CONTINENTAL

PIPE & TUBE CUT-OFF MACHINES

MODEL 2A CUT-OFF MACHINE

INSTRUCTION AND PARTS MANUAL

CONTINENTAL MODEL 2A

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INSTRUCTION AND PARTS MANUAL

TABLE OF CONTENTS **SECTION**

W A R R A N T Y

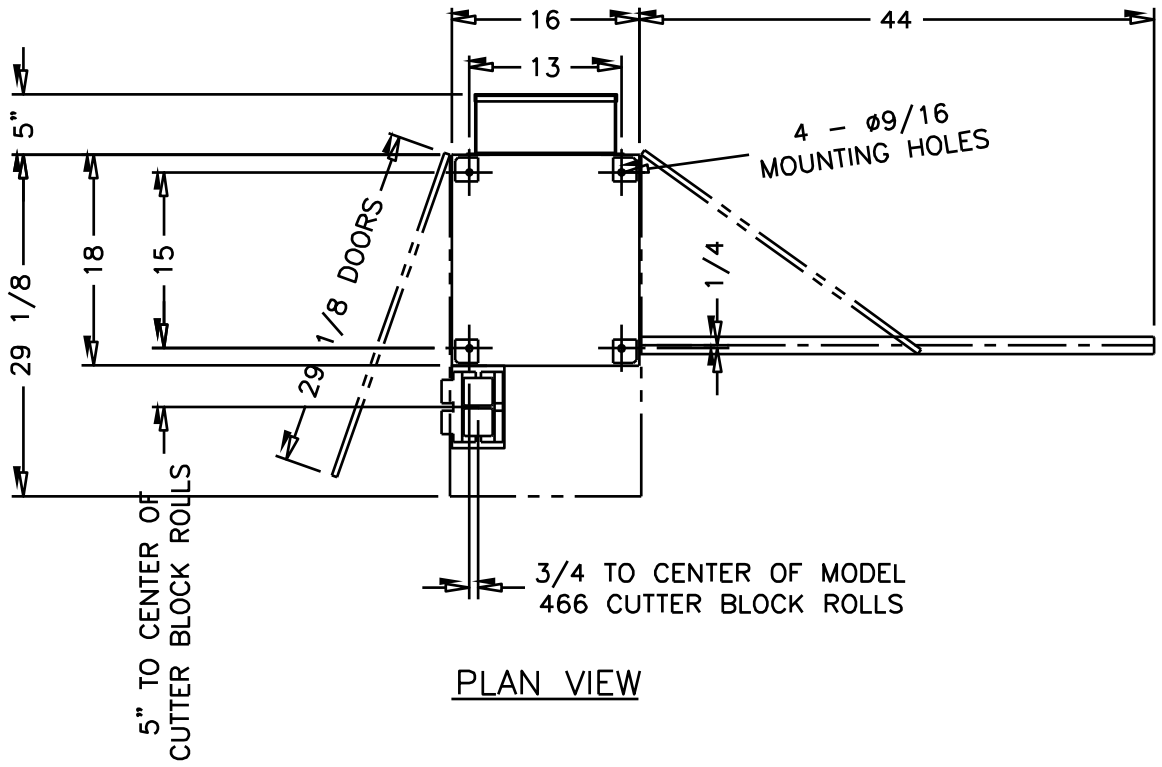
The equipment delivered hereunder is guaranteed to be free from defective material and workmanship for a period of six (6) months from date of delivery, when given normal and proper usage, and when used by the original purchaser.

Notice of any claimed defect must be given to seller within thirty (30) days after discovery of any claimed defect. During warranty period, seller's obligation shall be limited to delivering to the buyer, F.O.B. seller's plant, replacements of any equipment or parts, or repairing such equipment or parts, found defective by inspection.

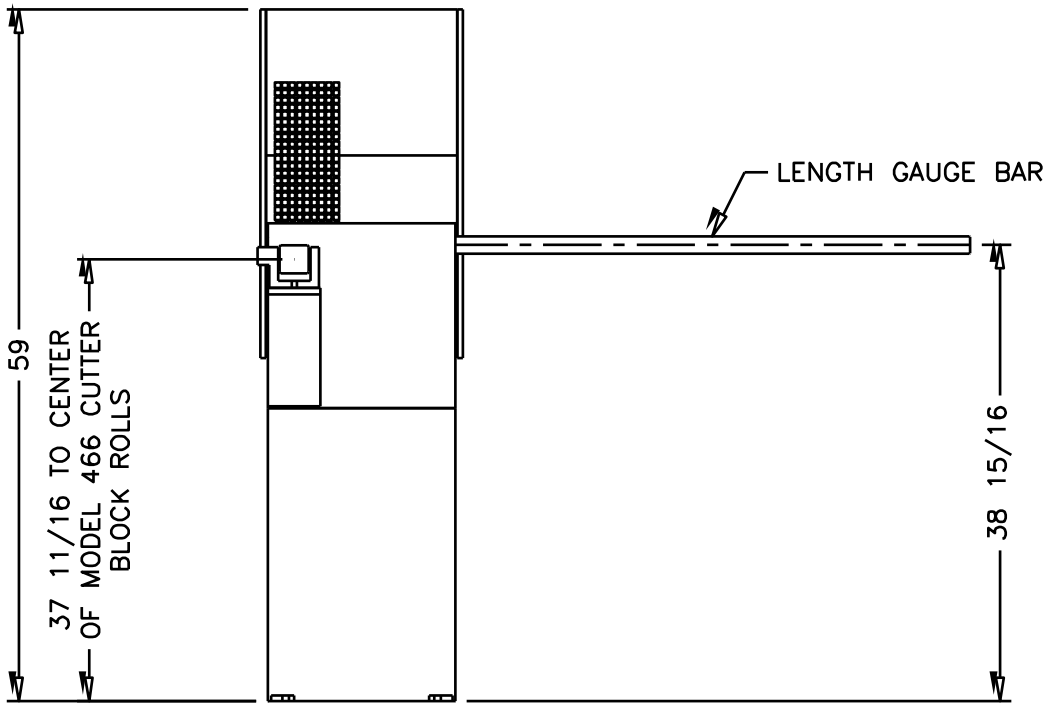
Any article not of seller's manufacture included in this proposal is sold under such warranty only as the makers give us, and we are able to enforce, but it is not guaranteed by seller in any way. No equipment or material shall be returned to seller except on our specific instructions and no claim will be honored unless we have been given an opportunity for inspection on site and in the claimed defective condition. The determination of seller's representative will be final. Seller assumes no responsibility for reimbursing repair or replacement costs incurred without our prior written authorization, or prior to a determination of seller's authorized representative. Seller assumes no liability for the cost of installation of repaired or replacement parts. All costs of packing and shipping defective parts and/or replacement of repaired parts shall be paid by buyer. In no event shall our liability under this warranty exceed the purchase price paid for the products.

THE WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SELLER SHALL HAVE NO LIABILITY WHATSOEVER IN ANY EVENT FOR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES RESULTING IN PERSONAL INJURY.

Any action for breach of this warranty or other action under this contract must be commenced within one (1) year after such cause of action arises.



PLAN VIEW



FRONT VIEW

CONTINENTAL PIPE & TUBE CUT-OFF MACHINES

A DIVISION OF KIENE DIESEL ACCESSORIES, INC.

