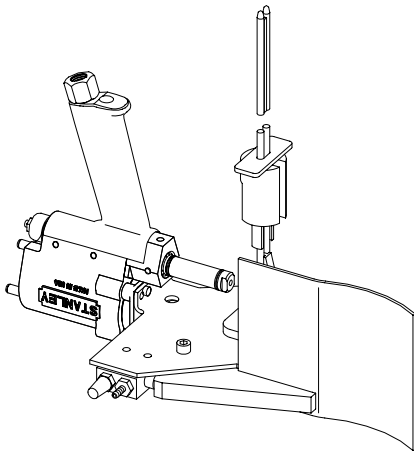


PNEUMATIC C-RING TOOLS SC460CT

SAFETY INSTRUCTIONS



WARNINGS

- **Always** read tool manual before operating.
- Always wear safety glasses while operating or while in the vicinity of a tool in operation.
- For testing, always cycle tool away from work to insure proper ring closure. For safety reasons, an improperly functioning tool **must not** be used. When operating tool, never point or actuate tool other than into work.
- Operate tool in an unobstructed work area.
- Disconnect air supply prior to maintenance and/or repair of tool.
- Use clean dry air to maximize efficiency **Do Not Exceed 115 P.S.I.**
- Do not use bottled gases such as oxygen, hydrogen, carbon dioxide, acetylene, etc.
- Tools shall be operated with a fitting or hose coupling on or near the tool in such a manner that all compressed air in the tool is discharged at the time the fitting or hose coupling is disconnected.



WARNING:

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 Standard Institute, ANSI Z87.1-1979 and provide frontal and side protection. Eye protection should 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 possible flying particles and/or debris, which could cause severe eye injury.

NOTE: Non-side shielded prescription glasses or faceshields alone do not provide adequate protection.

OPERATION

▲WARNING:

Always handle tool with care:

- Never engage in horseplay.
- Never pull the trigger unless nose of tool is directed toward the work.
- Keep others at a safe distance from the tool while the tool is in operation as actuation occurs, possibly causing injury. Keep hands and body away from the jaw mechanism of the tool.

