

Operating Instructions



Important:

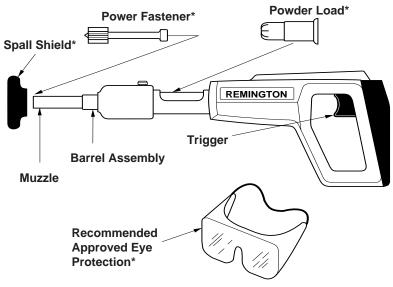
Read this manual and all labels carefully before operating your powder actuated tool. This manual should always accompany the tool and be transferred with it upon change of ownership.

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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.



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 <u>only</u> 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 Technical Services Department, 1-800-323-5190.

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.





 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.





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.





 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.



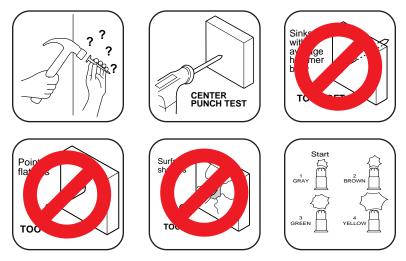


 ALWAYS take precaution to maintain your balance while operating a powder actuated tool.



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.





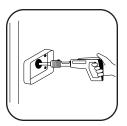
 NEVER attempt to drive power fasteners into very hard or brittle materials including, but not limited to cast iron, glass, tile, stone, brick, or hardened steel. Materials of this type tend to shatter and create hazard from flying particles.



3. NEVER make fastenings in spalled or cracked areas.

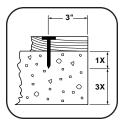


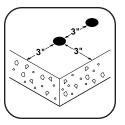
4. NEVER drive power fasteners into thin or easily penetrated material unless it is backed by concrete or steel. When in doubt, such as when base material is concealed, conduct a Center Punch Test (See page 6). Check continually to avoid fastening into unsuitable material, especially in older buildings.





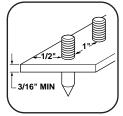
5. DO NOT fasten thru or within 1/2" of predrilled or pre-punched holes.



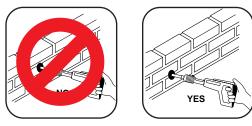


6. DO NOT drive power fasteners into concrete less than three times as thick as the intended fastener penetration, within 3" of the edge, within 3" of another power fastener, or within 3" of a failed power fastener.



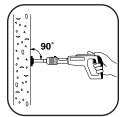


7. DO NOT drive power fasteners into steel base material less then 3/16" thick, within 2" of a weld, within 1/2" of the edge, or within 1" of another power fastener.



 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.





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.





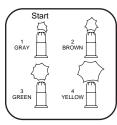
4. **NEVER** use a powder actuated tool in an explosive or flammable atmosphere or when non sparking tools are required.

POWDER LOADS AND FASTENERS





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





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.



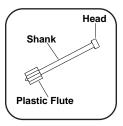
4. **NEVER** carry fasteners or other hard objects in the same pocket or container with powder loads.



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



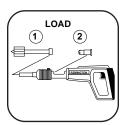
6. Power fasteners are a permanently installed fixture. An act of demolition is required for their removal. Appropriate safety precautions must be taken.

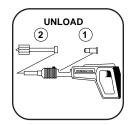


7. **NEVER** use common nails or other materials as fasteners. Remington Power Fasteners are manufactured from special steel and heat treated to produce a very hard yet ductile fastener.



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

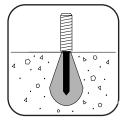
Holding power in steel depends on the elasticity of the steel. The steel pushes back on the shank of the power fastener.

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

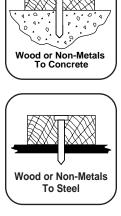
Always start with the lowest power level (gray-level 1). If the first test fastener does not penetrate to the desired depth, move to the next highest power level (brown-level 2). Increase until a proper fastening is made. **IMPORTANT:** Damage to the tool will result if the above instructions are not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

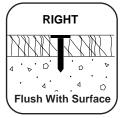
OVERDRIVEN POWER FASTENERS AND PISTON

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.