325 SOUTH FAIRBANK STREET – ADDISON, ILLINOIS 60101

OVERALL DIMENSIONS
MODEL 2A CUT-OFF MACHINE

CURRENT REVISION: •	DATE: 1/30/14	DRAWING NUMBER: MODEL 2A OVERALL DIMENSIONS

SECTION A. SAFETY INSTRUCTIONS

1. Read and understand this manual before operating this machine.
2. NEVER operate this machine with any guard or cover open or removed.
3. Provide a fused, switched disconnect for incoming power line in accordance with the National Electrical Code.
4. If electrical box cover is removed, high voltage connections are exposed. Customer supplied disconnect switch should be turned off and locked out before removing starter box cover.
5. This machine is powered by high voltage electricity. Electrical repairs should be made by a qualified electrician.
6. NEVER reach into the work area of the machine while the blade is turning.
7. This machine will cut a wide range of tubing diameters and lengths. Each customer's layout, method of supporting the tubing, and material flow into and out of the machine is different. As such, it is impossible for the manufacturer to provide a universal guard to keep operator's hands out of the machine. It is the customer's responsibility to:
    - provide a method to catch and collect cut pieces.
    - provide guards to prevent the operator from accidentally placing hands in the cutting area.
    - install guards along the tube being cut to prevent injury.
8. Movement of various parts may create pinch points. Operator must avoid these points.
9. NEVER wear loose clothing or jewelry that could become entangled in the machine or workpiece.
10. When changing a cut-off blade, turn off power at the customer supplied disconnect switch.
11. Be certain to remove wrench after replacing cut-off blade. NEVER leave wrench hanging from the cuttershaft.
12. NEVER push pipe or tube into the cutting area from the front of the machine. A turning cut-off blade may catch and throw it possibly causing personnel injury and equipment damage. ALWAYS slide the tube into the cutting area from the cut-off blade side of the machine.
13. ALWAYS feed pipe or tube into the cutting area from the cut-off blade side of the machine. Feeding material from the opposite side can result in the operator's hand being pinched between the pipe or tube and the underside of the Cutter Arm as the cut is being made.
14. NEVER attempt to cut material that is bent, twisted, or otherwise distorted.
15. The cutting operation may produce sharp edges and considerable heat. NEVER attempt to catch work pieces as they are cut. Take precautions when handling cut pieces.

SECTION B. INSTALLATION

DIMENSIONS

Drawing MODEL 2A OVERALL DIMENSIONS shows the overall dimensions of the machine.

LEVELING

Place the machine in the desired location. Transfer the mounting holes in the base to the floor. Then, move the machine and drill the floor for anchor bolts. Place the machine back into position and check the cutter block mounting surface for level, particularly in the side-to-side direction. Shim the base as necessary to level and eliminate any rocking. After shimming, bolt the machine securely to the floor.

ELECTRICAL

The electrical characteristics of the machine are stamped on a nameplate attached to the electrical box. Connect the incoming lines from a disconnect switch (customer supplied) to the L1, L2, L3 terminals on the motor starter located in the electrical box. Check to make sure that rotation of the cutter shaft is clockwise when viewed from the cut-off blade side. This will prevent pipe from being thrown out of the machine. If rotation is incorrect, reverse any two of the incoming lines.

AIR CONNECTION

A Filter/Regulator/Lubricator Unit (Part No. 4520) is provided at the rear of the machine. Connect shop air to the inlet side of this unit and fill the lubricator bowl with air line oil.

CUTTER BLOCKS

Cutter blocks are available for tube sizes within the range of the Model 2A. Select the appropriate cutter block for the tube size to be cut and bolt it to the #6478 cutter block baseplate on the machine. Refer to the table below to select the appropriate cutter block.

MODEL 201FS/CR	1/4” to 3/8” diameters
MODEL 202FS/CR	3/8” to 1” diameters
MODEL 203FS/CR	1” to 2” diameters

The cutter block must be set perpendicular to the cut-off blade or "threading" will occur. Threading is a condition where the tube moves sideways as the cut-off blade contacts it. To correct threading, loosen the front cutter block baseplate bolt slightly, then tap the baseplate to move it in the opposite direction of the threading. If tube is threading to the right, move the front of the cutter block to the left and vice versa. Then re-tighten the front cutter block baseplate bolt. Repeat until threading is eliminated.

TUBE SUPPORTS

If a Tube Support Table is to be used with this machine it should be assembled and installed according to the instructions provided with it.

If pipe supports are to be used, they must be carefully aligned with the machine and bolted to the floor. First, set the supports in place. They should be spaced so that the tube to be cut does not sag between the supports. NOTE: If short pieces are to be cut, place one of the supports close to the machine. Place a length of tube or barstock in the pipe supports and the cutter block rolls. Adjust the supports so that the tube is touching the entire length of both cutter block rolls (front and back), and all pipe support rolls.

At this point, the pipe supports should be bolted to the floor. Carefully mark the center of each hole in the pipe support bases. Then, drill and bolt to floor using 3/8" lag bolts with anchors.

Rotate the Pipe Support Heads so they are perpendicular to the tube (rolls will be aligned with tube). If the heads are not perpendicular to the tube, threading of the tube can result, particularly if polyurethane coated pipe support rolls are used.

Recheck alignment of pipe supports with the cutter block rolls. Misalignment may result in cut-off blade breakage, tube threading, and poor cuts.

LENGTH GAUGE

The Model 2A may be equipped with various types of Length Gauge. See the detailed instructions included with the Length Gauge assembly for instructions on installation and use.

MODEL 442	Manual length gauge
MODEL 428	Length gauge with cut switch
MODEL 429	Retracting length gauge
MODEL 250-X-2A	Outfeed support with retracting length gauge

SECTION C. CONTROLS

START/STOP BUTTONS

These buttons are located on the front of the cut-off machine. Pressing "START" starts the drive motor. Pressing "STOP" simultaneously stops the drive motor and retracts the air cylinder, raising the cut-off blade.

FOOT SWITCH

Pressing the foot switch initiates the cut-off stroke.

AUTOMATIC LENGTH GAUGE SWITCH

The switch on the optional Automatic Length Gauge acts the same as the foot switch. It initiates the cutting stroke.

RETURN SWITCH

The Return Switch is a limit switch located inside the machine enclosure on the cut-off blade side. When tripped this switch causes the air cylinder to retract, ending the cut-off stroke. The point at which this occurs is adjusted by moving the #5496 Trip.

AIR PRESSURE

Air pressure to the air cylinder may be adjusted at the Filter/Regulator/Lubricator Unit on the back of the machine. Adjusting the air pressure changes the total force available to push the cut-off blade through the cut. It should generally be set at 40 to 60 psi. Lighter wall tubing requires lower pressures and heavier wall tubing requires higher pressures.

AIR CYLINDER SPEED CONTROL

The cutting stroke consists of three parts: an initial rapid portion to move the cut-off blade quickly to the tube, a slower, controlled cutting stroke, and another rapid stroke to return the cut-off blade to starting position. The speeds of the two rapid moves are controlled by the Speed Control Screw located on the Exhaust Muffler/Speed Control (on the air cylinder control valve). It should be adjusted to provide a quick action, but not so fast that the motion is harsh or jerky. The speed control screw has been set at the factory and should not require adjustment unless the air pressure is set very high or very low.

HYDROCHECK

The hydrocheck is attached to the air cylinder and provides a hydraulic limiting action on the cutting portion of the stroke. This allows control of the cutting speed. Two nuts on the hydrocheck rod allow adjustment of the point at which the hydrocheck action begins. A control knob at the side of the hydrocheck allows adjustment of the cutting speed feed rate. Turning the knob clockwise will slow the feed rate. Turning the knob counterclockwise will increase the feed rate. A locking knob is provided.

