



Model P-40 & Model P-25 **POWER PUSHER®**

INSTRUCTION MANUAL

Power Pusher® Description

The *Power Pusher*® provides ram capability by using the spreading power of the *POWER HAWK* P-16 Rescue Tool. (The *Power Pusher* may also be used with other spreader tools that do not exceed 18,000 lbs. force at 14 inches of spread.) The *Power Pusher's* unique ZipNut® Double Zip™ feature allows quick and easy operation for safely holding the working load. The *Power Pusher* may also be extended by hand for stabilizing and shoring in seconds. A wide range of spreading distances can be achieved by using the Secondary Extender, connecting two *Power Pushers* back-to-back, or by using optional Extension Accessories.

The components of the *Power Pusher* are shown at right. Refer to these terms throughout this instruction manual.

- | | |
|------------------------|------------------------------|
| A. Head Adapter | F. Housing |
| B. Secondary Extender | G. Extender Push Plate |
| C. Extender Nut | H. Foot Adapter & Push Plate |
| D. Primary Extender | I. Carrying Handle |
| E. ZipNut® Double Zip™ | J. Coupling (Optional) |

General Safety Information

The *POWER HAWK Power Pusher* is designed to provide safe operation. All users should read and be thoroughly familiar with the operating instructions and safety precautions contained in this manual. Operator safety depends on users being properly trained by the Authority having jurisdiction and using the tool for the purpose intended. The following safety precautions must be observed at all times. FAILURE TO DO SO COULD RESULT IN SERIOUS PERSONAL INJURY, DAMAGE TO PROPERTY AND/ OR EQUIPMENT:

- ◆ The *POWER HAWK Power Pusher* shall only be operated by persons authorized by the Authority having jurisdiction.
- ◆ Suitable protective equipment shall be worn as directed by the Authority having jurisdiction. At a minimum, this should include gloves, helmet, eye protection, steel-toed footwear, and body protection, such as turnout gear.
- ◆ Prior to use, inspect all *POWER HAWK Power Pusher* components for any signs of damage. Do not use damaged equipment.
- ◆ Prior to use, ensure the Primary Extender and ZipNut® threads are clean and free from dirt and debris.
- ◆ Keep hands clear of moving parts.
- ◆ Stay alert. Do not operate tool when tired.
- ◆ Use only Factory authorized service parts.
- ◆ This tool should only be used with attachment accessories (Foot or Head Adapters, Coupling, etc) approved by Power Hawk Technologies, Inc. Use of unauthorized accessories is prohibited.

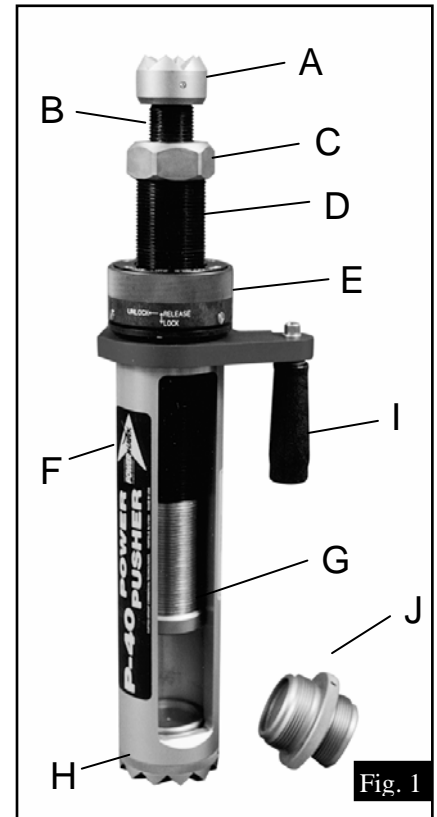


Fig. 1

Power Pusher Operation

Handling, Inspection, and Setup

- A. Handle the *Power Pusher* with caution to prevent personal injury and/or damage to the tool.
1. Avoid touching sharp edges on the Head and Foot Adapters
 2. Avoid tipping the *Power Pusher* upside-down without first supporting the Primary Extender. (See Fig. 2.)

