

Bottom-Out Stopper

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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 may cause excessive wear or a malfunction of the Mueller machines.

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.

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Capacity and Use

The Mueller Bottom-Out Stopper is designed to temporarily stop the flow of gas through the bottom opening of a bottom-out line stopper fitting. The bottom-out stopper uses two seals. The primary seal is a large resilient seat that matches the contour of the fitting bottom and stops the major part of the gas flow through the bottom opening. The secondary seal is an inner poppet type valve that seals off the balance of the gas flow when the plunger shaft of the stopper is fully depressed. This inner seal also acts as an equalizing valve when the plunger shaft is retracted. It allows gas to flow past the primary seal to equalize pressure above and below it, making it possible to remove the stopper easily.

Pressure Ratings

The bottom-out stopper is rated according to the gas pressure being applied from its top side. In no case may this pressure exceed that given in the chart (below), which

shows the maximum pressure of the various bottom-out stopper and stopping unit combinations. However, the actual working pressure of the job may have to be lowered so as not to exceed the pressure rating of the piece of equipment being used that has the lowest maximum working pressure rating.

Maximum Working Pressure

MUELLER STOPPING UNIT	MAX. WORKING PRESSURE OF MACHINE/STOPPER COMBINATION
D-5	250 psig*
DH-5	250 psig*
#1	125 psig
#2	100 psig
#3	100 psig
3SW	275 psig
3SW-500	500 psig*
4SW	500 psig*

*Certain fittings in specific sizes allows higher maximum pressure: D-5 and DH-5 on 2" H-17161 and H-1712604 – 500 psig max. For 3SW-500, fittings must be the enhanced design manufactured since 1997.



TYPICAL STOPPER

OPERATING INSTRUCTIONS

1. Determine proper equipment required for the stop-off operation from the Mueller Gas Products Catalog.
 2. Remove completion cap; attach required equipment and remove completion plug from stopper fitting. (Refer to the Mueller operating instruction manual for the stopping unit being used.)
- NOTE: Some 8" bottom-out fittings manufactured between 1957 and 1962 have four lugs inside the**

fitting above the bottom opening, and are not compatible with the bottom-out stopper. To determine compatibility, install an inspection flange (catalog number H-17619) on the fitting and look for the four lugs. If no lugs are found, proceed with the stop-off operation.

3. Inspect bottom-out stopper to assure that resilient sealing surfaces are in good condition, and apply Mueller Rubber Stopper Lubricant (part no. 580657) to the primary seal.

4. Securely attach bottom-out stopper to the stopping machine (using the appropriate adapter, if one is required; refer to chart on page 4) and retract bar to its rearmost position.
5. Attach stopping machine to gate valve.
6. Pressurize the machine above the gate valve by using the by-pass valve on the machine.
7. Open the gate valve fully.

OPERATING INSTRUCTIONS (CONT.)

FOR STOPPING UNIT #1, #2, #3 AND D SERIES

Follow Operating Instructions 1-7 on page 2.

2. Lower machine bar slowly until stopper is seated in the bottom of Fitting.
3. Swing feed yoke of the machine over feed collar and secure in place.
4. Slowly turn feed yoke **clockwise** to first compress primary seal against fitting, then continue turning to depress plunger shaft of the stopper against the inner seal. A gage and/or test nipple is recommended on the section of pipe to be isolated to help determine when gas flow has been completely stopped.
5. Blow down the isolated section of main and check for a complete shut off. If shut off is not complete, continue to compress the stopper, turning the yoke in ¼ to ½ turn increments, until shut off is satisfactory.
6. Complete repairs to the isolated section of main as required and test for leaks using accepted practice.

7. When ready to restore gas flow: slowly turn feed yoke **counter-clockwise** to raise plunger shaft off the inner seal, allowing gas to flow into the isolated section until pressure is equalized. Purge air from isolated section.

⚠ CAUTION: DO NOT raise primary stopper seal off fitting until pressure is equalized.

8. Continue turning feed yoke in **counter-clockwise** direction to fully unseat stopper and retract stopping machine bar and stopper to rearmost position above gate valve.
9. Close gate valve.
10. Blow down pressure in stopping machine by turning by-pass relief valve to relief position.
11. Remove stopping machine.

