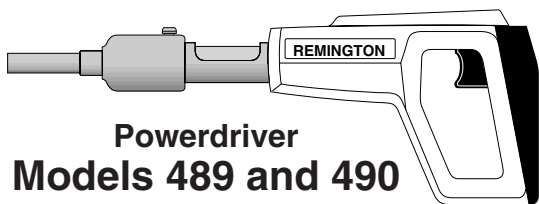


REMINGTON®

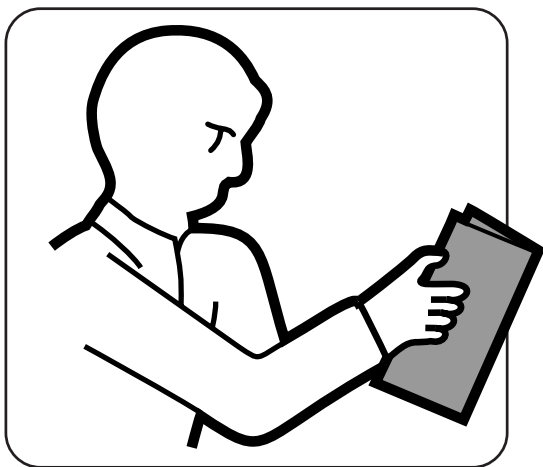


Powerdriver
Models 489 and 490



PATMITM
POWDER ACTUATED TOOL
MANUFACTURERS' INSTITUTE INC.

Operating Instructions



Important:

Read this manual and all labels carefully before operating your powder actuated tool. This manual should always accompany the tool and be transferred with it upon change of ownership.

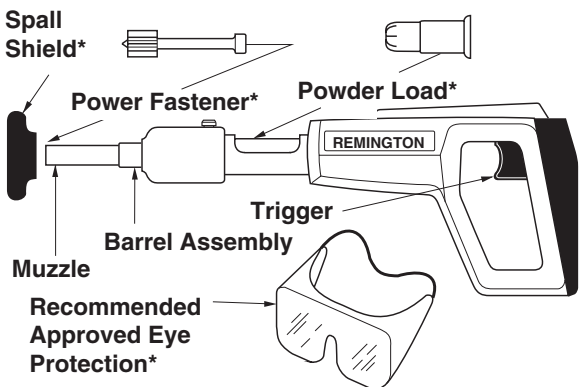
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REMINGTON®

Powerdriver Models 489 and 490

The Remington® Powerdriver Models 489 and 490 are designed for use with Remington® powder .22 caliber Type A neck-down crimped loads and Remington® Power Fasteners which are no longer than 2 1/2" or power washer fasteners no longer than 3". Remington® Power Fasteners are manufactured from special steel and heat treated to produce a very hard yet ductile fastener.



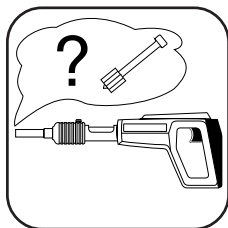
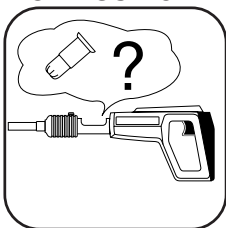
* Not provided with tool.

Warning: Safety Precautions

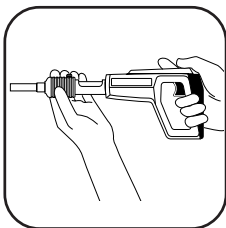
The following pages contain detailed warnings, cautions, and rules of safe operation. Read carefully and become familiar before operating to avoid serious injury. We expressly disclaim any liability for any injury to persons or damage to property which result from your failure to take the precautions contained in this manual.

 **WARNING:** This tool is designed only for use by qualified operators. Qualification is obtained through a thorough understanding of the Safety Warnings and operating instructions as defined in this operating manual. **NOTE:** The labor regulations of many states require that the operator of this tool on a job site be thoroughly trained and certified for competence prior to operating this tool. For certification procedures, call: DESA Specialty Products™ Technical Services Department, 1-800-858-8501 or visit www.desatech.com.

BEFORE USING



1. **ALWAYS** handle the tool as if it were loaded. Before starting work, check that the tool is unloaded and the muzzle is clear. **NEVER** load a tool unless it is going to be used.

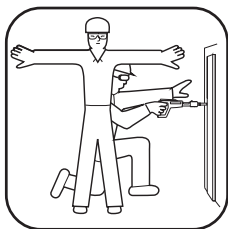


2. **ALWAYS** inspect to make sure the tool is working properly. If the tool does not work properly, remove from service and tag **DEFECTIVE**. **DO NOT** use the tool again until it has been properly repaired.

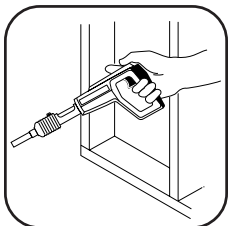


3. Operators and bystanders must **ALWAYS** wear ANSI/ OSHA approved eye and ear protection.

Safety Precautions



4. **ALWAYS** clear the work area on all sides and post appropriate warning signs on job sites.

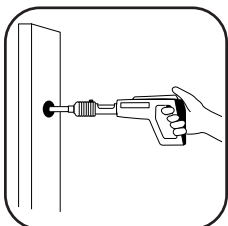
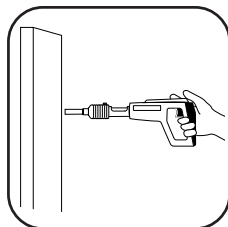
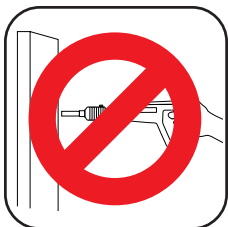


5. **ALWAYS** make sure the work area is clean from loose material and debris.