COUNTER

An electronic 8-digit counter is installed at the front of the cut-off machine. The counter display is powered by an internal lithium battery, which provides up to six (6) years of continuous operation. When first starting the cut-off machine, press the reset button to clear the counter display.

BLADE ROTATIONAL SPEED CONTROL – AVAILABLE ONLY WITH VARIABLE SPEED DRIVE OPTION

A dial-type control located at the front of the machine. It controls the rotational speed of the cut-off blade.

TIME DELAY CONTROL – AVAILABLE ONLY WITH RETRACTING LENGTH GAUGE OPTION

A dial-type control located at the front of the machine. It controls the timing of length gauge retract from the end of the tube during cut-off. This should be set so the length gauge retracts shortly after the blade contacts the tube.

SECTION D. OPERATION

CAUTION: BEFORE ATTEMPTING TO OPERATE THE MODEL 2A, READ AND UNDERSTAND THIS SECTION COMPLETELY.

Follow the steps below to set-up and operate the Model 2A for the various size pipe and tubes to be cut.

1. Install the appropriate cut-off blade for the tube to be cut. See current Continental Catalog for a description of cut-off blade models. Remove the #5723 Cutter Shaft Nut and #5326 Clamp Collar and place the cut-off blade on the cutter shaft. Replace the clamp collar and nut and tighten. Seat the nut securely by tapping the end of the wrench with a mallet.
2. Select the appropriate cutter block for the tubing size to be cut. See the installation section for a list of Cutter blocks.
3. Mount the cutter block on the machine.
4. Place a length of the tube to be cut in the cutter block rolls and the pipe support or support table rolls. Adjust the pipe supports or support table vertically to align with the cutter block rolls. It may be necessary at this point to slide the cutter block forward or backward slightly to achieve this alignment. The cutter block must remain aligned with the cut-off blade.
5. Set air pressure to approximately 40 to 60 psi.
6. Set the knurled adjusting knob on the #4550-A Hydrocheck so that it is just slightly opened. This will provide a very slow feeding speed and is a good precaution for the first few trial strokes.
7. Set the Stop Nuts on the Hydrocheck so that the link between the air cylinder and Hydrocheck contacts the nut just before the blade contacts the pipe. This may be done with the motor off and air supply disconnected, by manually pulling the #5422 Motor Plate down so that the cut-off blade is 1/16” to 1/8” above the tube. Then, adjust the Stop Nuts so they are touching the link.
8. Set the depth of the cut-off stroke by adjusting the #5496 Trip so that the #5224 Switch is actuated just after the cut-off blade completes its cut. Note that the #5224 Switch may also be adjusted by sliding it along its mounting bracket, rotating the actuating arm, or shortening the actuating arm. For most tube sizes, these adjustments will not be necessary.
9. For machines equipped with a variable-speed option, set the speed control to 2 – 4 for tube diameters less than 3/4”.

   The speed can be increased during trial cuts. Generally, for straight tube, most sizes above 3/4” diameter can be run at full speed (‘10’ on the dial). Smaller diameter and/or bent tube should be run at slower speeds.
10. Run a trial stroke with the pipe adjacent to, but not under, the cut-off blade. Observe the point at which the Hydrocheck engages, and the point at which the return switch is tripped, and adjust accordingly.

NOTE: DO NOT ALLOW THE CUT-OFF BLADE TO CONTACT THE CUTTER BLOCK ROLLS. THIS WILL RESULT IN IMMEDIATE DAMAGE TO THE BLADE AND ROLLS. IF IT APPEARS THAT THE BLADE MAY CONTACT THE ROLLS, PUSH THE "STOP" BUTTON. THIS WILL STOP THE MOTOR AND RAISE THE CUT OFF BLADE.

11. Place the material to be cut in the machine and run trial cuts. Adjust as required. Although the characteristics of the cutting process will vary significantly with tube size, wall thickness, and particularly material, the following will generally apply:
    - A faster blade down-speed (hydrocheck more open) will reduce the O.D. burr, and a slower blade down-speed (hydrocheck more closed) will reduce the I.D. burr.
    - Spreading the rolls apart will reduce the O.D. burr; moving them closer together will reduce the I.D. burr.

- Generally, the best cut is the fastest cut (fastest blade down-speed) that will produce the desired end conditions. A fast cut produces less heat and less wear on the blade.
- If excessive vibration of the spinning tube occurs, slow the blade rotational speed using the Blade Speed Control.
- See the CUT-OFF BLADES NOTES section for additional information concerning adjustment of the cutting process.

CAUTION: NEVER PUSH PIPE OR TUBE INTO THE CUTTING AREA FROM THE FRONT OF THE MACHINE. THE CUT-OFF BLADE CAN CATCH AND THROW THE MATERIAL CAUSING PERSONAL INJURY AND EQUIPMENT DAMAGE. ALWAYS SLIDE THE MATERIAL INTO THE CUTTING AREA FROM THE CUT-OFF BLADE SIDE OF THE MACHINE.

CAUTION: ALWAYS FEED PIPE OR TUBE INTO THE CUTTING AREA FROM THE CUT-OFF BLADE SIDE OF THE MACHINE. FEEDING MATERIAL FROM THE OPPOSITE SIDE CAN RESULT IN THE OPERATOR'S HAND BEING PINCHED BETWEEN THE PIPE OR TUBE AND THE COMPONENTS ON THE UNDERSIDE OF THE MOTOR PLATE AS THE CUT IS BEING MADE.

12. To make production cuts with a Model 442 or Model 250-X-2A Length Gauge, hold the tubing firmly against the Pipe Stop and press the foot switch. Hold the tube against the stop until the blade engages the cut. In the case of the Model 428 or Model 429 Automatic Length Gauge, simply push the tube against the stop and hold firmly until the cut-off blade engages the cut. **Do not hold the foot switch or the Automatic Length Gauge Switch closed during the cutting action. If they are closed at the same time that the #5224 Return Switch is actuated (at end of cutting stroke), damage to the Air Cylinder Solenoid will result.**

SECTION E. CUT-OFF BLADE NOTES

Continental Cut-Off Blades are available for almost all tube sizes and wall thicknesses. These blades are manufactured from S-7 Tool Steel. They are held to precise tolerances and heat treated to provide a long life. They may be resharpened using one of the Continental Grinders (see current catalog), or sent to Continental Pipe & Tube Cut-Off Machines for resharpening. With proper care, Continental Cut-Off Blades will provide thousands of cuts.

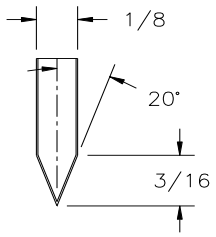
Following is a checklist of circumstances that can result in shortened blade life. Review this list when blade life is shorter than expected, or when unsatisfactory cutting action is encountered.

