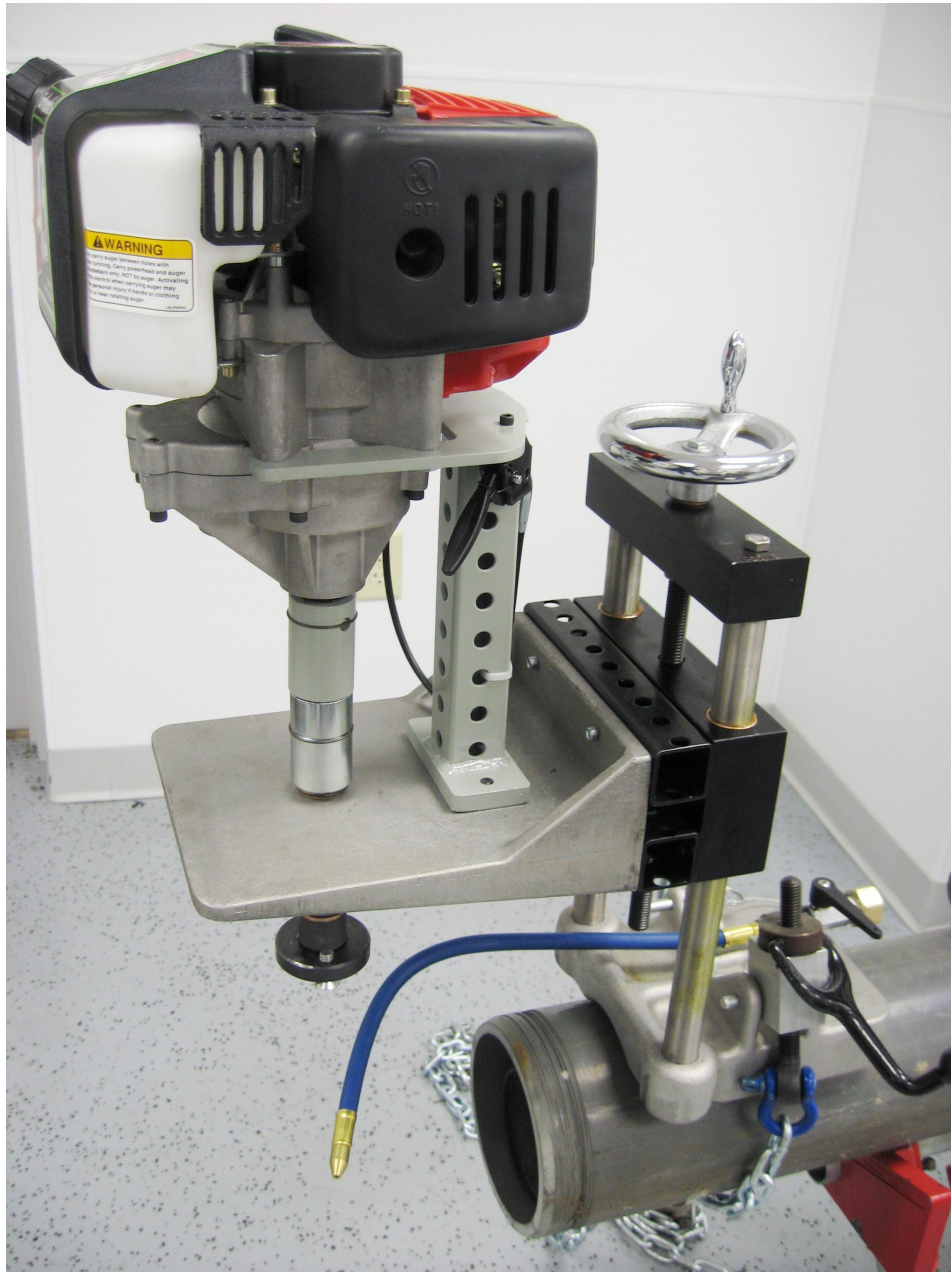


# 1660 Hole Cutter System Operation and Service Manual



Wheeler-Rex • Ashtabula, Ohio  
Tel: 800-321-7950 • Fax: 440-992-2925  
wheeler@wheelerrex.com  
www.wheelerrex.com

November 2012

# ***Choosing the Shell Cutter***

There are three different types of shell cutters.



**For Clay and Concrete**

Nominal Hole Size	Part No.
4"	3395
4 1/2"	3450
6"	3595
6 1/2"	3650



**For Reinforced Concrete,  
Clay, Ductile Iron and Cast Iron**

Nominal Hole Size	Part No.
4"	6395
4 1/2"	6450
6"	6595
6 1/2"	6650
8"	6800



**For Plastic**

Nominal Hole Size	Part No.
4"	4395
4 1/2"	4450
6"	4595
6 1/2"	4650
8"	4800

# ***Changing the Shell Cutter***



Remove the two (2) screws from the arbor.



Loosen the set screw with the Allen key and insert pilot drill. Make sure pilot drill is aligned for the set screw to tighten on drill flat.



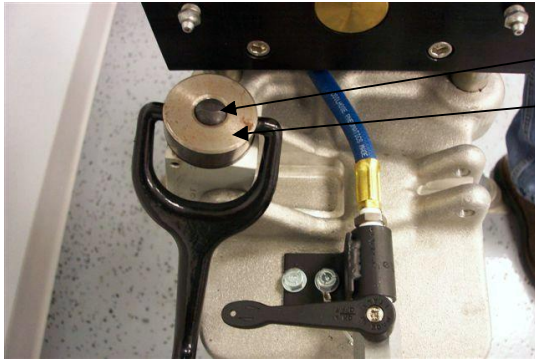
Attach the shell cutter with the two (2) screws.

**\*\* Shell cutters & pilot drill are sold separately from the hole cutter unit.\*\***

# ***Hole Cutter Setup***



Set the hole cutter on the pipe.



Screw

Nut

Unscrew hand clamp until screw is flush with nut.



Make sure the pipe is nested properly in the saddle of the base casting. Pull chain under pipe and back to casting base. Place one chain link between casting and push pin through base and chain link. Tighten chain with hand crank.

# *Operating the Gas Powered Engine*



Read Engine manual and instructions prior to starting engine.

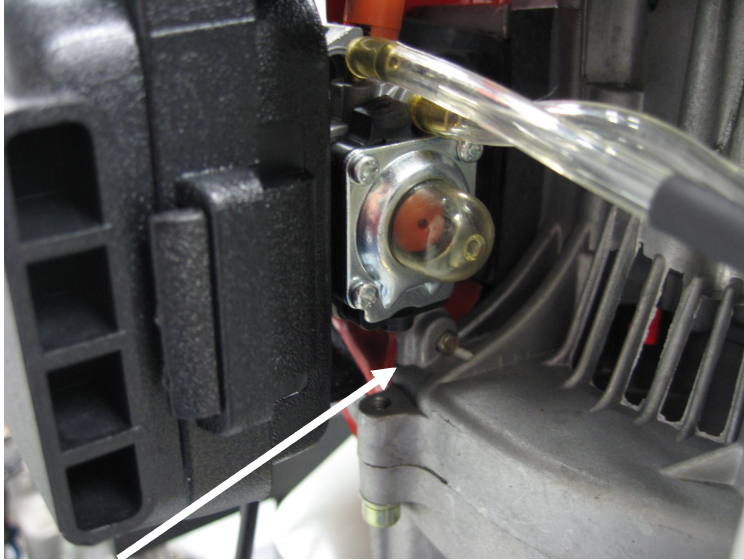


Pull  
Start  
Handle.

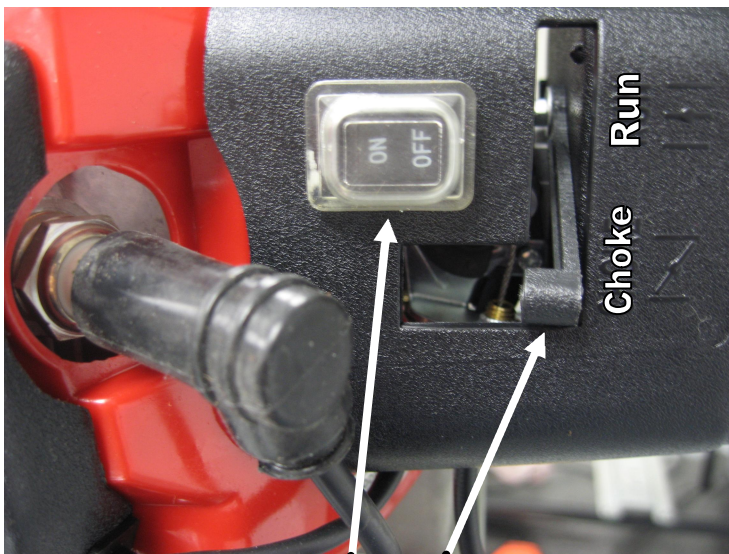
Gas  
Tank  
Cap

Mix gas & 2 cycle oil according to engine manufacture's instructions.

Fill gas tank.



Gas primer ball



Engine Off / On Switch  
Engine Choke / Run Switch

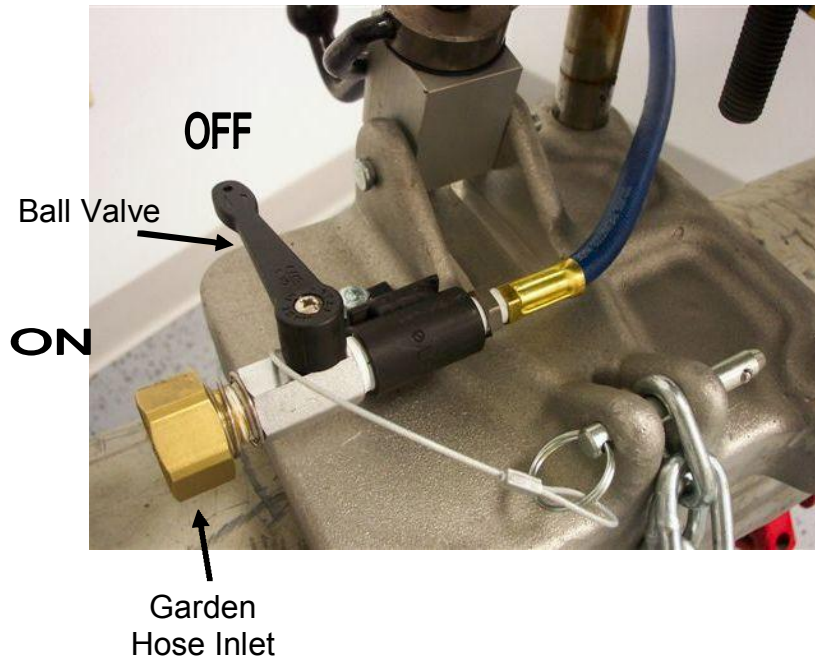


Pull start handle and start the engine.

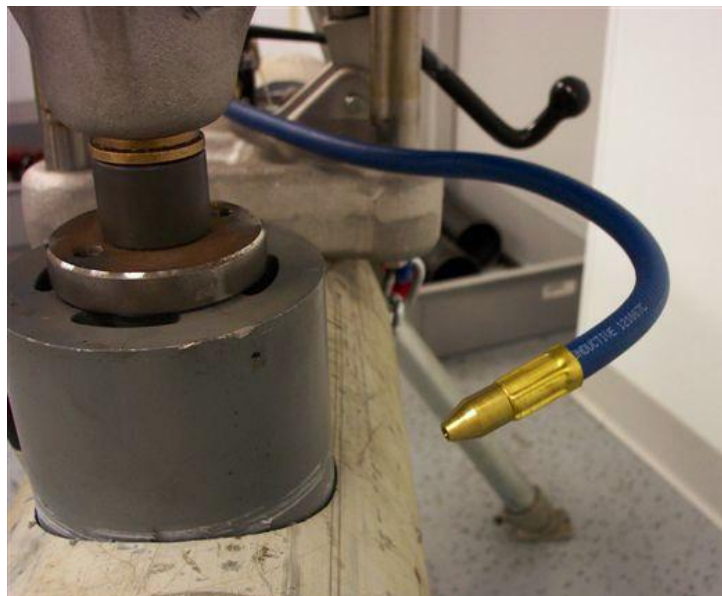


Engine throttle lever. Once engine is running, use throttle lever to control engine speed during cutting operation.

# ***Preparing for the Cut***



Attach garden hose to valve connection. Turn water on at source. Keep ball valve "OFF" until ready to make cut. This ball valve can also be used to control the water flow.

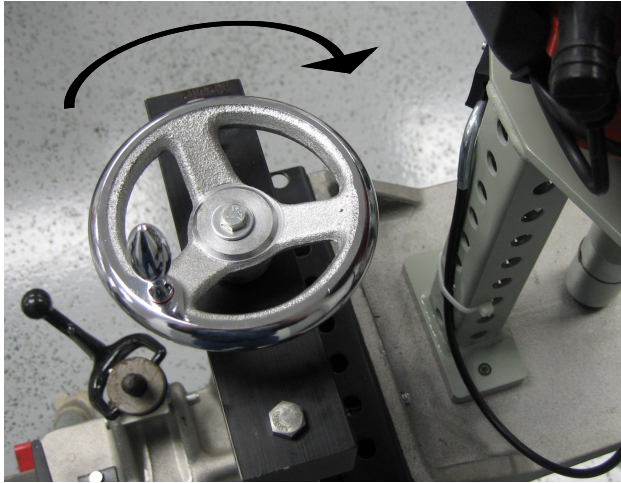


Adjust flexible hose for water stream to point on shell cutter. This is to help keep the cutter cool as well as flush away chips.



# ***Making the Cut***

1. Turn fluid valve to “ON” position.
2. Pull throttle lever to increase speed and power of the gas engine.

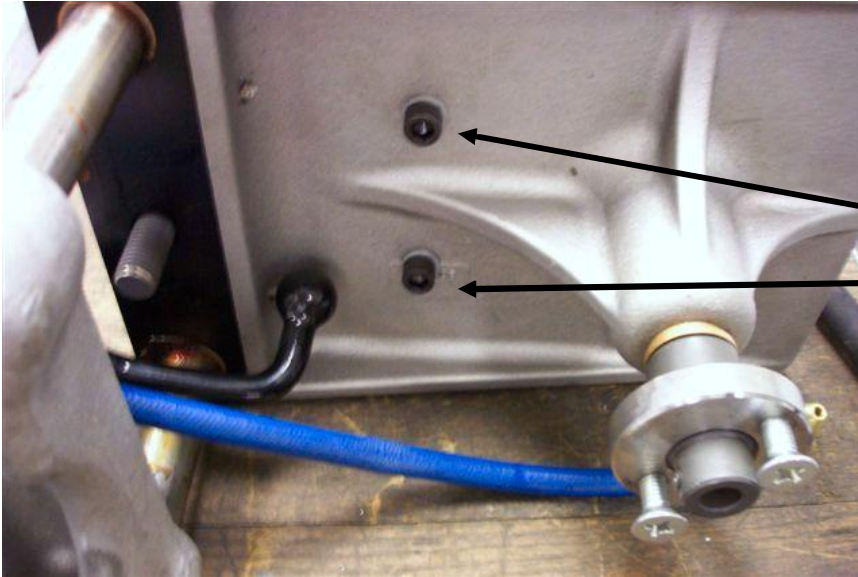


Slowly turn feed hand wheel in the clockwise position to lower the shell cutter. A heavy feed rate may damage shell cutter or pipe that is being cut. Allow shell cutter to cut material with a slow, steady turn of the feed wheel. If at anytime there are problems making the cut, stop cutting immediately.

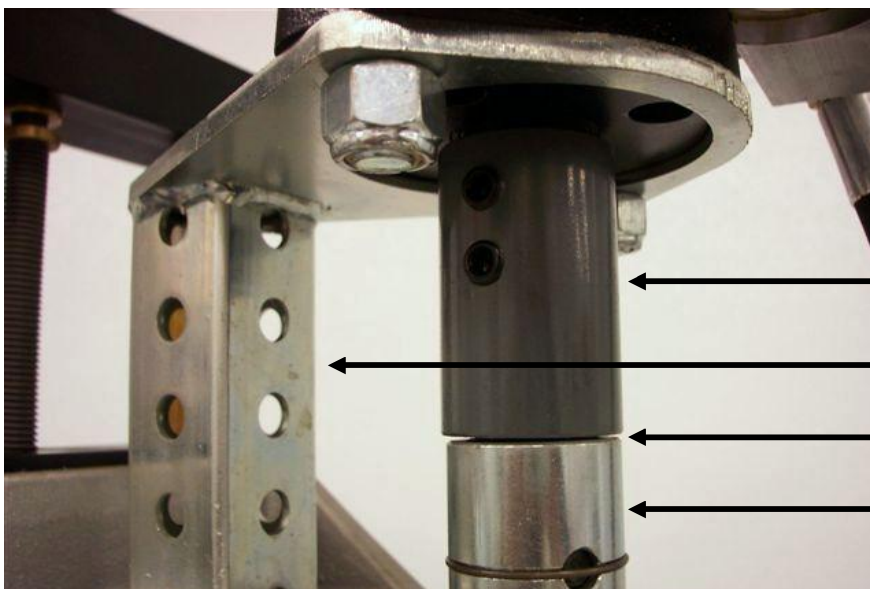
# ***Other Options***

The hole cutter is a modular system where the base, feed mechanism and arbor assembly remain the same. The power supply is interchangeable with four different options: Electric, gas, pneumatic, and hydraulic.