HANDLING THE TOOL

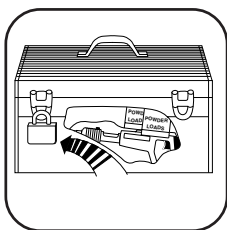
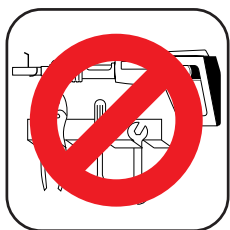


1. **NEVER** place your hand over the muzzle. Accidental discharge can cause serious injury.

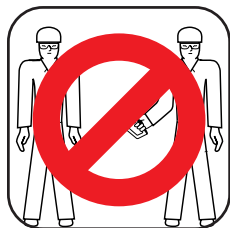


2. **NEVER** place your finger on the trigger until the muzzle of the tool is against the work surface.

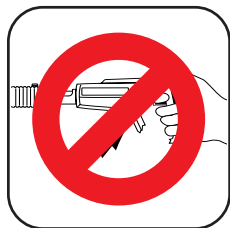
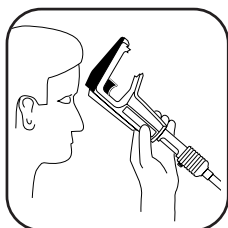
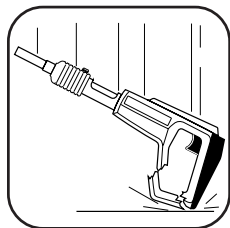
Safety Precautions



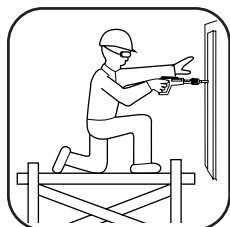
3. **ALWAYS** store **UNLOADED** powder actuated tool and powder loads in a locked container. Keep powder loads of different power levels in separate containers.



4. **NEVER** carry or pass a loaded powder actuated tool. **NEVER** point a powder actuated tool at anyone.



5. If the tool is dropped, inspect for damage and repair it before continuing to work. **NEVER** use a damaged tool.



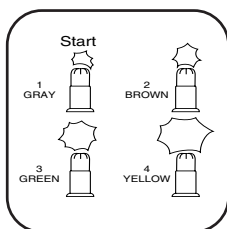
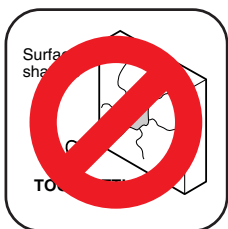
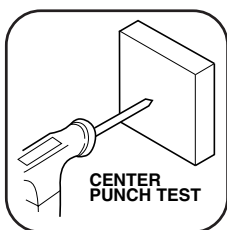
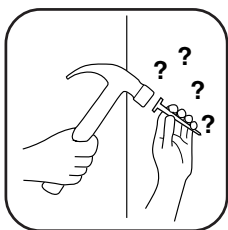
6. **ALWAYS** take precaution to maintain your balance while operating a powder actuated tool.

Safety Precautions



7. An operator taking medication should take extra precautions while handling the tool. **NEVER** drink alcoholic beverages or take medications which impair your vision, balance or judgement before using a powder actuated tool.

KNOW YOUR FASTENING BASE MATERIAL



1. **ALWAYS** know the thickness and type of base material into which you are fastening. **NEVER GUESS.** Test the base material by using the Center Punch Test. The Center Punch Test is performed by using a hammer to test drive the particular power fastener to be used into the material. If the point penetrates easily, the material is too soft. If the point becomes blunt, the material is too hard. If the material fractures, cracks or shatters, the material is too brittle. Test fastenings can be made if the material shows a clear fastener impression and the fastener point is not blunted. Always start with the lowest powder load (Gray-Level 1) and proceeding with the order shown in the lower right-hand figure above. **ALWAYS** wear approved eye protection.

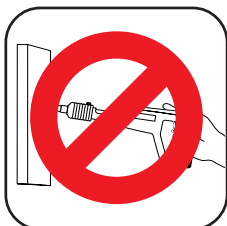
Safety Precautions



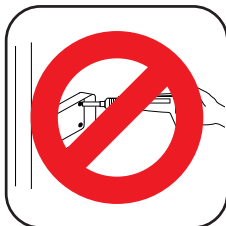
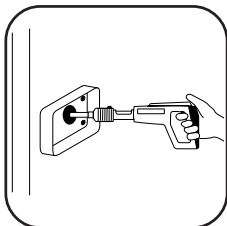
2. **NEVER** attempt to drive power fasteners into very hard or brittle materials including, but not limited to cast iron, glass, tile, stone, brick, or hardened steel. Materials of this type tend to shatter and create hazard from flying particles.



3. **NEVER** make fastenings in spalled or cracked areas.

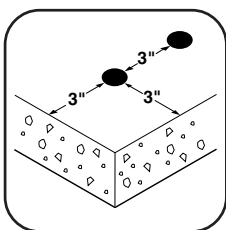
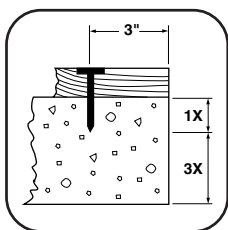


4. **NEVER** drive power fasteners into thin or easily penetrated material unless it is backed by concrete or steel. When in doubt, such as when base material is concealed, conduct a Center Punch Test (See page 6). Check continually to avoid fastening into unsuitable material, especially in older buildings.

