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LIMITED WARRANTY (ONE YEAR) ON SIMPSON STRONG-TIE® BRAND TOOLS

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PATMI POWER ACTUATED TOOL MANUFACTURERS' INSTITUTE

The PTP-27S, PTP-27SMAGR, PTP-27L and PTP-27LMAGR tools comply with OSHA requirements and with ANSI A10.4 2007 specifications.

Return Tools To:

Northwest U.S.A.
Simpson Strong-Tie Co. Inc.
5151 S. Airport Way
Stockton, CA 95206
(209) 234-7775

Southwest U.S.A.
Simpson Strong-Tie Co. Inc.
12246 Holly Street
Riverside, CA 92509
(800) 999-5099

Northeast U.S.A.
Simpson Strong-Tie Co. Inc.
2600 International Street
Columbus, OH 43228
(614) 876-8060

Southeast U.S.A.
Simpson Strong-Tie Co. Inc.
2221 Country Lane
McKinney, TX 75069
(972) 542-0326

Eastern Canada
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Western Canada
Simpson Strong-Tie Co. Inc.
11476 Kingston Street
Maple Ridge, BC V2X 0Y5
(604) 465-0296

T-SAS-PTP27MN12 2/12

WARNING

Read This Manual BEFORE Operating These Tools

SIMPSON Strong-Tie®

OPERATOR'S MANUAL

PTP-27S • PTP-27SMAGR
and
PTP-27L • PTP-27LMAGR

.27 Caliber Fully Automatic Magazine Tools

SIMPSON Strong-Tie®

5956 W. Las Positas Blvd., Pleasanton, CA 94588 • www.strongtie.com

SAFETY STARTS WITH YOU

A. TRAINING

1. All operators must complete the tool manufacturer's training before attempting to take an exam or to operate Simpson Strong-Tie® tools. You must obtain certification of training from an authorized Simpson Strong-Tie instructor. If such training is not available where you purchased the tool, call or write Simpson Strong-Tie before attempting to operate the tool for information on the nearest authorized instructor. Simpson Strong-Tie also offers online training and certification. For more information, visit ***www.strongtie.com***. Remember, obtaining this instruction is ***YOUR RESPONSIBILITY.***
2. Read this manual completely and understand its contents fully before attempting to operate the tool. If there is anything in this manual that you do not fully understand, ask your instructor or call Simpson Strong-Tie for information. Reading and understanding this manual is ***YOUR RESPONSIBILITY***.

B. LIMITATIONS

1. Just as no instruction book of any kind can forewarn a learner against all possible situations or emergencies that may arise, neither can Simpson Strong-Tie instructors or printed instructions detail all possible conditions or circumstances surrounding the use of this tool or its supporting products. Recognizing these circumstances and reacting in a safe manner is ***YOUR RESPONSIBILITY***.
2. Simpson Strong-Tie disclaims any responsibility for injury or death, which may result from any disregard of this manual or the verbal instruction of the authorized Simpson Strong-Tie instructor. Following the rules of safe operation given to you here and verbally is ***YOUR RESPONSIBILITY***.

SAFETY STARTS WITH YOU!!!
OBTAIN AUTHORIZED TRAINING

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TABLE OF CONTENTS

Safety Starts with You 1
Introduction 2
General Handling of P.A.T. and Powder Loads 3
Making Safe Fastenings 4
The "Nevers" of P.A.T. Fastening 5
Before Chambering a Powder Load 6
Safe Handling Practices of P.A.T. 7
Operating Principles of P.A.T. 8
Principles and Guidelines for Proper Fastening 9-10
Schematic and Parts for the PTP-27SMAGR and PTP-27LMAGR 11-12
Schematic and Parts for the PTP-27S and PTP-27L 13-14
How to Load and Fire the PTP-27SMAGR and PTP-27LMAGR 15-17
How to Load and Fire the PTP-27S and PTP-27L 18-19
Dismantling the PTP-27SMAGR and PTP-27LMAGR 20
Dismantling the PTP-27S and PTP-27L 21
Maintaining and Cleaning 22
Magazine Conversion 23
Single-Shot Conversion 24
Troubleshooting Tips 25-26
PTP-27SMAGR and PTP-27LMAGR Kit Contents 26
Tool Warranty ..... Back Cover

INTRODUCTION

The Simpson Strong-Tie® PTP-27S, PTP-27SMAGR, PTP-27L and PTP-27LMAGR tools are low-velocity or indirect-acting, powder-actuated tools (P.A.T.). Do not attempt to operate either of these tools or any other tool before obtaining proper training and operator certification.

READ THIS MANUAL CAREFULLY!

Understanding the safety features, operating principles and limitations of the tool will help you operate the tool with the greatest SAFETY and efficiency. Simpson Strong-Tie disclaims any responsibility for incidents resulting from the disregard of these instructions.

GENERAL HANDLING OF P.A.T. AND POWDER LOADS

GENERAL HANDLING OF THE PTP-27S, PTP-27SMAGR, PTP-27L, PTP-27LMAGR AND ALL P.A.T. TOOLS

1. Always point the tool away from yourself and all bystanders.
2. Open the tool before operating to make sure it is not loaded.
3. Never place your hand over the front of the tool.
4. Never operate the tool without checking to see if the barrel is free of obstructions and that the tool is clean and in good working condition.
5. **Never** attempt to alter, modify or manufacture parts for use in your Simpson Strong-Tie® tool, this can cause malfunctions and result in unsafe functioning of the tool. Use only genuine Simpson Strong-Tie parts, fasteners and powder loads at all times.
6. Operators and bystanders must wear eye and ear protection and head protection is recommended. Serious injury or death can occur if these safety items are not used.
7. Posting a warning sign, "Warning, Powder-Actuated Tool In Use" is a minimum warning where P.A.T. tools are in use.
8. **REMEMBER:** Use common sense and good judgment. Use these tools for their intended purpose only. Know the material you are fastening into making certain it is compatible with the powder actuated tool.

