

Customer
Ser. No.
Date
Model

CONAIR MARTIN/WORTEX

Part Of The Conair Group

OPERATION'S MANUAL

FHG/HG SERIES

GRANULATORS

 **WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!**

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

MNL00099

CONAIR MARTIN/WORTEX sincerely appreciates your choice of equipment and we assure performance to meet your need and, indeed, the equipment will surpass your expectations if normal recommended maintenance methods are observed.

As an owner, you can be proud of **CONAIR MARTIN/WORTEX's** granulating equipment. You have purchased the finest precision-engineered equipment available. Manufactured with superior workmanship, it will give you many years of efficient operation with the least amount of down time.

This manual provides you with a comprehensive introduction to your new **CONAIR MARTIN/WORTEX** equipment, along with specified maintenance suggestions. Please use this manual and keep it close at hand for easy reference.

SAFETY

Detailed safety procedures are included within this manual, and should be reviewed and understood thoroughly.

ASSISTANCE

When maintenance is required, and you do not find the necessary information in this manual, HELP is but a phone call away. Simply dial our service number listed below.

CONAIR MARTIN/WORTEX

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MANUFACTURER'S GENERAL WARRANTY

CONAIR MARTIN/WORTEX warrants each new product of its own manufacture to be free from defects in material and workmanship, under normal use and service, to the original owner only, for a period of one (1) year (except on knives and screens), subject to the conditions outlined in the Manufacturer's Complete Warranty. Our obligation under this warranty is limited to repair or replacement with a genuine part, any part of the product of our manufacture which is **returned to us within 30 days after the discovery of the defect**, properly identified and transportation charges prepaid, and not more than (6) months after the purchase by the original user, provided that, in our judgment, the part is defective.

Manufacturer will furnish without charge, FOB point of manufacture, a similar genuine part to replace any part of a product of its manufacture which proves to be defective in normal use and service during this period.

NOTICE

For additional warranty information regarding exact obligations and limitations see complete manufacturer's warranty enclosed with packing documents.

INSTRUCTION/INSTALLATION WARNING NOTICE

READ AND UNDERSTAND THE ENTIRE CONTENTS OF THIS MANUAL BEFORE INSTALLING, OPERATING, OR MAINTAINING THIS EQUIPMENT.

IMPORTANT NOTICE

**PLEASE READ BEFORE INSTALLATION
(DAMAGE OR INJURY COULD OCCUR)**

THESE GRANULATORS ARE VERY DIFFERENT COMPARED TO CONVENTIONAL GRANULATORS. PLEASE TAKE A MOMENT AND READ THIS MANUAL BEFORE INSTALLING YOUR CONAIR MARTIN/WORTEX GRANULATOR.

AFTER READING THE MANUAL, IF THERE ARE ANY QUESTIONS, PLEASE CALL:

SAFE OPERATING PROCEDURES

Equipment manufactured by CONAIR MARTIN/WORTEX is designed and constructed with "state of the art" precision and every possible safety provision has been incorporated at the time of manufacturing. However, no equipment can be designed for completely safe operation unless it is installed and operated as intended by the manufacturer, and unless it is protected from tampering or misuse by unauthorized personnel.

Those persons such as untrained operators or stray personnel who may be tempted to play with the controls or equipment are considered unauthorized personnel. Therefore, it is very important that the owner and/or operator take the following precautions regarding risks from mechanical components:

- 1) **All malfunctions or indications of improper operation** at any time during the life of the equipment should be reported to the owner to allow for immediate inspection and repair.
- 2) **No adjustments, modifications, alterations or repairs** should be made to the equipment by anyone other than qualified personnel.
- 3) **All individuals authorized to use the equipment** should be trained in the proper use of controls. All potential danger points should be specifically pointed out to the operators.
- 4) **It is suggested that a periodic review** of safety measures be conducted for all operators.
- 5) **No untrained personnel** should be allowed to operate the equipment at any time.
- 6) **Remember - safety of the operation depends on the owner and his operators.**

CONAIR MARTIN/WORTEX MAKES NO WARRANTIES REGARDING SAFETY OF THE EQUIPMENT UNLESS THESE SAFETY INSTRUCTIONS ARE OBSERVED.

SAFE OPERATING PROCEDURES

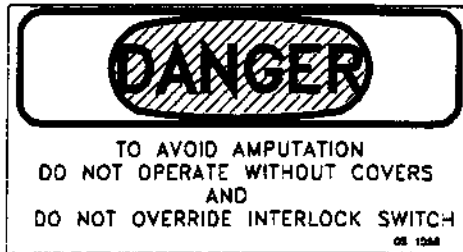


figure 1



figure 2

PRECAUTIONS

1. ALWAYS DISCONNECT POWER COMPLETELY BEFORE ATTEMPTING ANY SERVICE TO THE UNIT.
2. NEVER OPERATE THE UNIT WITH THE FEED THROAT FLAPS REMOVED OR IN POOR CONDITION.
3. NEVER OPERATE THE UNIT WITH THE GUARDS REMOVED.
4. DO NOT ATTEMPT TO OVER-RIDE SAFETY SWITCHES OR OVERLOADS.
5. NEVER ATTEMPT TO START THE GRANULATORS WITH MATERIAL IN THE CUTTING CHAMBER.
6. ALWAYS ALLOW THE UNIT TO "CLEAN OUT" BEFORE SHUTTING IT DOWN; AVOID FEEDING MATERIAL TO IT WHEN IT IS NOT OPERATING.
7. NEVER REACH INSIDE THE HOPPER WHEN FEEDING MATERIAL INTO THE MACHINE.
8. PREVENT ALL METAL AND OTHER FOREIGN MATERIAL FROM ENTERING THE HOPPER. THIS GRANULATOR IS INTENDED TO GRIND PLASTIC MATERIALS ONLY!

