

# MUELLER® GAS

## Inserting and Extracting 6" & 8" Thin Wall and Standard "Pig-Friendly" Plugs

**⚠ WARNING:**

1. Read and follow instructions carefully. Proper training and periodic review regarding the use of this equipment is essential to prevent possible serious injury and/or property damage. The instructions contained herein were developed for using this equipment on fittings of Mueller manufacturer only, and may not be applicable for any other use.
2. Do not exceed the pressure ratings of any components or equipment. Exceeding the rated pressure may result in serious injury and/or property damage.
3. Safety goggles and other appropriate protective gear should be used. Failure to do so could result in serious injury.
4. Pressure test, check for and repair leaks in all fittings and components each time one is installed or any joint or connection is broken. Failure to find and repair a leak from any source in the fittings, by-pass lines or equipment could result in an explosion and subsequent serious injury and/or property damage.
5. MUELLER® Drilling Machines and Equipment have been carefully designed and engineered to work together as a unit. The use of equipment manufactured by someone other than Mueller Co. may cause excessive wear or a malfunction of the MUELLER machines.

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All warranties, expressed or implied, for Mueller Drilling Machines are rendered null and void if the machines are used with shell cutters or equipment manufactured by someone other than Mueller Co.

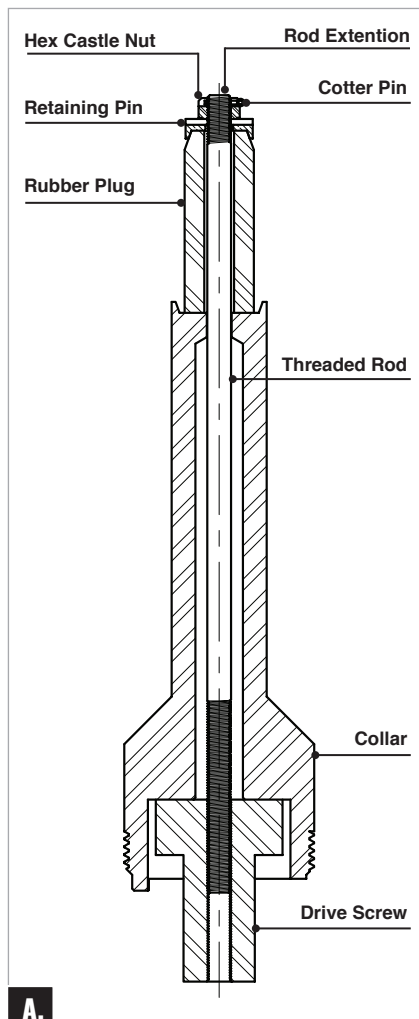
# 6" & 8" Thin Wall and Standard "Pig-Friendly" Plugs

## Preparation

### Preparing For Insertion

1. Assemble inserting/extracting tooling shown (A.).

**NOTE: DO NOT GREASE RUBBER PLUG.** (When engaging drive screw, do not over tighten. Stop when drive screw just stops spinning freely on threaded rod and the plug has a slight preload but is not expanded.)



**A.**

2. Insert the inserting/extracting tool into hole in plug bottom until rubber stopper extends through bottom of plug. Collar should rest on the bottom of the plug (B.).

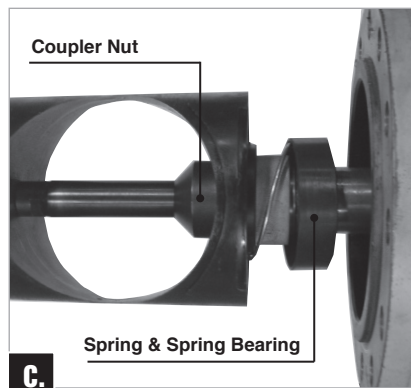
3. Rotate drive screw **clockwise** 15 revolutions. This expands the rubber stopper and secures the tool to the plug (B.).



**B.**

4. Attach combined crank and lifting yoke to the H-17342 3SW-500 stopping machine. Rotate crank **counter-clockwise** until operating tube and guide tube are exposed with enough room to secure the spring and spring bearing on the plug once it is secured to the stopping machine.

5. Install spring and spring bearing on operating tube (C.).



**C.**

6. Attach the plug to the stopping machine (C.).

- a) Insert square on drive screw into operating tube.
- b) Align lug on top of collar with matching recess or slot in end of guide tube of machine.

c) Slide coupler nut over collar threads and tighten securely by hand.

d) Install spring and bearing onto plug boss.

7. Rotate machine crank **clockwise** to retract plug and inserting/extracting tool, to rear most position, leaving approximately 3" of the plug extended beyond bottom of the stopping machine flange (D.).

**CAUTION:** When lifting the assembly **DO NOT** allow weight to rest on plug at any time as damage to plug could result.