CAUTION: The Primary Extender can extend freely from its own weight if turned upside-down. Attach Tie Down cord to Handle Eye Bolt and around the Secondary Extender when transporting the *Power Pusher*. (See Fig. 3)



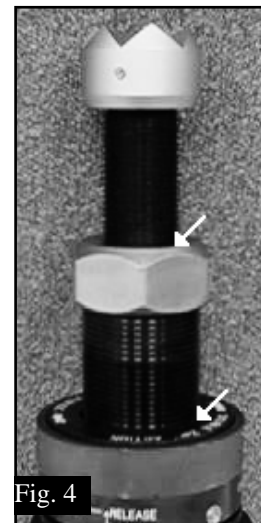
3. Keep hands and fingers away from points where threaded Extenders slide into the ZipNut® and Extender Nut. (See Fig. 4.)
4. Use the handle provided to carry the *Power Pusher*.

- B. Inspect *Power Pusher* components to ensure proper working condition. (See **Maintenance** and **Troubleshooting** sections.)
1. Make sure all threads are clean and free from dirt and debris.

! WARNING

The Primary Extender and ZipNut® threads must be clean and free from dirt and debris. Failure to do so may prevent proper action of the ZipNut® Double Zip™, lessen the load-holding capability of the Tool, and could result in serious personal injury, damage to property and/or equipment.

2. All assembled components should be securely tightened.
3. The ZipNut® Sleeve action should be smooth and easy.



- C. Select appropriate Head and Foot Adapters for the application and ensure proper attachment.

Head Adapters:

Installing: Assemble the Head Adapter onto the end of the Secondary Extender by pushing down and turning slightly in either direction until it “snaps” into place. This allows holding the Head Adapter to screw the Secondary Extender in or out.

Removing: While holding the Secondary Extender shaft still, turn the Head Adapter slightly in either direction to disengage, then pull straight up to remove.

Foot Adapters:

Installing: Screw the Foot Adapter completely into the base of the Housing.

Removing: Unscrew the Foot Adapter from the base of the Housing. Holes are provided on the outside diameter to accept a spanner wrench or pins, should the Adapter become too tight to be removed by hand.

ZipNut® Double Zip™ Operation

- ◆ When the ZipNut® sleeve is in the “LOCK” position, it allows the Primary Extender to extend, but will prevent it from retracting. (See Fig. 5.)
- ◆ When the sleeve is in the “RELEASE” or “UNLOCK” position, the Primary Extender can be moved freely in either direction. When in this position, a yellow caution stripe appears below the ZipNut® sleeve. (See Fig. 6.)



! CAUTION

The **YELLOW** stripe, which appears under the ZipNut® sleeve when in the “RELEASE” or “UNLOCK” positions, indicates the ZipNut® will **NOT** provide load-holding capability.

- ◆ To move the sleeve to the “RELEASE” or “UNLOCK” position, the load on the ZipNut® must be relieved. This can be accomplished by using a spreader tool to slightly extend the Primary Extender and support the load, or by removing the load itself.
- ◆ The “RELEASE” position is achieved by moving the ZipNut® sleeve upward. This position is momentary and must be manually held to allow the Extender to retract.
- ◆ The “UNLOCK” position is achieved by moving the ZipNut® sleeve upward and left. The sleeve will remain in this position allowing the Extender to extend or retract freely.

Operation Using a Spreader Tool

A. Positioning the *Power Pusher*

1. Securely position the *Power Pusher* so that the Head and Foot Adapters provide stable operation. (See Fig. 7.) Length adjustment may be made by manually extending the Primary Extender, or by screwing either Extender in or out.

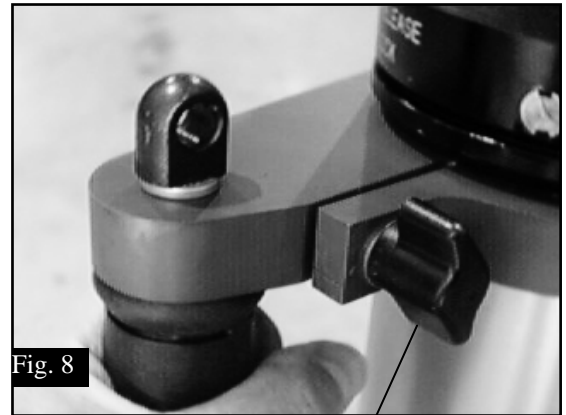
NOTE: Primary and Secondary Extenders have opposing threads. (See diagram in **Manual Operation**.)