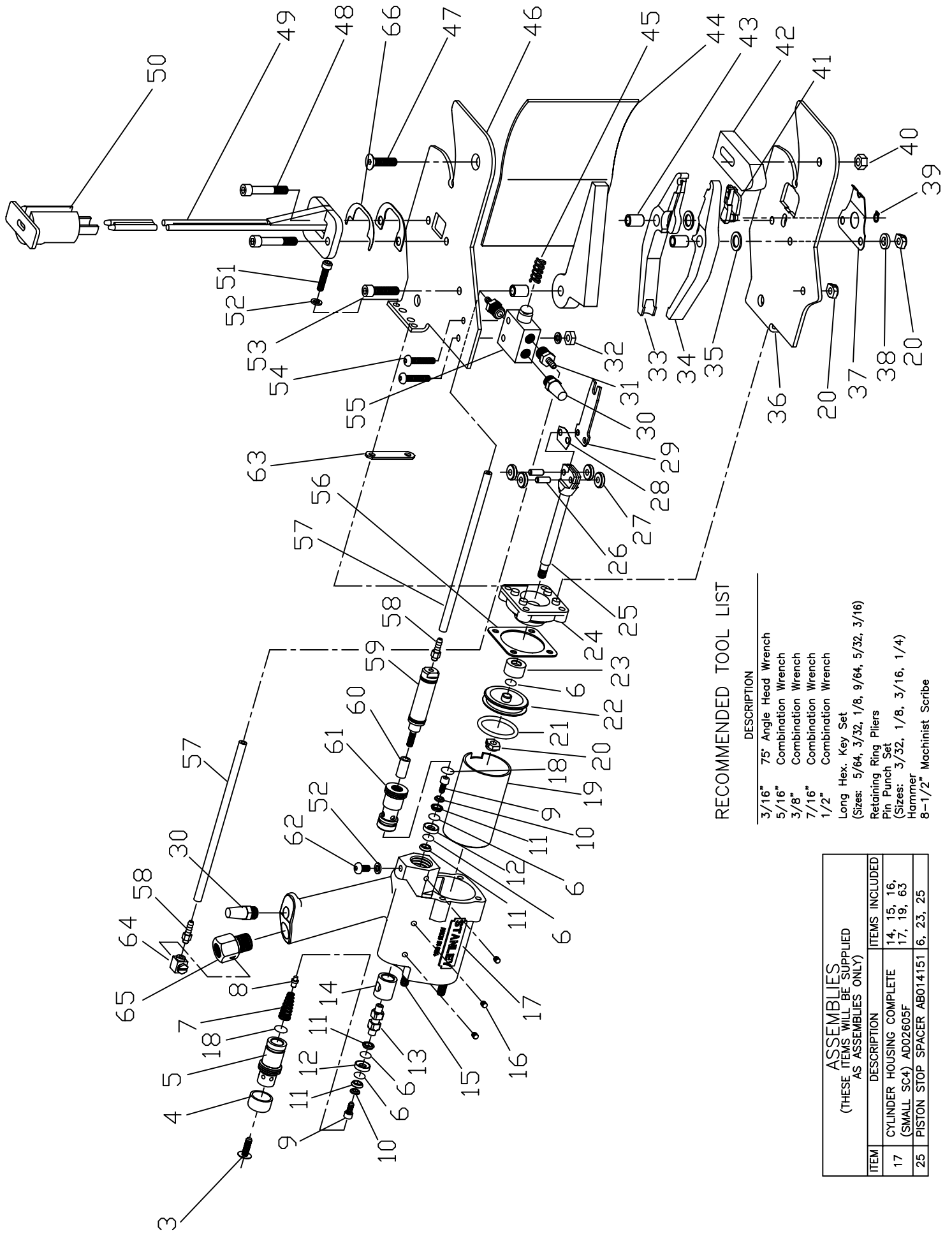
LOADING TOOL

▲WARNING:

When loading tool:

- Never place a hand or any part of body in jaw mechanism area of tool.
- Never point tool at anyone.
- Never actuate tool when loading, accidental injury may occur.

STANLEY® Fastening Systems



RECOMMENDED TOOL LIST

DESCRIPTION
3/16" 75° Angle Head Wrench
5/16" Combination Wrench
3/8" Combination Wrench
7/16" Combination Wrench
1/2" Combination Wrench
Long Hex. Key Set (Sizes: 5/64, 3/32, 1/8, 9/64, 5/32, 3/16)
Retaining Ring Pliers
Pin Punch Set (Sizes: 3/32, 1/8, 3/16, 1/4)
Hammer 8-1/2" Machinist Scribe

ASSEMBLIES (THESE ITEMS WILL BE SUPPLIED AS ASSEMBLIES ONLY)	
ITEM	ITEMS INCLUDED
17	14, 15, 16, 17, 19, 63
25	6, 23, 25

TO DISASSEMBLE

Jaws, magazine and pusher assembly

1. Slide pusher (#50) off magazine end (#49).
2. Remove nylock nuts, washers and jaw bolts (#20, #38, and #48) and latch spring (#37).
3. Remove upper and lower jaws (#33 and #34) with (2) jaw bushings (#43).
4. Remove magazine assembly (#49).

Feeder blade, rollers, piston rod

1. Remove (4) cap screws and washers (#51 and #52).
2. Remove front end assembly and (2) spacers (#63).
3. Remove the piston (#22), o-ring (#21), flexlock nut (#20) piston stop spacer assembly (#24), piston rod assembly with piston rod (#25), feeder blade (#29), (2) roller pins (#26) and (4) rollers (#47) from the front end assembly.

Throttle

1. Loosen set screws (#16) on both ends. **Do not loosen center set screw #16.**
2. **Do not remove throttle valve bushing (#14), location is pre-set at Stanley Fastening Systems.**
3. Remove air deflector parts (#3 and #4).
4. Remove rear valve seat (#5).
5. Remove throttle spring and locator parts (#7 and #8).
6. Remove front valve seat, bumper and stroke cylinder (#61, #60 and #59) using the flats on the rear of the cylinder.
7. Remove stroke cylinder from front valve.
8. Remove bumper from cylinder. Apply heat as needed to break down thread lock adhesive on threaded end of cylinder.
9. Using two 9/64" Allen wrenches, unscrew throttle valve screws (#9) to remove valve units. **Hint:** Hold tool so that the valve is vertical to help prevent losing parts.
10. One valve screw will remain with other valve parts on spacer (#13), and can be disassembled after removal from housing.