SPECIFICATIONS

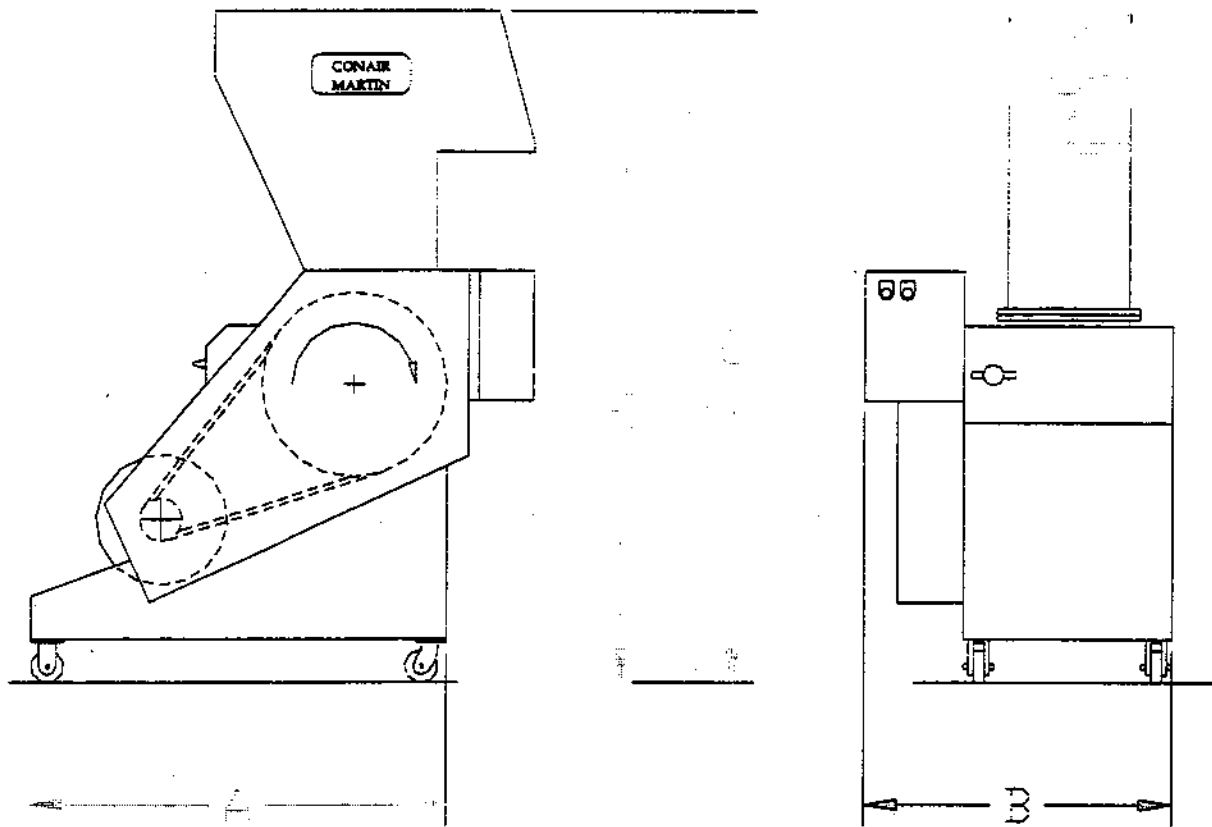


figure 3

MODEL	(F)HG910	(F)HG1412	(F)HG1420	(F)HG1630
Rotor Motor	5H.P. 480V	10H.P. 480V	20H.P.480V	50H.P. 480V
Rotor Type	3 Scooped Blade			
Rotor Knives	3(D-2 Tool Steel)			
Stationary Knives	2(D-2 Tool Steel)			
Cutting Circle	9"	12"	12"	16"
Screen	1/4" dia holes 46% open area	3/8" dia holes 46% open area	3/8" dia holes 46% open area	3/8" dia holes 46% open area
Rotor Bearings	Medium duty, single roll ball bearing type			
Hopper Opening(D)	9" x 10"	14" x 12"	14" x 20"	16" x 30"
Hopper	Pelican style w/sound deadening material			
Granulating Capacity	Up to 200lbs/hr	Up to 380lbs/hr	Up to 500lbs/hr	Up to 1250lbs/hr
Discharge	Bin type 1cu.ft	Bin type 2cu.ft	Bin type 3cu.ft	Evacuation only
Dimensions (A x B x C)	29" x 30" x 60"	30" x 38" x 66"	38" x 38" x 66"	43" x 52" x 70"
Approx. Shipping Weight	1,000lbs	1,800lbs.	2,500lbs.	5,500lbs.
OPTIONS:	2"OD vacuum tube in bin Sheet feed hopper Blower package			

INSTALLATION

1. Insure the proper electrical voltage supply is provided.
2. **With power off and power supply Locked Out**, open machine completely - Hopper, Screen, Cradle, and Cutting Chamber. Visually inspect for any foreign objects.
3. Check the rotor and bed knife bolts for proper torque. Check the knife gap for a proper clearance of .004"-.008" on the HG910, HG1412, HG1420 and .008"-.010" on the HG1630.
4. Close the machine completely.

