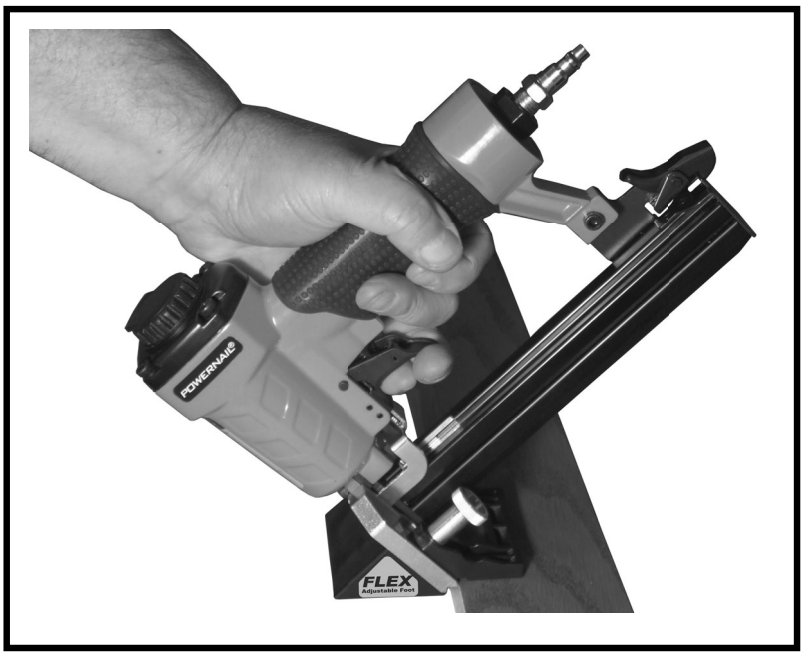
POWERNAIL® CO.

Models 20FS Pneumatic PowerStapler™



OPERATION AND MAINTENANCE MANUAL
MANUAL DE OPERACION Y DE MANTENIMIENTO
MANUEL D'INSTRUCTIONS ET D'ENTRETIEN

WARNING

Read this manual before you use this stapler. Follow all safety warnings and instructions. If you are uncertain about the operation of the stapler, call us directly at 1-800-323-1653 for assistance or contact the closest Powernail Dealer for help. Please retain this information for future reference.

REV 12.10.12

INTRODUCTION

The PowerStapler® Model 20FS trigger pull stapler is designed to bring Powernail quality and flooring expertise to a pneumatic Stapler. The PowerStapler Model 20FS is designed for use with 1", 20 gauge PowerStaples®. The Model 20FS staples flooring from 5/16" to 1/2" through the use of a FLEX foot that can be adjusted to fit different flooring profiles. For a superior pneumatic stapler, look to the company that has been the industry's leader in quality, Powernail® Company, Inc.

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LIMITED WARRANTY

POWERNAIL® Company, Inc. warrants to its customer, and to the first end-use purchaser of POWERNAIL 20FS POWERSTAPLER purchased from an authorized POWERNAIL distributor, that each serialized manufactured 20FS POWERSTAPLER by POWERNAIL®, for a period of 12 months from the date of purchase; shall be free of defects in materials and workmanship and will meet POWERNAIL's specifications in effect at the time of Product shipment. POWERNAIL will repair or replace, at its option, any 20FS POWERSTAPLER that does not conform to this warranty. Claims must be made no later than fifteen (15) days after the end of the warranty period. POWERNAIL will perform all repair or replacements itself or through its authorized contractors. POWERNAIL is not responsible for shipping, labor or other direct or indirect costs. Damage caused by abuse, misuse, unusual or excessive wear is excluded. Repair or modification of the Products by unauthorized parties will void this warranty. The customer is responsible for returning Products to POWERNAIL for verification of nonconformance. Warranties for Products not manufactured by POWERNAIL are limited to warranties provided to POWERNAIL by the manufacturer of such product that are assignable to customer.