**Here is how to change power supplies:**

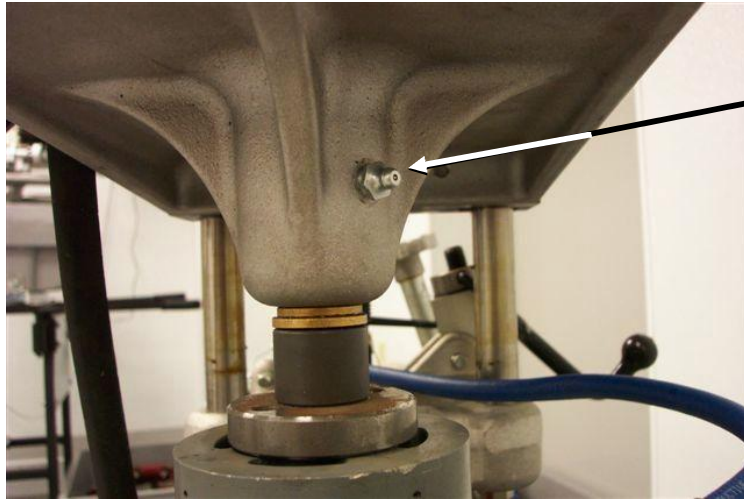


Remove the two (2) socket head cap screws from the platform.



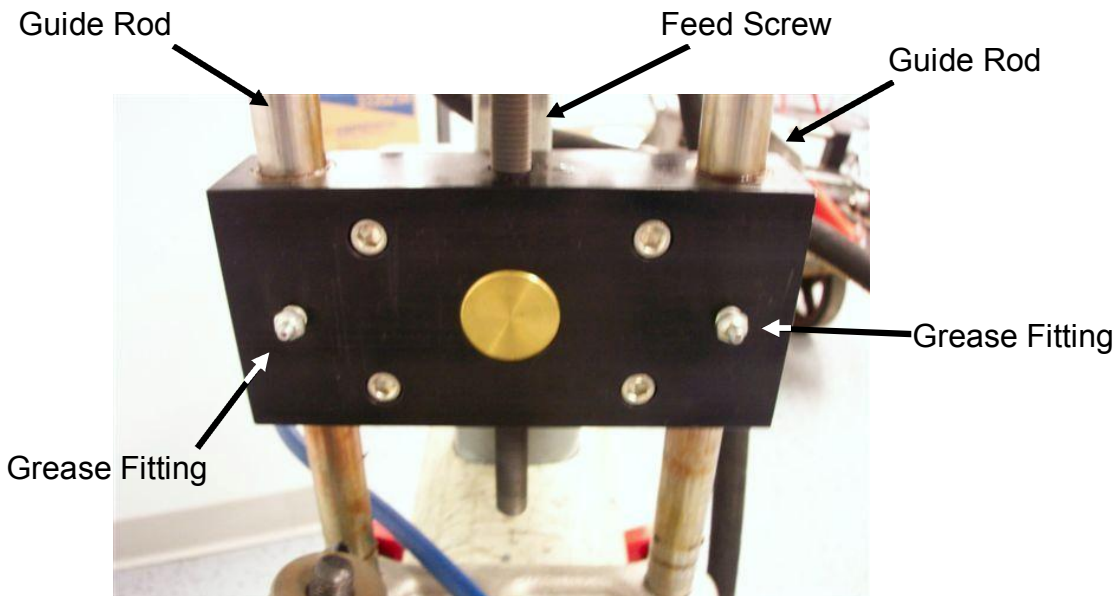
Separate the motor assembly from the arbor assembly. You can now replace the power assembly.

# ***Maintenance***



Grease Fitting

Grease arbor shaft prior to each use.



Guide Rod

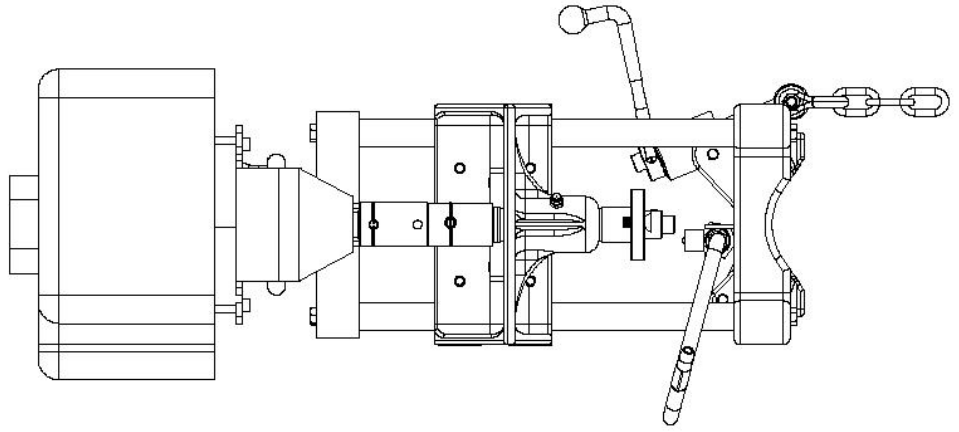
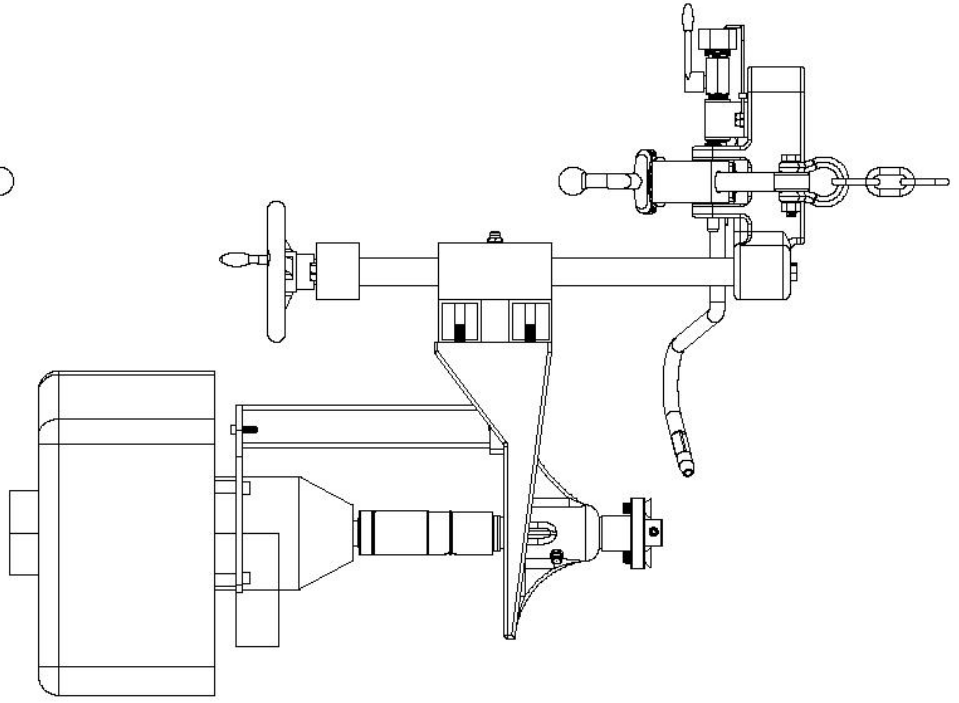
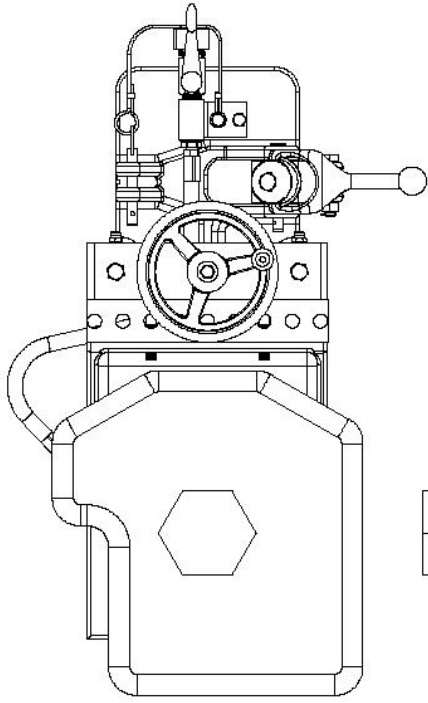
Feed Screw

Guide Rod

Grease Fitting

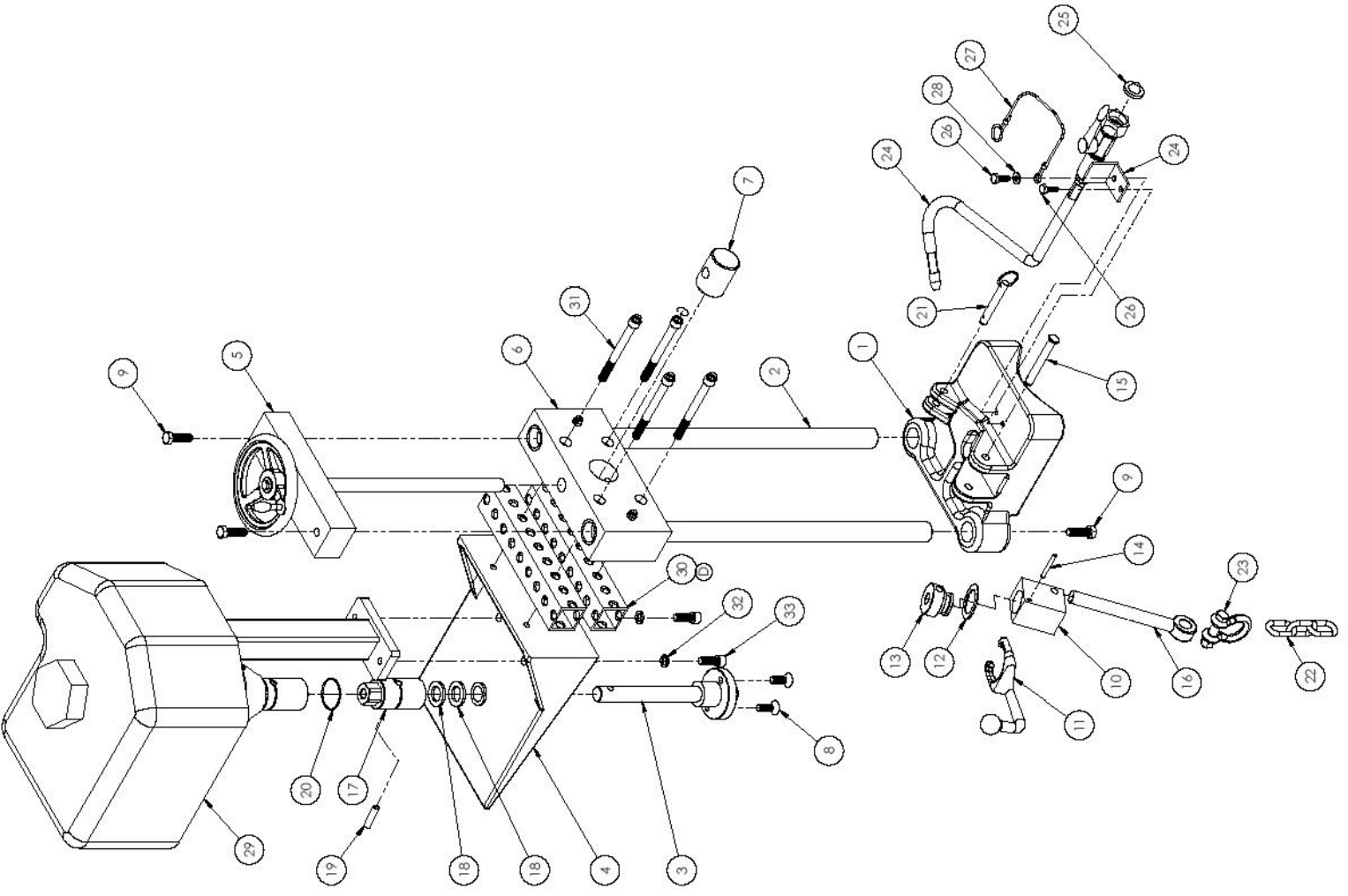
Grease Fitting

Grease guide rod bushings prior to each use. Clean guide rods after each use. Clean feed screw before and after each use.

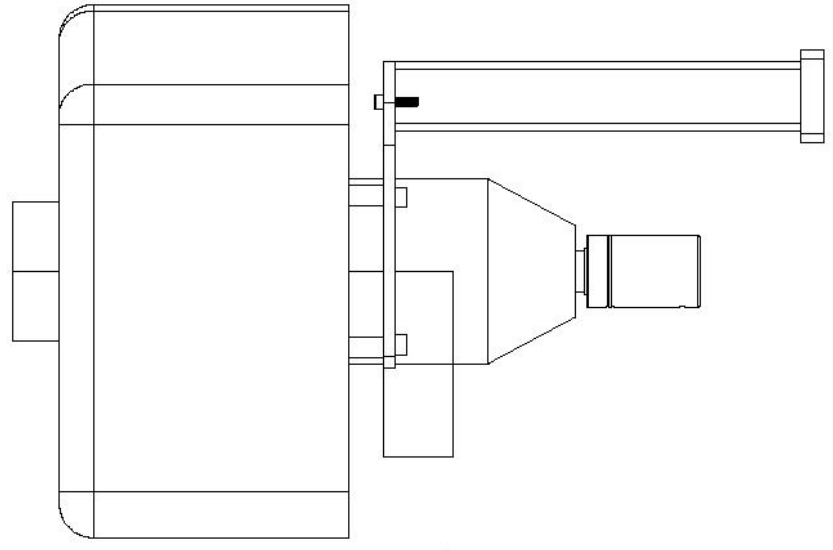
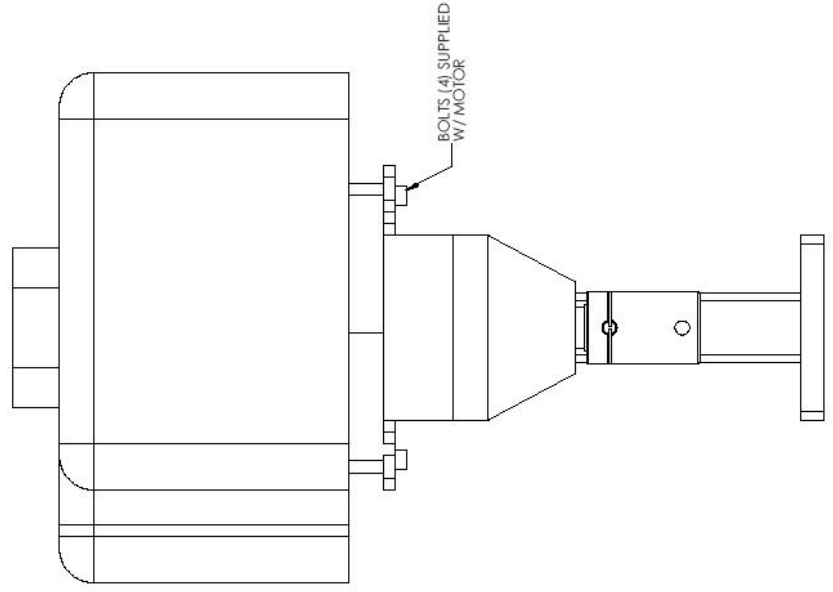
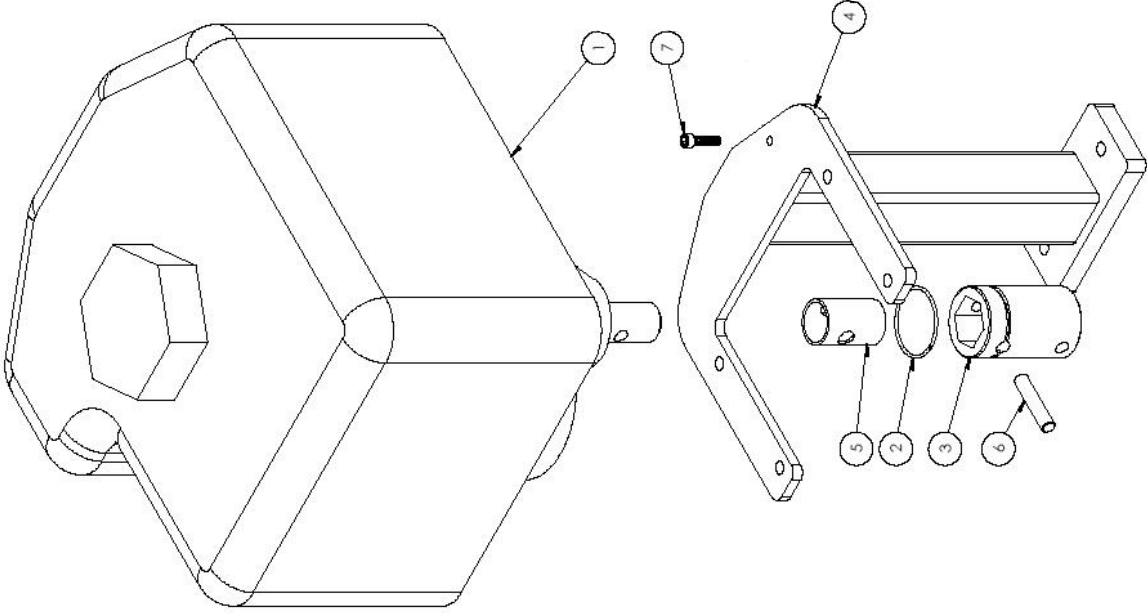




