CONTINENTAL MODEL 1G

CUT-OFF BLADE GRINDING MACHINE

SERIAL NO. _____

INSTRUCTION AND PARTS MANUAL

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INSTRUCTION AND PARTS MANUAL

T A B L E O F C O N T E N T S **SECTION**

SECTION A. S A F E T Y I N S T R U C T I O N S

1. Read and understand this manual before operating this machine.

2. NEVER operate this machine with guard removed.

3. Electrical repairs should be made by a qualified electrician.

4. NEVER reach into the work area of the machine while the grinding wheel is turning.

5. NEVER wear loose clothing or jewelry that could become entangled in the machine.

6. Disconnect power to motor when changing grinding wheel.

7. Turn off grinder motor at switch when changing cut-off blades, or when honing a cut-off blade.

8. Do not use cutting fluids or coolants with this unit.

9. Do not attempt to sharpen blades unless bore on blade matches Model #5391 Spindle Flange.

SECTION B. I N S T A L L A T I O N

SET-UP

1. Unpack the Model 1G and all parts. Check against parts list to make certain all parts are received.

2. Connect #5432 Lever to #5353 Lever Pivot Stud using #5365 Lever Screw. If shims are provided with the #5353 Pivot Stud, place them between the Pivot Stud and Lever.

3. Mount the Model 1G Grinder on a sturdy work surface and bolt it in place.

SECTION C. O P E R A T I O N

1. With the motor off, remove the #5401 Clamp Collar and Nut from the #5391 Spindle. Place cut-off blade on spindle flange; replace clamp collar and tighten securely using #5731 Wrench.

   NOTE: Cut-Off Wheel Bore MUST match #5391 Spindle Flange. Bushings are available to allow blades with larger bores to be ground.

2. Loosen the bolts and adjust the #5181 Spindle Housing to provide the bevel angle required. A scale for setting the angle is provided on the top of the #5182 Spindle Slide. See Figure 1, RECOMMENDED CUT-OFF BLADE BEVELS, for the bevel angles for various types of cuts. NOTE: The length of the bevel must be equal to or greater than the wall thickness of the material being cut.

3. Adjust the position of the #5183 Spindle Slide Base and the #5496 Trip to allow cut-off blade to feed into grinding wheel. Lock the trip in place with the #5852 Lock Nut. Note that the #5183 Base may be moved to compensate for grinding wheel wear.

4. Turn motor on. Feed blade into grinding wheel by pushing the #5432 Lever with left hand. At the same time, rotate the cut-off blade by turning the #5708 Handle. Continue grinding until the #5496 Trip is bottomed out. Grinding must proceed slowly to avoid overheating the edge of the blade, which will reduce its hardness.

5. Turn off grinder motor; then, turn over the cut-off blade and grind the second side, until the #5496 Trip is bottomed out.

6. Use a honing stone (available as Continental Part No. 5959) to hone the edge of the wheel, removing the sharp edge. If this is not done, the edge will roll over or chip very quickly.

   NOTE:

   A. 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.

   B. 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.

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, a lubricating oil may be required to assist the cut. Use LUBRICATING oil, NOT cutting oil.

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.

    NOTE:

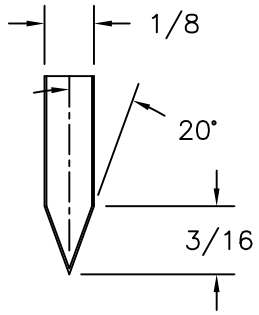
    A. If a sharper edge is left on the blade (less honing), the blade will cut faster and with less pressure, but will not last as long between resharpenings. This is more appropriate for thin-walled, softer, materials.

    B. 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.

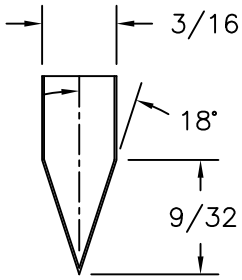
FIG. 1 – RECOMMENDED CUT–OFF BLADE BEVELS

1/8" STANDARD BEVEL



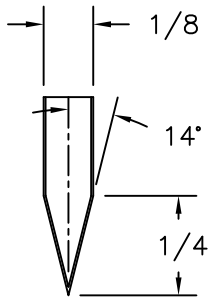
1/8" BLADE FOR WALL THICK–NESS UP TO .125" (1/8").

3/16" STANDARD BEVEL



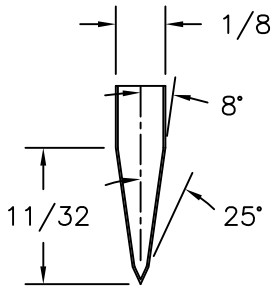
3/16" BLADE FOR WALL THICK–NESS UP TO .250" (1/4").