TO RE-ASSEMBLE

1. Assemble one side of the o-ring support assembly (#9, #10, #11, #12, #13, #12, and #11) on spacer (#13). The chamfer on both washers (#10) should be installed, with chamfer side against cap screw head (#9).
2. Hold tool vertically and install o-ring support assembly with spacer into bushing from the top.
3. Holding cap screw with an Allen wrench, bring second o-ring support assembly (mounted on screw (#9)) in from the opposite side and complete valve assembly. The valve should have free motion of travel of about 3/32" [.09"(2.3mm)].
4. Insert valve spring locator and spring (#8 and #7) into the rear of the valve.
5. Screw rear valve seat with lubricated o-ring (#5 and #18) into rear of the valve port. Insert your finger into the front of the valve port and place it on top of the socket head cap screw (#9). Apply pressure onto the screw depressing throttle spring. Turn rear valve in until you feel the valve making contact with the o-ring support assembly.
6. Apply Loctite #242 or equivalent onto threads of cylinder (#59). Install bumper (#60) onto stroke cylinder (#59). Screw bumper completely onto cylinder rod.
7. Install stroke cylinder (#59) into front valve (#61), screw cylinder completely into front valve.

8. Using flats on the stroke cylinder, slowly screw front valve seat with lubricated o-ring (#18) into front of the valve port. Screw valve in until it seats, then back it out approximately 1-1/2 turns. (See Throttle Valve Adjustment).
9. Assemble piston stop spacer assembly (#24), piston (#22), piston rod (#25) and nylock nut (#20) together. Be careful not to damage o-ring (#6) when pushing stop spacer onto piston rod, use lubrication. Place piston so that the extended neck is opposite the nylock nut. Nylock nut at rear of piston must be Loctited into place (Loctite #242 or equivalent). Place o-ring (#21) onto piston.
10. Mount feeder blade (#29) and two roller pins (#26) on piston rod (#25).
11. Place (4) rollers (#27) on the (2) roller pins (#26). Lubrication will hold the rollers in place while assembling the rest of the tool.
12. Mount latch (#41) onto side plate (#36) with latch pin clip (#39).
13. Place cylinder gasket (#56) between the stop spacer and the housing.
14. Insert stop spacer / feeder blade assembly into the cylinder housing. Be careful not to damage o-ring (#21) when pushing piston into the cylinder bore, use lubrication.
15. Install (2) 1/8 NPT hose fitting (#31) and install muffler (#30) into Humphrey valve (#55) as illustrated.
16. Connect (2) vinyl hoses (#57) to (2) hose fittings (#31).
17. Assemble magazine side plate (#46), latch side plate (#36), striker (#44), jaw bushing (#43) and striker bumper (#42) with socket head cap screw (#53), flexlock nut (#20), flat head cap screw (#47) and jam nut (#40) together.
18. Mount Humphrey valve assembly and air trip spring (#45) to magazine side plate (#46) with (2) button head cap screws (#54), (2) lock washers (#52) and (2) jam nuts (#32).
19. Assemble side plate assembly with (2) side plate spacers (#63) onto stop spacer / feeder blade assembly (rotate feeder blade to fit between side plates).
20. Secure front end assembly with (4) lock washers and cap screws (#52 and #51).
21. Adjust striker bumper (#42) so that the point is approx. .765" beyond the edge of the side plate. The striker (#46) should just clear the actuation button of the Humphrey valve (#55).
22. Install (2) jaw bushings (#43) into jaws (#33 and #34). Lubricate both jaws and bushings before installing them.
23. Insert jaws (#34 and #33) between the side plates (#36 and #46).
24. Place magazine shim or shims (#66) as needed under the magazine foot (#49), between magazine and side plate. Other shims may be added or subtracted to get the proper clearance under magazine. (See Magazine Installation Procedure)
25. Insert (2) jaw bolts (#48) through the magazine, shims, side plate, jaw bushing, side plate, latch spring (#37) and (2) washers (#38). Secure jaw bolts with (2) nylock nuts (#20). Do not over tighten jaw bolts, jaws must still pivot freely.
26. Install hose fitting (#58) to stroke cylinder (#59).
27. Connect vinyl hose (#57) to hose fitting onto stroke cylinder leading from the inside fitting of Humphrey valve (#55).
28. Install adjustment "L" fitting (#64) to inlet bushing (#65).
29. Install hose fitting (#58) to adjustment "L" fitting (#64).
30. Connect vinyl hose (#57) to hose fitting (#58) on inlet bushing.
31. Clamp all hose and fitting connections

