



TECHNICAL PUBLICATIONS

Operator's Manual

PortaBurst Lightning®



Issue 1.0
Original Instruction

960-1111

Overview

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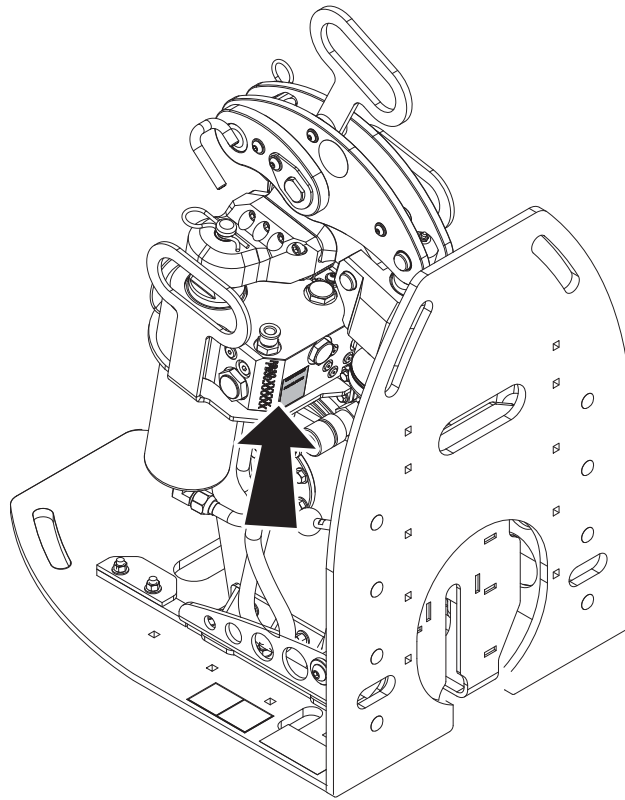
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Serial Number Location

Record serial numbers and date of purchase in spaces provided.



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Date of manufacture	
Date of purchase	

Intended Use

HammerHead® pipe bursters are intended for the replacement of 1.25" (31.8 mm) to 16" (406 mm) diameter buried pipes and conduits. The PortaBurst Lightning® is a compact, portable, hydraulically-powered machine designed to replace underground utilities using up to 29 tons (26 t) of pullback force. A power unit provides hydraulic power to run the pipe bursting unit.

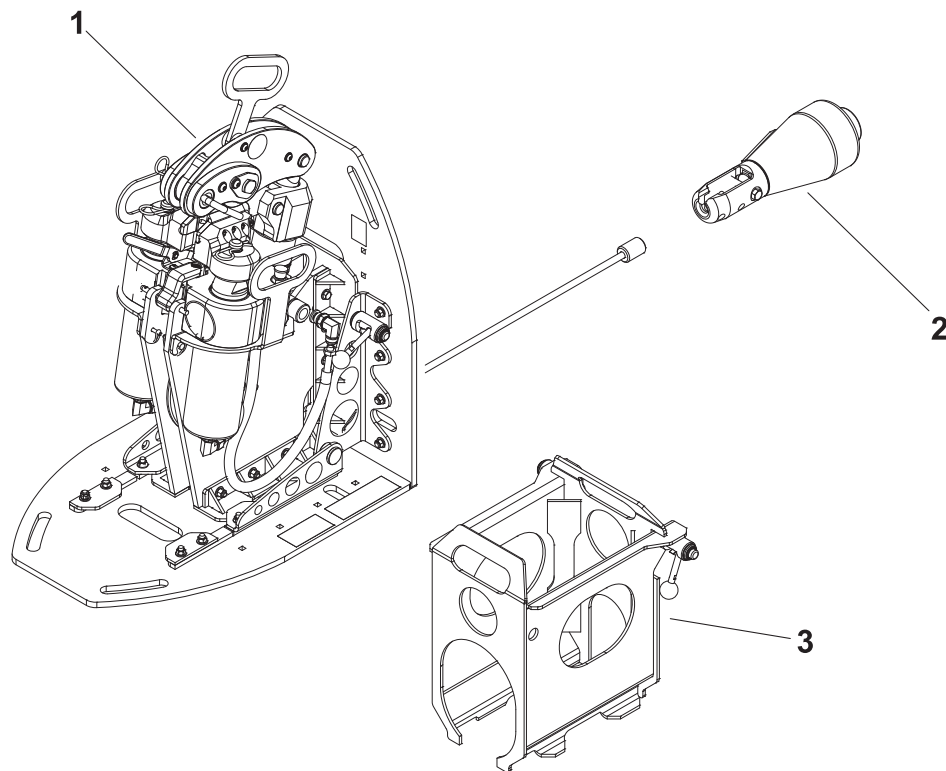
The unit is designed for operation in temperatures typically experienced in earth moving and construction work environments. Provisions may be required to operate in extreme temperatures. Contact your HammerHead dealer. Use in any other way is considered contrary to the intended use.

HammerHead pipe bursters and power units should be operated, serviced, and repaired only by persons familiar with their 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



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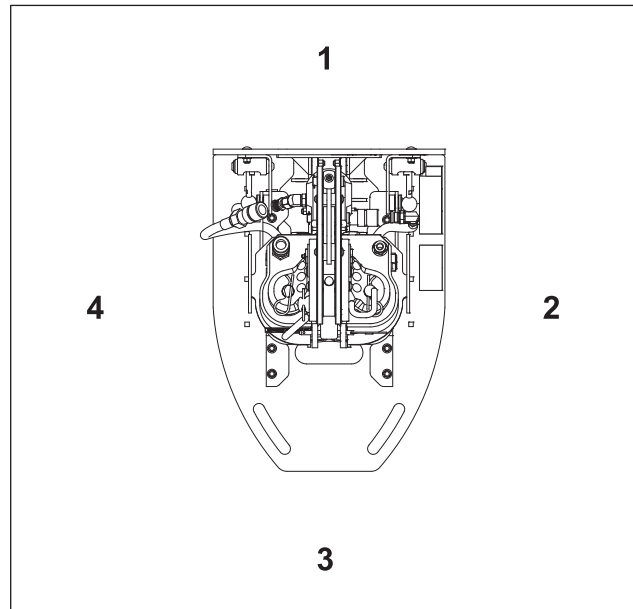
- 1. Bursting unit
- 2. Tooling head

- 3. Extension cage (optional)

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

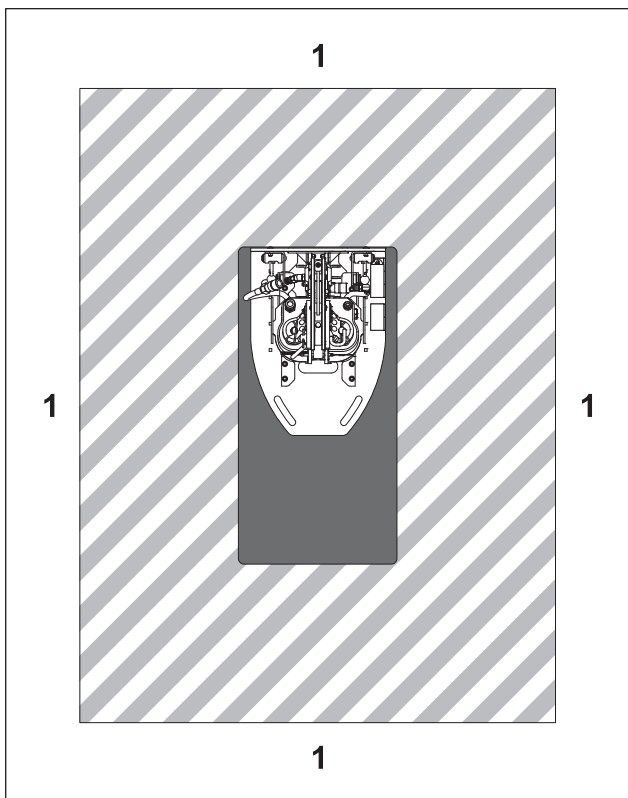


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Operating Area

IMPORTANT: Top view of unit is shown.