3244 Jefferson Rd., Ashabula, OH 44005  
DESCRIPTION:  
HOLE CUTTER ASSEMBLY  
PART NO. 1660



Item	PN	Description	Qty
1	700991	Base (Machined)	1
2	700431	ROD	2
3	700443	ARBOR ASSEMBLY	1
4	700441	ARBOR HOUSING ASSEMBLY	1
5	700438	HEAD ASSEMBLY	1
6	700433	ELEVATOR ASSEMBLY	1
7	700436	DRIVE BLOCK	1
8	12011	3/8-16 x 1" PHILLIPS FLAT HEAD MACHINE SCREW	2
9	276541	3/8-16 x 1 1/4" SS HEX HEAD CAP SCREW	4
10	700985	CHAIN TENSION BLOCK	1
11	606742	HANDLE	1
12	606751	BEARING	1
13	700989	CRANK NUT	1
14	275862	3/16" DIA x 1 1/2" ROLL PIN	1
15	276892	COTTERLESS CLEVIS PIN 3/8" x 3" LONG	1
16	276592	5/8-11 x 6" FULLY THREADED EYE BOLT	1
17	700445	BORING CAP	1
18	276481	THRUST BEARING (ST 2440-4)	2
19	276097	DOWEL PIN	1
20	260	CAP PIN RETAINER	1
21	276891	3/8" x 2" LONG DETENT PIN	1
22	700397	6' LONG CHAIN	1
23	276591	3/8" x 1" CHAIN SHACKLE	1
24	701079	FLUID ASSEMBLY	1
25	275917	STRAINER	1
26	560081	1/4-20 x 3/4" HHCS	2
27	276073	6" LANYARD	1
28	10713	3/16" FLAT WASHER	1
29	700449	ENGINE & MOUNT ASSEMBLY	1
30	701397	SPACER	2
31	277198	3/8-16 X 3 3/4" SHCS	4
32	7179	3/8" SPLIT LOCK WASHER	2
33	275118	3/8-16 x 1" SOCKET HEAD CAP SCREW	2



<b>Item</b>	<b>PN</b>	<b>Description</b>	<b>Qty</b>
1	277193	EARTHQUAKE E43 ENGINE	1
2	260	CAP PIN RETAINER	1
3	220366	POWER ADAPTOR	1
4	701366	MOUNT ASSY	1
5	700117	SHAFT BUSHING	1
6	275420	DOWEL PIN	1
7	6513	#10-24 SHCS	1



# ***1661 Hole Cutter***

## ***Operation & Service Manual***



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December 2012

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# ***Changing the Shell Cutter***



Remove the two (2) screws from the arbor.



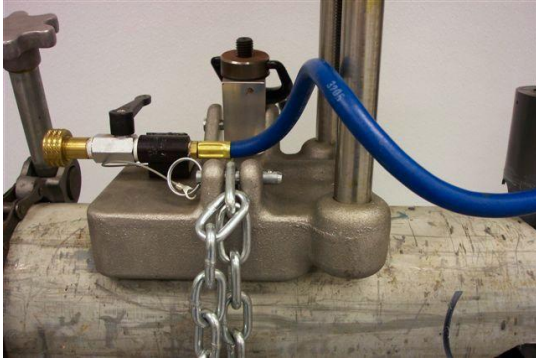
Loosen the set screw with the Allen key and insert pilot drill. Make sure pilot drill is aligned for the set screw to tighten on drill flat.



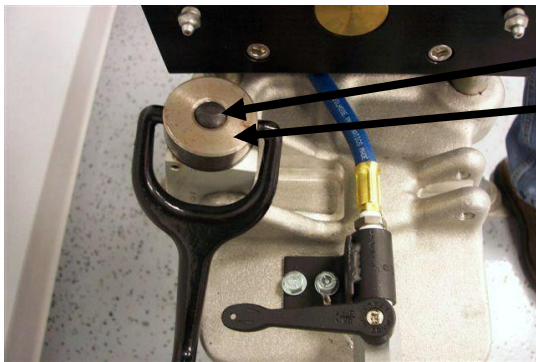
Attach the shell cutter with the two (2) screws.

**\*\* Shell cutters & pilot drill are sold separately from the hole cutter unit.\*\***

# ***Hole Cutter Setup***



Set the hole cutter on the pipe.



Screw

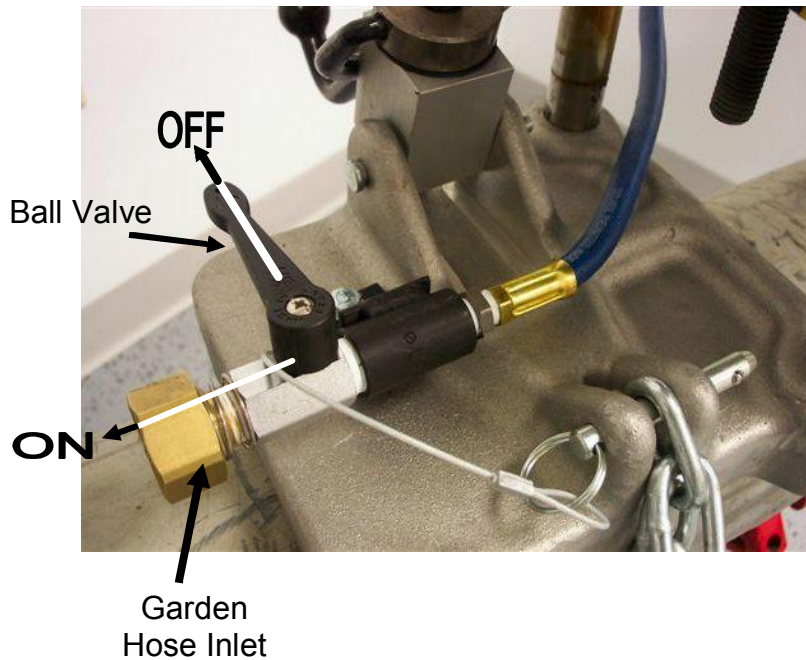
Nut

Unscrew hand clamp until screw is flush with nut.

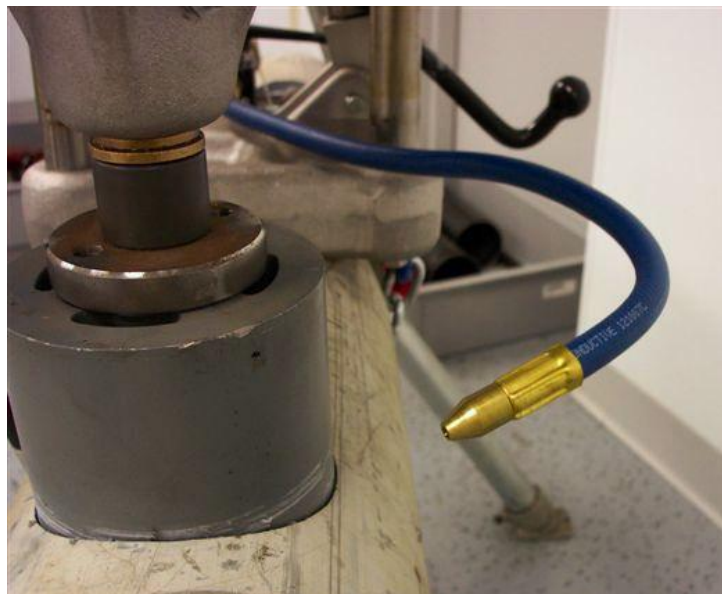


Make sure the pipe is nested properly in the saddle of the base casting. Pull chain under pipe and back to casting base. Place one chain link between casting and push pin through base and chain link. Tighten chain with hand crank.

# ***Preparing for the Cut***

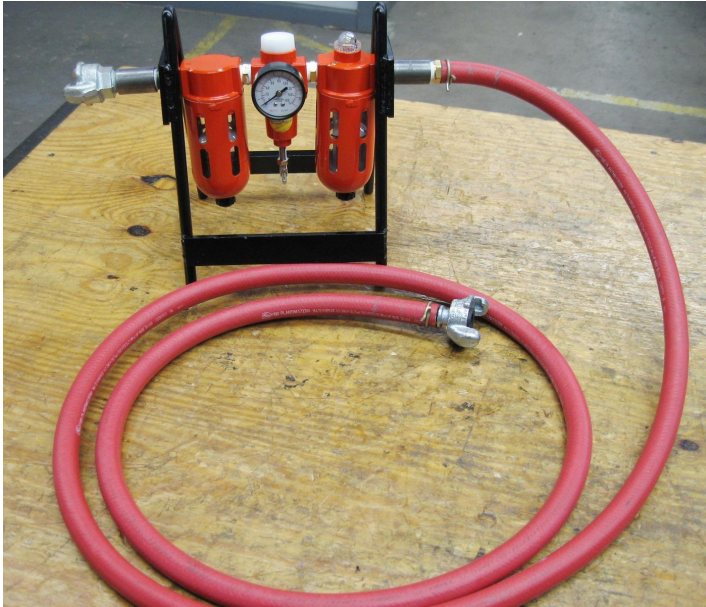


Attach garden hose to valve connection. Turn water on at source. Keep ball valve "OFF" until ready to make cut. This ball valve can also be used to control the water flow.



Adjust flexible hose for water stream to point on shell cutter. This is to help keep the cutter cool as well as flush away chips.

# ***Air Regulator with Filter and Oiler***



**Oil Fill Cap**

**Filter**

**Regulator**

**Oiler**

**To Air Motor**

**From  
Compressor**

Fill reservoir with detergent or non-detergent SAE #10 engine oil to the noted fill line (see page 7)

# ***Air Regulator / Oiler***

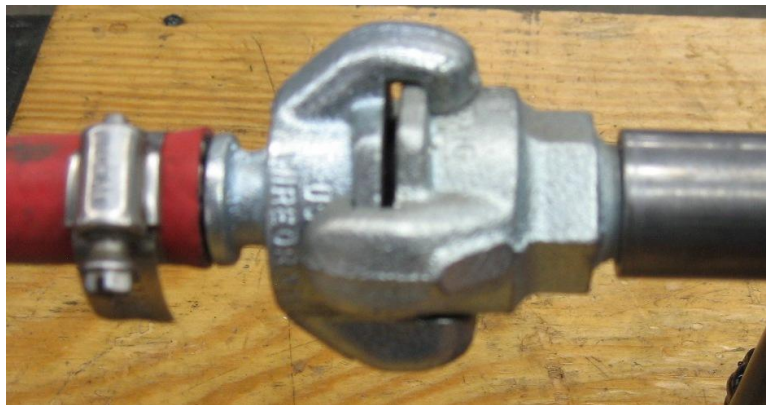
## **Air Pressure Regulator**



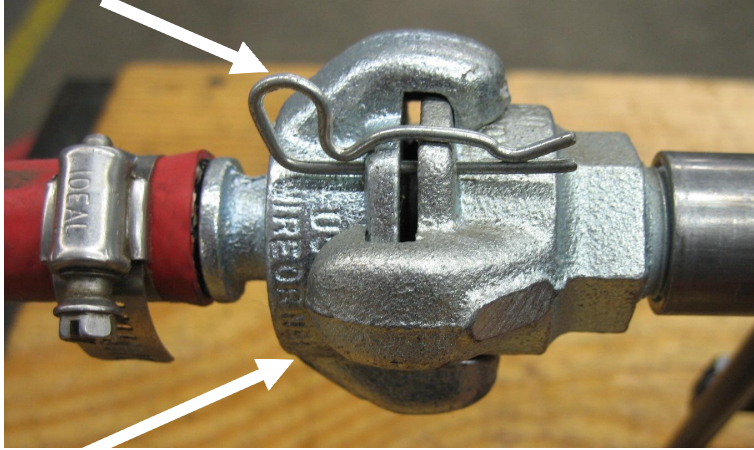
**Oil Fill Line**  
**Air Pressure  
Adjust Knob**

## **Connect Air Line to Regulator**

**From Air Supply  
or Compressor**



## Safety Clip

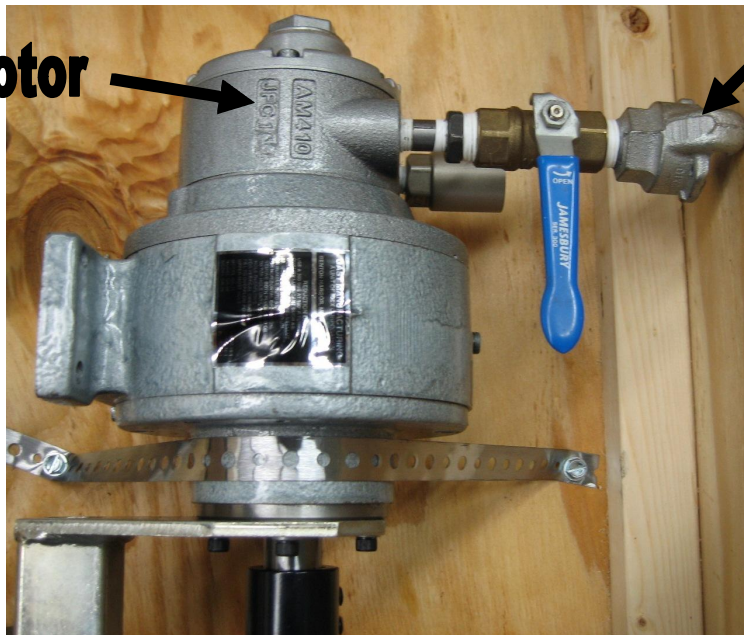


Make sure to use safety clips or wire tie air connections together. There are two pins required per connection.

**Second safety clip is on the bottom**

**Make sure to use clips or wire on connection**

**Air Motor**



**Connect Air Line**

**From Air Regulator Assembly**



# ***Making the Cut***

1. Fill oil reservoir
2. Connect air hose from compressor to air regulator using safety clips.
3. Connect air hose between air regulator and hole cutter using safety clips.
4. Turn on air compressor.
5. Turn air valve to ON position located on air motor.
6. Adjust air pressure as needed on air regulator.
7. Turn fluid valve to ON position.

8.

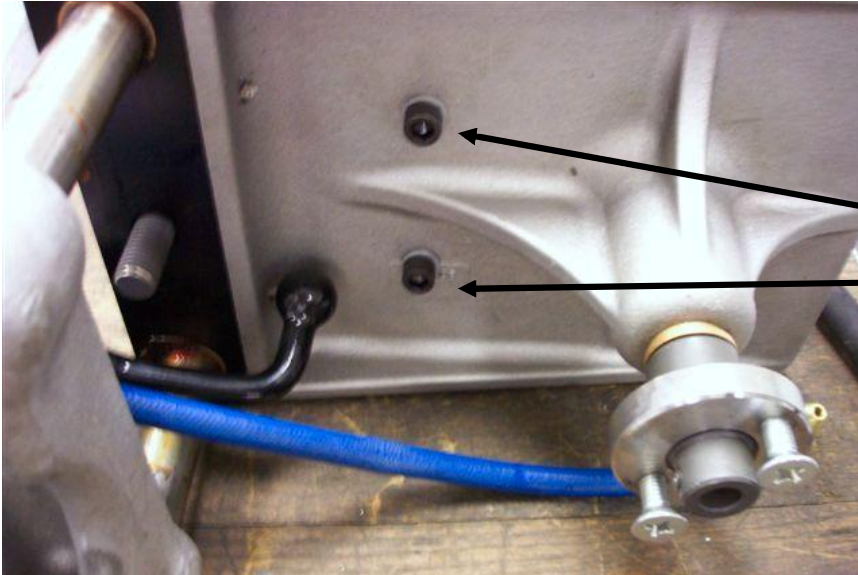


Slowly turn feed hand wheel in the clockwise position to lower the shell cutter. A heavy feed rate may damage shell cutter or pipe that is being cut. Allow shell cutter to cut material with a slow, steady turn of the feed wheel. If at anytime there are problems making the cut, stop cutting immediately.

