

MODELS:

AEGCTM-2

AEGCTM-2E-CE

AEGCTM-2WOH

AEGCTM-2EWOH-CE



Coning and Threading Machine

Operation and Maintenance Manual

Catalog: 02-9221ME

September 2022

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



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Model # _____

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Supplemental Inserts (shipped separately with unit)

Little Giant® Pump Manual

Speed Reducer Manual

Cutting Oil MSD Sheet

Instructional Coning & Threading USB Drive, p/n P-9930-D

Coning & Threading Tubing Gage



Section 1.0 Safety and Operating Environment

- 1.1 This machine is designed to be operated under clean and dry conditions. Operating environment temperatures should not be below 32°F (0°C) or greater than 100°F (38°C).

Note: Operations below 60°F (15.6°C) will require the heater option for the cutting oil reservoir.
- 1.2 Proper circulation of the cutting oil throughout the machine is critical and depending on the ambient temperature it may be necessary to allow time for the oil to warm up enough to circulate freely. Do not perform coning or threading operations until oil flows from the tubes.
- 1.3 To avoid electric hazards and damage to the machine, the unit should not be exposed to rain, snow or other sources of moisture.
- 1.4 Only trained personnel familiar with these operating procedures should operate this machine.
- 1.5 This machine contains exposed moving parts. Operating personnel should use caution not to place hands and fingers into moving parts such as the die head and the cutter blades. Operating personnel should also use caution and not wear loose clothing and/or jewelry that may become tangled in the machinery. The belt guard and control box covers must be in place at all times and are only to be removed by qualified service personnel with the power cord disconnected.
- 1.6 Operating personnel shall wear eye protection at all times while operating this machine.
- 1.7 When changing tooling or servicing the machine, unplug the power cord. In the event that either the motor or the pump become stalled, unplug the power cord immediately to avoid the hazard of electrical fire or damage to the components.
- 1.8 Prevent feedwheel from rotating or moving into the cutter assembly when not in use by securing the feedwheel with the chained hook.
- 1.9 Applies to Model AEGCTM-2E-CE only: The total power consumption for the unit is 450 watts. The locked rotor current rating for this unit is 29.5 amps. All electrical components are wired and designed to comply with EN60204-1.

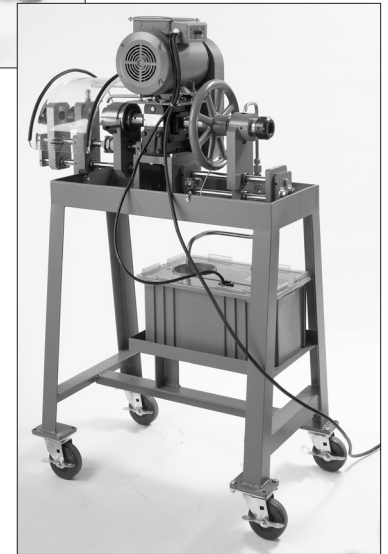


Figure 1
Front and rear view of Coning and Threading Machine

- 1.10 Applies to Model AEGCTM-2E-CE only: AEGCTM-2E-CE Coning and Threading machines equipped with an oil heater utilize an over-current protected heating element rated for 8.9 amps. Attempts to modify, override or bypass this device will void the warranty and may result in an electrical fire or damage to the components.

Section 2.0 Initial Setup of Coning and Threading Machine

- 2.1 Install four caster wheels using included hardware.

Note: All caster wheels have locks to prevent movement of machine during operation.
- 2.2 Remove plastic restraining straps securing the yoke assemblies.

- 2.3 If ordered separately, install oil splashguard.
- 2.4 Fill cutting oil reservoir with 3-1/2 gallons (13.2 liters) of medium weight oil with high sulfur content (PAE p/n P-8699).
- 2.5 Tools required to operate this machine:
 - Spanner wrench, special*
 - Allen wrench - 5/32" *
 - Pin tool, (p/n 101F-2845)*
 - Flat-tip screwdriver
 - Deburring tools
 - Clean cloth

*supplied with machine

Section 3.0 Tubing Preparation

- 3.1 Cutting and preparing tubing for coning and threading operations.
- 3.2 Tubing should be measured accurately and cut to length. Measure the distance from fitting to fitting. See Table #1 for an engagement (assembly) allowance to include in the cut length. Also an additional 1/16" finish allowance is required per end to square up tube ends. The total cut length will be the sum of the fitting to fitting distance, the engagement allowance and the finish allowances see (Figure 2).

Note: Tubing lengths greater than four feet (4') should be supported at machine level during coning and threading operations to avoid damage or excessive wear to tooling and machine.

Note: Tubing should also be kept concentric to the threading dies and coning blades.

- 3.3 Remove burrs from tubing inside and outside diameters after cutting.

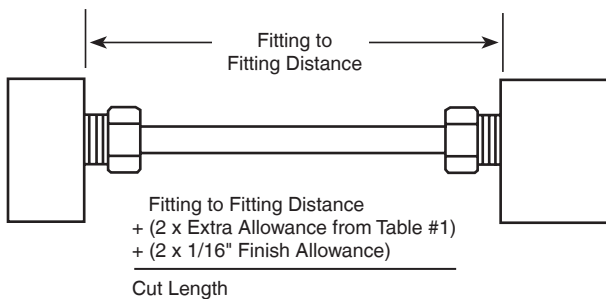


Figure 2
Determine Tube Length

Table 1
Extra Cutting Allowance for Engagement

	Connection Tubing Size	Type OD x ID	Engagement Allowance in (mm)
Medium Pressure (to 20,000 psi)	SF250CX	1/4 x .109	.55 (14.0)
	SF375CX	3/8 X .203	.69 (17.6)
	SF562CX10	9/16 x .359	.81 (21)
	SF562CX20	9/16 x .312	.84 (21.3)
	SF750CX10	3/4 x .516	1.00 (25.4)
	SF750CX20	3/4 x .438	1.00 (25.4)
	SF1000CX10	1 x .688	1.38 (35)
	SF1000CX20	1 x .562	1.46 (37)
	SF1500CX	1-1/2 x .937	1.88 (47.6)
High Pressure (to 60,000 psi)	F250C	1/4 x .083	.50 (12.7)
	F375C	3/8 x .125	.69 (17.5)
	F562C	9/16 x .188	.87 (22)
	F562C40	9/16 X .250	.84 (21)
	F1000C43	1 x .438	1.62 (41.1)
Ultra-High Pressure (to 150,000 psi)	F250C100	1/4 x .083	1.18 (30.0)
	F375C100	3/8 x .125	1.10 (28.0)
	F562C100	9/16 x .188	.84 (21.3)
	F312C150	5/16 x .062	1.18 (30.0)
Note: 9/16 100k same as F562C			
*Connection used is F312C150			

Section 4.0 Coning Operation

Install Cutting Blades

- 4.1 Rotate the feed wheel clockwise in order to disengage and slide away the tube holder assembly.
- 4.2 You may have to start and stop the machine quickly to get the coning blade holder to stop spinning in a good position to have access to the coning blade threaded pins.
- 4.3 Turn the machine off and unplug the power cord.
- 4.4 Loosen the adapter nut securing the cutting oil supply tube in order to rotate or remove the tube to have access to install or remove the blades (Figure 3).
- 4.5 Remove the two threaded pins from the blade holder using a flat-tip screwdriver.
- 4.6 Determine the appropriate sized cutting blades using Table #5 and the outside and inside diameters of the tubing.

- 4.7 Align the cutting blades by placing the blades together. When correctly aligned the part numbers stamped on the sides of the blades will face outwards. The cutting angles should be oriented as shown in Figure 4.

Note: When installing new blades, be sure the blades are flat against the holder. There should be no space between the blades and the holder, see Figure 5.

- 4.8 Slide blades into the slot in the blade holder.
- 4.9 Replace the threaded pins into the blade holder, through the mounting holes in the blades and tighten securely.
- 4.10 Reorient or replace the cutting oil supply tube. Tighten the adapter nut.
- 4.11 Slide the tube holder assembly toward and over the blade holder and thread it into place by spinning the feed wheel counterclockwise. Rotate feedwheel at least three (3) times to ensure thread engagement.

install Collet

- 4.12 Determine the appropriate sized collet using Table #5 and the outside diameter of the tubing.

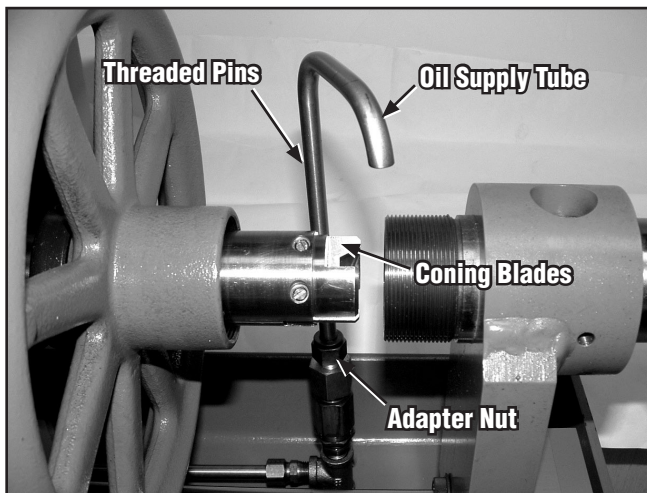


Figure 3
Installing Coning Blades



Figure 4
Coning Blades: Part Number is facing out

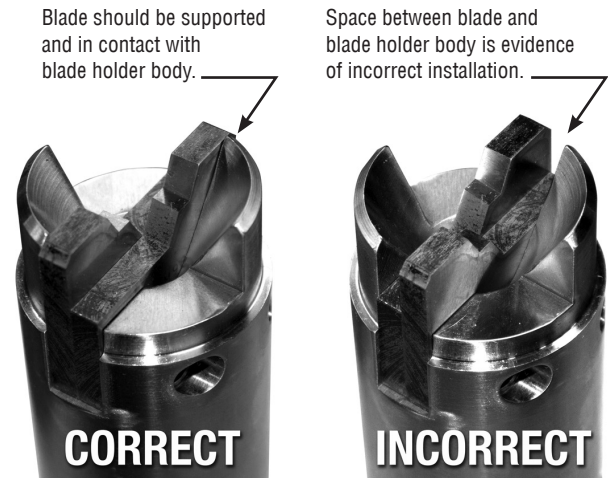


Figure 5
Proper Alignment of Coning Blades

- 4.13 Remove collet nut using the specially designed spanner wrench.
- 4.14 Place the small end of the collet on a hard surface and place the collet nut over the large end of the collet as shown and push together. They should snap together.
- 4.15 To separate a collet from the collet nut, grip the collet nut in one hand and pull firmly sideways on the small end of the collet to twist it out of the collet nut.
- 4.16 Install the collet assembly into the holder.
- 4.17 Install the collet and collet nuts for the threading end of the machine assembly in the same way.

Coning Operation

Note: When coning tubing, rotate feedwheel until you see the blade holder in the viewing window.

Note: When feedwheel is not in use and is intended to remain stationary, place chained hook through spokes to keep wheel immobile to prevent the holder assembly from contacting the blade assembly.

Note: Plug or cap the free end of tubing not being coned or threaded to prevent cutting oil from spilling onto the ground.

Note: Tubing must be straight for at least 4.75 in. (121 mm) in order to be able to secure the tubing in the collet for coning.

- 4.18 Rotate feedwheel until you see the cutting blades extend approximately 1/4" through the hole in the sleeve see Figure 6.

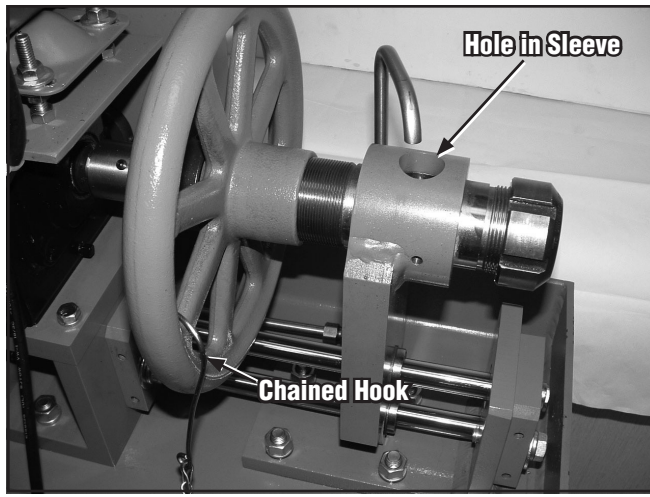


Figure 6
Illustration of Coning Operation

- 4.19 With the machine turned off and the power cord unplugged, insert tubing through the collet until it is flush against the blades. Now back tubing up about 1/4" and tighten the collet nut with the spanner wrench.
- 4.20 Connect the power cord and start the machine. Advance the blades by turning the feedwheel slowly. When the blades start to cut (as seen through hole in sleeve), rotate feedwheel the number of turns indicated in Table 2. Each turn of the feedwheel advances the tube 1/16". Advance cutting blades slowly.

Note: 304 SS tubing will require a slower blade feed rate than 316 SS. The rate of turning the feedwheel for 304 SS is approximately 1/4 that of 316 SS.

- 4.21 At completion of indicated number of turns, hold feed wheel stationary for three to five (3-5) revolutions of the cutting blades. This squares and finishes the coned end of the tubing.

Note: To ensure a proper sealing of a coned connection, it is necessary that the finished cone has a square end which is perpendicular to the center line of the tubing. The critical finish for coned connections is on the leading edge of the cone. The transition point where the cone meets the square end of the tube must be free of burrs and tool marks (Figure 7).

- 4.22 Reverse the feedwheel until the tubing is disengaged from the cutting blades. Attach the chained hook to the feedwheel and if no one is using the threading end of the machine, turn it off.

