

PROSTICK TOOL VA0320 OPERATING MANUAL



VERTEX FASTENERS

A DIV. OF *Leggett & Platt*

1798 SHERWIN AVE

DES PLAINES, IL. 60018 U.S.A.

PHONE: 847-768-6139

FAX: 847-769-7192

WEB: WWW.VERTEXFASTENERS.COM

EMAIL: VERTEX@LEGGETT.COM

Operational Instructions for Vertex Prostick Tool VA0320

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MAINTENANCE

Most problems with tools are a result of:

1. Normal wear and tear to components due to high usage.
2. Lack of proper lubrication.
3. Incorrect air pressure or air volume.
4. Dirt or water that may enter the tool via air lines.
5. Defective fasteners.

LUBRICATION

1. Vertex tools are designed for long, trouble free use with **minimal in-line lubrication**. (If an in-line lubricator is used, it should be set at a minimal rate of flow.)
2. When lubricating tool, **Pneumatic Fastening Tool Oil, Vertex part number VC0340** is recommended. When oiling, a couple of drops of oil should be placed through the airline fitting. Excess oil in tool will attract dirt, lint, preventing smooth operation. Cycle tool to expel excess oil. Oil daily.
3. When servicing or repairing tool **high grade lithium grease, Vertex part number VH0214** is recommended.

AIR FILTER AND REGULATOR

1. The airline should always contain a filter and regulator unit to provide tool with a constant flow of clean, dry air. Moisture and contaminants entering tool will decrease the serviceable life of tool.
2. The regulator should be set between **70 and 90 psi (4.8 to 6.2 bar)**. **Never** operate tool **over 100 psi (7 bar)**.

TIPS ON EXTENDING TOOL LIFE

1. Always use **Vertex brand fasteners** and always use **Vertex genuine parts** when replacing worn or broken parts. **Generic fasteners, and parts** may shorten tool life and **will void your tool warranty**.
2. It's best to use the lowest pressure (PSI) that the tool requires to drive the fastener correctly and use this setting. **Excess air pressure will reduce the life of tool**.
3. Keep tool clean and dry and always use **clean dry air**.
4. Avoid dropping tool, a primary reason for parts replacement.

Helpful hints for field servicing tool jams

A jam is usually a fastener that has lodged between the driving blade and the nose.

SAFETY FIRST – Always disconnect tool from air supply before attempting to clear a jam or servicing.

NOTE: refer to correct tool schematic for location of parts and correct part numbers.

Open the magazine and remove the remaining fasteners. Some jammed fasteners may be removed from the magazine side of the tool. Try to remove fastener with a pair of pliers. Depending on the severity of the jam, the driver blade must be pushed back up into the tool to allow the jammed fastener to be removed. Push the driver upwards and past the jammed fastener. As a last resort push driver up by placing a punch at the tip of the driver and tapping a hammer against the punch. **Only strike the driver**, it is the hardest part in the tool. The driver is the only part of the tool that moves in this area. If you strike the jammed fastener, you may cause it to jam worse in tool.

TROUBLESHOOTING

Water inside tools.

- Water inside tools is a result of natural condensation, settling in tanks and hoses. Drain tanks and hoses daily, if possible use condensate separators in line with tools.
- Tools that have had water in them for an extended time tend to have internal contamination and will perform poorly. Tool should be cleaned and lubricated

Tool does not fully drive fasteners.

- Air pressure too low, tools should be operated between 70 to 90 psi. (4.8-6.2 bar) Never over 100 psi (7 bar).
- Tool not perpendicular to work surface, staples driving at angle.
- Driver blade worn at tip. Replace driver blade VC4101.
- Piston o-rings worn or damaged. Replace o-rings upper o-ring VH0525, lower o-ring VH0528.
- Air exhaust clogged with dirt or built up old lubricant. Clean exhaust or replace muffler VH0545.
- Worn bumper. Replace bumper VC4119.
- Worn piston plug. Replace piston plug VC4122.
- Valve assembly worn/leaks. Replace valve assembly or components and o-rings.
- Dirt/tar build up on driver. Disassemble and clean nose/driver.
- Valve dry or dirty. Disassemble clean and lubricate.
- Air volume insufficient. Check fittings and hoses for restrictions. Restrictions can be moisture, dirt, or hoses and fittings too small for tool volume requirements.
- Wood not fully supported under area to be stapled.