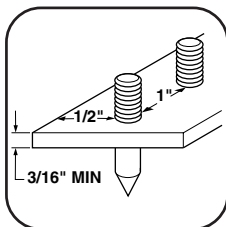
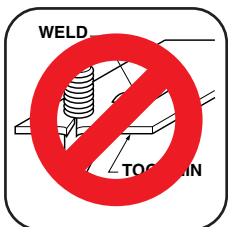


5. **DO NOT** fasten thru or within 1/2" of predrilled or pre-punched holes.

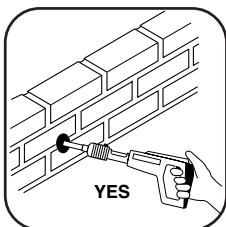
Safety Precautions



6. **DO NOT** drive power fasteners into concrete less than three times as thick as the intended fastener penetration, within 3" of the edge, within 3" of another power fastener, or within 3" of a failed power fastener.

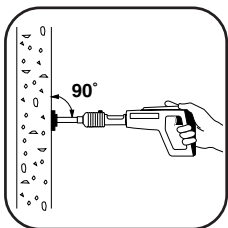


7. **DO NOT** drive power fasteners into steel base material less than 3/16" thick, within 2" of a weld, within 1/2" of the edge, or within 1" of another power fastener.



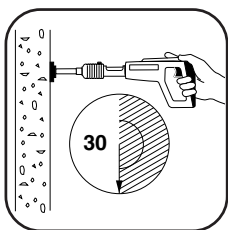
8. When fastening into masonry walls, always drive into horizontal mortar joints, **NEVER** into vertical mortar joints. **BE CAREFUL.** A poorly laid joint may permit too much penetration and/or unsatisfactory holding power.

OPERATING THE TOOL

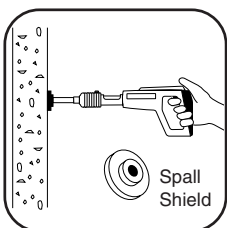
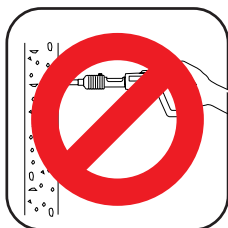


1. **ALWAYS** hold tool perpendicular to work surface.

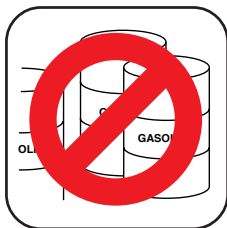
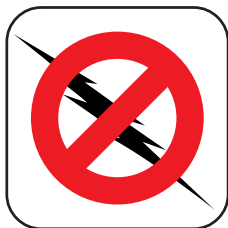
Safety Precautions



2. Should the tool fail to fire, hold the muzzle firmly against the work surface for 30 seconds. Release the trigger and remove pressure on the tool while holding the muzzle against the work surface. Again press the tool firmly against the work surface and pull the trigger. If the tool still fails to fire, hold the tool firmly against the work surface for another 30 seconds before unloading and carefully discarding the misfired powder load into water or oil.

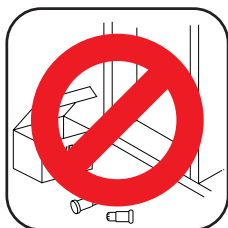


3. **ALWAYS** use the spall shield when driving directly into concrete or steel. **ALWAYS** wear eye protection.



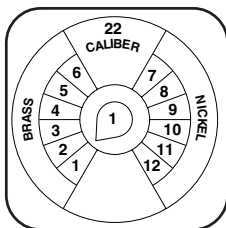
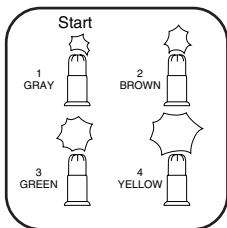
4. **NEVER** use a powder actuated tool in an explosive or flammable atmosphere or when non sparking tools are required.

POWDER LOADS AND FASTENERS



1. **NEVER** leave unfired powder loads on floors or work surfaces.

Safety Precautions



NOTE:

Failure to start with the lowest power level can result in overdrive condition and will result in damage to tool (see page 13).

2. Remington® Powder Loads are available in four power levels with gray (1) being the lowest power level and yellow (4) being the highest power level. Always start with the lowest power level (gray-level 1) and increase until a proper fastening is made (see page 13, *Selecting Fasteners and Loads*).



3. **NEVER** use powder loads in firearms.



4. **NEVER** carry fasteners or other hard objects in the same pocket or container with powder loads.

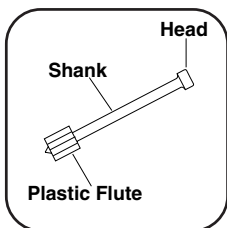


5. A color blind person must take extra precautions to prevent the chance of mixing the powder loads of various levels.

Safety Precautions



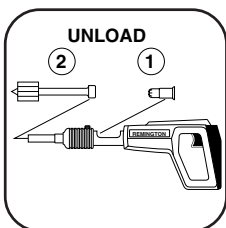
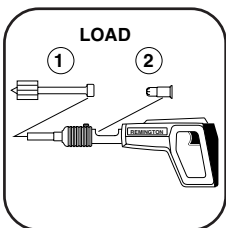
6. Power fasteners are a permanently installed fixture. An act of demolition is required for their removal. Appropriate safety precautions must be taken.



7. **NEVER** use common nails or other materials as fasteners. Remington® Power Fasteners are manufactured from special steel and heat treated to produce a very hard yet ductile fastener.