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.







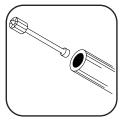
Piston Extended Out of Muzzle

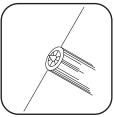
Operation



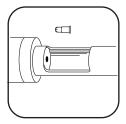


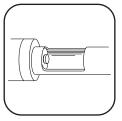
1. Grasp muzzle and slide barrel forward rapidly until it stops. This sets piston into firing position and opens the chamber.





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.





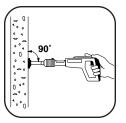
NOTE: Failure to start with the lowest power level can result in overdrive condition and will result in damage to tool (see page 13).

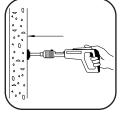
3. Select the proper Remington Powder Load (see *Application Chart* on pages 22 and 23) and insert into the chamber until it stops.



4. Push barrel into housing to the closed position.

Operation





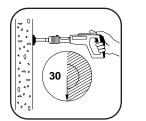
 Place the muzzle of tool perpendicular to work surface without tilting the tool. Push tool against work surface until sliding action of barrel stops.



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



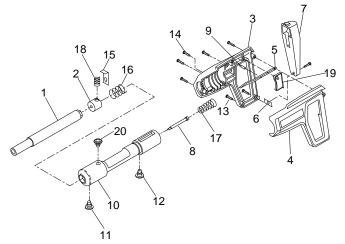
7. After fastening is made, slide barrel forward rapidly. This motion ejects the spent powder load and resets the piston for the next fastening. Make sure spent load has ejected from tool.





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	Part No.	Part No.		
No.	489	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.

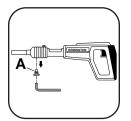
Description

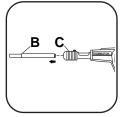
TA4090	SHIELD, Spall
056415	GOGGLES
056485	BRUSH, 1/4"
056486	BRUSH, 5/8"
103754	HEX WRENCH, 3/16"

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



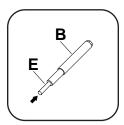
WARNING: Never disassemble, replace barrel, clean, or assemble a powder actuated tool while it is loaded.







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

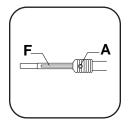




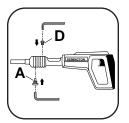
 If tool has been overdriven, tap piston (E) on a hard surface until the piston is pushed back into the muzzle. Inspect the barrel assembly (B) and replace if damaged.



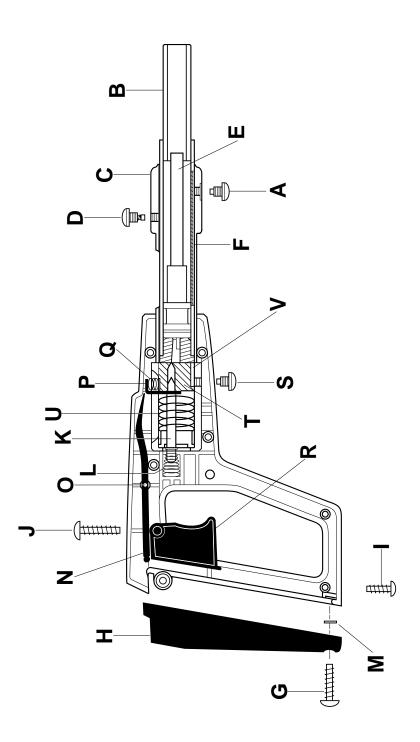




3. To assembly, push piston all the way into the barrel. Slide the barrel assembly into the receiver. Turn barrel to line up slot (F) with front screw hole (A).



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



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).
- 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).
- 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).
- 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

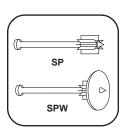
- Push the piston (E) all the way into the barrel (B). Insert breech spring (U), the breech (T) and barrel assembly (B) into the receiver (C). Make sure the breech slot (V) in the breech (T) is aligned with the hole for breech screw (S).
- 2. Push the barrel assembly (B) forward until the breech slot (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).
- 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).
- 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 as- sembled 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 barrer replacement (see page 17) Replace other parts if dam aged.	
Expended load will not extract. Reduction or loss of power.	Dirty or damaged chamber.	Clean chamber. If loads wi not chamber with slip-fit of extraction difficulties con tinue, take tool to your dis tributor.	
	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</i> does not completely depress, above.	