TUBE BEVEL



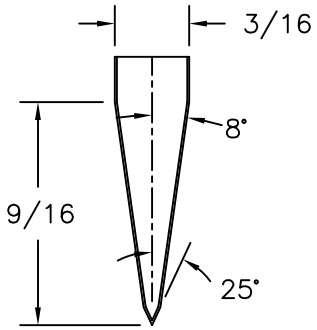
1/8" BLADE FOR WALL THICK–NESS UP TO .065".

1/8" LONG BEVEL



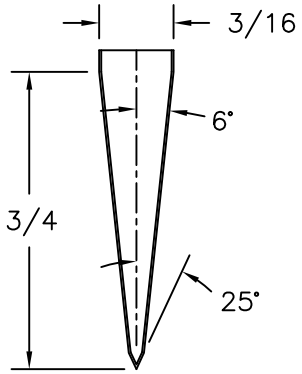
1/8" BLADE FOR WALL THICK–NESS UP TO .313" (5/16").

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").

FIG. 2 – CONTINENTAL CUT–OFF BLADE MODELS

MODEL NO.	BORE (IN.)	THICKNESS (IN.)	DIA. (IN.)	BEVEL (SEE FIG. 1)	REMARKS
7170	1–7/16	1/8	7	STD.	FOR USE ON CONTINENTAL MODEL 2B, 2A, 3H, 3A, 6H, & 6A. 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	STD.	
7372	1–7/16	3/16	7	LONG	
7373	1–7/16	3/16	7	EXTRA LONG	
7120	1–1/2	1/8	7	STD.	ONE (1) 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	STD.	
7322	1–1/2	3/16	7	LONG	
7140	1–3/4	1/8	7	STD.	TWO (2) 13/32 DIA. PIN HOLES, ONE (1) ON 1–13/32" RADIUS, ONE (1) ON 1–29/64" RADIUS.
7340	1–3/4	3/16	7	STD.	
7342	1–3/4	3/16	7	LONG	
8140	1–3/4	1/8	8	STD.	
8340	1–3/4	3/16	8	STD.	

FILE NAME: BVLPAGE

SECTION E. M A I N T E N A N C E

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.

> NOTE: NEVER use compressed air to clean this machine. This will force the grit from grinding into the moving parts, causing a shortened service life.

DAILY CHECKS (Or after each 20-30 resharpenings)

1. Wipe grit from the machine. In particular, wipe the joints where the #5182 Spindle Slide meets the #5183 Spindle Slide Base. Keeping this area clean will reduce the grit that penetrates this joint.

2. Lubricate all grease fittings with an N.L.G.I. #2 Lithium Based Extreme Pressure (EP) grease.

6 MONTH CHECKS

1. Remove #5182 Spindle and #5421 Gib from #5183 Spindle Slide Base. Wipe all sliding surfaces to remove any grit or dirt that may have entered. Spread a coating of #2 EP Grease on sliding surfaces and reassemble.

