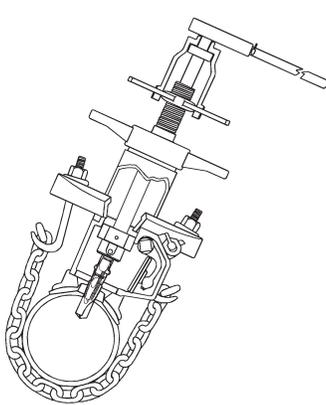


In 1871, Hieronymus Mueller, founder of the Mueller Co., invented and patented the first machine for drilling, tapping and inserting corporation stops in mains under pressure.

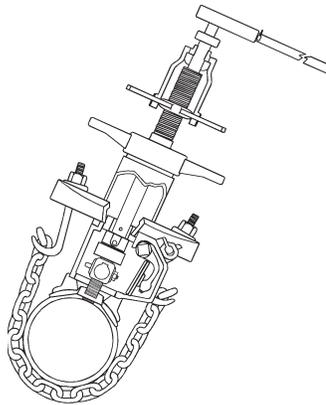
This invention revolutionized the method of making main to service connections under pressure and also established what has proven to be the most successful principle for machines of this type. This has been proven by the fact that Mueller machines are the accepted standard by most water companies, plumbers, and plumbing contractors.

Mueller Co. has taken the original tapping machine features and refined, expanded and incorporated them into additional machines for other conditions and purposes. Mueller Co. offers the most complete line of time proven drilling and tapping machines available.

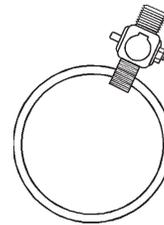
The Mueller method of making a main to service connection using the Mueller B-101 Drilling and Tapping Machine.



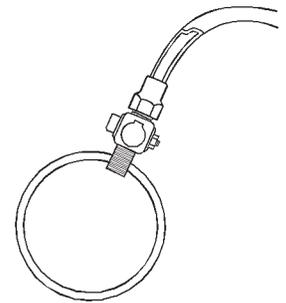
Mueller drilling and tapping machine drills and taps a hole in a pressurized main without allowing water to escape.



The drilling and tapping tool is extracted and a corporation stop is attached to the boring bar for insertion into the main.



The closed corporation stop is now installed, ready for the service pipe to be connected.



The connection is now complete and the corporation stop is opened.

Drilling and Tapping Machine Selection Guide

Machine	Description	Corporation Stop Capacity	Pipe Plug Capacity	Maximum Pressure	Operation	Recommended Use
B-101	Tapping Machine	1/2"-1"	1/2"-2-1/2"	90 psig (62 kPa/6.20 bar) 250 psig (1725 kPa/17.25 bar) ±	Hand* or power**	Drilling and tapping pressurized mains and inserting corporation stops or pipe plugs without loss of water
A-3		1"-2"	1"-2-1/2"	90 psig (62 kPa/6.20 bar) 200 psig (1380 kPa/13.80 bar)		
"J"		1/2"-2"	1/4"-2"	Dry or open mains only	Hand	Drilling and tapping dry open mains

*When drilling or tapping above 1" by hand, use extension handle shown on page 1.8

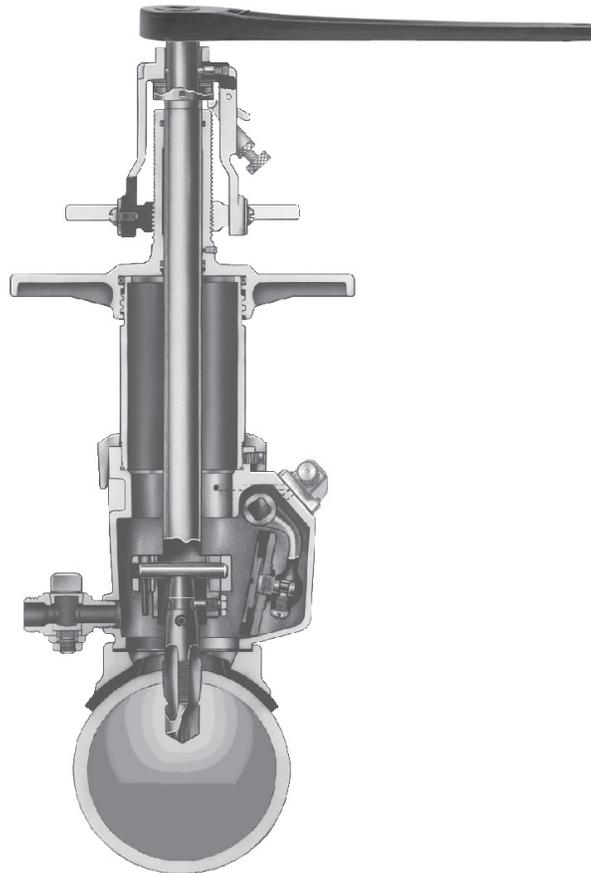
**When power operating the machine to drill and tap 1-1/2" and larger, only combined shell cutters and taps should be used - see page 1.5 (B-101) or 1.13 (A-3)

± Maximum pressure using the optional power clevis.

NOTE: To insert corporation stops larger than 1", use the MUELLER A-3™ machine shown on page 1.11

Note: Use B-100 or B-101 to insert corporation stops smaller than 1".

Rev. 8-04 Shaded area indicates changes



Mueller B-101 Machine features

- **Anti-Friction Thrust Collar** - fluorocarbon impregnated steel bearing sealed in a steel case - no lubrication required.
 - **Ratchet Handle** - fully enclosed ratchet; permanently lubricated; quick reverse button.
 - **Locking Mechanism** - secures the boring bar to the feed yoke to prevent the drill from spiraling into the pipe before the hole is completely drilled. Helps prevent tool breakage.
 - **Feed Nut & Yoke** - spring detents hold feed yoke securely in place around boring bar. Square shank on feed yoke fits power operator for automatic feed.
 - **Feed Sleeve & Cap** - acme threads require only 2-1/2 turns to remove sleeve and cap for fast disassembly; long bearing surfaces provide exceptional boring bar rigidity; positive metal-to-metal contact with upper barrel maintains boring bar alignment; O-ring seals.
 - **O-Ring Seals** - seal off special cavity inside feed sleeve to provide oil reservoir for lubricating boring bar and O-rings; boring bar wiper ring protects bottom O-ring.
 - **Boring Bar** - chrome plated to resist corrosion; helps assure long life of O-ring seals.
 - **Easily Maintained By-Pass Valve** - uses O-ring valve technology for better sealing.
 - **Offset Body** - reduces collection of chips around flop valve when machine is in horizontal or inclined position; increased diameter gives adequate clearance for inserting greater variety of stops and valves.
 - **Chip Flushing Valve** - provides means to continually flush pipe chips and other pipe residue from main during drilling and tapping operations on all kinds of pipe; threaded outlet permits hose to be attached so flushed water can be kept out of ditch.
 - **Tool Holding Method** - transmits force evenly through drive pins on tool to drill and tap pipe. Retaining screw holds tool tightly in boring bar socket for precise alignment of tool and boring bar. Convenient knock-out pin allows easy tool removal.
 - **Flop Valve** - seats with pressure, self-aligning, molded neoprene washer; lever handle has positive lock in open or closed position, position indicator included; O-ring on flop valve stem eliminates packing adjustment.
-

Mueller B-101 Machine - for drilling, tapping and inserting operations under pressure - 1/2" to 2-1/2" inclusive

- Catalog number B-101 (with boring bar locking mechanism)
- Hand or power operation
- Designed for use on pressurized or dry mains
- Insert or extract corporation stops to 1" in size; pipe plugs to 2-1/2" in size
- Use on cast iron or ductile iron pipe • cement lined cast iron or ductile iron pipe • A-C pipe • cast iron O.D. PVC • steel pipe
- 90 psig (625 kPa/6.25 bar) maximum working pressure without optional power clevis
- 250 psig (1725 kPa/17.25 bar) * maximum working pressure with optional power clevis



*Maximum pressure using the optional power clevis.

Equipment furnished with each machine

(For part numbers see page 1.9):

- Metal carrying case
- Reversible ratchet handle
- Small saddle gasket (fits between machine and saddle)
- Large saddle gasket (fits between saddle and pipe)
- Round link chain for 12" and smaller pipe
- Chain hooks/washers/nuts
- Open end wrench (for E-Z release inserting tools)
- Box wrench (for tightening chain hook nuts and tool retaining screw)
- Body cleaning chisel (for cleaning debris from inside machine body)
- Blow-off valve
- Instruction Manual (Form # 8910)
- Cutting grease

Optional equipment:

- Extracting tools (used to remove stops or plugs from mains) - page 1.6
- Equipment for special uses - page 1.8
- Power operators - page 1.25



Equipment to be selected:

- Combined drills and taps or shell cutters - pages 1.4 and 1.5
- Inserting tools (used to insert corporation stops or pipe plugs) - page 1.6
- Machine saddles (adapts machine to specific type and size of main) - page 1.7

B-101	
Total shipping weight	114 lbs. (52 kg)
Handling weight during operation (Upper section)	20 lbs. (9 kg)
Handling weight during operation (Lower section)	23 lbs. (10 kg)
Shipping length	23"
Extended length	32-1/2"

Rev. 2-18 Shaded area indicates changes



Mueller Combined Drills and Taps for Mueller B-101 Machines

Mueller Combined Drills and Taps are designed and manufactured to perfectly match the corresponding stop or plug thread to assure a pressure tight seal. To further assure these tools are of the highest quality, Mueller Combined Drills and Taps are tested by making an actual tap in a cast plate, and the resulting thread is gaged. Each Mueller Combined Drill and Tap is subjected to a hardness test to assure material integrity.

NOTE: Mueller Co. offers a Reconditioning service for Mueller made combined drills and taps, combined shell cutters and taps, and shell cutters. Contact Mueller Customer Service Center for details.

Mueller B-101 Machine Tool Kit - 682293

Description	Part Number	Description	Part Number
3/4" Equipment	-	DI/900 Pipe Saddle	
CD & T	680539	4"	75812
Inserting Tool****	680600	6"	75815
1" Equipment	-	8"	75817
CD & T	680540	10"	75820
Inserting Tool****	680601	12"	75821

Type of inlet thread on corporation stop or plug	Material of pipe to be tapped	Size & class of pipe to be tapped		Size of inlet thread on corporation stop or pipe plug						
		Size	Class	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
AWWA taper thread	All ductile iron	4"-54"	All ***	680537	680538	680539	680540	681487	681488	681489
		All								
	All cast iron	4"-30"	250 *							
		4"-30" 4"-20"	250 * D **							
		36"-48" 24"-42"								
		All A-C	3"-8"							
Steel	4"-24"	Sch. 40	680545	680546	680547	680548	-	-	-	
AWWA I.P. thread	All ductile iron	All	All ***	680572	-	680573	680574	681492	681493	681494
		4"-30"	250 *							
	All cast iron	4"-30" 4"-20"	250 * D **							
		36"-48" 24"-42"								
	All A-C	3"-24" 3"-16"	100 150							
		3"-14"	200							
Steel	4"-24"	Sch. 40	680569	-	680570	680571	-	-	-	

All B-101 Combined Drills and Taps except those deignated for steel are deigned for use on cement lined and unlined cast or ductile iron and A-C pipe. These tools are labeled CEM-RES®.†

* Centrifugally cast and pit cast iron pipe, classes 50 through 250 meeting the following specifications: ANSI/AWWA C102/A21.2; ANSI/AWWAC106/A21.6; ANSI/AWWA C108/A21.8; Federal specification WW-P- and pit cast iron pipe, classes A and B.