THESE WARRANTIES AND REMEDIES ARE EXCLUSIVE OF ALL OTHERS, EXPRESS OR IMPLIED. THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE ARE EXPRESSLY EXCLUDED. IN NO EVENT SHALL POWERNAIL'S LIABILITY FOR A WARRANTY CLAIM EXCEED THE PRICE PAID TO POWERNAIL FOR THE NONCONFORMING PRODUCT, REGARDLESS OF THE FORM OR BASIS OF THE CLAIM OR CAUSE OF ACTION.

SAFETY INSTRUCTIONS

When operating this Stapler, the operator and others in the work area should ALWAYS wear approved SAFETY GLASSES, with FRONT and SIDE eye protection. Eye protection will help guard against flying nails and debris, which could cause severe eye injury.

EAR PROTECTION should be used to prevent hearing damage when there are high noise levels in the work area. ALWAYS use ear plugs with a noise reduction rated at 29 db or higher at a construction site.

Stapler noise ratings are at LPA-1sd=90.6, LWA-1sd=99.3 and LPA-1s,1m=86.3.
Stapler vibration rating: m/s2=3.05.

Always DISCONNECT THE AIR SUPPLY before making any adjustments, repairing, clearing jams or when the Stapler is not in use. Do not use on scaffolding or ladders and disconnect Stapler from air supply when transporting between installation areas.

Never attach the female end of a quick disconnect to the Stapler. This will trap air inside the Stapler and permit it to be discharged. Only the unrestricted male connection should be attached to the Stapler.

Stapler requires an air source that can continuously deliver 70 to 110 psi at 3-1/2 cubic feet of air per minute for operation.

Normal air pressure should not exceed 110 psi or damage to the Stapler and seals may occur. Excess air pressure can cause the Stapler to explode.

To prevent fire or explosion, use only regulated compressed air—do not use bottled gases of any kind (no oxygen or combustible gasses) to power this Stapler.

Stapler is intended for use installing wood flooring and is not to be used for purposes not specified in the operations manual.

Do not use any staples other than Powernail® Powerstaples which are specifically designed for use in any Powerstapler. Powercleats Staples are available in various lengths. Contact your Powernail Dealer for Powernail Staples.

Use only Powernail replacement parts in the repair or maintenance of this Stapler. Parts or repair services are available from the manufacturer or from agents authorized by the manufacturer. Repairs should be carried out only by trained service personel in the field of fastener driving tools who will observe proper safety controls while performing maintenance. Service personel should be qualified to assess the safe working condition of fastener driving tools.

Always make sure Stapler is empty of nails before connecting air hose, so as to prevent any accidental discharge from occurring. ONLY CONNECT AIR TO AN UNLOADED Stapler.

Do not depress the trigger when loading. If the fasteners are jammed, disconnect the tool from the air supply before you remove the jammed nails.

Never place any part of the body in the discharge path of the Stapler when air is connected to the Stapler. Never point the tool at yourself or others, even if the tool is not loaded. For safety, keep out of reach of children. Never leave the Stapler unattended while it is connected to an air supply.

Do not fire into hard materials or attempt to use on hard or brittle material such as concrete, steel or tile. Before using this tool, carefully check that all parts are working correctly. Do not use the tool if it is not operating correctly, check for causes and adjust as necessary for proper operation. When not in use, the tool should be cleaned, fully assembled and then stored in a dry location. This will extend the life of the tool and reduce any oxidation.

OPERATION

The Model 20FS staples flooring from 5/16” to 1/2” through the use of a FLEX foot that can be adjusted to fit different flooring profiles.

To use the Model 20FS, simply snug up the flooring, pull the safety trigger and let the Stapler drive and set the staple at the correct 45 degree angle.

The unique body design allows for different grip angles and has an adjustable exhaust port to redirect stapler exhaust.

For a superior pneumatic stapler, look to the company that has been the industry’s quality leader, Powernail® Company, Inc.

Figure 1.

FOOT ADJUSTMENT / STAPLE LOCATION

Loosen both adjusting knobs (76)

Hold stapler on sample piece of sample flooring to be installed.