- Primary Extender is left-handed
- Secondary Extender is right-handed

2. Position the slot on the Housing to provide access for the spreader tool tips.



3. For automatic holding of the *Power Pusher* during extending, make sure the ZipNut® sleeve is in the "LOCK" position. (See **ZipNut® Double Zip™ Operation** above)
4. The Handle can be re-positioned by loosening the thumbscrew and rotating the handle to the desired position. Lock the handle in position by tightening the thumbscrew. (See Fig. 8)



THUMBSCREW

B. Extending the *Power Pusher*

! WARNING

DO NOT EXCEED 18,000 LBS. LOAD. Failure to do so may result in breakage of components and may cause serious personal injury, damage to property and/or equipment. If using a spreader tool other than the *Power Hawk® P-16 Rescue Tool*, check with its manufacturer – **DO NOT USE TOOLS THAT EXCEED 18,000 LBS. FORCE WITHIN 14 INCHES OF SPREAD.**

1. Place the tips of the spreader tool through the slot in the Housing, and spread them out against the Push Plates. (See Fig. 9.)



! CAUTION

Spreader tool tips must sit down inside the rim on the Push Plates and must not ride against the inside diameter or sides of the Housing slot when operating. Failure to do so can result in damage to the Housing.

2. Using the spreader, extend the *Power Pusher* to the desired length.

! CAUTION

Working material can move or shift during extending operations. Make sure Head and Foot Adapters remain firmly seated against the working material (See Fig. 10.) and the *Power Pusher* is stable throughout the entire operation. Failure to do so could result in unpredictable movement or dislodging of the tool, and may cause serious personal injury, damage to property and/or equipment.



NOTE: When the GOLD section of the Primary Extender becomes visible above the ZipNut®, the *Power Pusher* has reached the end of its stroke. (See Fig. 11.) If more distance is required, adjust the Secondary Extender or see the section below on **Back-to-Back Operation**.

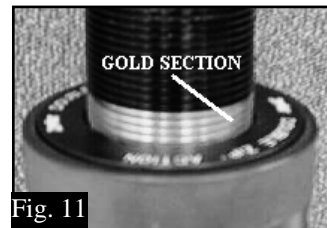


Fig. 11

3. With the ZipNut® sleeve in the “LOCK” position (see **ZipNut® Double Zip™ Operation** section above), the spreader may then be closed and removed, safely leaving the *Power Pusher* extended while under load. (See Fig. 12.)



Fig. 12

C. Retracting the *Power Pusher*

1. Place the tips of the spreader tool through the slot and spread them out against the Push Plates.
2. Extend the Primary Extender slightly to relieve the load on the ZipNut®.
3. Move the ZipNut® sleeve to the “UNLOCK” position. (See **ZipNut® Double Zip™ Operation**)
4. Slowly close the spreader tool, allowing the Primary Extender to retract.

CAUTION: During retraction, keep the *Power Pusher* from tipping over or falling once it becomes free from the working material.

Manual Operation (Shoring, Stabilizing, etc.)

A. Positioning the *Power Pusher*

1. Securely position the *Power Pusher* so that the Head and Foot Adapters provide stable operation. (See Fig. 13.) Length adjustment may be made by manually extending the Primary Extender, or by screwing either Extender in or out.

NOTE: Primary and Secondary Extenders have opposing threads.

NOTE: A wrench may be used on the Extender Nut to provide additional screwing power.