8. **NEVER** pry a powder load out of the chamber. Prying can discharge the load causing serious injury (see *Troubleshooting Guide* on pages 20 and 21).



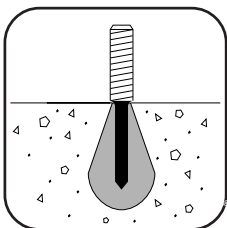
9. **ALWAYS** insert the power fastener first, then the powder load. If work is interrupted for any reason, **ALWAYS** remove the powder load before removing the power fastener (see page 15, item 7).

Why a Power Fastener Holds

WHY A POWER FASTENER HOLDS IN CONCRETE

The compression bond of the concrete to the power fastener accounts for the majority of the holding power. The fastener displaces the concrete which tries to return to its original form causing a squeezing effect.

Maximum holding power is achieved when the depth of penetration produces a bond on the power fastener equal to the strength of the concrete. As a general rule, penetration should be approximately 1" to 1 1/4" into the base concrete. Make sure the concrete is at least three times as thick as the intended fastener penetration. **NEVER** have the power fastener point protrude thru the concrete.

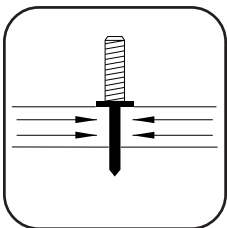


NOTE: Concrete needs to cure for 28 days before maximum fastening holding power will be achieved.

WHY A POWER FASTENER HOLDS IN STEEL

Holding power in steel depends on the elasticity of the steel. The steel pushes back on the shank of the power fastener.

Drop a marble into water; the water parts, the marble continues down, the water closes back. This is similar to the reaction when a power fastener penetrates steel.



In steel, the point of the power fastener must penetrate completely through for highest holding power. If the fastener does not penetrate, the spring action of the steel pushes back on the point and tends to force the fastener out.

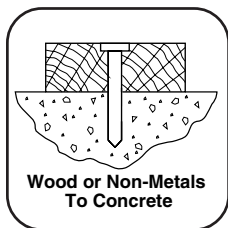
Recommended applications are between 3/16-3/8" steel.

NOTE: When fastening in steel be sure the point goes thru the steel.

Selecting Power Fasteners and Powder Loads

FASTENING INTO CONCRETE

The proper power fastener length can be determined by adding the thickness of the material to be fastened and the amount of fastener that will actually penetrate the concrete. The concrete must be three times as thick as the intended fastener penetration. In most cases, penetration should be approximately 1" to 1 1/4" into the base concrete material.



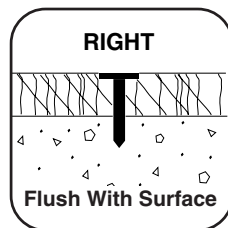
FASTENING INTO STEEL

The proper fastener length can be determined by adding the thickness of the material to be fastened and the thickness of the steel. The point of the power fastener must go completely through the steel.



POWDER LOADS

Always start with the lowest power level (gray-level 1). If the first test fastener does not penetrate to the desired depth, move to the next highest power level (brown-level 2). Increase until a proper fastening is made. **IMPORTANT:** Damage to the tool will result if the above instructions are not followed (see illustrations to right and lower right).



OVERDRIVEN POWER FASTENERS AND PISTON

An overdriven power fastener results when too strong of a powder load is used causing the piston to extend past the muzzle. Move to the next lightest powder load. Repeated overdrive will damage your tool. By avoiding overdrive, you can extend the life of your tool considerably and avoid costly repairs.

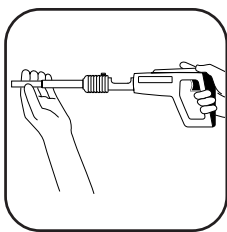
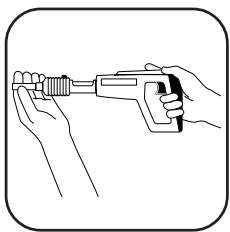


Piston Extended
Out of Muzzle

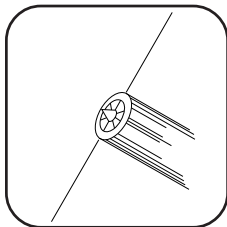
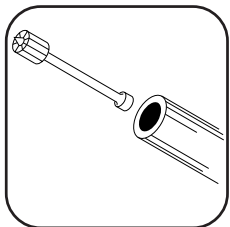
NOTE: NEVER fire the tool without a power fastener. This can damage the tool and/or cause possible injury to the operator.

IMPORTANT: DO NOT use power fasteners longer than 2 1/2", or power washer fasteners longer than 3". Power fasteners longer than 2 1/2" and power washer fasteners longer than 3" will cause load ejection problems.

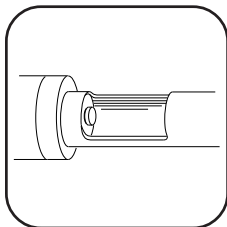
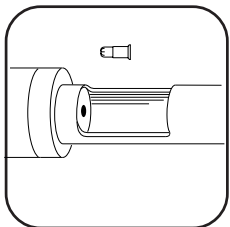
Operation



1. Grasp muzzle and slide barrel forward rapidly until it stops. This sets piston into firing position and opens the chamber.



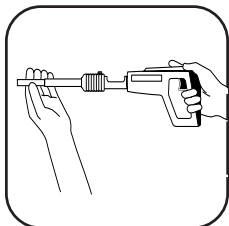
2. Insert power fastener into muzzle of tool, head end first. Push the fastener until point is even with end of tool. **ALWAYS** load the fastener first, then the powder load.