**D.**

8. Position stopping machine on gate valve.

**NOTE:** Ensure the hole in the plug is aligned with the pipe when the stopping machine is attached to the gate valve.

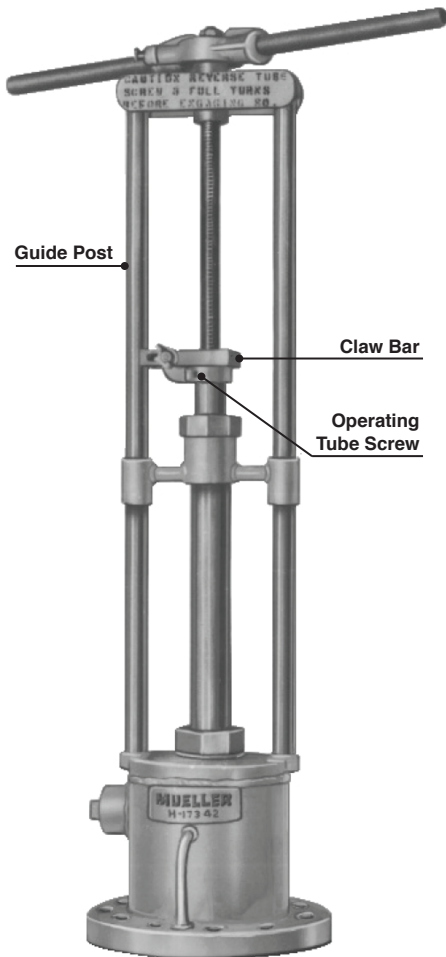
9. Bolt stopping machine to gate valve with gasket in place (assure gasket is in serviceable condition).

# 6" & 8" Thin Wall and Standard "Pig-Friendly" Plugs

## Plug Insertion

### Plug Insertion Instructions

1. Close relief valve on gate valve, and open the bypass.
2. Open gate valve fully.
3. Use chalk to mark where the top of clamp bar is located relative to the guide post (see below).



4. Advance plug by rotating stopping machine crank, or double handled ratchet, **counter-clockwise** until squared section on operating tube screw is exposed. (See Table 1)
5. Loosen wing nut and shift clamp bar from contact with guide post to contact with squared section of operating tube screw, then tighten wing nut.
6. Rotate crank, or double-handed ratchet handle, **counter-clockwise** approximately 15 revolutions to release the inserting/extracting tool from the plug.

7. Loosen wing nut and shift clamp bar from contact with squared section of operating tube screw to guide post, then tighten wing nut.
8. Retract operating tube with the inserting/extracting tool attached to the rearmost position by rotating crank **clockwise** until it stops.
9. Fully close gate valve.
10. Close bypass valve and open relief valve.
11. Remove stopping machine.

Table 1. Model 3SW-500 Travel Chart

| 3SW-500                     | 6" Pig Plugs   | 8" Pig Plugs   |
|-----------------------------|--|--|
| 300/400 Class LSF           | 236 Turns or 28 <sup>1</sup> / <sub>4</sub> " Travel | 202 Turns or 24" Travel                              |
| 300/400 Class Spherical LSF | 252 Turns or 30 <sup>3</sup> / <sub>8</sub> " Travel | 213 Turns or 25 <sup>1</sup> / <sub>4</sub> " Travel |

# 6" & 8" Thin Wall and Standard "Pig-Friendly" Plugs

## Plug Extraction

### Plug Extraction Instructions

1. Attach combined crank and lifting yoke to H-17342 3SW-500 stopping machine.
2. Rotate crank **counter-clockwise** until ends of operating and guide tubes are exposed.
3. Attach inserting/extracting tooling to stopping machine.
  - a) Insert square on drive screw into operating tube.
  - b) Align lug on top of collar with matching recess or slot in end of guide tube of machine.
  - c) Slide coupler nut over collar threads and tighten securely by hand.
4. Retract inserting/extracting tool to rearmost position by rotating crank **clockwise**.
5. Position stopping machine on gate valve. Bolt stopping machine to gate valve with gasket in place (assure gasket is in serviceable condition).
6. Close relief valve, then open bypass.
7. Open gate valve fully.

**⚠ CAUTION: When lifting the assembly DO NOT allow weight to rest on tool at any time as damage to tool could result.**
8. Advance tool by rotating crank, or double handled ratchet, **counter-clockwise**. (See Table 1)

Since the clamp bar moves with the plug note the origin of the clamp bar before advancing the plug into position. The distances given are from the clamp bar origin.
9. Loosen wing nut and shift clamp bar from contact with guide post to contact with squared section of operating tube screw. This allows the rubber plug to be expanded and "lock" onto the plug then tighten the wing nut.
10. Rotate crank or double-handled ratchet wrench **clockwise** approximately 15 revolutions to expand the rubber on the tool into the opening at the bottom of plug.
11. Loosen wing nut and shift clamp bar from contact with squared section of operating tube screw to guide post, then tighten wing nut.
12. Retract the operating tube with the inserting/extracting tool and plug attached to the rearmost position by rotating crank **clockwise** until it stops.
13. Fully close gate valve.
14. Close bypass and open relief valve.
15. Remove the stopping machine and tool.



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