

**Subject: Spotting Tong Replacement Procedure**

Date: 11/11/02

**Distribution: GS Series Pinsetter Customers**

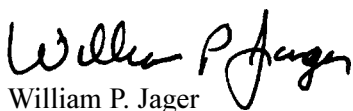
Bulletin No. CEB02-13

Brunswick has recently changed the design of the spotting tongs used in the GS-Series Pinsetters to improve reliability. As a result of this improvement, the procedure for replacing the tongs has changed.

The original replacement procedure, as indicated in the service manuals, required that the spotting tongs be in the fully opened position during replacement. Using this original procedure with the newer style tongs can result in improper gear timing between the replacement tong and the remaining tongs.

Attached is the new step by step replacement procedure for changing the spotting tongs. **In the new procedure, the tongs are replaced when they are in the fully closed position.** Please update your GS-Series Pinsetter Service Manual as necessary.

If you have any questions, please contact the Brunswick Customer Response Center at 1-800-323-8141 (Menu option 1).



William P. Jager

Service Product Engineer



David E. Rice

Director of Service

# Changing Spotting Tongs

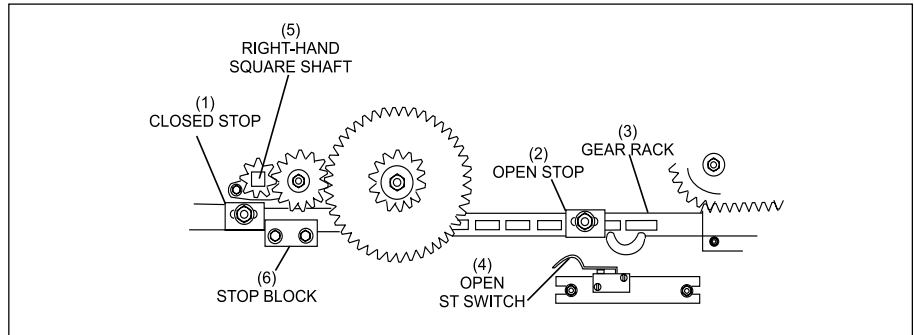
If a spotting tong becomes damaged and needs to be removed for repair, use the following instructions.

1. Turn the stop/run switch on the pinsetter electrical box and the mechanic's rear control box to the stop position to prevent anyone else from starting the pinsetter while you are servicing the machine. (Disconnect main power to the pinsetter if you will be leaving the machine unattended.)
2. Turn on the Pin Light using the bypass switch or NexGen Controller Keypad to provide light if needed.
3. Manually lower the setting table onto a jack stand or other suitable support.

**NOTE:** If suspending the setting table on the stroke limiter plate, it must still be supported by a jack stand or some means of support to prevent the table from dropping if the stroke limiter is bumped or slips.

4. Turn the spotting tong square shaft until the spotting tongs are completely closed. The "ST" switch should be open and the closed stop should be against the stop block. Refer to *Figure 1*.