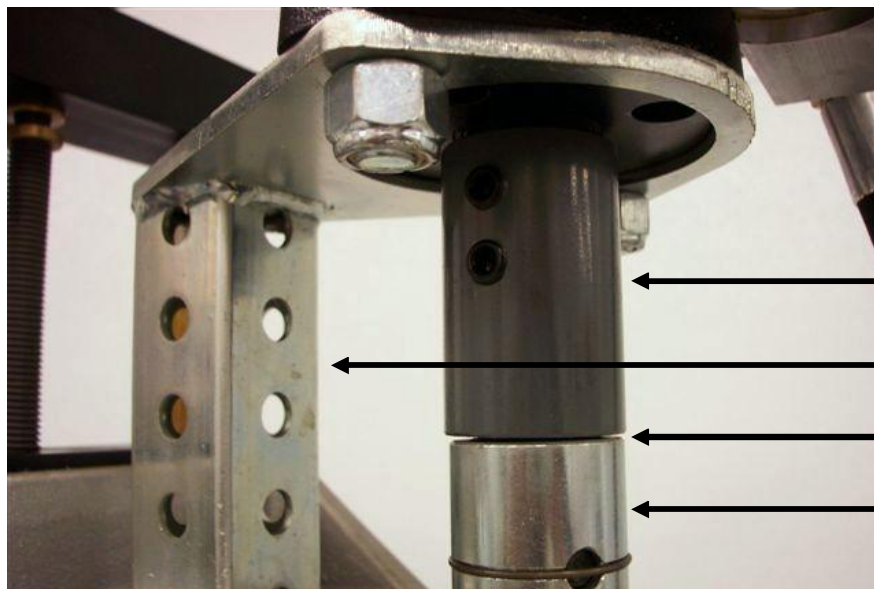
# ***Other Options***

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**Here is how to change power supplies:**



Remove the two (2) socket head cap screws from the platform.



Arbor Coupling

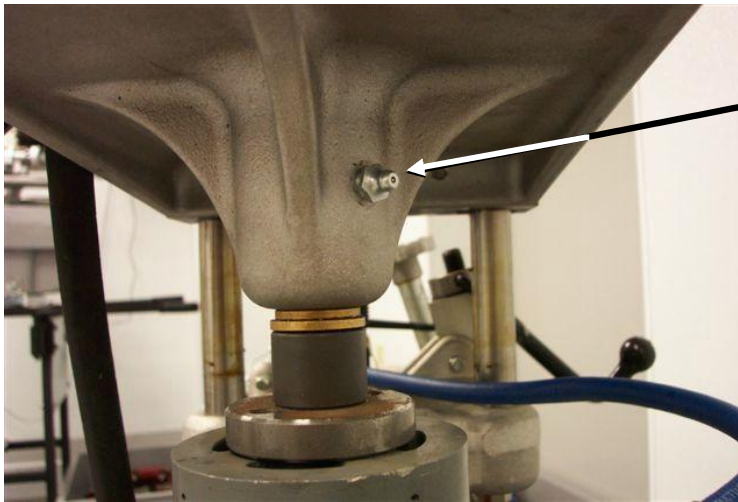
Motor Bracket

Separation Point

Arbor Assembly

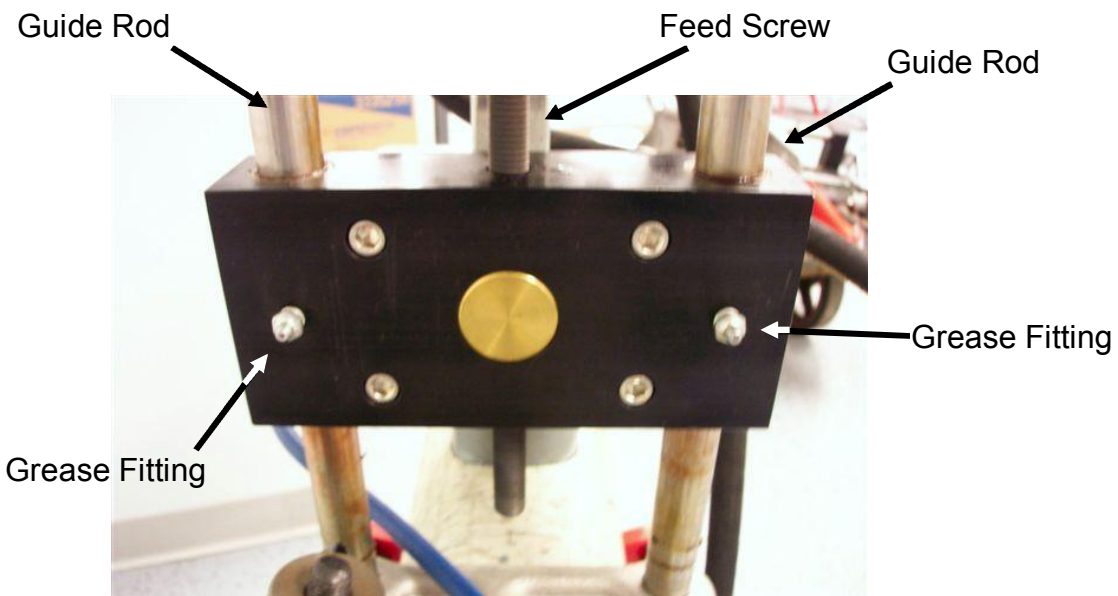
Separate the motor assembly from the arbor assembly. You can now replace the power assembly.

# ***Maintenance***



Grease Fitting

Grease arbor shaft prior to each use.



Guide Rod

Feed Screw

Guide Rod

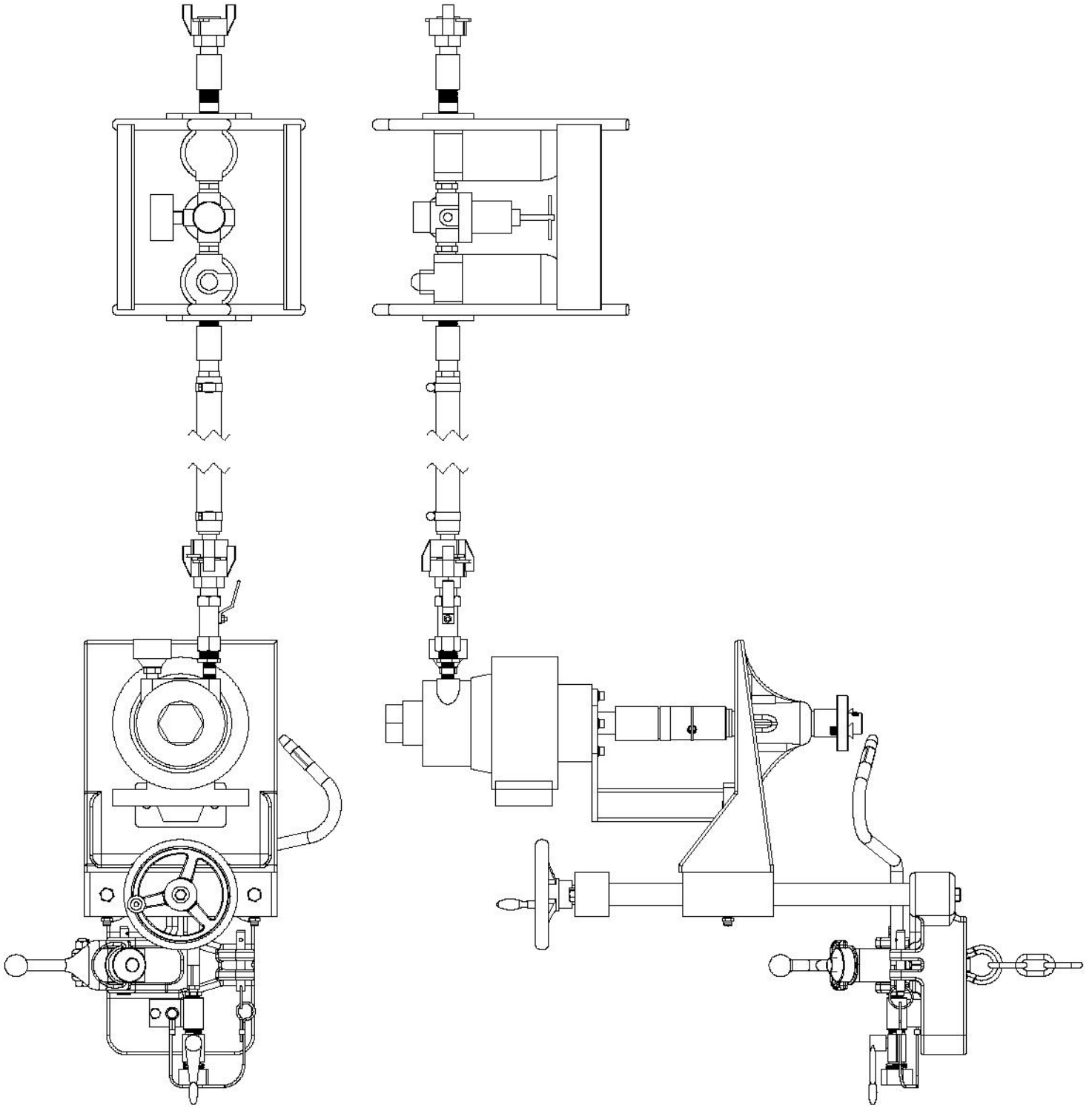
Grease Fitting

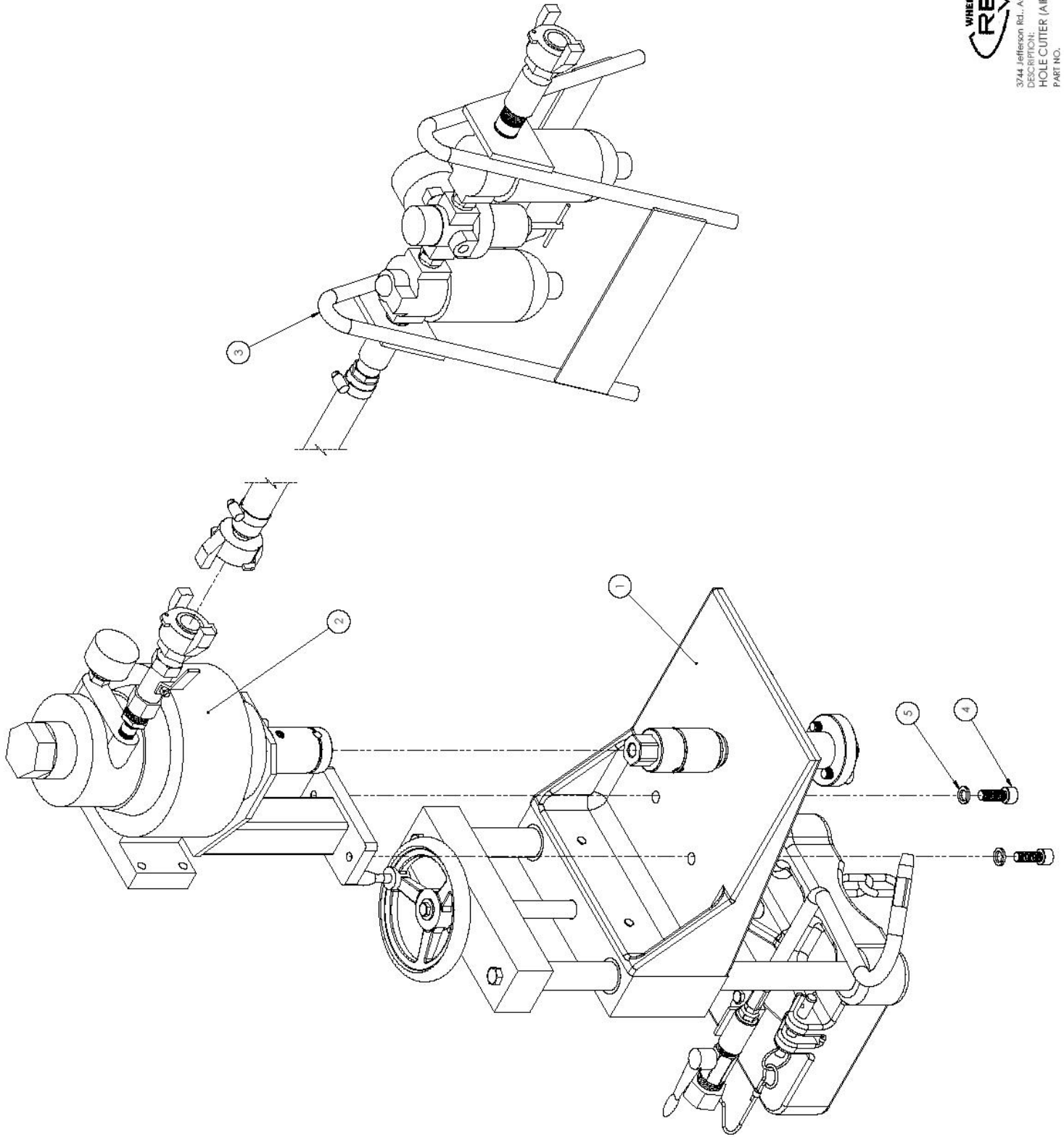
Grease Fitting

Grease guide rod bushings prior to each use. Clean guide rods after each use. Clean feed screw before and after each use.

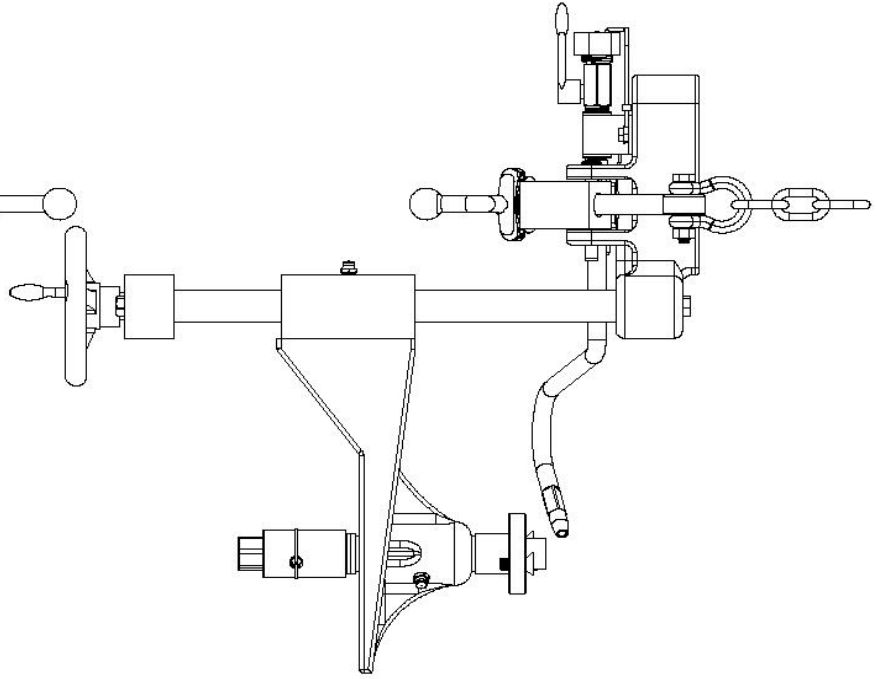
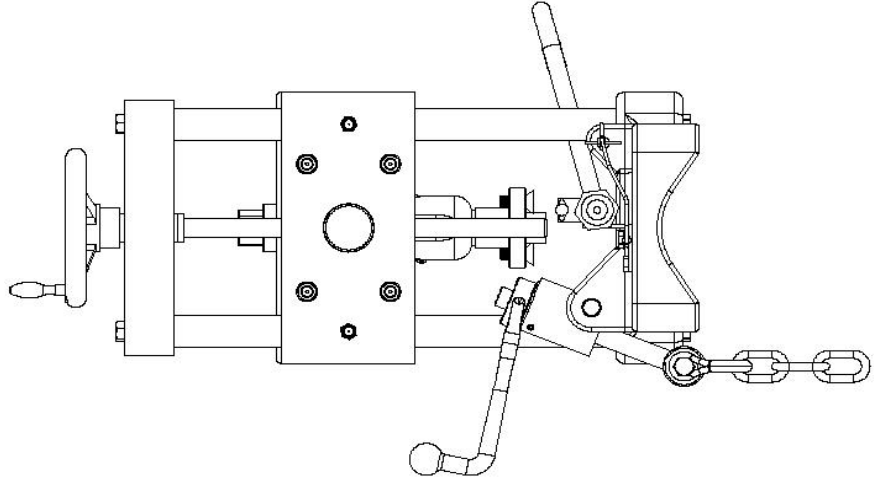
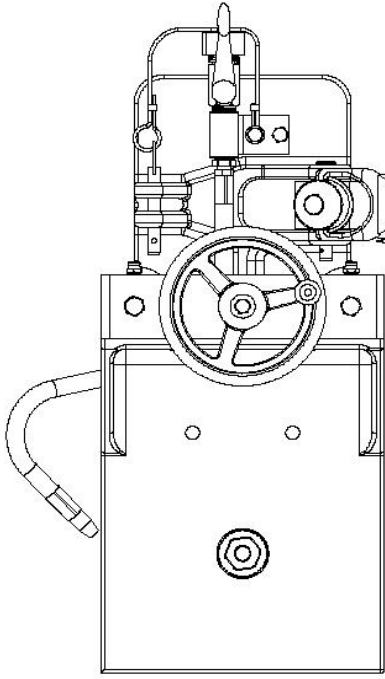
# ***Hole Cutter System Information***