HANDLING THE PTP-27S, PTP-27SMAGR, PTP-27L, PTP-27LMAGR, AND POWDER LOADS

1. ***Always*** wear eye and ear protection; head and hand protection is recommended.
2. ***Always*** properly brace yourself when working on scaffolding or ladders.
3. **Never** carry powder loads in the same pocket or container with fasteners or any other hard objects.
4. **Never** use powder-actuated loads in firearms. They are more powerful than normal small arms ammunition.
5. **Never** carry a loaded tool from job to job.
6. **Never** use the tool for anything other than its intended purpose.
7. **Never** use powder actuated tools in flammable atmospheres.
8. **Never** attempt to force a load into the chamber of the tool.
9. **Never** strike or pry a load.

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MAKING SAFE FASTENINGS

BASE MATERIAL SUITABILITY AND THE CENTER PUNCH TEST

Before loading the tool or fastening into any material, check the suitability and thickness of the base material. To check base material suitability, give it the center punch test.

CENTER PUNCH TEST:

Using the fastener as a punch, with a hammer, strike a solid blow to the actual material you wish to fasten into, then look for these results:

1. If the point of the fastener is blunted, the material is too hard and is unsuitable. If the material is too hard, the fastener can ricochet, and possibly escape, striking you or bystanders and cause serious injury or death.
2. If the material cracks or shatters, it is too brittle and is unsuitable. This can result in particles striking the operator or bystanders, or the fastener could pass completely through the base material causing serious injury or death.
3. If the fastener sinks into the material with the hammer blow, the material is too soft and is unsuitable. If the material is too soft, the fastener can pass completely through and strike someone on the other side causing serious injury or death.
4. If the fastener makes a small indentation in the base, the base material is suitable for fastening into.

DO NOT USE POWDER-ACTUATED TOOLS FOR FASTENING INTO THESE MATERIALS:

1. Vertical mortar joints
2. Bricks
3. Hollow block or tile
4. Glazed tile
5. Glass
6. Hardened or tool grade steel
7. Cast iron
8. Welded areas or torch cuts
9. Spring steel
10. Natural rock

BASE MATERIAL THICKNESS

Thickness of the base material is perhaps the most important consideration for good safe fastenings. In concrete, the thickness must be three times the shank penetration; in other words, for 1" of shank penetration, the concrete must be at least 3" thick. In steel, the thickness must be equal to or greater than the diameter of the shank. Fastening into any base material, which is too thin, may enable the fastener to pass through and escape – resulting in serious injury or death.

THE "NEVERS" OF P.A.T. FASTENING

GUIDELINES FOR SAFE FASTENING

1. **Never** hold the tool at an acute angle to the work surface. The tool must be perpendicular to the work surface making certain that NO debris is present on the surface.
2. **Never** set a fastener too close to another installed fastener as this can cause a ricochet.
3. **Never** fasten less than 3" from the edge of unsupported concrete or masonry, or less than ½" from the edge of steel except for specific applications recommended by the tool manufacturer.
4. **Never** fasten into rough, spalled, cracked or uneven concrete. Fasten at least 3" from the outer edge of a spalled area.
5. **Never** fasten into material that is too hard, such as hardened steel, welds, cast steel, marble, spring steel, natural rock, etc. This could cause the fastener to shatter and escape and result in serious injury or death.
6. **Never** fasten into material that is too brittle, such as glass, glazed brick, glazed tile, slate, etc. This could cause the material to shatter and result in serious injury or death.
7. **Never** fasten into material that is too soft, such as wood, plaster, drywall composition board, plywood, etc. This could cause the fastener to pass through and escape resulting in serious injury or death.
8. **Never** fasten through an existing hole in any material as the fastener could hit the edge of the hole and ricochet.
9. **Never** leave the chamber loaded. If you decide not to make a fastening after having loaded the tool, remove both the powder load and fastener from the tool before returning it to its case.
10. **Never** place your hand or any part of your body over the front of tool, and make sure there is no load chambered and no fasteners in the fastener guide.
11. **Never** point the tool toward any person.

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BEFORE CHAMBERING A POWDER LOAD

PREPARE FOR LOADING

1. ***Always*** open the tool and inspect it to be certain it is unloaded.
2. ***Always*** check to be sure that the tool is clean. Excessive dirt or debris can cause accidental firing or misfiring of the tool.
3. **Never** load or fire the tool in an explosive atmosphere or when flammables are nearby.
4. **Never** use improper powder loads or fasteners in the tool, as this may be unsafe or damage the tool.
5. ***Always*** insert the fastener first, and the load last. Make sure you never double load the fasteners.
6. **Never** allow bystanders to gather around you when using the tool.
7. **Never guess** – before fastening into any unknown base material, particularly into walls, perform the center punch test described in this manual.
8. **Never guess** – once you determine that the base material is suitable, make a test fastening with the lowest level powder load. If that powder load does not set the fastener, try the next highest load, and so on until the fastener is properly set.