INSTALLATION PROCEDURE / ADJUSTMENTS

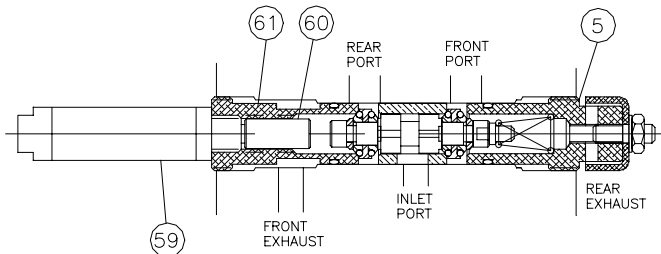
Magazine

1. Before tightening jaw bolts (#48), insert approximately .010" of shims.
2. Tighten bolts and check shoe area for proper fit. The clearance should be approximately .010"(.25mm).
3. Cycle tool and check for proper closure of ring. If feeder blade hits rear of magazine, add another shim. If there is too much clearance between magazine shoe area reduce the amount of shim thickness. Shims (#66) are available in three thickness: .005" (.013mm) P/N B1545005, .010" (.25mm) P/N B1545010 and .030" (.76mm) P/N A01911.

Throttle valve

Follow these steps after completing tool assembly in order to minimize the time and effort required for optimum throttle valve adjustment:

1. Using the stroke cylinder, slowly screw in the front valve seat (#61) until it bottoms, then back it out 1-1/2 turns (if needed).
2. Do the same with the rear valve seat (#5) (if needed).
3. Attach an air line and fully depress the striker assembly. IF AIR SHOULD LEAK OUT THE REAR VALVE SEAT, slowly turn in the rear valve seat (#5) until the air stops leaking.
4. Release the striker assembly. IF AIR SHOULD LEAK OUT OF THE HANDLE, use the flats on the stroke cylinder (#59) and turn the front valve seat (#61) in slowly until the air stops leaking from the handle.
5. Gently depress the striker assembly. Air should flow evenly from the rear exhaust to the handle exhaust.
6. The valve should now be adjusted - test the tool.
7. Tighten the front and rear valve seat locking set screws (#16) and re-test the tool.
8. **Do not loosen or tighten center locking set screw (#16) it is pre-set from Stanley Fastening Systems.**



TOOL LEAKS AIR OR IS SLUGGISH

1. If tool is leaking air in the throttle area, see "Throttle Valve Adjustment" section.
2. Should the tool leak air in both the triggered (actuated) and at rest positions, a damaged piston o-ring may be the cause. Once the piston o-ring has been replaced, lubricate with lithium grease. Tilt the front of the tool to one side to allow the o-ring on the piston to pass the notch on the cylinder liner. If this procedure is not followed, the o-ring may be damaged during the insertion of the piston assembly into the cylinder housing.
3. If the tool still continues to leak, the liner may be leaking between the housing. The tool should be sent back to Stanley Fastening Systems for repair.
4. Put a few drops of light oil into inlet bushing to lubricate the piston o-ring.
5. In the event the rear throttle valve screw is turned in too far, the tool will operate slowly or in a sluggish manner during the opening/loading sequence. This screw controls the amount of rear exhaust. When properly adjusted, two or

three threads should be exposed once the nut and washer are in place.

LUBRICATION

1. The "SC" series Flex-C tools are designed for long, trouble-free service with no or minimal air line lubrication. (If an in-line lubricator is used, it should be set at the minimum rate of flow.)
2. Excess oil in the tool will attract dirt, lint, and the adhesive material used in collating the fasteners, preventing smooth operation. When lubrication is used, always use a good **grade of 5W non-detergent oil with no additives.**
3. When servicing or repairing tool use **lithium grease** on all moving parts.

FILTER AND REGULATOR

1. The air line should always contain a filter and regulator unit to provide the tool with a constant flow of clean, dry air. If moisture and contaminants are allowed to enter the tool, the tool's serviceable life will be decreased.
2. The regulator should be set between 90 and 105 psi. (6.726 bar). Never operate this tool beyond 105 psi. (7.24 bar).