NOTES

*When opening the screen cradle for whatever reason,
you must clean it thoroughly before closing...
The screen cradle must close firmly to the cutting chamber.
Failure to clean the screen cradle could damage it.*

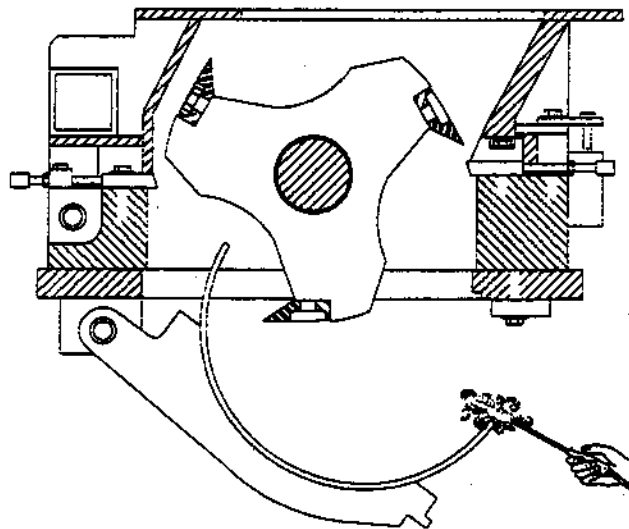


figure 4

5. Remove any foreign objects on and around the unit.
6. With power on, polarize the motor for proper rotation of rotor.

NOTES

Rotor shaft may be viewed by looking at the motor shaft and following the rotation arrow sticker affixed to the motor. Contact the Conair Service Department if you have any questions at 1-800-999-5677.

7. Upon completion of the electrical power installation, verify the direction of the rotor using the arrow label on the motor as a guide. The direction can be changed by switching any two fused wire leads at the disconnect switch.
8. With the granulator running, release the safety interlock switch and verify that it is working properly. The granulator should stop. If the granulator does not stop under this condition call the Conair service department.

NOTES

Make all power connections in compliance with local electrical codes and be sure the unit is properly grounded. The electrical supply should be sized for the equipment. Remember to take into account blower assembly motors when sizing.

If you have your own method of regnnd removal, the rate of material throughput should never exceed the rate of removal, or jam-ups within the granulator will occur.

OPERATION GUIDELINES

1. Do not operate with foreign articles around the granulator.
2. Do not attempt to bypass safety interlocks.
3. Do not throw purgings or large lumps into the unit.
4. Only feed the unit with the proper *volume* that the granulator is sized for and is capable of granulating.
5. If the machine jams, disconnect and lock-out electric power supply. Open the hopper assembly and remove the parts.

NOTES

When removing the screen for whatever reason, you must clean thoroughly before installing. Failure to clean the screen could damage it.

6. Keep the knives sharp at all times
7. Grease the rotor shaft bearings every three months or as required. Don't over grease. This could result in damage to the bearing seals.
8. Allow the machine to finish grinding before switching off. Failure to do this could result in the machine not restarting.
9. Never allow the bin to overflow. This will cause excessive wear on moving parts and shorten the life of your screens and moving parts. We recommend a high level proximity switch to turn off granulation if overflow is a problem.
10. If granulating engineered materials, rotate the screen once a month to extend screen life. The screen will show washout on the holes on one side if this is not done.
11. To start the granulator, move the disconnect switch to the on position. Material removal equipment should be started at this time.
12. Press the START button. If there is any abnormality in the sound or operation of the unit, press the STOP button and refer to the Troubleshooting section.
3. With normal operation, material may now be fed carefully into the feed hopper.

WARNING !

LOCKOUT AND TAG OUT THE MAIN ELECTRICAL POWER SUPPLY TO THE GRANULATOR BEFORE PERFORMING ANY MAINTENANCE.

DRIVE BELT TENSION

NOTES

After the granulator has been installed for 2 weeks, tighten belts to proper tension.

1. Verify that the power is OFF and locked out.
2. Remove the side cover from the granulator.

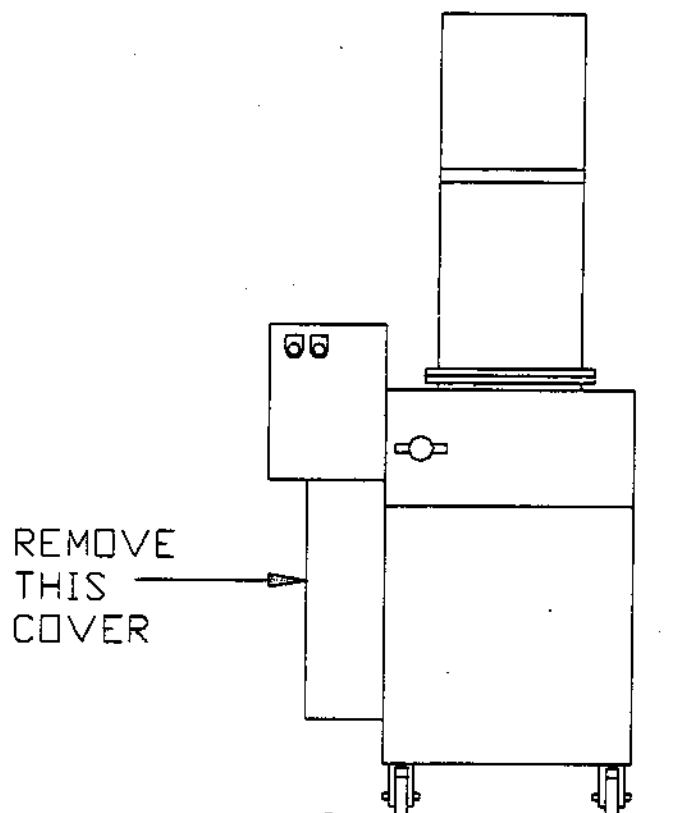


figure 5

3. Loosen the nuts holding the drive motor to its adjustable base.

Maintenance

4. If the tension of the belt span is set properly, firm thumb pressure can depress the belts no more than 1/2" at the center.