**Maximum size of pit cast iron pipe, classes C and D.

***Ductile iron pipe, classed 50 through 56 meeting specifications ANSI/AWWA C151/A21.51.

****Inserting tools fit Flare, CTS 110, CTS Pack Joint

†These tools, marked CEM-RES®, have been developed for use on A-C pipe meeting specifications ASTM C96 and AWWA C400 and for cement-lined pipe meeting specifications ANSI/AWWA C104/A21.4. Cutting grease is supplied with and use is mandatory on all CEM-RES tools except when tapping A-C pipe.

Note: Mueller recommended cutting grease is available in pints (88366).

B-101 Combined Drills and Taps with replaceable carbide tipped drill - AWWA taper thread

Material of pipe to be tapped	Size and class of pipe to be tapped		Drill length	Thread size of stop	Drill and tap complete	Component		Rollpin
	Size	Class				Drill and rollpin	Tap and shank with rollpin	
All A-C †	3"-16"	100	Reg	-	-	580779	680675	502580
		150		3/4"	680671			
	200	1"		680672	580780	680676	502581	



See bottom of page 1.4 for footnote †

B-101 Combined Drills and Taps with with AWWA Taper Thread Long Drill Point

Material of pipe to be tapped	Size and class of pipe to be tapped		Corporation stop size	Part Number
	Size	Class		
All ductile iron	4"-54"	All	3/4"	680535
All cast iron	4"-48"	All	3/4"	
All A-C	3"-16"	All	1"	680536

B-101 Combined Shell Cutters and Taps for PVC plastic pipe - AWWA taper thread

Material of pipe to be tapped	Maximum pipe wall thickness	Thread size of stop	Component*		Shell cutter and tap complete	Optional coupon removal tool
			Tap and shank	Shell cutter		
Cast iron O.D. PVC plastic pipe (AWWA C900)	1.125"	3/4"	581502	507577	682646	581636
		1"	581503	507578	682645	581637

* Need to order both tap/shank and shell cutter.



B-101 Combined Shell Cutters and Taps

Thread Type	Material of pipe to be tapped	Size and class of pipe to be tapped		Thread size of stop or plug	Shell cutter and tap complete	Shell cutter and tap components				
		Size	Class			Combination shank and tap	Shell cutter	Pilot drill	Retaining screw	Drift pin
AWWA taper thread	All cast iron & ductile iron	All***	250*	1-1/2"	580517	580516	501701	501641	37802	63264
		All***	D**	2"	580518	580519	53627	501642	33510	63264
AWWA I.P. Thread	All cast iron & ductile iron	All***	250*	1-1/4"	580444	580440	37353	501641	37802	63264
		All***	D**	1-1/2"	580445	580441	37354	501641	37802	63264
		4"-54"	All***	2"	580446	580442	37355	501642	33510	63264
			All***	2-1/2"	681502	681501	40907	37356	33509	63264

See bottom of page 1.4 for footnotes *, ** and ***



This chart gives the minimum wall thickness of pipe that will provide the recommended four full threads of engagement with the corporation stop inlet thread. For pipe with thinner walls than specified here, use MUELLER Service Clamps and Corporation Stops.

Type of Thread	Tap Size	Thickness of various pipe diameter (in.)														
		3	4	6	8	10	12	14	16	18	20	24	30	36	42	48
AWWA Taper Thread	1/2"	.33	.32	.31	.30	.30	.30	.30	.29	.29	.29	.29	.29	.29	.28	.28
	5/8"	.36	.35	.32	.31	.31	.30	.30	.30	.29	.29	.29	.29	.29	.29	.28
	3/4"	.37	.36	.35	.34	.33	.33	.32	.32	.32	.31	.31	.31	.31	.31	.31
	1"	.46	.44	.40	.39	.38	.37	.36	.36	.36	.35	.35	.35	.34	.34	.34
	1-1/4"	.57	.52	.47	.44	.42	.41	.49	.39	.39	.39	.38	.37	.37	.37	.37
	1-1/2"	.64	.58	.51	.47	.45	.43	.42	.41	.40	.40	.39	.38	.38	.37	.37
AWWA I.P. Thread	2"	.86	.75	.61	.55	.51	.48	.46	.45	.44	.43	.42	.40	.40	.39	.38
	1/2"	.330	.322	.311	.305	.301	.299	.297	.296	.295	.295	.292	.291	.290	.289	.289
	3/4"	.356	.343	.325	.316	.310	.306	.304	.301	.300	.298	.296	.294	.293	.292	.291
	1"	.459	.438	.411	.396	.387	.381	.376	.373	.370	.368	.365	.361	.359	.358	.356
	1-1/4"	.528	.493	.449	.425	.410	.400	.393	.388	.383	.380	.375	.370	.366	.363	.361
	1-1/2"	.588	.540	.481	.449	.430	.417	.407	.400	.394	.390	.383	.376	.372	.368	.366
	2"	.740	.657	.558	.508	.477	.456	.441	.430	.421	.414	.403	.392	.385	.380	.376
2-1/2"	-	.968	.812	.736	.689	.658	.636	.620	.607	.596	.580	.565	.554	.546	.541	
3"	-	-	.975	.855	.784	.737	.704	.679	.659	.644	.620	.596	.580	.569	.560	

Note: Mueller recommended cutting grease is available in pints (88366).

Rev. 11-18 Shaded area indicates changes

Mueller Inserting Tools are provided with an E-Z Release feature. This feature allows the drilling and tapping machine to disengage the corporation stop without backing the corporation stop out of the main. E-Z Release Inserting Tools consist of two parts (a shank and a nut) which are joined by a coarse acme thread. When the machine disengages the corporation stop, the two parts of the inserting tool separate at the acme thread. The part of the inserting tool left attached to the corporation stop is easily removed once the tapping machine is removed from the main.



B-101 Inserting tools for corporation stops

Tool	Corporation stop outlet	Inserting Tool Size				
		1/2"	5/8"	3/4"	1"	1-1/4"
Inserting Tool	Copper flare connection	680598	680599	680600	680601	680602
	CTS Mueller 110® Conductive Compression Connection	-	-	680600	680601	683136
	CTS Pack Joint	-	-	680600	680601	-
	CTS Grip	-	-	680600	680601	-
	CTS Q Line	-	-	680600	680601	-
	IPS PE Mueller 110® Conductive Compression Connection	-	-	680688	680689	-
	IPS Grip	-	-	680688	680602	-
	PEP Pack joint	-	-	680688	680602	-
	PVC Pack joint	-	-	680688	680602	-
	Mueller coupling thread	680609	-	680611	680612	-
	I.P. copper flare connection	-	-	680603	680604****	-
	M.I.P. thread	-	-	680595	680596	680597
	Outside thread-Mueller Screw Plug thread	-	680653	680654	680655	-
	Outside thread-F.I.P. thread	680630	-	680631	680632	-
	Insulated	-	-	681722	681724	-
	Kitec CTS	-	-	680600	680601	-

****Outlet thread is one size larger than tubing

Inserting tool for corp stops



B-101 Extracting tools for corporation stops

Corporation stop outlet	Extracting Tool Size				
	1/2"	5/8"	3/4"	1"	1-1/4"
Copper flare connection	680622	-	680623	680624	580315
CTS Mueller 110® Conductive Compression Connection*	-	-	680623	680624	-
CTS Pack Joint	-	-	680623	680624	-
CTS Mueller Grip	-	-	680623	680624	-
CTS Q Line	-	-	680623	680624	-
PVC Pack Joint	-	-	681288	-	-
ISP PEP	-	-	681288	-	-
IPS PE Mueller 110® Conductive Compression Connection***	-	-	681288	680690	-
Mueller coupling thread	680614	680615	680616	680617	-
I.P. copper flare connection	680625	-	680626	680627	-
M.I.P. thread	680618	-	680619	680620	680621
Outside thread-Mueller Screw Plug thread	680633	680634	680635	680636	-
Outside thread-F.I.P. thread	680637	-	680638	680639	-
Insulated	-	-	681723	681725	-

*For type "K" copper service tubing or plastic tubing having the same O.D. (PE or PB).

*** For PE plastic pipe, meeting specifications ASTM D-2239 (SDR-7) 160 psi.



B-101 Inserting and Extracting tools of H-10034 and H-10037 plugs

Inserting and Extracting tool description	Size of Inserting or Extracting tool (same size as size of plug)							
	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
Inserting tool for H-10034 plug	680643	680644	680644	680644	680645	680645	680645	-
Inserting tool for H-10037 plug	-	-	680644	680644	680644	680645	680645	680645
Extracting tool H-10034 plug	680640	680641	680641	680641	680642	680642	680642	-
Extracting tool for H-10037 plug	-	-	680641	680641	680641	680642	680642	680642

MUELLER® B-101™ DRILLING & TAPPING MACHINES MACHINE SADDLES



1.7

Shaded area indicates change Rev. 4-17



Mueller® B-101 Machine Saddles

Mueller B-101 Machine Saddles*

Pipe O.D. range**		Kind and type of pipe***				Saddle Part Number
		Cast iron, ductile iron, cast iron O.D. PCV	Steel	A-C		
in.	mm					Class 100
2.25-2.69	57.2-68.3	-	2"	-	-	75808
2.69-3.00	68.3-76.2	2"	2-1/2"	2"	-	75832
3.50-4.00	88.9-102.0	3"	3"	2-1/2"	2"-2-1/2"	75810
4.38-5.00	111.0-127.0	4"	4"	-	-	75812
5.00-5.44	127.0-138.0	-	-	4"	4"	75813
5.44-6.13	138.0-156.0	-	5"	-	-	75814
5.81-6.38	148.0-162.0	5"	-	-	-	75833
6.44-7.13	164.0-181.0	6"	6"	-	-	75815
7.13-8.25	181.0-210.0	-	-	6"	6"	75816
8.00-9.50	203.0-241.0	8"	8"	-	-	75817
9.50-12.25	241.0-311.0	-	10"	8"	8"	75819
10.63-13.13	270.0-334.0	10"	12"	10"	10"	75820
11.00-14.50	279.0-368.0	12"	14"	12"	-	75821
14.00-17.38	356.0-442.0	14"	16"	14"	12"	75835
16.00-19.38	406.0-492.0	16"	18"	16"	14"/16"	75836
19.00-27.13	483.0-689.0	18"/20"	20"/24"	-	-	75204
21.00-30.00	533.0-740.0	24"	30"	-	-	75838
32.00-77.00	813.0-1960.0	30"-48"	36"	-	-	75841

* When using the B-101 machine on pipe 3" and smaller, a chain spreader (page 1.8) is required.