Adjust the face pad (74) so it lays flat on the finished surface of the flooring (Fig 1).

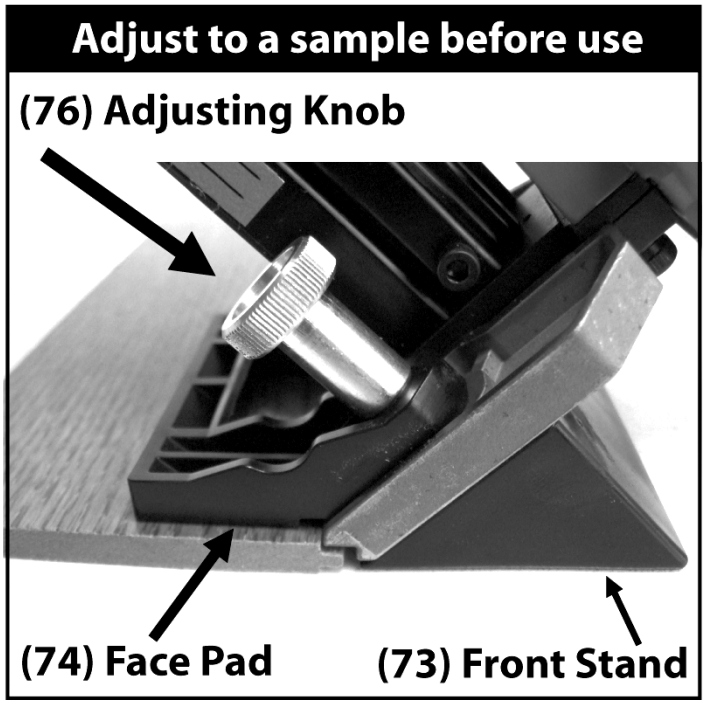
Lightly snug both adjusting knobs (76).

Push down on front stand (73) so it lays flat on the sub floor.

Tighten both adjusting knobs (76).

Test the adjustment by stapling down a sample piece of floor

Readjust if necessary so that the staple insertion point enters the top of the flooring nail pocket.



OPERATION, *continued...*

SETTING

Your air tool is fully assembled when you receive it. After you have adjusted the stapler foot to a sample of your flooing and you are ready to use it, attach the air line and any desired air system accessories. Be sure the air hose is depressurized when installing or removing adapters to the air line. To prevent misfire, do not connect air to a loaded nailer.

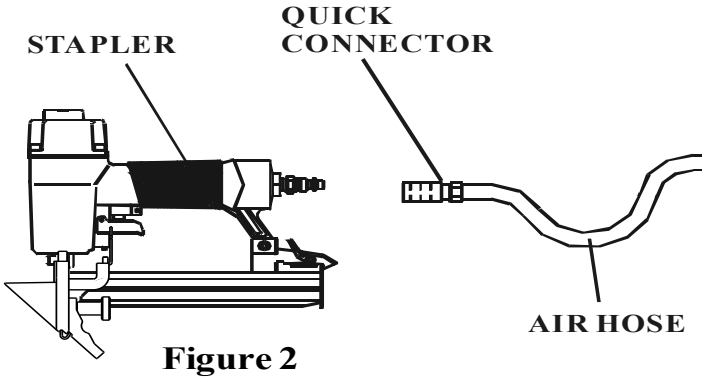


Figure 2

CONNECTING THE TOOL TO AN AIR SUPPLY

1. An automatic airline oilier is recommended but oil may be added manually before every operation or after about 1 hour of continuous use.

2. Place two (2) drops of air-tool oil in the air plug as shown in Figure 3. If you are using an automatic in-line oiler, check and add oil if necessary.

3. Turn your compressor on and set the compressors pressure regulator to the proper pressure for the size and type of fastener being used. Normal operating pressure should be adjusted between 70-110 psi based on fastener and wood being used.

