

Emergency Retract Procedure

In the event of a power loss, the Torq-Matic™ Floor Wrench may need to be manually retracted from an extended position.

Recommendation

This document guides rig personnel through the emergency retract procedure, without use of the hydraulic power unit (HPU), for all arm-conveyed Torq-Matic™ Floor Wrench models TM80 and TM120.



Read this bulletin thoroughly before starting the procedure. Complete a Job Safety Analysis (JSA) to include everyone affected by the task being performed. All JSA attendees must sign the JSA form. Pay particular attention to positions of people, pinch points, and strains or slips associated with pushing or pulling.



Lock out and tag out all equipment prior to beginning this procedure to ensure equipment is isolated from any energy source.



Ensure proper PPE is worn at all times while performing this procedure.

Required Tools

The following tools are required to perform the emergency retract procedure without use of the HPU:

- One Hawe Manual Actuator Valve Handle
- One 3/8"-Drive Extension, 20-24" Long
- One 9/16" Combination Wrench
- Two 48-60" Pry Bars
- One 3/8"-Drive Ratchet
- One 3/8"-Drive 5/32" Hex Bit
- Two 18-20" Pry Bars
- One 6-8' Step Ladder

Before starting this procedure, attach the wrench lifting sling to the jib portion of the wrench (see Figure 1). Use the rig floor hoist to remove any slack from the cables.

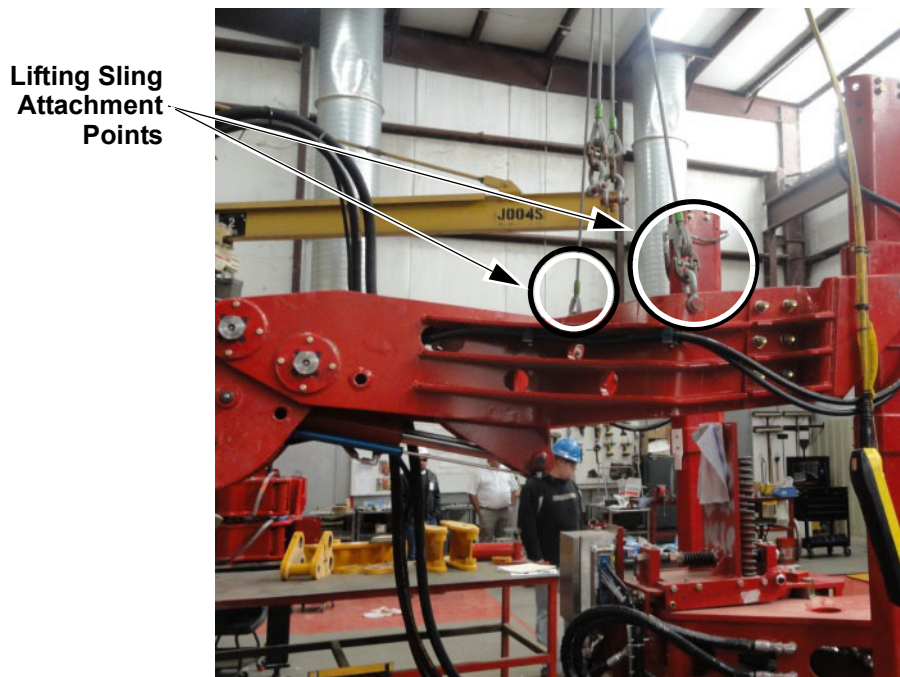


Figure 1: Lifting Sling Attached to the Wrench Jib



Remove any obstructions and barricade the wrench pathway to prevent personnel access or equipment damage during wrench travel.

1. Attach the valve handle to the manual actuator for the lower clamp valve (see Figure 2). (See Figure 11 and Figure 12 at the end of this document for more information on the specific locations of the different valves on both the TM80 and the TM120 wrenches.)