** Use pipe O.D. range as a guide to select saddles for pipe not listed in chart.

*** These saddles are suitable for pipe meeting the following specifications: Centrifugally cast pipe, classes 50-250 ANSI/AWWAC106/A21.6; ANSI/AWWAC108/A21.8; Federal specification WW-P-421.

- Pit cast pipe, classes 50-250 ANSI/AWWA C102/A21.2.
- A-C pipe, classes 100 and 150 ASTM C296, AWWA C400.
- Ductile iron pipe, classes 50-56 ANSI/AWWA C151/A21.51.
- Steel pipe, schedule 40 ASTM B36.10.
- Cast iron O.D. PVC pipe AWWA C900.

Rev. 4-01 Shaded area indicates changes


Power clevis

Catalog Number: H-10802 - The power clevis is used when making taps in mains having pressure over 90 psig (620 kPa). By its use, the boring bar can be forced down and a connection made against pressures as high as 250 psig (1725 kPa/17.25 bar). The power clevis also permits controlled withdrawal of the boring bar to prevent damage to the tool threads and shock to machine.


Ratchet handle extension

Part Number: 500684 - When making cuts over 1" in size, this bar increases length of ratchet handle from 18-11/32" (466 mm) to 30-11/32" (771 mm). This permits greater leverage and ease of operation.


Corporation stop wrench

Catalog Number: H-10048—Used to operate 3/4" and 1" corporation stops.


Web belt

Part Number: 88693—for pipe O.D. up to 12"

Part Number: 89119—for pipe O.D. up to 16"

Part Number: 580874—for pipe O.D. up to 36" Web belt replaces round or flat link chains to protect wrapped, coated or plastic pipes.


Round link extension chain

Part Number: 80000 - 4' (1.2m) extension chain increases 12" (305mm) chain to fit 12"-24" pipe.

Part Number: 80001 - 6' (1.8m) extension chain increases 12" (305mm) chain to fit 12"-36" pipe.

Part Number: 87673 - 10' (3.0m) extension chain increases 12" (305mm) chain to fit 12"-48" pipe.


Flat link chain with eyebolt and nut

Part Number: 580551—For pipe up to 12".


Flat link extension chain with bolts and nuts

Part Number: 89059—4' (1.2m) extension chain increases 12" (305mm) chain to fit 12"-24" pipe.

Part Number: 88126—6' (1.8m) extension chain increases 12" (305mm) chain to fit 12"-36" pipe.

Part Number: 88127—10' (3.0m) extension chain increases 12" (305mm) chain to fit 12"-48" pipe.


Flat chain hook with nut

Part Number: 580550 Chain hook with nut.


Chain spreader

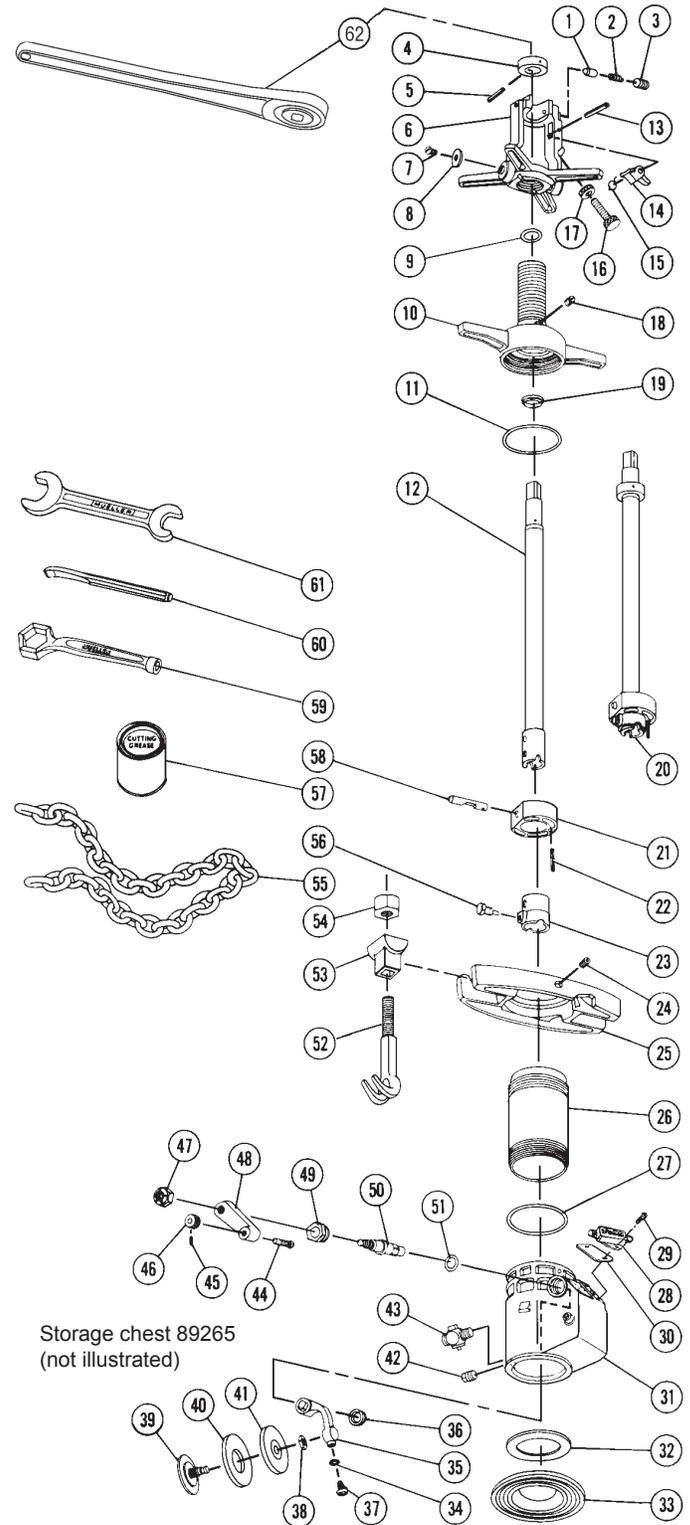
Part Number: 40321

Used when tapping 3" or smaller pipe.

MUELLER® B-101™ DRILLING & TAPPING MACHINE REPAIR PARTS

Shaded area indicates change Rev. 5-15

Item Number	Part Number	Part Name
1	500851	Detent pin - 2
2	59810	Spring - 2
3	305006	Screw - 2
4	580610	Friction collar
5	48130	Retaining pin
6	580611	Feed nut & yoke complete
7	312443	Yoke retaining screw - 2
8	537126	Washer - 2
9	79269	Boring bar O-ring - 2
10	500685	Feed sleeve & cap
11	500687	Cap packing
12	502022	Boring bar
13	502027	Rollpin
14	502025	Pivot arm
15	502026	Pivot arm spring
16	502028	Operating screw
17	502029	Lock nut
18	41435	Oil plug
19	500887	Wiper ring
20	581286	Boring bar complete
21	500692	Bearing
22	48130	Retaining pin
23	500691	Bearing sleeve
24	97795	Chain yoke retaining screw
25	500683	Chain yoke
26	500682	Cylinder
27	500670	Valve body O-ring
28	682053	By-pass valve sub assembly
29	501373	By-pass valve screw - 2
30	311812	By-pass valve gasket
31	502046	Valve body
32	40066	Small saddle gasket
33	40067	Large saddle gasket
34	52165	Lock washer
35	500672	Valve gate arm
36	72627	Spring
37	500675	Lock screw
38	500676	Lock nut
39	500674	Valve washer and stem
40	500673	Gate washer
41	500671	Valve gate
42	50369	Pipe plug
43	581646N	Blow-off valve
44	501061	Handle screw
45	302575	Lock screw
46	46280	Handle knob
47	500669	Handle nut
48	500668	Lever handle
49	500667	Valve stem retaining nut
50	500666	Valve stem
51	41301	Valve stem O-ring
52	500709	Chain hook - 2
53	500707	Chain hook washer - 2
54	500706	Chain hook nut - 2
55	500780	Chain
56	500694	Tool retaining screw
57	88366	Cutting grease
58	500693	Knock out pin
59	500708	Chain hook wrench
60	40050	Body cleaning chisel
61	501579	Inserting tool wrench
62	528273	Ratchet handle complete
-	682078	By-pass valve Key repair kit
-	306991	By-pass valve Spare retaining ring
-	682087	By-pass valve repair kit



Mueller B-101 Repair Kit - See page 1.10

NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. MUELLER CO. offers a machine repair service. Contact MUELLER® Customer Service Center for details.

Rev. 4-17 Shaded area indicates changes

Mueller B-101 Repair Kit – 681844 (See page 1.9 for Item No.)