Piston/driver does not return fully.

- Bumper cracked or damaged. Replace bumper VC4119.
- Piston plug cracked or damaged. Replace piston plug VC4122.

- Piston or cylinder damaged. Replace damaged part.
- Piston o-rings worn or damaged. Replace o-rings upper o-ring VH0525, lower o-ring VH0528.
- Air pressure too low or restricted. Check air lines/compressor. Restrictions can be moisture, dirt, or hoses and fittings too small for tool volume requirements.
- Driver blade bent or damaged at driving end. Replace driver blade VC4101.
- Dirt/tar build up on driver. Disassemble and clean nose/driver.
- Air exhaust clogged with dirt or built up old lubricant.
- Lack of lubrication. Clean and lubricate tool, replace worn o-rings.

Tool leaks air from nose.

- Piston o-ring worn or damaged. Replace lower o-ring VH0528.
- Internal lower piston o-ring damaged. Replace o-ring VH0527.

Tool leaks air from exhaust area.

- Valve stem seal worn out. Replace valve stem seal VC4131.
- O-ring on the outside of the head valve piston worn or damaged. Replace o-ring VH0529.

Air leak near top of tool.

- Check to make sure valve body is sealing. O-ring VH0529 must be in body enough to seal.
- Seal on valve damaged or worn. Replace valve stem seal VC4131.
- Valve plug is loose and/or worn o-ring. Tighten or replace valve plug VC4130 and/or replace worn o-ring VH0541.

Tool misfires.

- Firing tool too fast. Exhaust muffler may be too restrictive for operator speed. Remove muffler VH0545.
- Pusher damaged. Replace damaged pusher VC4135.
- Pusher spring(s) weak, damaged or broken. Replace spring(s) VC4132.
- Magazine obstructed by dirt. Clean magazine, replace if worn.
- Worn bumper. Replace bumper VC4119.
- Worn piston plug. Replace piston plug VC4122

Sluggish operation.

- Lack of lubrication. Add a few drops of tool oil, **Vertex part number VC0340** to air inlet of tool. Oil daily.
- Air exhaust clogged with dirt or built up old lubricant. Clean or replace muffler VH0545.

Tool jamming.

- Burr on end of driver blade, buff burr off driver blade.
- Magazine obstructed by dirt. Clean magazine, replace if worn.
- Magazine loose. Tighten bolts VH0032.
- Pusher damaged. Replace damaged pusher VC4135.
- Pusher spring(s) weak, damaged or broken. Replace spring(s) VC4132.
- Damaged driver blade. Replace driver blade VC4101.
- Worn bumper. Replace bumper VC4119.
- Worn piston plug. Replace piston plug VC4122.
- Check fasteners are correct for tool.

Tool fails to cycle.

- Air supply restriction. Check air lines/compressor. Restrictions can be moisture, dirt, or hoses and fittings too small for tool volume requirements.
- Tool dry, lack of lubrication. Use VERTEX air tool oil.
- Worn valve seal. Replace valve stem seal VC4131.
- Valve stuck. Disassemble/clean/check/lubricate.

Valve body loosens.

- Valve body loosens and will not stay in place. Lower bumper has taken a set and rotates valve body. Replace bumper VC4119.