Operator should stand outside of the pit in the locations marked by number 1.



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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** 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.

**PortaBurst Lightning®
Operator's Manual**

Issue number 1.0/OM-11/15

Part number 960-1111

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HammerHead, HydroBurst, PortaBurst Lightning, and Quick Grip are registered trademarks of Earth Tool Company LLC.

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

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Service Record

a record of major service performed on the machine

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Safety

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Guidelines

Follow these guidelines before operating any jobsite equipment:

- Complete proper training and read operator's manual before using equipment.
- Contact your local One-Call (811 in USA) or the One-Call referral number (888-258-0808 in USA and Canada) to have underground utilities located before digging. Also contact any utilities that do not participate in the One-Call service. Mark proposed path with white paint prior to contacting One-Call or utilities.
- 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.
- 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.

Emergency Procedures



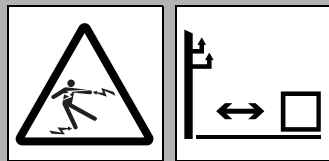
⚠ WARNING

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

Before operating any equipment, review emergency procedures and check that all safety precautions have been taken.

EMERGENCY SHUTDOWN - Turn ignition switch to stop position or push remote engine stop button (if equipped).

Electric Strike Description



⚠ DANGER

Electric shock. Contacting electric lines will cause death or serious injury. Know location of lines and stay away.

When working near electric cables, remember the following:

- Electricity follows all paths to ground, not just path of least resistance.
- Pipes, hoses, and cables will conduct electricity back to all equipment.
- Low voltage current can injure or kill. Many work-related electrocutions result from contact with less than 440 volts.

Most electric strikes are not noticeable, but indications of a strike include:

- power outage
- smoke
- explosion
- popping noises
- arcing electricity

If any of these occur assume an electric strike has occurred.

If an Electric Line is Damaged

If you suspect an electric line has been damaged and you are **in pit**, DO NOT MOVE and DO NOT TOUCH ANYTHING. Remain in pit and take the following actions. The order and degree of action will depend upon the situation.

- Warn people nearby that an electric strike has occurred. Instruct them to leave the area and contact utility.
- Contact utility company to shut off power.
- Do not leave pit until given permission by utility company.

If you suspect an electric line has been damaged and you are **out of pit**, DO NOT TOUCH ANYTHING. Take the following actions. The order and degree of action will depend upon the situation.

- LEAVE AREA. The ground surface may be electrified, so take small steps with feet close together to reduce the hazard of being shocked from one foot to the other.
- Contact utility company to shut off power.
- Do not return to jobsite or allow anyone into area until given permission by utility company.

If you suspect an electric line has been damaged and you are **on other piece of equipment**, DO NOT MOVE. Remain on truck or trailer and take the following actions. The order and degree of action will depend upon the situation.

- Warn people nearby that an electric strike has occurred. Instruct them to leave the area and contact utility.
- Contact utility company to shut off power.
- Do not return to area or allow anyone into are until given permission by utility company.

If a Gas Line is Damaged



⚠ WARNING

Fire or explosion possible. Fumes could ignite and cause burns. No smoking, no flame, no spark.



⚠ WARNING

Explosion possible. Serious injury or equipment damage could occur. Follow directions carefully.

If you suspect a gas line has been damaged, take the following actions. The order and degree of action will depend on the situation.

- Immediately shut off engine(s), if this can be done safely and quickly.
- Remove any ignition source(s), if this can be done safely and quickly.
- Warn others that a gas line has been cut and that they should leave the area.
- Leave jobsite as quickly as possible.
- Immediately call your local emergency phone number and utility company.
- If jobsite is along street, stop traffic from driving near jobsite.
- Do not return to jobsite until given permission by emergency personnel and utility company.

If a Fiber Optic Cable is Damaged

Do not look into cut ends of fiber optic or unidentified cable. Vision damage can occur. Contact utility company.

If Machine Catches on Fire


Perform emergency shutdown procedure and then take the following actions. The order and degree of action will depend on the situation.


- Immediately move battery disconnect switch (if equipped and accessible) to disconnect position.
- If fire is small and fire extinguisher is available, attempt to extinguish fire.
- If fire cannot be extinguished, leave area as quickly as possible and contact emergency personnel.


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.

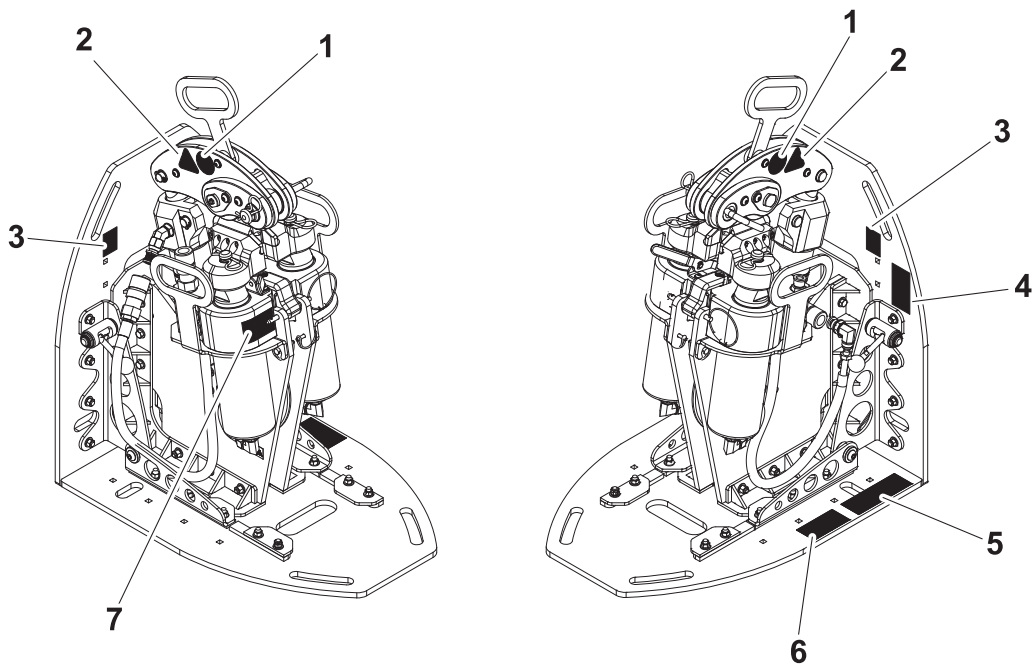
 **CAUTION** indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

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

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

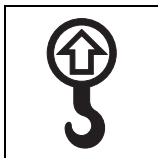
IMPORTANT can help you do a better job or make your job easier in some way.

Machine Safety Alerts



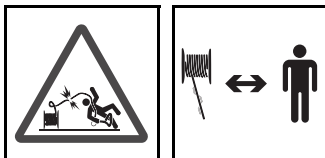
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1



Lift point. See Transport chapter for more information.

2



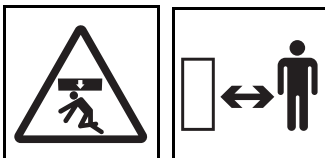
⚠ DANGER Cable may break while pulling and strike you. Serious injury or death may occur. Stay away.

3



⚠ DANGER Sudden cable movement can cause serious injury or death. Stay clear.

4



⚠ WARNING Crushing weight could cause death or serious injury. Stay away. 275-326, 701-326

PortaBurst Lightning[®] Operator's Manual

Machine Safety Alerts

5



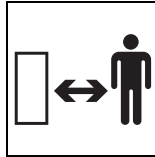
⚠ WARNING To avoid injury, you **MUST** read and understand operator's manual before using this machine.

6



⚠ WARNING Jobsite hazards could cause death or serious injury. Use correct equipment and work methods. Use and maintain proper safety equipment. 274-050; 274-724 (2P)

7



⚠ WARNING Moving parts can crush and cut hand or foot. Stay away.

