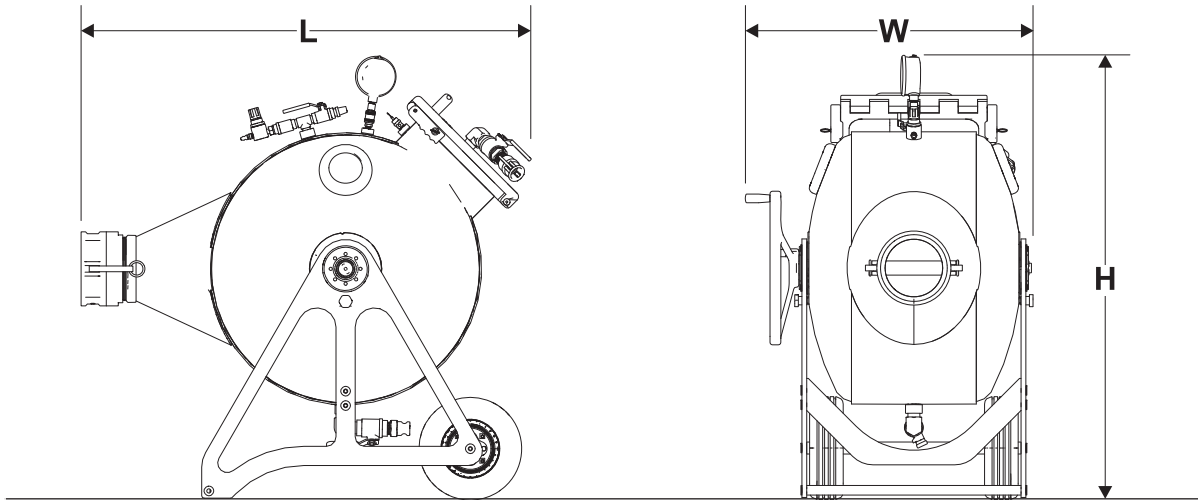
Check valves and hoses as needed for leaks, loose fittings, unusual noise or vibration. Repair or replace if needed.



CheckHoses.eps

# Specifications

## D225-QL



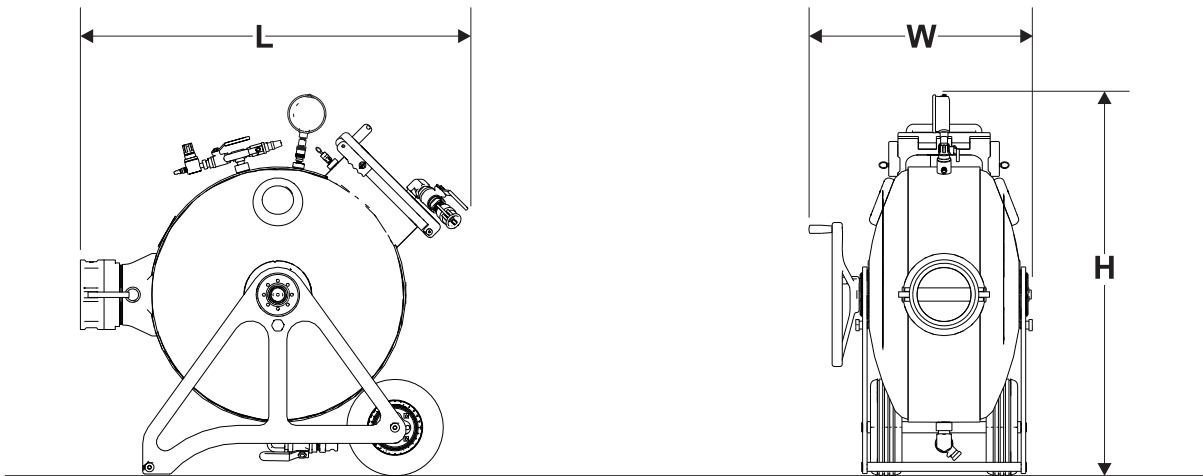
J76om018h.eps

Dimensions	U.S.	Metric
L, length	46 in	1.17 m
W, width	27.3 in	0.69 m
H, height	46.1 in	1.17 m
Weight	162 lb	73.48 kg

### Noise Levels

This machine can generate sound levels exceeding 80 dBA. Always wear appropriate hearing protection when operating machine. Find sound power and pressure information at [www.ditchwitch.com](http://www.ditchwitch.com), or contact [customersupport@ditchwitch.com](mailto:customersupport@ditchwitch.com).