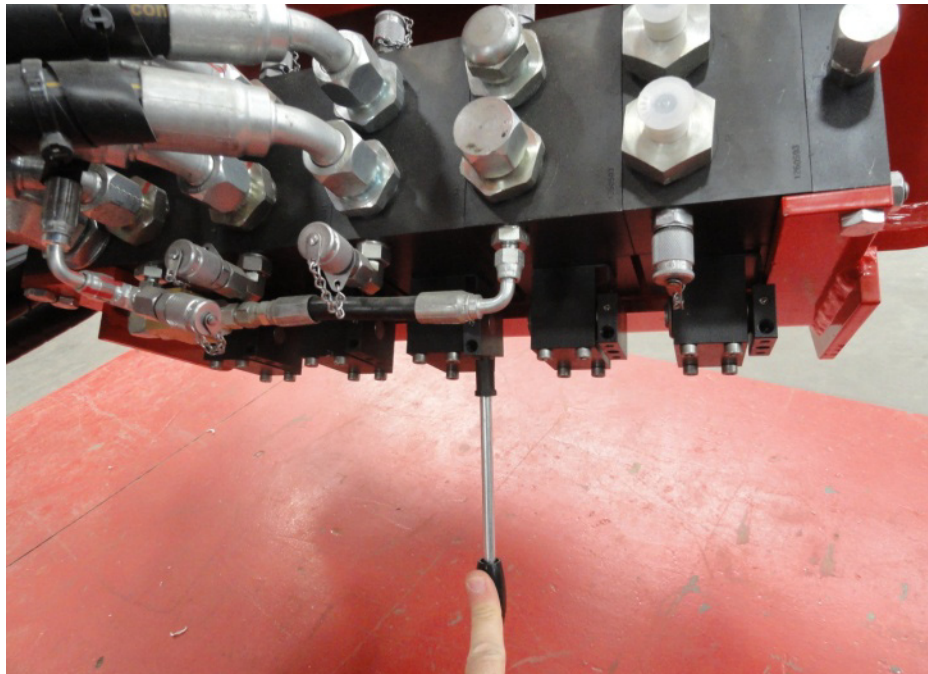


Figure 2: Attaching the Valve Handle to the Lower Clamp Valve Manual Actuator on the TM120 Floor Wrench



Step 2 requires two rig personnel.

2. Hold the lower clamp manual actuator valve in the open position and pry one of the lower clamp cylinders off the pipe as far as possible using a pry bar (see Figure 3). Use a second pry bar to pry the opposite clamp off of the pipe while using the first pry bar to prevent the first cylinder from extending.



Figure 3: Prying the Lower Clamp Cylinders off the Pipe



As the clamps are loosened, the tongs may settle away from the pipe. This is normal, but the tongs should not continue to drift back.

3. Move the valve handle to the manual actuator for the upper clamp cylinder valve.
4. Repeat Step 2 to pry the upper tong cylinders away from the pipe.
5. Move the valve handle to the spinner clamp cylinder actuator.