Table 2

Required Feedwheel Rotation for Coning Operation

Type of Connection	Tube Diameters		Number of Feedwheel Turns
	OD in (mm)	ID in (mm)	
SM250CX	1/4 (6.4)	.109 (2.8)	2.0
SM375CX	3/8 (7.1)	.209 (5.2)	2.0
SM562CX20	9/16 (14.3)	.312 (7.9)	2.5
SM562CX10	9/16 (14.3)	.359 (9.1)	2.0
SM750CX20	3/4 (19.1)	.438 (11.1)	3.0
SM750CX10	3/4 (19.1)	.516 (13.1)	2.5
SM1000CX20	1 (25.4)	.562 (14.3)	4.0
SM1000CX10	1 (25.4)	.688 (17.5)	3.0
M250C M250C100	1/4 (6.4)	.083 (2.1)	2.0
M312C150	5/16 (7.9)	.062 (1.6)	3.0
M375C M375C100	3/8 (7.1)	.125 (3.2)	2.5
M562C M562C100	9/16 (14.3)	.188 (4.8)	4.0
M562C40	9/16 (14.3)	.250 (6.4)	3.5
M562C40-312	9/16 (14.3)	.312 (7.92)	3.5

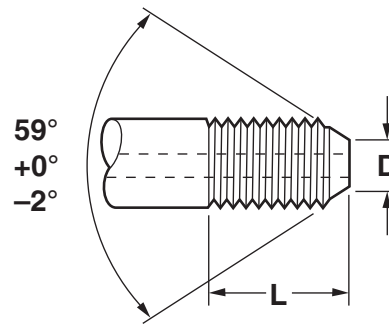


Figure 7
Tube End Dimensions (see Table 3)

- 4.23 Use the spanner wrench to loosen collet nut, releasing tube from collet.
- 4.24 Remove tubing and inspect cone. There should be no score marks on the tube and it should be completely faced.
- 4.25 Deburr the inside of the tube. This completes the coning operation.

Table 3
Tube Thread Dimensions (see Figure 7)

Male Connection	Tube Size O.D. x I.D.	Dimensions		Thread Size and Type *
		D	L (max)	
SM250CX	1/4" x .109 (6.35 x 2.77)	.141 (3.58)	.40 (10.2)	1/4" - 28
SM375CX	3/8" x .203 (9.53 x 5.16)	.25 (6.35)	.46 (11.7)	3/8" - 24
SM562CX20	9/16" x .312 (14.29 x 7.92)	.406 (10.31)	.59 (15.0)	9/16" - 18
SM562CX10	9/16" x .359 (14.29 x 9.12)	.438 (11.13)	.56 (14.2)	9/16" - 18
SM750CX20	3/4" x .438 (19.05 x 11.13)	.562 (14.27)	.69 (17.5)	3/4" - 16
SM750CX10	3/4" x .516 (19.05 x 13.11)	.578 (14.68)	.68 (17.2)	3/4" - 16
SM1000CX20	1" x .562 (25.4 x 14.27)	.719 (18.26)	.92 (23.3)	1" - 14
SM1000CX10	1" x .688 (25.4 x 17.48)	.812 (20.62)	.84 (21.3)	1" - 14
SM1500CX	1-1/2" x .937 (38.10 x 23.78)	1.062 (26.97)	1.09 (27.7)	1-1/2" - 12
M250C	1/4" x .083 (6.35 x 2.10)	.125 (3.18)	.57 (14.5)	1/4" - 28
M375C	3/8" x .125 (9.53 x 3.18)	.219 (5.56)	.77 (19.6)	3/8" - 24
M562C	9/16" x .187 (14.29 x 4.78)	.281 (7.14)	1.01 (25.7)	9/16" - 18
M562C40	9/16" x .250 (14.29 x 6.35)	.312 (7.92)	.98 (24.97)	9/16" - 18
M1000C43	1" x .438 (25.4 x 11.13)	.562 (14.27)	1.06 (26.9)	1" - 14
M250C100	1/4" x .083 (6.35 x 2.10)	.125 (3.18)	.64 (16.3)	1/4" - 28
M375C100	3/8" x .125 (9.53 x 3.18)	.219 (5.56)	.68 (17.38)	3/8" - 24
M562C100	9/16" x .187 (14.29 x 4.78)	.281 (7.14)	1.01 (25.7)	9/16" - 18
M312C150	5/16" x .062 (7.94 x 1.57)	.125 (3.18)	.71 (18.0)	5/16" - 24

*Thread is left-hand national fine (Class 2). All dimensions for reference only and subject to change.

Section 5.0 Threading Operation

Install Collets and Die Chasers

- 5.1 Select the appropriate sized collet and die chasers using Table #5 and tube size. Install collets as described in Install Collet Section (steps 4.12 through 4.17)
- 5.2 Set the locks on the cart's wheels.
- 5.3 Install die chasers in die head.

Note: The die head has three positions; closed, open and extreme open position.

When the die head is in the closed (cutting) position, the die chasers are in position to cut threads.

In the open position, the die chasers are moved away from the tubing. This is the position the die head should be in when the threading operation is completed and when adjusting thread depth.

In the extreme open position, the die chaser slots in the die head are exposed permitting the dies to be installed or removed.

Note: Chasers are ground in matched sets of four (4) and available in sets only.

- 5.3.1 Trip die head into open position.

With the die head in the closed position, push arms mounted on trip yoke toward the motor causing head to trip into open position.
- 5.3.2 Move die head to extreme open position.
- 5.3.3 You may have to start and stop the machine quickly to get the die head to stop spinning in a good position to have access to the head release lever. Turn the machine off and unplug the power cord. Next, press head release lever in (located on adjusting ring) with an implement, such as a screwdriver, to allow the die head to spring back into extreme open position (Figure 8). The die chaser slots should now be fully exposed with the die head in this position.
- 5.3.4 Insert chasers into die head slots.

The chasers and slots are each numbered 1 through 4. It is critical that the numbered chaser is placed into the matching numbered slot.

For example, No. 1 chaser in No. 1 slot, No. 2 chaser in No. 2 slot, etc.

Make sure blades are clean and free of burrs that could scratch the machine parts. Push chasers into the matching numbered slots until there is a slight click indicating the chaser is seated properly. Chaser spring plungers prevent chasers from falling out.

- 5.3.5 Move die head into closed (cutting) position. Firmly pull trip yoke arms forward, away from the motor, being sure to continue the forward motion after the head release lever snaps into locking position and until head locks into the closed (cutting) position.

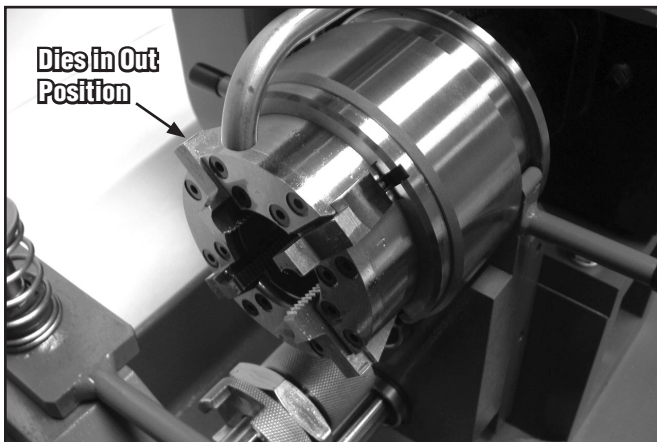


Figure 8

Moving die head to extreme position for chaser insertion by pressing head release lever

Set-up Die Head

- 5.4 Adjust Pitch Diameter
 - 5.4.1 Pitch Diameter - With the die head in the closed position, check the pitch diameter of cutting dies by attempting to screw a standard factory threaded nipple into the die head.
 - 5.4.2 If the piece does not go in smoothly, loosen adjusting ring binding screw using a 5/32" allen wrench (Figure #9).

Note: You may have to start and stop the machine quickly to get the die head to stop spinning in a good position to have access to the binding screw.

- 5.4.3 Then insert a metal pin tool or rod into the hole in the adjusting ring next to the adjusting ring binding screw and use the tool to rotate the adjusting ring until the desired pitch diameter is obtained. The die head adjusting ring is marked with an "S" (smaller pitch diameter) and an "L" (larger pitch diameter) to indicate the direction to turn the ring to adjust the pitch diameter smaller or larger (Figure 9).
- 5.4.4 Tighten adjusting ring binding screw before cutting a thread.
- 5.4.5 Cycle the die head through the closed and open positions to ensure the new thread depth adjustments take effect.

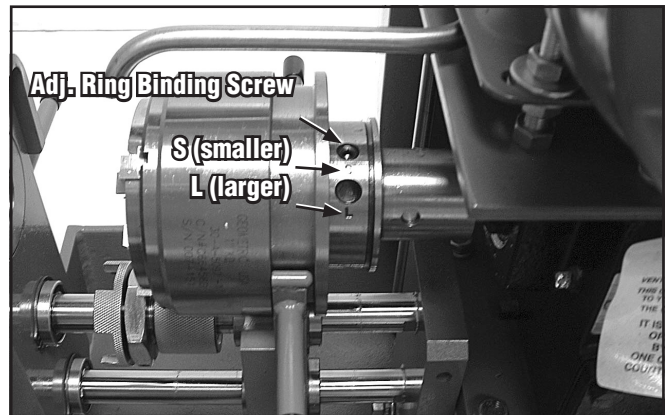


Figure 9

Illustration of adjusting ring

- 5.5 Set Thread Length

Adjusting the spacer head assembly located under the die head sets the proper distance for thread length. Stop collar adjustment gives fine adjustment of thread length.

 - 5.5.1 Rotate tube-stop 90° to the left by lifting up, rotating and letting down (Figure 10). Insert coned, unthreaded tubing loosely through both collets. Bottom tube end against tube-stop and tighten collet nut on the inner yoke by hand. Then rotate tube-stop back to original position and tighten collet nut on the inner yoke with a spanner wrench. Pull the inner yoke away from the motor and against the frame bracket. Tighten the collet nut on the outer yoke with a spanner wrench.
 - 5.5.2 Close the die head by pulling the two handles on the die head trip yoke away from the motor.
 - 5.5.3 Carefully slide the collet assembly (this consists of the inner and outer yokes) with mounted tubing forward until the cone of the tube touches the chasers.

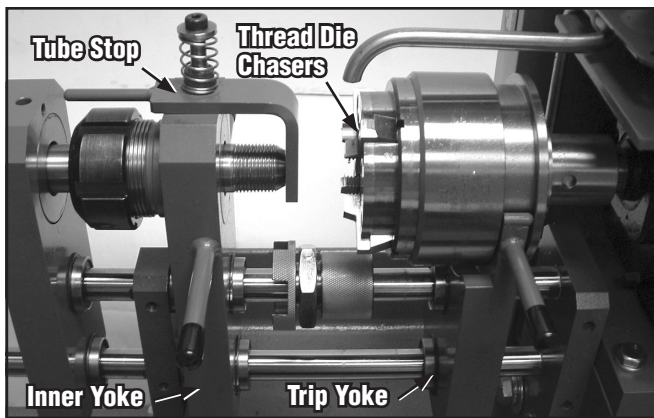


Figure 10

Positioning tube against tube stop. Die head is shown in the extreme open position

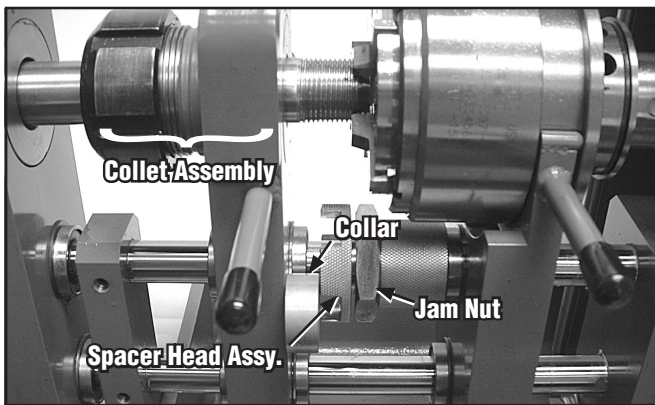


Figure 11

Setting thread length.
Die head is shown in the closed position

- 5.7 Carefully slide the collet assembly with mounted tube forward until the cone of the tube touches the chasers.
- 5.8 Squeeze the bar handles protruding from each side of the trip yoke and collet assembly toward each other to feed the tube into the chasers until you see the threads being cut. Once all four die chasers are cutting, let go of the handles and the die head will self-feed.
- 5.9 When the preset length has been threaded, the self-feeding action of the die head will pull the collet and yoke assembly against the spacer head which in turn will push against the trip yoke causing it to automatically open the die head and release the tubing.
- 5.10 Turn off the machine and clean the chips out of the die head assembly to prevent damage when the yoke assembly is pulled away from the die head. Pull collet assembly with tube mounted in it away from die head.
- 5.11 Loosen the collet nuts and remove tube. Allow any oil inside the tubing to drain back into the machine.

Inspect Sample Tube

- 5.12 Screw a collar onto the tube to check for proper thread length and depth. The collar should screw on easily and be able to move slightly side to side. The threads are not deep enough if the collar won't screw on easily. If the collar moves up and down lengthwise, then threads are cut too deep.

Correct length allows 1 to 1-1/2 threads to show above the collar. See column "L" of Table 3 and Figure 7 for correct threaded lengths for different tube sizes.

- 5.13 If the pitch diameter or thread length is not correct, adjust the machine and thread a new piece of tubing.

Operation After Setting Die Head

- 5.14 When the die head has been properly adjusted and sample tubing is produced with proper thread length and fit, proceed with threading operation of tubing.
- 5.15 Rotate tube-stop 90° to the left by lifting up, rotating and letting down (Figure 10). Insert coned, unthreaded tubing loosely through both collets. Bottom tube end against tube stop and tighten collet nut on the inner yoke by hand. Then rotate tube-stop back to original position and tighten collet nut on inner yoke with spanner wrench. Pull the inner yoke away from the motor and against the frame bracket. Tighten the outer collet nut with spanner wrench.

- 5.5.4 Loosen the jam nut on the spacer head assembly located under the die head.
- 5.5.5 While holding one half of the knurled spacer head assembly, turn the other half in the appropriate direction to lengthen or shorten the spacer head assembly so a corresponding collar with the same thread size as the chasers fits snug between the inner collet yoke assembly and spacer head assembly (Figure 11).
- 5.5.6 Tighten the jam nut.