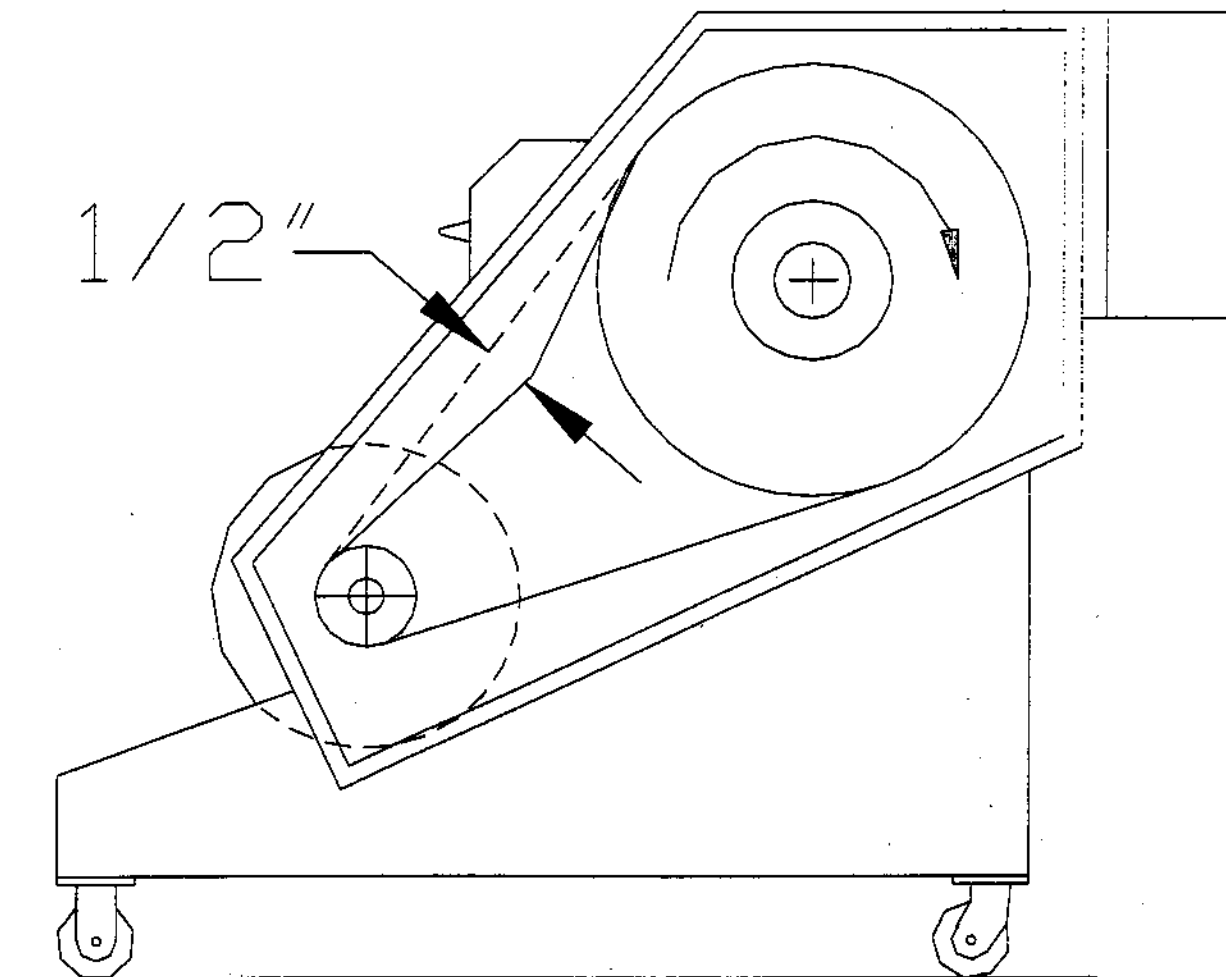


figure 6

5. Turn the adjusting bolt mounted on the top of the mount counter-clockwise to increase belt tension and clockwise to decrease belt tension.
6. Once proper belt tension has been achieved, tighten the motor mounting nuts. Check the pulley alignment to make sure the pulleys are in line. Misalignment may cause excessive belt wear.
7. Install the side cover and return the unit to use.

NOTES

**NEVER USE BELT DRESSING.
CHECK THE BELTS PERIODICALLY FOR WEAR AND CLEANLINESS.
ALWAYS REPLACE THE BELTS AS A SET.**

ACCESSING THE CUTTING CHAMBER**WARNING !**

USE EXTREME CAUTION WHEN WORKING WITH THE KNIVES. THE KNIVES ARE SHARP. LOCKOUT AND TAG OUT THE MAIN ELECTRICAL SUPPLY TO THE GRANULATOR BEFORE PERFORMING ANY MAINTENANCE.

1. Both the rotor knives and the bed knife are accessible when the cradle is open. Before opening, first verify that the power is OFF.
2. Loosen the upper cradle hold-down bolts and the cradle safety switch knob. Removal of the bolts will allow the granulator cradle to be lowered. The cradle may be pivoted into the open position for access to the cutting chamber and screen.