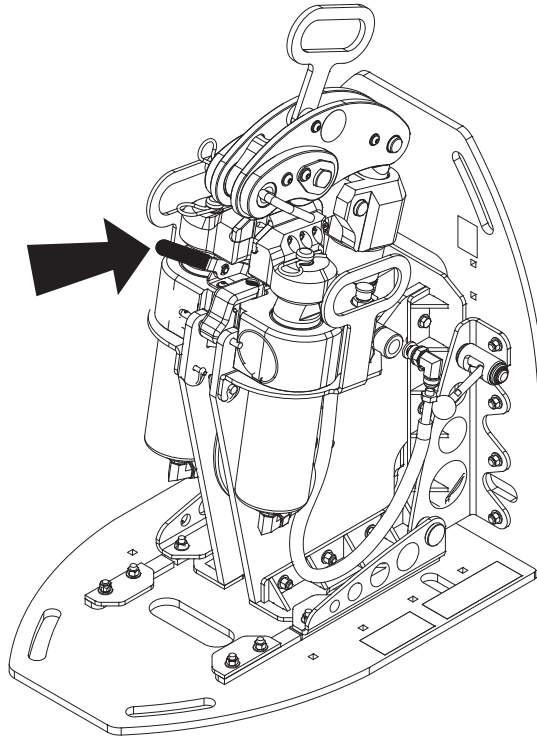
Controls

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Bursting Unit



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Item	Description	Notes
Catch jaw lever	Push lever down to disengage catch jaw. Pull lever up to engage catch jaw.	

Power Unit

For power unit controls, see hydraulic power supply operator's manual.

NOTICE: Do not use power unit that exceeds the capabilities of the bursting unit. See "Specifications" on page 61.

Prepare

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Gather Information

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

Review Job Plan

Review blueprints or other plans and make sure you have taken enlargement during pullback into account. 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

Contact your local One-Call (811 in USA) or the One-Call referral number (888-258-0808 in USA and Canada) to have underground utilities located before digging. Also contact any utilities that do not participate in the One-Call service.

Examine Pullback Material

Ask for a sample of the new product material you will be pulling back. Check its weight and stiffness. Contact the manufacturer for bend radius information. Check that you have appropriate pullback devices.

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

Inspect jobsite before transporting equipment. Check for the following:

- changes in elevation such as hills or open trenches
- obstacles such as buildings, railroad crossings, or streams
- signs of utilities
 - “buried utility” notices
 - utility facilities without overhead lines
 - gas or water meters
 - junction boxes
 - drop boxes
 - light poles
 - manhole covers
 - sunken ground
- traffic
- access
- soil type and condition
- depths of existing pipes

Identify Hazards

- Identify safety hazards. Follow U.S. Department of Labor regulations on excavating and trenching (Part 1926, Subpart P) and other similar regulations.
- Have an experienced locating equipment operator sweep area within 20' (6 m) to each side of burst path. Verify previously marked line and cable locations.
- Mark location of all buried utilities and obstructions.



⚠ 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:

- Wear personal protective equipment including hard hat, safety eye wear, and hearing protection.
- Do not wear jewelry or loose clothing.
- Notify One-Call and companies which do not subscribe to One-Call.
- Comply with all utility notification regulations before digging or bursting.
- Verify location of previously marked underground hazards.
- Mark jobsite clearly and keep spectators away.

Select Installation and Bursting Pit Locations

Consider the following when selecting pit locations:

Traffic

Vehicle and pedestrian traffic must be a safe distance from pulling equipment. Allow at least 10' (3 m) buffer zone around equipment.

Space

Check that starting and ending points allow enough space for installation and bursting pits.

Check that installation area has enough space for product to be installed.

Check that there is enough space to work.

Access

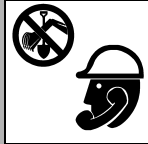
Consider shade, wind, fumes, and other site features.

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

Plan Pull Path

Plan the pull path, from entry to end, before job begins. Locate the entire route of the pipe to be replaced to ensure a straight path. Expose all crossing or parallel utilities in accordance with local regulations.

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:

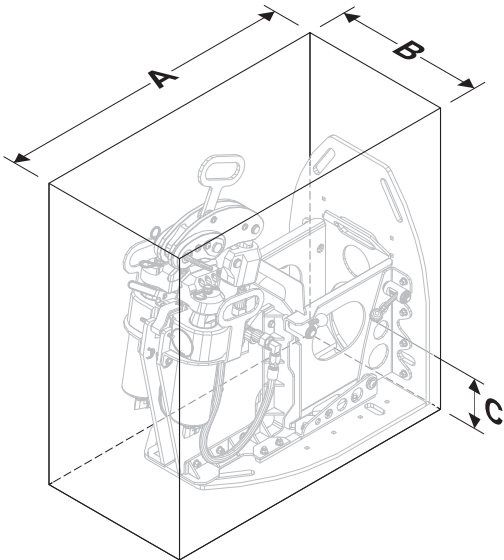
- Cutting high voltage cable can cause electrocution. Expose lines by hand before digging.
- All vegetation near operator's station must be removed. Contact with trees, shrubs, or weeds during electrical strike could result in electrocution.

Mark Pull Path

Mark your planned pull path with flags or paint.

Dig Bursting Pit

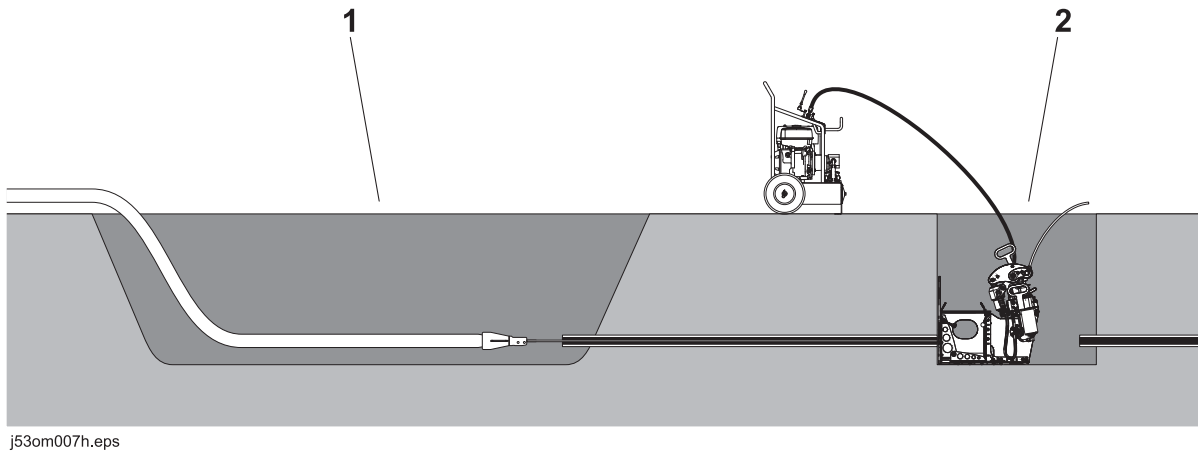
Dimensions



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Minimum Bursting Pit	
Length (A)	Width (B)
U.S. (metric)	U.S. (metric)
3' (0.9 m)	4' (1.2 m)
Centerline of cable is 4.5" (114.3 mm) above the bottom plate (C).	

Requirements



Installation Pit (1)

- Pit dimensions depend on pipe depth and product being installed. Installation pit length typically needs to be three times the installation pit depth.

NOTICE: Shortening the installation pit may cause increased friction as well as raise the grade of the new line for the first several feet.

- Must be in line with existing pipe.
- Sloped back end aids new product installation. Consider new product bend radius.

Bursting Pit (2)

- Bottom of pit must be level to align bursting unit properly with existing pipe.
- Bottom 34" of pit wall must be square (90°) with pit floor.

NOTICE: Loose soil may need to be shored to support force of burst.

- Centerline of the cable is 4.5" (114.3 mm) above the bottom plate.