Thread Sample Tube

- 5.6 Turn the machine on. Ensure the chasers are thoroughly lubricated by the cutting oil.

Note: Plug or cap the free end of tubing not being coned or threaded to prevent cutting oil from spilling onto the ground.

Note: Plug or cap the free end of tubing not being coned or threaded to prevent cutting oil from spilling onto the ground.

- 5.16 Close the die head by pulling the two handles on the die head trip yoke away from the motor.
- 5.17 Turn the machine on. Ensure the chasers are thoroughly lubricated by the cutting oil.
- 5.18 Carefully slide the collet assembly with mounted tube forward until the cone of the tube touches the chasers.
- 5.19 Squeeze the two handles on each side of the trip yoke and collet assembly together to feed the tube into the chasers until you see the threads being cut. Once all four die chasers are cutting, let go of the handles and the die head will self-feed.
- 5.20 When preset length has been threaded, the trip yoke is actuated and will automatically open the die head.
- 5.21 Turn off the machine and clean the chips out of the die head assembly to prevent damage when the yoke assembly is pulled away from the die head. Pull collet assembly away from die head.
- 5.22 Loosen the collet nuts and remove tube. Allow any oil inside the tubing to drain back into the machine.

Note: The coning and threading machine is furnished with a lubrication pump. This is used to supply cutting fluid to the points of cone cutting and threading. A sufficient supply of cutting fluid shall be maintained during machining operations for successful coning and threading.

Note: An optional thermostatically controlled immersion heater is available for use in cold weather. Cutting fluid should be Parker AE Part No. P-8699.

5.23 To Remove Chasers

5.23.1 Trip die head into open position.

If the die head is in the closed position, push on trip yoke arms toward the motor causing head to trip into open position.

5.23.2 Move die head to extreme open position.

You may have to start and stop the machine quickly to get the die head to stop spinning in a good position to have access to the head release lever.

Next, press head release lever in (located on adjusting ring) with an implement, such as a screwdriver, to allow the die head to spring back into extreme open position. The die chaser slots are now fully exposed with the die head in this position (Figure 8).

5.23.3 Remove chasers.

Place a clean cloth or pad against the bladed portion of the chaser, then push the chaser outward until it pops loose. Chaser spring plungers prevent chasers, before removal, from falling into chips and oil.

Note: Chaser removal is done without removing the die head from the machine.

Section 6.0

Assembly and Make Up of Coned Connection

Step 1

Inspect seat cone and tube cone to verify free of all lines and surface imperfections with tube face and cone edge completely smooth. Lubricate male threads of gland nut and collar/gland contact surface with a metal flake based thread lubricant. (see recommended lubricants on page 25-26 of this catalog)

Slip gland nut on tubing as shown (Fig. 5) and thread collar on tubing (turning counter-clockwise) until 1-1/2 to 2 full threads are exposed between collar and cone (Fig. 6).

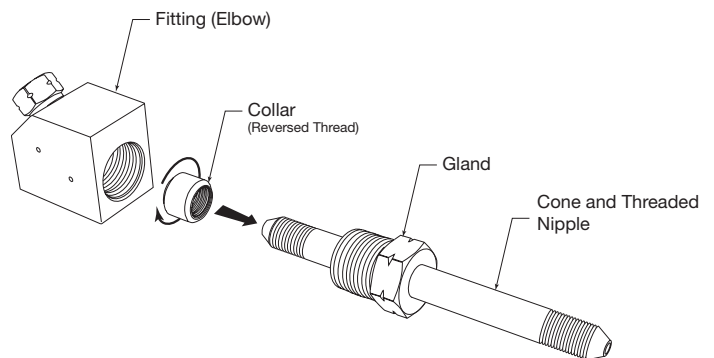


Figure 5

Note: A small amount of process tolerable lubricant, such as silicone grease or any lubricating oil, on the cone tip will help with the sealing process.

CAUTION: Unplug the machine before proceeding.

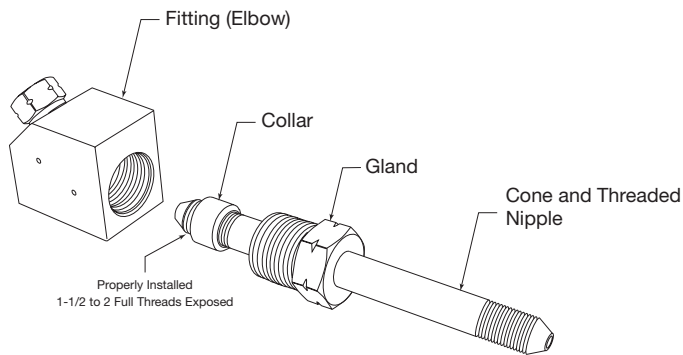


Figure 6

Step 2

Insert tubing in connection, engage gland nut and tighten "finger-tight" at least 4 complete turns (Medium Pressure) and 5-6 Turns (High Pressure) - angular misalignment will not allow rotation with fingers and could cause leakage or gland nut gall - remove and determine cause of misalignment and correct.

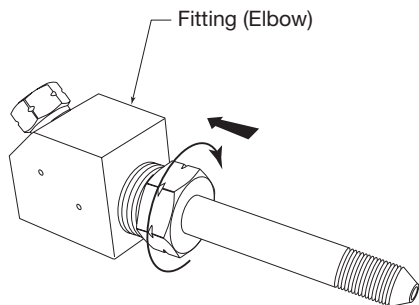


Figure 7

Step 3

Tighten gland nut with torque wrench (REQUIRED) to specified values listed in Table 4. When tightening, the use of an additional wrench is recommended to hold the fitting or valve body if not otherwise anchored.

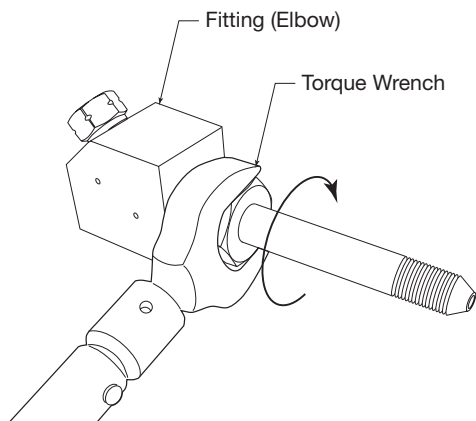


Figure 8

Cautionary Note: The torque used to seal Cone and Thread Connections is typically much less than used on compression fittings (1/8 to 1/4 turn of gland nut from finger-tight)

Recommended Thread Anti-Seize: (Not for use on coned surfaces)

Copper Anti-Seize Lubricant:
P-3580 (16 oz. can)
P-3580-8 (8 oz. can)

Moly Paste (50-70%) Anti-Seize Lubricant:
P-9766 (16 oz. can)

Table 4: Full Pressure Connection Gland Torque

(For CW 316 Stainless Steel & Medium Pressure 2507 Super Duplex Materials)

	Connection Type	Gland Nut Hex Size (inches)	Required Torque ¹	Required Torque Dry-Moly Coated	Pressure MAWP PSI
			ft.-lbs. (N.m)		
Medium Pressure	SF250CX (1/4" MP)	1/2	20 (27)	15 (21)	20,000
	SF375CX (3/8" MP)	5/8	30 (41)	20 (27)	20,000
	SF562CX10 (9/16" MP)	15/16	55 (75)	40 (55)	15,000
	SF562CX20 (9/16" MP)	15/16	55 (75)	40 (55)	20,000
	SF750CX10 (3/4" MP)	1-3/16	75 (102)	55 (75)	15,000
	SF750CX20 (3/4" MP)	1-3/16	90 (122)	70 (95)	20,000
	SF1000CX10 (1" MP)	1-3/8	135 (187)	100 (136)	15,000
	SF1000CX20 (1" MP)	1-3/8	135 (187)	100 (136)	20,000
	SF1500CX (1-1/2" MP)	1-7/8	200 (272)	160 (217)	15,000
High Pressure	F250C (1/4" HP)	5/8	25 (34)	-	60,000
	F375C (3/8" HP)	13/16	50 (68)	-	60,000
	F562C (9/16" HP)	1-3/16	75 (102)	-	60,000
	F562C40 (9/16" HP-40K)	1-3/16	60 (82)	-	40,000
	F1000C43 (1" HP-43K)	1-3/8	180 (244)	-	43,000
Ultra High Pressure	F250C100 (1/4" UHP-100K)	3/4	50 (68)	-	100,000
	F375C (3/8" UHP-100K)	3/4	105 (143)	-	100,000
	F562C (9/16" UHP-100K)	1-3/16	125 (170)	-	100,000
	F375C (5/16" UHP-150K)	3/4	70 (95)	-	150,000

¹ Required torque shown is for manually lubricated (liquid or paste anti-seize) glands. For torque reduction when using glands supplied with Dry-Moly coating see "Reduced Pressure/Special Material" Chart on next page.

For torques at lower working pressures (specialty materials) see "Special Material" Torque Chart on next page.

Reduced Pressure/Special Material Torque Table: Pressure psi (bar) vs. Torque ft.-lbs. (N.m)

Note: ALL Parker Autoclave Engineers Pressure Containing products will have Maximum Allowable Working Pressure (@ Room Temperature) indelibly marked at an easy to read location. Most "Special Materials" are rated to a pressure less than our standard Cold Worked UNS S31600/S31603 316/316L Stainless Steel Material and use of the chart below is necessary for proper installation of Cone & Thread Connections at these lower pressures.

Use of this chart is also recommended when application pressure is less than the MAWP rating on the part. This will create a seal circle in the connection at a point before max insertion depth is reached - enhancing the lifetime of the product.

Connection	Pressure psi (bar)										** Dry-Moly Coat Torque Reduction
	Minimum	5,000 (345)	10,000 (690)	15,000 (1034)	20,000 (1379)	25,000 (1724)	30,000 (2068)	40,000 (2758)	50,000 (3447)	60,000 (4137)	
SF250CX (1/4" MP)	10 (13.6)	10 (13.6)	10 (13.6)	15 (20.3)	20 (27.1)	-	-	-	-	-	25%
SF375CX (3/8" MP)	10 (13.6)	10 (13.6)	15 (20.3)	25 (33.9)	30 (40.7)	-	-	-	-	-	30%
SF562CX10 (9/16" MP)	20 (27.1)	30 (40.7)	45 (61)	55 (74.6)	-	-	-	-	-	-	30%
SF562CX20 (9/16" MP)	15 (20.3)	15 (20.3)	30 (40.7)	40 (54.2)	55 (74.6)	-	-	-	-	-	
SF750CX10 (3/4" MP)	25 (33.9)	40 (54.2)	60 (81.3)	75 (101.7)	-	-	-	-	-	-	30%
SF750CX20 (3/4" MP)	20 (27.1)	25 (33.9)	45 (61)	70 (94.9)	90 (122)	-	-	-	-	-	
SF1000CX10 (1" MP)	40 (54.2)	65 (88.1)	115 (156)	135 (183)	-	-	-	-	-	-	25%
SF1000CX20 (1" MP)	35 (47.5)	50 (67.8)	100 (136)	115 (156)	135 (183)	-	-	-	-	-	
SF1500CX (1-1/2" MP)	110 (149)	110 (149)	160 (217)	200 (271)	-	-	-	-	-	-	20%
F250C (1/4" HP)	10 (13.6)	10 (13.6)	10 (13.6)	10 (13.6)	10 (13.6)	15 (20.3)	15 (20.3)	20 (27.1)	25 (33.9)	25 (33.9)	N/A
F375C (3/8" HP)	10 (13.6)	10 (13.6)	10 (13.6)	15 (20.3)	20 (27.1)	25 (33.9)	25 (33.9)	35 (47.5)	45 (61)	50 (67.8)	N/A
F562C (9/16" HP)	15 (20.3)	15 (20.3)	15 (20.3)	20 (27.1)	25 (33.9)	35 (47.5)	40 (54.20)	50 (67.86)	65 (88.1)	75 (102)	N/A
F562C40 (9/16" HP)	15 (20.3)	15 (20.3)	15 (20.3)	25 (33.9)	30 (40.7)	40 (54.2)	45 (61)	60 (81.3)	-	-	N/A
F562C40-312 (9/16" HP-40K)	25 (34)	25 (34)	25 (34)	35 (47.5)	45 (61)	55 (74.6)	65 (88.1)	85 (115)	-	-	N/A
F1000C43 (1" HP 43K)	30 (40.7)	50 (67.8)	65 (88.1)	75 (101.7)	100 (136)	125 (170)	150 (203)	180 (244)	-	-	25%
Connection	-	-	-	-	-	60,000 (4137)	70,000 (4825)	80,000 (5515)	100,000 (6895)	150,000 (10340)	
F250C100 (1/4" UHP)	-	-	-	-	-	20 (27)	30 (41)	35 (48)	50 (68)	-	N/A
F375C100 (3/8" UHP)	-	-	-	-	-	40 (54)	60 (81)	75 (102)	105 (143)	-	N/A
F562C100 (9/16" UHP)	-	-	-	-	-	75 (102)	90 (122)	100 (136)	125 (170)	-	N/A
F312C150 (5/16" UHP)	-	-	-	-	-	35 (48)	35 (48)	35 (48)	45 (61)	70 (95)	N/A

**All special material glands dry moly coated will have lower set torques. Reduce the torque found or computed from chart above percentages shown in this column.

REFERENCE: Completed Assembly Connection

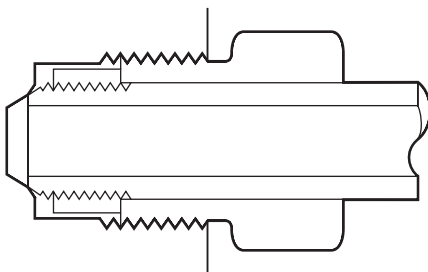


Figure 13

Completed Medium Pressure Connection

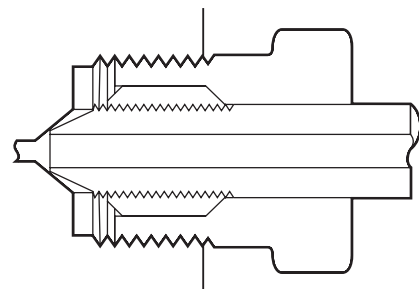


Figure 14

Completed High Pressure Connection

Section 7.0 Recommended Spare Parts

Recommended parts and tooling for all variations of Coning and Threading Machine Models AEGCTM-2 and AEGCTM-2E.

