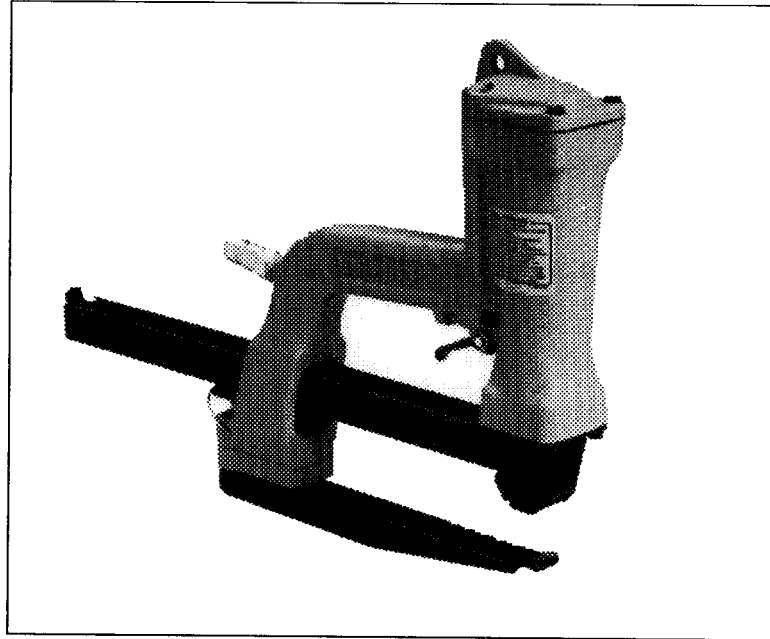


STANLEY **BOSTITCH**[®]

P50

AIR DRIVE PLIER



OPERATION and MAINTENANCE MANUAL

⚠WARNING:

BEFORE OPERATING THIS TOOL, ALL OPERATORS SHOULD STUDY THIS MANUAL, TO UNDERSTAND AND FOLLOW THE SAFETY WARNINGS AND INSTRUCTIONS. KEEP THESE INSTRUCTIONS WITH THE TOOL FOR FUTURE REFERENCE. IF YOU HAVE ANY QUESTIONS, CONTACT YOUR STANLEY-BOSTITCH REPRESENTATIVE OR DISTRIBUTOR.

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STANLEY **BOSTITCH**[®]
Stanley Fastening Systems

INTRODUCTION

The Stanley-Bostitch P50 is a precision-built tool; designed for high speed, high volume stapling. These tools will deliver efficient, dependable service when used correctly and with care. As with any fine power tool, for best performance the manufacturer's instructions must be followed. Please study this manual before operating the tool and understand the safety warnings and cautions. The instructions on installation, operation and maintenance should be read carefully, and the manual kept for reference. NOTE: Additional safety measures may be required because of your particular application of the tool. Contact your Stanley-Bostitch representative or distributor with any questions concerning the tool and its use. Stanley-Bostitch, Inc., East Greenwich, Rhode Island 02818.

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NOTE:

Stanley-Bostitch tools have been engineered to provide excellent customer satisfaction and are designed to achieve maximum performance when used with precision Stanley-Bostitch fasteners engineered to the same exacting standards. **Stanley-Bostitch cannot assume responsibility for product performance if our tools are used with fasteners or accessories not meeting the specific requirements established for genuine Stanley-Bostitch nails, staples and accessories.**



LIMITED WARRANTY

Stanley-Bostitch, Inc., warrants to the original retail purchaser that this product is free from defects in material and workmanship, and agrees to repair or replace, at Stanley-Bostitch's option, any defective product within 90 days from the date of purchase. This warranty is not transferable. It only covers damage resulting from defects in material or workmanship, and it does not cover conditions or malfunctions resulting from normal wear, neglect, abuse, accident or repairs attempted or made by other than our regional repair center or authorized warranty service center. Driver blades, bumpers and o-rings are considered normally wearing parts.

THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THIS WARRANTY. STANLEY-BOSTITCH SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This warranty is limited to sales in the United States and Canada. Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

To obtain warranty service, return the product at your expense together with proof of purchase to a Stanley-Bostitch Regional or authorized warranty repair center. You may call us at 1-800-556-6696 for the location of authorized warranty service centers in your area.