1. Make certain correct blade model is being used. Check current Continental Catalog for applications.
2. #5723 Nut must be tightened securely to make certain the Cut-Off Blade is clamped flat and cannot slip.
3. Make certain that the blade does not touch the cutter block rolls at the end of the stroke. This will immediately damage both the blade and the rolls.
4. Check alignment of the tubing in the pipe supports and cutter block roll (see OPERATION Section). This alignment is critical for smooth cuts and long blade life.
5. Make certain that the tube spins freely on the supports. Any drag or binding can cause the Cut-off Blade to slip against the pipe as it cuts.
6. Check adjustment of the Length Gauge to make certain it clears the tube shortly after the Cut-Off Blade engages the cut. As the cut is made, the end of the tube is actually moved towards the Length Gauge. If the gauge has not cleared the end of the tube it will cause binding.
7. On air powered machines, check to be sure the Hydrocheck engages BEFORE the Cut-Off Blade contacts the tube.
8. Make sure that the tubing is not striking the side of the Cut-Off Blade as it is advanced into position.
9. On tough or heavy wall material, the Model 310 Lubrication System is recommended. It is available as an option for new machines as well as a retrofit kit for existing machines. This system can increase blade life, reduce cutting time and produce cleaner cuts with less burr.
10. Do not attempt to cut excessively bent, twisted or otherwise distorted material.
11. Tubing material can vary significantly, even within one lot. Hard areas may be encountered, which can shorten blade life.
12. If material is long (over 20 ft.) or very heavy, the Cut-Off Blade may have difficulty spinning it. This will cause the blade to slip, shortening blade life.
13. During resharpening, the edge of the blade must not become overheated. This will cause the edge to soften.
14. After resharpening, the edge of the blade should be honed with a stone (available as Continental Part No. #5959) to remove the sharp edge, and provide a rounded edge. The sharper the edge the more fragile it is.
    - If a sharper edge is left on the blade (less honing), the blade will cut faster and with less pressure, but will not last as long between resharpenings. This is more appropriate for thin-walled, softer, materials.
    - If a more blunt edge is left on the blade (more honing), the blade will require more pressure to cut, but will last longer between resharpenings. This is more appropriate for heavier walled, tougher materials.
15. If a Cut-Off Blade becomes dull or nicked during use, remove it immediately and have it resharpened. If it is left in service, the damage will become worse. In a relatively short time, the blade will be ruined.

See next page for bevel types and standard cut-off blade models available.

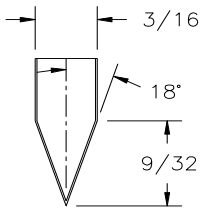
FIG. 1 – RECOMMENDED CUT–OFF BLADE BEVELS

1/8" STANDARD BEVEL



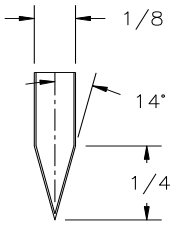
1/8" BLADE FOR WALL THICK–NESS UP TO .125" (1/8").

3/16" STANDARD BEVEL



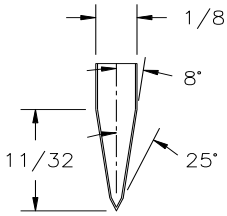
3/16" BLADE FOR WALL THICK–NESS UP TO .250" (1/4").

TUBE BEVEL



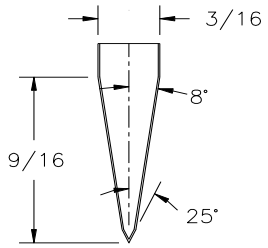
1/8" BLADE FOR WALL THICK–NESS UP TO .065".

1/8" LONG BEVEL



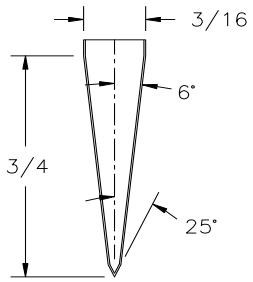
1/8" BLADE FOR WALL THICK–NESS UP TO .313" (5/16").

3/16" LONG BEVEL



3/16" BLADE FOR WALL THICK–NESS UP TO .500" (1/2").

EXTRA LONG BEVEL



3/16" BLADE FOR WALL THICK–NESS UP TO .625" (5/8").

Continental Cut-Off Blade Models					
Blade No.	**Bore Dia.**	**Blade Thickness**	**Outer Diameter**	**Bevel (See fig. 1)**	**Remarks**
7170	1-7/16"	1/8"	7"	Standard	For use on Continental Model 2B, 2A, 3H, 3A, 6H and 6A Cut-Off Machines. No pin holes or keyways.
7171	1-7/16"	1/8"	7"	Tube	
7172	1-7/16"	1/8"	7"	Long	
7370	1-7/16"	3/16"	7"	Standard	
7372	1-7/16"	3/16"	7"	Long	
7373	1-7/16"	3/16"	7"	Extra Long	
7120	1-1/2"	1/8"	7"	Standard	One 13/32" dia. pin hole on 1-1/8" radius
7121	1-1/2"	1/8"	7"	Tube	
7122	1-1/2"	1/8"	7"	Long	
7320	1-1/2"	3/16"	7"	Standard	
7322	1-1/2"	3/16"	7"	Long	
7140	1-3/4"	1/8"	7"	Standard	Two 13/32" dia. pin holes: One on 1-13/32" radius One on 1-29/64" radius
7340	1-3/4"	3/16"	7"	Standard	
7342	1-3/4"	3/16"	7"	Long	
8140	1-3/4"	1/8"	8"	Standard	
8340	1-3/4"	3/16"	8"	Standard	

SECTION F. MAINTENANCE

This machine is completely adjusted and lubricated at the factory. Performing the following maintenance checks will assure trouble-free operation and a long service life. Use NLGI #2 Lithium-based, Extreme Pressure (EP) grease where indicated.

DAILY CHECKS

1. Fill Air Line Lubricator with Air Line Oil.
2. Drain water from the Air Line Filter/Regulator.

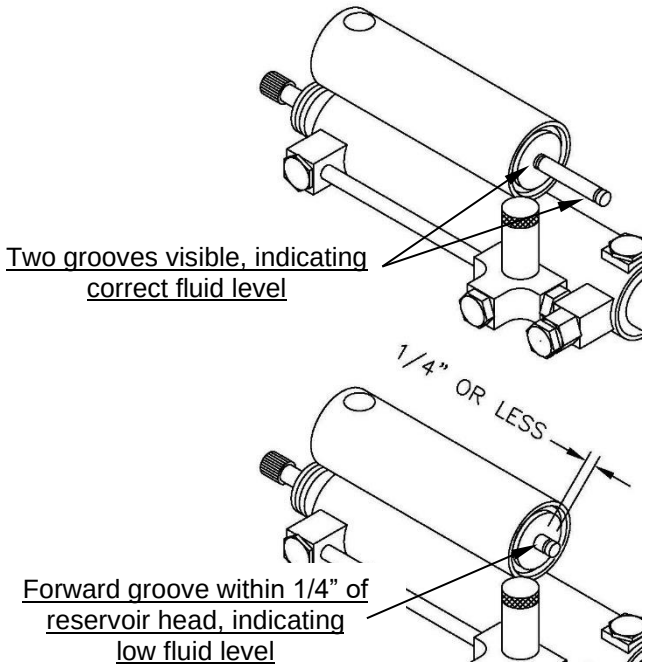
NOTE: THESE TWO ITEMS **ARE** EXTREMELY IMPORTANT TO THE SERVICE LIFE OF THE AIR CYLINDER.

WEEKLY CHECKS

1. Lubricate the #5417 Gauge Bar and #5495 Pivot Bar, using NLGI #2 EP grease in the fittings provided.
2. Lubricate Cutter Block Bearings, using NLGI #2 EP grease in the fittings provided.
3. If using a Model 442 or Model 429 Length Gauge, spread a light coating of grease on the flat surface of the #5493 Gauge Lever, using #2 EP grease.
4. Place a few drops of light machine oil on the pivot points of the air cylinder mounts.
5. Check Air Line Lubricator to make sure it provides approximately one drop for every 20-30 strokes of the Air Cylinder.

