

TROUBLE SHOOTING GUIDE FOR PNEUMATIC C-RING TOOLS



Form No. 10541

PROBLEM

Inside diameter of ring too large after clinching



CAUSE

- Latch worn
- Wrong latch used (too short)
- Latch spring broken
- Wrong piston rod (too short)

- Low power –
 1. Air pressure set too low
 2. Air leaks in supply hose
 3. Air leak in tool
 4. Throttle valve not adjusted properly
- Wrong jaws used
- Worn jaws (helix, cam surface, bolt holes, jaw bushings)
- Worn rollers
- Wrong rollers (too small)
- Defective rings –
 1. Wire too hard
 2. Rough Surface
 3. Cut-off burrs

SOLUTION

- Replace latch
- Verify and replace latch
- Replace latch spring
- Verify and replace piston rod
- Verify pressure
 1. Check air pressure setting (Operator Manual)
 2. Replace air supply hose
 3. See page 5
 4. Adjust throttle valve properly
- Verify and replace jaws
- Replace jaws

- Replace rollers
- Verify and replace rollers
- Return sample of rings to your Stanley Fastening representative to be tested

Inside diameter of ring too small after clinching



- Wrong jaws
- Jaw stops worn or polished off

- Verify and replace jaws
- Replace jaws

Ring points not entering opposite jaw

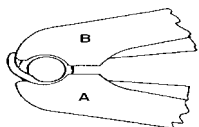


Figure A

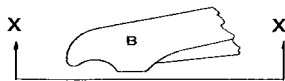
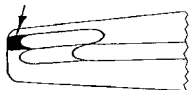


Figure B
Chamfer



View X-X
Figure C

- Tip of jaw broken off
- Mismatched jaws –
 1. Jaws should be replaced only in pairs
- Defective rings –
 1. Points not equal
 2. Ring not symmetrical
 3. Cut-off Burrs
- Helix in jaw “A” worn so that it does not properly guide the ring point into the rotating helix in jaw “B” as shown
- Rings only curling in one jaw

- Replace jaws
- Verify and replace jaws

- Return sample of rings to your Stanley Fastening representative to be tested

- Correct by chamfering the tip of the helix that the ring is entering as shown in the shaded area in Figure “C”
- Replace jaws

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PROBLEM

Ring tear drops instead of forming



CAUSE

- Latch worn
- Wrong latch (too short)
- Latch spring bent or broken (spring must hold latch tightly against end of side plate and against jaws)
- Feeder blade –
 1. Wrong feeder blade (too short)
 2. Modified by customer
 3. Worn (rounded on leading edge)
- Wrong or worn side plate
- Defective rings –
 1. Burrs
 2. Twisted
 3. Not symmetrical

SOLUTION

- Replace latch
- Verify and replace latch
- Replace latch spring
- Feeder blade
 1. Verify and replace
 2. Do not modify parts
 3. Replace feeder blade
- Replace side plate
- Return sample of rings to your Stanley Fastening representative to be tested

Rings jam

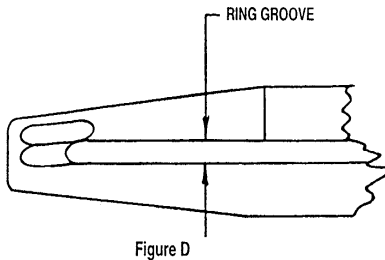


Figure D

- Magazine –
 1. Damaged or bent (changes position of shoe)
 2. Too many shims (Ring passes under shoe without raising shoe; ring out of control)
 3. Too few shims (Ring must be forced under shoe which “bottoms out” and may deflect magazine itself)
 4. Worn shoe
 5. Magazine shoe groove worn
 6. Frequent jamming can cause the shoe groove in the magazine to bend and increase the groove width
 7. Loose or lost rear magazine mounting screw (magazine is not supported properly)
- Pusher spring loose
- Feeder blade –
 1. Worn (holes, length, thickness, leading edge)
 2. Broken
 3. Bent
- Ring groove in jaw worn (see figure “D”)
- Defective rings –
 1. Burrs
 2. Rings skewed on stick
 3. Rings out of line on stick
 4. Rings twisted
 5. Rings not symmetrical
 6. Rings formed to size
 7. Ring strip flare at the ends
- Wrong wire gauge for model of tool