- ⇒ For cutting 4"-8" holes into clay tile, ductile iron, cast iron, plastic and reinforced concrete pipes from 6" - 20" OD.
- ⇒ Complete with water valve assembly
- ⇒ Air Requirements
  - 70 - 80 psi (4.6-5.5 bar) minimum - 100psi maximum
  - 50 - 60 cfm ( 1400-1700lpm) minimum
- ⇒ Set up time approximately 5-10 minutes
- ⇒ Cutting time approximately 5-10 minutes

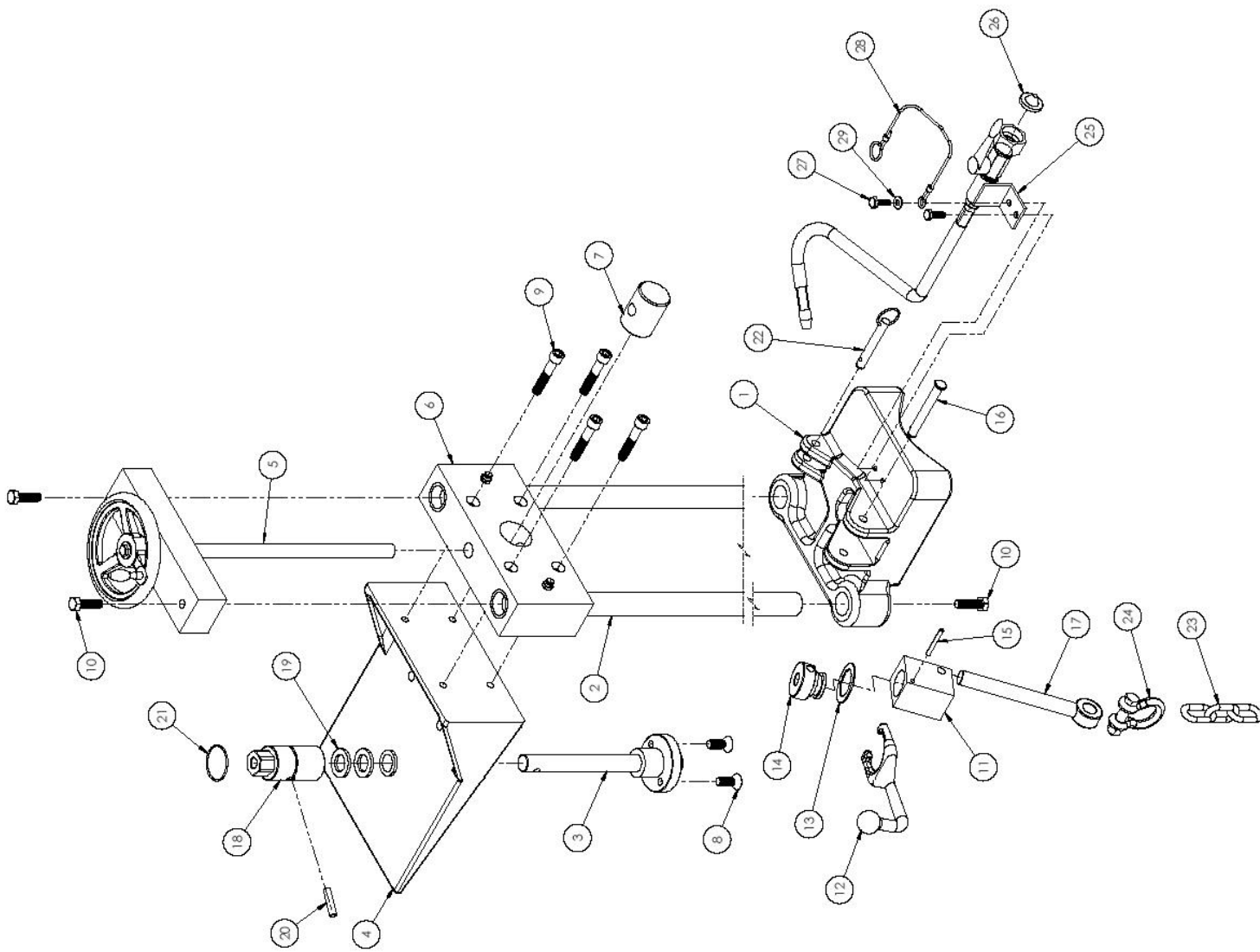




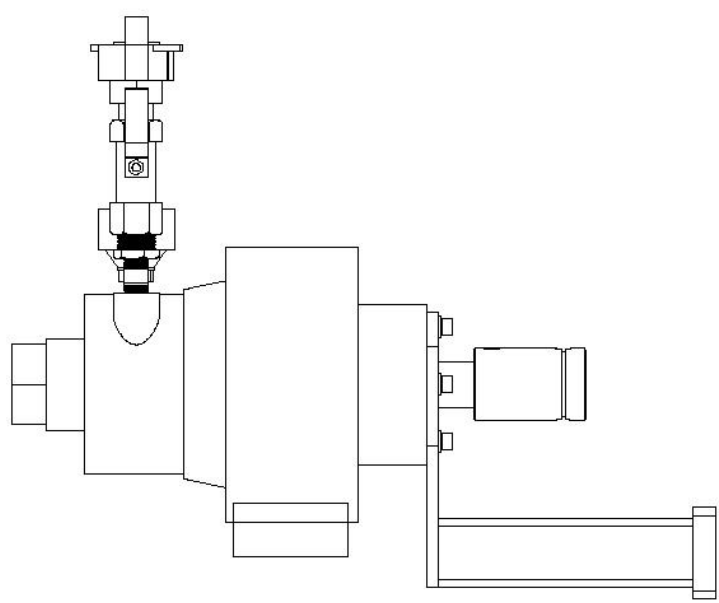
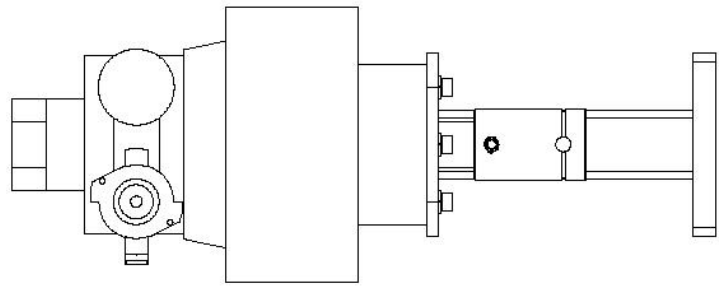
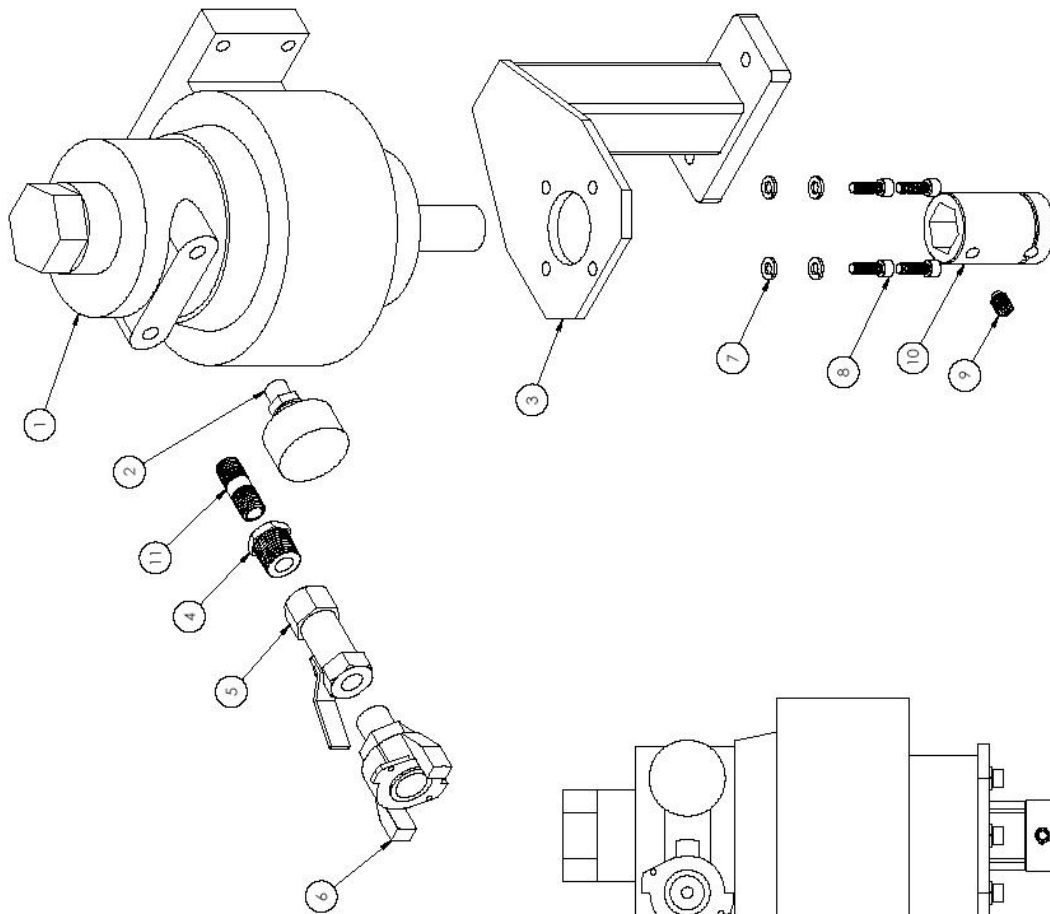
<b>ITEM NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	700420	HOLE CUTTER ASSEMBLY	1
2	700453	AIR MOTOR & MOUNT ASSEMBLY	1
3	700489	AIR CONTROL ASSEMBLY	1
4	275118	3/8-16 x 1" SOCKET HEAD CAP SCREW	2
5	7179	3/8" SPLIT LOCK WASHER	2



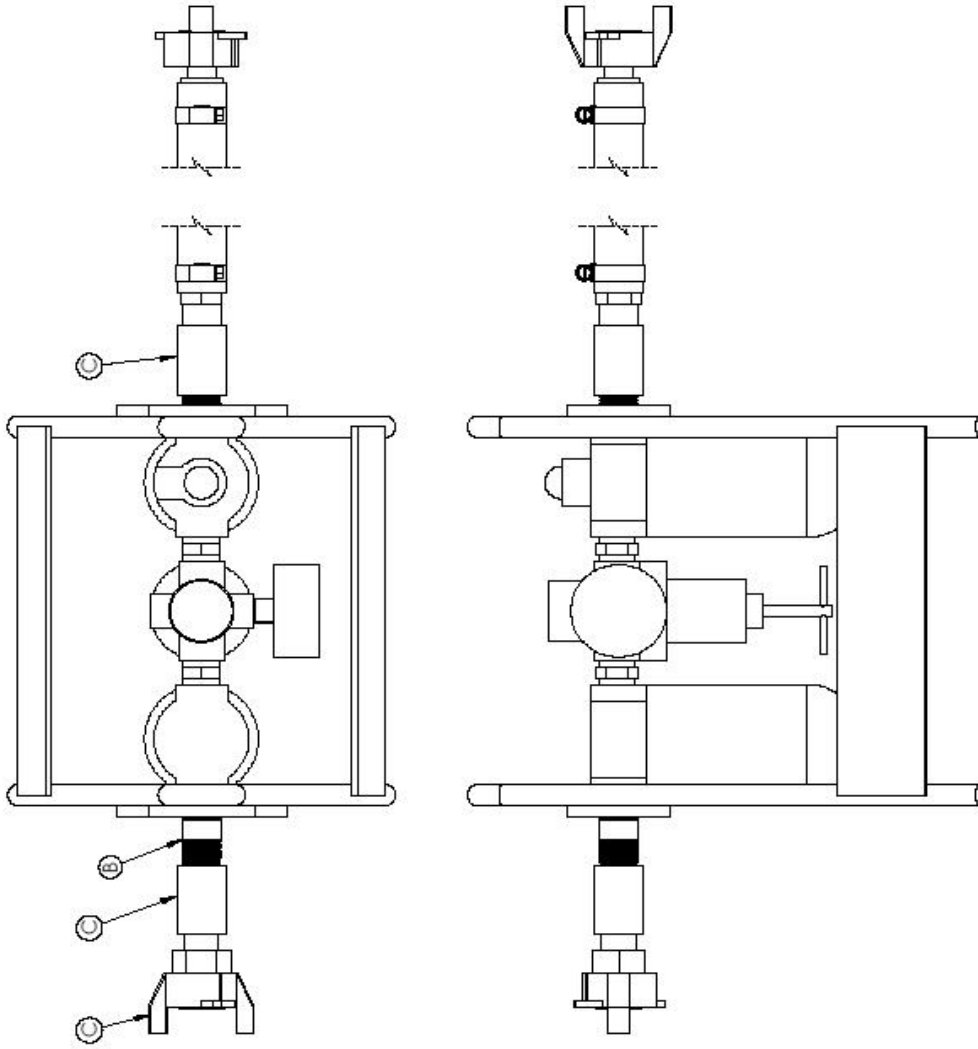




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1	700991	Base (MACHINED)	1
2	700431	ROD	2
3	700443	ARBOR ASSEMBLY	1
4	700441	ARBOR HOUSING ASSEMBLY	1
5	700438	HEAD ASSEMBLY	1
6	700433	ELEVATOR ASSEMBLY	1
7	700436	DRIVE BLOCK	1
8	12011	3/8-16 x 1" PHILLIPS FLAT HEAD MACHINE SCREW	2
9	276547	3/8-16 x 2" SHCS	4
10	276541	3/8-16 x 1 1/4" SS HEX HEAD CAP SCREW	4
11	700985	CHAIN TENSION BLOCK	1
12	606742	HANDLE	1
13	606751	BEARING	1
14	700989	CRANK NUT	1
15	275862	3/16" DIA x 1 1/2" ROLL PIN	1
16	276892	COTTERLESS CLEVIS PIN 3/8" x 3" LONG	1
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18	700445	BORING CAP	1
19	276481	THRUST BEARING (ST 2440-4)	2
20	276097	DOWEL PIN	1
21	260	CAP PIN RETAINER	1
22	276891	3/8" x 2" LONG DETENT PIN	1
23	700397	6' LONG CHAIN	1
24	276591	3/8" x 1" CHAIN SHACKLE	1
25	701079	FLUID ASSEMBLY	1
26	275917	STRAINER	1
27	560081	1/4-20 x 3/4" HHCS	2
28	276073	6" LANYARD	1
29	10713	3/16" FLAT WASHER	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	276522	AIR MOTOR	1
2	276546	SILENCER	1
3	700454	AIR MOTOR MOUNT ASSEMBLY	1
4	275670	1/2 x 1/4 FS SCRD HX BUSH	1
5	275665	1/2" VALVE	1
6	276544	AIR COUPLING AM2	1
7	275105	1/4" SPLIT LOCK WASHER	4
8	4181	1/4-20 x 3/4" SHCS	4
9	276119	3/8-16 x 1/2" FULL DOG SET SCREW	1
10	220366	POWER ADAPTOR	1
11	276465	1/4" x 1 1/2" PIPE NIPPLE	1