SELECTING FASTENERS AND LOADS

Powder Loads for PTP-27S, PTP-27SMAGR, PTP-27L and PTP-27LMAGR

Model No	Description
P27SL2	.27 Cal. - Brown (level 2)
P27SL3	.27 Cal. - Green (level 3)
P27SL4	.27 Cal. - Yellow (level 4)
P27SL5	.27 Cal. - Red (level 5)
P27SL6	.27 Cal. - Purple (level 6)

Fasteners for the PTP Tools

		PTP-27S	PTP-27L	PTP-27SMAGR	PTP-27LMAGR
Simpson Strong-Tie® Fasteners	Description	Pin Length (in.)	Pin Length (in.)	Pin Length (in.)	Pin Length (in.)
PDPA-XXX	.300" headed, .157" dia shank	Max 1½	Max 2½	N/A	N/A
PDP-XXX	.300" headed, .145" dia shank	Max 1½	Max 2½	N/A	N/A
PDPH-XXX	.300" headed, .177" dia shank	Max 1½	Max 2½	N/A	N/A
PDPW-XXX	.300" headed w/ ¾" washer	Max 2	All	N/A	N/A
PDPWL-XXX	.300" headed w/ 1" washer	Max 2	All	N/A	N/A
PDPHWL-XX	.300" headed w/ 1" washer	Max 2	All	N/A	N/A
PINWP-XXX	.300" headed w/ 1⅜" plastic washer	Max 1½	All	N/A	N/A
PINW-XXX	.300" headed w/ 1⅞" washer	Max 2	All	N/A	N/A
PHN-XXX	8 mm headed	Max 1½	Max 2½	N/A	N/A
PHNW-XXX	8 mm headed w/ 1" washer	Max 2	All	N/A	N/A
PSLV4-XXXXX	¼"-20 threaded stud	Max 1½	All	N/A	N/A
PDPT-XXX	.300" headed Tophat	all	All	N/A	N/A
PHCB-XXX	.300" headed highway basket clip	Max 1½	Max 2½	N/A	N/A
PBXDP-XXX	.300" headed BX cable strap	all	All	N/A	N/A
PECLDP-XXX	.300" headed ceiling clips	all	All	N/A	N/A
PCCXXX-DPXXX	.300" headed conduit clips	all	All	N/A	N/A
PHSNA-XXX	8 mm headed w/ 3.68 mm shank, 10-collated	N/A	N/A	Max 1¼	Max 2⅞

SAFE HANDLING PRACTICES OF P.A.T.

1. If the powder load does not fire after pulling the trigger, hold the tool firmly against the work surface for at least 30 seconds. Carefully remove the tool from the work surface, making sure to point it away from yourself and any bystanders. Remove the load and dispose of it in a can of water. Unfired loads must never be thrown in trash containers or carelessly discarded in any way.
2. **NEVER** attempt to force or pry an unfired powder load from the chamber with a sharp or pointed object, as this may cause an accidental discharge.
3. **NEVER** attempt to disassemble a jammed tool containing a live powder load. Tag the tool "DO NOT USE" and store it safely in a locked case. Call your Simpson Strong-Tie® representative for tool repair.
4. If at any time during the operation of the tool you feel it is not working properly, STOP using it and call your Simpson Strong-Tie representative.
5. If unnecessary bystanders are in the area tell them to leave, warn all others that you are using a powder-actuated tool.
6. Check the work surface to be sure it is clear of any debris. Clear away any debris so that the tool sits flush on the work surface.
7. Check the work area for explosive or flammable materials. If any are found, remove them before operating the tool.
8. Check the chamber of the tool to be sure there is no dirt, grit or foreign objects present.
9. Check the fastener guide to make sure you don't double load it with fasteners, and that it is clear of any obstruction.
10. Any tool found not to be in proper working condition shall be immediately removed from service and tagged "Defective Tool," until it has been repaired according to manufacturer's instructions.

BEFORE loading the tool, operate it a few times on a solid surface making certain all parts move freely and that the firing pin clicks when the tool is fully depressed and the trigger is pulled. "Dry firing" will not damage the tool.

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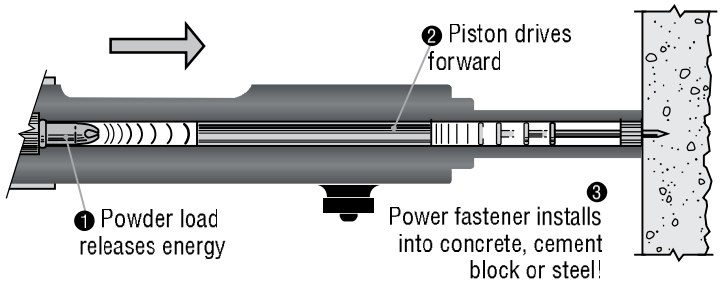
OPERATING PRINCIPLES OF P.A.T.

THERE ARE TWO TYPES OF POWDER-ACTUATED TOOLS:

INDIRECT-ACTING TYPE TOOL

Indirect-acting type tools work by expanding gases that act directly on a piston which drives the piston forward to strike the fastener.



DIRECT-ACTING TYPE TOOL

Direct-acting type tools work by expanding gases that act directly on the fastener without the use of a piston. Direct-acting tools are no longer manufactured in North America and are regarded as far less safe to operate than indirect-acting tools. Simpson Strong-Tie only provides indirect-acting type tools.

CAUTION: Powder-actuated tools are capable of fastening into concrete and/or steel. The fastener enters the work surface with an extreme amount of energy. Make certain not to misdirect the energy.

SAFETY STARTS WITH YOU!

As the powder-actuated tool operator, your safety and the safety of those around you should always be kept in mind. Consider that the least powerful load used in powder actuated tools produce approximately 10 times the power of a .22 caliber long rifle cartridge. Respect this power as you would a chain saw, a lawn mower or a rifle.

FASTENING INTO MASONRY MATERIALS:

Masonry materials suitable for fastening into include:

- Poured concrete
- Precast concrete
- Pre-stressed concrete
- Grout-filled concrete block
- Grouted joints

Fasteners are primarily held into masonry by a clamping of the concrete around the fastener. Factors that influence a fastener driven into concrete include:

- Depth of penetration
- Compressive strength of concrete
- Fastener spacing and edge distance
- Fastener shank diameter
- Concrete aggregate

PROPER DEPTH OF PENETRATION:

	.145" Dia. Shank Penetration
Concrete Block & Joints	1"–1¼"
Concrete 2000–2500 psi	9-10 times shank Dia. or 1¼"–1½"
Concrete 2500–4000 psi	7-8 times shank Dia. or 1"–1¼"
Precast or prestressed concrete 4,000 psi	5-6 times shank Dia. or ⅞"–1¼"

FASTENER EDGE DISTANCE ON CONCRETE:

Distance should be no closer than 3".