4. Connect the tool to the air supply (figure 2).

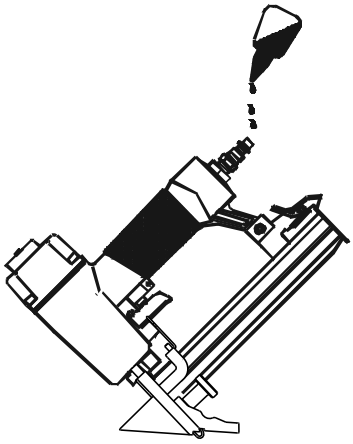


Figure 3

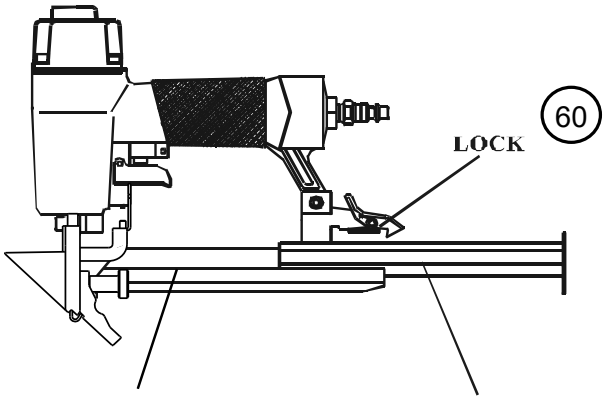
LOADING THE FASTENERS

1. Depress the LOCK(60) to release the MOVABLE

MAGAZINE (44) and pull the magazine out fully as shown in Figure 3.

2. Place a full clip of the specified type and size fasteners on the FIXED MAGAZINE (51), up to 125 fasteners may be loaded in the magazine.