SIX MONTH CHECKS

1. Check oil level in gearbox. Fill with a 7EP or 8EP Lubricant as indicated on gearbox manufacturer's label. (DO NOT use 5EP or 6EP Lubricants as this can lead to excessive foaming.) If no lubricant is shown, use 90W Gear Oil. Fill gearbox to level indicated on gearbox for “CONTINUOUS” use.
2. Check drive belts for wear and tightness. Adjust accordingly. All three belts should be tightened evenly.
3. Check hydrocheck fluid level.
    - With the unit fully retracted, the fluid level is correct when two grooves on the stem extending from the reservoir are visible.
    - With the unit fully retracted, and the forward groove is within 1/4” of the head of the reservoir, the fluid level is low and should be filled.
    - If the hydrocheck requires service, see the following section for information.



Two grooves visible, indicating correct fluid level

Forward groove within 1/4” of reservoir head, indicating low fluid level

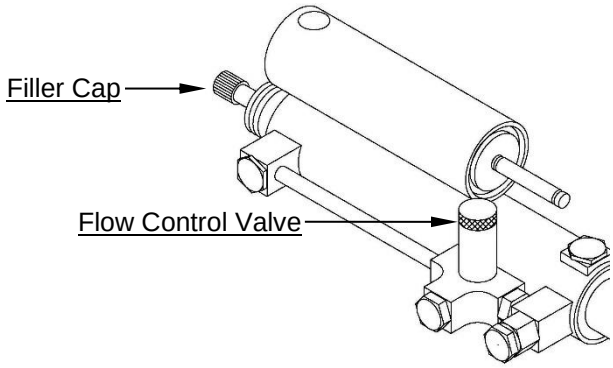
4550-A-1 HYDROCHECK MAINTENANCE

Maintenance consists principally of maintaining the fluid level. The rod seals are extremely efficient. However, in time a minute film of oil will be carried past the seals, necessitating replenishment. The hydrocheck was designed to use ISO 32 hydraulic oil.

ADDING OIL

A capped, ball-check oil fitting is provided at the rear of the hydrocheck for the purpose of refilling the unit. This fitting accepts a coupler that is furnished with the hydrocheck. The coupler is used with Continental #4550-A-G Oil Gun. The refilling procedure is as follows:

1. Remove the hydrocheck from its mounting.
2. Fully open the flow control valve.
3. Move the hydrocheck rod to its fully retracted position.
4. Remove the filler cap.
5. Actuate the oil gun until air-free oil is ejected from the hose assembly, then screw coupler onto fill fitting.
6. Actuate oil gun until a small amount of oil bleeds out the relief hole on the underside of the reservoir. The hydrocheck is now over-filled and may be properly bled without adding additional oil.



7. Remove the oil gun.
8. With the flow control valve open, manually move the main rod full stroke, in and out slowly, four or five times. With the rod fully extended, rest the unit vertically on a bench with the main rod down for several minutes. Then, insert a small drill or paperclip into the fill fitting and depress momentarily to bleed out trapped air. Repeat this entire step five or six times.
9. Fully retract the main rod. If the rear groove on the stem extending from the reservoir is more than 1/8” beyond the head of the reservoir, additional oil should be bled from the unit to bring the oil to the proper level.
10. Wipe filler fitting clean and replace filler cap. The hydrocheck can now be returned to service.

IRREGULAR CHECKING ACTION

The presence of air in the hydrocheck will cause irregular checking action. Air can be detected by a spongy feel when pressing on the balance cylinder rod, or by the sound of air passing through needle valve when in operation. Follow the air bleeding procedure above to remove all traces of trapped air.

SEAL KIT

Part number 4550-A-1-R1 Hydrocheck Packing Kit contains parts subject to replacement through normal operation.

DISMANTLING AND REASSEMBLING

Always use care in dismantling and reassembling the hydrocheck to be sure cylinders, piston seals and piston rod seals are not damaged. Replace any damaged packing before reassembling.

DRIVE ASSEMBLY MODEL NUMBERS				
MODEL	MOTOR HP	VOLTS AC	SEE PARTS ILLUSTRATION	WIRING DIAGRAM
411A	1	208–230/460	PI411	4026
411B	1	220	PI411	4026–VSD
411C	1	440	PI411	4026–VSD

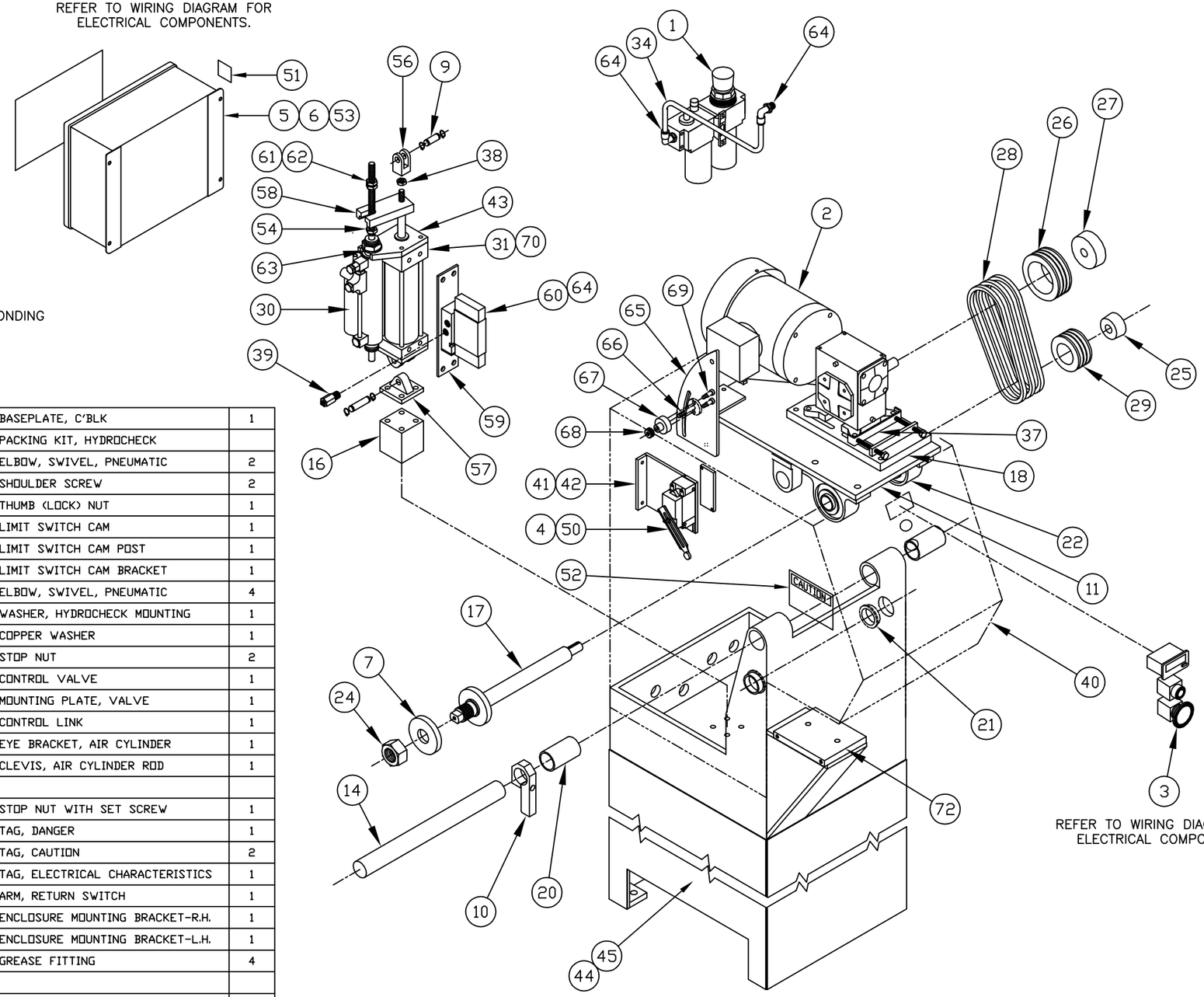
NOTE:

1. REFER TO TABLE ABOVE FOR DRIVE ASSEMBLY MODEL NUMBER, CORRESPONDING PARTS ILLUSTRATION AND WIRING DIAGRAM.
2. ITEMS MARKED * ARE NOT ILLUSTRATED.
3. FOR MACHINES BEGINNING WITH SERIAL NUMBER 25–21896 AND LATER.