- Magazine –
 1. Replace magazine
 2. Adjust – see Operator Manual
 3. Adjust – see Operator Manual
 4. Replace shoe
 5. Replace magazine
 6. Replace magazine
 7. Tighten or replace mounting screw
- Adjust pusher spring
- Feeder blade
 1. Replace feeder blade
 2. Replace feeder blade
 3. Replace feeder blade
- Replace jaw
- Return sample of rings to your Stanley Fastening representative to be tested
- Verify wire size
 1. 16 ga..06 dia. [1.5mm]
 2. 15 ga..07 dia. [1.8mm]
 3. 11 ga..12 dia. [3.0mm]

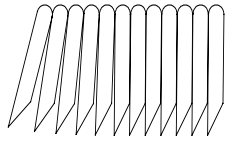
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| <u>PROBLEM</u> | <u>CAUSE</u> | <u>SOLUTION</u> |
|---|---|--|
| Rings don't feed down magazine | <ul style="list-style-type: none"> • Pusher spring – <ol style="list-style-type: none"> 1. Spring too loose 2. Spring broken • Damaged or bent magazine • Defective rings – <ol style="list-style-type: none"> 1. Undersized (tight on magazine) 2. Burrs 3. Rings twisted 4. Rings skewed on stick 5. Rings out of line on stick 6. Ring strip flares at the ends | <ul style="list-style-type: none"> • Pusher spring – <ol style="list-style-type: none"> 1. Adjust pusher spring 2. Replace pusher spring • Replace magazine • Return tool and sample of rings to your Stanley Fastening representative to be tested |
| Ring spitting | <ul style="list-style-type: none"> • Air pressure too high • Pusher spring loose • Magazine – <ol style="list-style-type: none"> 1. Damaged or bent (changes position of shoe) 2. Too many shims (ring passes under shoe without raising shoe; ring not contained) 3. Too few shims (Ring must be forced under shoe which “bottoms out” and may deflect magazine itself. This may produce snapping or clicking noise as ring is fed from magazine.) 4. Worn shoe or magazine shoe groove worn • Worn jaws (replace only in sets) • One (or both) jaws rubbing side plate. Jaws must move freely; the ring should have equal force on it as it leaves the shoe of the magazine. If one jaw is hard to move, the ring will contact it first, causing the ring to rotate and spin out of control. • Build up of material in jaw helix, (when using plated, aluminum or plastic coated rings) • Defective rings – <ol style="list-style-type: none"> 1. Burr on outside curve of ring 2. Rings skewed on stick 3. Rings out of line on stick 4. Rings not symmetrical 5. Wrong wire gauge for model of tool 6. Rings twisted opposite to jaw helix 7. Ring strip flares at the ends | <ul style="list-style-type: none"> • Verify proper air pressure • Adjust pusher spring • Magazine – <ol style="list-style-type: none"> 1. Replace magazine 2. Adjust – see Operator Manual 3. Adjust – see Operator Manual 4. Replace shoe or magazine • Replace jaws • Adjust jaws • Remove build up of material • Return sample of rings to your Stanley Fastening representative to be tested |
| Snapping noise as ring is being fed from magazine | <ul style="list-style-type: none"> • Too few shims under magazine <ol style="list-style-type: none"> 1. Ring is being forced under the shoe that has “bottomed out” and is deflecting the magazine. • Magazine shoe rocking in magazine groove • Rings of wrong wire gauge used in tool – too large | <ul style="list-style-type: none"> • Adjust magazine – see Operator Manual • Replace magazine • Verify rings and use correct rings for the given tool |

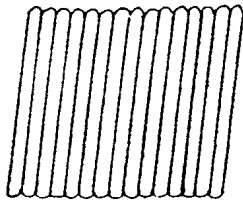
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“C” RINGS

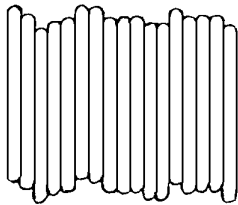
Stanley Fastening System Hogringers are designed to operate with rings manufactured within standard tolerances. As can be seen in the preceding pages, visibly defective rings can be the cause of many ring-forming troubles.