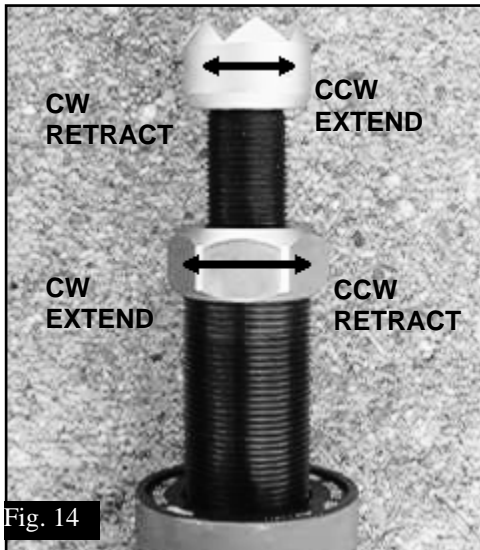


Fig. 14



Fig. 13

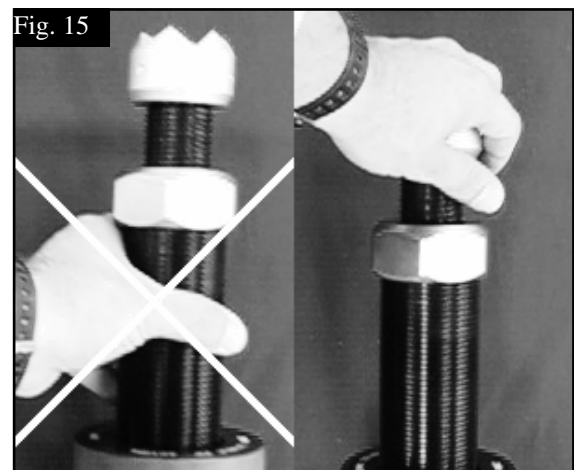
NOTE: Primary and Secondary Extenders have opposing threads. (See Fig. 14.)

- Primary Extender is left-handed
- Secondary Extender is right-handed

B. Retracting the *Power Pusher*

1. Screw the Primary Extender into the Housing to retract the *Power Pusher* away from the load.
2. Extend the Primary Extender slightly to relieve the load on the ZipNut®.
3. While supporting the weight of the Primary Extender, move the ZipNut® sleeve to the "RELEASE" or "UNLOCK" position. (See **ZipNut® Double Zip™ Operation** section above)
4. Allow the Primary Extender to retract in a controlled manner.

CAUTION: During retraction, keep *Power Pusher* from tipping over or falling once it becomes free from the working material.



CAUTION: To avoid personal injury, do not grasp the Primary Extender between Extender Nut and ZipNut® when retracting.

Back-to-Back Operation (Using Two *Power Pushers*)

Using the optional Coupling in place of the Foot Adapters, two *Power Pushers* may be assembled back-to-back, thus doubling the available spreading distance.

1. Screw Coupling completely into base of both Housings. (See Fig. 16.)
2. If necessary, line up the slots by rotating each Housing no more than 1/2 turn from the mating Coupling.
3. Refer to the ***Operation Using Spreader Tool*** or ***Manual Operation*** sections for basic operating instructions.



Maintenance

Proper care and maintenance of the *Power Pusher* is necessary to ensure long tool life and safe operation.

Interval	Check	Instructions
After Each Use	Threads clean and lubricated	Brush dirt and debris from Extender threads. Lubricate with WD-40 (or equivalent) as needed to prevent corrosion.
	Smooth ZipNut® sleeve operation	Move sleeve through all positions. If operation is rough, lubricate and move Primary Extender back and forth to work lubricant into working mechanism of ZipNut®. If operation is still rough, see ZipNut® Double Zip™ Cleaning below.
	Components free of damage or excess wear	Replace Adapters or Push Plates if holes or cracks appear. Other components should be replaced if threads become worn or damaged, or if structural integrity is in question. Use Factory Authorized parts.
	Components securely fastened	If loose, tighten Extender Push Plate and ZipNut®. A removable threadlocker (Loctite 243 or equivalent) is recommended to maintain tightness. If loose, tighten Extender Nut. A permanent threadlocker (Loctite 680 or equivalent) is recommended to hold parts securely.
Monthly	ZipNut® Double Zip™ Cleaning	See full instructions below.
Annually	Factory Inspection and Tune-up	See Dealer for Factory Authorized service.

ZipNut® Double Zip™ Cleaning

Cleaning the ZipNut® requires some disassembly of the *Power Pusher*. Disassemble as follows:

- ◆ Remove Extender Push Plate from Primary Extender.
 - ◆ Note: The Push Plate is fastened via threads internal to the Primary Extender, NOT the visible, left-handed threads.
 - ◆ Note: The Push Plate has been fastened using a liquid threadlocker. If part is difficult to remove, heating it with a heat gun or similar item will loosen the threadlocker.

- ◆ Remove Primary Extender by sliding it out through the ZipNut®.

Clean the ZipNut®.