- (1) CLOSED STOP
- (2) OPEN STOP
- (3) GEAR RACK
- (4) OPEN ST SWITCH
- (5) RIGHT-HAND SQUARE SHAFT
- (6) STOP BLOCK



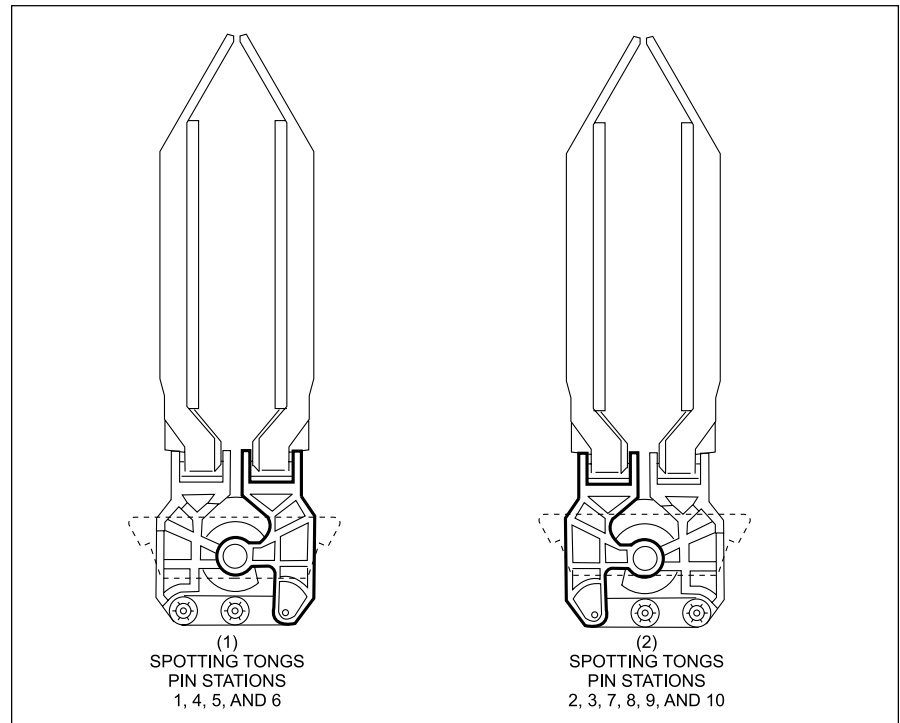
*Figure 1. Spotting Tongs Open.*

5. Remove the hardware holding the spotting tongs to the setting table. Retain the hardware for use during reassembly.

**NOTE:** To keep the tongs timed properly, it is advisable to only remove one set of tongs at a time.

6. Select the correct type depending on the position of the tongs in the table. Refer to *Figure 2*.

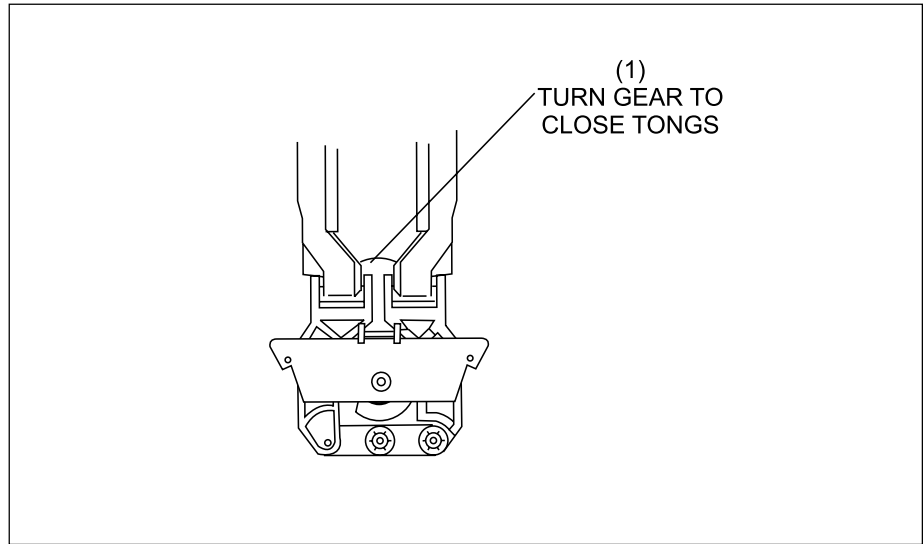
- (1) SPOTTING TONGS PIN STATIONS  
1, 4, 5, AND 6
- (2) SPOTTING TONGS PIN STATIONS  
2, 3, 7, 8, 9, AND 10



*Figure 2. Spotting Tongs.*

7. Turn the gear on the bottom of the spotting tong assembly until the tongs are completely closed. Refer to *Figure 3*.

(1) TURN GEAR TO CLOSE TONGS



*Figure 3. Spotting Tongs Completely Closed.*

8. Place the closed spotting tongs on the setting table so the gears mesh. Reinstall the mounting hardware through the cover plate and the mounting holes.
9. Manually rotate the square shaft to open and reclose the tongs to check for proper movement.