6. Repeat Step 2 on page 4 to pry the spinner clamps away from the pipe (see Figure 4).



Figure 4: Prying the Spinner Clamps Away from the Pipe

7. Ensure there is adequate clearance between the pipe and the lower, upper, and spinner clamps (see Figure 5).

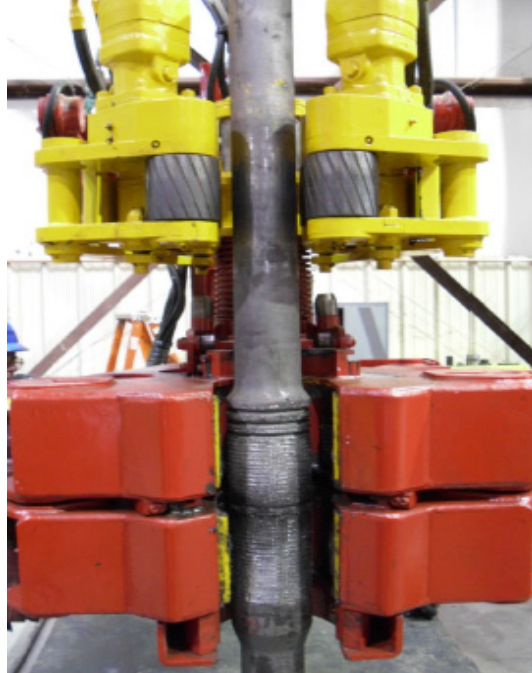


Figure 5: Ensure Adequate Clearance Between the Pipe and the Clamps



In Step 8, ensure the ladder legs will not be contacted when the tongs are lowered to the floor as the tong assembly retracts toward the boom.

8. Place a step ladder behind the wrench to provide access to the horizontal cylinder counterbalance valves (see Figure 6).



Figure 6: Proper Ladder Placement

9. Install the 24" extension and 5/32" hex bit in the ratchet. Insert the tool between the left and middle ribs on the tie bar and insert the bit into the counterbalance valve stem on the right-hand side of the 2-valve manifold (located under the upper pin of the horizontal cylinder) (see Figure 7).

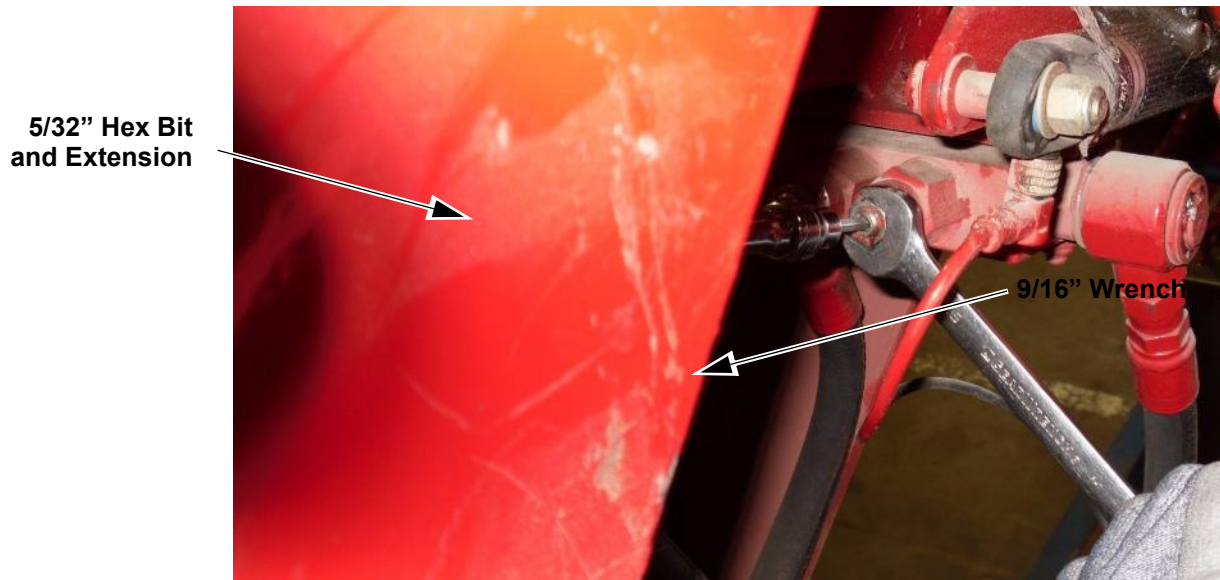


Figure 7: Loosening the Lock Nut on the Counterbalance Valve



In Step 10, do **not** allow the valve stem to turn while the lock nut is being loosened.

10. Use a 9/16" wrench to loosen the lock nut on the valve stem. Use the ratchet to prevent the valve stem from turning while the lock nut is loosened (see Figure 7). Loosen the lock nut 2–3 turns counterclockwise.



Use extreme caution while performing Step 11. Failure to do so may cause the tong assembly to collapse suddenly, causing damage to equipment and/or injury to personnel.