- ◆ Use water to flush debris from the internal workings of the ZipNut®.
- ◆ Work the ZipNut® sleeve through the positions repeatedly to help free up the mechanism.
- ◆ Continue until ZipNut® moves freely and no more debris is being flushed from the ZipNut®.
- ◆ Thoroughly dry the inside of the ZipNut® using compressed air.
- ◆ Lubricate the inside of the ZipNut® with WD-40 (or equivalent).

Reassemble the *Power Pusher* as follows:

- ◆ Insert the Primary Extender through the ZipNut®.
- ◆ Install the Extender Push Plate into the Primary Extender. Install with a removable grade threadlocker (Loctite 243 or equivalent)

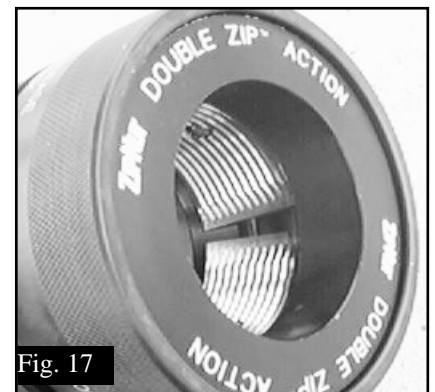


Fig. 17

Troubleshooting

Problem	Possible Cause	Solution
Primary Extender will not retract	ZipNut® sleeve is in "LOCK" position	Relieve load, then slide ZipNut® sleeve to "RELEASE" or "UNLOCK" as described in ZipNut® Double Zip™ Operation
ZipNut® sleeve will not slide from "LOCK" position	ZipNut® is under load	Relieve load by extending Primary Extender slightly. (See Retracting Power Pusher)
	Primary Extender is fully extended	Primary Extender must be manually retracted slightly by using the Extender Nut to screw it in
	ZipNut® is dirty	Clean ZipNut® as described in ZipNut® Double Zip™ Cleaning
	ZipNut® is damaged	Contact Dealer or Factory for Service
Primary Extender will not hold load	ZipNut® sleeve is not in "LOCK" position	Move ZipNut® sleeve to "LOCK" position as described in ZipNut® Double Zip™ Operation
	Threads on Primary Extender or ZipNut® are dirty	Clean threads of dirt and debris
	Threads on Primary Extender or ZipNut® are damaged	Contact Dealer or Factory for Service

If above does not correct problem, contact your authorized *Power Hawk®* Dealer or the Factory at 1-800-PWR-HAWK (1-800-797-4295) or 973-439-3862.

Replacement Parts

Replacement parts for *POWER HAWK Power Pusher* can be obtained from your authorized *POWER HAWK* Dealer or by contacting the factory at 1-800-PWR-HAWK (1-800-797-4295) or 973-627-4646, Fax 973-627-4622
Email: Powerhawk@powerhawk.com

www.powerhawk.com

Specifications

Model P-25 Power Pusher

Maximum Load: 18,000 lbs. (80.1 kN)

Using Standard Head and Foot Adapters...

Fully Extended Length: 27 in. (68.6 cm)

Fully Retracted length: 16 in. (40.6 cm)

Stroke Length: 5 in. (12.7 cm)

Adjustment Length: 6 in. (15.2 cm)

Housing Slot Width: 2.25 in (5.7 cm)

Weight: 27 lbs. (12.2 kg)

Model P-40 Power Pusher

Maximum Load: 18,000 lbs. (80.1 kN)

Using Standard Head and Foot Adapters...

Fully Extended Length: 41 in. (104.1 cm)

Fully Retracted length: 23 in. (55.4 cm)

Stroke Length: 12 in. (30.5 cm)

Adjustment Length: 6 in. (15.2 cm)

Housing Slot Width: 2.25 in (5.7 cm)

Weight: 36 lbs. (16.3 kg)

POWER HAWK Power Pushers® are manufactured by:

POWER HAWK TECHNOLOGIES, INC.

300 Forge Way, Suite 2

Rockaway, New Jersey 07866 USA

1-800-PWR-HAWK (1-800-797-4295) or 973-627-4646

Fax: 973-627-4622

www.powerhawk.com

"Power Hawk" is a Registered Trademark of Power Hawk Technologies, Inc.