- | | |
|--|--|
| <p>7.1 Drive Belt: for the AEGCTM-2E-CE, p/n P-6958-1
for the AEGCTM-2, p/n P-1754-2</p> <p>7.2 Coning Blade Holder, p/n 201D-0159</p> <p>7.3 Coning & Threading DVD, p/n P-9930-D</p> | <p>7.4 Coning & Threading Gage</p> <p>7.5 Other Tooling: See Table 5.</p> <p>7.6 Cutting Oil, p/n P-8699</p> |
|--|--|

Table 5
Tooling Part Numbers

Tube Size OD x ID (in)	Collet (single)	Collets (set of 3)	Cutting Blades (set of 2)	Die Chaser (set of 4)	Tooling Kit*
Δ 1/4 x .109	CTM4C-S	CTM4C-2	CTM4BX	AEGCTM4D	AEGCTM4X-2
Δ 1/4 x .083	CTM4C-S	CTM4C-2	CTM4B	AEGCTM4D	AEGCTM4-2
5/16 x .062	CTM5C-S	CTM5C-2	CTM5B	AEGCTM5D	AEGCTM5-2
3/8 x .203	CTM6C-S	CTM6C-2	CTM6BX	AEGCTM6D	AEGCTM6X-2
3/8 x .125	CTM6C-S	CTM6C-2	CTM6B	AEGCTM6D	AEGCTM6-2
9/16 x .359	CTM9C-S	CTM9C-2	CTM9BXX	AEGCTM9D	AEGCTM9XX-2
9/16 x .312	CTM9C-S	CTM9C-2	CTM9BX	AEGCTM9D	AEGCTM9X-2
9/16 x .250	CTM9C-S	CTM9C-2	CTM9B40	AEGCTM9D	AEGCTM940-2
9/16 x .188**	CTM9C-S	CTM9C-2	CTM9B	AEGCTM9D	AEGCTM9-2
3/4 x .516	CTM12C-S	CTM12C-2	CTM12BX	AEGCTM12D	AEGCTM12X-2
3/4 x .438	CTM12C-S	CTM12C-2	CTM12B	AEGCTM12D	AEGCTM12-2
1 x .688	CTM16C-S	CTM16C-2	CTM16BX	AEGCTM16D	AEGCTM16X-2
1 x .562	CTM16C-S	CTM16C-2	CTM16B	AEGCTM16D	AEGCTM16-2
1 x .438	CTM16C-S	CTM16C-2	CTM16BXX	AEGCTM16D	AEGCTM16XX-2

Δ Not Recommend! Only very experienced users should attempt.
*Tooling Kit includes 3 collets, a set of 2 cutting blades and a set of 4 die chasers. **Same tooling used for 100k tubing.
Note: See the Drawings and Schematic section for information on additional parts not required as spare parts.

Section 8.0 Service

For service, contact the Parker Autoclave Engineers Representative in your area or contact the Parker Autoclave Engineers Customer Support Services at 800-458-0409 or by fax at 814-860-5811.

Little Giant® Pump Instructions

IMPORTANT - Read carefully for better service and longer life.

The pump which you have just purchased is of the highest quality workmanship and material. It has been engineered to give you long and trouble-free service.

Like any other piece of mechanical equipment, a little attention will help to keep it in perfect operating condition for a long time.

Pump Information and Suggestions

1. **SYMBOL OF ⚠. DO NOT CONNECT THIS UNIT TO VOLTAGE OTHER THAN THAT SHOWN ON THIS UNIT. IF YOU ARE IN DOUBT, PLEASE HAVE YOUR SERVICE-MAN CHECK. THE WARRANTY DOES NOT COVER UNITS BURNED OUT BY HIGH VOLTAGE CURRENT.**
2. **DO NOT LET THE UNIT OPERATE DRY.**
The pump is cooled by the flow of liquid through the pump. Running the pump dry may damage the seals or motor.
3. The pump must be submerged when it is operating. The intake volute must always be below the liquid level.



4. Keep the inlet screen and impeller free of debris or restrictions.
5. Be sure not to let the unit freeze in the winter as it may distort or break the pump.
6. Your unit is lifetime lubricated by the manufacturer. Lubricating the pump again may damage it and may void the warranty
7. Make sure the pump is disconnected from any power sources before performing any type of service or repair on the pump.

Pump Service Instructions

Very little service will be required by your pump. If for any reason the unit should fail to operate, follow the suggestions listed below:

1. Disconnect pump from electric current. Try it at another electrical outlet to make sure current is getting to the unit. If it still does not start:
2. Remove the intake screen.
3. Remove three (3) front screws as indicated by the arrows in Figure 15 and then remove the volute (cover over the impeller). (Do not remove other screws which may be exposed.)

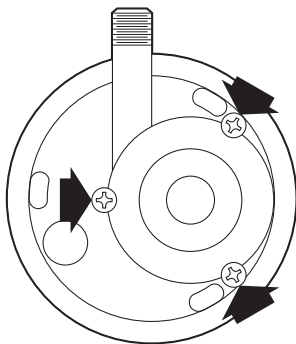


Figure 15
View of Pump Face

4. Lightly clean any corrosion or debris which may have clogged the volute or impeller. Use a brush and penetrating oil and lightly scrape away any deposits. Do not scratch the painted surface.
5. Turn the impeller by hand to make sure it turns freely. While keeping the impeller from touching anything, plug the unit in to see if the impeller will turn.
6. If it does, re-install the volute, three (3) screws and inlet screen.

IF FOR ANY REASON THESE OPERATIONS DO NOT RESTORE THE PUMP TO FULL SERVICE, CONTACT THE

LITTLE GIANT PUMP COMPANY OR IT'S AUTHORIZED SERVICE CENTER.

DO NOT, IN ANY CASE, OPEN THE SEALED PORTION OF THE UNIT OR REMOVE SCREWS OTHER THAN SHOWN BY ARROWS IN ILLUSTRATION #5.

DO NOT CUT THE ELECTRIC CORD OFF THE PUMP OR SHORTEN IT WHEN REMOVING THE PUMP. ONLY DISCONNECT PUMP FROM IT'S ORIGINAL CONNECTION.

VIOLATIONS OF THESE PROVISIONS OR THOSE SHOWN IN THE LITTLE GIANT PUMP SERVICE GUIDE WILL VIOLATE THE WARRANTY ON THE UNIT.

CONDITIONS: This unit is designed to circulate light oils and other mild liquids. It will operate under more severe conditions also, but the warranty in such cases will be subject to approval by the factory.

CONNECT TO SAME SERVICE VOLTAGE AS SHOWN ON THE PUMP.

Oil Heater Option

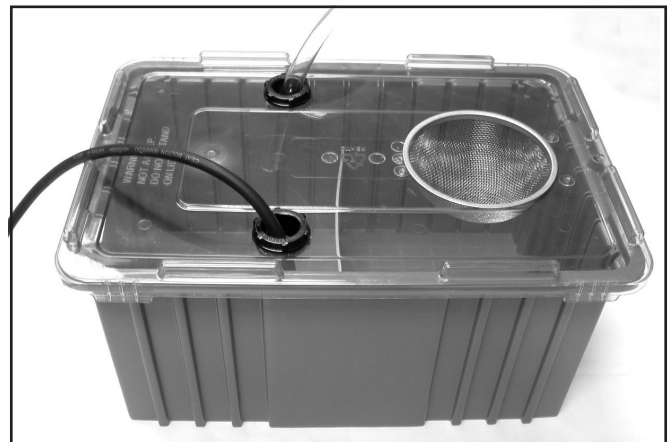
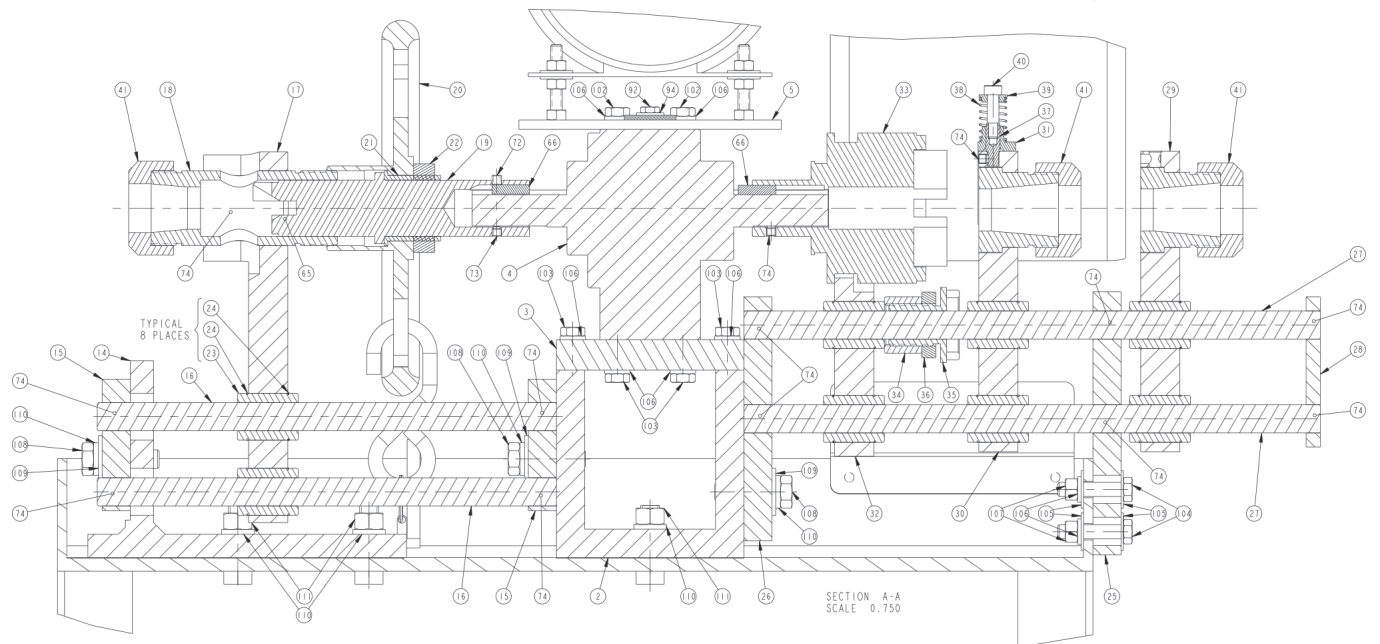
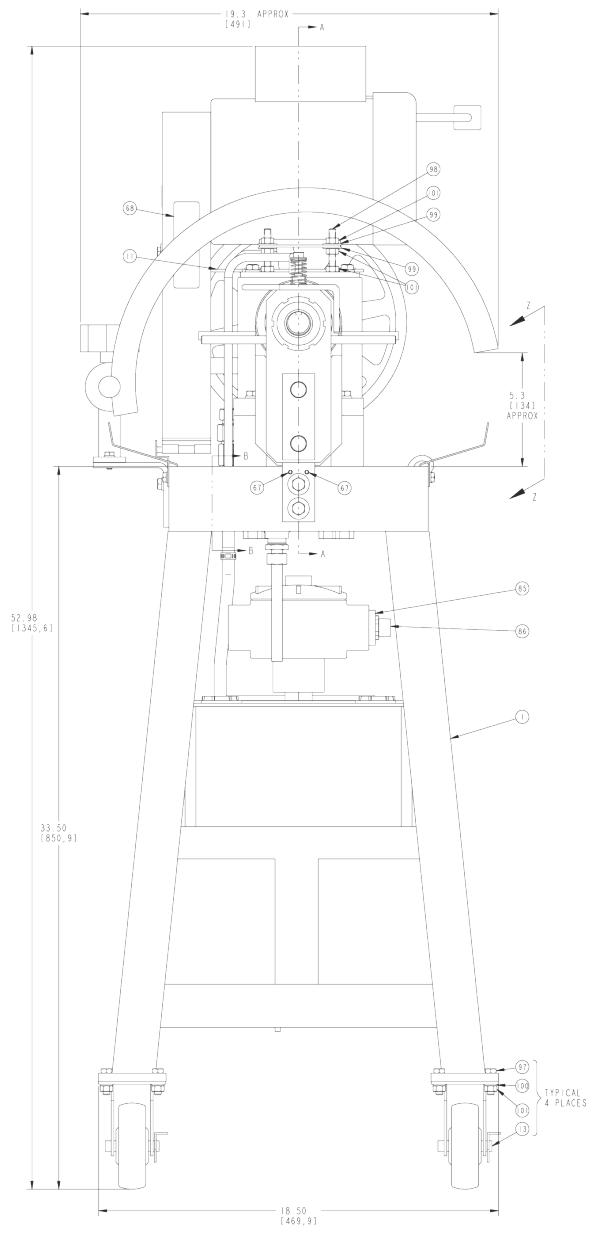
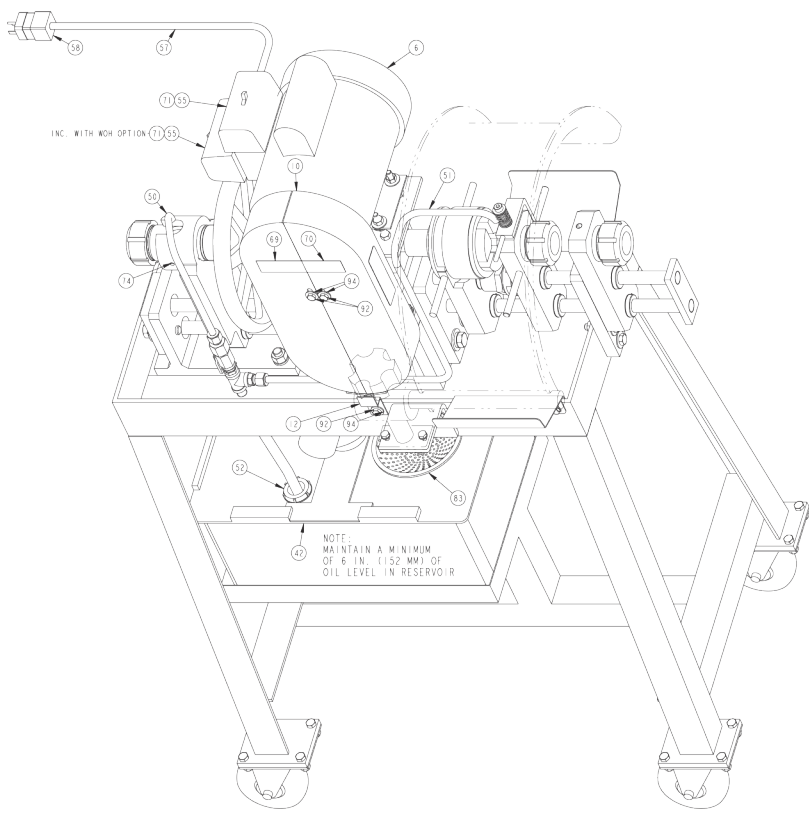
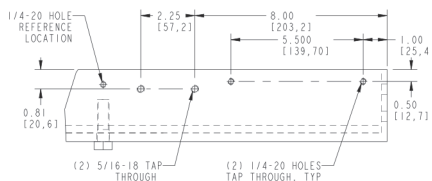
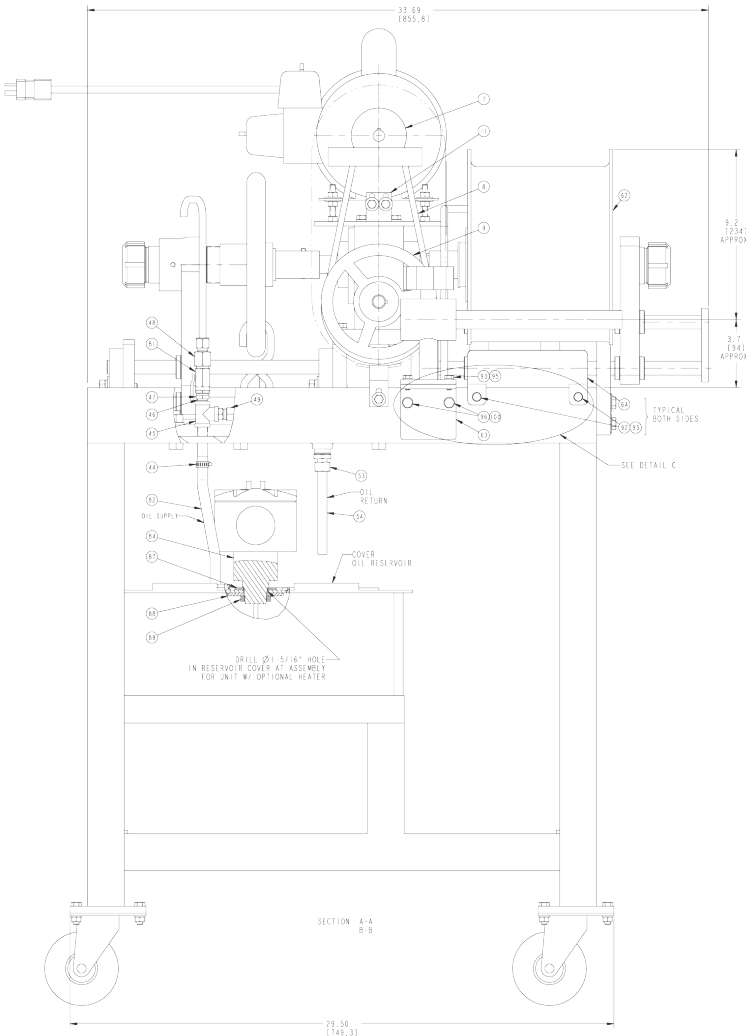