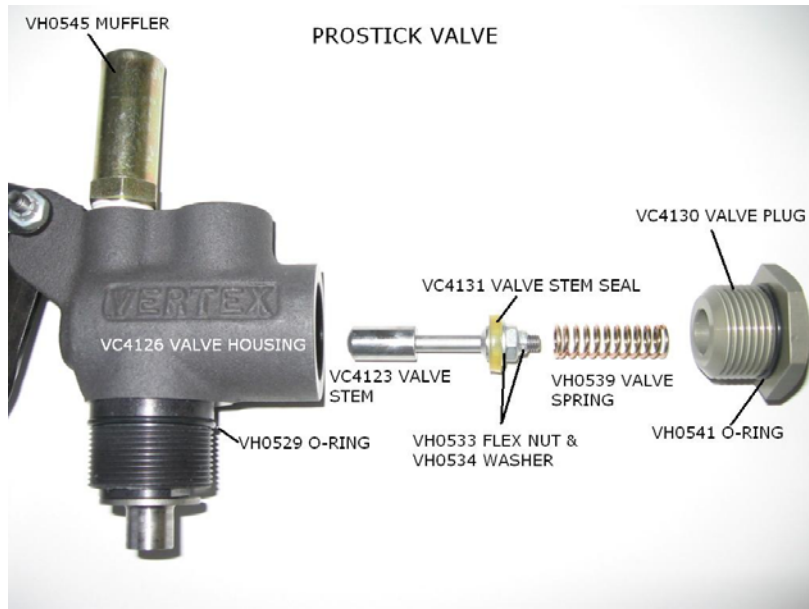
REPAIR

NOTE: Mineral spirits is recommended for cleaning tool and parts. Wipe off immediately, dry parts thoroughly before reassembly, use adequate ventilation.

SAFETY FIRST – Always disconnect tool from air supply before attempting to clear a jam or servicing.

NOTE: Refer to tool schematic and pictures for location of parts and correct part numbers.

To Disassemble Valve



1. Remove valve plug VC4130 by unscrewing from valve housing. Remove spring VH0539 and valve assembly.
2. Hold valve stem VC4123 with pliers on the small diameter area to avoid marring stem. Unscrew flex nut VH0533 and remove washer VH0534 and VC4131 valve stem seal.

To Reassemble Valve

1. Push valve stem seal VC4131 onto valve stem followed by the washer VH0534.
2. Hold valve stem VC4123 with pliers on small diameter to avoid marring stem. Screw flex nut VH0533 onto valve stem VC4123. **Do not over tighten to point of deforming the seal!** Seal should be able to turn with effort on valve stem.
3. Insert valve stem assembly into valve housing VC4126.
4. Place spring VH0539 onto end of the valve stem assembly.
5. Replace valve plug VC4130 by screwing into valve housing VC4126 and tighten.

To Disassemble Driver Assembly

1. Remove valve housing VC4126 by unscrewing from body of tool.
2. Remove cylinder sleeve VC4105 by pulling upwards and out of body.
3. Remove piston driver assembly by pulling upwards and out of body.
4. Unscrew lower piston VC4107 from upper piston VC4108 using two wrenches as shown.



5. Pull piston plug VC4122 out of lower piston VC4107 and off driver blade.
6. Pull lower piston VC4107 off driver blade.
7. Remove nylon inserts VC4139 and remove pin VC4120.
8. Pull Driver blade VC4101 out of upper piston.