Item Number	Part No.	Description
4	580610	1 - Friction Collar
5	48130	1 - Retaining Pin
57	88366	1 - Cutting Grease
19	500887	1 - Wiper Ring
11	500687	1 - Cap Packing
21	500692	1 - Bearing
32	40066	1 - Small Saddle Gasket
33	40067	1 - Large Saddle Gasket
27	500670	1- Valve Body O-ring
28	682087	1 - By-Pass Valve Repair Kit
40	500673	1 - Gate Washer
56	500694	1 - Tool Retaining Screw
9	79269	2 - Boring Bar O-ring
51	41301	1 - Valve Stem O-ring

Mueller B-101 Bypass Repair Kit – 682087

Item Number	Part No.	Description
29	501373	2 - Screws
28/30	682053	1 - Bypass valve assembly with gasket
-	311815	1 - Nameplate
-	Form - 12084	1 - Instruction sheet

Mueller A-3 Machine - for drilling, tapping and inserting operations under pressure - 1" to 2-1/2" inclusive

- Catalog number A-3
- Hand or power operation
- Designed for use on pressurized or dry mains
- Insert or extract corporation stops from 1" to 2" and pipe plugs to 2-1/2" in size
- Use on cast iron or ductile iron pipe • cement lined cast iron or ductile iron pipe • A-C pipe • cast iron O.D. PVC • steel pipe
- 90 psig (621 kPa) maximum working pressure without optional power clevis
- 200 psig (1379 kPa) maximum working pressure with optional power clevis
- 250 F (121 C) maximum working temperature



Equipment furnished with each machine

(For part numbers see page 1.17):

- Wooden storage chest (not shown)
- Ratchet handle
- Ratchet handle extension
- Small saddle gasket (fits between machine and saddle)
- Large saddle gasket (fits between saddle and pipe)
- Flat link chain with eyebolt and nut for 6" thru 16" pipe
- Chain hook, nut and washer
- Box end wrench for chain hook nut
- Allen wrench
- Open end corporation stop wrench
- Body cleaning chisel (for cleaning debris from inside of machine body)
- Cutting grease
- Instruction manual (Form #8541)

Equipment to be selected:

- Combined drills and taps or shell cutters and taps—page 1.12 and 1.13
- Inserting tools (used to insert corporation stops or pipe plugs)—page 1.14
- Machine saddles (adapts machine to specific type and size of main)—page 1.15

Optional equipment:

- Extracting tools (used to remove corporation stops or pipe plugs)—page 1.14
- Equipment for special uses—1.16
- Power operators—page 1.25

	A-3
Total shipping weight	188 lbs. (85 kg)
Handling weight during operation - Upper section	40 lbs. (18 kg)
Handling weight during operation - Lower section	58 lbs. (26 kg)
Shipping length	36"
Extended length	54"

Rev. 10-16 Shaded area indicates changes



Regular drill length Long drill length

Mueller Combined Drills and Taps for A-3 Machines

Mueller Combined Drills and Taps are designed and manufactured to perfectly match the corresponding stop or plug thread to assure a pressure tight seal. To further assure these tools are of the highest quality, Mueller Combined Drills and Taps are tested by making an actual tap in a cast iron plate, and the resulting thread is gaged. Each Mueller Combined Drill and Tap is subjected to a hardness test to assure material integrity.

NOTE: Mueller CO. offers a reconditioning service for MUELLER made combined drills and taps, combined shell cutters and taps, and shell cutters. Contact MUELLER Customer Service Center for details.

Mueller A-3 Machine Tool Kit - 682294

Description 1" Equipment	Part No.	Description 1-1/2" Equipment	Part No.	Description 2" Equipment	Part No.	Description DI Pipe Saddles	Part No.
CD&T	680540	CD&T	681488	CD&T	681489	6"	75908
Inserting Tool	680601	Flare Inserting Tool	88640	Flare Inserting Tool	88641	8"	75909
-	-	110 Inserting Tool	680421	110 Inserting Tool	680422	10"	75910
						12"	40236
						14"	75911
						16"	40238
						18"	40240
						20"	40240
						24"	40241

All A-3 Combined Drills and Taps except those designated for steel are designed for use of cement lined and unlined cast or ductile iron and A-C pipe. These tools are labeled CEM-RES®. †

Type of Inlet thread on corporation stop or plug	Material of pipe to be tapped	Size and class of pipe to be tapped		Size of Inlet thread on corporation stop or plug				
		Size	Class	1"	1-1/4"	1-1/2"	2"	2-1/2"
AWWA Taper Thread	All ductile iron	6"-54"	All***	680540	681487	681488	681489	-
		All	All***					
	All cast iron	6"-48"	250*					
		6"-30"	250*					
		6"-20"	D**					
		36"-48" 24"-42"	250* D**					
	A-C	6"-24"	100	680536	63656	63657	63658	-
		6"-16"	150					
	6"-14"	200						
Steel	6"-24"	Sch. 40	680548	-	-	-	-	
AWWA I.P. Thread	All ductile iron	6"-54"	All***	680574	681492	681493	681494	681506
		All	All***					
	All cast iron	6"-48"	250*					
		6"-30"	250*					
		6"-20"	D**					
		36"-48" 24"-42"	250* D**					
	A-C (use a Service Saddle)	All	All	-				
Steel	6"-24"	Sch. 40	680571	682263	682264	682265	-	

FLong drill point

* Centrifugally cast and pit cast iron pipe, classes 50 through 250 meeting the following specifications: ANSI/AWWA C102/A21.2; ANSI/AWWA C106/A21.6; ANSI/AWWA C108/A21.8; Federal specification WW-P-421 and pit cast iron pipe, classes A and B.

** Maximum size of pit cast iron pipe, classes C and D.

*** Ductile iron pipe, classes 50 through 56 meeting specifications ANSI/AWWA C151/A21.51

† These tools, marked CEM-RES®, have been developed for use on A-C pipe meeting specifications ASTM C296 and AWWA C400 and for cement-lined pipe meeting specifications ANSI/AWWA C104/A21.4 (the warranty will be voided on any non-CEM-RES drills used on A-C pipe). Cutting grease is mandatory on all CEM-RES drills except when tapping AC pipe.

Note: Mueller recommended cutting grease is available in pints (88366).

A-3 Combined Drills and Taps with replaceable carbide tipped drill—AWWA taper thread

Material of pipe to be tapped	Size and class of pipe to be tapped		Drill length	Thread size of stop	Drill and tap comp.	Components		Rollpin
	Size	Class				Drill and rollpin	Tap and shank with rollpin	
A-C†	6"-16"	100 150	Reg.	1"	680672	580780	680676	502581
	6"-14"	200						



See bottom of page 1.12 for footnote †

A-3 Combined Shell Cutters and Taps for PVC—AWWA taper thread

When using these tools on any PVC, the specific instructions and recommendations of the pipe manufacturer must be followed. Because of the many types of plastic sold, Mueller Co. assumes no responsibility for performance of any threaded connection in plastic pipe.



Optional coupon removal tool



Material of pipe to be tapped	Max. pipe wall thickness	Thread size of stop	Components		Shell cutter and tap complete	Optional coupon removal tool
			Tap and shank	Shell cutter		
Cast iron O.D. PVC (AWWA C900)	1.125"	1"	581503	507578	682645	581637

A-3 Combined Shell Cutters and Taps

Type of inlet thread on corporation stop or plug	Material of pipe to be tapped	Size and class of pipe to be tapped		Thread size of stop or plug	Shell cutter and tap complete	Shell cutter and tap components parts				
		Size	Class			Combined shank and tap	Shell cutter	Pilot drill	Ret. screw	Drift pin
AWWA Taper Thread	Cast iron & Ductile iron	6"-48"	All	1-1/2"	580740	502395	502394	53906	33509	63264
			All	2"	83525	53949	53627	53906	33509	63264
AWWA I.P. Thread	Ductile iron	6"-48"	All***	1-1/2"	88739	37351	37354	37801	37802	63264
			All***	2"	88740	37352	37355	37356	33510	63264
			All***	2-1/2"	681502	681501	40907	37356	33509	63264



See bottom of page 1.12 for footnotes *, **, and ***
Note: Mueller recommended cutting grease is available in pints (88366).

Rev. 11-18 Shaded area indicates changes

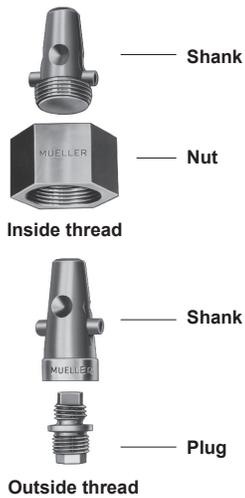
Most Mueller Inserting Tools are available with an E-Z Release feature. This feature allows the drilling and tapping machine to disengage the corporation stop without backing the corporation stop out of the main. E-Z Release Inserting Tools consist of two parts (a shank and a nut) which are joined by a coarse acme thread. When the machine disengages the corporation stop, the two parts of the inserting tool separate at the acme thread. The part of the inserting tool left attached to the corporation stop is easily removed once the tapping machine is removed from the main.



A-3 Inserting tools for corporation stops

Tool	Corporation stop outlet	Inserting Tool Size			
		1"	1-1/4"	1-1/2"	2"
Inserting Tool	Copper flare connection	680601	680602	88640	88641
	CTS Mueller 110® Conductive Compression Connection	680601	683136	680421	680422
	CTS Pack Joint	680601	-	680421	680422
	CTS Mueller Grip	680601	-	680421	680422
	CTS Q Line	680601	-	-	-
	IPS PE Mueller 110® Conductive Compression Connection	680689	-	-	-
	IPS Grip	680602	-	-	-
	PEP Pack joint	680602	-	680422	-
	PVC Pack joint	680602	-	-	-
	Mueller coupling thread	680612	-	-	-
	I.P. copper flare connection	680604****	-	-	-
	M.I.P. thread	680596	680597	83065	83066
	Outside thread-Mueller Screw Plug thread	680655	58482	58843	58484
	Outside thread-F.I.P. thread	680632	61212	61213	61214
Kitec CTS	680601	-	-	-	

****Outlet thread is one size larger than tubing



A-3 Extracting tools for corporation stops

Corporation stop outlet	Extracting Tool Size			
	1"	1-1/4"	1-1/2"	2"
Copper flare connection	680624**	83185	83186	83187
CTS Mueller 110® Conductive Compression Connection*	680624**	-	581765	68423
CTS Pack Joint Connection*	680624**	-	581765	68423
CTS Mueller Grip	680624	-	-	-
IPS PE Mueller 110® Conductive Compression Connection***	680690	-	-	-
Mueller coupling thread	680617	-	-	-
I.P. copper flare connection	680627	-	-	-
M.I.P. thread	680620	680621	83179	83180
Outside thread-Mueller Screw Plug thread	680636	83170	83171	83172
Outside thread-F.I.P. thread	680639	-	-	-

* For type "K" copper service tubing or plastic tubing having the same O.D. (PE or PB).

*** For PE plastic pipe, meeting specifications ASTM D-2239 (SDR-7) 160 psi.



A-3 Inserting and Extracting tools of H-10034 and H-10037 plugs

Inserting and Extracting tool description	Tool Size				
	1"	1-1/4"	1-1/2"	2"	2-1/2"
Inserting tool for H-10034 plug	680644	680645	680645	680645	-
Inserting tool for H-10037 plug	680644	680644	680645	680645	680645
Extracting tool for H-10034 plug	680641	680642	680642	680642	-
Extracting tool for H-10037 plug	680641	680641	680642	680642	-



Mueller® A-3 Machine Saddles

Mueller A-3 Machine Saddles*

Pipe O.D. range**		Kind and type of pipe***				Saddle Part Number
		Cast iron, ductile iron, cast iron O.D. PCV	Steel	A-C		
in.	mm					Class 100
6.56-7.13	167.0-181.0	6"	-	-	-	75908
6.94-7.50	176.0-191.0	-	6"	6"	6"	46704
8.00-8.63	203.0-219.0	-	8"	-	-	45384
8.88-9.38	226.0-238.0	8"	-	-	-	75909
9.19-9.63	233.0-245.0	-	-	8"	8"	43293
10.13-11.25	257.0-286.0	10"	10"	10"	-	75910
11.88-13.50	302.0-342.0	12"	-	-	10"	40236
13.38-14.00	340.0-356.0	-	14"	12"	-	43364
14.13-16.25	359.0-413.0	14"	16"	14"	12"	75911
16.00-18.75	406.0-476.0	16"	18"	16"	14"	40238
18.13-22.75	461.578.0	18"/20"	20"	-	16"	40240
22.50-27.50	572.0-699.0	24"	24"	-	-	40241
27.75-35.00	654.0-889.0	30"	30"	-	-	75912
34.00-58.00	864.0-1470.0	36"/42"/48"	36"	-	-	75914

* Use pipe O.D. range as a guide to select saddles for pipe not listed in chart.