Figure 16
Pump/Reservoir Assembly

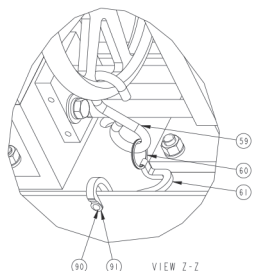
For operation below 65°F (18.3°C) see page 16.

1. The heater is used to heat the oil in cold conditions to help the flow of oil to the cutters and die chasers.
2. Oil heater is preset at the factory and should not need adjusting.
3. Be sure there is sufficient oil in the reservoir before using the oil heater.
4. If for any reason the oil heater fails to operate properly contact the factory for inspections.



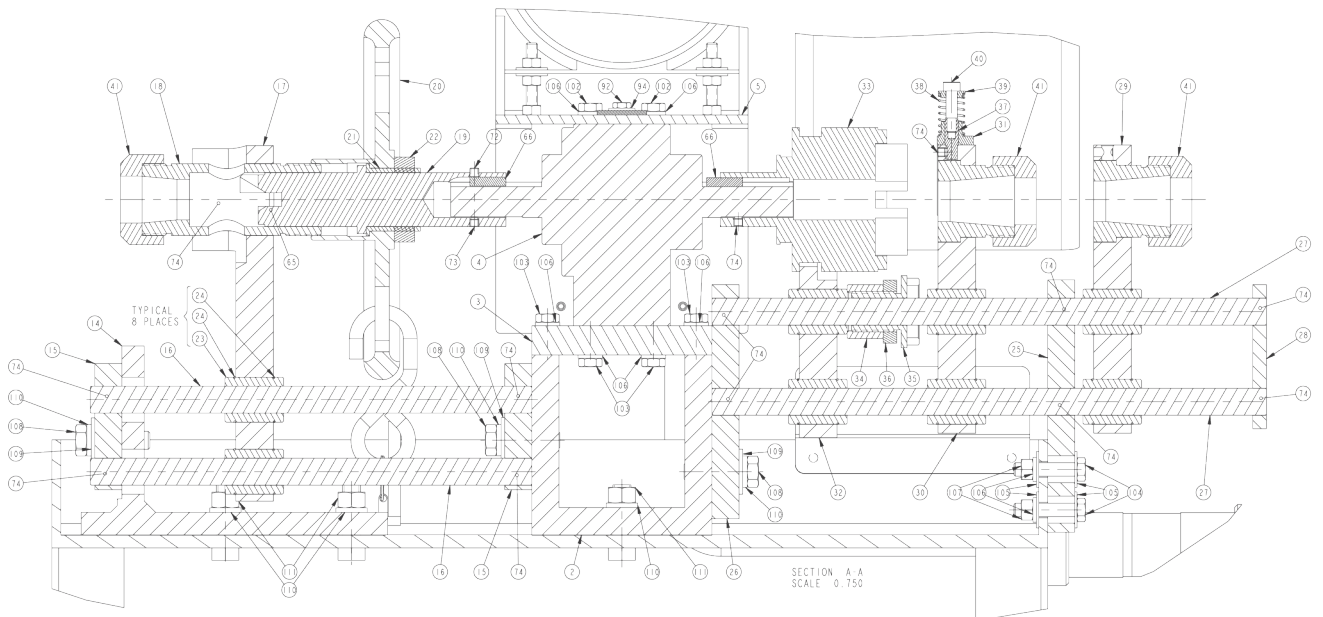
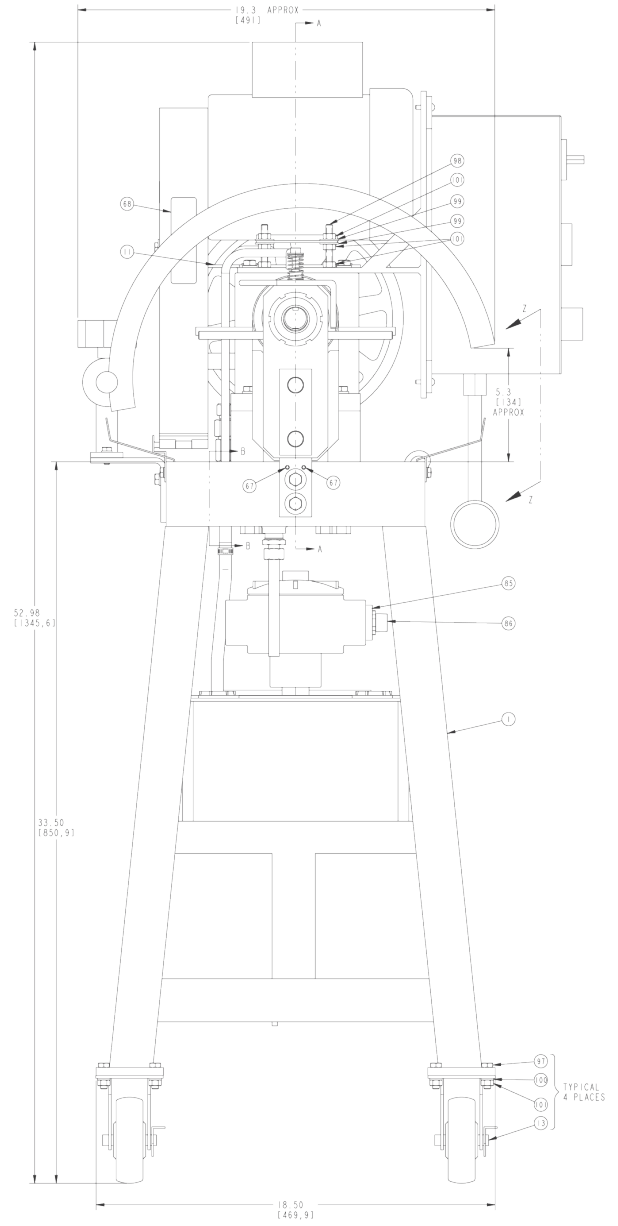
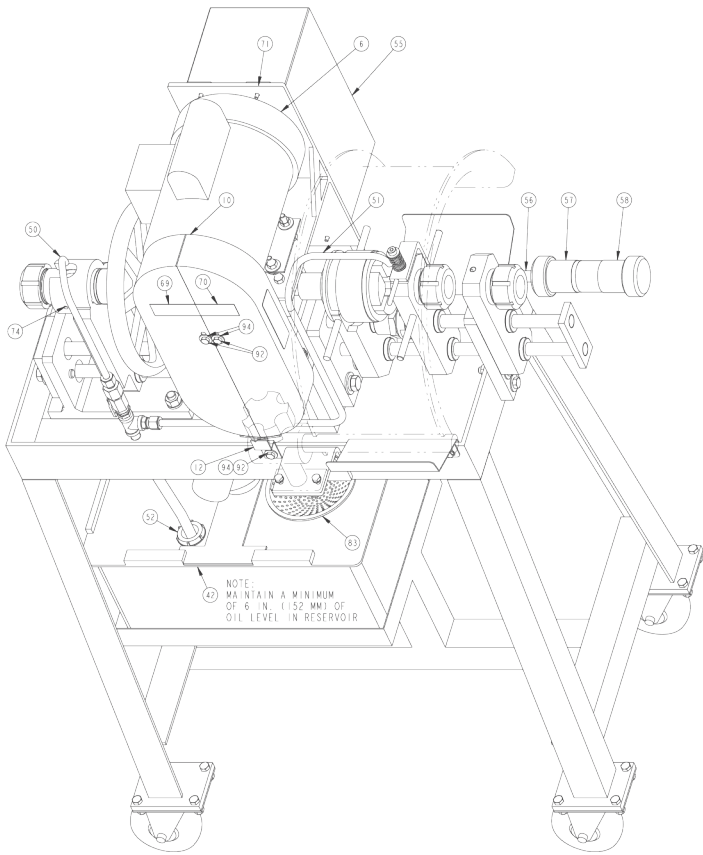


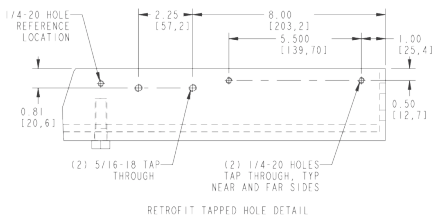
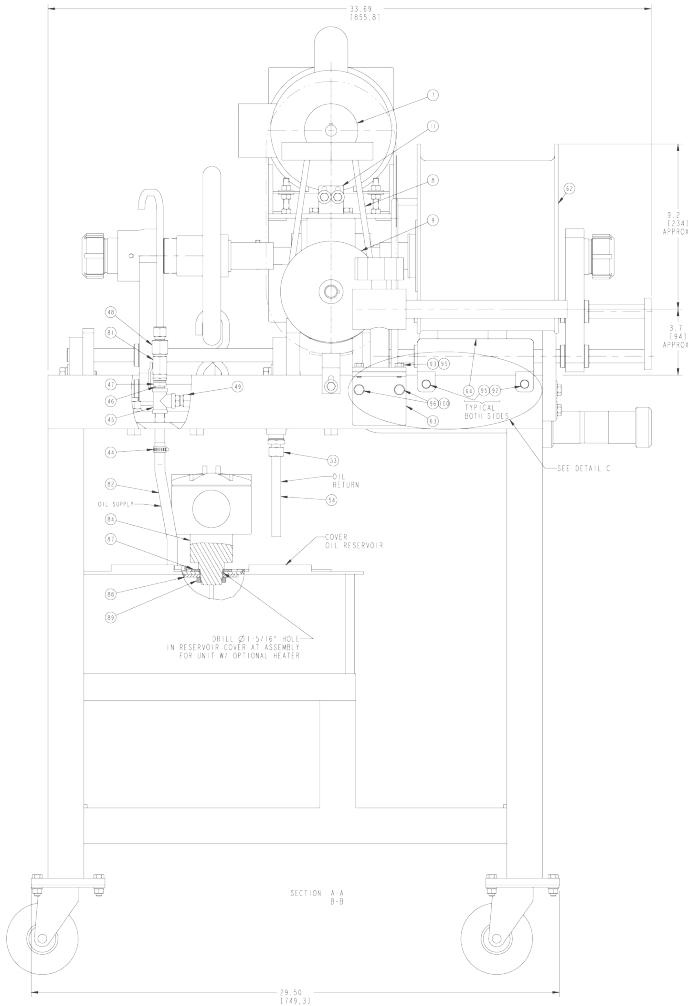
RETROFIT TAPPED HOLE DETAIL
 DETAIL C
 **** NOTE FOR END USER INSTALLING OIL GUARD RETROFIT KIT AEGCTM-20K ****
 DEPENDENT ON WHEN THE MACHINE WAS BUILT, THERE MAY NOT BE TAPPED HOLES IN THE STAND, SHOWN IN THIS DETAIL. IN THIS CASE, THE END USER MUST ADD THE TAPPED HOLES AS SHOWN IN ABOVE DETAIL VIEW.