NOTE:

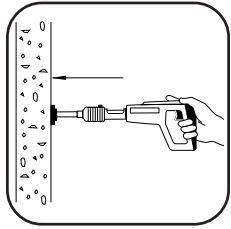
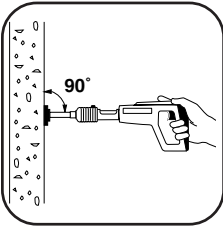
Failure to start with the lowest power level can result in overdrive condition and will result in damage to tool (see page 13).

3. Select the proper Remington® Powder Load (see *Application Chart* on pages 24 and 25) and insert into the chamber until it stops.

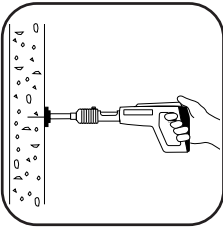


4. Push barrel into housing to the closed position.

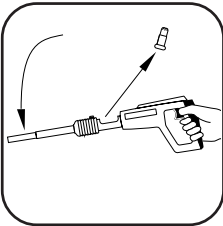
Operation



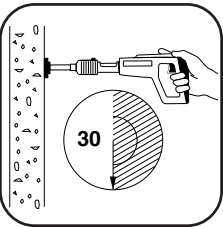
5. Place the muzzle of tool perpendicular to work surface without tilting the tool. Push tool against work surface until sliding action of barrel stops.



6. Squeeze trigger to set power fastener. Be sure to keep pressure on tool during this operation.

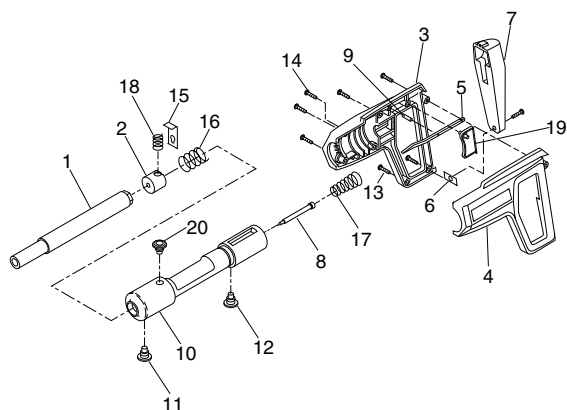


7. After fastening is made, slide barrel forward rapidly. This motion ejects the spent powder load and resets the piston for the next fastening. Make sure spent load has ejected from tool.



8. Should the tool fail to fire, hold the muzzle firmly against the work surface for 30 seconds. Release the trigger and remove pressure on the tool while holding the muzzle against the work surface. Again press the tool firmly against the work surface and pull the trigger. If the tool still fails to fire, hold the tool firmly against the work surface for another 30 seconds before unloading and carefully discarding the misfired powder load into water or oil.

Parts List



Key No.	Part No. 489	Part No. 490	Description	Qty.
1	TA4080	TA4080	BARREL, Assembly and Piston	1
2	076659	076659	BREECH	1
3	076620-02	076620	HOUSING, Handle, Right	1
4	076630-02	076630	HOUSING, Handle, Left	1
5	078334	078334	LINK, Trigger	1
6	076943	076943	NUT, Pad Recoil	1
7	098679-01	098679-01	PAD, Recoil	1
8	075370	075370	PIN, Firing	1
9	044279	044279	PIN, Spring	1
10	098720-02	098720-01	RECEIVER, Assembly	1
11	055436	055436	SCREW, Barrel	1
12	077183	077183	SCREW, Breech	1
13	076674	076674	SCREW, Housing	2
14	077277	077277	SCREW, Housing	6
15	076657	076657	SEAR	1
16	077191	077191	SPRING, Breech	1
17	056217	056217	SPRING, Pin, Firing	1
18	056218	056218	SPRING, Sear	1
19	076671	076671	TRIGGER	1
20	077708	077708	PAD, Pressure Assembly	1

ACCESSORIES

Part No. Description

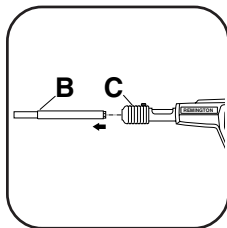
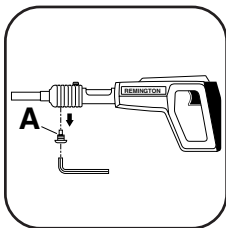
TA4090	SHIELD, Spall
056415	GOGGLES
056485	BRUSH, 1/4"
056486	BRUSH, 5/8"
103754	HEX WRENCH, 3/16"

IMPORTANT: Do not use key numbers when ordering service parts. Always order components by part number and description. Include Model and Serial numbers.

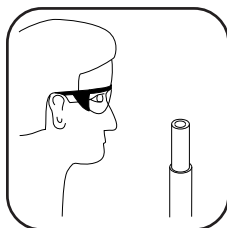
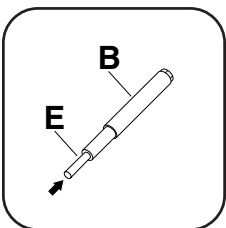
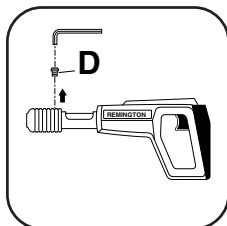
Barrel Replacement



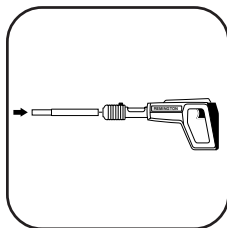
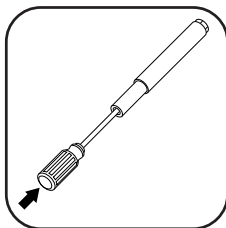
WARNING: Never disassemble, replace barrel, clean, or assemble a powder actuated tool while it is loaded.