MINIMUM DISTANCE BETWEEN FASTENINGS:

.125" to .145" shank diameter fasteners – 3" spacing.
.172" to .187" diameter shank pin - 4" spacing.
.218" to .25" diamter shank pin - 6" spacing.

CONCRETE THICKNESS:

Concrete thickness must be at least three times the fastener penetration.

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PRINCIPLES AND GUIDELINES FOR PROPER FASTENING

FISH-HOOKING:

"Fish-hooking" is when the fastener curves when driven into concrete, due to the fastener hitting large, hard, or excessive amounts of aggregate, rebar or any hard object. Fish-hooking can reduce the holding power of the fastener, result in spalling, and may increase unsafe conditions due to escaping particles. Fish-hooking can be minimized by:

- Reducing shank penetration
- Increasing shank diameter
- Using appropriate powder load level. Excessive power can cause over driving.
- Fastening through a metal disc

FASTENING INTO STEEL:

The most common type of steel fastened into is structural steel in the form of beam, angle iron, channel, tee, plate and strip. The holding power of the powder-actuated fastener is a function of the gripping action of the steel base material around the fastener and the fusion of the fastener to the base material.

FACTORS THAT INFLUENCE THE HOLDING POWER OF FASTENERS IN STEEL ARE:

- Shank diameter: Larger shank diameters increase holding power
- Thickness of steel base material: Thicker base material increases holding power
- Fastener point penetration: Getting the point to pass through base material by approximately ¼" maximizes holding power
- Knurled fasteners: Knurling on the fastener provides interlocking of the shank and the base material that increases the holding power

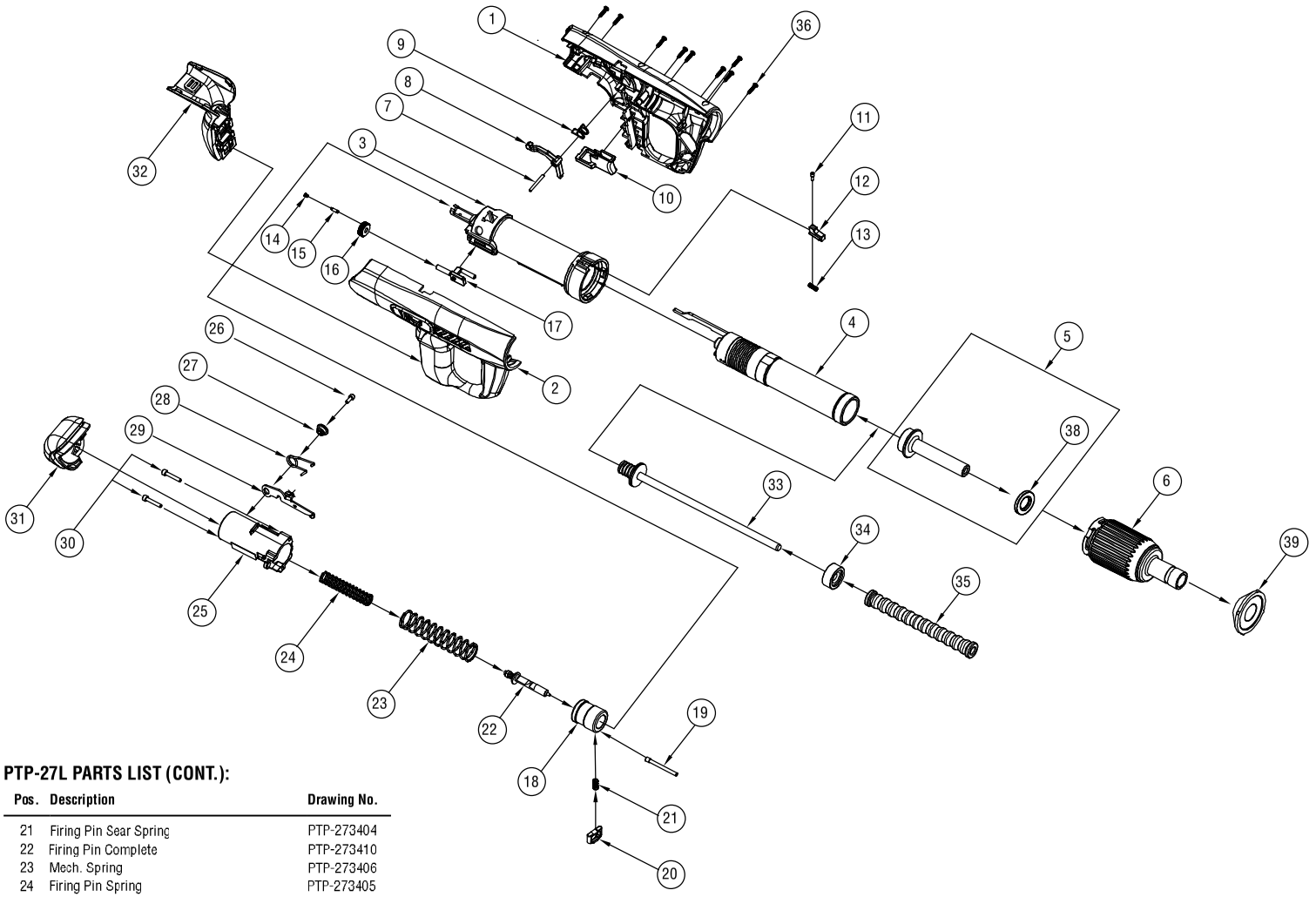
GENERAL RULES:

Minimum spacing of fasteners into steel is 1½". Minimum edge distance of fasteners into steel is ½". Steel thickness must be no less than the shank diameter of the fastener.