12. Attach completion machine to gate valve and install completion plug into fitting. (Refer to Mueller Operating Instruction manual for Stopping Machine being used.)

13. Install completion cap and perform finishing procedures.

FOR STOPPING UNIT 3SW, 3SW-500 AND 4SW

1. Follow Operating Instructions 1-7 on page 2.

2. Lower bottom-out stopper into fitting by turning stopping machine handle in the **counter-clockwise** direction until primary seal is seated in bottom of fitting and inner seal is compressed. A gage and/or test nipple is recommended on the section of main to be isolated to determine when gas flow has been completely stopped.

3. Blow down the isolated section of main and check for a complete shut-off. If shut-off is not complete, continue to compress the stopper until shut-off is satisfactory.

4. Complete repairs to the main as required and test for leaks using accepted practice.

5. When ready to restore gas flow: slowly turn crank handle **clockwise** to raise plunger shaft off the inner seal, allowing gas to flow into the isolated section until pressure is equalized. Purge air from isolated section.

⚠ CAUTION: DO NOT raise primary stopper seal off fitting until pressure is equalized.

6. Continue turning crank handle in **clockwise** direction to fully unseat stopper and retract machine bar and stopper to rearmost position above gate valve.
7. Close gate valve.
8. Blow down pressure in stopping machine by turning by-pass relief valve to relief position.
9. Remove stopping machine.

MUELLER BOTTOM-OUT STOPPER

Equipment / Parts

COMPATIBLE EQUIPMENT

FOR STOPPING UNIT #1, #2, #3 AND D SERIES

Follow Operating Instructions 1-7 on page 2.

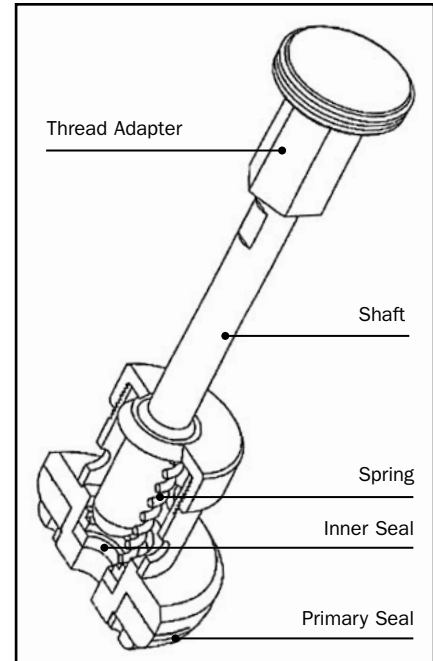
2. Lower machine bar slowly until stopper is seated in the bottom of Fitting.

3. Swing feed yoke of the machine over feed collar and secure in place.

4. Slowly turn feed yoke clockwise to first compress primary seal against fitting, then continue turning to depress plunger shaft of the stopper against the inner seal. A gage and/or test nipple is recommended on the section of pipe to be isolated to help determine when gas flow has been completely stopped.

5. Blow down the isolated section of main and check for a complete shut off. If shut off is not complete, continue to compress the stopper, turning the yoke in 1/4 to 1/2 turn increments, until shut off is satisfactory.

6. Complete repairs to the isolated section of main as required and test



REPAIR PARTS

STOPPER SIZE	STOPPER NUMBER	PRIMARY SEAL	INNER SEAL	SPRING	SHAFT	THREAD ADAPTER	COMPATIBLE MACHINE
2"	681989	529002	529005	311747	529006	529007	#1
3"	681990	529010	529014	311748	529015	-	#2
4"	681991	529020	529014	311748	529015	681979	#2
	681992	529020	529014	311748	529015	681980	3SW Series
6"	681993	529027	529031	311749	529032	681982	#3
	681994	529027	529031	311749	529032	681983	3SW Series
8"	682634	529037	529041	311750	529042	682633	#3 x CL300 LSF
	681995	529037	529041	311750	529042	681985	#3 x CL150 LSF
	681996	529037	529041	311750	529042	681986	3SW Series
10" / 12"	681997	529047	529041	311750	538299	682998	4SW

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