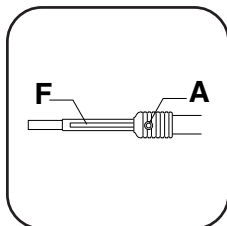
1. Remove front screw (A). Slide barrel assembly (B) from receiver (C). Remove pressure pad assembly (D).



2. If tool has been overdriven, tap piston (E) on a hard surface until the piston is pushed back into the muzzle. Inspect the barrel assembly (B) and replace if damaged.

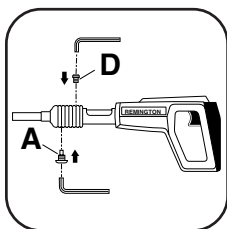


3. To assembly, push piston all the way into the barrel. Slide the barrel assembly into the receiver. Turn barrel to line up slot (F) with front screw hole (A).

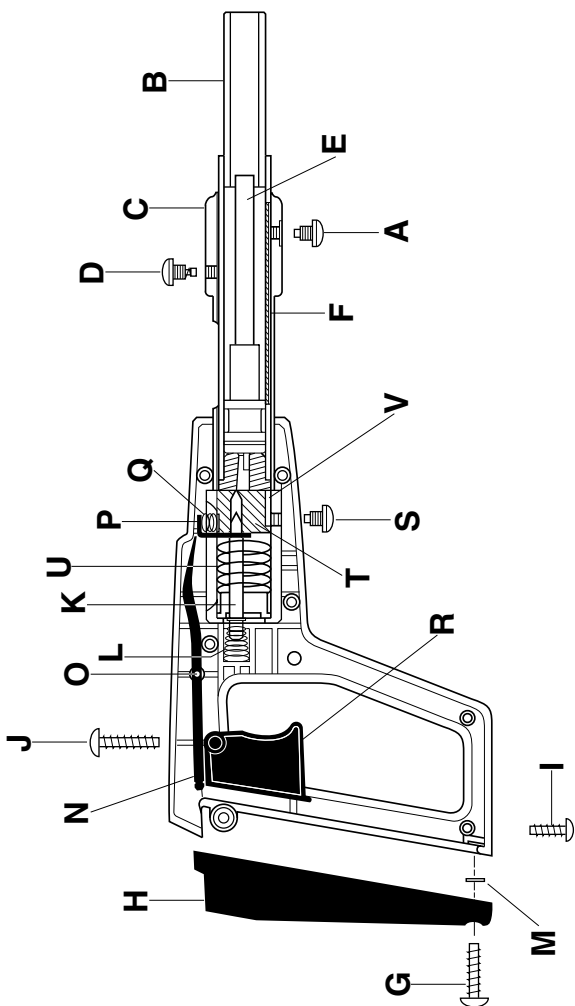


Barrel Replacement (Continued)

4. Insert screw (A) and tighten. Insert and tighten pressure pad assembly (D).



Tool Disassembly And Assembly



Tool Disassembly And Assembly

TOOL DISASSEMBLY

1. Remove screw (G) from recoil pad (H). Lift pad away from handle. Separate housing halves by removing the seven housing screws (I & J).
2. Remove receiver (C), firing pin (K), firing pin spring (L), sheet metal nut (M), trigger link (N), link pin (O), sear (P), and trigger (R).
3. Push barrel assembly (B) into receiver (C). Remove screw (S) from receiver. Remove front screw (A), pressure pad assembly (D), barrel assembly (B), breech (T), and breech spring (U).
4. Clean your tool after each days use by using a penetrating lubricant such as "WD-40" sparingly and wipe dry. Brushes are available through your distributor to aid in cleaning.

TOOL ASSEMBLY

1. Push the piston (E) all the way into the barrel (B). Insert breech spring (U), the breech (T) and barrel assembly (B) into the receiver (C). Make sure the breech slot (V) in the breech (T) is aligned with the hole for breech screw (S).
2. Push the barrel assembly (B) forward until the breech slot (V) is visible through the hole for breech screw (S). Insert and tighten breech screw (S). Align barrel slot (F) with hole for front screw (A). Insert and tighten front screw (A). Insert and tighten pressure pad assembly (D).
3. Insert link pin (O) into housing half. Assemble sear spring (Q) in pocket of breech (T). Insert sear (P) into breech with solid leg facing forward and keyhole leg down. Assemble small end of firing pin spring (L) onto end of firing pin (K) and insert into rear of receiver (C).
4. Place breech end of receiver into housing. Assemble trigger link (N) on link pin (O) with angled end of trigger link up over sear (P).
5. Assemble trigger (R) into housing half. Insert sheet metal nut (M) into housing pocket with hollow side towards grip. Assemble housing halves.
6. Insert short screws (I) into handle bottom. Longer screws (J) into remaining holes in side of housing. Tighten uniformly.
7. Assemble upper part of recoil pad (H) into housing. Insert screw (G) into lower part of recoil pad (H) and tighten.
8. Test tool without powder load by depressing barrel against work surface, pulling trigger, and releasing tool. Test several times to insure that the firing mechanism operates freely.

