

TROUBLESHOOTING GUIDE

FC3000S

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1 – Improper clip-spacing

- Improper rail recipe – review clip-spacing on screen and edit as needed – see manual for instructions
- Rail condition is bad (e.g., warped, voids, chipped, dimensions off, not square)
- Rail trigger/trigger switch assembly, VC5255, may be worn, broken, or in need of adjustment. Inspect the condition of the VC5254 rail trigger for damage or wear. If this is okay with chain off and air supply unplugged, cycle the VC5254 rail trigger. If the trigger is operating correctly, the clip light on the control cabinet should light up when the trigger is between 5% to 75% of its travel. Perform this test numerous times to ensure that there is not an intermittent issue. Trigger may also need adjustment, which can be done by loosening the socket head cap screw holding the trigger to the knurled shaft on the switch and retightening it to the correct position.
- Front fence not adjusted properly – make sure that the fence is all the way against the rails
- Rail may be losing contact with the chain lug(s):
 - Make sure VC5709 pressure foot is not broken, is in place, tight, and that it has adequate spring pressure
 - Check to be sure the lugs are not worn; replace as necessary
- Chain is not adjusted properly (too loose) – adjust as necessary (see chain adjustment procedure in manual)
- Improper compensation setting – if none of the above corrected the issue then the compensation setting may be off and may be adjusted per the manual entitled “Hidden Screens” 4 = Set-up. Always correct “Sensor Offset” first, then P1 compensation if needed.

2 – Clip not driven properly

Clips over-driven or under-driven:

- Check air pressure and adjust up or down depending if clip is over-driven or under-driven
- Lubricate tool
- Check tool-height adjustment to make sure it is properly set (place rail underneath tool-height gauge pin and lower the tool head until the gauge pin contacts the rail)
- Check for air leaks – listen for obvious air leaks; if none are heard, with chain off and clips backed out of the tool, hold the manual clip button in and listen for leaks
- Insure that VH0355 and VH0504 mufflers are clean
- Check for knots or voids in the wood
- VH524 ball bearing may be worn or missing, VC3012 spring may be worn or missing, or side plates where ball bearings sit may be worn
- VC3085 spring restrictor may be bent
- VC3011 pawl may be missing, worn, or broken
- VC3014 pawl spring may be bent
- On screen 4, check to make sure the clipping time is not too short
- One or both of the drive cylinders may have internal issues

Clips askew or not tight to rail:

- Front fence not adjusted properly
- Bad or bowed rail
- VC5285 pressure arm not functioning properly

3 – Clips do not feed properly

- Check air pressure – should be 70-90 P.S.I.; adjust as necessary
- Lubricate tool and clip-feed assembly
- Check clip dispenser to make sure clips move freely
- Check to make sure clips are loose on the coil
- Check to make sure clips slide freely on feed rail and that feed rail is not damaged or obstructed
- Check to make sure that the clip-feed cylinder is engaged and that the assembly is tight to the mounting bracket
- VC5127 feed piston (clip feeder) internal spring may be broken
- VC5117 torsion spring may be missing or broken
- Is the driver blade stuck down? If so, please follow troubleshooting procedures for “blade stuck down or tool doesn’t fire”

4 – Will not power up/no display/erratic display

- Is machine plugged in?
- Is there power to the machine?
- Check for tripped circuit breaker in control box and reset if necessary. Older machines may have a fuse in the VH0296 terminal block; replace if blown with VH0267
- Check for faulty switch VH0289
- Check to see if the red light on the micro-processor board is on; if not, check 24 V power supply
- If power supply is okay and the light on the circuit board is not on, then the circuit board has most likely failed
- If the red light is on the micro-processor board but there is no display on the keypad, then the VH0278 keypad has most likely failed
- Odd-looking letters or symbols on the keyboard – could be worn or defective VH0278 keypad, VH0558 membrane, or possibly micro-processor board
- Is there an alarm light on the VC5852 servo pack? If so, call service tech or factory