"ZipNut" and *"Double Zip"* are Trademarks of Thread Technology, Inc.

The ZipNut® Double Zip™ is protected under Patent (Numbers 4,378,187; 5,324,150; 5,427,488; 5,378,100; 5,580,200; Foreign Patents; and Patents Pending), and is utilized by Power Hawk Technologies, Inc. under an exclusive agreement with Thread Technology, Inc.

WARRANTY

WARRANTY. Power Hawk Technologies, Inc. guarantees the *Power Hawk Power Pusher*, parts, equipment and accessories against defects in material and workmanship for a period of one (1) year from the date of purchase by the original purchaser. The identity of the original purchaser and the date of purchase shall be established in each case by the return of the properly completed Warranty Registration Card.

WARRANTY TERMS. The obligations of Power Hawk Technologies, Inc. under this warranty include free replacement of the necessary parts and the shipping costs to return the equipment to the user, provided the inspection of the equipment has proved that the parts were defective at the time of purchase or were improperly designed or manufactured. The warranty inspection can only be performed by a Power Hawk Technologies, Inc. service center or an official Power Hawk Technologies, Inc. factory-trained distributor, and shipping costs to a Power Hawk Technologies, Inc. service center or an official Power Hawk Technologies, Inc. factory-trained distributor will be for purchaser's account. Said warranty shall remain in effect only if (1) such goods are used normally and properly in accordance with Power Hawk Technologies, Inc. instructions as to maintenance and operation, whether given orally or set forth in manuals and instruction sheets furnished by Power Hawk Technologies, Inc. and (2) the purchaser gives prompt notice to Power Hawk Technologies, Inc. of any such defects and preserves and turns over all allegedly defective goods, parts or items.

EXCLUSIONS. This warranty covers all defects in material and workmanship except:

- Any damage occurring during shipments of the goods (for which claims shall be presented to the carrier).
- Normal wear and tear and deterioration.
- Damage caused by abuse, improper use, or corrosion
- Damage caused by repairs performed by persons other than a Power Hawk Technologies, Inc. service center or an official Power Hawk Technologies, Inc. factory-trained distributor, or damage resulting from the use of parts other than genuine Power Hawk Technologies, Inc. parts.
- Damage as a result of improper or neglected reasonable maintenance.

THIS WARRANTY STATED HEREIN IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS, STATUTORY OR IMPLIED, AND POWERHAWK TECHNOLOGIES, INC. EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES FOR MERCHANTABILITY, FITNESS, PERFORMANCE OR SUITABILITY FOR A PARTICULAR PURPOSE.

LIMITATION OF DAMAGES. Power Hawk Technologies, Inc.'s obligation under this warranty is limited to repair and/or replacement, at Power Hawk Technologies, Inc.'s option, of any defective Power Hawk Technologies, Inc. tool, part, accessory or item or other manufacturer's tool, part, accessory or item, and under no circumstances, whether due to a breach of any warranty hereunder or any other cause, and whether arising in contract or in tort (including negligence or strict liability) shall Power Hawk Technologies, Inc. be liable for (1) consequential or indirect loss or damage including, but not limited to, loss of profits, loss of

production, plant downtime, or liabilities to customers or other third parties, or (2) loss or damage arising out of the sale or contributory negligence of the purchaser, its employees or agents, or any third part, or (3) any special or punitive damages of any nature. If Power Hawk Technologies, Inc. determines, in its sole and final discretion, that the nature of the defect precludes remedy by repair and/or replacement Power Hawk Technologies, Inc. reserves the right to satisfy any warranty obligation by refunding the full purchase price, on return of all defective goods to Power Hawk Technologies, Inc., shipping cost prepaid. Any action for breach of warranty or other action must be commenced within one (1) year after such cause of action arises, except where applicable law would prohibit any such time restriction in bringing of such an action.

NOTICES. For all notices, information and inquiries concerning this warranty or Power Hawk Technologies Inc. service centers and official Power Hawk Technologies, Inc. factory-trained distributors contact:

Power Hawk Technologies, Inc.,

300 Forge Way, Suite 2

Rockaway, New Jersey 07866 USA

Telephone: 973-627-4646 or 1-800-PWR-HAWK (1-800-797-4295)

Fax: 973-627-4622

Email: powerhawk@powerhawk.com