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## **Service Bulletin for LL2000**

### **Symptom Description:**

Tooling lowers under low pressure, but will not operate clinching stroke when foot pedal depressed.

### **Tools Required:**

#2 Phillips screw driver, 1/8 flat standard tip screwdriver, standard imperial wrench set, WD-40, clean rags, air line and nozzle.

### **Solution Procedure:**

**\*WARNING DISCONNECT AND DRAIN ALL AIR FROM MACHINE BEFORE PERFORMING ANY REPAIRS OR MAINTENANCE TO MACHINE\***

### **Pulse Unit Test :**

1. Remove booster cover from side of machine (Dwg # 01578 cover shown with Norlok Logo) being careful to retain all bolts, nuts, and washers.
2. Locate Pulse Unit (Dwg # 01578 item 4) and incremental adjuster. Arrow should be pointing in the 8 o'clock position.
3. With a 1/8 standard tip screwdriver, twist the adjuster to the 12 o'clock position, return air to the machine and depress the foot pedal.
4. If the machine operates, the fastening cycle should last around 5 seconds. The unit has come out of adjustment and should be reset to the 8 o'clock position or 1 ½ second dwell.
5. If machine still does not operate proceed to next test.



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Foot Pedal Test :

1. **Drain all air from system.** Remove ¼” Nylon hose attached to base of Pulse Unit (Dwg # 01578 item 11).
2. Return air to the machine and bring tooling to lowered position. Operate the foot pedal while checking for air coming from the ¼” Nylon hose that has been disconnected.
3. If there is no air coming out of hose when foot pedal depressed the Foot Pedal Valve is faulty and needs to be replaced. (Pt # 200032).
4. If there is an air signal from Nylon hose reattach to Pulse Unit and proceed to next step.

Parker Valve - Clean and Lubricate :

1. **Drain all air from system.** Locate the High Pressure Valve (Dwg# 01578 and 01707). High pressure valve has the Pulse Unit attached to it.
2. Remove (while attached to the machine if possible) the 2 phillips screws holding the end caps on (Dwg# 01707, item 2 and 5). **It is important to note the orientation of all end caps for reassembly.**
3. Carefully push the spool (Dwg # 01707 item 4) out of the manifold body (Dwg # 01707 item 1) and inspect for any damage (replace with Service kit Pt # 200181 if damaged).
4. With an air nozzle and clean rag, clean the spool and valve body. Spray the spool with WD-40 and reassemble the valve. Be careful not to damage the ‘O’ rings when replacing spool. Replace end caps and reattach all parts.



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5. Return air to the machine and operate foot pedal. If machine operates, the spool had become dirty and seized. If the problem reappears again shortly, ordering the service kit from step # 3 will eliminate the problem.
6. If the machine still does not operate, order PT# 200050 and 200015. Inform Norlok of the situation and an RGA # will be supplied with the new parts. Any of these parts not required for the repair can be returned and full credit issued.
7. Proceed to next step when parts received.

Pulse Unit Replacement :

1. **Drain all air from system.** Take new Pulse Unit and replace old unit. A standard screwdriver can remove the screws holding the Pulse Unit to the Aluminum Pulse Unit Base.
2. Return air to the machine and operate foot pedal. If machine operates, return unused parts with RGA # and restore machine to operating condition for production .
3. If machine does not operate proceed to next step.



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Parker Valve Replacement :

1. **Drain all air from system.** Replace entire valve assembly using machines original Pulse Unit.
2. Return air to the machine and operate the foot pedal. If machine operates, return unused parts with RGA # and restore machine to operating condition for production.
3. If machine does not operate replace original Pulse Unit with new one. Machine will now operate.

Consult Norlok with any further service questions