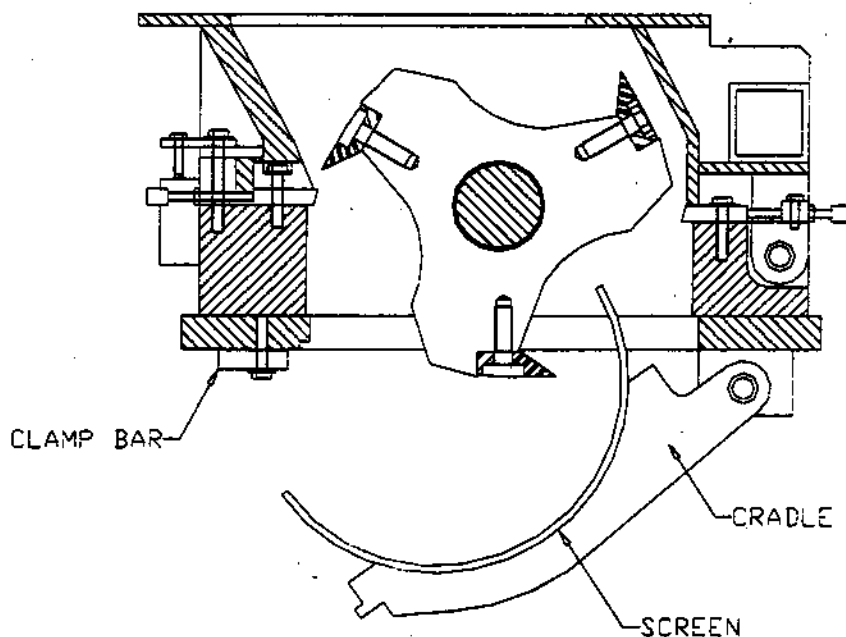


figure 7

RESETTING THE CUTTING CLEARANCES

1. See the section on "Accessing the Cutting Chamber", section 5, page 3.
2. Rotate the rotor by hand until one knife on the rotor is in cutting position with one bed knife.
3. Insert a feeler gauge at point closest to the rotor knife. (On the HG910, HG1412, HG1420 series granulators use .004 to .008 and on the HG1630 series use a .008 to .010)
4. Turn the bed knife adjusting bolt in until the feeler gauge is a tight fit between the rotor knife and the bed knife. Follow the same procedure along the full length of the bed knife.

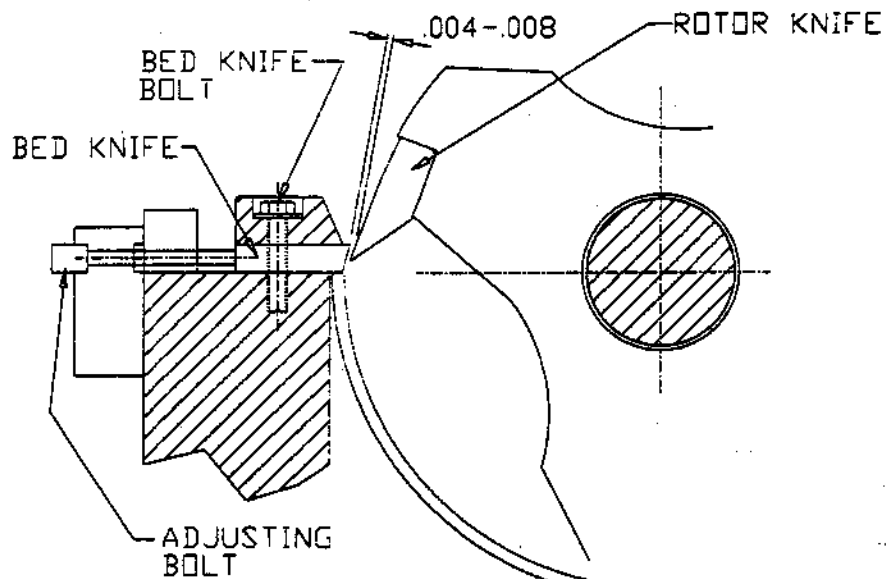


figure 8

5. Follow the same procedure on the opposite bed knife. It is important to check each rotor knife to be sure the proper clearance is maintained.
6. Tighten the bed knife bolts, adjustment screws and jam nuts.
7. Torque the bed knife bolts to 90 ft/lbs.
8. Make sure you recheck the clearance adjustment after torquing.
9. Before lowering the hopper, clean all contact surfaces thoroughly to allow firm closing.

ROTOR KNIFE REPLACEMENT

1. Read the section on "Accessing the Cutting Chamber", section 5, page 3.
2. Remove the bolts holding the rotor blade to the rotor.
3. Remove the rotor blade.
4. Carefully and thoroughly clean the rotor knife seat and bolt holes.
5. Verify that the replacement knife is the same size as the removed knife.
6. Place the knife on the rotor seat and install clean dry bolts. Make sure the knife is fully seated . Should always replace bolts. Do not use old rotor bolts.

NOTES

Both rotor and bed knives are installed with grade 8 bolts. These bolts have been torqued and it is the recommendation of the bolt manufacturer they be replaced with new bolts each time the knives are replaced.

7. Torque the knife mounting bolts * and then check the clearance between the rotor knife seat and the knife to verify that the blade is fully seated.
(*On HG910, HG1412, HG1420 use 230ft.lbs. and on HG1630 use 450ft.lbs.)
8. The rotor can be turned 180° to replace the other blade using the same procedure.
9. After replacement of the blades the cutting clearance must be set. See "Resetting the Cutting Clearances", section 5, page 4.

BED KNIFE REPLACEMENT

1. Read the section on "Accessing the Cutting Chamber", section 5, page 3.
2. Thoroughly clean the cutting chamber of all material.
3. Remove the bolts holding down the bed knife.
4. Loosen the adjusting bolts and unscrew them to the fully retracted position.
5. Remove the knife and thoroughly clean the bed knife seat.
6. Replace the knife and reset the clearance between the rotor blades and the bed knife; see "Resetting the Cutting Clearances".