** These saddles are suitable for pipe meeting the following specifications:

- Centrifugally cast pipe, classes 50-250 ANSI/AWWA C106/A21.6; ANSI/AWWA C108/A21.8; Federal specification WW-P-421.
- Pit cast pipe, classes 50-250 ANSI/AWWA C102/A21.2.
- A-C pipe, classes 100 and 150 ASTM C296, AWWA C400.
- Ductile iron pipe, classes 50-56 ANSI/AWWA C151/A21.51.
- Steel pipe, schedule 40 ASTM B36.10.
- Cast iron O.D. PVC plastic pipe AWWA C900.

Rev. 4-91 Shaded area indicates changes


Power clevis

Catalog Number: H-10802 - The power clevis is used when making taps in mains having pressure over 90 psig (620 kPa). By its use, the boring bar can be forced down and a connection made against pressures as high as 250 psig (1725 kPa/17.25 bar). The power clevis also permits controlled withdrawal of the boring bar to prevent damage to the tool threads and shock to machine.


By-pass clean out tap

Part Number: 500529 - Used to retap, clean out and remove chips or foreign matter in the threaded portion of the A-3 machine by-pass.


Corporation stop wrench

Part Number: H-10048 - Used to operate 3/4" and 1" corporation stops.


Web belt

Part Number: 88693—for pipe O.D. up to 12"

Part Number: 89119—for pipe O.D. up to 16"

Part Number: 580874—for pipe O.D. up to 36"

Replaces round or flat link chains to protect wrapped, coated, or plastic pipes.


Flat link extension chain with bolts and nuts

Part Number: 82314—2'-4" (.7m) extension chain increases 16" (406mm) chain to fit 16"-24" pipe.

Part Number: 81028—5'-4" (1.6m) extension chain increases 16" (406mm) chain to fit 16"-36" pipe.

Part Number: 81029—8'-2" (2.5m) extension chain increases 16" (406mm) chain to fit 16"-48" pipe.

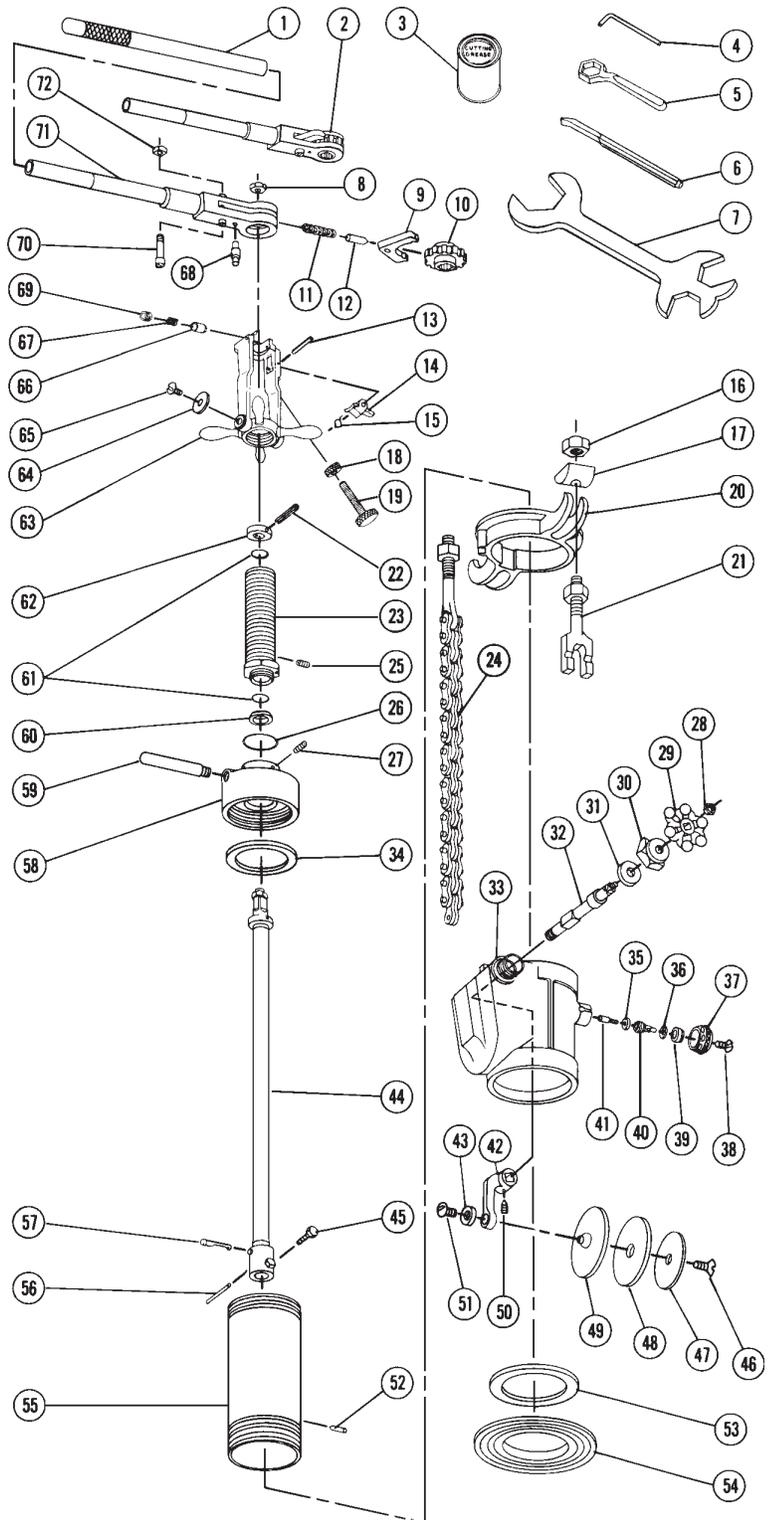

Chain spreader

Part Number: 40321

Used when tapping pipe smaller than 6".

Shaded area indicates change Rev. 8-04

Item Number	Part Number	Part Name
1	86391	Handle extension
2	85308	Ratchet handle (complete)
3	88366	Cutting grease
4	90322	Allen wrench
5	40028	Chain nut wrench
6	40205	Chisel
7	75409	Wrench
8	46029	Boring bar nut
9	40004	Ratchet dog
10	40137	Ratchet wheel
11	40007	Spring
12	40006	Spring pin
13	502027	Roll pin
14	502025	Pivot arm
15	502026	Pivot arm spring
16	40211	Chain hook nut
17	40212	Chain hook washer
18	502029	Lock nut
19	502028	Operating screw
20	40213	Chain yoke
21	89099	Chain hook
22	48130	Friction collar roll pin
23	503149	Feed sleeve
24	85318	Chain for 6"-16" mains
25	41435	Oil plug
26	45374	Feed sleeve O-ring
27	98430	Set screw
28	58849	Handwheel nut
29	58519	Handwheel
30	40193	Stem packing nut
31	58461	Stem packing washer
32	40194	Valve stem
33	503147	Valve body
34	40189	Cap gasket
35	42042	Seat washer
36	40049	Seat nut washer
37	40043	Hand knob
38	40044	Hand knob screw
39	40048	Seat nut
40	40045	Stem
41	40047	Screw
42	40195	Gate arm
43	40203	Gate screw washer
44	580967	Boring bar assembly
45	62501	Tool retaining screw
46	40200	Seat washer screw
47	40197	Gate washer
48	40198	Seat washer
49	40196	Gate
50	40013	Stem set screw
51	40202	Gate-to-arm screw
52	40023	Yoke retaining pin
53	40229	Small saddle gasket
54	40230	Large saddle gasket
55	58093	Cylinder
56	56694	Retaining pin
57	40015	Drift pin
58	503148	Cap
59	40020	Handle
60	501273	Boring bar wiper ring
61	51458	Boring bar O-ring
62	580610	Friction collar
63	580898	Feed yoke
64	50133	Washer
65	79745	Retaining screw
66	500851	Detent
67	59810	Detent spring
68	40139	Stud
69	305006	Detent screw
70	40138	Bolt *
71	80111	Handle bar
72	46255	Nut *



Mueller A-3 Repair Kit - See page 1.18

Operating instruction manual (Form #8541) & page 1.13

NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. MUELLER CO. offers a machine repair service. Contact MUELLER® Customer Service Center for details.

*Order both parts when replacing either one.

TO ORDER SPECIFY QUANTITY, PART NUMBER AND PART NAME (include catalog number and model number of machine)

Rev. 4-17 Shaded area indicates changes

Mueller A-3 Machine Repair Kit - 681843

Part Number	Description
45374	1 - Feed Sleeve O-ring
40189	1 - Cap Gasket
42042	1 - Seat Washer
40049	1 - Seat Nut Washer
58461	1 - Stem Packing Washer
40198	1 - Seat Washer
501273	1 - Boring Bar Wiper Ring
51458	2 - Boring Bar O-ring
62501	1- Tool Retaining Screw
40229	1 - Small Saddle Gasket
40230	1 - Large Saddle Gasket
88366	1 - Cutting Grease

Shaded area indicates change Rev. 12-18

**Mueller “J” Machine - for drilling and tapping operations in
dry or open mains - 1/2" to 2" inclusive**

- Catalog number “J”
- Hand operation
- Designed for use on dry or open mains
- Used to drill and tap 1/2" to 2" holes
- Use on cast iron or ductile iron pipe • cement lined cast iron or ductile iron pipe
 - A-C pipe • steel pipe



Item	Sizes									Operation	Method
	-	-	1/2"	-	3/4"	1"	1-1/4"	1-1/2"	2"		
Corporation Stops	-	-	1/2"	-	3/4"	1"	1-1/4"	1-1/2"	2"	Drill and tap main	Hand
Pipe Plug	-	-	1/2"	-	3/4"	1"	1-1/4"	1-1/2"	2"		

Equipment furnished with each machine

- Wooden storage chest (not shown)
- Ratchet handle
- Round link chain with eyebolt and nut
- Chain hook and nut
- Chain straps
- Double end box wrench for tightening chain hook nuts and feed screw guide set screw
- Cutting grease
- Instruction manual (Form #8549)
- Tool adapter (Part #683158)

Equipment to be selected

- Combined drills and taps – page 1.20

	"J" Machine
Total shipping weight	64 lbs. (29 kg)
Machine only weight	39 lbs. (18 kg)

Rev. 11-18 Shaded area indicates changes



Mueller® Combined Drills and Taps

Mueller Combined Drills and Taps are designed and manufactured to perfectly match the corresponding stop or plug thread to assure a pressure tight seal. To further assure these tools are of the highest quality, Mueller Combined Drills and Taps are tested by making an actual tap in a cast iron plate, and the resulting thread is gaged. Each Mueller Combined Drill and Tap is subjected to a hardness test to assure material integrity.