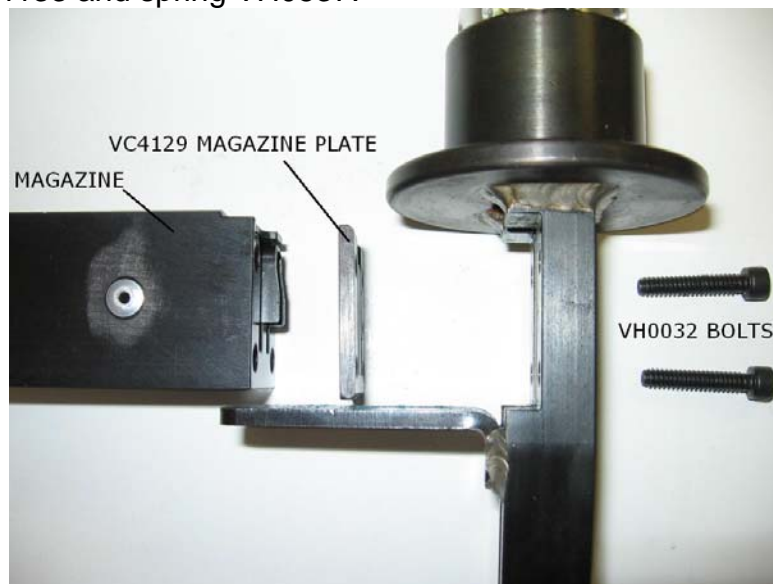
To Reassemble Driver Assembly

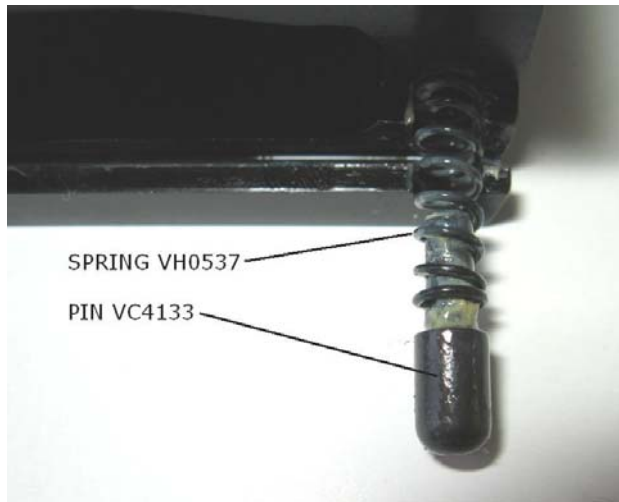
1. Push driver blade VC4101 into upper piston VC4108.
2. Center Driver Pin VC4120 into hole in upper piston and driver blade followed by nylon insert VC4139 on each side.

3. Push lower piston VC4107 onto blade and screw onto upper piston using two wrenches until tight.
4. Push piston plug VC4122 slotted end towards piston, down blade and into lower piston VC4107 until seated.
5. Insert the piston/driver assembly into body making sure the blade goes into the nose and is free to move up and down.
6. Insert cylinder sleeve VC4105 into body.
7. Screw valve housing VC4126 back into body of the tool.

To Disassemble Magazine

1. Remove four (4) bolts VH0032 (5/32" Allen wrench) to remove magazine VC4136 and magazine plate VC4129.
2. Push magazine slide VC4134 towards mounting end of magazine and remove. This disengages the slide from the pusher VC4135.
3. Remove the springs VC4132 by unhooking them from the pusher.
4. Drive pin VH0538 from magazine (3/32" pin punch) and remove the springs VC4132.
5. Remove pin VC4133 and spring VH0537.





To Reassemble Magazine

1. Insert pin VH0538 into magazine VC4136 and thru eyelet of springs VC4132.



2. Pull springs around pulleys in magazine and attach each eyelet to pusher VC4135. Place pusher into track of magazine.
3. Insert pin VC4133 and spring VH0537 into pocket in magazine.



4. Slide cover VC4134 into magazine, thumb hold first into mounting end as shown. Push down on pin VC4133 compress fully to allow cover to clear. Pin will engage into notch of cover in closed position.



INSERT COVER THUMB HOLD FIRST INTO MAGAZINE FROM THE MOUNTING END AS SHOWN

5. Place magazine plate VC4128 onto end of magazine. Plate can only go on in one direction with guide pin.



VC4129 MAGAZINE PLATE ONTO MAGAZINE
NOTE: PLATE CAN ONLY GO ON ONE WAY DUE TO GUIDE PIN IN MAGAZINE.