11. Retract the tong assembly as follows:

- a. Remove the wrench from the counterbalance valve lock nut.
- b. Ensure there is sufficient clearance between the wrench and the ladder.
- c. Ensure all personnel are clear of the wrench and any possible pinch points during retraction.
- d. Ensure personnel operating the rig floor hoist “follow” the tong assembly by lowering the hoist as necessary while the wrench is in motion.
- e. Use the ratchet to slowly turn the valve stem clockwise until the tong assembly begins to creep back (see Figure 8).



Figure 8: Slowly Turn the Counterbalance Valve Clockwise



In Step f, take care not to tangle the ratchet in the hoses on the rear of the wrench.

- f. As the tong assembly moves back and down, the ratchet and extension will extend farther from the tie bar (see Figure 9).



Figure 9: Keep the Ratchet Clear of Hoses and Cables

- g. Continue to lower the tong assembly until the tongs rest on the floor (see Figure 10).

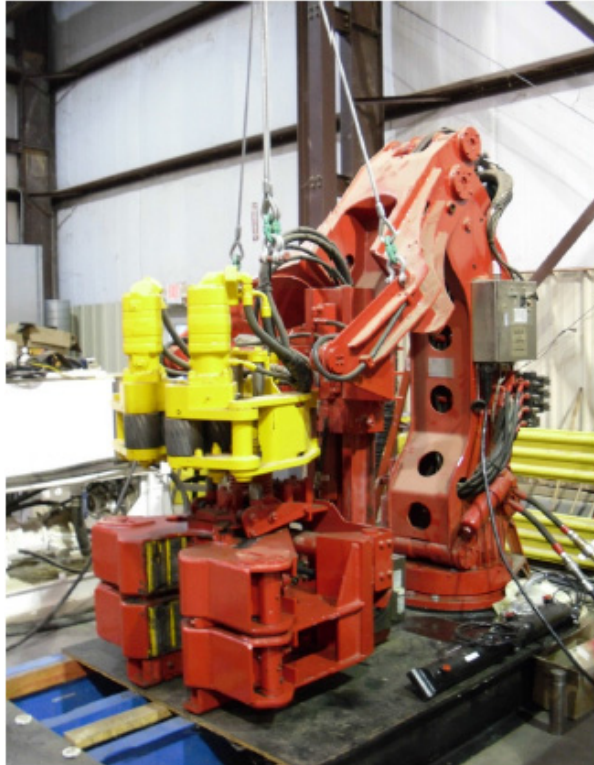


Figure 10: Tongs Lowered to the Floor

12. With the tong assembly resting on the rig floor, the lifting sling can be removed and the wrench will remain stationary.



If the tongs are raised prior to resetting the counterbalance valve, then the wrench will retract farther, dragging the tongs on the floor.

Extending the Wrench

To extend the wrench, the counterbalance valve must be reset as follows:

1. Loosen the lock nut on the horizontal retract valve stem (to the right of the counterbalance valve when looking from the back; see Figure 7 on page 8).
2. Screw the horizontal retract valve stem all the way out.
3. Turn the horizontal retract valve stem back in 3/4-turn and then secure the valve stem with the lock nut.
Take care not to turn the stem while tightening the lock nut.
4. Loosen the lock nut on the horizontal extend valve stem (to the left of the counterbalance valve when looking from the back; see Figure 7 on page 8).
5. Screw the horizontal extend valve stem all the way in.
6. Turn the horizontal extend valve back in two turns and then secure the valve stem with the lock nut.
Take care not to turn the stem while tightening the lock nut.