NOTE: MUELLER CO. offers a reconditioning service for MUELLER made combined drills and taps, combined shell cutters and taps, and shell cutters. Contact MUELLER Customer Service Center for details.

“J” Machine Combined Drills and Taps (CEM-RES® tools marked † in chart are designed for use on A-C and cement-lined iron pipe. Warranty will be voided on any other tool used on these types of pipe.)

Type of Inlet thread on corporation stop or plug	Material of pipe to be tapped	Size and class of pipe to be tapped		Drill length	Drill length						
		Size	Class		1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
AWWA Taper Thread	All cast iron	4"-30"	250*	Regular	680537†	680538	680539†	680540†	37793† <small>- Adapter will not be used on this tool</small>	37794† <small>- Adapter will not be used on this tool</small>	44135† <small>- Adapter will not be used on this tool</small>
		4"-40"	D**								
		4"-48"	250"								
	All ductile iron	All	All***								
4"-54"		All***									
A-C	3"-24" 3"-16" 3"-14"	100 150 200									
Steel	4"-24"	Sch. 40		680545	680546	680547	680548	79337 <small>- Adapter will not be used on this tool</small>	79338 <small>- Adapter will not be used on this tool</small>	79339 <small>- Adapter will not be used on this tool</small>	
AWWA I.P. Thread	All cast iron	4"-30"	250*	Regular	680572†	-	680573†	680574†	681492†	681493†	681494†
		4"-40"	D**								
		4"-48"	250"								
	All ductile iron	4"-54"	All***								
All		All***									
A-C	3"-24" 3"-16" 3"-14"	100 150 200									
Steel	4"-24"	Sch. 40		680569		680570	680571	37285 <small>- Adapter will not be used on this tool</small>	37286 <small>- Adapter will not be used on this tool</small>	37287 <small>- Adapter will not be used on this tool</small>	

* Centrifugally cast and pit cast iron pipe, classes 50 through 250 meeting the following specifications: ANSI/AWWA C102/A21.2; ANSI/AWWA C106/A21.6; ANSI/AWWA C108/A21.8; Federal specification WW-P-421 and pit cast iron pipe, classes A and B.

** Maximum size of pit cast iron pipe, classes C and D.

*** Ductile iron pipe, classes 50 through 56 meeting specifications ANSI/AWWA C51/A21.51.

† These tools, marked CEM-RES®, have been developed for use on A-C pipe meeting specifications ASTM C296 and AWWA C400 and for cement-lined pipe meeting specifications ANSI/AWWA C104/A21.4. Cutting grease is supplied with and use is mandatory on all CEM-RES tools except when tapping A-C pipe.

Note: Mueller recommended cutting grease is available in pints (88366).

⚠ WARNING: Use on A-C pipe, which contains a known carcinogen, requires appropriate protective equipment and procedures be employed.



Corporation stop wrench

Part Number: H-10048 - Used to operate 3/4" and 1" corporation stops.



Flat link extension chain with bolts and nuts

Part Number: 80000—4' (1.2m) extension chain increases 12" (305mm) chain to fit 12"-24" pipe.

Part Number: 80001—6' (1.8m) extension chain increases 12" (305mm) chain to fit 12"-36" pipe.

Part Number: 87673—10'-0" (3.0m) extension chain increases 12" (305mm) chain to fit 12"-48" pipe.



Chain spreader

Part Number: 40321 - Used when tapping pipe 3" or smaller pipe.



J Machine CD&T Adapter

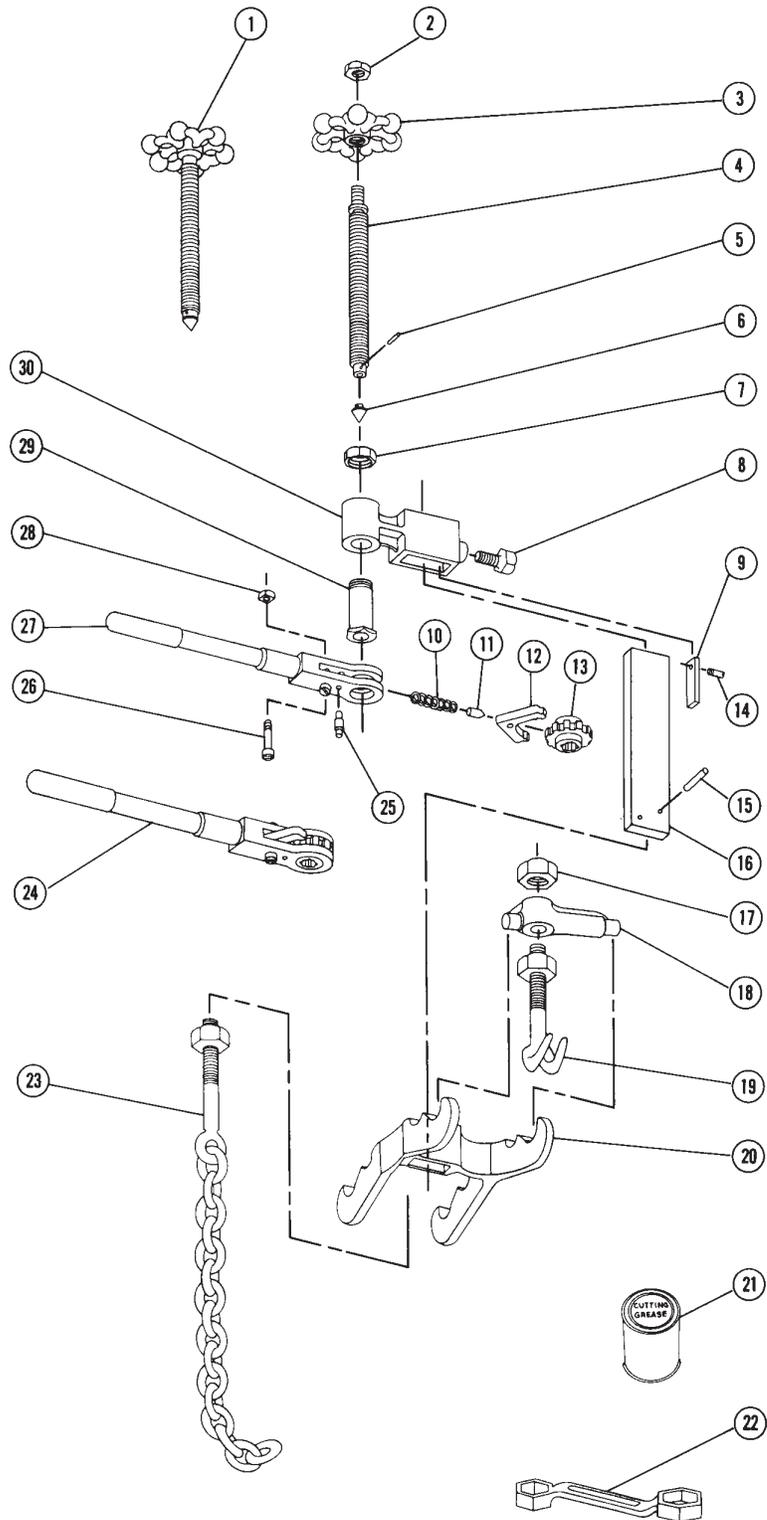
Part Number: 683158

- Used with 1/2"-1" CRXT

Rev. 9-18 Shaded area indicates changes

Item No.	Part Number	Part Name
1	85324	Feed screw complete
2	51733	Nut
3	51732	Wheel
4	51731	Screw
5	62938	Pin
6	62887	Point
7	40349	Bushing nut
8	40318	Set screw
9	40319	Guide key
10	40007	Spring
11	40006	Spring pin
12	40004	Ratchet dog
13	40137	Ratchet wheel
14	40023	Key retaining pin
15	58155	Pin
16	58152	Standard
17	40026	Chain nut
18	40311	Chain strap
19	85325	Chain hook with nut
20	40310	Base
21	88366	Cutting grease
22	40316	Double end box wrench
23	87206	Chain assembly
24	85303	Ratchet handle complete
25	40139	Stud
26	40138	Bolt*
27	80109	Handlebar
28	46255	Nut*
29	40348	Feed screw bushing
30	58153	Feed screw guide
31	683158	Machine Adapter for 1/2", 3/4" & 1" CDxT

*Order both parts when replacing either one.



NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. MUELLER CO. offers a machine repair service. Contact MUELLER® Customer Service Center for details.

TO ORDER SPECIFY QUANTITY, PART NUMBER AND PART NAME (include catalog number and model number of machine)



Mueller “H-W” Combined Drills and Taps

Mueller Combined Drills and Taps are designed and manufactured to perfectly match the corresponding stop or plug thread to assure a pressure tight seal. To further assure these tools are of the highest quality, Mueller Combined Drills and Taps are tested by making an actual tap in a cast iron plate, and the resulting thread is gaged. Each Mueller Combined Drill and Tap is subjected to a hardness test to assure material integrity.

NOTE: Mueller Co. offers a reconditioning service for Mueller made combined drills and taps, combined shell cutters and taps, and shell cutters. Contact Mueller Customer Service Center for details.

“H-W” Machine Combined Drills and Taps (CEM-RES® tools marked † in chart are designed for use on A-C and cement-lined iron pipe. Warranty will be voided on any other tool used on these types of pipe.)

Type of inlet thread on corporation stop or plug	Material of pipe to be tapped	Size and class of pipe to be tapped		Drill Length	Size of inlet thread on corporation stop or plug																	
		Size	Class		1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"									
AWWA Taper Thread	All cast iron	4"-30"	250*	Regular	-	-	37639†	37505†	37255†	37792†	37793†	37794†	44135†									
		4"-20"	D**																			
		4"-48"	250*																			
	All ductile iron	4"-54"	All***																			
		All																				
A-C	3"-24"	100																				
Steel	3"-16"	150	-											37500	37180	79337	79338	79339				
	3"-14"	200																				
AWWA I.P. Thread	All cast iron	4"-30"	250*											75490	78767†	37638†	-	37485†	37394†	37880†	37881†	37882†
		4"-20"	D**																			
		4"-48"	250*																			
	All ductile iron	4"-54"	All***																			
		All																				
A-C	3"-24"	100	63694	37282	37283	37284	37285	37286	37287													
Steel	3"-16"	150																				
	3"-14"	200																				

* Centrifugally cast and pit cast iron pipe, classes 50 through 250 meeting the following specifications: ANSI/AWWA C102/A21.2; ANSI/AWWA C106/21.6; ANSI/AWWA C108/A21.8; Federal specification WW-P-421 and pit cast iron pipe, classes A and B.