5 – Chain not moving

- Turn machine off, wait 10 to 15 seconds, and turn machine back on
- Chain broken
- Chain jammed
 - A. Rail jam – press chain-reverse button and/or attempt to raise the clipping head and remove jammed rail
 - B. Lug screws loose – check all lug screws and tighten as necessary
 - C. Obstruction(s) – look for any obstructions and remove as necessary
 - D. Loose set screws in drive sprocket – check and tighten as needed
 - E. Motor-mount screws loose between drive sprocket and motor-mount bracket
 - F. Gearbox dry or bad
- Is driver blade stuck down? If so, please follow troubleshooting procedures for “blade stuck down or tool doesn’t fire”
- Faulty or broken VH0293 switch
- Confused logic – reset function #5 on keypad
- Bad motor

6 – Exit-stacker issues

- Table-actuator switch VH0364 out of adjustment or not working. Verify that the lug strikes the spring lever and activates the switch
- Pusher cylinders are binding due to:
 - A. Lack of oil – remove 1/4” tubing on the back of each VH0365 cylinder and insert 3 drops of 30WT non-detergent oil in each
 - B. Adjust VH0840 flow-control valve
 - C. Loose mounting hardware – check and tighten as necessary
 - D. Debris/obstructions – check and remove as needed
- Defective VH0362 mac valve – use VH0520 valve-repair kit
- VH0380 timing relay bad or set incorrectly

7 – Tool-height adjustment not working

- The jam's cause could be debris or clips in the VC5241 acme rod threads
- Binding/misaligned motor – check for loose or missing fasteners
- Head driven up too far – turn clipper-head adjustment to lower and jiggle head until it frees itself
- Head-adjustment motor VC5217 sprocket loose – tighten VH0159 set screw(s) (use blue Loctite) on VH0270 sprocket
- VH0290 switch bad
- VC5727 tool motor bad
- Tool-head binding due to excess wear on the VC5241 acme rod – inspect and replace if necessary

8 – Frequent rail jams

- Warped or bowed rails
- Worn lugs – inspect and replace as necessary
- Improper tool height – inspect and adjust as necessary
- Improper front fence adjustment – inspect and adjust as necessary
- Chain too loose, causing lug to go under rail – inspect and adjust chain as per instructions

9 – Driver blade stuck down, tool doesn't fire

- Check air pressure
- Blade jammed on rail
- Lack of lubrication – remove VH0248 ¼” tubing from back of tool and add 3 drops of 30WT non-detergent oil to the tool, re-install tubing, and attempt to cycle the tool
- Check for debris or loose clips on all tool components and remove
- Driver blade may be broken
- Piston may be unscrewed from the driver – inspect and reattach if necessary using “red” Loctite
- Check for burrs on the side plates that would keep the driver blade from returning properly; if present, buff out and reinstall sideplates
- Clipping time is set too long – verify and adjust on screen 4
- Bad mac valve VH0696? Use mac valve repair kit VH0569
- Bad VC5296 micro-processor

10 – Recommended maintenance

- Daily
- Use air gun to blow off woodchips, sawdust, and debris from machine including tool, rail trigger, acme rod, tool-height adjustment area, exit stacker
 - Add 2 to 3 drops of 30W non-detergent, no-additive oil to opening between the front plate and the top of the blade of the tool assembly
- Weekly
- Check for loose or missing screws, nuts, or bolts
 - Check to make sure safety covers and guards are in place
 - Remove air hose from clip-feeder assembly and add 2 to 3 drops of 30W non-detergent, no-additive oil to the hose opening and reinstall
 - Remove tool air supply hose and add 2 to 3 drops of 30W non-detergent, no-additive oil to the hose opening and reinstall
- Bi-weekly
- Drain reservoir air tank of water/condensation
- Monthly
- Check chain tension (per manual)
 - Clean mufflers (remove and clean)
 - Remove front plate from tool and lubricate drive blade, front plate, and top plate
 - Remove air supply hoses on clip-lifter cylinders and add 2 to 3 drops of 30W non-detergent, no-additive oil to the hose openings and reinstall
 - Remove air supply hoses on exit table cylinders and add 2 to 3 drops of 30W non-detergent, no-additive oil to the hose openings and reinstall
 - Remove air supply hoses to front fence cylinders and add 2 to 3 drops of 30W non-detergent, no-additive oil to the hose openings and reinstall
 - Clean and lubricate drive chain
 - Lubricate idler sprocket
 - Check hoses for cuts and abrasions
- Annually
- Rebuild tool
 - Degrease and clean all machine areas
 - Inspect and replace as necessary VC5541 exit pusher glides
 - Check and replace lugs as necessary