TIPS ON EXTENDING TOOL LIFE

The serviceable life of the "SC" series tools can be extended greatly by using the following guidelines:

1. Always use Stanley Fastening brand fasteners. Never replace worn or broken parts with anything other than genuine Stanley Fastening Systems parts. **Generic fasteners** may shorten the life of your Flex-C tool and **will void** the manufacturer's warranty.
2. Keep your tool(s) clean and dry. Always use clean, dry air and never exceed the recommended air pressure noted above.
3. Use of this tool at minimum air pressure required for the work at hand will greatly extend the life of the tool.
4. Exercise caution not to drop equipment. Tools dropping onto the floor or ground is a primary reason for parts replacement.

HELPFUL HINTS FOR FIELD SERVICE TOOL JAMS

1. The most common reason for jamming problems in the SC tool is not actuating striker completely to ensure positive functioning of the valve. If the tool is "short cycled," the feed mechanism will return forward prematurely in an attempt to pick up a second ring. This will most likely cause a jam.
2. If a jam occurs, remove pusher and remaining rings from magazine. After making sure no one is in front of tool, cycle tool. This should force jammed ring(s) out of jaw mechanism.
3. If procedure "2" does not clear the tool, **disconnect air**, lay tool on a clean flat surface and remove lower jaw bolt and nut, and pull lower jaw and bushing from tool. Jammed rings are now exposed and may be removed from tool. Remove build up of dirt, lint, and any other foreign debris and check for worn or damaged parts. Re-assemble in reverse order.
4. Replace worn or damaged parts to keep tool operating properly.

SPECIFICATIONS AND TYPES OF MATERIALS AVAILABLE BY PART NUMBER							
Part Number	Per Strip #	Per Box #	Material	Wire Diameter	Ring I.D.	Ring Leg Opening	Operating of Tool SC460CT
RING516G100	100	10,000	Galvanized	0.06	0.53	0.40	7/32-3/16
RING516SS100	100	10,000	Stainless Steel	0.06	0.53	0.40	7/32-3/16
RING516AL100	100	10,000	Aluminum	0.06	0.53	0.40	7/32-3/16

* Please specify “Blunt” or “Sharp” when ordering rings.

RING DOES NOT CLOSE CORRECTLY

1. Check air pressure. Line pressure at the tool should be between 90 and 95 psi (6.21 - 6.55 bar) for most applications. The tool should never be operated at pressures exceeding 100 psi (6.90 bar) except for some stainless steel applications where 115 psi (7.93 bar) is required to close the stainless steel ring completely.
2. A 3/8” (9.5 mm) or larger air line should be used with the “SC” Series Tools. Air lines in excess of 100’ (30.5 meters) in length can cause air volume deficiencies at the tool which will prevent normal operation.
3. Check for foreign debris in the jaw area. This is especially true in the area between the side plates and rollers.
4. The jaws may be worn from extended use. Check the “land” between the receiving grooves of the jaws. If the land is worn excessively, replacing the jaw(s) is recommended.
5. When the tool is used in corrosive applications, light oil should be applied on a regular basis to the jaw bushings and rollers. Unlubricated and/or corroded jaw bushings may cause the tool to function poorly.
6. When ring teardrops, the latch is not backing the ring up properly. Replace or reshape latch spring to hold latch against the side plate. The latch may also need to be replaced to get proper ring shape.

FEEDING PROBLEMS

1. If rings do not feed smoothly down the magazine, check pusher spring for proper tension. If the magazine is covered with dirt from field use, clean the magazine and apply a light coating of oil.
2. When rings feed properly on the magazine but do not feed into the jaws without spitting out of the magazine side of the tool, or if the rings sit in the jaw grooves on an angle, check jaws to ensure freedom of movement. With the jaws void of rings, the vertical movement should be approximately .06” (1.5 mm). The jaw bolt nuts should be snug, but **never over-tightened**.
3. After considerable use or several jams, the fingers on the pusher may show signs of spreading. This may cause the pusher to “hang up” on the magazine, with little or no pressure behind the rings. The last few rings in the strip will not feed into the jaw mechanism. The pusher fingers can be squeezed back into proper position or the pusher should be replaced. **NEVER USE LOOSE RINGS IN THE SC TOOL.**

LIMITED WARRANTY

Stanley Fastening System 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 Fastening System’s option, any defective product within 60 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, or accident.

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 FASTENING SYSTEMS SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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, you must return the product at your expense together with proof of purchase to a Stanley-Bostitch Regional warranty repair center or you may call us at 1-800-556-6696 or 1-800-832-3080 for the location of additional authorized warranty service locations in your area.