3. Push the MOVABLE MAGAZINE ASSEMBLY forward until it is locked.



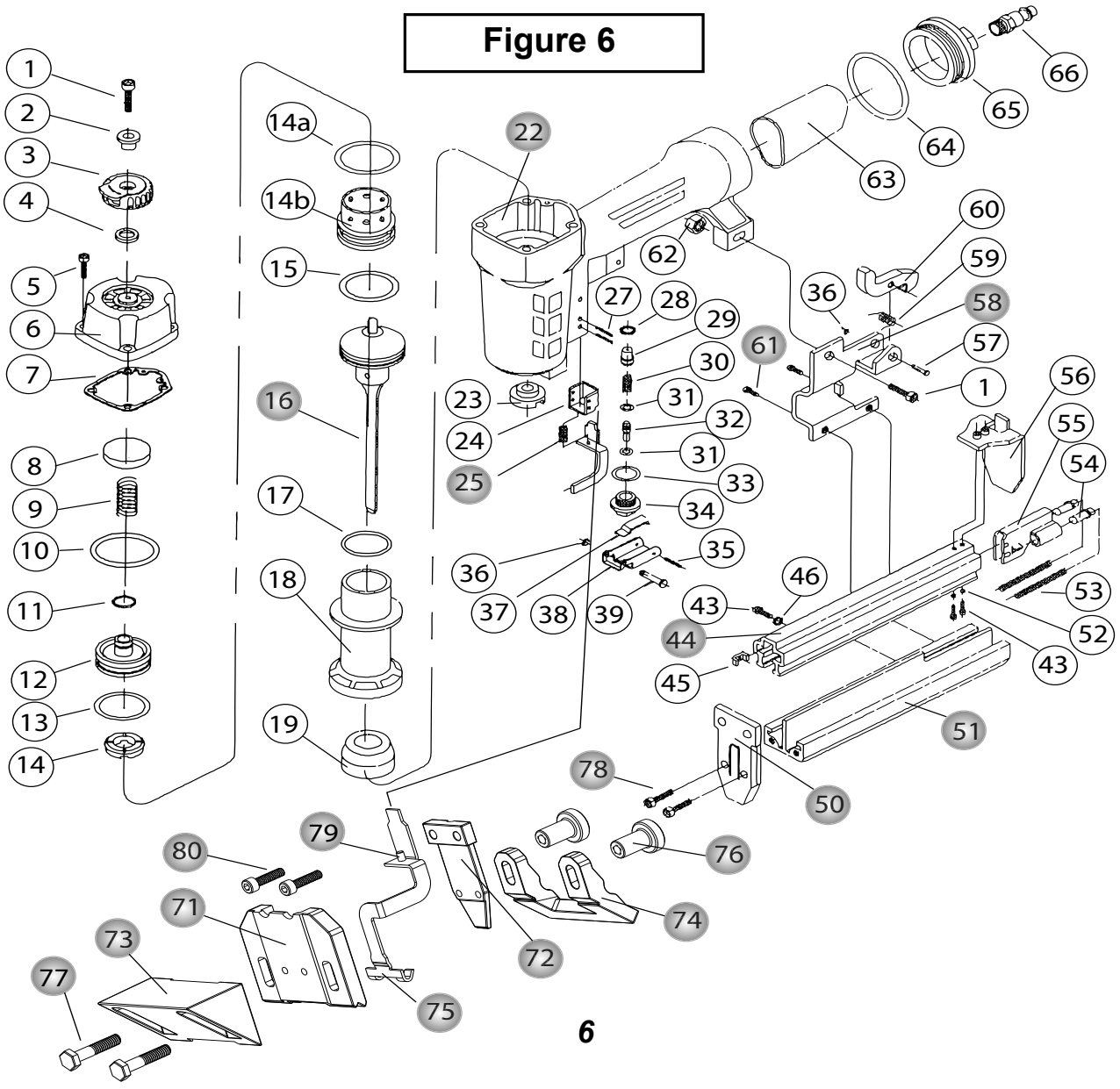
MAINTENANCE

(Tools needed: 3mm & 4mm allen wrench)

20FS Disassembly, Inspection & Trouble Shooting (See figure 6.)

1) Remove the adjustable foot parts and set aside (76) (74) (73) (77)
2) Remove the two M4 screws (61) from the staple channel rear support (58)
3) Remove the two M5 screws (80) from the body (22)
4) Slide the staple channel assembly down off the drive blade. Note: black safety spring (25) will come off, set aside for reassembly.
5) If the channel assembly doesn't want to slide off the drive blade remove the two M4 screws (78) which attach the gate plate/gate to the fixed staple channel (51)
6) With the staple channel removed you can now inspect the drive blade (16) to make sure there is nothing preventing it from moving up and down without binding.
7) At this time you can also inspect the gate (50) and gate plate (72) for obstructions.
8) If any of those parts look questionable they would need to be replaced.
9) The drive blade/piston (16) comes as an assembly and is replaced from the top of the stapler.

Figure 6



MAINTENANCE, *continued...*

20FS Reassembly & Adjustments (See figure 6.)

1) Install silver colored safety slide (75) into the silver foot (71)
2) Next install the gate (50) and gate plate (72) over the safety slide (75)
3) Install the two M4 screws (78) thru the front of the silver foot (71) thru the gate plate (72) thru the gate (50) into the fixed staple channel (51)
4) You will now need to align the center of the fixed staple channel (51) with the center of the gate (50). You can do this by eye and then tighten the two M4 screws (78). To test if the alignment is correct take a half a stick of staples and slide them into the gate (50) making sure they slide freely and don't get hung up on the side of the gate (50) If the alignment is not correct loosen the two M4 screws (78) and re-do the above procedure.
5) Tighten the two M4 screws (78) when the alignment is complete.
6) Note: Any time the two M4 and M5 screws (78) (80) are loosened or removed the channel alignment adjustment must be done.
7) If the upper slide (44) of the staple channel was removed you can slide it on to the lower channel (51)
8) Now slide the staple channel assembly on to the drive blade, install the two M5 body screws (80) and the two M4 screws (61) to the side of the staple channel rear support (58)
9) The black safety spring (25) can now be reinstalled which goes between the silver safety slide extension (79) and the Safe Bracket Guider (24).
10) Reassemble the adjustable foot parts to the stapler & test. (76) (74) (73) (77)

REGULAR MAINTENANCE

1. Frequent, but not excessive, lubrication is required for best performance. Oil added through the airline connection will lubricate internal parts. An automatic airline oilier is recommended but oil may be added manually before every operation or after about 1 hour of continuous use.