SAFETY INSTRUCTIONS

⚠WARNING: **EYE PROTECTION** which conforms to ANSI specifications and provides protection against flying particles both from the FRONT and SIDE should ALWAYS be worn by the operator and others in the work area when loading, operating or servicing this tool. Eye protection is required to guard against flying fasteners and debris, which could cause severe eye injury.



The employer and/or user must ensure that proper eye protection is worn. Eye protection equipment must conform to the requirements of the American National Standards Institute, ANSI Z87.1-1989 and provide both frontal and side protection. NOTE: Non-side shielded spectacles and face shields alone do not provide adequate protection.



CAUTION: ADDITIONAL SAFETY PROTECTION will be required in some environments. For example, the working area may include exposure to noise level which can lead to hearing damage. The employer and user must ensure that any necessary hearing protection is provided and used by the operator and others in the work area. Some environments will require the use of head protection equipment. When required, the employer and user must ensure that head protection conforming to ANSI Z89.1 1986 is used.

AIR SUPPLY AND CONNECTIONS

⚠WARNING: Do not use oxygen, combustible gases, or bottled gases as a power source for this tool as tool may explode, possibly causing injury.

⚠WARNING: Do not use supply sources which can potentially exceed 200 P.S.I.G. as tool may burst, possibly causing injury.

⚠WARNING: The connector on the tool must not hold pressure when air supply is disconnected. If a wrong fitting is used, the tool can remain charged with air after disconnecting and thus will be able to drive a fastener even after the air line is disconnected possibly causing injury.

⚠WARNING: Do not pull trigger or depress contact arm while connected to the air supply as the tool may cycle, possibly causing injury.

⚠WARNING: Always disconnect air supply: 1.) Before making adjustments; 2.) When servicing the tool; 3.) When clearing a jam; 4.) When tool is not in use; 5.) When moving to a different work area, as accidental actuation may occur, possibly causing injury.

LOADING TOOL

⚠WARNING: When loading tool: 1.) Never place a hand or any part of body in fastener discharge area of tool; 2.) Never point tool at anyone; 3.) Do not pull the trigger or depress the trip as accidental actuation may occur, possibly causing injury.

OPERATION

⚠WARNING: Always handle the tool with care: 1.) Never engage in horseplay; 2.) Never pull the trigger unless nose is directed toward the work; 3.) Keep others a safe distance from the tool while tool is in operation as accidental actuation may occur, possibly causing injury.

⚠WARNING: The operator must not hold the trigger pulled on contact arm tools except during fastening operation as serious injury could result if the trip accidentally contacted someone or something, causing the tool to cycle.

⚠WARNING: Keep hands and body away from the discharge area of the tool. A contact arm tool may bounce from the recoil of driving a fastener and an unwanted second fastener may be driven possibly causing injury.

⚠WARNING: Check operation of the contact arm mechanism frequently. Do not use the tool if the arm is not working correctly as accidental driving of a fastener may result. Do not interfere with the proper operation of the contact arm mechanism.

⚠WARNING: Do not drive fasteners on top of other fasteners or with the tool at an overly steep angle as this may cause deflection of fasteners which could cause injury.

⚠WARNING: Do not drive fasteners close to the edge of the work piece as the wood may split, allowing the fastener to be deflected possibly causing injury.

MAINTAINING THE TOOL

⚠WARNING: When working on air tools note the warnings in this manual and use extra care when evaluating problem tools.

AIR SUPPLY AND CONNECTIONS

OPERATING PRESSURE

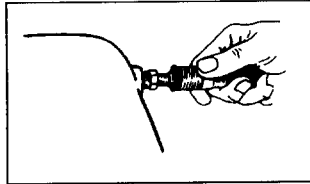
The operating pressure of the P50 series plier is 30 to 55 p.s.i. (2.1 to 3.9 kg/cm²). Do not exceed 55 p.s.i. (3.9 kg/cm²). Tool wear will be greatly increased if excessive pressure is used.

SETTING THE CORRECT PRESSURE

The air requirements will vary, depending on the material to be stapled and the staple size. Do not use more air pressure than is required to drive the staple in the specific job. To determine best setting, start at low pressure and increase pressure until drive is satisfactory. Using excess pressure increases tool wear on the plier and wastes compressed air.

QUICK DISCONNECT FITTINGS

Install a free-flow connector plug on the nailer. Thread is 1/4" N.P.T. Install a connector socket on the air hose. For best performance, fitting should have minimum inside dia. of .190".