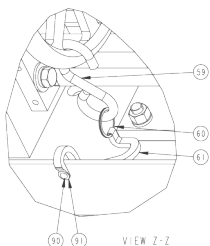
STANDARD ASSEMBLY (AEGCTM-2) PARTS LIST				
ITEM NO.	QTY.	PART NO.	DESCRIPTION	MATERIAL
1	1	201A-4287	STAND ASSEMBLY	CARBON STEEL
2	1	201A-4235	MOUNTING BLOCK	CAST IRON
3	1	101F-0032	GEAR REDUCER PLATE	CARBON STEEL
4	1	P-1872-2M	GEAR REDUCER	-
5	1	101F-0033	MOTOR PLATE	CARBON STEEL
6	1	P-1740	MOTOR, 1/2 HP, 1750 RPM 115/230V, 1 PHASE 60 HZ	-
7	1	P-1744	SHEAVE, 3" OD	STEEL
8	1	P-1754-1	DRIVE BELT	-
9	1	P-1746-2	SHEAVE, 6.25" OD	STEEL
10	1	301C-0135	BELT GUARD ASSEMBLY, AEGCTM-2	CARBON STEEL
11	1	201D-0025	BRACKET (BELT GUARD SUPPORT)	CARBON STEEL
12	1	101F-0667	BRACKET, LOWER BELT GUARD	CARBON STEEL
13	4	P-1795	SWIVEL CASTER, W/ WHEEL LOCK	COMML
14	1	201D-0214	SHAFT SUPPORT	CARBON STEEL
15	2	201D-0213	SHAFT SUPPORT C	CARBON STEEL
16	2	201D-0215	SHAFT, 1/2.25 OAL X .75 OD	STEEL
17	1	201D-0216	SLEEVE HOLDER	CARBON STEEL
18	1	201A-3066	SLEEVE	4150 ALLOY STEEL
19	1	201D-0159	HOLDER, CONING BLADE	CARBON STEEL
20	1	201A-4232	CONING FEED WHEEL	CAST IRON
21	1	101B-0792	FEED WHEEL BEARING	OILITE BRONZE
22	1	P-1844	STOP COLLAR	COMML STEEL
23	8	P-1752	BALL BUSHING	COMML
24	16	P-1753	RESTRAINING RING	STEEL
25	1	201D-0204	SHAFT SUPPORT A	CARBON STEEL
26	1	201D-0205	SHAFT SUPPORT B	CARBON STEEL
27	2	201D-0206	SHAFT, 1.5, 38 OAL X .75 OD	STEEL
28	1	201D-0209	SHAFT END STOP	CARBON STEEL
29	1	101F-1113	PIVOT ARM ASSY (W/ COLLET HOLDER & NO HANDLES)	-
30	1	102F-1113	PIVOT ARM ASSY (W/ COLLET HOLDER & HANDLES)	-
31	1	201D-0210	TUBE STOP	CARBON STEEL
32	1	201D-0211	DIE HEAD TRIP YOKE	CARBON STEEL
33	1	301A-5097	DIE HEAD	-
34	1	104B-0784	SPACER HEAD	316 SS
35	1	201D-0207	SPACER	316 SS
36	1	101F-1212	HEX NUT, 1 1/8-12 THRD	316 SS
37	1	201D-0229	TUBE STOP SHAFT	316SS
38	1	P-10013	SPRING	316 SS
39	1	101F-0516	SPRING WASHER	316 SS
40	1	P-10012	SCREW, SOC HD CAP, SHOULDER 1/4-20 X .75 LG	STEEL
41	3	P-1761	COLLET NUT	COMML
42	1	90298	OIL RESERVOIR	-
43	1	P-1797	OIL PUMP (NOT SHOWN)	-
44	2	90044	HOSE CLAMP	STAINLESS STEEL
45	1	P-1800	TEE, 1/4" NPT	BRASS
46	1	P-8880	CLOSED NIPPLE, 1/4 NPT	BRASS
47	1	P-9989	REDUCER, 3/8" NPT TO 1/4" NPT	BRASS
48	1	6FSC6N-B	COUPLING 3/8" O.D. TUBE X 3/8" NPT	BRASS
49	1	6MSC4N-B	ADAPTER, 3/8" NPTM TO 3/8" TUBE	BRASS
50	1	101F-2864	TUBE, OIL SUPPLY, TO CUTTING BLADES	316 SS
51	1	101F-2721	TUBE, OIL SUPPLY TO DIEHEAD	316 SS
52	2	P-1524	BUSHING	-
53	1	P-8818	CONNECTOR, 1/2" NPT TO 1/2" TUBE	BRASS
54	1	MS15-065	TUBE, 0.50 OD X 0.375 ID X 5.00 LG	316 SS
55	1	P-1745	CONTROL BOX, ON/OFF SWITCH	-
56	1	90200	HEATING ELEMENT (NOT SHOWN-USED WITH P-1745)	-
57	1	P-5005	POWER CORD, 120V	SJ00W-A 14 AWG
58	1	P-1054	POWER PLUG, MALE 120V	-
59	1	AE006234	HOOK	PLATED STEEL
60	1	AE006235	SPLIT RING	PLATED STEEL
61	1	90068	SASH CHAIN	304 SS
62	1	90598	OIL GUARD ASSEMBLY	LEXAN
63	1	101F-3394	BRACKET, OIL GUARD	CARBON STEEL
64	2	AE006198-01	DRIP GUARD	CARBON STEEL
65	2	101F-2579	THREADED PIN, CONING BLADE	17-4 PH
66	2	205A-3070	KEY, 1.00 X .25 X .25	CARBON STEEL
67	2	P-8695	ROLL PIN, .188 DIA. X 1.0 LG	CARBON STEEL
68	1	101F-5808	NAMEPLATE	BRUSHED ALUMINUM
69	1	AE001898	LABEL (PARKER LOGO)	-
70	1	AE001897	LABEL (AE LOGO)	-
71	2	P-3505	SCREW, FILLISTER HEAD	300 SERIES SS
72	1	P-3590	SCREW, SET, SOC HD, SCREW CUP PT 1/4-20 X .25 LG	STEEL
73	1	P-8087	SCREW, SET, SOC HD, HALF DOG 1/4-20 X .25 LG	STEEL
74	14	P-8696	SCREW, SET, SOC HD, HALF DOG 1/4-28 X .25 LG	STEEL
75	1	P-9999	HARDWARE KIT (SEE EXTENDED PARTS LIST)	-
76	1	101F-2845	DIE HEAD ADJUSTMENT TOOL (NOT SHOWN)	316 SS
77	1	CTM_SETUP_KIT	CONE & THREAD MACHINE SETUP TUBES (NOT SHOWN)	316 SS
78	1	P-1796	SPANNER WRENCH (NOT SHOWN)	-
79	1	P-8699	CUTTING OIL, 3.5 GAL, (NOT SHOWN)	-
80	1	P-9930-D	CONING & THREADING INSTRUCTION DVD (NOT SHOWN)	-
81	1	BALLVALVE	BALL VALVE, SUPPLIED W/ RESERVOIR HARDWARE KIT	BRASS
82	1	PLASTICTUBE	TUBE, OIL SUPPLY (INCLUDED W/ PUMP)	STAINLESS STEEL
83	1	90404	SCREEN (INCLUDED W/ OIL RESERVOIR)	STAINLESS STEEL

ADDITIONAL PARTS INCLUDED WITH AEGCTM-2W0H (OIL HEATER) * ITEM #55 (QTY 1), ITEM #71 (QTY 2)				
84	1	90174	HEATER, 250 WATT, 120V	-
85	1	90179	REDUCER 1 1/4 NPT TO 1/2 NPTF	-
86	1	90180	STRAIN RELIEF 1/2 NPT TO 1/4 GAGE WIRE	-
87	1	101F-1371	HEATER BRACKET	300 SERIES SS
88	1	HW125R	FLAT WASHER, 1 1/4	PLATED STEEL
89	1	P-1847	TRU SEAL FITTING 1" NPT	CAD PLATED STEEL



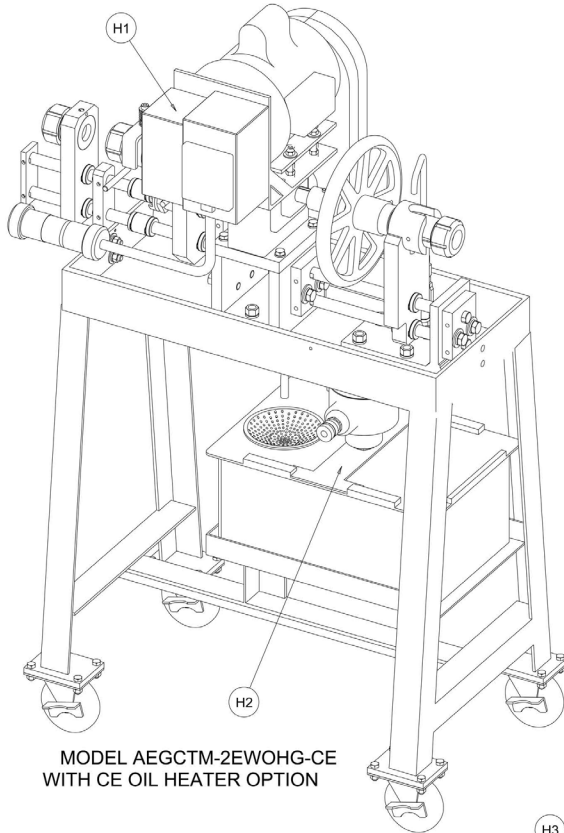


RETROFIT TAPPED HOLE DETAIL
DETAIL C
**** NOTE FOR END USER: INSTALLING OIL GUARD RETROFIT KIT AEGCTM-20K ****
DEPENDENT ON WHEN THE MACHINING WAS BUILT, THERE MAY NOT BE TAPPED HOLES IN THE STAND SHOWN IN THIS DETAIL. IN THIS CASE, THE END USER MUST ADD THE TAPPED HOLES AS SHOWN IN ABOVE DETAIL VIEW.