Check Supplies and Prepare Equipment

Check Supplies

- marking flags or paint
- barrier cones and tape
- wire cable (See "Wire Cable" on page 51.)
- personal protective equipment, such as hard hat and safety glasses
- notepad and pencil

Prepare Equipment

Condition and Function

- clean couplers
- hoses and valves
- inspect/clean jaws

Assemble Accessories

Fire Extinguisher

If required, mount a fire extinguisher near the power unit but away from possible points of ignition. The fire extinguisher should always be classified for both oil and electric fires. It should meet legal and regulatory requirements.

Transport

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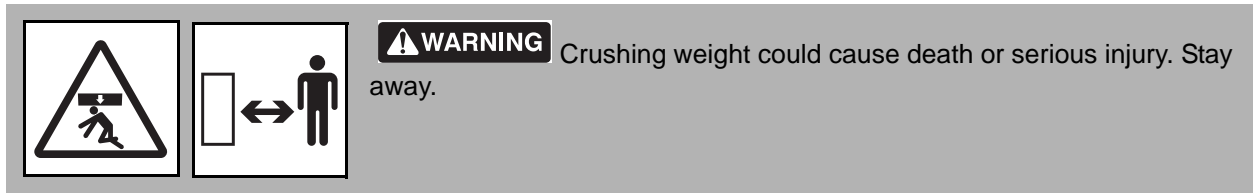
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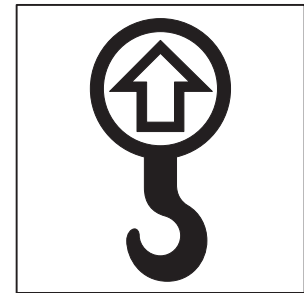
Disassemble the Unit 35

Lift



Points

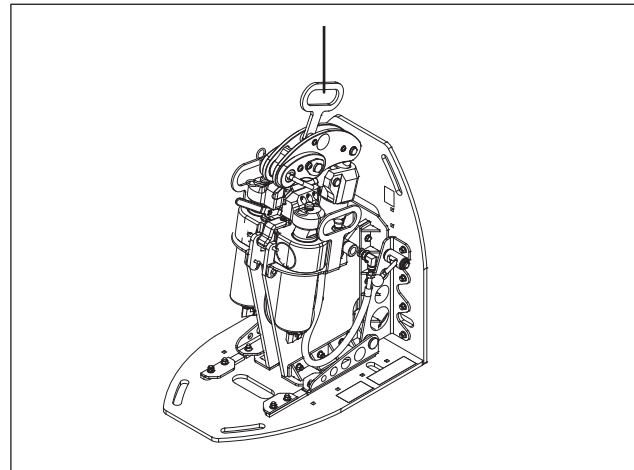
Lifting points are identified by lifting decals. Lifting at other points is unsafe and can damage machinery.



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Procedure

Use equipment capable of supporting the unit's size and weight. See "Specifications" on page 61 or measure and weigh equipment before lifting.



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Tie Down

Procedure

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

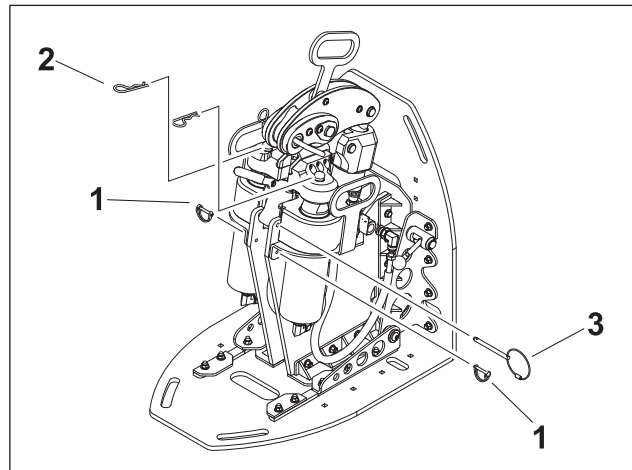
Disassemble the Unit

Unit can be disassembled for easy transport.

1. Turn unit off.

NOTICE: After turning unit off, cycle controls on power unit to relieve pressure in the hoses. See hydraulic power supply operator's manual for more information.

2. Disconnect hydraulic hoses. Connect hoses together to prevent any contaminants from entering hose connections.
3. Remove two retaining clips (1) from the front of each hydraulic cylinder.
4. Remove stationary jaw pin (3).
5. Remove retaining clip (2) on top of each cylinder.

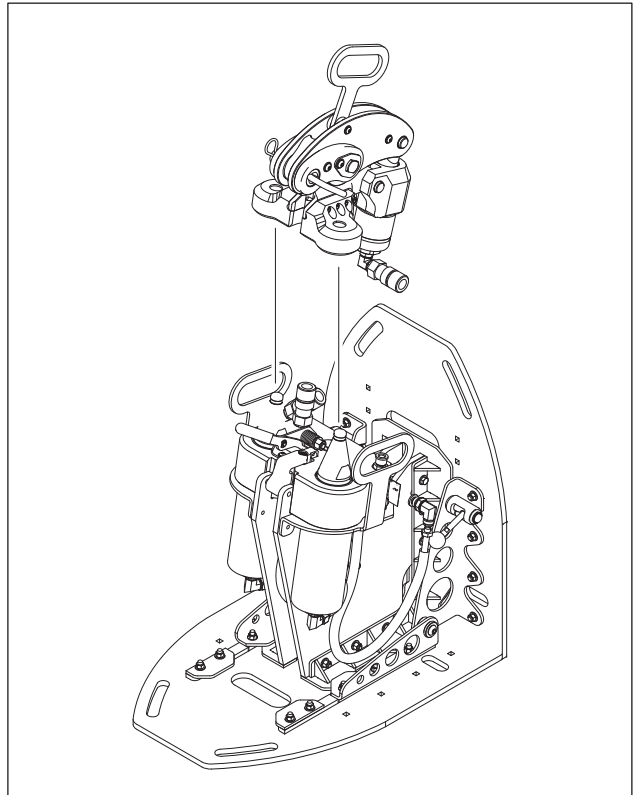


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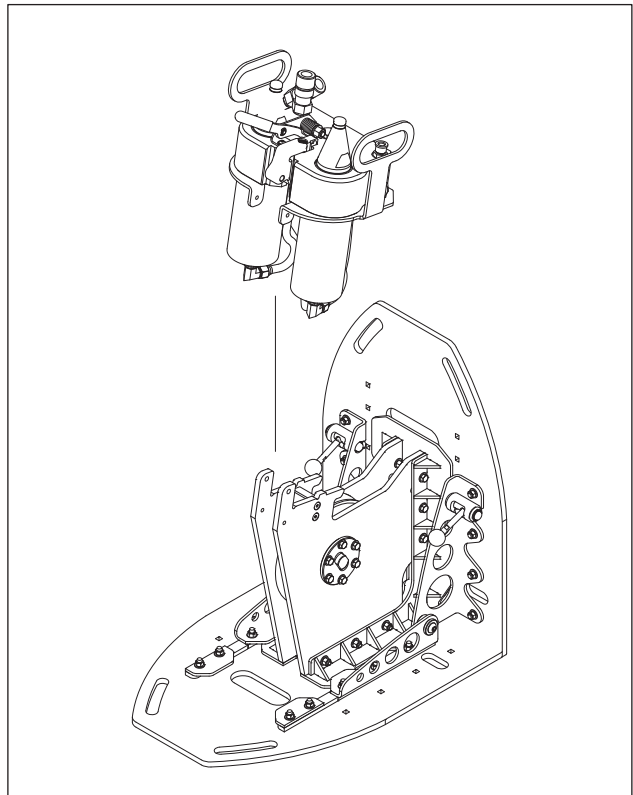
Disassemble the Unit

6. Lift upper cylinder head assembly from the frame (shown).



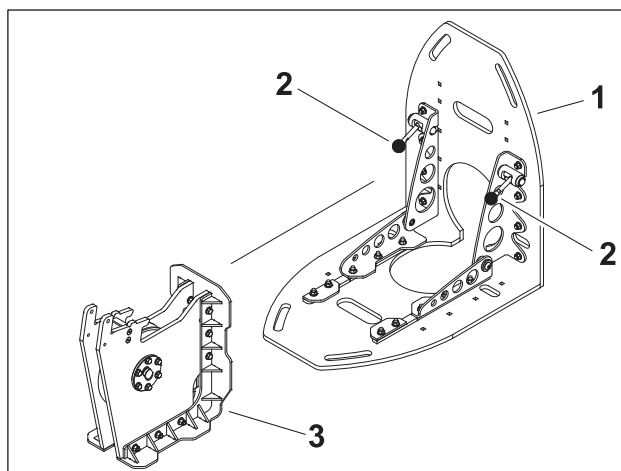
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7. Tilt lower cylinder assembly back to unlatch and lift from the frame (shown).