D125-QL



J76om020h.eps

Dimensions	U.S.	Metric
L, length	42.3 in	1.07 m
W, width	22.4 in	0.57 m
H, height	42.2 in	1.07 m
Weight	134 lb	62.14 kg

Noise Levels

This machine can generate sound levels exceeding 80 dBA. Always wear appropriate hearing protection when operating machine. Find sound power and pressure information at [www.ditchwitch.com](http://www.ditchwitch.com), or contact [customersupport@ditchwitch.com](mailto:customersupport@ditchwitch.com).

# Support

## Procedure

Notify your dealer immediately of any malfunction or failure of HammerHead® equipment.

Always give model, serial number, and approximate date of your equipment purchase. This information should be recorded and placed on file by the owner at the time of purchase.

Return damaged parts to dealer for inspection and warranty consideration if in warranty time frame.

Order genuine HammerHead replacement or repair parts from your authorized HammerHead dealer. Use of another manufacturer's parts may void warranty consideration.

## Resources

### Publications

Contact your HammerHead dealer for publications and videos covering safety, operation, service, and repair of your equipment.

### HammerHead Training

For information about on-site, individualized training, contact your HammerHead dealer.

# Warranty

## Limited Warranty Policy

Earth Tool Company LLC, hereinafter sometimes referred to as ETC warrants each new industrial product of its own manufacture to be free from defects in material and workmanship, under normal use and service for one full year after delivery to the owner or 1000 operating hours, whichever occurs first. During the warranty period, the authorized selling HammerHead® Dealer shall furnish parts without charge for any HammerHead product that fails because of defects in material and workmanship. Warranty is void unless warranty registration card is returned within ten days from the date of purchase. This warranty and any possible liability of Earth Tool Company LLC here under is in lieu of all other warranties, express, implied, or statutory, including, but not limited to any warranties of merchantability or fitness for a particular purpose.

The parties agree that the Buyer's SOLE AND EXCLUSIVE REMEDY against ETC, whether in contract or arising out of warranties, representations, or defects shall be for the replacement or repair of defective parts as provided herein. In no event shall ETC's liability exceed the purchase price of the product. The Buyer agrees that no other remedy (including, but not limited to, incidental or consequential loss) shall be available to him. If, during the warranty period, any product becomes defective by reason of material or workmanship and Buyer immediately notifies ETC of such defect, ETC shall, at its option, supply a replacement part or request the return of the product to its plant in Lake Mills, Wisconsin. No part shall be returned without prior written authorization from ETC, and this warranty does not obligate ETC to bear any transportation charges in connection with the repair or replacement of defective parts. Earth Tool Company LLC will not accept any charges for labor and/or parts incidental to the removal or remounting of parts repaired or replaced under this Warranty.

This Warranty shall not apply to any part or product which shall have been installed or operated in a manner not recommended by ETC nor to any part or product which shall have been neglected, or used in any way which, in ETC's opinion, adversely affects its performance; nor negligence of proper maintenance or other negligence, fire or other accident; nor with respect to wear items; nor if the unit has been repaired or altered outside of an ETC authorized dealership in a manner of which, in the sole judgment of ETC affects its performance, stability or reliability; nor with respect to batteries which are covered under a separate adjustment warranty; nor to any product in which parts not manufactured or approved by ETC have been used, nor to normal maintenance services or replacement of normal service items. Equipment and accessories not of our manufacture are warranted only to the extent of the original Manufacturer's Warranty and subject to their allowance to us, if found defective by them. ETC reserves the right to modify, alter, and improve any product or parts without incurring any obligation to replace any product or parts previously sold with such modified, altered, or improved product or part. No person is authorized to give any other Warranty, or to assume any additional obligation on ETC's behalf unless made in writing, and signed by an officer of ETC.

**EARTH TOOL COMPANY LLC**

**Lake Mills, Wisconsin**

**Service Record - 47**

## QuickLok Inversion Drum Operator's Manual

[illegible]



A CHARLES MACHINE WORKS COMPANY