SCHEMATIC AND PARTS FOR THE PTP-27S AND PTP-27L TOOLS

PTP-27S PARTS LIST:

Pos.	Description	Drawing No.
1	Left Handle	PTP-273102
2	Right Handle	PTP-273101
3	Receiver	PTP-273210
4	Short Barrel	PTP-273330
5	Short Fastener Guide for PTP-27S and L	PTP-273820
6	Short Baseplate	PTP-273810
7	Trigger Lever Pin	PTP-273107
8	Trigger Lever	PTP-273108
9	Trigger Lever Spring	PTP-273109
10	Trigger	PTP-273105
11	Slide Screw	PTP-273203
12	Slide	PTP-273201
13	Slide Spring	PTP-273202
14	Regulator Nut Spring	PTP-355603
15	Regulator Nut Pin	PTP-355602
16	Regulator Nut	PTP-273602
17	Regulator Bolt	PTP-273601
18	Firing Pin Mech.	PTP-273402
19	Pushing Pin	PTP-273401
20	Firing Pin Sear	PTP-273403
21	Firing Pin Sear Spring	PTP-273404
22	Firing Pin Complete	PTP-273410
23	Mech. Spring	PTP-273406
24	Firing Pin Spring	PTP-273405
25	Receiver Base	PTP-273501
26	Advance Lever Screw	PTP-355604
27	Advance Lever	PTP-273507
28	Advance Lever Spring	PTP-273503
29	Advance Lever	PTP-273502
30	Receiver Base Screw	PTP-273505
31	Plug Cover	PTP-273104
32	Cushing Handle	PTP-273103
33	Short Piston	PTP-273320
34	Piston Disk	PTP-273306
35	Short Rubber Returner	PTP-273305
36	Handle Screw	PTP-273106
38	Buffer Ring	PTP-273856
39	Spall Guard	PTP-273855



PTP-27L PARTS LIST:

Pos.	Description	Drawing No.
1	Left Handle	PTP-273102
2	Right Handle	PTP-273101
3	Receiver	PTP-273210
4	Long Barrel	PTP-274330
5	Short Fastener Guide for PTP-27S and L	PTP-273820
6	Long Baseplate	PTP-274810
7	Trigger Lever Pin	PTP-273107
8	Trigger Lever	PTP-273108
9	Trigger Lever Spring	PTP-273109
10	Trigger	PTP-273105
11	Slide Screw	PTP-273203
12	Slide	PTP-273201
13	Slide Spring	PTP-273202
14	Regulator Nut Spring	PTP-355603
15	Regulator Nut Pin	PTP-355602
16	Regulator Nut	PTP-273602
17	Regulator Bolt	PTP-273601
18	Firing Pin Mech.	PTP-273402
19	Pushing Pin	PTP-273401
20	Firing Pin Sear	PTP-273403

PTP-27L PARTS LIST (CONT.):

Pos.	Description	Drawing No.
21	Firing Pin Sear Spring	PTP-273404
22	Firing Pin Complete	PTP-273410
23	Mech. Spring	PTP-273406
24	Firing Pin Spring	PTP-273405
25	Receiver Base	PTP-273501
26	Advance Lever Screw	PTP-355604
27	Advance Lever Spacer	PTP-273507
28	Advance Lever Spring	PTP-273503
29	Advance Lever	PTP-273502
30	Receiver Base Screw	PTP-273505
31	Plug Cover	PTP-273104
32	Cushing Handle	PTP-273103
33	Short Piston	PTP-273320
34	Piston Disk	PTP-273306
35	Long Rubber Returner	PTP-274305
36	Handle Screw	PTP-273106
38	Buffer Ring	PTP-273856
39	Spall Guard	PTP-273855