NOTES

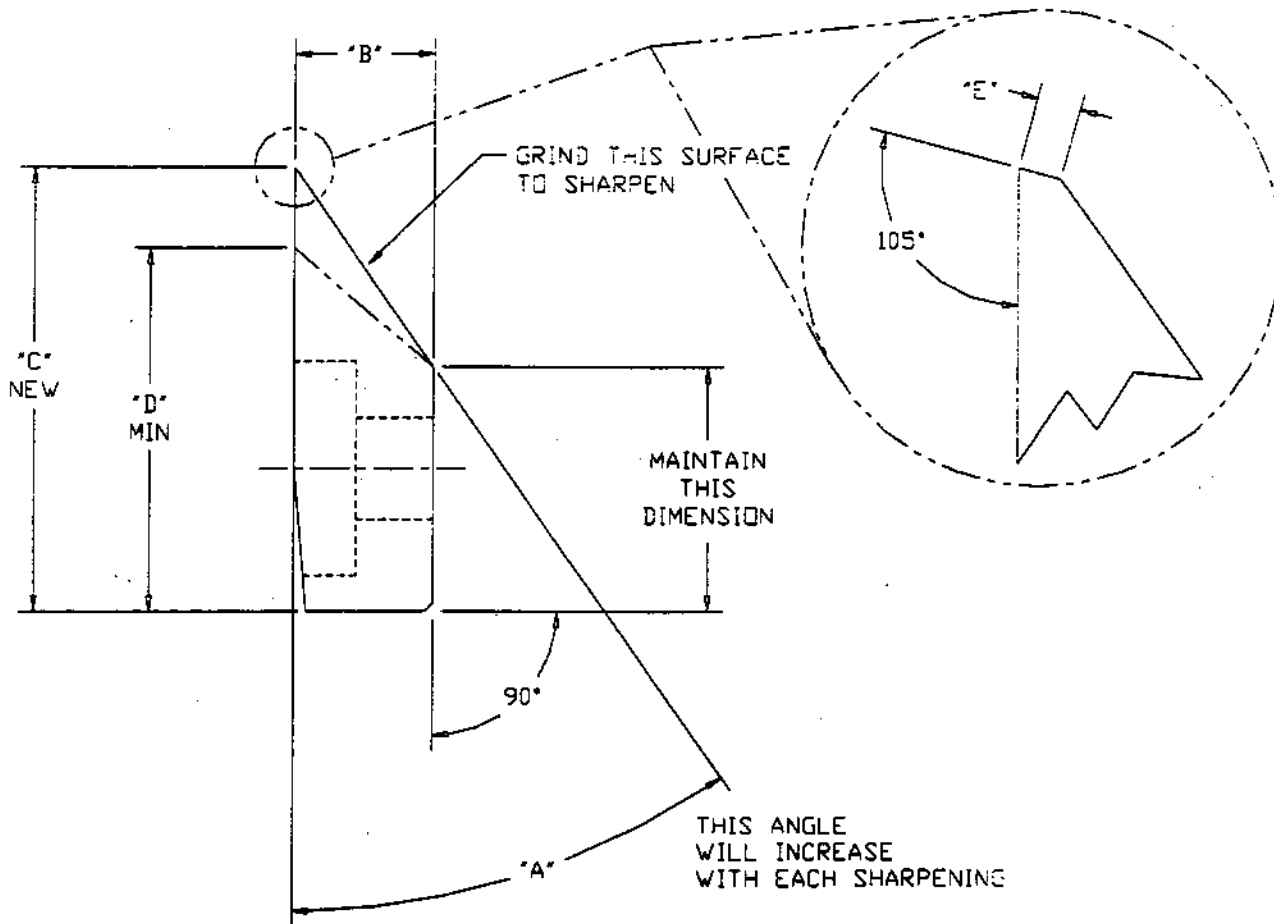
Both rotor and bed knives are installed with grade 8 bolts. These bolts have been torqued and it is the recommendation of the bolt manufacturer they be replaced with new bolts each time the knives are replaced.

7. After resetting the clearances, torque the mounting bolts to 90 ft/lbs.

SCREEN REMOVAL

1. Read the section "Accessing the Cutting Chamber", section 5, page 3.
2. Rotate the screen out of the granulator from the back of the cutting chamber on the hopper hinge side.
3. Thoroughly clean the screen tracks and screen.
4. The screen is reversible to extend its life.
5. Rotate the screen back into the cutting chamber.

ROTOR KNIFE SHARPENING



FHG/HG ROTOR BLADES	910	1412/1420	1630
A	39	36	35
B	0.875	1.000	1.102
C	2.484	2.875	3.445
D	2.125	2.500	3.125
E	0.031	0.010	0.015

SUGGESTED LUBRICATION SCHEDULE

Grease fittings are located on each side of the granulator. These bearings may be accessed through an opening at the top of the pillow blocks on either side of the granulator making it unnecessary to open the unit. The period of time between lubrications depends upon hours of actual granulator operation. (Type NLGI grade #2 lithium based recommended)

Hours of Operation	Lubrication Period (Weeks)
Rotor	8
	16
	24
	10
	5
	3

DIFFICULTY	PROBABLE CAUSE	CORRECTIVE ACTION
<p>1. Grinder will not start.</p>	<p>A. Power is not connected.</p> <p>B. Wrong supply voltage.</p> <p>C. Hopper not fully closed limit switch not engaged.</p> <p>D. Overload tripped / fuse blown.</p>	<p>Disconnect switch must be in ON position. Confirm voltage at your power source.</p> <p>Check serial number tag for proper voltage.</p> <p>Check for obstructions in the cutting chamber. Check limit switch.</p> <p>Examine reason for overload and reset or replace fuses.</p>
<p>2. Rotor will not turn.</p>	<p>A. Unit stopped too soon at previous shutdown - should allow to clean out before stopping.</p>	<p>Open granulator - remove pieces that block knife motion.</p>
<p>3. Clicking sound when empty.</p>	<p>A. Knives not adjusted properly.</p>	<p>Readjust the knives.</p>
<p>4. Grinder jams easily.</p>	<p>A. Knives are dull.</p> <p>B. Belts are slipping.</p>	<p>Sharpen or replace knives.</p> <p>Adjust belt tension.</p>

Troubleshooting

DIFFICULTY	PROBABLE CAUSE	CORRECTIVE ACTION
5. Excessive fines or poor cut.	A. Knives are dull. B. Improper knife setting.	Sharpen or replace knives. Readjust knife clearance.
6. Slivers or longs in the granulator.	A. Screen not installed properly. B. Holes too big.	Reset screen - confirm fit. Replace screen with proper hole diameter.

