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## THREE M TOOL

### HYDRAULIC CHAIN AND CABLE CUTTER TROUBLESHOOTING GUIDE

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**There are no user serviceable parts inside the cutters:** Three M Tool's hydraulic chain and cable cutters are designed to be self-contained and require no routine maintenance or lubrication. There are no user serviceable parts inside the cutters. Store employees should not attempt internal repairs without specific authorization and instructions from Three M Tool.

**Before you call Three M Tool:** Please use this troubleshooting guide to help diagnose problems you may have. If this guide does not solve your problem, **please call your chain supplier first.** Your chain supplier will most likely have the quickest solution to your problem.

#### **1. BLADES DON'T MOVE WHEN HANDLE IS PUMPED.**

##### ***A. Control Valve is not closed:***

- i. Turn Control Valve Knob toward "Cut" (clockwise) until snug (using firm hand pressure).
- ii. Do Not Over Tighten Knob

##### ***B. Hydraulic circuit is air bound:***

- i. Priming Instructions to purge air pockets from the hydraulic system:
- ii. Turn Control Valve Knob one full turn toward "Release"
- iii. Pump handle 10 to 15 strokes
- iv. Turn Control Valve Knob toward "Cut" until snug. Do Not Over Tighten Knob
- v. Pump handle, using full strokes, to close blades
- vi. The Blades should begin to move after 5 full strokes. If not, repeat priming procedure.
- vii. Turn Control Valve toward "Release". The cutter is primed and ready to use.

##### ***C. Hydraulic fluid is evident on the outside of the cutter, resulting from a major fluid leak:***

- i. Hydraulic Power Unit needs to be serviced. Contact your chain supplier or Three M Tool to repair or replace cutter.

##### ***D. Hydraulic fluid is not evident on the outside of the cutter, resulting from a minor or internal fluid leak***

- i. Hydraulic Power Unit needs to be serviced. Contact your chain supplier or Three M Tool to repair or replace cutter.

**2. BLADES MOVE, BUT NOT FAR ENOUGH TO FINISH CUTTING CYCLE.****A. *Hydraulic circuit is air bound***

- i. Priming Instructions to purge air pockets from the hydraulic system:
- ii. Turn Control Valve Knob one full turn toward "Release"
- iii. Pump handle 10 to 15 strokes
- iv. Turn Control Valve Knob toward "Cut" until snug. Do Not Over Tighten Knob
- v. Pump handle, using full strokes, to close blades
- vi. The Blades should begin to move after 5 full strokes. If not, repeat priming procedure.
- vii. Turn Control Valve toward "Release". The cutter is primed and ready to use.

**B. *Hydraulic fluid is evident on the outside of the cutter, resulting from a major fluid leak:***

- i. Hydraulic Power Unit needs to be serviced. Contact your chain supplier or Three M Tool to repair or replace cutter.

**C. *Hydraulic fluid is not evident on the outside of the cutter, resulting from a minor or internal fluid leak***

- i. Hydraulic Power Unit needs to be serviced. Contact your chain supplier or Three M Tool to repair or replace cutter.

**3. BLADES DO NOT RETURN TO "FULL OPEN" POSITION AFTER CYCLE.****A. *Chain or cable does not fit in blade gap because it is larger in diameter than the capacity of cutter***

- i. Check capacity of your cutter. All hydraulic cutters have a label on the front face showing the model number and cutting capacity for both grade and diameter.
- ii. Never exceed either the grade or diameter capacity of your cutter.

**B. *Control Valve is not fully open***

- i. Turn Control Valve Knob toward "Release" (counter-clockwise) one full turn.
- ii. Knob should turn freely, Do Not Force Knob.

**C. *Blades are binding on return stroke because cutting edges are damaged***

- i. See "Blades or Cutting Edges are worn or damaged:".

**D. *Internal bearing or return spring wear or damage***

- i. Contact your chain supplier or Three M Tool to repair or replace cutter.