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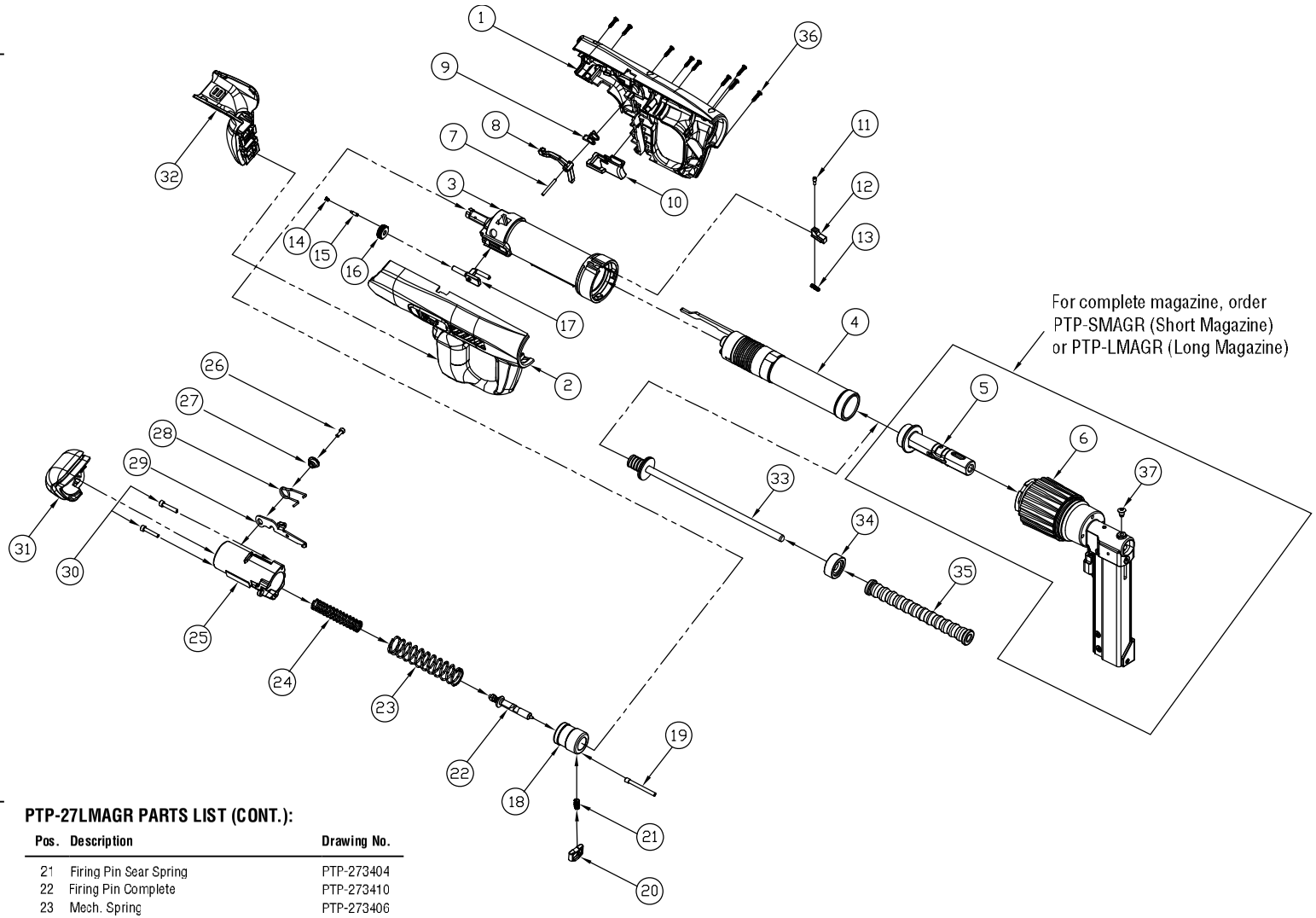
SCHEMATIC AND PARTS FOR THE PTP-27SMAGR AND PTP-27LMAGR TOOLS

PTP-27SMAGR PARTS LIST:

Pos.	Description	Drawing No.
1	Left Handle	PTP-273102
2	Right Handle	PTP-273101
3	Receiver	PTP-273210
4	Short Barrel	PTP-273330
5	Short Fastener Guide for PTP-27SMAGR	PTP-275820
6	Short Magazine Body	PTP-275810
7	Trigger Lever Pin	PTP-273107
8	Trigger Lever	PTP-273108
9	Trigger Lever Spring	PTP-273109
10	Trigger	PTP-273105
11	Slide Screw	PTP-273203
12	Slide	PTP-273201
13	Slide Spring	PTP-273202
14	Regulator Nut Spring	PTP-355603
15	Regulator Nut Pin	PTP-355602
16	Regulator Nut	PTP-273602
17	Regulator Bolt	PTP-273601
18	Firing Pin Mech.	PTP-273402
19	Pushing Pin	PTP-273401
20	Firing Pin Sear	PTP-273403
21	Firing Pin Sear Spring	PTP-273404
22	Firing Pin Complete	PTP-273410
23	Mech. Spring	PTP-273406
24	Firing Pin Spring	PTP-273405
25	Receiver Base	PTP-273501
26	Advance Lever Screw	PTP-355604
27	Advance Lever Spacer	PTP-273507
28	Advance Lever Spacer	PTP-273503
29	Advance Lever	PTP-273502
30	Receiver Base Screw	PTP-273505
31	Plug Cover	PTP-273104
32	Cushing Handle	PTP-273103
33	Short Piston	PTP-273320
34	Piston Disk	PTP-273306
35	Short Rubber Returner	PTP-273305
36	Handle Screw	PTP-273106
37	Nose Piece Screw	PTP-275826

PTP-27LMAGR PARTS LIST:

Pos.	Description	Drawing No.
1	Left Handle	PTP-273102
2	Right Handle	PTP-273101
3	Receiver	PTP-273210
4	Long Barrel	PTP-274330
5	Long Fastener Guide for PTP-27LMAGR	PTP-276820
6	Long Magazine Body	PTP-276810
7	Trigger Lever Pin	PTP-273107
8	Trigger Lever	PTP-273108
9	Trigger Lever Spring	PTP-273109
10	Trigger	PTP-273105
11	Slide Screw	PTP-273203
12	Slide	PTP-273201
13	Slide Spring	PTP-273202
14	Regulator Nut Spring	PTP-355603
15	Regulator Nut Pin	PTP-355602
16	Regulator Nut	PTP-273602
17	Regulator Bolt	PTP-273601
18	Firing Pin Mech.	PTP-273402
19	Pushing Pin	PTP-273401
20	Firing Pin Sear	PTP-273403



PTP-27LMAGR PARTS LIST (CONT.):

Pos.	Description	Drawing No.
21	Firing Pin Sear Spring	PTP-273404
22	Firing Pin Complete	PTP-273410
23	Mech. Spring	PTP-273406
24	Firing Pin Spring	PTP-273405
25	Receiver Base	PTP-273501
26	Advance Lever Screw	PTP-355604
27	Advance Lever Spacer	PTP-273507
28	Advance Lever Spring	PTP-273503
29	Advance Lever	PTP-273502
30	Receiver Base Screw	PTP-273505
31	Plug Cover	PTP-273104
32	Cushing Handle	PTP-273103
33	Long Piston	PTP-276320
34	Piston Disk	PTP-273306
35	Long Rubber Returner	PTP-274305
36	Handle Screw	PTP-273106
37	Nose Piece Screw	PTP-275826

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HOW TO LOAD AND FIRE THE PTP-27SMAGR AND PTP-27LMAGR TOOLS

Never place your hand over the nose of the tool unless inserting a fastener and then only with the chamber empty. The PTP-27SMAGR is shown in the demonstration below. The same technique is applicable to the PTP-27LMAGR.