Manual Actuator Valve Layout Diagrams

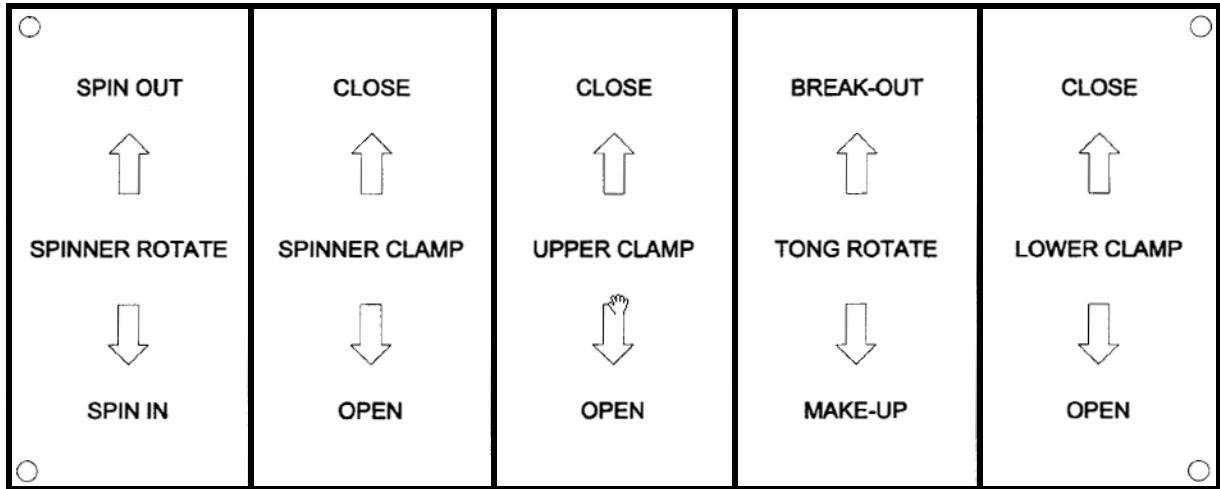


Figure 11: TM80 Manual Actuator Valve Layout

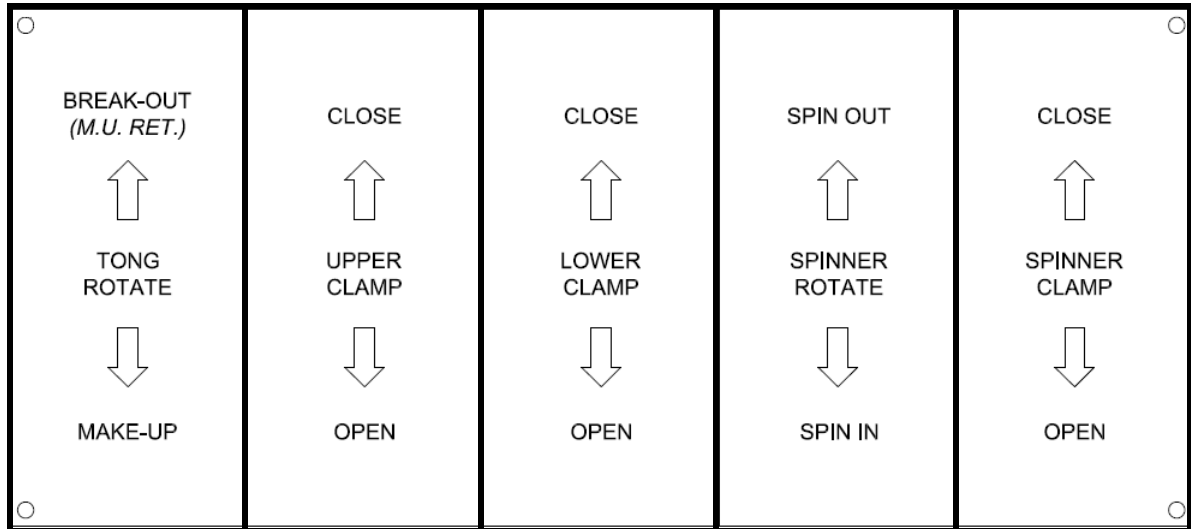


Figure 12: TM120 Manual Actuator Valve Layout