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8. Slide levers out (2) securing frame (3) to backing plate (1).
9. Remove frame from backing plate. Backing plate can now be folded down and unit is ready for transport.
10. To assemble unit, follow steps in reverse order.



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Burst Pipe

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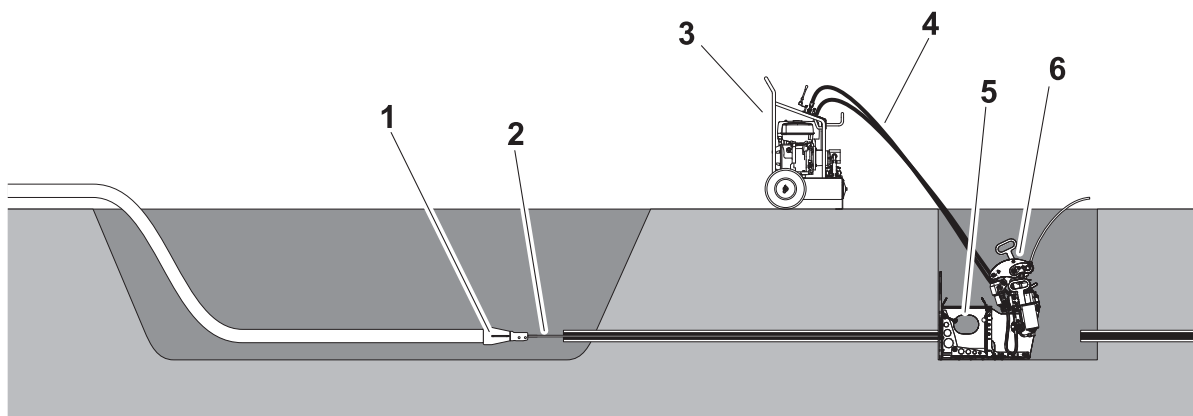
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- Slitter Head 47

Set Up and Configure



- | | |
|-----------------|-------------------------------|
| 1. Tooling head | 4. Hydraulic connection hoses |
| 2. Wire cable | 5. Extension cage (optional) |
| 3. Power unit | 6. Bursting unit |

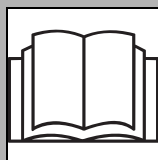
NOTICE: Follow U.S. Department of Labor regulations on excavating and trenching (Part 1926, Subpart P) and other similar regulations.

1. Position power unit outside of bursting pit, at least two feet away from the edge.
2. Lower bursting unit into pit against pit wall.

NOTICE: Ensure no personnel are in pit as equipment is lowered.

3. Ensure backing plate is square (90°) with pit floor.

Connect Bursting Head



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

To help avoid injury:

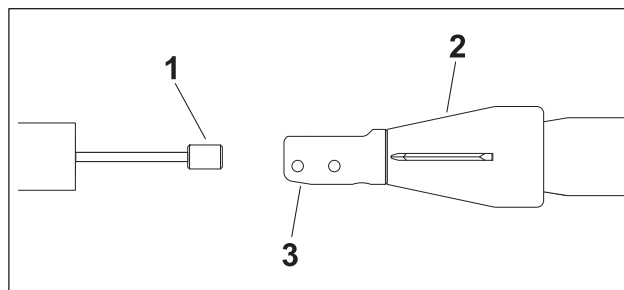
- Maintain 2-way communication between bursting pit and all other personnel.
- Make sure all personnel are clear of moving parts.
- Do not attempt to use any part of body to assist wire cable entering/exiting bursting unit.

IMPORTANT: See "Systems and Equipment" on page 49 for more information.

Quick Grip[®] Bursting Head

1. Pull wire cable through existing utility leaving the swaged button-end of the cable (1) at the installation pit.
2. Slide the Quick Grip[®] Bursting Head (2) into the length of new pipe.

NOTICE: Ensure the length of the new pipe is long enough to replace the length of pipe being replaced.

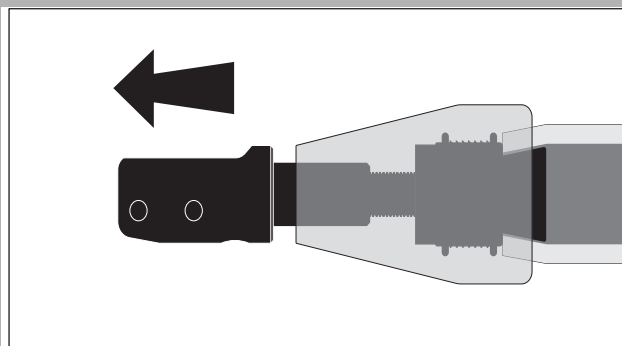


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3. Tighten the front of the bursting head (3) assembly until it grips the inside of the pipe.
4. Once it has gripped the pipe, tighten the bursting head until it no longer rotates.

NOTICE:

- A pipe wrench may be used to tighten the bursting head if needed.
- To prevent the jaws from rotating inside the pipe, it may be necessary to hold the bursting head and pull the stem assembly forward to initially engage the jaws as shown.

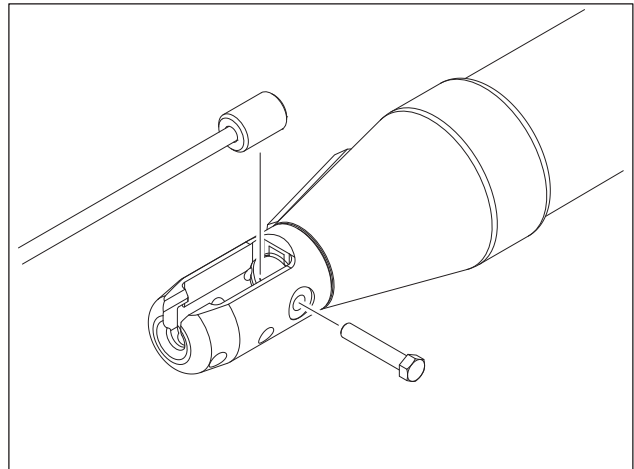


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PortaBurst Lightning® Operator's Manual

Connect Bursting Head

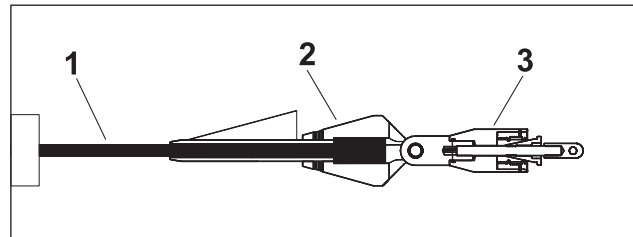
5. Remove the retaining screw and place the button-end of the cable in the slot in the end of the bursting head.
6. Pull the cable back and reinsert retaining screw to secure cable in place.



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Slitter Head

1. Thread the wire cable (1) through the slitter head (2) until the swaged button end of the cable stops at the internal shoulder of the slitter.
2. Pull the wire cable through existing utility leaving the slitter head at the installation pit.
3. Slide pipe puller (3) into length of new pipe.



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NOTICE: Ensure the length of the new pipe is long enough to replace the length of pipe being replaced.

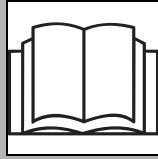
4. Tighten the front of the pipe puller assembly until it grips the inside of the pipe.
5. Once it has gripped the pipe, tighten the assembly until it no longer rotates.