FLARED RINGS IN A STRIP



RINGS SKEWED ON A STRIP



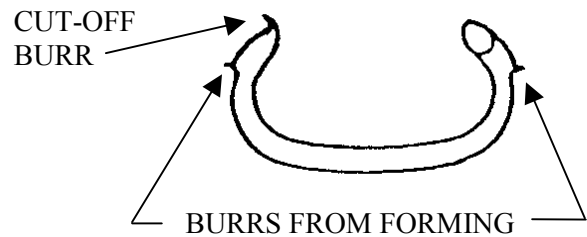
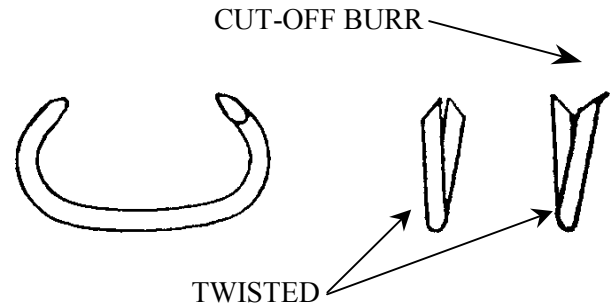
RINGS OUT OF LINE ON A STRIP

LONG
HANGING
LEG

SHORT LEG



UNSYMMETRICAL



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CORRECTING AIR LEAKS IN TOOLS

The source of air leakage is most commonly the throttle assembly or the liner housing seal. This procedure will assist the repairman in solving this problem quickly.

The throttle is basically a pair of two-way valves that divert air in front of, or behind the piston to crimp a ring or load a ring in the jaws respectively. The figures below show the air routings for both positions.

Follow the Disassembly instructions and replace all o-rings. Verify that the trigger contact area is not worn. If worn, the valve will not cycle completely (replace the trigger).

Follow the re-assemble and adjustment instructions.

If the air leak persists, inspect the piston, piston o-ring, piston rod bushing and bushing o-ring. Replace if any appear worn.

If the tool still leaks air, the throttle valve bushing or piston liner may be leaking. Have tool serviced at your nearest Stanley Fastening Service Center.

To Disassemble:

1. Remove front sub-assembly from housing.
2. Do not remove throttle valve bushing (#33), location is preset at Stanley Fastening.
3. Remove air deflector parts (#1, #2, #3, and #4).
4. Loosen set screws (#28) on both ends. Do not loosen center set screw (#28).
5. Remove rear valve seat (#5).
6. Remove throttle spring and locator parts (#7 and #8).
7. Remove front valve seat (#16) and throttle stem (#17) using a 3/16" wrench.
8. Using two 9/64" Allen wrenches, unscrew throttle valve screws (#9) to remove valve units. Hint: Hold housing so that the valve is vertical to help prevent losing parts.
9. One valve screw will remain with other valve parts on spacer (#14), 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 (#14). The chamfer on both washers (#10) should be installed, with chamfer side against cap screw head (#9).
2. Hold housing 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 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 socket head cap screw (#9) in the rear of the valve port.
5. Screw rear valve seat with lubricated o-ring (#5 and #6) into rear of the valve port.
6. Insert throttle stem (#17) into front valve seat (#16) so that the rounded end is out and slowly screw front valve seat with lubricated o-ring (#6) into front of the valve port.
7. Leave trigger guard loose for adjusting the valve. See Throttle Valve Adjustment Procedure for proper valve adjustment instructions.

Throttle Valve Adjustment Instruction

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

1. Using the valve stem (#17), slowly screw in the front valve seat (#16) until it bottoms, then back it out 1-1/2 turns.
 2. Do the same with the rear valve seat (#5).
 3. Attach an air line and fully depress the trigger. AIR SHOULD LEAK OUT THE REAR VALVE SEAT. While depressing the trigger, slowly turn in the rear valve seat (#5) until the air stops leaking.
 4. Release the trigger. AIR SHOULD LEAK OUT OF THE HANDLE. Place a 3/16 wrench on the trigger valve stem (#17) and turn the front valve seat (#16) in slowly until the air stops leaking from the handle.
 5. Gently depress the trigger. 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 screws (#28) and re-test the tool.
 8. **Do not loosen or tighten center locking screw (#28), it is preset from Stanley Fastening Systems.**
- Do not screw set screw (#1) in too far or it will result in the tool running sluggish by restricting the air flow.