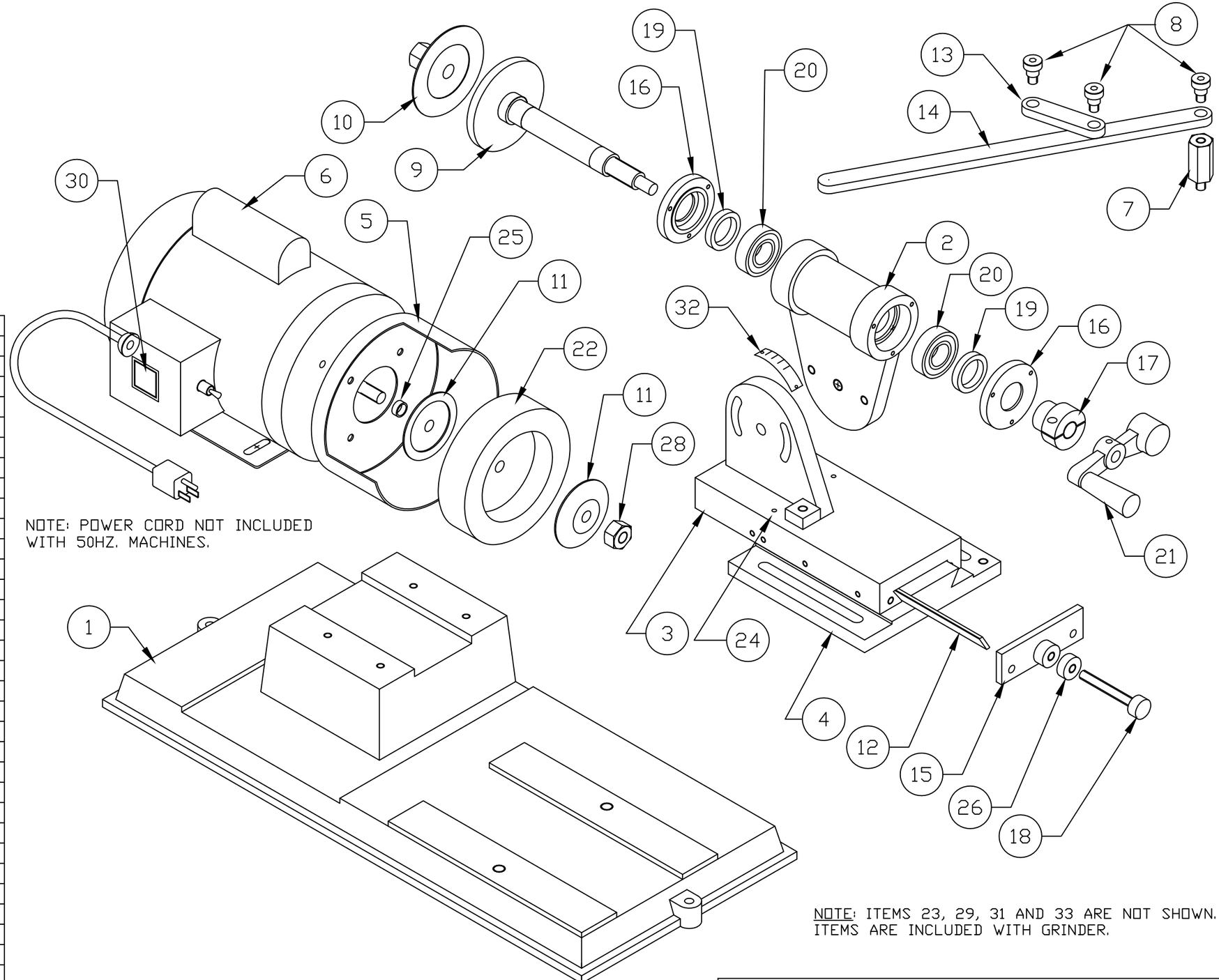
2. Readjust Gib to minimize side-to-side play, while allowing a smooth sliding motion.

SECTION F

P A R T S I L L U S T R A T I O N

33	5959	CUT-OFF BLADE HONING STONE	1
32	6308	SPINDLE SLIDE INDEX	1
31	5879	TAG, CAUTION	1
30	5875	TAG, ELECTRICAL CHARACTERISTICS	1
29	MANUAL-1G	MANUAL & PARTS LIST	1
28		1/2-20 HEX NUT	1
26	5852	3/8-16 LOCK NUT	1
25	5985	SPACER, MOTOR SHAFT	1
24	5868	GREASE FITTING	2
23	5731	BOX WRENCH	1
22	5710	GRINDING WHEEL	1
21	5708	HANDLE	1
20	5649	BEARING	2
19	5624	SEAL	2
18	5496	TRIP	1
17	5463	CLAMP NUT	1
16	5438	BEARING END CAP	2
15	5437	SLIDE END PLATE	1
14	5432	LEVER	1
13	5431	LEVER LINK	1
12	5421	GIB	1
11	5402	GRINDING WHEEL FLANGE	2
10	5401	CLAMP COLLAR	1
9	5391C	SPINDLE W/FLANGE - 1 3/4 DIA.	1
9	5391B	SPINDLE W/FLANGE - 1 7/16 DIA.	1
9	5391A	SPINDLE W/FLANGE - 1 1/2 DIA.	1
8	5365	LEVER SCREW	3
7	5353	LEVER PIVOT STUD	1
6	5207B	50HZ., 3/4 H.P. MOTOR	1
6	5207	60HZ., 3/4 H.P. MOTOR	1
5	5191	WHEEL GUARD	1
4	5183	SPINDLE SLIDE BASE	1
3	5182	SPINDLE SLIDE	1
2	5181	SPINDLE HOUSING	1
1	5180	GRINDER BASE	1
ITEM	PART No.	DESCRIPTION	QTY.

BILL OF MATERIALS



NOTE: POWER CORD NOT INCLUDED WITH 50HZ. MACHINES.

NOTE: ITEMS 23, 29, 31 AND 33 ARE NOT SHOWN. ITEMS ARE INCLUDED WITH GRINDER.

CONTINENTAL PIPE & TUBE CUT-OFF MACHINES

A DIVISION OF KIENE DIESEL ACCESSORIES, INC.

325 SOUTH FAIRBANK STREET - ADDISON, ILLINOIS 60101

PARTS ILLUSTRATION
MODEL 1G CUT-OFF BLADE GRINDING MACHINE

CURRENT REVISION: Q	FILE NAME: PI1G	DRAWING NUMBER: PI 1G

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.