** Maximum size of pit cast iron pipe, classes C and D.

***Ductile iron pipe, classes 50 through 56 meeting specifications ANSI/AWWA C51/A21.51.

† These tools, marked CEM-RES®, have been developed for use on A-C pipe meeting specifications ASTM C296 and AWWA C400 and for cement-lined pipe meeting specifications ANSI/AWWA C104/A21.4. Cutting grease mandatory on all CEM-RES tools except when tapping A-C pipe.

Mueller® “H-W” Machine equipment for special uses Corporation stop wrench

CATALOG NUMBER: H-10048—Used to operate 3/4" and 1" corporation stops.



Round link extension chains

PART NUMBER: 80000

4'-0" (1.2m) extension chain increases 12"(305mm) chain to fit 12"-24" pipe.

PART NUMBER: 80001

6'-0" (1.8m) extension chain increases 12"(305mm) chain to fit 12"-36" pipe.

PART NUMBER: 87673

10'-0" (3.0m) extension chain increases 12"(305mm) chain to fit 12"-48" pipe.



Chain spreader

PART NUMBER: 40321—Used when tapping 3" or smaller pipe.

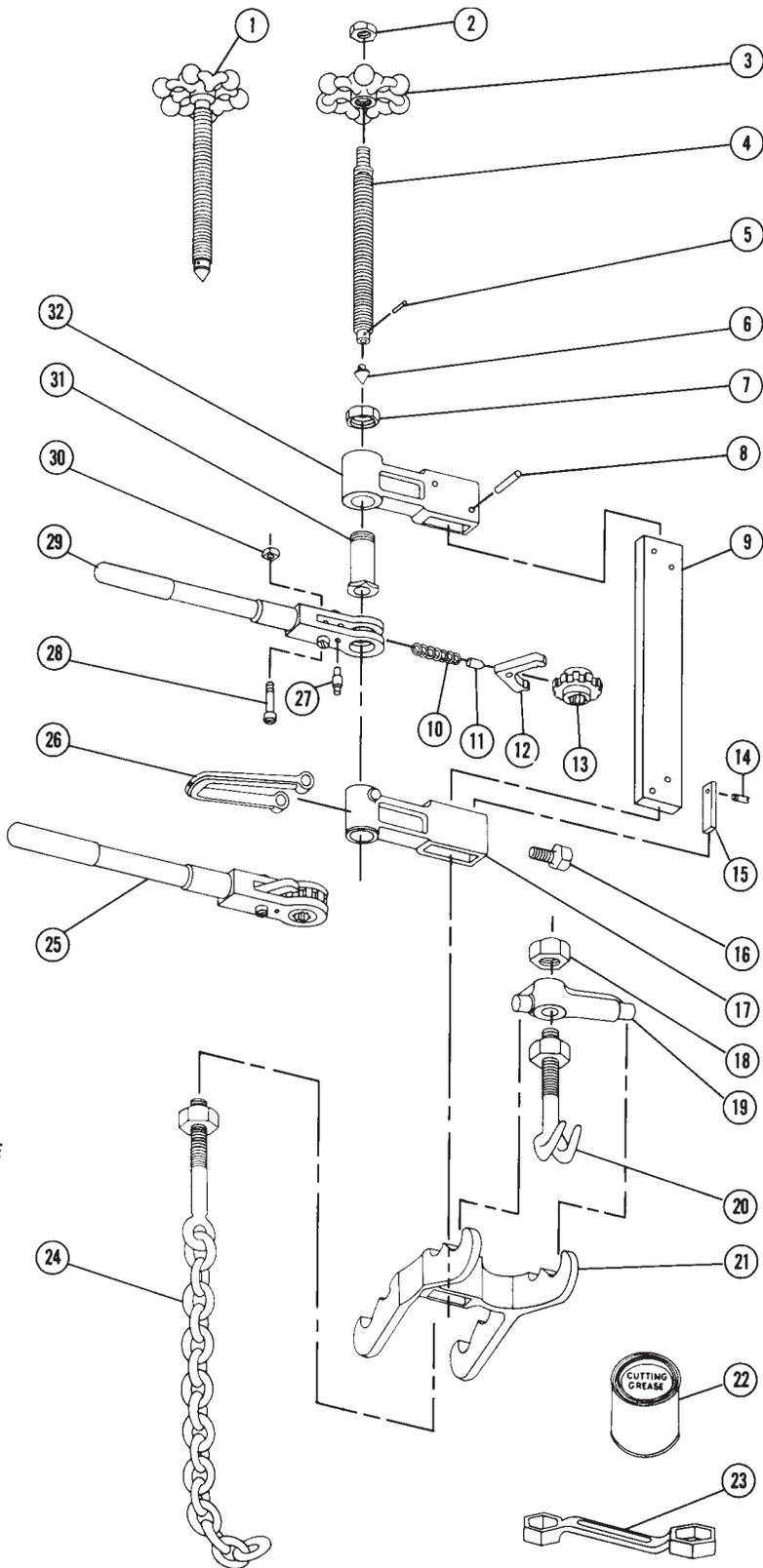


WTHE “H-W” MACHINE IS NO LONGER AVAILABLE; UNTIL FURTHER NOTICE MUELLER WILL CONTINUE TO SUPPORT THIS PRODUCT.
 Note: Mueller recommended cutting grease is available in pints (88366).

⚠ WARNING: Use on A-C pipe, which contains a known carcinogen, requires appropriate protective equipment and procedures be employed.

Rev. 2-18 Shaded area indicates changes

Item No.	Part Number	Part Name
1	85324	Feed screw complete
2	51733	Nut
3	51732	Wheel
4	51731	Screw
5	62938	Pin
6	62887	Point
7	40349	Bushing nut
8	58155	Pin
9	58159	Standard
10	40007	Spring
11	40006	Spring pin
12	40004	Ratchet dog
13	40137	Ratchet wheel
14	40023	Key retaining pin
15	40319	Guide key
16	40318	Set screw
17	58224	Tool guide
18	40026	Chain nut
19	40311	Chain strap
20	85325	Chain hook with nut
21	40310	Base
22	88366	Cutting grease
23	40316	Double end box wrench
24	87206	Chain assembly
25	85303	Ratchet handle complete
26	40351	Swinging yoke
27	40139	Stud
28	40138	Bolt*
29	80109	Handlebar
30	46255	Nut*
31	40348	Feed screw bushing
32	58156	Feed screw guide



*Order both parts when replacing either one.

WTHE “H-W” MACHINE IS NO LONGER AVAILABLE; UNTIL FURTHER NOTICE, MUELLER WILL CONTINUE TO PROVIDE SPARE PARTS FOR THIS PRODUCT. CONTACT YOUR MUELLER REPRESENTATIVE ABOUT OTHER MACHINES THAT PERFORM WITHIN THE SPECIFICATIONS OF THIS MACHINE.

NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. MUELLER CO. offers a machine repair service. Contact MUELLER® Customer Service Center for details.

TO ORDER SPECIFY QUANTITY, PART NUMBER AND PART NAME (include catalog number and model number of machine)

H-603 Electric Power Operator

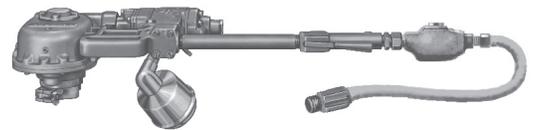
- Catalog number H-603
- Mounts directly to B-100/B-101, A-3 and E-5/D-5 machines without special adapters
- Can be set to automatically advance boring bar while drilling
- 35 RPM maximum free speed
- Reversible 3/4 horsepower electric motor
- Ground fault interrupter complies with NEC article 305-6(a) and OSHA article 1926.404bii
- Circuit breaker with manual reset
- Power supply required: 1200 watts minimum at 110 - 120 volts A.C. or D.C., 10 amps minimum capacity
- Total shipping weight 41 lbs. (19 kg)
- Machine only weight 35 lbs. (16 kg)
- Shipped in a sturdy wooden storage chest



H-603 electric power operator

H-604 Air Power Operator

- Catalog number H-604
- Mounts directly to B-100/B-101, A-3 and E-5/D-5 machines without special adapters
- Can be set to automatically advance boring bar while drilling
- Reversible air motor-can withdraw tool under power
- Constant feed lubricator (shipped loose)
- 35 RPM maximum free speed
- Air supply: 55 cubic feet of free air per minute at 90 psig
- Total shipping weight 42 lbs. (19 kg)
- Machine only weight 37 lbs. (17 kg)
- Shipped in a sturdy wooden storage chest



H-604 air power operator

IMPORTANT: MAINTAIN PRESSURE OF 90 PSIG—THE USE OF A GAGE AT THE THROTTLE TO DETERMINE THE ACTUAL PRESSURE OF AIR AT THE POWER OPERATOR IS RECOMMENDED. PROPER USE OF OILER IS REQUIRED TO MAINTAIN OPERATOR WARRANTY.

