

Troubleshooting the Vertex C-Ring Tool

Vertex Fasteners is committed to providing our customers with world-class customer service and support. Our dedicated regional sales/service technicians are Vertex employees. They know the product, the business, and their customers, and are there to serve you. Vertex also has a well-trained staff of customer service, production and engineering professionals that are ready and able to assist you.

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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. Dirt or water that may enter the tool via air lines.
4. Defective rings.

LUBRICATION

1. The **C-Ring tool** is 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, and the tape used to collate rings, preventing smooth operation. Cycle tool to expel excess oil.
3. When servicing or repairing tool a **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 (6.9 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. Use tool at minimum amount of air pressure needed to do the work at hand. **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.



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HELPFUL HINTS FOR FIELD SERVICE OF TOOL JAMS

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

The most common reason for jamming problems is worn parts. Common parts that see a lot of wear are the jaws, pusher assembly and the pusher spring.

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

TROUBLESHOOTING

Inside diameter of ring too large after clinching

- Latch worn – replace latch
- Latch spring broken – replace latch spring
- Low power
 1. Air pressure too low – check air pressure setting
 2. Air leaks in supply hose – replace hose
 3. Air leak in tool – see tool manual repair section
- Worn jaws (helix, cam surface, bolt holes, jaw bushings) – replace jaws
- Worn rollers – replace rollers
- Defective rings –
 1. Wire too hard
 2. Rough surface
 3. Cut-off burrs
 4. Wrong rings. Return samples of rings to your Vertex Fasteners representative for testing.

Inside diameter of ring too small after clinching

- Wrong jaws – replace jaws
- Jaw stops worn or polished off – replace jaws

Ring points not entering opposite jaw (Figure A)

- Tip of jaw broken off – replace jaws
- Mismatched jaws
 1. Jaws should be replaced only in pairs
- Defective rings
 1. Points not equal
 2. Ring not symmetrical
 3. Cut-off burrsReturn samples of rings to your Vertex Fasteners representative for testing.
- Ring point not entering jaw A – Correct by chamfering tip of the helix that the ring is entering as shown in Figure B.
- Rings only curling in one jaw – replace jaws

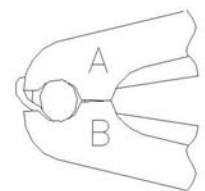
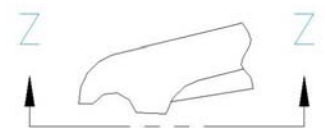


Figure A



View Z-Z
Figure B

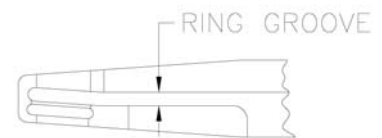
Ring tear drops instead of forming

- Latch worn – replace latch
- Latch spring bent or broken (spring must hold latch tightly against end of side plate and against jaws) – replace latch spring
- Feeder blade worn – replace feeder blade
- Defective rings
 1. Burrs
 2. Twisted
 3. Not symmetrical
 4. Wrong rings. Return samples of rings to your Vertex Fasteners representative for testing.



Rings jam

- Magazine
 1. Damaged – replace magazine
 2. Too many shims (ring passes under shoe without raising shoe; no control of ring) – adjust see repair section
 3. Too few shims (ring must be forced under shoe which “bottoms out” and may deflect magazine) – adjust see repair section
 4. Worn shoe – replace shoe
 5. Frequent jamming can cause the shoe hole in the magazine to increase in size – replace the magazine
 6. Loose or lost rear magazine mounting screw (magazine is not supported properly) – tighten or replace mounting screw
- Damaged or bent rail – replace rail
- Pusher spring defective – replace spring
- Feeder blade worn, broken or bent – replace feeder blade
- Ring groove in jaw worn – replace jaw
- Defective rings
 1. Burrs
 2. Rings skewed on stick
 3. Rings out of line on stick
 4. Rings twisted
 5. Rings not symmetrical
 6. Poor tape to ring adhesion
 7. Wrong rings. Return samples of rings to your Vertex Fasteners representative for testing.



Rings don't feed down magazine

- Pusher spring defective – replace spring
- Damaged magazine – replace magazine
- Damaged or bent rail – replace rail
- Damaged pusher – replace pusher
- Defective rings

1. Undersized (tight on magazine)
2. Burrs
3. Rings twisted
4. Rings skewed on stick
5. Rings out of line on stick
6. Poor tape to ring adhesion
7. Wrong rings. Return tool and sample rings to your Vertex Fasteners representative for testing.

Ring spitting

- Air pressure too high – verify air pressure
- Pusher spring loose – replace spring
- Magazine
 1. Damaged – replace magazine
 2. Too many shims (ring passes under shoe without raising shoe; no control of ring) – adjust see repair section
 3. Too few shims (ring must be forced under shoe which “bottoms out” and may deflect magazine) – adjust see repair section
 4. Worn shoe – replace shoe
- Damaged or bent rail – replace rail
- Worn jaws – replace jaws (replace only in sets)
- Build up of material in jaw helix – remove build up of material
- Defective rings –
 1. Burr on outside curve of ring
 2. Rings skewed on stick
 3. Rings out of line on stick
 4. Rings not symmetrical
 5. Rings twisted opposite to jaw helix
 6. Wrong rings. Return samples of rings to your Vertex Fasteners representative for testing.

Ring Defects

Vertex Fasteners Hog Ring Tools are designed to operate with rings manufactured to standard tolerances. Defective rings can be the cause of many ring-forming problems. Never use rings that are too loose or otherwise defective. Below are some examples of defects that can occur.