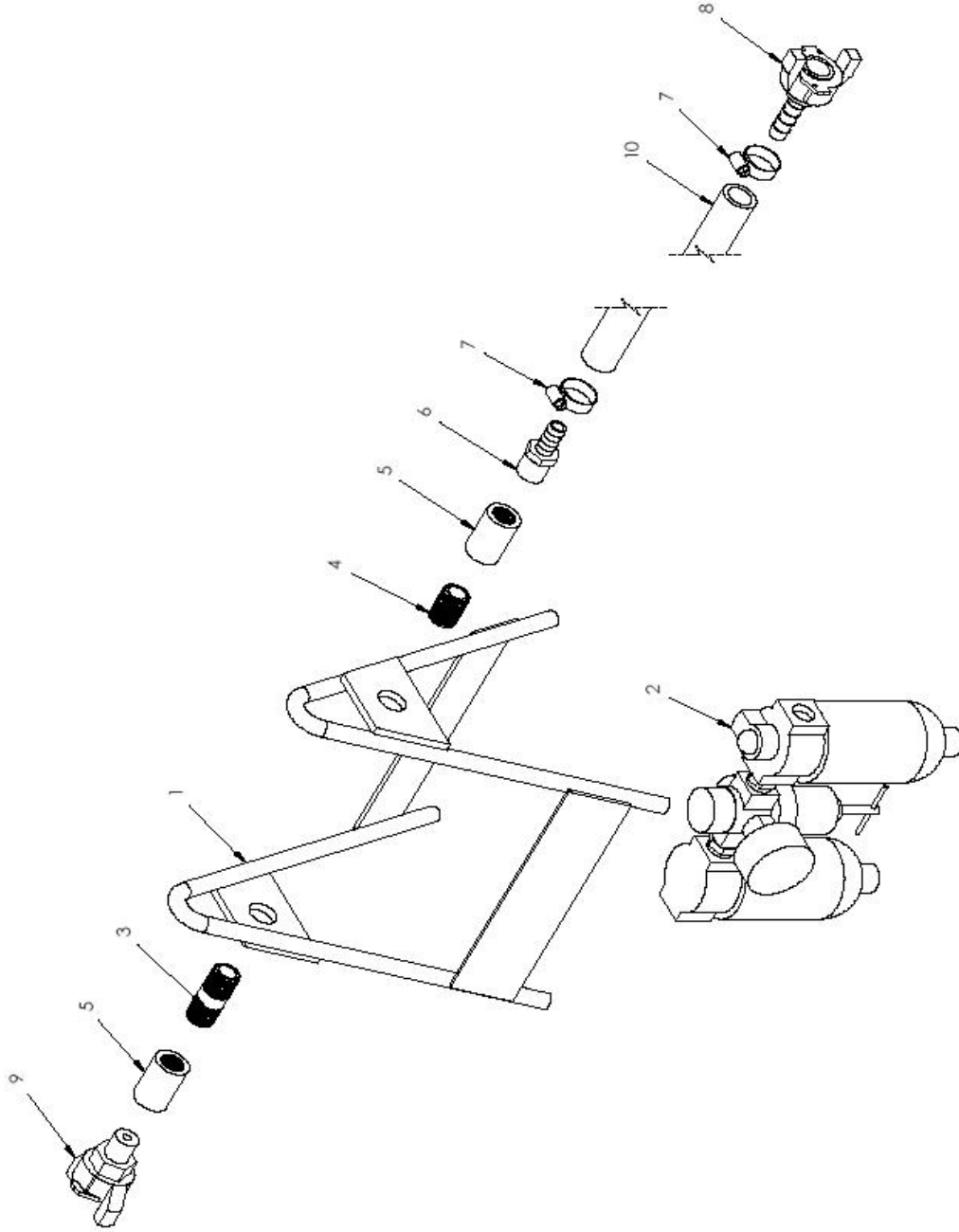
3744 Jefferson Rd., Ashland, OH 44005

DESCRIPTION:

AIR CONTROL ASSEMBLY

PART NO

700489

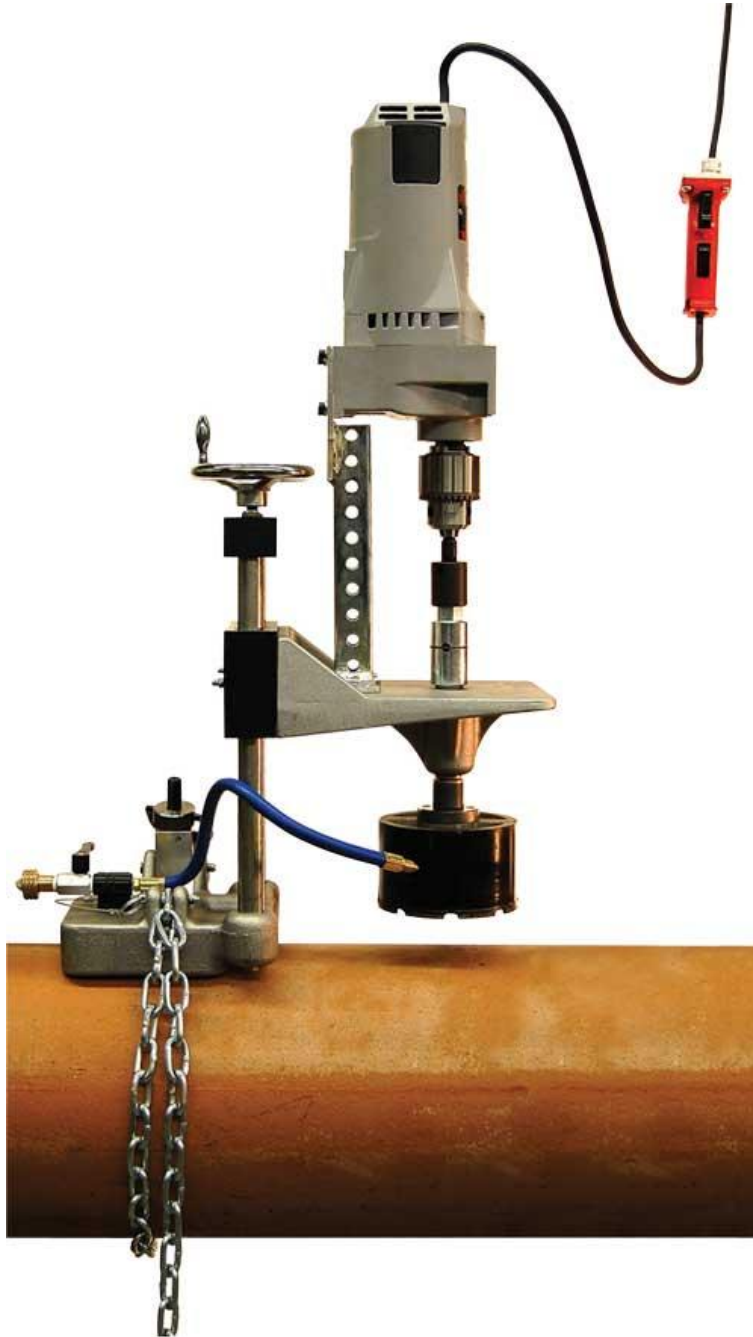


3744 Jefferson Rd., Ashtabula, OH 44005  
DESCRIPTION:  
AIR CONTROL ASSEMBLY  
PART NO. 700489

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	700488	STAND ASSEMBLY	1
2	276559	FILTER, REGULATOR, & LUBRICATOR ASSEMBLY	1
3	275633	1/2 X 2" XH PIPE NIPPLE	1
4	275669	1/2 x CLOSE PIPE NIPPLE	1
5	275475	1/2" COUPLING	2
6	275496	1/2" HOSE BARB	1
7	276550	HOSE CLAMP	2
8	276545	AIR COUPLING AM1	1
9	276544	AIR COUPLING AM2	1
10	700490	HOSE	1

# ***1662 Hole Cutter***

## ***Operation & Service Manual***



**Wheeler-Rex • Ashtabula, Ohio**  
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**wheeler@wheelerrex.com • www.wheelerrex.com**

November 2012



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Remove the two (2) screws from the arbor.



Loosen the set screw with the Allen key and insert pilot drill. Make sure pilot drill is aligned for the set screw to tighten on drill flat.



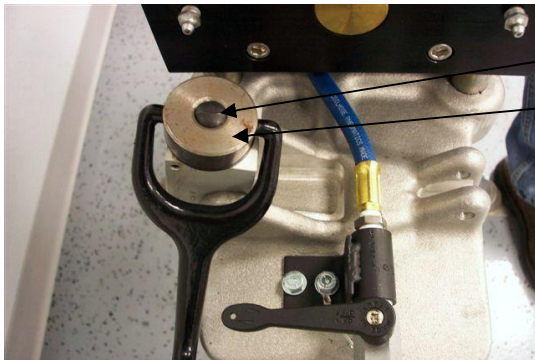
Attach the shell cutter with the two (2) screws.

\*\* Shell cutters & pilot drill are sold separately from the hole cutter unit.\*\*

# ***Hole Cutter Setup***



Set the hole cutter on the pipe.



Screw

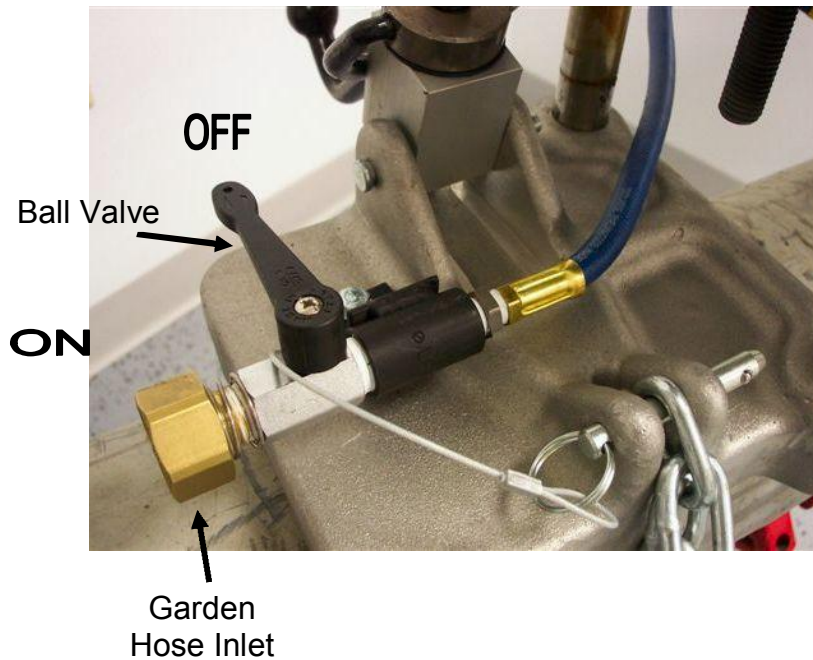
Nut

Unscrew hand clamp until screw is flush with nut.



Make sure the pipe is nested properly in the saddle of the base casting. Pull chain under pipe and back to casting base. Place one chain link between casting and push pin through base and chain link. Tighten chain with hand crank.

# ***Preparing for the Cut***



Attach garden hose to valve connection. Turn water on at source. Keep ball valve "OFF" until ready to make cut. This ball valve can also be used to control the water flow.



Adjust flexible hose for water stream to point on shell cutter. This is to help keep the cutter cool as well as flush away chips.

# ***Making the Cut***

1. Turn fluid valve to “ON” position.
2. Pull handle trigger on power cord for power.

3.

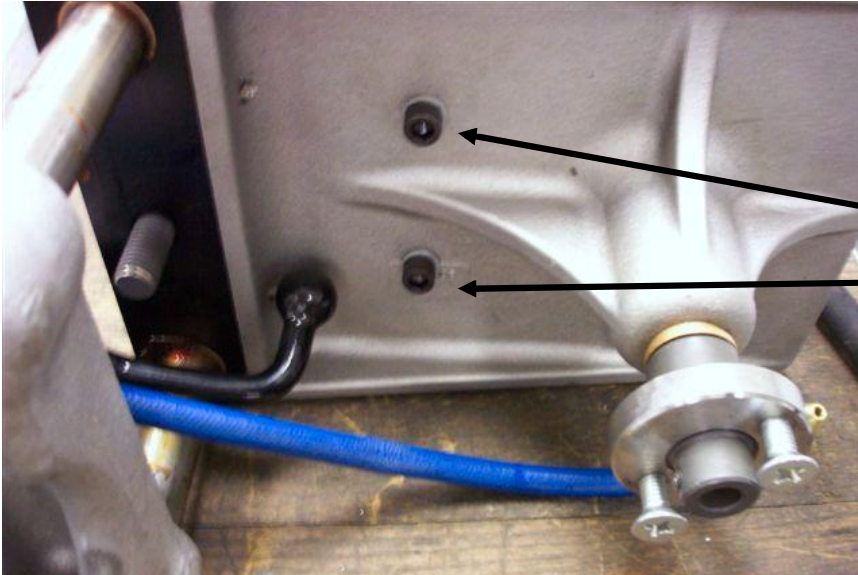


Slowly turn feed hand wheel in the clockwise position to lower the shell cutter. A heavy feed rate may damage shell cutter or pipe that is being cut. Allow shell cutter to cut material with a slow, steady turn of the feed wheel. If at anytime there are problems making the cut, stop cutting immediately.

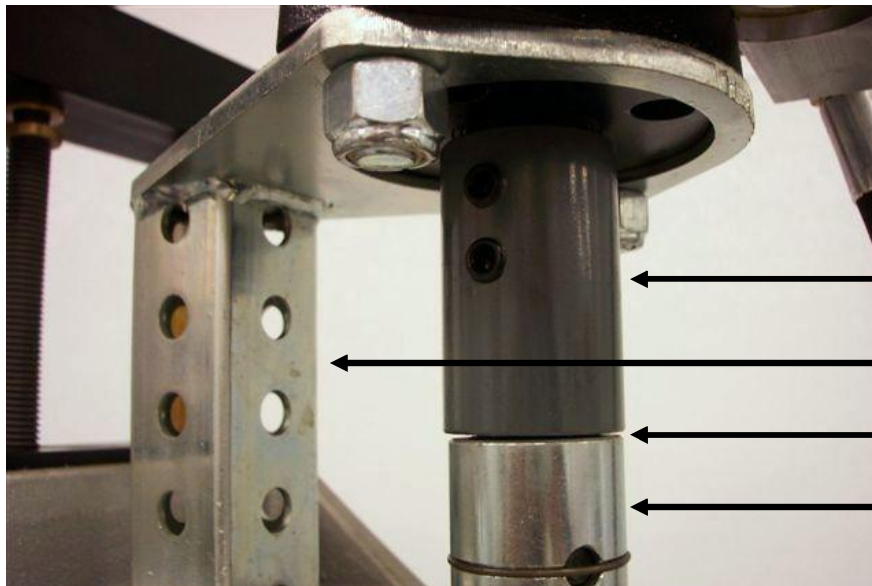
# ***Other Options***

The hole cutter is a modular system where the base, feed mechanism and arbor assembly remain the same. The power supply is interchangeable with four different options: Electric, gas, pneumatic, and hydraulic.

**Here is how to change power supplies:**



Remove the two (2) socket head cap screws from the platform.



Arbor Coupling

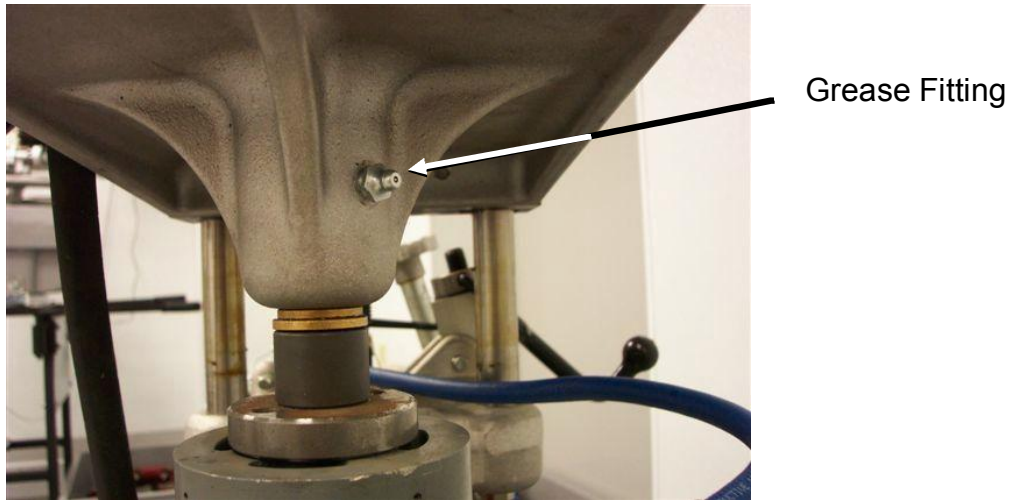
Motor Bracket

Separation Point

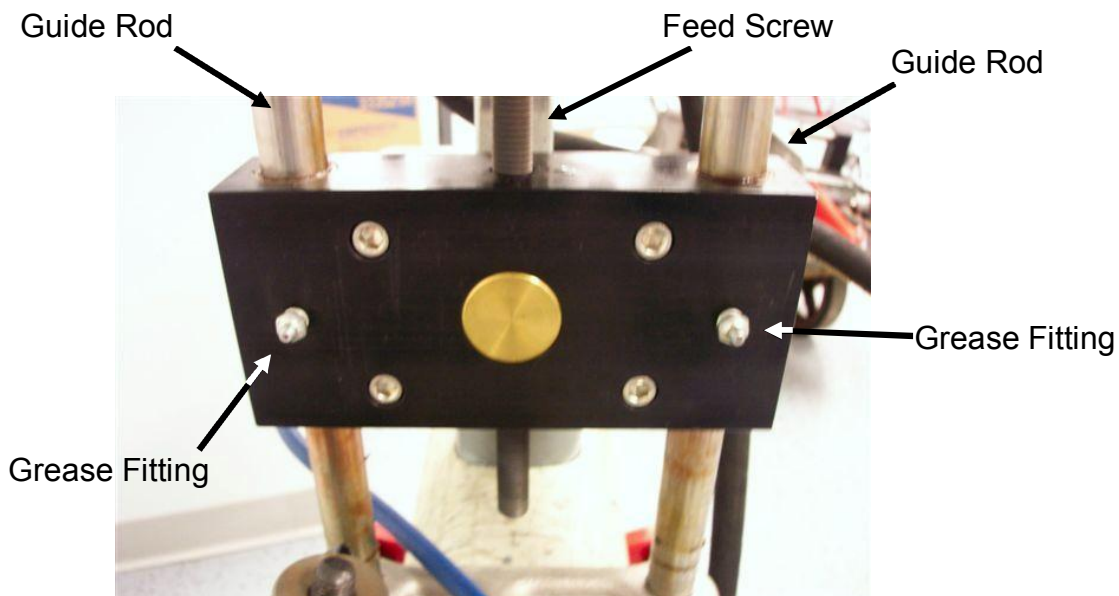
Arbor Assembly

Separate the motor assembly from the arbor assembly. You can now replace the power assembly.