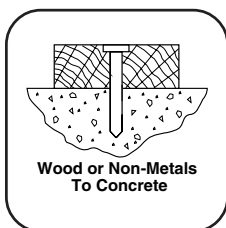
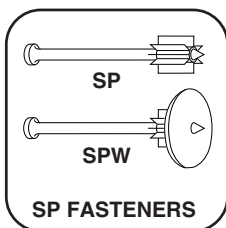
Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	REMEDY
Piston hangs out of muzzle.	Tool overdriven.	Tap piston on a hard surface until piston is pushed back into the muzzle (see <i>Overdriven Fastener</i> below).
	Piston not properly assembled in relation to barrel screw.	Remove barrel assembly. Follow instructions for barrel replacement (see page 17). Replace all damaged or missing parts.
	Broken piston.	Replace barrel assembly or take tool to your distributor.
Overdriven fastener.	Excessive power.	Change either to next lower powder load or next longer length fastener.
Piston jammed.	Overdriving of fastener (see above).	Remove barrel assembly. Follow instructions for barrel replacement (see page 17). Replace other parts if damaged.
Expend load will not extract. Reduction or loss of power.	Dirty or damaged chamber.	Clean chamber. If loads will not chamber with slip-fit or extraction difficulties continue, take tool to your distributor.
	Broken ejector.	Replace barrel assembly or take tool to your distributor.
	Pins being used are over 2 1/2" long.	Use proper pin size.
Reduction or loss of power	Piston not returning to full rear position.	Barrel must be snapped to the full extended position to properly position piston against breech.
	Worn piston ring or broken piston.	Replace barrel assembly or take tool to your distributor.
Tool does not completely depress.	Misassembled or damaged breech and firing pin parts.	Remove breech and check all parts for correct fit assembly.
Tool does not fire.	Failure of tool to depress completely.	See data listed under <i>Tool does not completely depress</i> , above.

Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	REMEDY
Tool does not fire.	Dirt build-up on breech not allowing proper penetration of firing pin.	Check firing pin indentation on cartridge. Clean breech, breech face, sear and firing pin. Replace worn or damaged parts.
Opening and closing of barrel or pushing down on the tool, etc. is not smooth but is rough or binds.	Lack of proper cleaning.	Inspect and clean complete tool. Replace worn or damaged parts.

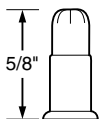
Fasteners



Fasten wood or non-metals to concrete or steel.

IMPORTANT

This tool is designed to use .22 caliber neck-down crimped loads, power levels 1 (gray) through 4 (yellow).



Neck-Down Crimped Load Straight Wadded Load

⚠ CAUTION: Do not use any load other than the .22 caliber neck-down crimped load. Other types of loads will cause load-ejection problems.

Replacement Parts And Accessories



WARNING: Use only replacement parts and accessories described in this manual. Use of other parts or accessories could damage saw or injure operator.

For original replacement parts and accessories, contact your nearest Authorized Dealer or Authorized Service Center for this product. If they can not supply the part or accessory, contact your nearest Parts Central listed on page 23. Each Authorized Dealer, Authorized Service Center, and Parts Central is independently owned and operated.

See page 16 for an Illustrated Parts List.

If you need additional referral information, contact our Technical Service Department (see *Technical Service*).

In Canada call 1-800-561-3372 for parts information.

Technical Service

You may have further questions about assembling, operating, or maintaining this product. If so, you can visit our Technical Service web site at **www.desatech.com** or contact our Technical Service Department at 1-800-858-8501 (English Only). You may also write to:

DESA Specialty Products™

P.O. Box 90004

Bowling Green, KY 42102-9004

ATTN: Technical Service Specialty Products

When contacting DESA Specialty Products™, have ready

- Your Name
- Your Address
- Your Phone Number
- Model Number of Product
- Date of Purchase (Include copy of receipt for written requests).

Repair Service

Note: Only use original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

Each Authorized Service Center is independently owned and operated.

WARRANTY SERVICE

If product requires warranty service, return it to nearest Authorized Service Center. You must show proof of purchase. If faulty materials or workmanship caused damage, we will repair or replace product without charge. *Note:* Normal wear, misuse, abuse, neglect, or accidental damage is not covered under warranty.

NON-WARRANTY SERVICE

If product requires service, return it to nearest Authorized Service Center. Repairs will be billed to you at regular repair list prices. For additional Service Center or warranty information, call 1-800-858-8501 or visit our Technical Service web site at **www.desatech.com**.

Parts Centrals

Ray's Portable Heater Service

3191 Myers Road
Camino, CA 95709-9550
530-644-7716

Baltimore Electric

5 Manila Drive
Hamden, CT 06514-0322
203-248-7553
1-800-397-7553

Eckley's Small Engine

31617 Spruce Drive
Eustis, FL 32726-9592
352-357-6764

Parts Company of America

1657 Shermer Road
Northbrook, IL 60062-5362
708-498-5900
1-800-323-0620
www.grainger.com

Portable Heater Parts

342 North County Road 400 East
Valparaiso, IN 46383-9704
219-462-7441
1-800-362-6951
www.portableheaterparts.com
sales@portableheaterparts.com
techservice@portableheaterparts.com

FBD

1349 Adams Street
Bowling Green, KY 42103-3414
270-846-1199
1-800-654-8534
franktalk@aol.com

Lyons & Lyons Sales Co. Inc.

Glen Arm Road
Glen Arm, MD 21057-9454
410-665-6500
1-800-333-5966
lyonsco@erols.com

Master Part Distributors

1251 Mound Avenue NW
Grand Rapids, MI 49504-2672
616-791-0505
1-800-446-1446
www.masterparts.net

Hance Distributors, Inc.