ITEM	PART No.	DESCRIPTION	QTY.	ITEM	PART No.	DESCRIPTION	QTY.
36				72	6478	BASEPLATE, C'BLK	1
35				71	4550-A-1-R1*	PACKING KIT, HYDROCHECK	
34	300-01139	TUBING, PNEUMATIC	4'	70	300-00905*	ELBOW, SWIVEL, PNEUMATIC	2
33				69	6344	SHOULDER SCREW	2
32	5243	FOOT SWITCH	1'	68	6343	THUMB (LOCK) NUT	1
31	6230	AIR CYLINDER - SEE NOTE 3	1	67	6342	LIMIT SWITCH CAM	1
30	4550-A-1	HYDROCHECK	1	66	6341	LIMIT SWITCH CAM POST	1
29	5767	TAPERLOCK SHEAVE	1	65	6340	LIMIT SWITCH CAM BRACKET	1
28	5766	V-BELT	3	64	300-00904	ELBOW, SWIVEL, PNEUMATIC	4
27	5765	TAPERLOCK BUSHING	1	63	4550-A-4	WASHER, HYDROCHECK MOUNTING	1
26	5764	TAPERLOCK SHEAVE	1	62	V-26-4	COPPER WASHER	1
25	5761	TAPERLOCK BUSHING	1	61	4550-A-3	STOP NUT	2
24	5723	CUTTERSHAFT NUT	1	60	6207	CONTROL VALVE	1
23	5702*	WRENCH, CUTTERSHAFT NUT	1	59	6206	MOUNTING PLATE, VALVE	1
22	5652	PILLOW BLOCK	2	58	6236	CONTROL LINK	1
21	5645	BUSHING, FLANGED	2	57	6202	EYE BRACKET, AIR CYLINDER	1
20	5644	BUSHING	2	56	6231	CLEVIS, AIR CYLINDER ROD	1
19				55			
18	5867	GEARHEAD ADJUSTMENT PLATE	1	54	4550-A-2	STOP NUT WITH SET SCREW	1
17	5556	CUTTERSHAFT - 1-7/16 DIA.	1	53	5878	TAG, DANGER	1
16	6203	AIR CYLINDER MOUNTING BLOCK	1	52	5876	TAG, CAUTION	2
15				51	5875	TAG, ELECTRICAL CHARACTERISTICS	1
14	5495	PIVOT BAR	1	50	5224-2	ARM, RETURN SWITCH	1
13				49	5871-R*	ENCLOSURE MOUNTING BRACKET-R.H.	1
12				48	5871-L*	ENCLOSURE MOUNTING BRACKET-L.H.	1
11	5422	MOTOR PLATE	1	47	300-01129*	GREASE FITTING	4
10	5417	GAUGE CAM	1	46			
9	5405	AIR CYLINDER PIN	1	45	5910	LOWER HOUSING	1
8				44	5909	BASE	1
7	5326	CLAMP COLLAR	1	43	6235	MOUNTING BRACKET, HYDROCHECK	1
6	SEE NOTE 1	PANEL, TERMINAL BOX	1	42	5859	RETURN SWITCH BACKING PLATE	1
5	SEE NOTE 1	STARTER & TERMINAL BOX	1	41	5858	RETURN SWITCH MOUNTING BRACKET	1
4	5224-1	RETURN SWITCH	1	40	5856	ENCLOSURE	1
3	SEE NOTE 1	PUSH-BUTTON & COUNTER ENCLOSURE	1	39	6208	EXHAUST MUFFLER/SPEED CONTROL	1
2	5219	GEARHEAD MOTOR - 1 H.P.	1	38	6233	HEX JAM NUT	2
1	4520	TRIO CONTROL UNIT	1	37	5842	GEARHEAD PUSH BAR	1

BILL OF MATERIALS

REFER TO WIRING DIAGRAM FOR ELECTRICAL COMPONENTS.



REFER TO WIRING DIAGRAM FOR ELECTRICAL COMPONENTS.

CONTINENTAL PIPE & TUBE CUT–OFF MACHINES
A DIVISION OF KIENE DIESEL ACCESSORIES, INC.
325 SOUTH FAIRBANK STREET – ADDISON, ILLINOIS 60101

PARTS ILLUSTRATION
MODEL 2A CUT–OFF MACHINE

CURRENT REVISION: X	DATE: 10/5/22	DRAWING NUMBER: MODEL 2A PARTS ILLUSTRATION

MODEL 411A, 1HP, 208–230/460VAC FIXED SPEED DRIVE ASSEMBLY CONSISTS OF:

1	6364–1 TERMINAL BOX
1	6364–2 PANEL, TERMINAL BOX
1	5249 STARTER
3	5993 THERMAL OVERLOAD RELAY
1	6324 PUSH BUTTON BOX AND COUNTER ENCLOSURE

MODEL 411B, 1HP, 220VAC VARIABLE SPEED DRIVE ASSEMBLY CONSISTS OF:

1	6333–1–220 VARIABLE SPEED DRIVE
1	6335 SPEED CONTROL (POTENTIOMETER)
1	6364–1 TERMINAL BOX
1	6364–2 PANEL, TERMINAL BOX
2	6368 FAN GUARD
8	225–62030 #8–32 X 3/8 LONG BHCS
8	208–63008 #8 INTERNAL LOCK WSHR
8	202–63050 #8–32 HEX NUT