REGULATORS

Most air supply equipment will produce pressures that exceed the P50's maximum operating pressure, 55 p.s.i. (3.9 kg/cm²). A pressure regulator is required to control the operating pressure. The flow capacity must be sufficient for the air usage at the installation.

HOSES

Air supply hoses should have a 85 p.s.i. (6.0 kg/cm²) working pressure rating (or 150 percent of the maximum pressure that could be produced in the air system.)

AIR CONSUMPTION

The P50 requires 1.75 cubic feet per minute of free air to operate at the rate of 100 staples per minute, at 55 p.s.i. Take the actual rate at which the plier will be run to determine the amount of air required. For instance, if your staple usage averages 50 staples per minute, you need 50% of the 1.75 c.f.m. which is required for running at 100 staples per minute.

⚠WARNING:

To prevent accidental firing, disconnect air supply:

- before making adjustments
- when servicing the tool
- when clearing jams
- when tool is not in use

⚠WARNING:

Do not use oxygen or combustible gases as a power source for this tool or air supply sources which can potentially exceed 200 P.S.I. as tool may explode.

⚠WARNING:

NOTE: The air supply system must be capable of maintaining the required air pressure at the tool when it is operated at its highest cycle speed. Inadequate air supply will result in a loss of power and inconsistent driving after the first cycle when the tool is operated in high speed bursts.

Always attach a free - flow - connector plug to the plier. If a wrong fitting is used, the tool can remain charged with air after disconnecting, and thus will be able to cycle even after the air line is unplugged.

NOTE: Air compressors used to supply compressed air to this plier should comply with the requirements of the American National Standards Institute Standard B19.3-1972, Safety Standard for Compressors for Process Industries.

NOTE: Make sure air lines and fittings are clean before connecting.

LOADING THE P50 SERIES STAPLING PLIER

⚠WARNING:



EYE PROTECTION which conforms to ANSI specifications and provides protection against flying particles both from the **FRONT** and **SIDE** should **ALWAYS** be worn by the operator and others in the work area when loading, operating or servicing this tool. Eye protection is required to guard against flying fasteners and debris, which could cause severe eye injury.

The employer and/or user must ensure that proper eye protection is worn. Eye protection equipment must conform to the requirements of the American National Standards Institute, ANSI Z87.1-1989 and provide both frontal and side protection. **NOTE:** Non-side shielded spectacles and face shields alone do not provide adequate protection.

⚠WARNING:

TO PREVENT ACCIDENTAL INJURIES:

- Never place a hand or any other part of the body in nail discharge area of tool while the air supply is connected.
- Never point the tool at anyone else.
- Never engage in horseplay.
- Never pull the trigger unless nose is directly towards the work.
- Always handle the tool with care.
- Do not pull the trigger or depress the trip mechanism while loading the tool.

1) Open The Magazine:
Pull cover back until locked by detent pin.

2) Load Staples:
Insert a stick of staples and push forward in the channel.
Insert a second stick of staples.

3) Close magazine:
Push the lock release tab (located at front of magazine cover) down and push the cover forward until its locked by the detent pin.

⚠WARNING:

Disconnect the air supply before making adjustments

CAUTION: Do not attempt to operate this plier without material between the shuttle and clincher to avoid damaging the driver tip.

MODEL P50 SERIES AIR DRIVE PLIER

MODEL	CLINCHER BLADE	STAPLES	NOTE: Use of ANY other staple leg lengths in these models will damage tool.
P50-10B	Standard Clincher	SB103020 Staples	
P50CL-10B	L.H. "C" Blade	5/8" (15.9mm)	
P50CR-10B	R.H. "C" Blade		
P50-10C	Standard Clincher	SB103020 Staples 3/8" (9.5mm)	
P50-5B	Standard Clincher	SB5019 Staples 3/8" (9.5mm), 1/2" (12.7mm), 5/8" (15.8mm)	

FILTERS

Dirt and water in the air supply is a major cause of wear in air tools. A filter will help to get best performance from this plier. The filter must have adequate flow capacity for the specific installation. The filter has to be kept clean to be effective in cleaning the air. Consult the filter manufacturer's instructions on proper maintenance. Clean and empty the filter as needed. A dirty and clogged filter will also cause a pressure drop, which can reduce the pliers performance.

LUBRICATION

Frequent but not excessive lubrication is required for best performance. Oil added through the air line connection will lubricate the internal parts. Use Bostitch Air Tool Lubricant BC602 (pint) or BC604 (quart), Mobil Velocite #10 oil or an equivalent. Do not use detergent oil or oil additives because the seals and bumpers in the tool may be attacked by the oil.