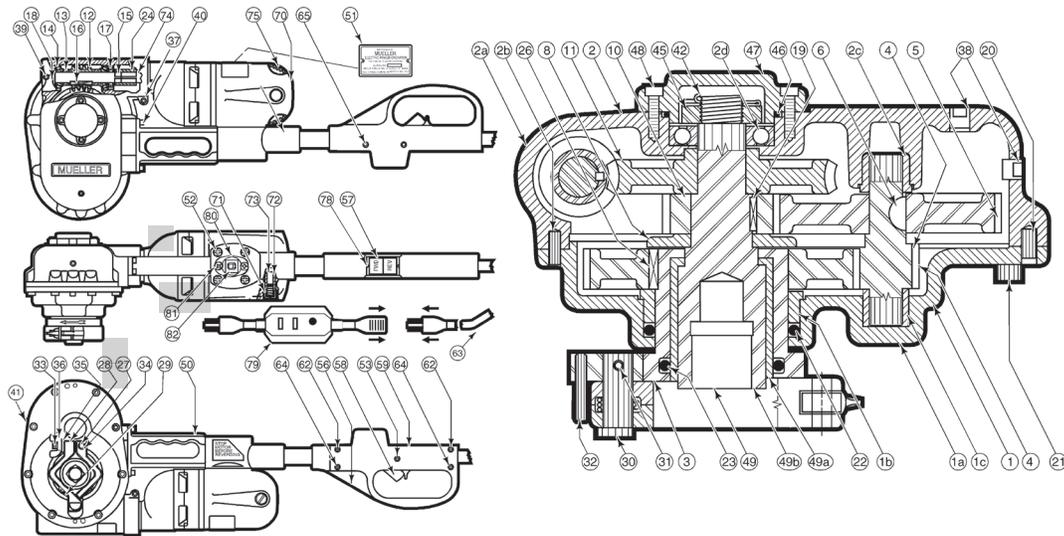
H-704 Hydraulic Power Operator

- Catalog number H-704
- Use with E-5™, EH-5™, D-5™ or DH-5™ drilling machines
- Use with B-101™ and A-3™ drilling and tapping machines
- Reversible operation
- Removable handle for efficient storage
- Preset safety relief valve prevents over-torque conditions
- Flow Range — 7 to 9 gpm (27-34 lpm)
- Motor Speed — 33 rpm at 8 gpm (30 lpm)
- Maximum Pressure (continuous) — 2000 psig (138 bar)
- Maximum Pressure (intermittent) — 2750 psig (190 bar)
- Total Shipping Weight — 73 lbs (33 kg)
- Machine Only Weight — 52 lbs (24 kg)



H-704 hydraulic power operator

Rev. 8-13 Shaded area indicates changes



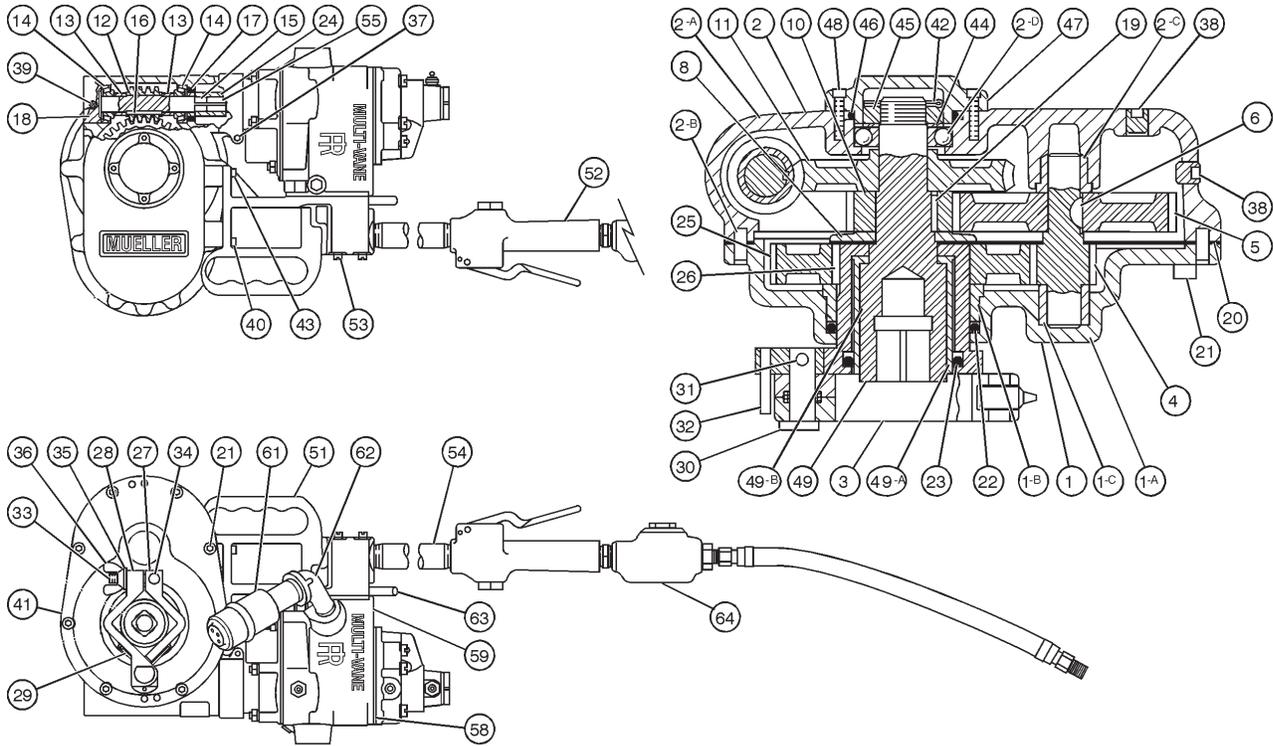
NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. MUELLER CO. offers a machine repair service. Contact MUELLER® Customer Service Center for details.

TO ORDER SPECIFY, QUANTITY, PART NUMBER AND PART NAME (include catalog number and model number of power operator)

Item No.	Part Number	Part Name	Item No.	Part Number	Part Name	Item No.	Part Number	Part Name
1	83990	Cover complete	26	305539	Key	56*	508583	Handle assmebly
1a	501383	Cover	27	501407	Drive arm-left	57	508548	Reversing switch
1b	501385	Feed yoke drive shaft bearing	28	501408	Drive arm-right	58*	505070	Trigger switch
1c	501384	Gear and shaft bearing	29	501393	Spring	59	508584	Handle cover
2	83989	Body complete	30	501400	Hinge shaft	60*	505071	Pawl-interlocking
2a	501383	Body	31	501144	Hinge shaft pin	61*	505068	Ring-clinch
2b	501986	Alignment pins (2)	32	500702	Stop pin	62	505066	Fillister head screw (2)
2c	501381	Gear and shaft bearing	33	501415	Eyebolt	63*	502568	Cord set
2d	501382	Thrust bearing	34	501412	Eyebolt shaft	64*	505066	Fillister head screw (2)
3	83987	Feed yoke drive shaft complete	35	501394	Washer	65	508550	Reversing switch mounting screw (2)
4	40850	Shaft and gear	36	94341	Wing nut	66*	505064	Self tapping pan head screw (2)
5	40852	Large shaft gear	37	92741	Motor clamp	67*	505024	Fillister head screw-phillips
6	98223	Key	38	41435	Oil level plug	68	508549	Reversing switch bracket
8	501402	Washer	39	97763	Socket head set screw	69	508581	Reversing switch washer
10	40851	Main shaft gear	40*	305103	Motor holding cap screws (4)	70	502570	Motor assmebly
11	505373	Worm wheel	41	508585	Name plate	71	505006	Cap-brush holder
12	501403	Worm	42	90377	Cotter pin	72	505080	Brush holder
13	501395	Spacer (2)	44	501401	Flat washer	73	505005	Brush-motor
14	501406	Thrust bearing (2)	45	501397	Drive shaft nut	74	508586	Spindle-tool
15	501404	Worm shaft	46	45374	O-ring	75	505296	Inspection hole cap
16	305537	Worm shaft key	47	501396	Cover cap	76*	52661	Round head drive screw (2)
17	501416	Worm shaft oil seal	48	301149	Cover cap screws (4)	77	52661	Round head drive screw (2)
18	501398	Thrust plug cap	49	89784	Drive shaft complete	78	508569	Reversing switch mounting screw
19	305535	Square key	49a	501387	Drive shaft bearing	79	311834	Ground fault interuptor
20	501391	Rim gasket	49b	505372	Drive shaft	80	538128	Circuit breaker housing
21	305105	Rim cap screws (8)	50*	505375	Motor mount and handle tube	81	313032	Pan head screws (2)
22	40855	Feed yoke drive shaft seal	51	505376	Name plate	82	313033	Circuit breaker
23	302846	Drive shaft seal	52*	305852	Flat head screw-phillips (4)		311793	Wooden crate
24	501989	Coupler	53	505067	Flat head screw (2)	*	581262	Indicates all parts furnished with handle
25	40849	Feed tube gear	55	508582	Reversing switch lock nut	-	-	-

H-604 AIR POWER OPERATOR REPAIR PARTS (MODEL #4)

Shaded area indicates change Rev. 8-04



NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. MUELLER CO. offers a machine repair service. Contact MUELLER® Customer Service Center for details.

TO ORDER SPECIFY QUANTITY, PART NUMBER AND PART NAME (include catalog number and model number of power operator).

Item No.	Part Number	Part Name	Item No.	Part Number	Part Name	Item No.	Part Number	Part Name
1	83990	Cover sub-assembly	20	501391	Body gasket	44	501401	Flat washer
1a	501383	Cover	21	305105	Cap screws - socket head (8)	45	501397	Drive shaft nut
1b	501385	Drive shaft feed yoke bearing	22	40855	Feed yoke drive shaft seal	46	45374	O-ring
1c	501384	Pinion shaft cover bearing	23	302846	Drive shaft seal	47	501396	Cover cap
2	83989	Body sub-assembly	24	501989	Coupler	48	301149	Cover cap screws - socket hd. (4)
2a	501380	Body	25	40849	Feed tube gear	49	89784	Drive shaft sub
2b	501986	Alignment pins (2)	26	305539	Key	49a	501387	Drive shaft bearing
2c	501381	Pinion shaft body bearing	27	501407	Drive arm - left	49b	505372	Drive shaft
2d	501382	Drive shaft bearing	28	501408	Drive arm - right	50	502571	See NOTE 1
3	83987	Drive shaft feed yoke assembly	29	501393	Spring - drive arm	51	502572	Ing-R adapter handle
4	40850	Pinion gear and shaft	30	501400	Hinge shaft	52	502573	Ing-R throttle valve body
5	40852	Large shaft gear	31	501144	Hinge shaft pin (roll pin)	53	505081	Motor manufacturing screws (4)
6	98223	Woodruff key	32	500702	Stop pin (roll pin)	54	505294	Throttle connector
8	501402	Washer	33	501415	Eye bolt	55	501261	Spindle
10	40851	Boring bar gear	34	501412	Eye bolt shaft (roll pin)	56	505383	Vanes (5) (not shown)
11*	505373	Worm wheel	35	501394	Washer - wing nut	57	505384	Cylinder (not shown)
12	501403	Worm	36	94341	Wing nut	58	506723	Back head gasket
13	501395	Spacers (2)	37	92741	Motor clamp socket cap screw	59	507196	Motor housing
14	501406	Worm shaft bearings (2)	38	41435	Oil lever plugs - allen (2)	61	311322	Muffler
15	501404	Worm shaft	30	97763	Plug-lock allen set screw	62	311321	Street elbow
16	305537	Worm shaft key	40	307609	Motor holding cap screws (4)	63	VSM-620	Air motor reversing lever
17	501416	Worm shaft oil seal	41	505457	Name plate	64	311816	Constant feed oiler assembly
18	501398	Thrust plug	42	90377	Cotter pin	-	-	-
19	305535	Square key	43	301150	Motor handle cap screws (2)	-	-	-

NOTE: 1 INGERSOLL-RAND 22-K Special Air Motor.

1.28



MUELLER® DRILLING &
TAPPING MACHINES

Rev. 5-16 Shaded area indicates changes



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