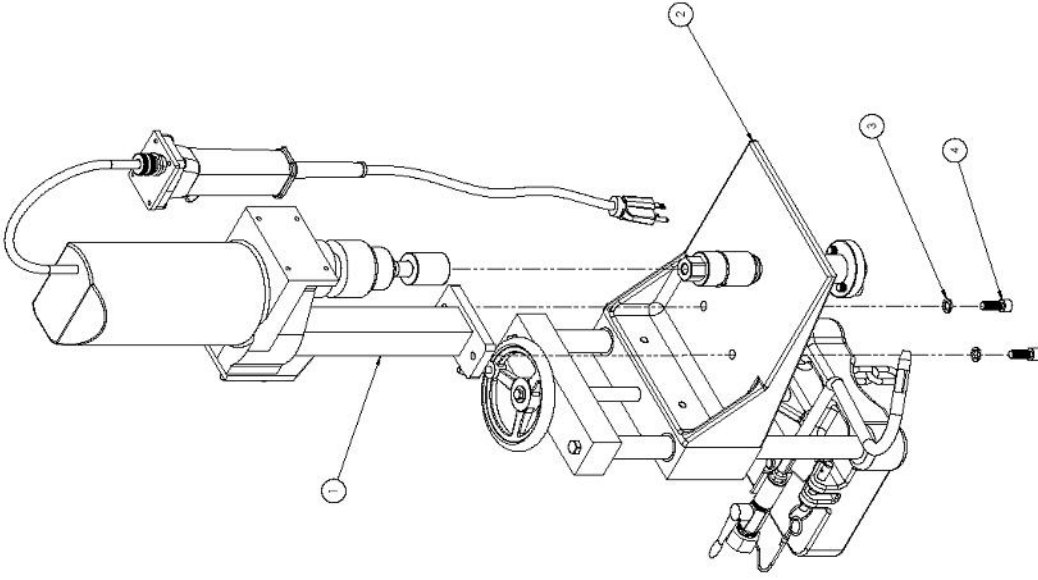
# ***Maintenance***



Grease arbor shaft prior to each use.



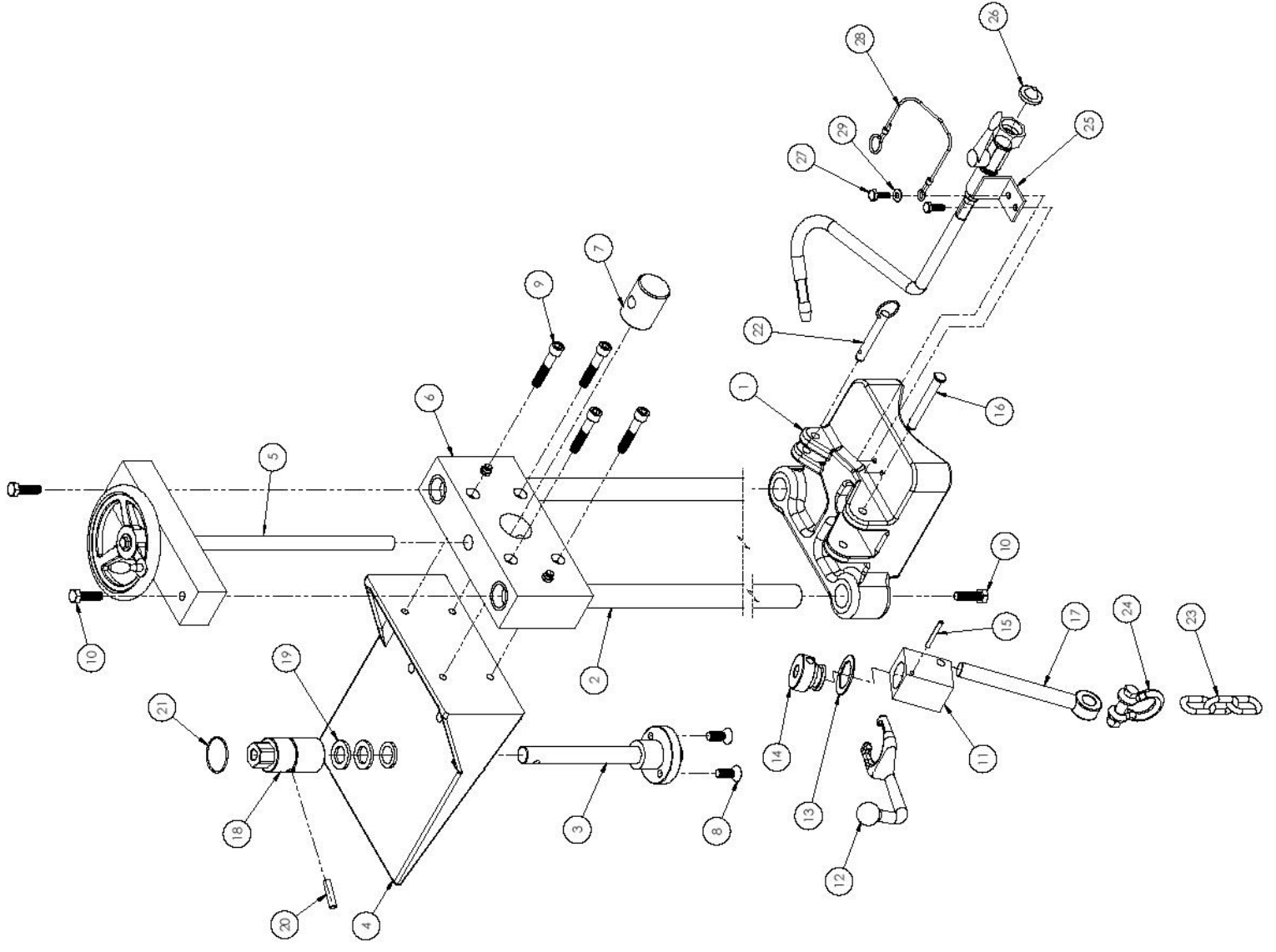
Grease guide rod bushings prior to each use. Clean guide rods after each use. Clean feed screw before and after each use.



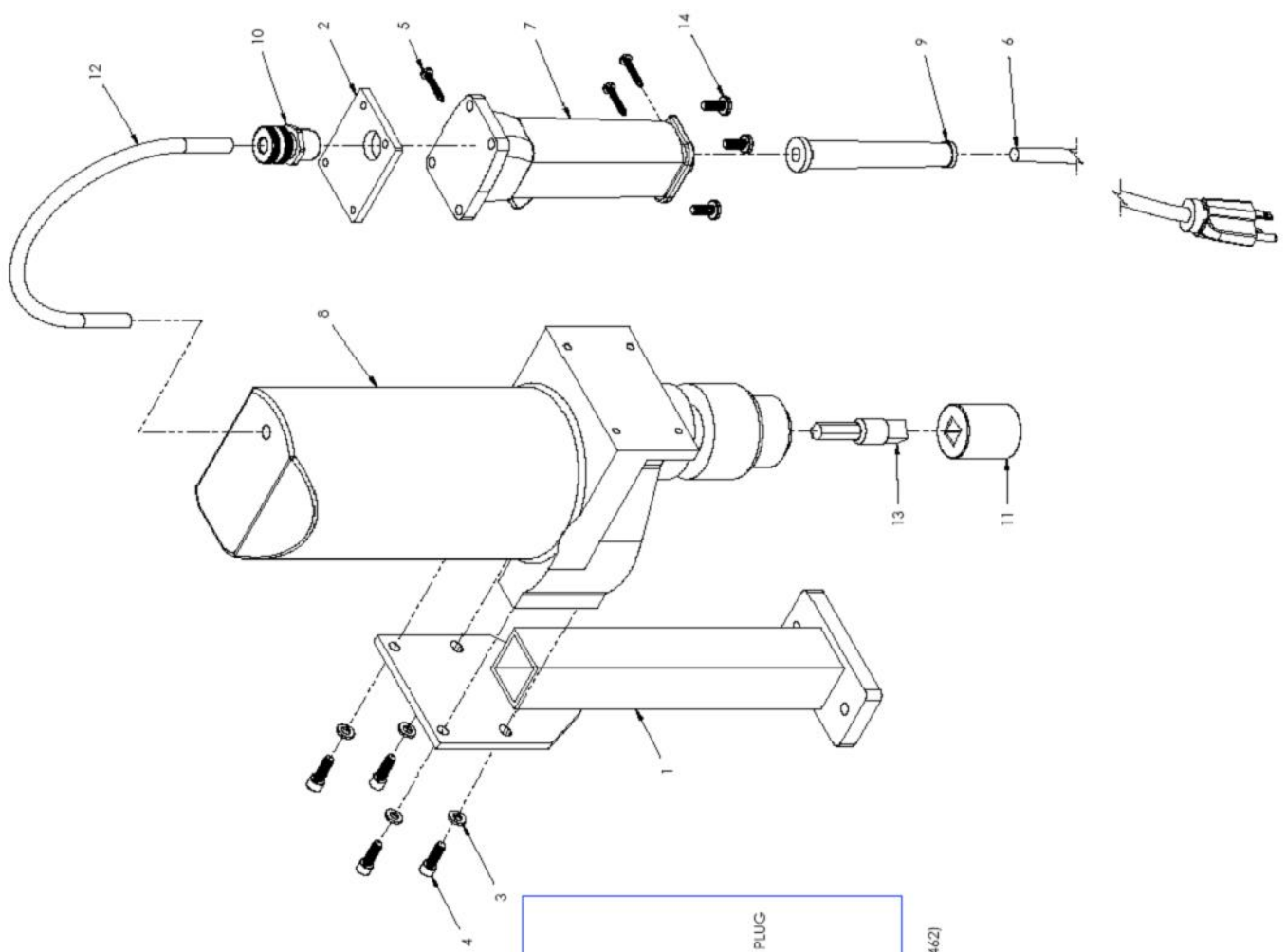
3744 Johnson Rd., Appleton, WI 54912  
 DESCRIPTION: ELECTRIC HOLE CUTTER  
 PART NO. 1662

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	700456	ELECTRIC MOTOR & MOUNT ASSEMBLY	1
2	700420	HOLE CUTTER ASSEMBLY	1
3	7179	3/8" SPLIT LOCK WASHER	2
4	275118	3/8-16 x 1" SOCKET HEAD CAP SCREW	2

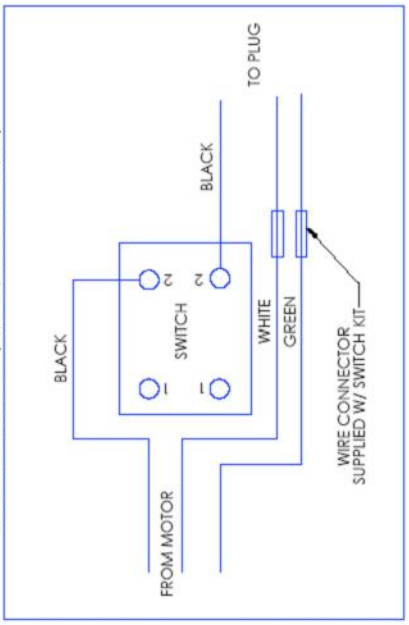




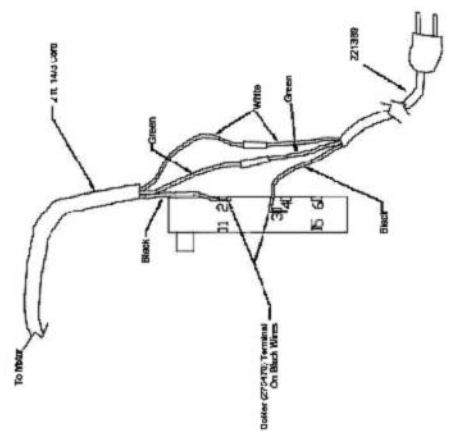
Item	PN	Description	Qty
1	700991	Base (MACHINED)	1
2	700431	ROD	2
3	700443	ARBOR ASSEMBLY	1
4	700441	ARBOR HOUSING ASSEMBLY	1
5	700438	HEAD ASSEMBLY	1
6	700433	ELEVATOR ASSEMBLY	1
7	700436	DRIVE BLOCK	1
8	12011	3/8-16 x 1" PHILLIPS FLAT HEAD MACHINE SCREW	2
9	276547	3/8-16 x 2" SHCS	4
10	276541	3/8-16 x 1 1/4" SS HEX HEAD CAP SCREW	4
11	700985	CHAIN TENSION BLOCK	1
12	606742	HANDLE	1
13	606751	BEARING	1
14	700989	CRANK NUT	1
15	275862	3/16" DIA x 1 1/2" ROLL PIN	1
16	276892	COTTERLESS CLEVIS PIN 3/8" x 3" LONG	1
17	276592	5/8-11 x 6" FULLY THREADED EYE BOLT	1
18	700445	BORING CAP	1
19	276481	THRUST BEARING (ST 2440-4)	2
20	276097	DOWEL PIN	1
21	260	CAP PIN RETAINER	1
22	276891	3/8" x 2" LONG DETENT PIN	1
23	700397	6' LONG CHAIN	1
24	276591	3/8" x 1" CHAIN SHACKLE	1
25	701079	FLUID ASSEMBLY	1
26	275917	STRAINER	1
27	560081	1/4-20 x 3/4" HHCS	2
28	276073	6" LANYARD	1
29	10713	3/16" FLAT WASHER	1



SWITCH WIRE DIAGRAM (HANDLE/SWITCH KIT #277147)



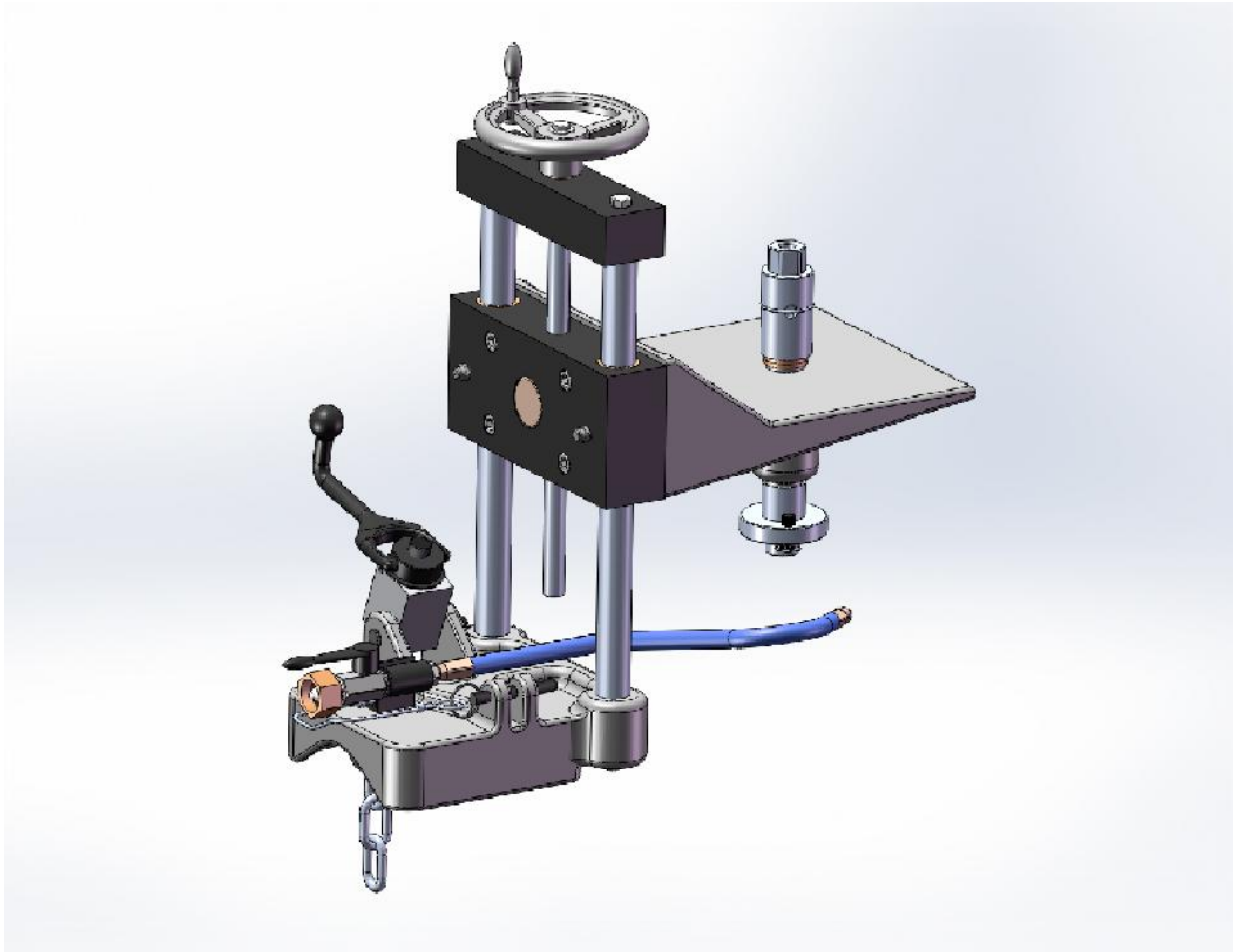
SWITCH WIRE DIAGRAM (TYCO ONE PIECE MOLDED SWITCH #275462)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	700457	MOTOR MOUNT ASSEMBLY	1
2	700532	PLATE	1
3	275105	1/4" SPLIT LOCK WASHER	4
4	4181	1/4-20 x 3/4" SHCS	4
5	276804	8-16 x 1 SLOTTED TORX HEAD 06-82-7326	3
6	221389	CORD SET	1
7	277147	HANDLE & SWITCH KIT	1
8	275466	MILWAUKEE DRILL MOTOR 4262-1	1
9	276820	CORD PROTECTOR 44-76-0140	1
10	275716	CORD CONNECTOR	1
11	275494	1" IMPACT SOCKET	1
12	276553	2' 14-3 ELECTRICAL CORD	1
13	275576	ADAPTER	1
14	276575	1/2-20 x 5/8" PAN HEAD SCREW	4
15	275782	RING TERMINAL C 01 411X **NOT SHOWN**	3
16	276787	CRIMP CONNECTOR **NOT SHOWN**	2