If an air line lubricator is used it should be as close to the tool as practical, with a hose to the tool no longer than 50 feet (15 meters).

If no lubricator is used, add oil during use by squirting oil into the air fitting on the tool once or twice a day. Only a few drops at a time are required. Too much oil will collect inside the tool and will be noticeable in the exhaust.

For cold weather operation, near and below freezing, the oil and water present in the air line may freeze and prevent operation. We recommend the use of Bostitch "Winter Formula" Air Tool Lubricant BC603 in place of BC602/BC604 or permanent antifreeze (ethylene glycol) as a cold weather lubricant. Note that some commercial air line drying liquids attack o-rings and seals - do not use these low temperature air dryers without checking compatibility.

MAINTAINING P50 SERIES STAPLING PLIER

⚠WARNING: When working on air tools, note the warnings in this manual, and use extra care when evaluating problem tools.

REPLACEMENT PARTS

Bostitch replacement parts are recommended. Do not use modified parts or parts which will not give equivalent performance to the original equipment. When ordering replacement parts specify by part number.

⚠WARNING: Eye protection should be worn by the person operating or testing the plier, and by others in the work area.

ASSEMBLY PROCEDURES FOR SEALS

When repairing a plier make sure the internal parts are clean and freshly lubricated. Use Parker O-lube or equivalent on all "O" rings. Coat each "O" ring with O-lube before assembling. Use a small amount of oil on all moving surfaces and pivots. After reassembly, add a few drops of Velocite #10 oil or equivalent, through the air line fitting before testing.

⚠WARNING: Disconnect the air supply before making adjustments, servicing the tool, clearing jams, or when tool is not in use.

TROUBLE SHOOTING

Shuttle Punches Through Board:

Pressure too high; staple leg too short.

Staple Leg Buckles And Flattens Against Work Surface:

Staple leg too long, shuttle not down against work due to worn shuttle piston o-ring.

Driver Punches Through Board:

Worn driver piston bumper.

Staple Ejects From Nose Before Shuttle Contacts Work Surface:

Worn shuttle piston o-ring; excessive air pressure.

Staple Ejects From Rear Opening In Shuttle

Worn driver piston o-ring

Air Leaking Through Exhaust Port:

Worn upper driver piston o-ring; worn upper shuttle piston o-ring; worn valve stem seat.

Air Leakage Through Nose Piece:

Worn lower driver piston o-ring; worn shuttle piston o-ring.

Staples Tumbling In Staple Channel:

Feed springs overstressed; feed springs broken; pusher binding on magazine core; dirt inside magazine; excessive air pressure.

CLEARING JAMS:

Do not attempt to clear jammed staples by firing the tool to clear jam:

1. Disconnect Air Supply.
2. Pull back top guide assembly and staples.

3. Pull down shuttle.
 4. Remove jammed staple either from opening at the rear of shuttle or from drive track behind the magazine assembly.
- To clear jam caused by tumbled staple or if jam can not be cleared as outlined above:
1. Be sure air supply is disconnected and top guide is pulled back.
 2. Remove staples.
 3. Snap magazine spring off magazine block.
 4. Lift rear of magazine up and pull magazine back.
 5. Remove jammed staple.
 6. Slide magazine forward, aligning locating pins with holes in guide.
 7. Push rear of magazine; do so with pin in magazine, block engages hole in frame.
 8. Wedge magazine spring back onto magazine block.

***Special maintenance instructions:**

These are threaded parts that have been assembled with a plastic thread locking compound. They should be replaced in a Bostitch service center. However, if they must be replaced in the field, they may be separated by heating parts to approximately 450°F when the compound becomes plastic. Clean parts thoroughly. Degrease threads with Loctite solvent #75559, apply Loctite grade 277, and assemble. Allow 1/2 - 1 hour for sealant to cure at room temperature.

NOTE: The work opening between the shuttle and the clincher can be varied for special applications. The opening should never be increased to more than 31/32 (24.6mm) maximum for Standard Pointed, and Mattress Blade Pliers; and 27/32 (21.4mm) maximum for "C" Blade Pliers. It may be reduced by removing the clincher spacer between the clincher and the frame. If the spacer is removed be sure to check the length of the clincher mounting screws. Be sure they do not hit the magazine when they are replaced. Cut the screws off as needed, or use shorter screws.