**4. BLADES OR CUTTING EDGES ARE WORN OR DAMAGED. Which Model Cutter do you have? 44, or 88? All hydraulic cutters have a label on the front face showing the model number and cutting capacity.****MODEL 44 (Solid Cutting Blades, No Replaceable Blade Inserts.)****A. *One or both blades are chipped, cracked or broken***

- i. **Discontinue use immediately and remove cutter from retail area.** Contact your chain supplier or Three M Tool to repair or replace cutter.

**B. *One or both blades are worn or mushroomed (indentation from chain)***

- i. Contact your chain supplier or Three M Tool to repair or replace cutter.

**MODEL 88 (With Replaceable Blade Inserts.)**

- A. One or both blade inserts are chipped, cracked or broken but the larger blades holding the inserts are not damaged**
- Discontinue use immediately and remove cutter from retail area.**
  - The Blade Inserts can be easily replaced by the customer if the blades that hold them are not damaged. Contact your chain supplier or Three M Tool for Replacement Blade Inserts.
- B. One or both blade inserts are broken and/or the blades that hold the inserts are damaged**
- Discontinue use immediately and remove cutter from retail area.**
  - The Blade Inserts could have been easily replaced by the customer if the blades that hold them were not damaged.
  - Contact your chain supplier or Three M Tool to repair or replace the cutter if blades are damaged.

**5. CUTTER DOESN'T CUT CABLE CLEANLY.**

- A. Cable was not wrapped in tape to support strands**
- Wrap area to be cut with masking tape, cut through tape.
  - Avoid cutting very short lengths (less than 2").
- B. Cable is larger in diameter than the capacity of cutter**
- Check capacity of your cutter.
  - All hydraulic cutters have a label on the front face showing the model number and cutting capacity for both grade and diameter. Never exceed either the grade or diameter capacity of your cutter.
- C. Blades are worn or damaged**
- See "Blades or Cutting Edges are worn or Damaged:"

**6. CONTROL VALVE KNOB WILL NOT TURN.**

- A. If blades move when handle is pumped (even at the end of the stroke, "Full Cut/Bend", the blades should move slightly). The Valve is stuck closed.**
- Turn the Control Knob counter-clockwise toward "Release".
  - If reasonable force does not free valve, or if excessive force is needed to close valve for normal operation, the valve seat has been damaged.
  - Contact your chain supplier or Three M Tool to repair or replace the cutter.
- B. If blades do not move when handle is pumped, or there is no fluid resistance felt when handle is pumped. The Valve is stuck open.**
- Turn the Control Knob clockwise toward "Cut".
  - If reasonable force does not free valve, the valve stop or shaft has been damaged.
  - Contact your chain supplier or Three M Tool to repair or replace the cutter.
- C. If Control Knob turns freely but does not control cycle.**
- See "Blades don't move when handle is pumped:" or
  - See "Blades do not return to "Full Open" position after cycle:"

**7. VISIBLE HYDRAULIC FLUID LEAKAGE.**

**A. *Hydraulic fluid leak is evident on the outside of the cutter, resulting from a major fluid leak.***

- i. Hydraulic Unit cannot be refilled with fluid in the store, and internal seals need to be replaced to stop future fluid leaks.
- ii. Contact your chain supplier or Three M Tool to repair or replace cutter.

**8. CUTTER OPERATES PROPERLY, BUT MINOR PARTS ARE MISSING OR BROKEN.**

**A. *The following parts are available for In-Store repairs from your chain supplier or Three M Tool:***

- Replacement Blade Insert Kit (#7962) (Model 88 only)
- Replacement Blade Guard (#7434)
- Replacement Pump Handle Knob (#7513)
- Replacement Control Valve Knob (#7207)
- Shelf Plate Mounting Kit (#7217)
- Instruction - Warning Hang Card (#7314)

**9. IF YOU STILL HAVE QUESTIONS, CALL THREE M TOOL**

**A. Please have the following information ready when you call:**

- i. What Company did you get your cutter from? Or what brand of chain do you sell?
- ii. What Model Number are you calling about? (From a label on the front face.)
- iii. What is the Serial Number of your cutter? (6 digit number on the bottom face.)



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