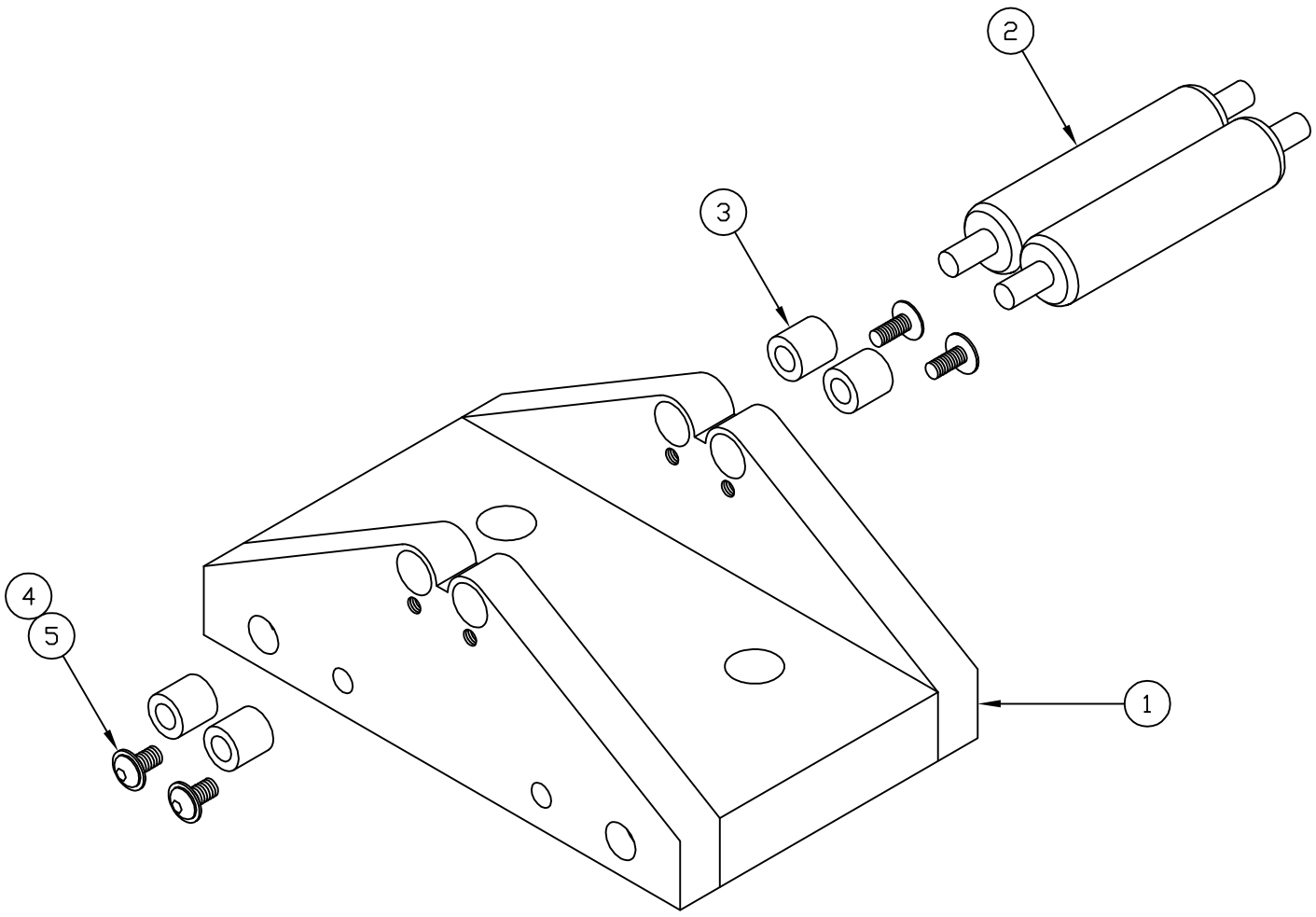
MODEL 411C, 1HP, 440VAC VARIABLE SPEED DRIVE ASSEMBLY CONSISTS OF:

1	6333–1–440 VARIABLE SPEED DRIVE
1	6335 SPEED CONTROL (POTENTIOMETER)
1	6364–1 TERMINAL BOX
1	6364–2 PANEL, TERMINAL BOX
2	6368 FAN GUARD
8	225–62030 #8–32 X 3/8 LONG BHCS
8	208–63008 #8 INTERNAL LOCK WSHR
8	202–63050 #8–32 HEX NUT

CONTINENTAL PIPE & TUBE CUT–OFF MACHINES
A DIVISION OF KIENE DIESEL ACCESSORIES, INC.
325 SOUTH FAIRBANKS STREET, ADDISON, ILLINOIS, 60101

PARTS ILLUSTRATION (PARTS LIST)
MODEL 411A, 1HP, 208–230/460VAC FIXED SPEED DRIVE ASSEMBLY
MODEL 411B, 1HP, 220VAC VARIABLE SPEED DRIVE ASSEMBLY
MODEL 411C, 1HP, 440VAC VARIABLE SPEED DRIVE ASSEMBLY

CURRENT REVISION: D	DATE: 6/21/21	DRAWING NUMBER: MODEL 411 PARTS ILLUSTRATION



PACK BEARINGS WITH KENDALL SUPER BLU HIGH TEMP EP L-427 GREASE (CONTINENTAL PART NO. 5960). REMOVE EXCESS GREASE.

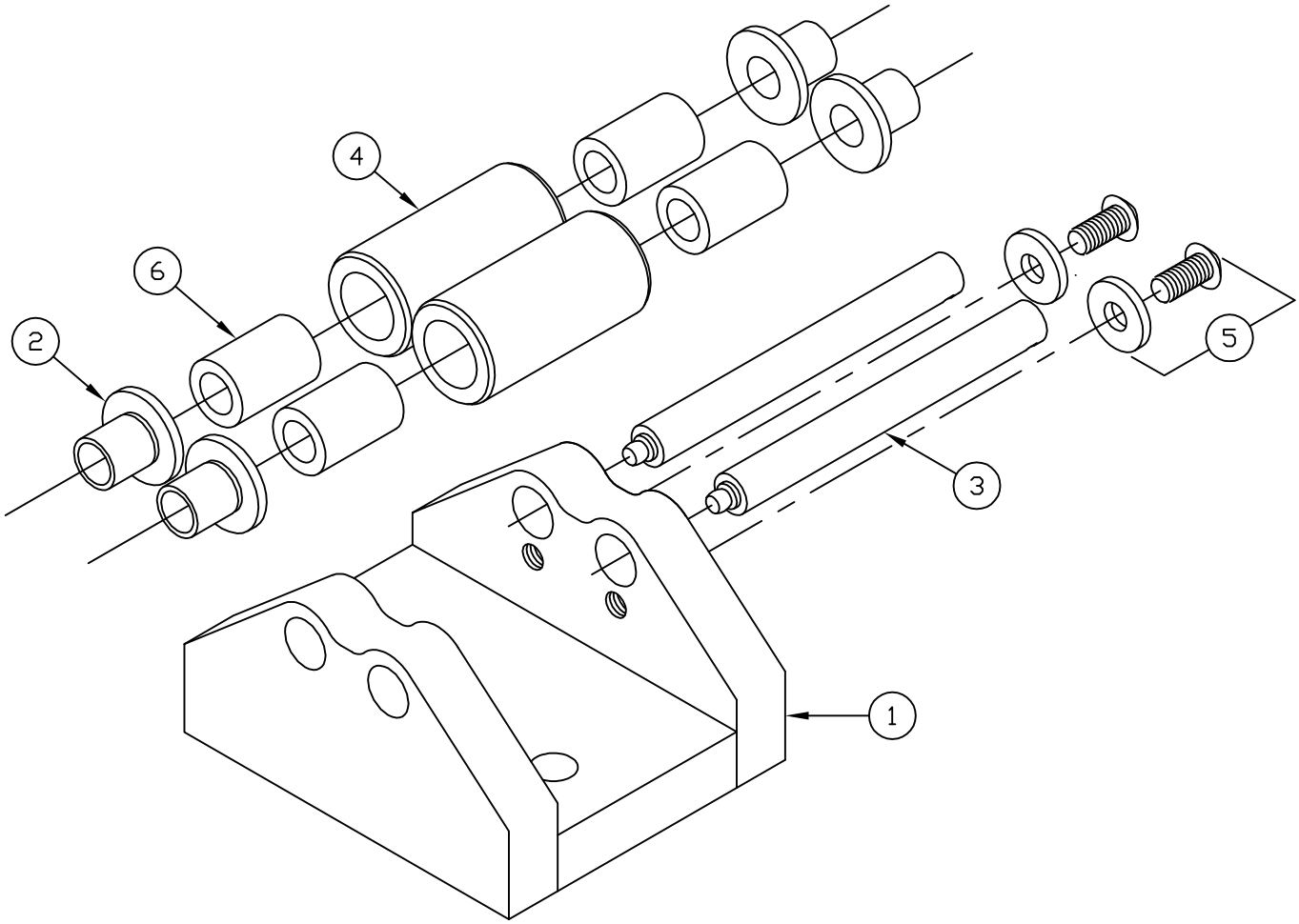
BILL OF MATERIALS

ITEM	PART NO.	DESCRIPTION	QTY.
1	6486	CUTTER BLOCK	1
2	5307	CUTTER BLOCK ROLL	2
3	5614	BEARING	4
4	225-62030	#8-32 X 3/8 BUTTON HD CAP SCR	4
5	248-62010	M5 INTERNAL LOCK WSHR	4
6	210-62207	5/16-18 X 1" SHCS - NOT SHOWN	2