Only a few drops of oil at a time are necessary. Too much oil will collect inside the tool and be blown out during the exhaust cycle. ONLY USE PNEUMATIC TOOL OIL. Do not use detergent oil or additives, as these lubricants will cause accelerated wear to the seal in the tool.

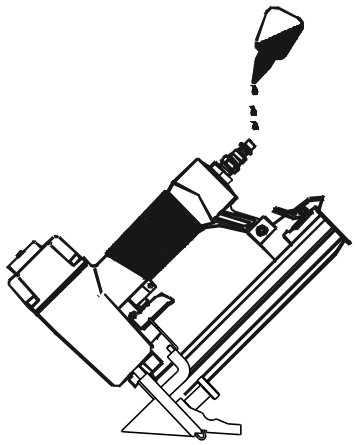


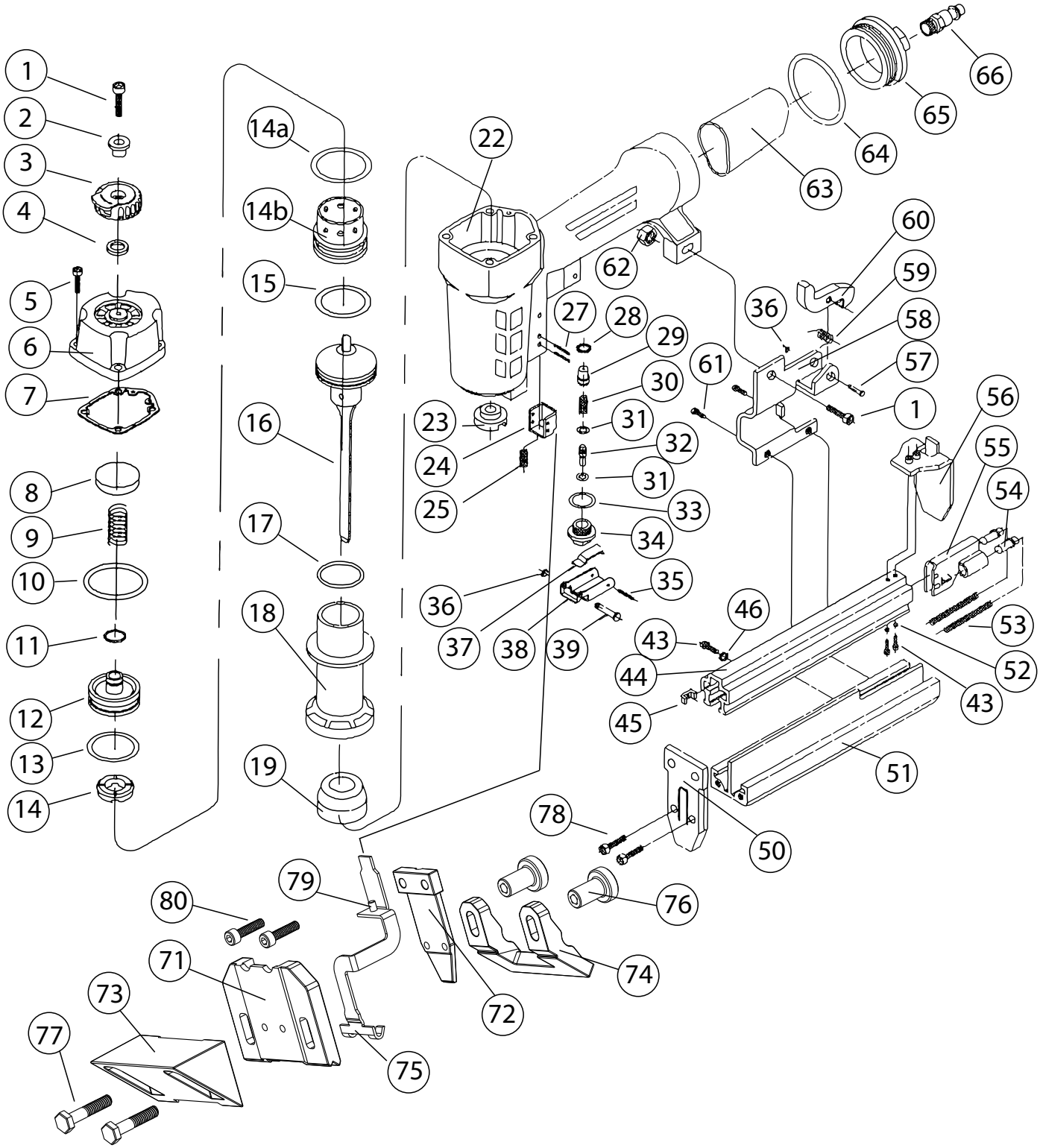
Figure 3

2. Use a small amount of oil on all moving surface and pivots.

3. Dirt and water in the air supply are major causes of pneumatic tool wear. Use a filter/oiler for better performance and longer life. The filter must have adequate flow capacity for the specific application. Consult the manufacturer's instructions for proper maintenance of your filter.

4. Keep tools clean for better and safer performance. Use nonflammable cleaning solutions only if necessary. CAUTION: Soaking the tool may damage O-ring and other tool parts.

20FS SCHEMATIC



PARTS LIST

ITEM	DESCRIPTION	PART #
1	Screw	n/a
2	Bushing	n/a
3	Exhaust Cover	n/a
4	Seal	n/a
5	Screw	n/a
6	Cylinder Cap	n/a
7	Gasket	09-20FS-5007
8	Seal	n/a
9	Spring	n/a
10	O-Ring (36.3 x 2.5)	09-20FS-5010
11	O-Ring (15.7 x 2)	09-20FS-5011
12	Valve	n/a
13	O-Ring (31.5 x 3.5)	09-20FS-5013
14	Stopped Washer	n/a
14a	O-Ring (48.5 x 2.5)	09-20FS-5014A
14b	Collar	n/a
15	O-Ring (28.3 x 3)	09-20FS-5015