1. Pull the magazine spring latch down, then swing the magazine door completely open.

2. Insert a strip of 10 pins into the back of the magazine. Note the magazine is designed for no more than 10 pins.

3. Close the magazine door making sure the spring latch is locked.

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HOW TO LOAD AND FIRE THE PTP-27SMAGR AND PTP-27LMAGR TOOLS (CONTINUED)

4. Select the proper strip powder load for the application. With the metal casing pointing toward the front of the tool, insert the strip through the bottom of the handle until the bottom of the strip is flush with the bottom of the tool handle.

5. Dial the power regulator to full power. The power regulator is a tool feature that allows the user to lower the power output. The ideal use of the power regulator is to achieve power output that is between powder load levels. Example: If a red powder load delivers too much power and a yellow powder load delivers too little power for the application, use a red powder load, then dial the power regulator down ⅛ to ¼ down from full power. To lower the power output, turn the thumb wheel until the dial indicator moves toward the "–" sign. Note: Only use the power regulator to reduce power by less than 1 powder load level. Using a red powder load to achieve a yellow or green powder load output is not a good use of the power regulator since doing this will shorten the life of the power regulator and other components of the tool. Even if you dial the power down, if you use a red powder load (high power load level), the tool still has to absorb the excess energy.

HOW TO LOAD AND FIRE THE PTP-27SMAGR AND PTP-27LMAGR TOOLS (CONTINUED)

6. Make sure the tool is perpendicular (90°) to the work surface. Fully depress the tool against the work surface, then pull the trigger.

7. Adjust the power regulator down if necessary. Dial down the power regulator ⅛ to ¼ down from full power.

8. Remove the spent powder strip load by grasping the strip from the top side of the tool and firmly pull upwards in a smooth motion.

Note: If three or fewer pins are in the magazine and need to be removed, they can be taken out by using a small Allen wrench or other small-stem rod that can be inserted into the hole in the top of the barrel and pushed out.

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HOW TO LOAD AND FIRE THE PTP-27S AND PTP-27L TOOLS

The PTP-27S is shown; however, the same loading and firing instructions apply to the PTP-27L.

1. Load the pin, tip pointing out into the end of the tool, so the pin tip is flush with the end of the fastener guide.

2. Select the proper strip powder load for the application. With the metal casing, pointing toward the front of the tool, insert the strip through the bottom of the handle until the strip is flush with the bottom of the tool handle.

3. Dial the power regulator to full power. The power regulator is a tool feature that allows the user to lower the power output. The ideal use of the power regulator is to achieve power output that is between powder load levels. Example: If a red powder load delivers too much power and a yellow powder load delivers too little power for the application, use a red powder load, then dial the power regulator down ⅛ to ¼ down from full power. To lower the power output, turn the thumb wheel until the dial indicator moves toward the "–" sign. Note: Only use the power regulator to reduce power by less than 1 powder load level. Using a red powder load to achieve a yellow or green powder load output is not a good use of the power regulator since doing this will shorten the life of the power regulator and other components of the tool. Even if you dial the power down, if you use a red powder load (high power load level), the tool still has to absorb the excess energy.

HOW TO LOAD AND FIRE THE PTP-27S AND PTP-27L TOOLS (CONTINUED)

4. Make sure the tool is perpendicular (90°) to the work surface. Fully depress the tool against the work surface, then pull the trigger.

5. Adjust the power regulator down if necessary. Dial down the power regulator ⅛ to ¼ down from full power.

6. Remove the spent powder strip load by grasping the strip from the top side of the tool and firmly pull upwards in a smooth motion.

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DISMANTLING THE PTP-27SMAGR AND PTP-27LMAGR TOOLS

The PTP-27SMAGR and PTP-27LMAGR tools have wearable parts that occasionally need replacing, and the tool requires periodic cleaning.

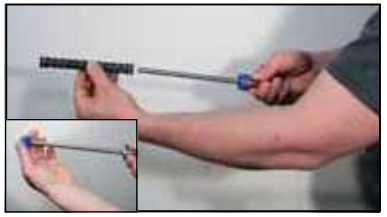
To dismantle the tools:

1. Pull back on the baseplate spring latch.

2. Turn the baseplate ¼ turn and slide the baseplate with magazine off the front of the tool.

3. Slide the barrel out of the front of the tool.

4. Pull the piston out of the front of the barrel.



5. Slide the rubber returner and piston disk off the piston.

The front of the tool is now disassembled

DISMANTLING THE PTP-27S AND PTP-27L TOOLS

The PTP-27S and PTP-27L tools have wearable parts that occasionally need replacing, and the tool requires periodic cleaning. A PTP-27S is shown below in the demonstration. The same technique applies to dismantling a PTP-27L.

To dismantle the tools:

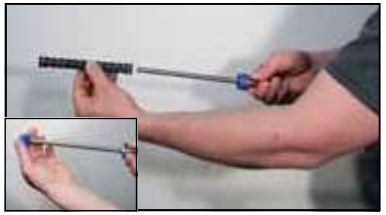
1. Pull back on the baseplate spring latch.

2. Turn the baseplate ¼ turn and slide the baseplate off the front of the tool.

3. Lift the fastener guide off the barrel.

4. Slide the barrel out of the front of the tool.

5. Pull the piston out of the front of the barrel.



6. Slide the rubber returner and piston disk off the piston.

   The front of the tool is now disassembled for replacing wearable components, such as the rubber returner, piston or piston disk.