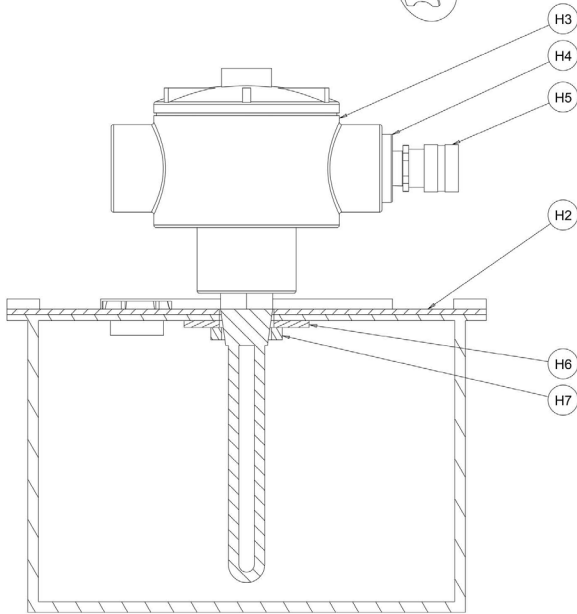


STANDARD CE ASSEMBLY (AEGCTM-2-CE) PARTS LIST				
ITEM NO.	QTY.	PART NO.	DESCRIPTION	MATERIAL
1	1	201A-4287	STAND ASSEMBLY	CARBON STEEL
2	1	201A-4235	MOUNTING BLOCK	CAST IRON
3	1	101F-0032	GEAR REDUCER PLATE	CARBON STEEL
4	1	P-1872-2M	GEAR REDUCER	-
5	1	201D-1151	MOTOR PLATE	CARBON STEEL
6	1	P-6956	MOTOR, 1/2 HP, 1425 RPM 110/220V, 1 PHASE 50 HZ	-
7	1	P-1744	SHEAVE, 3" OD	STEEL
8	1	P-6958-1	DRIVE BELT	-
9	1	P-6957-2	SHEAVE, 5.65" OD	STEEL
10	1	301C-0135	BELT GUARD ASSEMBLY, AEGCTM-2	CARBON STEEL
11	1	201D-0025	BRACKET (BELT GUARD SUPPORT)	CARBON STEEL
12	1	101F-0667	BRACKET, LOWER BELT GUARD	CARBON STEEL
13	4	P-1795	SWIVEL CASTER, W/ WHEEL LOCK	COMML
14	1	201D-0214	SHAFT SUPPORT	CARBON STEEL
15	2	201D-0213	SHAFT SUPPORT C	CARBON STEEL
16	2	201D-0215	SHAFT, 12.25 OAL X .75 OD	STEEL
17	1	201D-0216	SLEEVE HOLDER	CARBON STEEL
18	1	201A-3066	SLEEVE	4150 ALLOY STEEL
19	1	201D-0159	HOLDER, CONING BLADE	CARBON STEEL
20	1	201A-4232	CONING FEED WHEEL	CAST IRON
21	1	101B-0792	FEED WHEEL BEARING	OILITE BRONZE
22	1	P-1844	STOP COLLAR	COMML STEEL
23	8	P-1752	BALL BUSHING	COMML
24	16	P-1753	RESTRAINING RING	STEEL
25	1	201D-0204	SHAFT SUPPORT A	CARBON STEEL
26	1	201D-0205	SHAFT SUPPORT B	CARBON STEEL
27	2	201D-0206	SHAFT, 15.38 OAL X .75 OD	STEEL
28	1	201D-0209	SHAFT END STOP	CARBON STEEL
29	1	101F-1113	PIVOT ARM ASSY (W/ COLLET HOLDER & NO HANDLES)	-
30	1	102F-1113	PIVOT ARM ASSY (W/ COLLET HOLDER & HANDLES)	-
31	1	201D-0210	TUBE STOP	CARBON STEEL
32	1	201D-0211	DIE HEAD TRIP YOKE	CARBON STEEL
33	1	301A-5097	DIE HEAD	-
34	1	104B-0784	SPACER HEAD	316 SS
35	1	201D-0207	SPACER	316 SS
36	1	101F-1212	HEX NUT, 1 1/8-12 THRD	316 SS
37	1	201D-0229	TUBE STOP SHAFT	316SS
38	1	P-10013	SPRING	316 SS
39	1	101F-0516	SPRING WASHER	316 SS
40	1	P-10012	SCREW, SOC HD CAP, SHOULDER 1/4-20 X .75 LG	STEEL
41	3	P-1761	COLLET NUT	COMML
42	1	90298	OIL RESERVOIR	-
43	1	50528	OIL PUMP (NOT SHOWN)	-
44	2	90044	HOSE CLAMP	STAINLESS STEEL
45	1	P-1800	TEE, 1/4" NPT	BRASS
46	1	P-8880	CLOSED NIPPLE, 1/4 NPT	BRASS
47	1	P-9989	REDUCER, 3/8" NPT TO 1/4" NPT	BRASS
48	1	6F5C6N-B	COUPLING 3/8" O.D. TUBE X 3/8" NPT	BRASS
49	1	6M5C4N-B	ADAPTER, 3/8" NPTM TO 3/8" TUBE	BRASS
50	1	101F-2864	TUBE, OIL SUPPLY, TO CUTTING BLADES	316 SS
51	1	101F-2721	TUBE, OIL SUPPLY TO DIEHEAD	316 SS
52	2	P-1524	BUSHING	-
53	1	P-8818	CONNECTOR, 1/2" NPT TO 1/2" TUBE	BRASS
54	1	MS15-065	TUBE, 0.50 OD X 0.375 ID X 5.00 LG	316 SS
55	1	201C-3905	MOTOR CONTROL STATION, 220 VAC, CE	-
56	1	POWERCORD	CORD, POWER, 220V (INCLUDED WITH CONTROL STATION)	-
57	1	P-6085	POWER CONNECTOR, TWIST-LOCK MALE 30A/250V	-
58	1	P-6084	POWER CONNECTOR, TWIST-LOCK FEMALE 30A/250V	-
59	1	AE006234	HOOK	PLATED STEEL
60	1	AE006235	SPLIT RING	PLATED STEEL
61	1	90068	SASH CHAIN	304 SS
62	1	90598	OIL GUARD ASSEMBLY	LEXAN
63	1	101F-3394	BRACKET, OIL GUARD	CARBON STEEL
64	2	AE006198-01	DRIP GUARD	CARBON STEEL
65	2	101F-2579	THREADED PIN, CONING BLADE	17-4 PH
66	2	205A-3070	KEY, 1.00 X .25 X .25	CARBON STEEL
67	2	P-8695	ROLL PIN, .188 DIA. X 1.0 LG	CARBON STEEL
68	1	101F-5808	NAMEPLATE	BRUSHED ALUMINUM
69	1	AE001898	LABEL (PARKER LOGO)	-
70	1	AE001897	LABEL (AE LOGO)	-
71	4	P-1607	SCREW, RD HD MACH, #10-24 X 0.75 LG	300 SERIES SS
72	1	P-3590	SCREW, SET, SOC HD, SCREW CUP PT 1/4-20 X .25 LG	STEEL
73	1	P-8087	SCREW, SET, SOC HD, HALF DOG 1/4-20 X .25 LG	STEEL
74	14	P-8696	SCREW, SET, SOC HD, HALF DOG 1/4-28 X .25 LG	STEEL
75	1	P-9999	HARDWARE KIT (SEE EXTENDED PARTS LIST)	-
76	1	101F-2845	DIE HEAD ADJUSTMENT TOOL (NOT SHOWN)	316 SS
77	1	CTM_SETUP_KIT	CONE & THREAD MACHINE SETUP TUBES (NOT SHOWN)	316 SS
78	1	P-1796	SPANNER WRENCH (NOT SHOWN)	-
79	1	P-8699	CUTTING OIL, 3.5 GAL., (NOT SHOWN)	-
80	1	P-9930-D	CONING & THREADING INSTRUCTION DVD (NOT SHOWN)	-
81	1	BALLVALVE	BALL VALVE, SUPPLIED W/ RESERVOIR HARDWARE KIT	BRASS
82	1	PLASTICTUBE	TUBE, OIL SUPPLY (INCLUDED W/ PUMP)	STAINLESS STEEL
83	1	90404	SCREEN (INCLUDED W/ OIL RESERVOIR)	STAINLESS STEEL

ADDITIONAL PARTS INCLUDED WITH AEGCTM-2E-CE (OIL HEATER) AND ITEM #55 CHANGES TO P/N 202C-3905				
84	1	90174-220CE	HEATER, 250 WATT, 220V, CE	-
85	1	90179	REDUCER 1/4 NPT TO 1/2 NPT	-
86	1	90180	STRAIN RELIEF 1/2 NPT TO 1/4 GAGE WIRE	-
87	1	101F-1371	HEATER BRACKET	300 SERIES SS
88	1	HW125R	FLAT WASHER, 1 1/4	PLATED STEEL
89	1	P-1847	TRU SEAL FITTING 1" NPT	CAD PLATED STEEL



MODEL AEGCTM-2EWOH-CE WITH CE OIL HEATER OPTION



CE OIL HEATER & RESERVOIR CUT-AWAY VIEW

OIL HEATER (WOH) PARTS LIST - AEGCTM-2WOH

ITEM NO.	DESCRIPTION	PART NUMBER	QTY
H1	CONTROL STATION, 220 VOLT, CE, DUAL BREAKER	202C-3905	1
H2	HEATER BRACKET	101F-1371	1
H3	HEATER, 250 WATT, 220 VOLT, CE	90174-220CE	1
H4	REDUCER, 1-1/4 NPTM TO 1/2 NPTF	90179	1
H5	STRAIN RELIEF, 1/2 NPTM TO 14 GAGE WIRE	90180	1
H6	WASHER, FLAT, 1-1/4 OD	HW125R	1
H7	TRU SEAL FITTING, 1" NPT	P-1847	1

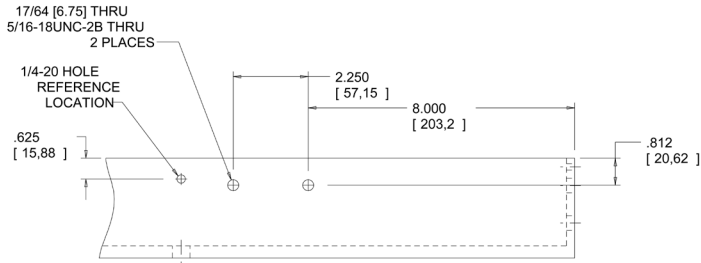
AEGCTM-2E-CE ALPHABETICAL PARTS LIST (SEE SHEETS #4 & #5)

ITEM NO.	DESCRIPTION	PART NUMBER	QTY
76	ADAPTER, 3/8" FNPT TO 3/8" TUBE	P-6601	1
81	ADAPTER, 3/8" MNPT TO 3/8" TUBE	P-0928	1
51	BALL BUSHING	P-1752	8
77	BALL VALVE, SUPPLIED W/ RESERVOIR HARDWARE KIT	BALLVALVE	1
1	BELT GUARD ASSEMBLY, AEGCTM-2	301C-0135	1
74	BRACKET (BELT GUARD SUPPORT)	201D-0025	1
10	BRACKET, LOWER BELT GUARD	101F-0667	1
11	BUSHING	P-1524	2
80	CLOSED NIPPLE, 1/4 NPT	P-8880	1
24	COLLET NUT	P-1761	3
29	CONING FEED WHEEL	201A-4232	1
3	CONTROL STATION	201C-3905	1
4	CORD, POWER, 220V	POWERCORD	1
38	DIE HEAD	301A-5097	1
65	DIE HEAD TRIP YOKE	201D-0211	1
73	DRIVE BELT	P-6958-1	1
43	FEED WHEEL BEARING	101B-0792	1
47	FLAT WASHER, 1/2	HW050R	6
8	FLAT WASHER, 1/4	HW025R	5
68	FLAT WASHER, 3/8	HW038R	4
17	FLAT WASHER, 5/16	HW031R	8
54	GEAR REDUCER	P-1872-1M	1
56	GEAR REDUCER PLATE	101F-0032	1
58	HEX NUT, 1 1/8-12 THRD	101F-1212	1
62	HEX NUT, 1/2-13	P-0168	6
67	HEX NUT, 3/8-16	P-0881	2
16	HEX NUT, 5/16-18	P-0840	28
31	HOLDER, CONING BLADE	201D-0159	1
82	HOSE CLAMP	90044	1
83	HOSE CONNECTOR	P-8818	1
34	KEY, 1.00 X .25 X .25	205A-3070	2
46	SPRING LOCKWASHER, 1/2, REGULAR	P-3098	12
36	SPRING LOCKWASHER, 3/8, REGULAR	P-0882	14
22	SPRING LOCKWASHER, 5/16, REGULAR	P-0841	16
33	MOTOR PLATE	201D-1151	1
2	MOTOR, 1/2 HP, 1425 RPM 110/220V, 1 PHASE 50 HZ	P-6956	1
63	MOUNTING BLOCK	201A-4235	1
14	NAME PLATE	P-0419	1
84	OIL PUMP	50528	1
13	OIL RESERVOIR	90298	1
66	PIVOT ARM ASSY (W/ COLLET HOLDER & HANDLES)	102F-1113	1
44	PIVOT ARM ASSY (W/ COLLET HOLDER & NO HANDLES)	101F-1113	1
6	POWER CONNECTOR, TWIST-LOCK FEMALE 30A/250V	P-6084	1
5	POWER CONNECTOR, TWIST-LOCK MALE 30A/250V	P-6085	1
79	REDUCER, 3/8" NPT TO 1/4" NPT	P-9989	1
52	RESTRAINING RING	P-1753	16
18	ROLL PIN, .188 DIA. X 1.0 LG	P-8695	2
87	SCREEN, OIL RESERVOIR	90404	1
45	SCREW, HEX HD CAP, 1/2-13 X 1.75 LG	P-3365	6
9	SCREW, HEX HD CAP, 1/4-20 X 0.50 LG	HH025NC0050	5
35	SCREW, HEX HD CAP, 3/8-16 X 0.75 LG	HH038NC0075	4
55	SCREW, HEX HD CAP, 3/8-16 X 1.38 LG	P-3605	8
70	SCREW, HEX HD CAP, 3/8-16 X 1.75 LG	P-3160	2
21	SCREW, HEX HD CAP, 5/16-18 X 1.00 LG	P-3629	16
85	SCREW, RD HD MACH, #10-24 X 0.75 LG	P-1807	4
53	SCREW, SET, SOC HD, HALF DOG 1/4-20 X .25 LG	P-8087	1
27	SCREW, SET, SOC HD, HALF DOG 1/4-28 X .25 LG	P-8696	14
32	SCREW, SET, SOC HD, SCREW CUP PT 1/4-20 X .25 LG	P-3590	1
39	SCREW, SOC HD CAP, SHOULDER 1/4-20 X .75 LG	P-10012	1
61	SHAFT END STOP	201D-0209	1
49	SHAFT SUPPORT	201D-0214	1
69	SHAFT SUPPORT A	201D-0204	1
64	SHAFT SUPPORT B	201D-0205	1
48	SHAFT SUPPORT C	201D-0213	2
50	SHAFT, 12.25 OAL X .75 OD	201D-0215	2
60	SHAFT, 15.38 OAL X .75 OD	201D-0206	2
72	SHEAVE, 2.8" OD	P-1744	1
75	SHEAVE, 5.65" OD	P-6957-1	1
25	SLEEVE	201A-3066	1
26	SLEEVE HOLDER	201D-0216	1
59	SPACER	201D-0207	1
57	SPACER HEAD	104B-0784	1
41	SPRING	P-10013	1
40	SPRING WASHER	101F-0516	1
12	STAND ASSEMBLY	201A-4287	1
30	STOP COLLAR	P-1844	1
23	SWIVEL CASTER, W/ WHEEL LOCK	P-1795	4
78	TEE, 1/4" NPT	P-1800	1
86	THREADED PIN, CONING BLADES	101F-2579	2
15	THREADED ROD, 5/16-18 X 2.25 LG	HA031NC0225	4
7	TUBE STOP	201D-0210	1
42	TUBE STOP SHAFT	201D-0229	1
19	TUBE, DRAIN	101F-2118	1
20	TUBE, OIL SUPPLY (INCLUDED W/ PUMP)	PLASTICTUBE	1
37	TUBE, OIL SUPPLY TO DIEHEAD	101F-2721	1
28	TUBE, OIL SUPPLY, TO CUTTING BLADES	101F-2864	1

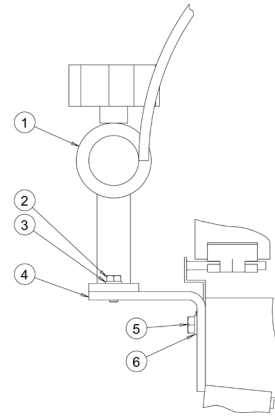
OIL SPLASH GUARD PARTS LIST: KIT PART NUMBER - AEGCTM-2GK

Item No.	DESCRIPTION	PART NUMBER	QTY.
1	Oil Guard	90598	1
2	Screw	90596	2
3	Lockwasher, Spring, 1/4, Regular	P-3701	2
4	Bracket, Oil Guard	191F-3394	1
5	Screw	90597	2
6	Lockwasher, Spring, 5/16, Regular	P-0841	2