16	Piston Assembly	09-20FS-5016
17	O-Ring (27.3 x 2)	09-20FS-5017
18	Cylinder	09-20FS-5018
19	Bumper	09-20FS-5019
22	Body	n/a
23	Joint Guider	09-20FS-5023
24	Safe Bracket Guider	n/a
25	Spring (Safety)	09-20FS-5025
27	Pin	n/a
28	Seal	n/a
29	Trigger Valve Head	n/a
30	Spring	n/a
31	O-Ring (5.5 x 1.5)	n/a
32	Trigger Valve Stem	n/a
33	O-Ring (15 x 1.9)	n/a
34	Trigger Valve Guider	n/a
35	Pin	n/a
36	Locking Washer	09-20FS-5036
37	Spring	n/a
38	Trigger	n/a
39	Pin	n/a
43	Screw	n/a
44	Movable Magazine Unit	n/a
45	Stopped Block	n/a

ITEM	DESCRIPTION	PART #
46	Spring Washer	n/a
50	Gate	09-20FS-5050
51	Fixed Magazine Unit	09-20FS-5051
52	Washer	n/a
53	Spring (Magazine, 2 count)	09-20FS-5053
54	Feeder Shoe Retainer	n/a
55	Feeder Shoe	n/a
56	Stopped Plate	n/a
57	Pin	n/a
58	Support	n/a
59	Torsion Spring	n/a
60	Lock	n/a
61	Screw	n/a
62	Nut	n/a
63	Softgrip Sleve	n/a
64	O-Ring (40.2x2.3)	n/a
65	End Cap	n/a
66	Air Plug	n/a
70	Maunal/Instructions	09-20FS-INST
71	Stapler Foot	09-20FS-5071
72	Stapler Gate Plate	09-20FS-5072
73	Stapler Support Shoe	09-20FS-5073
74	Stapler Foot Rest	09-20FS-5074
75	Stapler Safety	09-20FS-5075
76	Knob-Foot Rest	09-20FS-5076
77	1/4-28 x 1-1/4 Cap Screw	09-20FS-5077
78	M4-0.7 x 25mm SHCS	09-20FS-5078
79	.156 Dia Spring Pin	09-20FS-5079
80	M5-0.8 x 20mm SHCS	09-20FS-5080
90	Model 20FS SEAL KIT	09-20FS-5090SK