Be sure all screws and nuts are checked periodically to keep them tight. Observe caution against stripping threads when tightening fasteners.

A periodic check should be made of the bumpers. A Worn bumper should be replaced before damage occurs to related parts. To check, disconnect the air supply remove cap and piston. Check bumpers for wear and replace if necessary.

REPLACEMENT OF CLINCHER

BLADES:

1. Remove pivot and retaining screw under clincher blade.
2. Assemble new clincher, leaving pivot and retaining screw slightly loose.
3. Insert single staple in staple channel in shuttle, leaving points protruding.
4. Pull shuttle down until staple points contact clincher.
5. Align clincher with staple points by turning clincher alignment screws in frame.
6. When clincher is properly aligned, tighten pivot screw first, then tighten retaining screw.

REPLACEMENT OF SHUTTLE

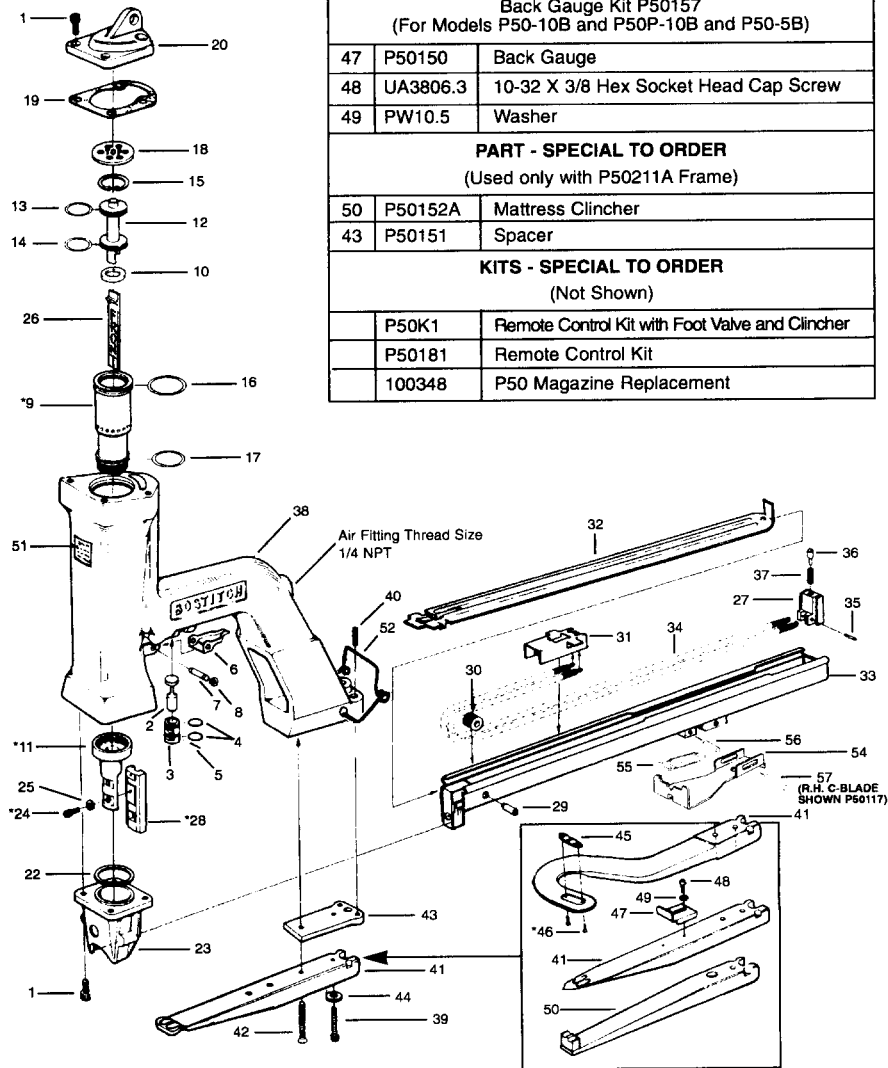
1. Remove clincher blade.
2. Disconnect magazine and pull to rear.
3. Remove nose piece.
4. Pull shuttle down as far as it will come and remove retaining screws to disconnect shuttle.

REPLACEMENT OF DRIVER PISTON

OR DRIVER

1. Remove cap and piston head bumper.
2. Disconnect magazine and pull to rear.
3. Pull out shuttle piston assembly.
4. Remove internal shuttle piston retaining ring
5. Pull out driver piston assembly.