Troubleshooting Guide (cont.)

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 dam- aged parts.
Opening and clos- ing 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 dam- aged parts.



SP FASTENERS



Fasteners

Wood or Non-Metals

To Concrete

IMPORTANT

Wood or Non-Metals

To Steel

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.

For fastening this	to this	power fastener length	powder load color	
Two by fours	 Concrete Cement block Steel (3/16" to 3/8" thick) 	2 ¹ /2" 2 ¹ /2" 2"	Green Green Vellow	
Furring strips	Concrete Cinder block Cement block Steel (3/16" to 3/8" thick)	$ \begin{array}{c} 1 & \frac{1}{2}'' \\ 1 & \frac{1}{2}'' \\ 1 & \frac{1}{2}'' \\ 2'' \end{array} $	Green Gray Brown Yellow	
Electrical junction boxes		1" 1" 3/4"	Green Brown Green	
Conduit clips	Concrete Cement block Cinder block Steel	1" 1" 1" 3/4"	Green Brown Gray Green	
Shelf brackets	Concrete Cement block Cinder block	1" 1" 1"	Green Brown Gray	
1/4" Plywood or pegboard	Concrete Cement block Steel	1 ¹ /4" 1 ¹ /4"	Green Green Yellow	

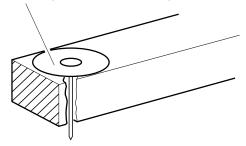
Powder load and power fastener application information.

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

Parts and Accessories Not Under Warranty

Contact authorized dealers of this product. If they can't supply original replacement part(s), either contact your nearest Parts Central (see below) or call DESA International's Parts Department at 1-800-972-7879.

When calling DESA International, have ready

- · model and serial numbers of your tool
- replacement part number

REMINGTON PAT PARTS CENTRALS

BALTIMORE ELECTRIC

1348 Dixwell Avenue Hamden, CT 06514-0322 1-800-397-7553 203-248-7553 Parts Department

*ALL TOOL & FASTENER

7830 N.W. 72nd Avenue Miami, FL 33166 305-888-6909 Parts Department

*PRECISION TOOL

1726B Hazelwood Drive Marietta, GA 30067 678-560-6811 Bob Young

***PORTABLE HEATER PARTS**

342 No. County Road 400 East Valparaiso, IN 46383-9704 219-462-7441 1-800-362-6951

*FBD

601 Hope Street Bowling Green, KY 42103-3414 270-796-8406 1-800-654-8534

*Certified For Service

MASTER SERVICE CENTER

1184 Wilson Ave. NW Grand Rapids, MI 49544-3458 US 1-800-446-1446 616-791-4760 Mike Fowler

FOUR FLAGS POWER PROD.

1115 Stateline Road Niles, MI 49120-4728 1-800-268-4983 1-616-684-2697 Parts Department

*MANZO ASSOCIATES

1645 Bustleton Pike Feasterville, PA 19053-1305 215-364-0480 Parts Department

21st CENTURY

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

BLUEBONNET TOOL

10490 Shady Trail Suite 104 Dallas, TX 75354-1145 214-358-2363 Ken Perry

106092

Limited Warranty Agreement

DESA International 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 will repair or replace the tool at DESA's option. To obtain service under this warranty, contact DESA 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 will send replacement part(s), repair, or replace the tool at DESA's 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 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:



2701 Industrial Drive P.O. Box 90004 Bowling Green, KY 42102-9004

U.S.A. ONLY

For Technical Assistance or Repair on Your Remington Powder Actuated Tool, Call Technical Services Department 1-800-323-5190.

You can also visit DESA International's Technical Service web site at **www.desatech.com**.

> For Certification Procedures, Call 1-800-626-2237

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