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- **Training Schools**

Featured Accessory Products

Powerjack® Model 500
Truly a Tinker's TOOL, the POWERJACK Model 500 is designed to push or pull flooring strips into place and hold them tightly. The PowerJack Model 500 self adjusts from 5/16” to 3/4" thickness flooring. It can be used to either push or pull wood flooring strips into place and ratchets tightly for hands free operation. The base of the PowerJack 500 has mounting holes for mid-floor use. Simply screw nail the PowerJack 500 to your sub floor -in front of your flooring strips -and ratchet the flooring strips tight. Also great for under cabinet and kick plate installation.
Part number: 06-99650

Model 50P FLEX™
The Powernail Model 50P FLEX is truly a flexible nailer which can nail down the wide variety of flooring found in today’s market. Using the adjustable foot, you can fine-tune the nailer height according to different wood profiles. No need for extra shims and pads! The Powernail Flex is suitable for use on thinner 3/8”, 1/2”, 5/8” and 3/4” solid tongue and groove hardwood exotics, bamboo, and engineered flooring. **Part number: 02-50PFLEXW**

Powernailer® TOOL BAG™
The TOOL BAG holds all Powernailer® configurations including the FLEX and POWER ROLLER models. The Powernail TOOL BAG is built tough with a double wall of padded industrial nylon to protect your tools. Corners are reinforced with leather for durability. Zippered storage pouch on the inside (12” x 6”). The Tool Bag has two durable handles which can be used for carrying over your shoulder.
Dimensions: 20” base, 7” deep and 20” Tall.
Part number: 06-99201

TOOL BAG

TROUBLE SHOOTING CHART

Here are some common issues may occur during use.
If the stapler is not working as it should be, stop using the tool immediately and resolve the issue before continuing.

	PROBLEM	POSSIBLE CAUSE	SOLUTION
1	Air leaking between body and drive guider	1. Damaged bumper	1. Check and replace bumper
2	Air leaking between body & cylinder cap	1. Screw loose.	1. Tighten screws.
		2. Damaged gasket.	2. Check and replace gasket.
3	Blade driving fastener too deeply	1. Worn bumper	1. Replace bumper
		2. Air pressure is too high.	2. Adjust the air pressure.
4	Runs slowly or has power loss	1. Insufficient oil.	1. Lubricate as instructed.
		2. Insufficient air supply.	2. Check air supply
		3. Broken spring in cylinder cap.	3. Replace spring
		4. Exhaust port is cylinder cap is blocked.	4. Replace damaged internal parts.
5	Tool skips a fastener	1. Worn bumper or damaged spring (53)	1 Replace bumper or pusher spring.
		2. Dirt in drive guider	2. Clean drive channel of front plate.
		3. Inadequate airflow to tool	3. Check hose and compressor fitting.
		4 Worn or dry O-ring on piston	4. Replace O-ring or lubricate.
		5. Cylinder cap seal leaking	5. Replace seal.
6	Fasteners are jammed	1. Joint guider is worn	1. Replace joint guider.
		2. Fasteners are wrong size or damaged.	2. Use the recommended and undamaged fasteners.
		3. Magazine or front plate screws are loose.	3. Tighten screws.
		4. Blade in piston assembly is damaged.	4. Replace piston assembly.
7	Tool will not drive down tight	1. Worn blade in piston assembly.	1. Replace piston assembly.
		2. Lack of power.	2. Adjust to adequate air pressure.
		3. Slow cycling and loss of power.	3. Check cylinder cap spring for broked coils or reduced length. Check if exhaust port of cylinder cap is restricted.

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