CAUTION: Items 12 and 26 must be assembled in direction shown. Retaining tooth on driver, and longest side of piston, must face front of tool. Do not rotate these parts.



PARTS SPECIAL TO "C" BLADE MODELS		
45	P50137	Clincher
46	UA1804.7	4-40 X 1/4 Hex Socket Flat Head Screw
KITS - SPECIAL TO ORDER		
Back Gauge Kit P50157 (For Models P50-10B and P50P-10B and P50-5B)		
47	P50150	Back Gauge
48	UA3806.3	10-32 X 3/8 Hex Socket Head Cap Screw
49	PW10.5	Washer
PART - SPECIAL TO ORDER		
(Used only with P50211A Frame)		
50	P50152A	Mattress Clincher
43	P50151	Spacer
KITS - SPECIAL TO ORDER		
(Not Shown)		
	P50K1	Remote Control Kit with Foot Valve and Clincher
	P50181	Remote Control Kit
	100348	P50 Magazine Replacement

* IMPORTANT: SEE SPECIAL MAINTENANCE INSTRUCTIONS, PAGE 6
 • NOTE: FOR SB1030203/8 STAPLES USE P50191 SHUTTLE

ITEM NO.	PART NO.	DESCRIPTION
1	UA3808.1	10-32 X 1/2 Hex Socket Head Cap Screw
2	P50115A	Stem
3	P50114	Barrel
4	86458	O-Ring
5	UB2112.2	Roll Pin 3/32 Diameter X 3/4
6	P50119	Trigger
7	P50129	Pin
8	85018	E-Ring
9	P50196	Shuttle Piston
10	P50108	Driver Piston Bumper
11	P50104	Sleeve
12	P50118	Driver Piston
13	87112	O-Ring
14	87137	O-Ring
15	87115	Internal Snap Ring
16	87113	O-Ring
17	850682	O-Ring
18	P50106	Piston Head Bumper
19	P50120	Gasket
20	P50102	Cap
22	P50107	Shuttle Piston Bumper
23	P50105	Guide
24	UA3804.6	10-32 X 1/4 Hex Socket Head Cap Screw
25	SW10E	#10 Lock Washer
27	P50167	Lock Pin Block
29	P50169	Spring Roll Pin
30	P50168	Spring Roll
31	P50172	Pusher
32	P50171A	Top Guide Assembly
34	P50177	Feed Spring
35	P50175	Feed Spring Pin
36	P50173	Lock Pin
37	P50174	Lock Pin Spring
51	851246	Warning Label
52	P50197	Spring, Magazine
53	P50210	Label, Caution-P50
54	P50217	Magazine Clamp
55	P50218	Spring
56	UB2808.1	Spring Pin 3/16 X 1/2 long
57	UB2112.2	Spring Pin 3/16 X 3/4 long

VARIABLE PARTS

MODEL NUMBER	ITEM NUMBER AND DESCRIPTION									
	26	28	33†	38	39	40	41	42	43	44
	DRIVER	SHUTTLE	CORE CASE ASSEMBLY	FRAME	SOC. CAP SCREW	SET SCREW	CLINCHER	FLT. HD. SCREW	SPACER	WASHER
P50-10B P50CL-10B P50CR-10B	P50121 " "	* P50186 • " • "	P50213A " "	P50211A P50212A "	UA4824.2 UA4812.1 "	UA4816.12 UA4808.4 "	P50116A P50138 P50117	UA5824.5 UA5816.7 "	P50151 " "	LW14 " "
P50-5B	P50187	* P50188	P50215A	P50211A	UA4824.2	UA4816.12	P50116A	UA5824.5	P50151	LW14
P50-5C	P50187	103507	104137	P50211A	UA4824.2	UA4816.12	P50116A	UA5824.5	P50151	LW14
P50-10C	P50121	P50191	P50214A	P50211A	UA4824.2	UA4816.12	P50116A	UA5824.5	P50151	LW14

*NOTE: FOR SB50193/8 STAPLES USE 103507 SHUTTLE

*NOTE: FOR SB1030203/8 STAPLES USE P50191 SHUTTLE

†NOTE: ITEM 33 CORE CASE ASSEMBLY DOES NOT INCLUDE ITEMS 27, 29-32, 34-37 OR 54-57.