# ***1664 Hole Cutter***

## ***Operation & Service Manual***



**Wheeler-Rex • Ashtabula, Ohio**  
**Tel: 800-321-7950 • Fax: 440-992-2925**  
**wheeler@wheelerrex.com • www.wheelerrex.com**

January 2013

# ***Choosing the Shell Cutter***

There are three different types of shell cutters.



**For Clay and Concrete**

Nominal Hole Size	Part No.
4"	3395
4 1/2"	3450
6"	3595
6 1/2"	3650



**For Reinforced Concrete,  
Clay, Ductile Iron and Cast Iron**

Nominal Hole Size	Part No.
4"	6395
4 1/2"	6450
6"	6595
6 1/2"	6650
8"	6800



**For Plastic**

Nominal Hole Size	Part No.
4"	4395
4 1/2"	4450
6"	4595
6 1/2"	4650
8"	4800

# ***Changing the Shell Cutter***



Remove the two (2) screws from the arbor.



Loosen the set screw with the Allen key and insert pilot drill. Make sure pilot drill is aligned for the set screw to tighten on drill flat.



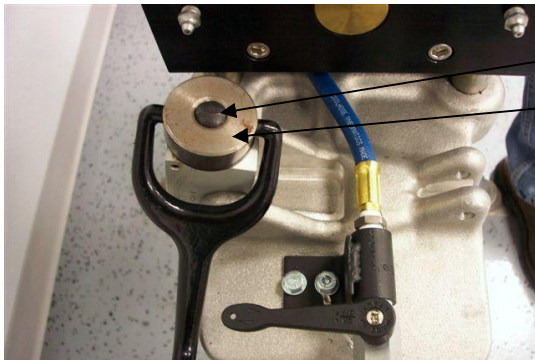
Attach the shell cutter with the two (2) screws.

\*\* Shell cutters & pilot drill are sold separately from the hole cutter unit.\*\*

# ***Hole Cutter Setup***



Set the hole cutter on the pipe.



Screw

Nut

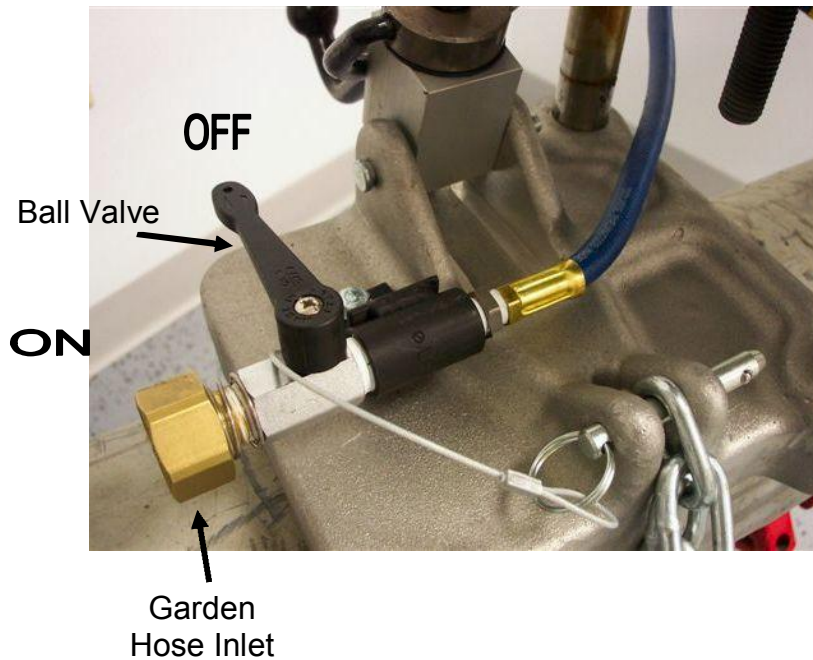
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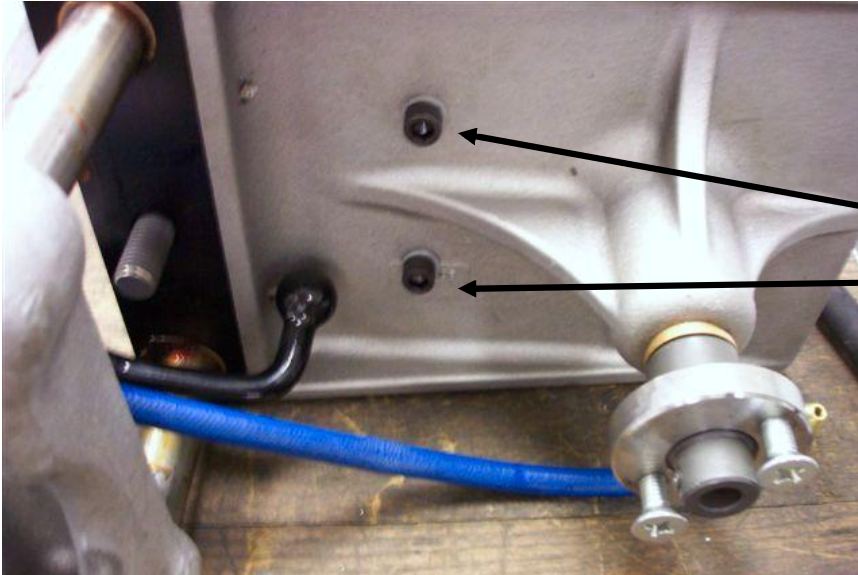


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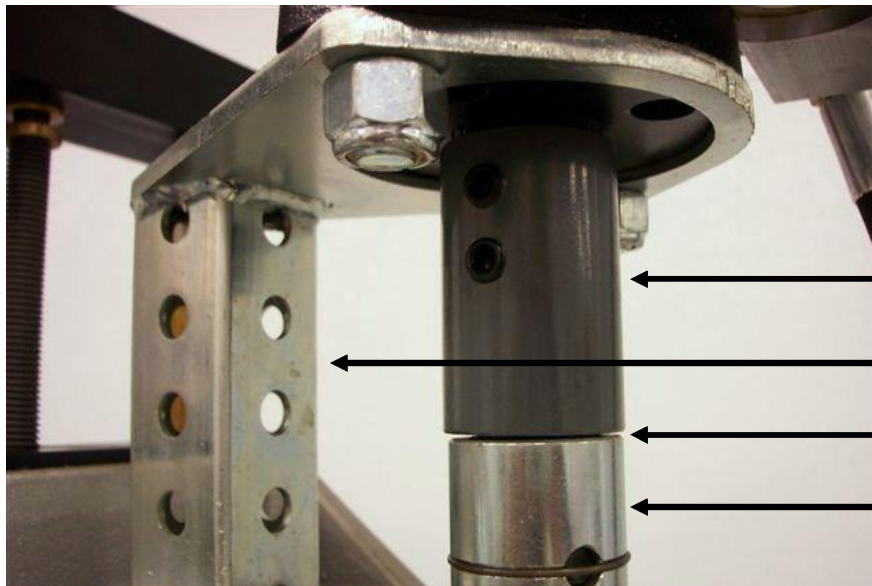
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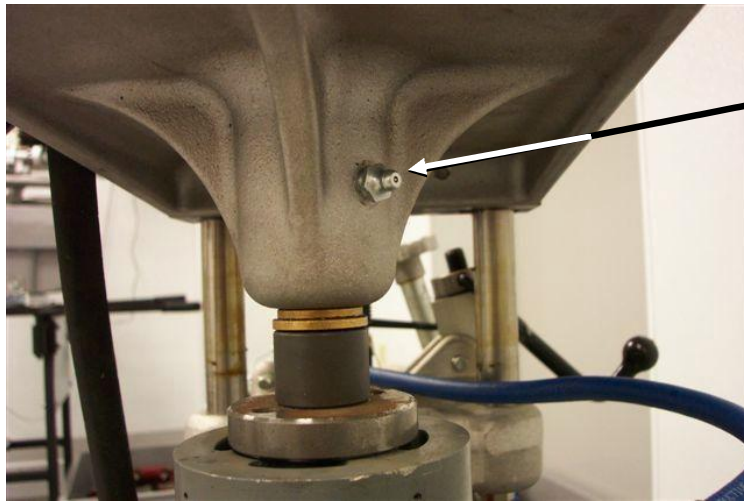
Motor Bracket

Separation Point

Arbor Assembly

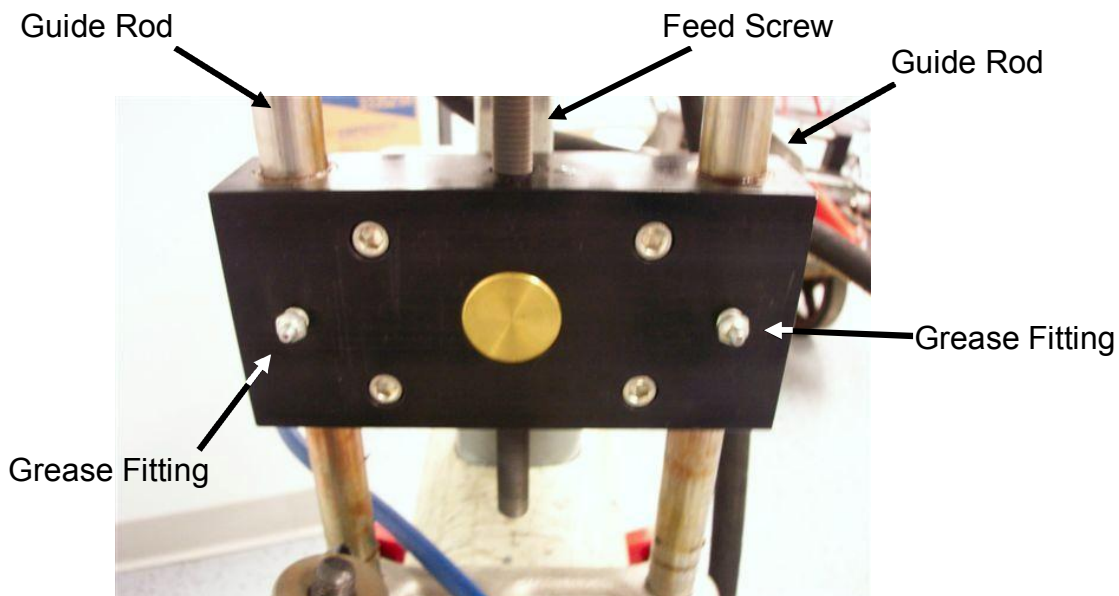
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# ***Maintenance***



Grease Fitting

Grease arbor shaft prior to each use.



Guide Rod

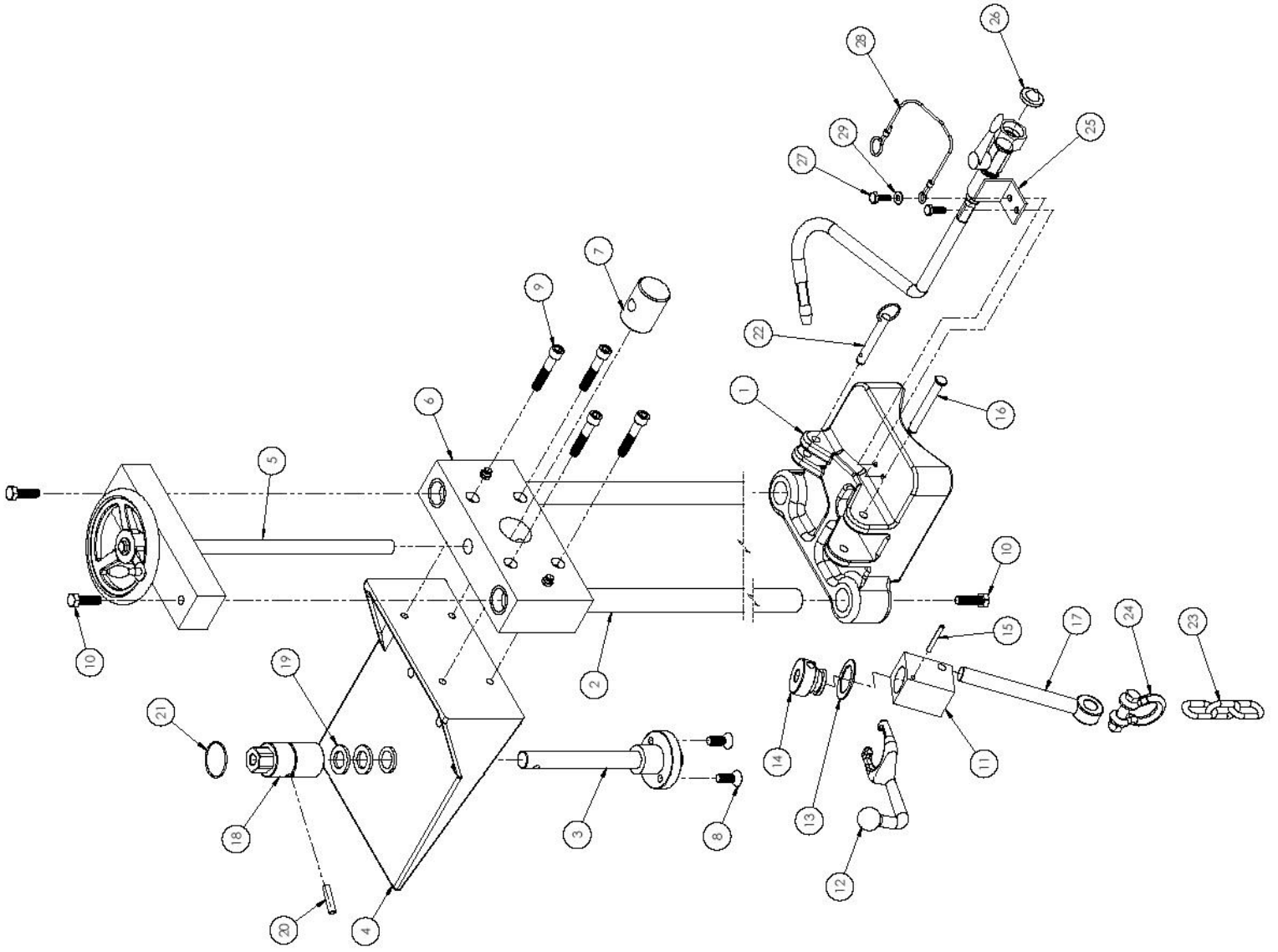
Feed Screw

Guide Rod

Grease Fitting

Grease Fitting

Grease guide rod bushings prior to each use. Clean guide rods after each use. Clean feed screw before and after each use.



3744 Jefferson Rd., Ashland, OH 44805  
DESCRIPTION:  
HOLE CUTTER ASSEMBLY  
PART NO. 700420

Item	PN	Description	Qty
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