6. Place magazine assembly into nose of tool and attach with four (4) bolts VH0032.

To Disassemble Nose

1. Remove magazine assembly as outlined above.
2. Unscrew nose VC4109 from body VC4103.
3. Remove bumper VC4119.

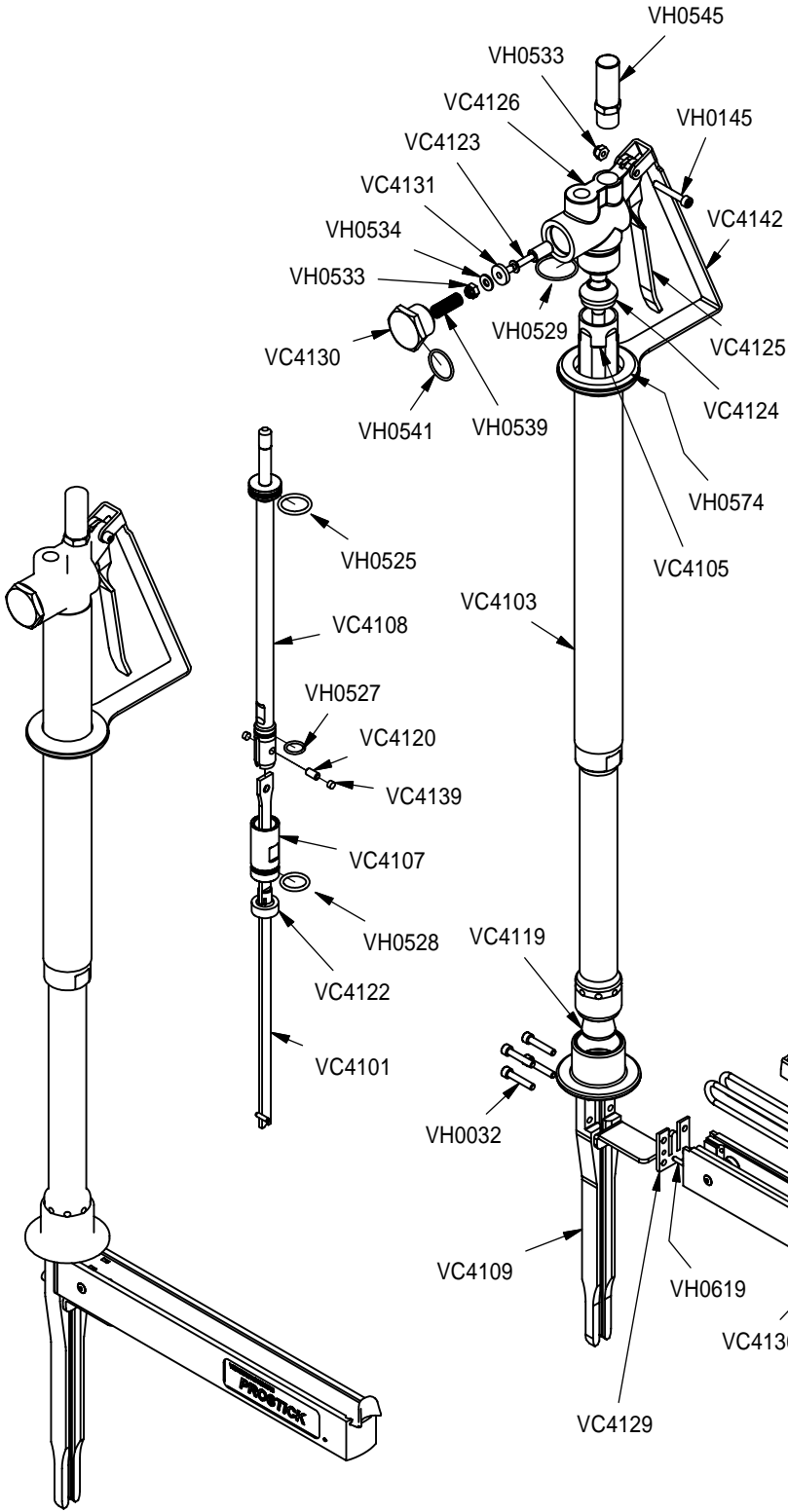
To Reassemble Nose

1. Replace bumper VC4119 narrow end towards blade. Blade should slide easily into opening of bumper.
2. Orient blade so it lines up with slot of nose VC4109 and screw nose into body VC4103.
3. Reassemble magazine to nose as outlined previously.