12795 16th Avenue North
Plymouth, MN 55441-4556
763-559-2299
www.hanceco.com

Automotive Equipment Service

3117 Holmes
Kansas City, MO 64109-1716
816-531-9144
1-800-843-3546
www.aes-lawnparts.com

Bowden Electric Motor Service

1681 S. Wesleyan Blvd.
Rocky Mount, NC 27803
252-446-4203

East Coast Energy

10 East Route 36
West Long Branch, NJ 07764-1501
1-800-755-8809

Forrest Lytle and Sons, Inc.

740 West Galbraith Road
Cincinnati, OH 45231-6002
513-521-1464

Bortz Chain Saw Shop

Road #2, Box 64A
Oley, PA 19547-9412
610-987-6452

21st Century

2950 Fretz Valley Road
Perkasie, PA 18944-4034
215-795-0400
1-800-325-4828

Laportes

2444 N 5th Street
Hartsville, SC 29550-7704
843-332-0191

MTA Distributors

555 Hickory Hills Blvd.
Nashville, TN 37189-9244
615-299-8777
1-800-264-0225

Webbs Appliance Center

1519 Church Street
Nashville, TN 37203-3004
615-329-4079
1-800-899-4079

Industrial Hardware

4109 Bainbridge Blvd.
Chesapeake, VA 23324-1403
804-543-2232
1-800-788-0008
catatem@erols.com

Mills Lawn and Garden













928 Commonwealth Place
Virginia Beach, VA 23464
757-361-9293
www.mills-parts.com

Tuco Industrial Products

5223 180th Street SW
Suite 4A-1
Lynnwood, WA 98037-4506
425-743-9533
1-800-735-1268
www.tucoheat.com

Application Chart

Powder load and power fastener application information.

For Fastening this:	to this:	Power fastener length	Power load color
 Two by fours	Concrete	2 1/2"	Green
	Cement block	2 1/2"	Green
	Steel (3/16" to 3/8" thick)	2"	Yellow
			
 Furring strips	Concrete	1 1/2"	Green
	Cinder block	1 1/2"	Gray
	Cement block	1 1/2"	Brown
	Steel (3/16" to 3/8" thick)	2"	Yellow
			
 Electrical Junction boxes	Concrete	1"	Green
	Cement block	1"	Brown
	Steel	3/4"	Green
			
 Conduit clips	Concrete	1"	Green
	Cement block	1"	Brown
	Cinder block	1"	Gray
	Steel	3/4"	Green
			
 Shelf brackets	Concrete	1"	Green
	Cement block	1"	Brown
	Cinder block	1"	Gray
			
 1/4" Plywood or pegboard	Concrete	1 1/4"	Green
	Cement block	1 1/4"	Green
	Steel	1"	Yellow
			

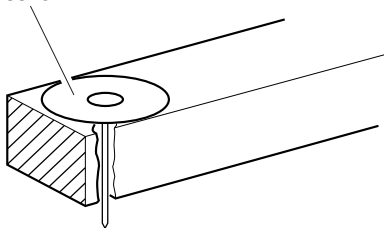
Powder load listings are recommendations only. If you are in doubt, try a test fastening using the next lightest powder load.

Power fasteners and powder loads are available in poly packages of 10, blister packs of 25 and cartons of 100.

IMPORTANT


- Recommended for use with Remington® powder loads and power fasteners.
- Do not use power fasteners longer than 2 1/2" or power washer fasteners longer than 3".
- If power fastener goes below the top surface of the board, use penetrating control disc (see illustration below) or washered SPW-type fasteners.
- Always wear approved eye and ear protection.

*Use power fastener with penetration control disc, part number 015549.



Application Chart

.22 CALIBER Type A neck-down crimp loads for powder actuated tools

	Stock Number	Load Level Number	Load Strength	Color Code	
				Case Body	Head
	A22C1	1	light	brass	Gray
	A22C2	2	medium	brass	Brown
	A22C3	3	heavy	brass	Green
	A22C4	4	extra heavy	brass	Yellow

NOTES

Limited Warranty Agreement

DESA Specialty Products™ warrants the Remington® Powerdriver Models 489 and 490 against defects in materials and workmanship for a period of one (1) year from the date of purchase.

If within one (1) year from the purchase date this Powder Actuated Tool fails due to a defect in material or workmanship, DESA Specialty Products™ will repair or replace the tool at DESA Specialty Products™ option. To obtain service under this warranty, contact DESA Specialty Products™ at the number/address listed below. You must have the Serial Number, Model Number, date of purchase and indicate the type of problem being experienced. DESA Specialty Products™ will send replacement part(s), repair, or replace the tool at DESA Specialty Products™ option. However, this warranty does not cover failures caused by misusing or abusing the product (for proper use of this product, read and understand the operating instructions in this owners manual). Repairs made because of misuse, abuse, negligence, or accident will be charged for at regular repair prices.

This express and limited warranty is the only warranty on this product, and to the full extent permitted by law there are no other warranties, express or implied, including warranties of merchantability and/or fitness for a particular purpose which extend beyond the terms of this express and limited warranty.

To the full extent permitted by law, the liability of DESA Specialty Products™ for personal injury, property damage, or any other damage whatsoever, including consequential and incidental damages, arising from the sale or use of this product shall not exceed the purchase price of this product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For information about this warranty write:



P.O. Box 90004
Bowling Green, KY 42102-9004
www.desatech.com

U.S.A. ONLY

For Technical Assistance on Your
Remington® Powder Actuated Tool Or
For Certification Procedures, Call
Technical Services Department
1-800-858-8501 Or
Visit www.desatech.com