NOTICE: A pipe wrench may be used to tighten the bursting head if needed.

6. Remove the shoulder screw from the slitter head and place the eye of the pipe puller assembly into the clevis of the slitter head.
7. Connect the pipe puller to the slitter head using the shoulder screw.

Pull New Product

Install Cable into Burster



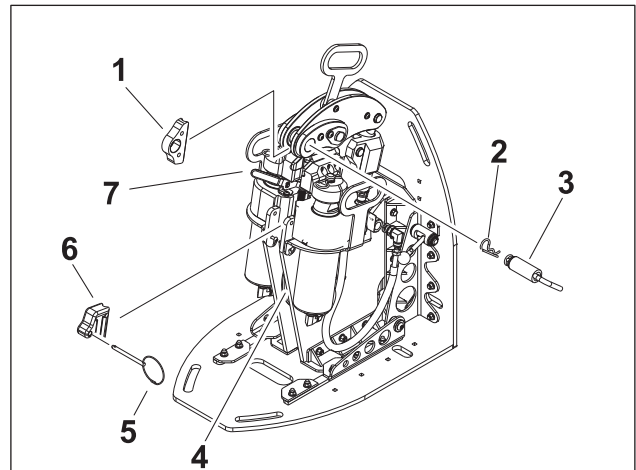
Read operator's manual. Know how to use all controls.
Your safety is at stake.

To help avoid injury:

- Maintain 2-way communication between bursting pit and all other personnel.
- Make sure all personnel are clear of moving parts.
- Keep personnel at the proper operating area. See "Operating Area" on page 6.
- Bursting unit may raise off pit floor under load. Keep hands and feet away.
- Do not attempt to use any part of body to assist wire cable entering/exiting bursting unit.

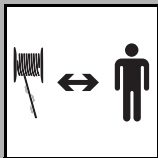
IMPORTANT: Installing cable into the burster while the unit is above ground will make the installation easier.

1. Thread wire cable through backing plate and extension cage assembly (if used) and around sheave assembly (4).
2. Remove stationary jaw pin (5).
3. Push catch jaw lever (7) down (see "Catch jaw lever" on page 22) and remove stationary jaw (6).
4. Remove cotter pin (2) to remove top jaw pin (3).
5. Remove top jaw (1).
6. Route cable up along catch jaw and through top jaw.
7. Reinstall stationary jaw and secure with stationary jaw pin.
8. Reinstall top jaw and secure with top jaw pin.
9. Repeat steps 2-5 to remove cable. See "Shut Down" on page 46 for proper procedure.



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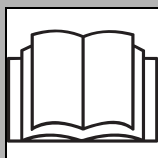
Burst Pipe and Pull New Product



⚠ DANGER Cable may break while pulling and strike you. Serious injury or death may occur. Stay away.



⚠ DANGER Sudden cable movement can cause serious injury or death. Stay clear.



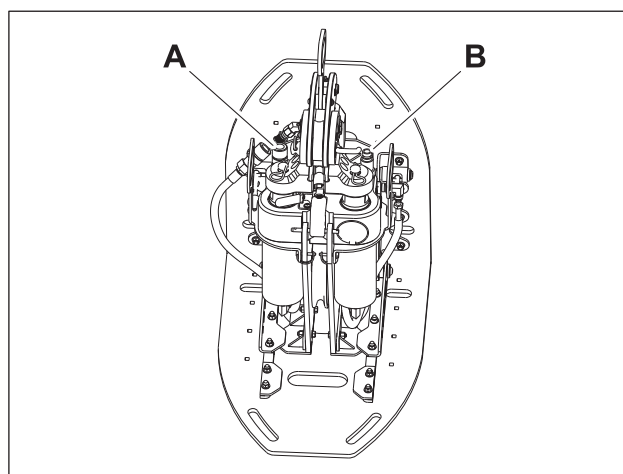
⚠ WARNING Pressurized fluid or air could pierce skin and cause severe injury. Refer to operator's manual for proper use.

To help avoid injury: Before using system, check that all connections are tight and all lines are undamaged.

If you are injured, seek immediate medical attention from a doctor familiar with this type of injury.

1. Connect hydraulic hoses from power unit to bursting unit (A,B).

NOTICE: Ensure hoses are properly supported and secured outside of pit to keep them from moving while machine is in use.

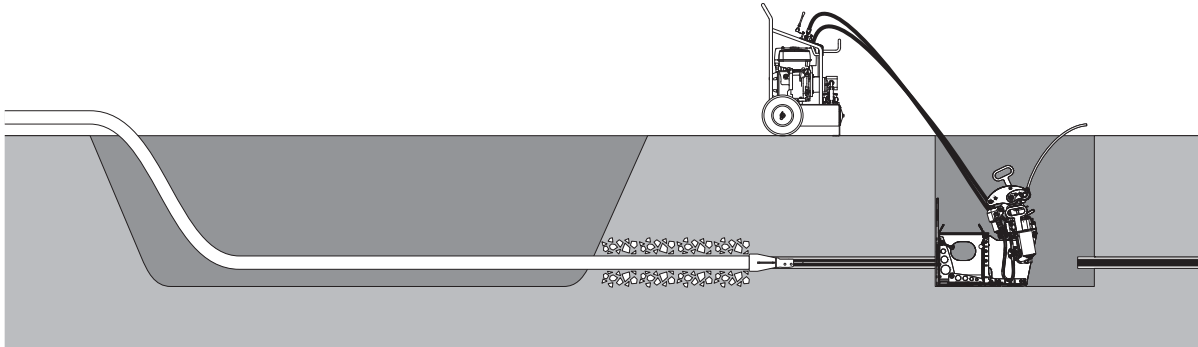


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PortaBurst Lightning[®] Operator's Manual

Pull New Product

2. Start power unit. Use power unit controls to pull wire cable in and install new pipe. See hydraulic power supply operator's manual.



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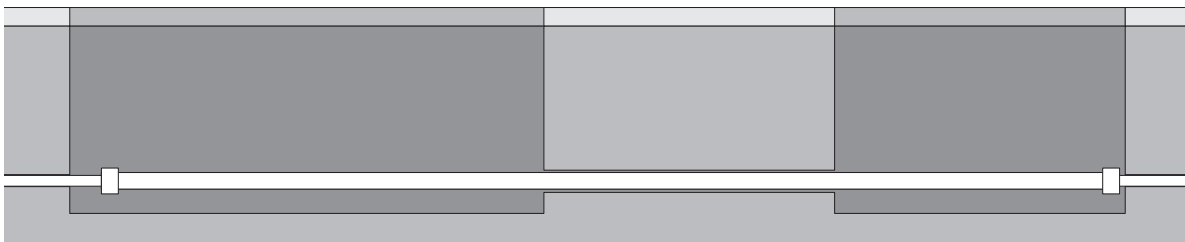
NOTICE:

- Closely monitor position of the backing plate to ensure it remains square (90°) with pit floor.
- Wire cable may move erratically during the beginning of the burst until enough wire cable is fed through the system to allow the loose end of the cable to rest on the ground.

3. Continue to pull wire cable into bursting pit until all new product is installed, ensuring wire cable is guided away from operator.

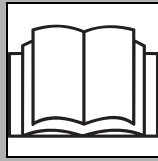
NOTICE: Be careful not to pull bursting head into the bursting unit. The optional extension cage allows the bursting head to be pulled into the pit without damaging the bursting unit.

4. Connect both ends of new product to existing pipe to complete job.



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Shut Down



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

To help avoid injury:

- Maintain 2-way communication between bursting pit and all other personnel.
- Make sure all personnel are clear of moving parts.
- Wire cable may have stored energy from the burst which may cause the cable to twist when released from the bursting head.
- Cycle controls to relieve all pressure on wire cable and hydraulic hoses before entering pit.

Quick Grip[®] Bursting Head

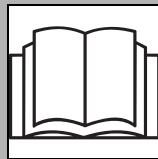
1. Remove Quick Grip bursting head.
 - Remove the retaining screw and slide the wire cable forward to remove it from the bursting head.
 - Unscrew the front of the bursting head until loose and slide it out of the pipe.