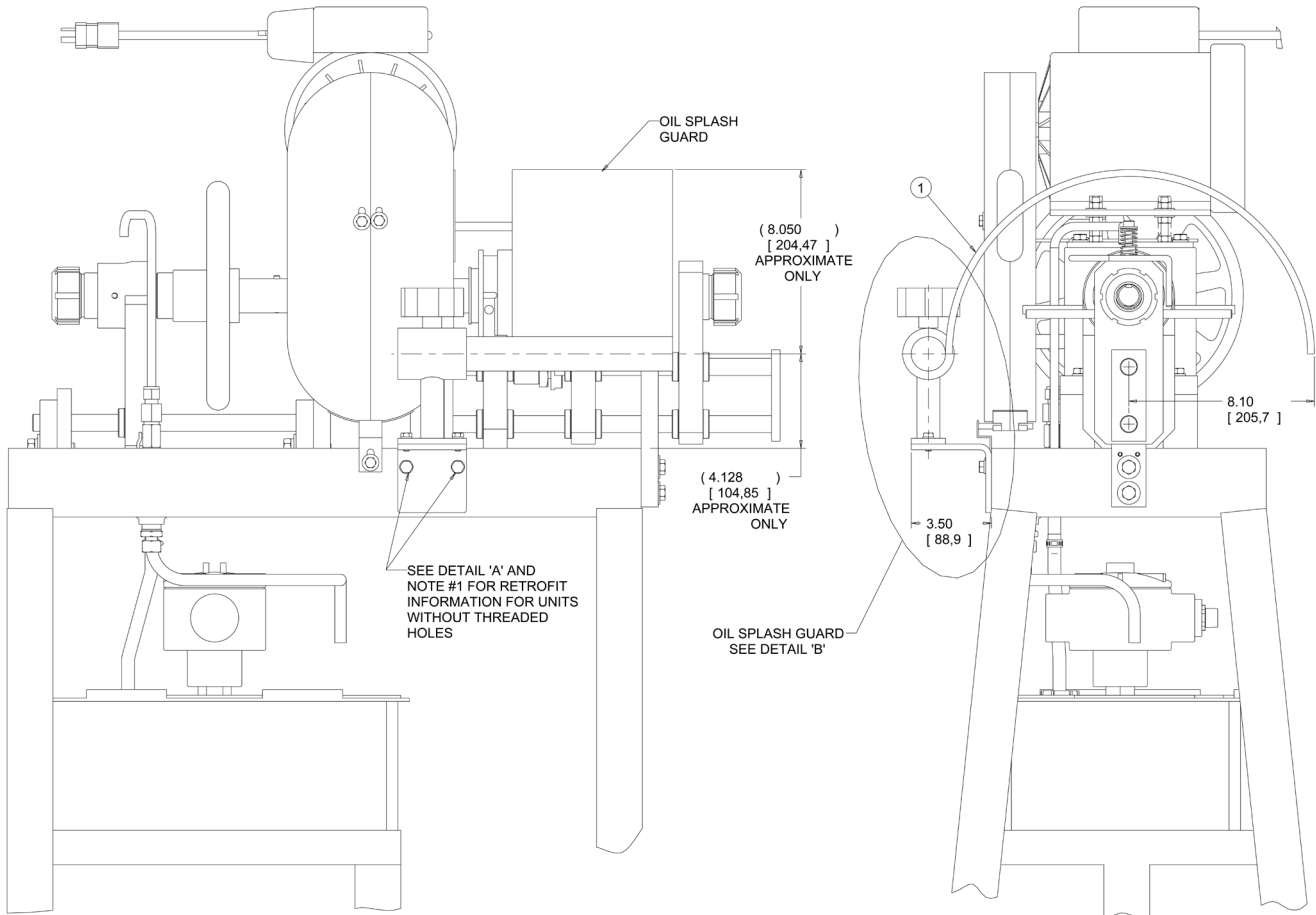
NOTE FOR END USERS REGARDING INSTALLATION OF OIL SPLASH GUARD RETROFIT KIT, P/N AEGCTM-2E-CEGK: SOME EARLIER MODELS OF THE CONING & THREADING MACHINE DID NOT HAVE THE 5-18 TAPPED HOLES IN THE STAND FOR MOUNTING THE OIL GUARD ASSEMBLY. THE END USER MUST DRILL (\varnothing 17/64) AND TAP TWO (5/16-18UNC-2B) HOLES AT THE LOCATIONS SHOWN IN DETAIL 'C' PRIOR TO INSTALLING OIL GUARD.



DETAIL 'A'
RETROFIT DETAILS

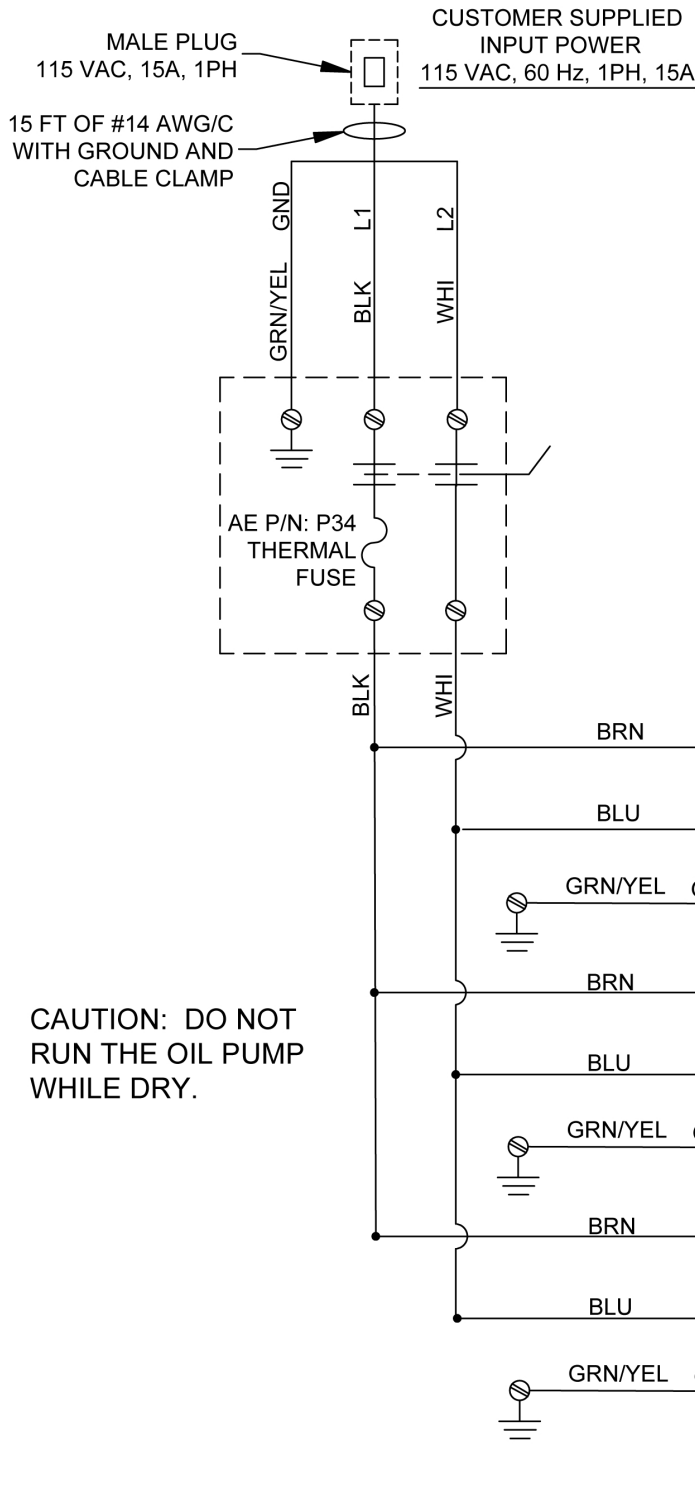


DETAIL 'B'
OIL SPLASH GUARD ASSEMBLY
MOUNTING DETAILS



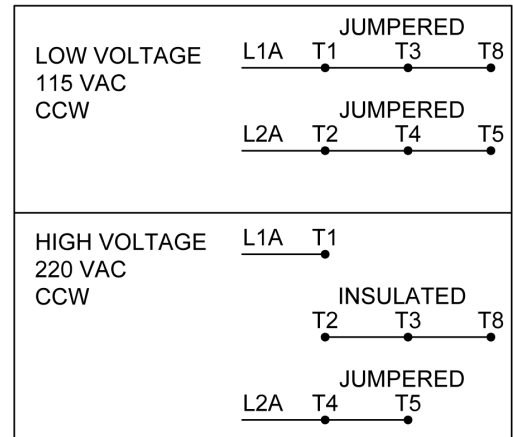
NOTES:

1. It is the customer's responsibility to supply a safety disconnect ahead of the incoming power to the controller (10,000 amp interrupting capacity).
2. Induction motor to have ground conductor carried through to the ground screw.
3. Pump to have ground conductor carried through to the ground screw.
4. Heater to have ground conductor carried through to the ground screw.
5. FLC = Full Load Current



CAUTION: DO NOT RUN THE OIL PUMP WHILE DRY.

MOTOR WIRING



MOTOR
RATED: 1/2 HP (0.37 Kw) @
115 / 208-230 VAC,
60 Hz, 1PH, 1725 RPM,
IP44
FLC: 9.0 / 4.5 A - 4.5 A

18/3C WITH GROUND

OIL PUMP
LOAD: 70 W @ 115 VAC,
60 Hz, 1PH
THERMALLY PROT.
FLC: 1.1 A

RESISTIVE LOAD HEATER (OPTIONAL)
LOAD: 250 W @ 115 VAC, 1PH
FLC: 2.27 AMPS

18/3C WITH GROUND

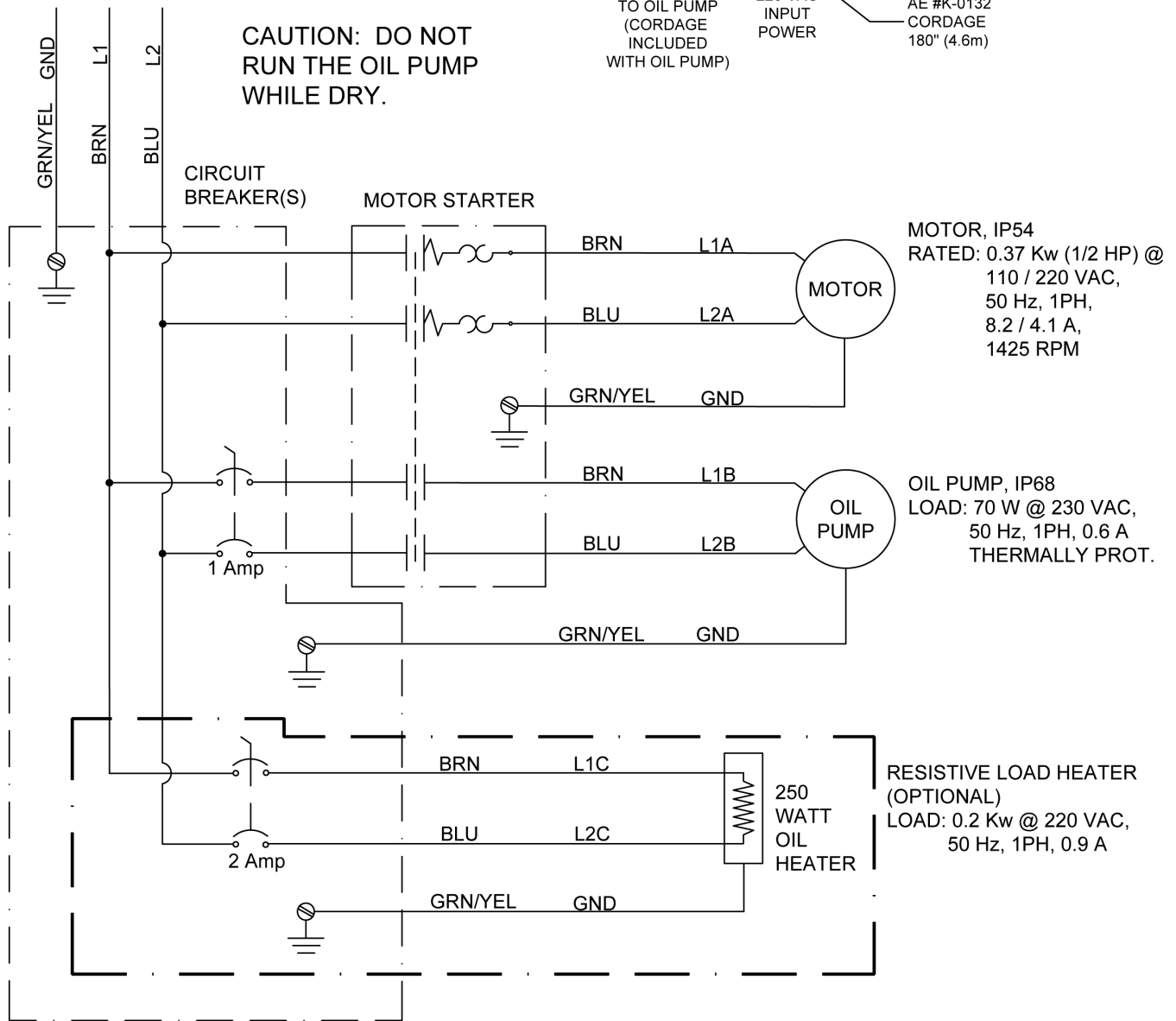
AEGCTM-2-WIRING.DWG

NOTES:

1. One AE #K-0077 strain relief to be provided loose for 1/2 HP Motor junction box.
2. Wires L1 and L2 internal to the enclosures to be #14 AWG, Black, MTW.
3. Earth ground points to be labelled "PE".
4. Only one ground wire per terminal.
5. All ground wires to be green with yellow stripe.
6. Set motor Over Limit (O/L) to 5.1 Amp.
7. End user must install male connector (AE #P-6085) on end of machine's power cord and female connector (AE #P-6084) on end of power source cord.

INPUT POWER
220VAC, 50/60 Hz
SINGLE PHASE

CAUTION: DO NOT RUN THE OIL PUMP WHILE DRY.



AEGCTM-CE-WIRING.DWG



WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH,
PERSONAL INJURY AND PROPERTY DAMAGE.

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