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MAINTENANCE AND CLEANING

MAINTAINING THE PTP-27S, PTP-27L, PTP-27SMAGR AND PTP-27LMAGR TOOLS:

A clean and maintained tool always functions best. These tools should be cleaned after each day of use or after 1,000 continuous fastenings. While cleaning the tool, check the wearable parts such as the piston, rubber returner and piston disk for signs of wear or damage.

CLEANING THE TOOLS:

With the front of the tool disassembled, and with the provided lubricant and brushes, spray the lubricant, brush and wipe clean with a clean towel, the following parts:

1) Piston – make sure to clean the chamber end of the piston and wipe the shaft clean.
2) Barrel – clean the inside and outside of the barrel, making sure the chamber end is free of any dirt or debris.
3) Baseplate – remove dirt and residue from inside the baseplate.
4) Receiver – remove dirt and residue from inside the receiver.
5) Magazine – brush and clean any moving parts inside the magazine. Make sure excess lubricant is wiped clean. Excess lubricant can attract additional dirt.

WHILE CLEANING THE TOOL, MAKE SURE WEARABLE PARTS ARE IN GOOD CONDITION.

1) Rubber Returner – if there are signs of cracking or end splitting, replace the rubber returner.
2) Piston – if the end is flared or the shaft bent, replace the piston
3) Piston Disk – if there are any signs of cracking, replace the piston disk.

TOOL PARTS TO BE CLEANED OR REPLACED:

MAGAZINE CONVERSION

The PTP-27S and PTP-27L tools are automatic tools. They can be converted from a single-shot to a magazine tool by changing a few parts (purchased separately). The PTP-27S is shown below; however, the same technique is used for the PTP-27L.

CONVERTING THE PTP-27S TOOL TO A MAGAZINE TOOL:

1. Pull back the spring latch on the receiver.

2. Turn the baseplate ¼ turn, slide it off.

3. Remove the single-shot fastener guide.

4 If necessary, replace the piston and rubber returner.

Note: Magazine kits have proper piston and rubber returner included.

5. Slide on the PTP-27SMAGR magazine, then turn ¼ turn until the receiver spring latch snaps into locking position.

To order the magazine conversion kit for the PTP-27S or PTP-27L tools, order the part numbers: PTP-27SMAGR or PTP-27LMAGR.

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SINGLE-SHOT CONVERSION

The PTP-27SMAGR and PTP-27LMAGR tools are fully automatic magazine tools. They can be converted to an automatic single-shot tool by changing a few parts (purchased separately). As single-shot tools, pin assemblies such as preassembled washer pins and clips can be installed. The PTP-27SMAGR is shown below; however, the same technique is used for the PTP-27LMAGR.

CONVERTING THE PTP-27SMAGR TOOL TO A SINGLE-SHOT TOOL:

1. Pull back the spring latch on the receiver.

2. Turn the baseplate with magazine ¼ turn and slide the magazine off.

3. Slide on the single-shot nosepiece. This part will rest on with no latches or fasteners.

   If necessary, replace the piston and rubber returner. These parts are included in the single-shot conversion kits.

4. Slide on the single-shot baseplate, then turn ¼ turn until the receiver spring latch snaps into locking position.

To order the single-shot conversion kit for the PTP-27SMAGR tool, order the part number: PTP-27SCON.

TROUBLESHOOTING TIPS

Symptom	Cause	Solution
Over-driving Fasteners	Excessive Power	Change to next lower power level load strip
	Soft Base Material	Check base material – center punch test
	Pin too short for application	Use longer pin or washer pin
Tool does not fire	Tool not completely depressed	Firmly depress tool before firing
	Excessive dirt on chamber and breech	Properly clean tool
	Damaged firing pin or breech	Replace damaged parts*
	Damaged fastener guide	Repair or replace fastener guide
	Receiver Plug has loosened	Tighten receiver plug
	Load misfire	Follow safety procedure in manual
	Tool did not advance strip	See "Strip load will not advance" below
Reduction or loss of power	Piston is not returned to rear position	Clean tool and remove excess carbon built up in barrel
		Inspect rubber returner for damage and replace if necessary
	Damaged piston	Replace or repair worn parts*
	Damaged piston disk	Replace damaged part
Piston will not fully reset	Excess carbon build up in barrel	Completely clean the tool
	Damaged or worn rubber returner	Replace damaged returner with a new returner
	Bent or damaged piston	Replace piston
	Other damaged parts	Tag the tool "Defective – Do not use". Place the tool in a locked container, and contact your local Simpson Strong-Tie® representative
	Plastic debris on piston or in nosepiece	Remove piston, fastener guide and remove debris
Strip load will not advance	Strip is inserted incorrectly	Check proper installation of strip
	Barrel is not fully retracting	Remove barrel then reinstall barrel to reset the strip advance lever
	Advance mechanism is damaged	Contact your local Simpson Strong-Tie representative. Tag the tool and lock it in a container
	Improper strip being used	Do not use .25 caliber in this tool

* should be performed by qualified individuals

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TROUBLESHOOTING TIPS SPECIFIC TO PTP-27SMAGR AND PTP-27LMAGR

Pins do not feed through magazine	Nosepiece is not fully depressed	Make sure fastener guide is fully depressed against work surface
	Magazine or tool is dirty	First remove powder strip load from tool Thoroughly clean the tool and magazine
	Rubber returner is damaged or worn	First remove powder strip load from tool Replace the rubber returner
	Pin is jammed in tool or magazine	First remove powder strip load from tool! Inspect magazine and fastener guide for stray pins and remove the stray pin
	Magazine feed mechanism is damaged	Contact your local Simpson Strong-Tie® representative
	Plastic debris in nosepiece or magazine	Remove debris

PTP-27ASMAGR AND PTP-27ALMAGR KIT CONTENTS

Kit also includes operators exam and P.A.T. warning sign