CONTINENTAL PIPE & TUBE CUT-OFF MACHINES
A DIVISION OF KIENE DIESEL ACCESSORIES, INC.
325 SOUTH FAIRBANK STREET - ADDISON, ILLINOIS 60101

PARTS ILLUSTRATION
MODEL 201FS CUTTER BLOCK ASSEMBLY

CURRENT REVISION: *	DATE: 4/15/20	DRAWING NO: PI 201FS



LUBRICATE ROLLERBEARINGS WITH KENDALL SUPER BLU HIGH TEMP EP L–427 GREASE (CONTINENTAL PART NO. 5960). PUMP A SUFFICIENT QUANTITY INTO EACH BEARING THROUGH THE FITTING SO THAT GREASE IS FORCED OUT BETWEEN THE BEARING AND CUTTERBLOCK ROLL. REMOVE EXCESS GREASE.

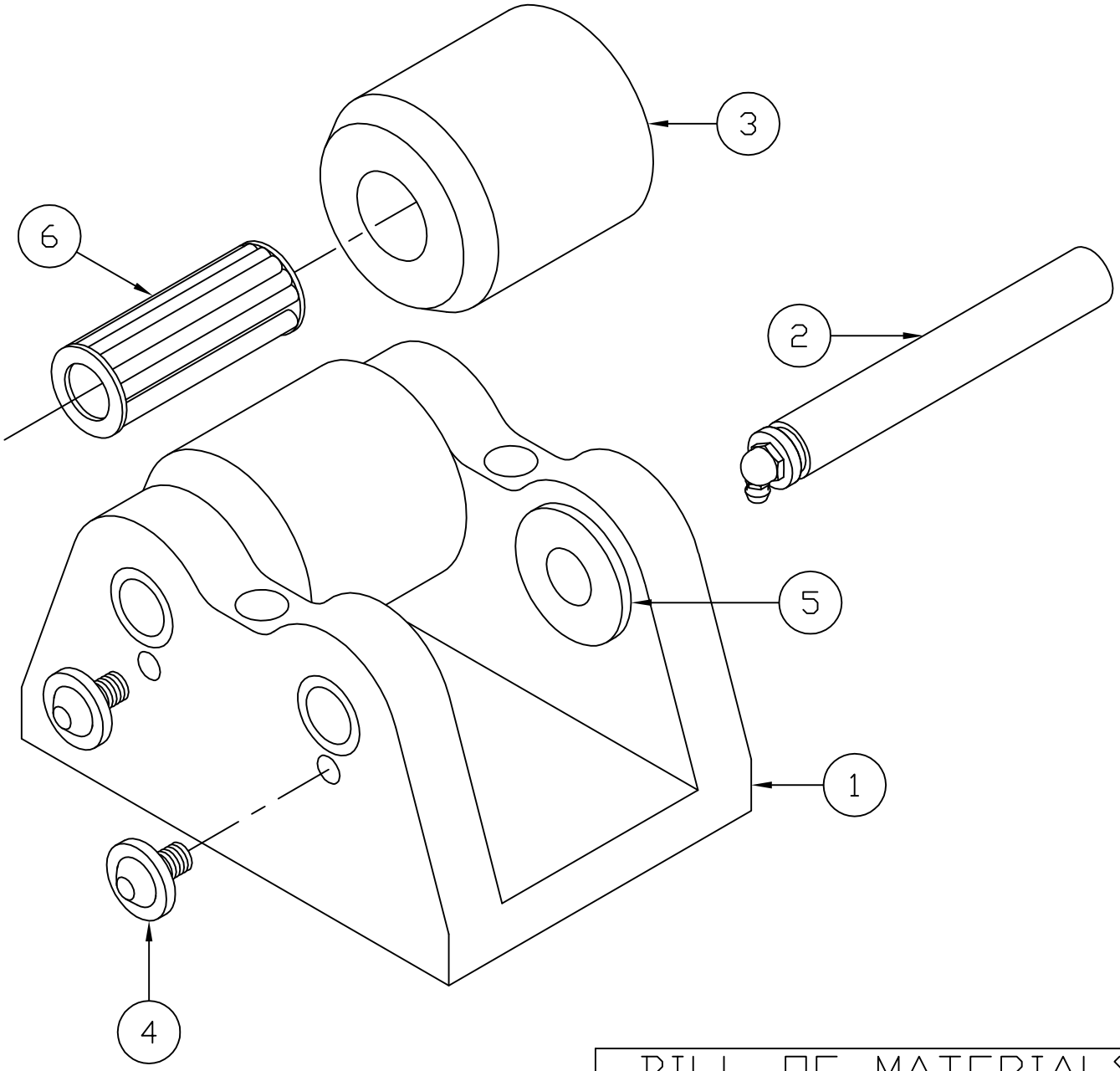
BILL OF MATERIALS

ITEM	PART No.	DESCRIPTION	QTY.
1	6487	CUTTERBLOCK	1
2	5313	CUTTERBLOCK ROLL PIN BUSHING	4
3	5314	CUTTERBLOCK ROLL PIN	2
4	5315	CUTTERBLOCK ROLL	2
5	5361	CUTTERBLOCK PIN CLAMP SCREW	2
6	5615	CUTTERBLOCK ROLLERBEARING	4
7	210–62205	5/16–18 X 3/4 SHCS – NOT SHOWN	2

CONTINENTAL PIPE & TUBE CUT–OFF MACHINES
A DIVISION OF KIENE DIESEL ACCESSORIES, INC.
325 SOUTH FAIRBANK STREET – ADDISON, ILLINOIS 60101

PARTS ILLUSTRATION
MODEL 202FS CUTTER BLOCK ASSEMBLY

CURRENT REVISION: *	DATE: 4/15/20	DRAWING NO: PI 202FS



LUBRICATE ROLLERBEARINGS WITH KENDALL SUPER BLU HIGH TEMP EP L-427 GREASE (CONTINENTAL PART NO. 5960). PUMP A SUFFICIENT QUANTITY INTO EACH BEARING THROUGH THE FITTING SO THAT GREASE IS FORCED OUT BETWEEN THE BEARING AND CUTTER BLOCK ROLL. REMOVE EXCESS GREASE.

BILL OF MATERIALS

ITEM	PART NO.	DESCRIPTION	QTY.
1	6488	CUTTER BLOCK	1
2	5311	ROLL PIN	2
3	6490	CUTTER BLOCK ROLL	2
4	5361	ROLL PIN CLAMP SCREW	2
5	5395	ROLL PIN BUSHING	4
6	5616	ROLLERBEARING	2
7	210-62213	5/16-18 X 2-1/2 SHCS - NOT SHOWN	2

CONTINENTAL PIPE & TUBE CUT-OFF MACHINES
A DIVISION OF KIENE DIESEL ACCESSORIES, INC.
325 SOUTH FAIRBANK STREET - ADDISON, ILLINOIS 60101

PARTS ILLUSTRATION
MODEL 203FS CUTTER BLOCK ASSEMBLY

CURRENT REVISION: *	DATE: 6/18/20	DRAWING NO: PI203FS