RECOMMENDED SPARE PARTS LIST

PART #	DESCRIPTION	NO OF TOOLS	
		1	5 OR MORE
VC4109	DOUBLE STAPLE HEAD	0	1
VC4119	DRIVER BUMPER	2	6
VC4120	DRIVER PIN	0	2
VC4122	PISTON PLUG	2	6
VC4124	RETURN BUMPER	2	6
VC4131	VALVE STEM SEAL	1	3
VC4132	SPRING	2	8
VC4133	PIN	1	2
VC4135	PUSHER	1	2
VC4101	DOUBLE STAPLE BLADE	1	2
VC4139	NYLON INSERT	2	6
VH0525	O-RING #117	2	8
VH0527	O-RING #014	1	6
VH0528	O-RING #115	2	8
VH0529	O-RING #024	0	4
VH0537	SPRING	1	2



VERTEX #	BOSTITCH REF #	DESCRIPTION	QTY
VC4101	100828	DOUBLE STAPLE BLADE	1
VC4103	-	BODY - LIGHT WEIGHT	1
VC4105	BC1530	CYLINDER SLEEVE	1
VC4107	BC1477	LOWER PISTON	1
VC4108	BC1529	UPPER PISTON	1
VC4109	100346	DOUBLE STAPLE HEAD	1
VC4119	BC1572	DRIVER BUMPER	1
VC4120	BC1478	DRIVER PIN	1
VC4122	101608	PISTON PLUG	1
VC4123	BC367	VALVE STEM	1
VC4124	BC1474	RETURN BUMPER	1
VC4125	BC283	TRIGGER	1
VC4126	BC1602A	VALVE HOUSING	1
VC4129	BC1545	MAGAZINE PLATE	1
VC4130	BC156	VALVE PLUG	1
VC4131	BC442	VALVE STEM SEAL	1
VC4132	BC1260	SPRING	2
VC4133	BC34	PIN	1
VC4134	BC1537	MAGAZINE SLIDE	1
VC4135	BC694	PUSHER	1
VC4136	BC1535A	MAGAZINE	1
VC4139	T34233	NYLON INSERT	2
VC4142		TRIGGER GUARD	1
VH0032	UA3816.4	SHCS, 10 - 24 x 1	4
VH0145	UA3820	SHCS, 10 - 32 x 1 1/4	1
VH0525	87137	O-RING, #117	-
VH0527	86458	O-RING, #014	-
VH0528	88998	O-RING, #115	-
VH0529	88705	O-RING, #024	-
VH0533	HN1032.5	NUT, FLEX, 10 - 32	2
VH0534	PW10.5	WASHER, #10	1
VH0537	BC41	SPRING, DETENT PIN	1
VH0538	UB2820	PIN, SPRING, 3/32 x 1 1/4	1
VH0539	T36135	SPRING, VALVE	1
VH0541	105502	O-RING, #020	-
VH0545		MUFFLER	1
VH0574		GROMMET	-
VH0619	UB2808.2	PIN, ROLL, 1/8 x 1/2	-

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REV	ECN	DESCRIPTION	BY	APPD	DATE	© 2004
A	387	NAME CHANGE	JMW	DA	7-15-04	DWN BY JMW
B	484	ADDED VC4142	JMW	DA	5-2-05	APPD DA
C	654	ADDED/EDITED NUMBERS	JMW	DA	3-2-06	DATE 2-25-04
						SCALE
						DWG. NO. VA0320

VERTEX FASTENERS INC.
 3714 JARVIS AVENUE
 SKOKIE, IL 60076 U.S.A.

PROSTICK
 DOUBLE SHOT
 LIGHT WEIGHT

 INVENTOR **A**