IMPORTANT: It may be necessary to tap the front of the bursting head lightly to release its grip on the pipe.

2. Remove wire cable from bursting unit.

NOTICE: Fully retract cylinders for transport to avoid damaging cylinder rod.

3. Disconnect hydraulic hoses from the bursting unit.



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

To help avoid injury: Before using system, check that all connections are tight and all lines are undamaged.

If you are injured, seek immediate medical attention from a doctor familiar with this type of injury.

4. Remove bursting unit from pit.

Slitter Head

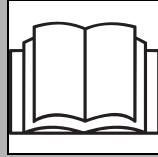
1. Remove pipe puller.
 - Remove the shoulder screw and disconnect the pipe puller from the slitter head.
 - Unscrew the pipe puller until loose and slide it out of the pipe.

IMPORTANT: It may be necessary to tap the eye of the pipe puller lightly to release it from the pipe.

2. Remove wire cable from bursting unit.

NOTICE: Fully retract cylinders for transport to avoid damaging cylinder rod.

3. Remove slitter head.
4. Slide wire cable out of slitter head.
5. Disconnect hydraulic hoses from the bursting unit.



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

To help avoid injury: Before using system, check that all connections are tight and all lines are undamaged.

If you are injured, seek immediate medical attention from a doctor familiar with this type of injury.

6. Remove bursting unit from pit.

Systems and Equipment

Chapter Contents

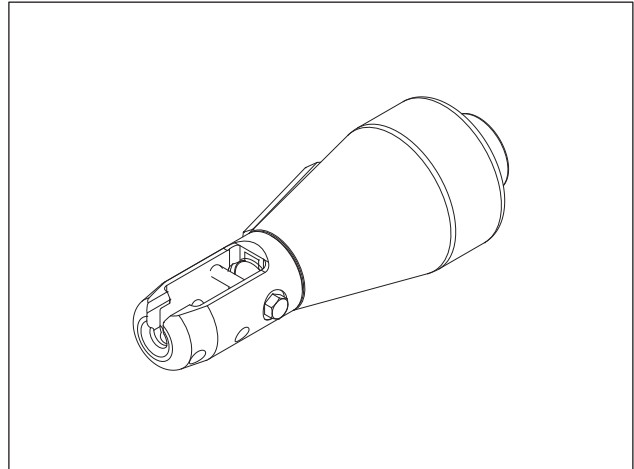
Quick Grip[®] Bursting Head 50

Extension Cage 50

Wire Cable 51

Quick Grip® Bursting Head

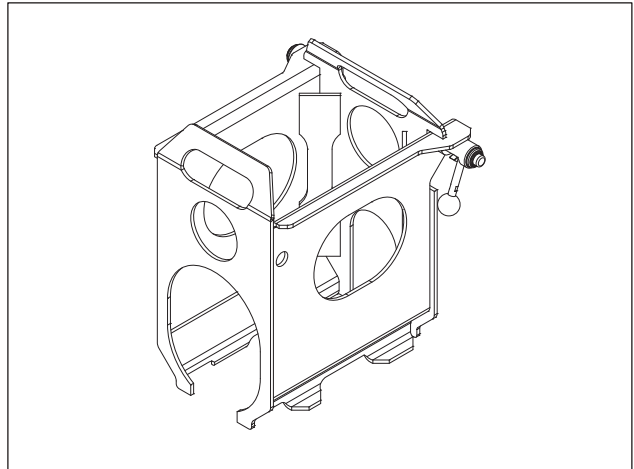
The Quick Grip bursting head is used when installing polyethylene and high-density polyethylene pipe.



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Extension Cage

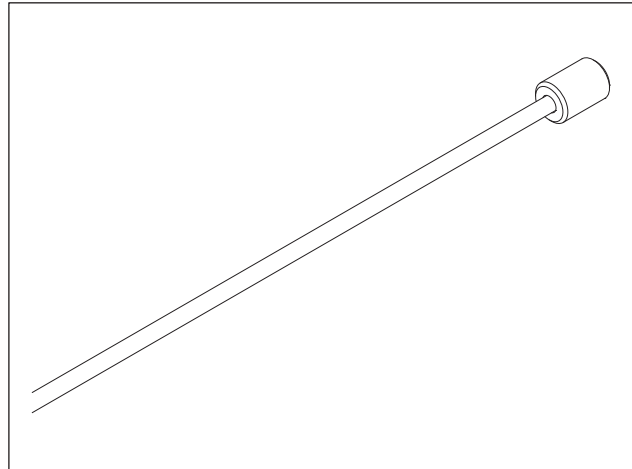
The extension cage can be attached directly to the backing plate before assembling the rest of the bursting unit.



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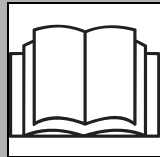
Wire Cable

Part Number	Description
912-3161	cable, swaged 3/4" x 75'
912-3162	cable, swaged 3/4" x 150'
912-3163	cable, swaged 3/4" x 100'



j54om027h.eps

Maintaining Wire Cable



⚠ WARNING Incorrect procedures could result in death, injury, or property damage. Learn to use equipment correctly.

To help avoid injury:

- Replace damaged wire cable immediately. Obvious damage includes permanent bends, flat spots, worn spots, broken wires, frays, rust, and corrosion.
- Inspect button end of the cable before each use.

For maximum wire cable life:

- Use only manufacturer's recommended wire cable listed above.
- Install wire cable properly.
- Do not use over-sized wire cable.
- Keep wire cable protected from the elements.
- Keep wire cable from kinking.
- Do not over-stress wire cable.
- Only use wire cable for the specified job.

Complete the Job

Chapter Contents

Stow Components 54

- Roll Wire Cable 54

Restore Jobsite 54

Stow Tools 54

Stow Components

Load unit as specified, or disassemble to transport. See “Transport” on page 33 for more information.

Roll Wire Cable

After cable is removed from burster, roll wire cable to store.

Restore Jobsite

Fill in installation and bursting pits.

Stow Tools

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

Service

Chapter Contents

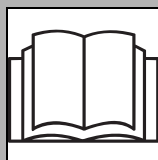
Service Precautions 56

Recommended Lubricants/Service Key 56

Each Use 57

As Needed 59

Service Precautions



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

To help avoid injury: Ensure bursting unit is not connected to power unit while servicing.

Recommended Lubricants/Service Key

Item	Description
EPMA	Lube: Extreme-Pressure Moly Antiseize - MIL-M-7866C
EPG	Lube: Extreme-Pressure Grease
	Check level of fluid or lubricant
	Check condition
	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 65 to record all required service to your machine.

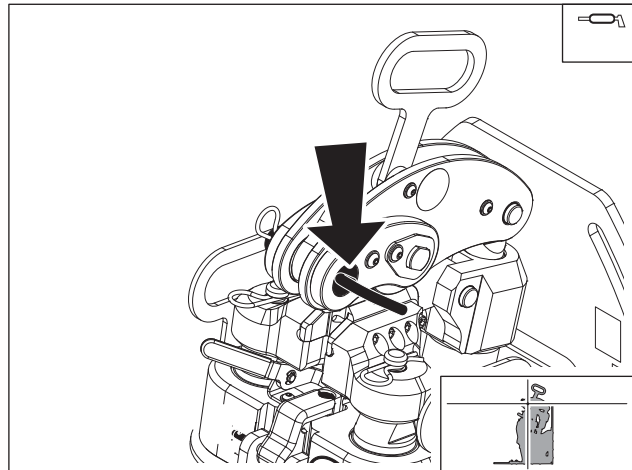
Each Use

Tasks	Notes
Lube jaw pins	EPMA, before each use
Inspect wire cable	before each use
Clean jaw threads	after each use

Lube Jaw Pins

Top Jaw Pin

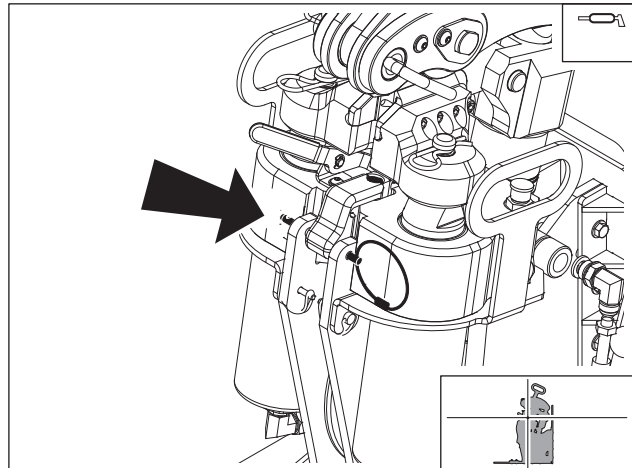
Apply EPMA by hand or using a brush to top jaw pin as shown before each use.



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Catch Jaw Pin

Apply EPMA by hand or using a brush to catch jaw pin as shown before each use.



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Inspect Wire Cable

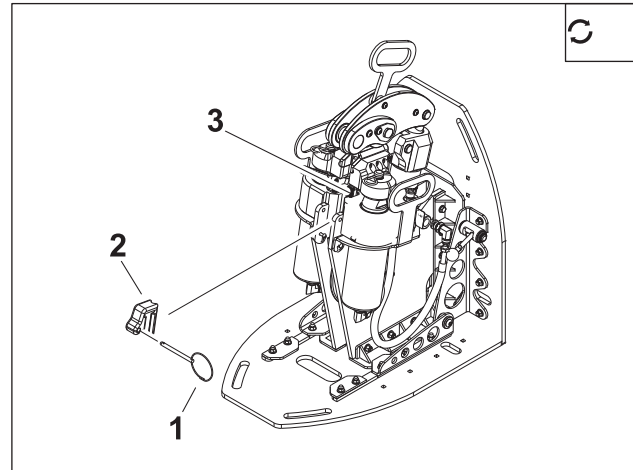
Inspect wire cable before each use. Replace damaged wire cable immediately. Obvious damage includes permanent bends, flat spots, worn spots, broken wires, frays, rust, and corrosion. For more information, see "Wire Cable" on page 51.

Clean Jaw Threads

Clean catch jaw threads and top jaw threads with high-pressure water before and after each job. Brush jaws with wire brush to remove debris.

Catch Jaw Threads

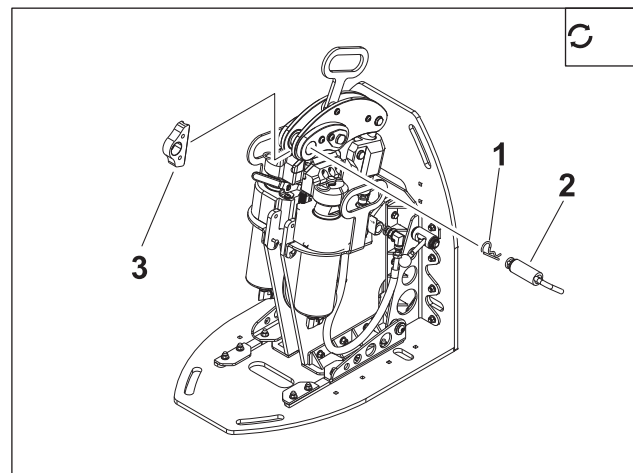
To clean: Remove stationary jaw pin (1) to remove stationary jaw (2) for better access to catch jaw (3).



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Top Jaw Threads

To clean: Remove cotter pin (1) to remove top jaw pin (2). Remove top jaw (3).



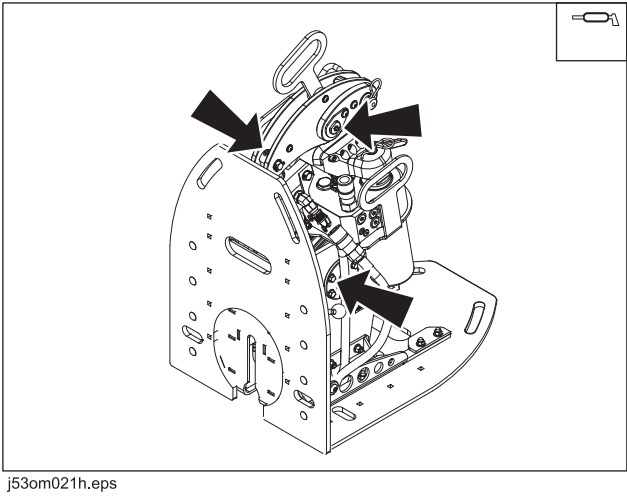
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As Needed

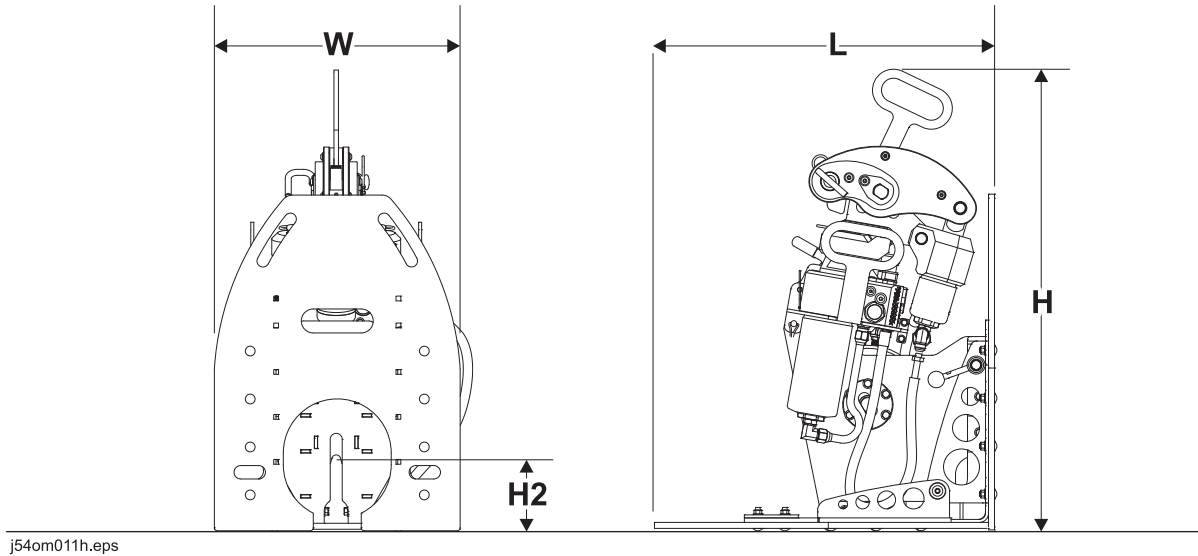
Tasks	Notes
Lube PortaBurst Lightning	EPG, 3 locations

Lube PortaBurst Lightning

Lube PortaBurst Lightning with EPG at zerks as shown.



Specifications



Dimensions		U.S.	Metric
L, length		28.5 in	72 cm
W, width		35.3 in	90 cm
H, height		23.5 in	60 cm
H2, centerline of cable from bottom plate		4.5 in	11.4 cm
Total system weight, mass		189 lb	85.7 kg
	Positive grip subassembly	58 lb	26.3 kg
	Cylinder subassembly	69 lb	31.3 kg
	Sheave subassembly	62 lb	28.1 kg
Backing plate weight, mass		70 lb	31.8 kg
Extension cage weight, mass (optional)		52 lb	23.6 kg
Operational		U.S.	Metric
Pullback force @ 3000 psi		29 ton	26 tonne

Power Unit Requirements	U.S.	Metric
Minimum pressure requirement	2200 psi	152 bar
Maximum pressure allowed	3000 psi	207 bar
Minimum hydraulic flow requirement	6 gpm	23 L/min
Maximum hydraulic flow allowed	12 gpm	45 L/min

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

HammerHead® Equipment and Replacement Parts 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 - 65

PortaBurst Lightning® Operator's Manual

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