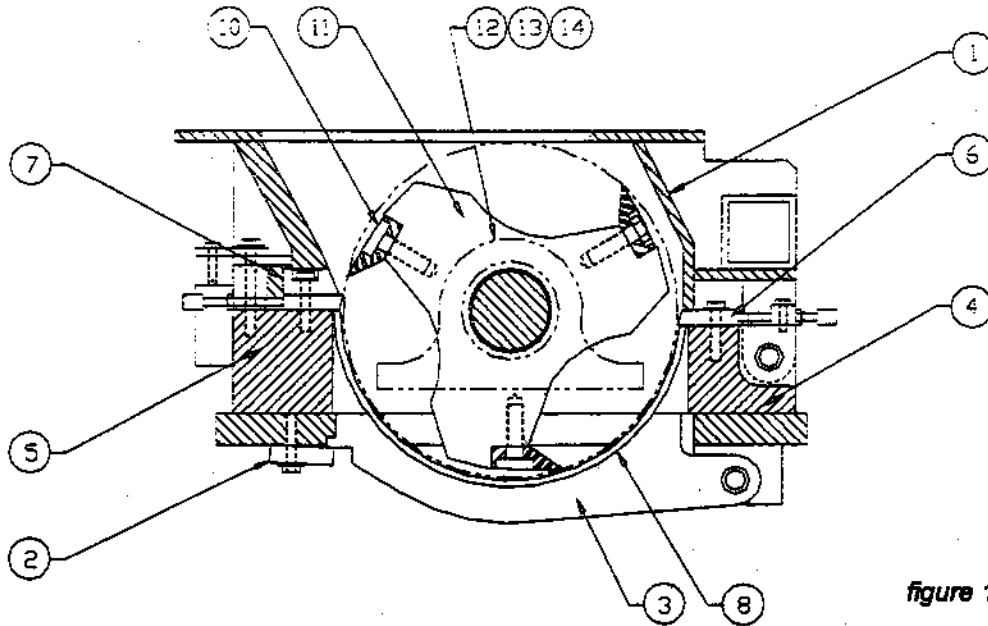


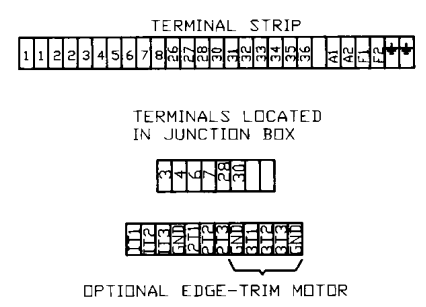
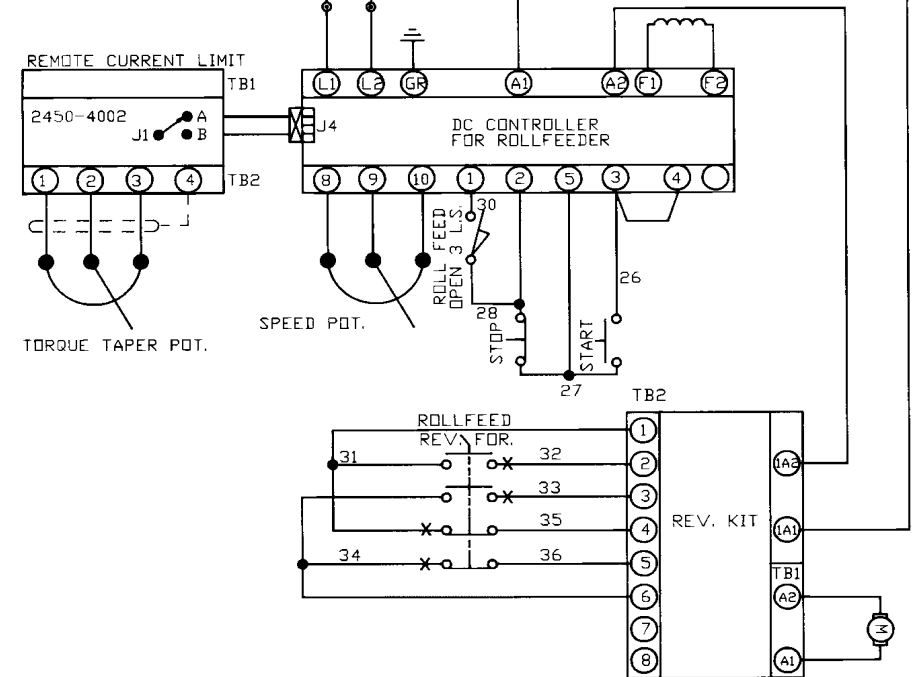
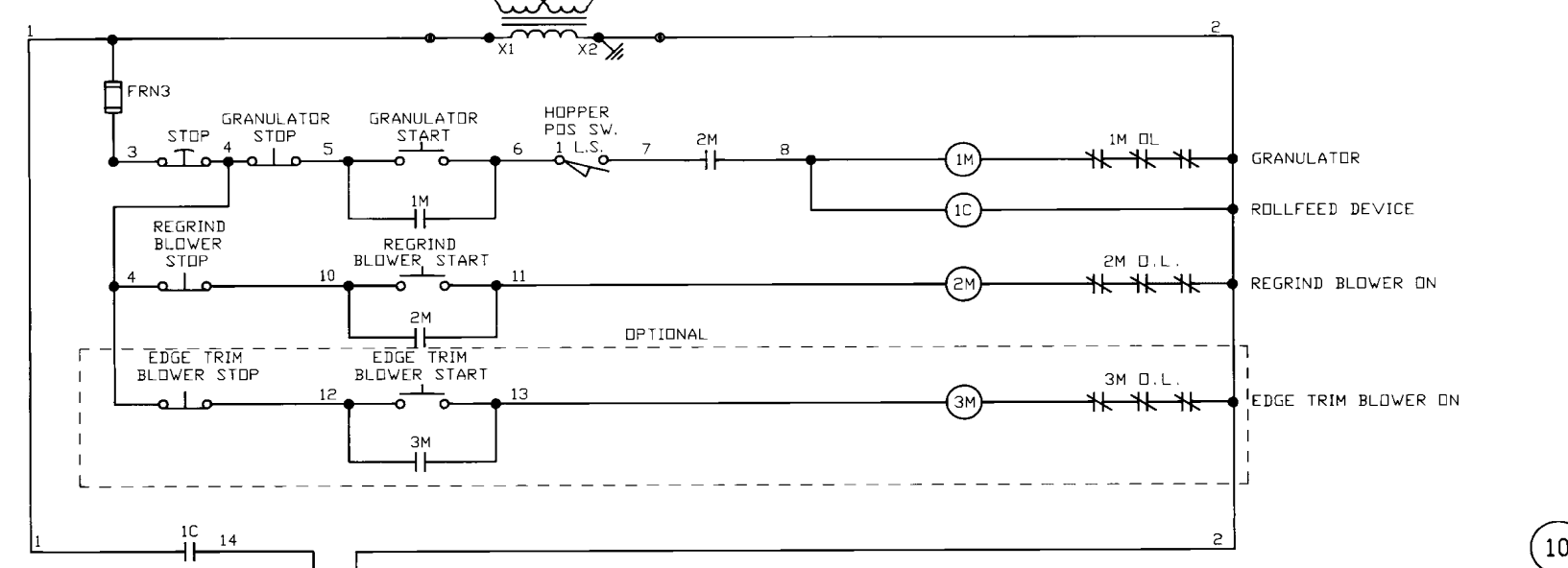
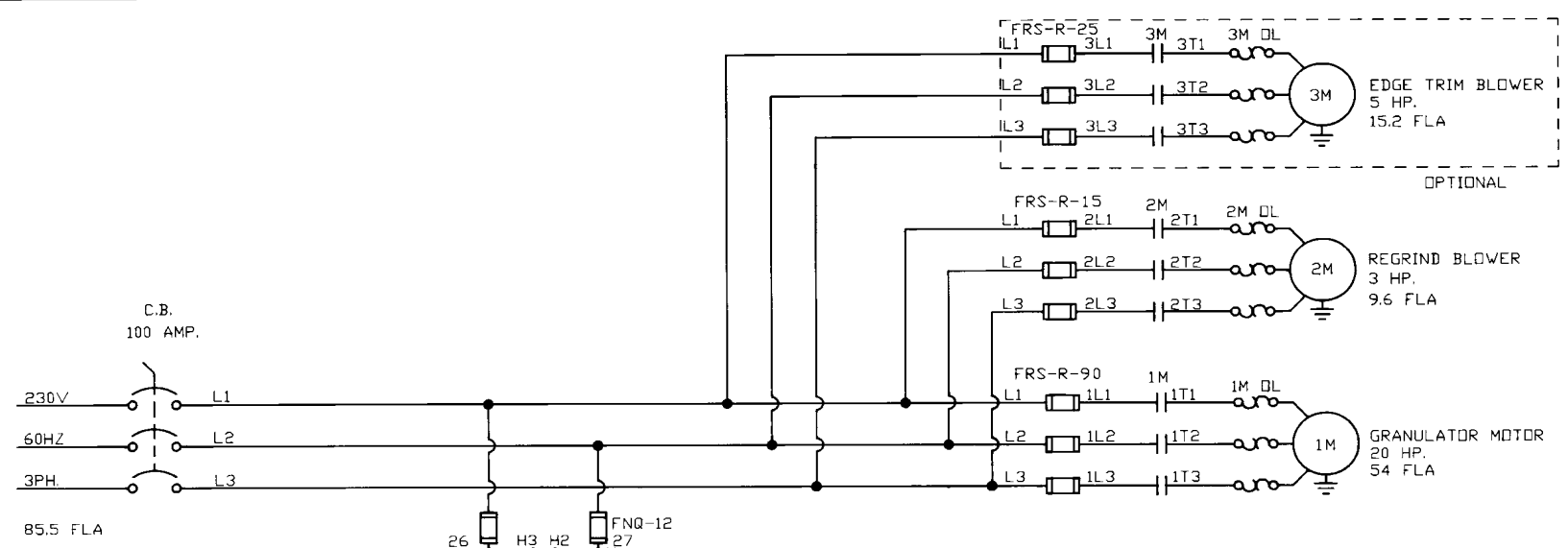
figure 10

#	DESCRIPTION	(FH)G910	QTY	(FH)G1412	QTY	(FH)G1420	QTY	(FH)G1630	QTY
		PART #		PART #		PART#		PART #	
1	Upper Housing	910B-37	1	1412-116	1	1420-116	1	1630-82	1
2	Clamp Bar	723-162-06	1	1412-18	1	1420-18	1	1630-26	1
3	Cradle	910B-68-1	1	1400-19 1400-20-1 1400-20-2	1	1400-19 1400-20-1 1400-20-2	1	1630-23 1630-24-1 1630-24-2	1
4	Bed Knife Support Upstroke	910B-67*	1	1412-14	1	1420-14	1	1630-14	1
5	Bed Knife Support Downstroke	910B-67*	1	1412-13	1	1420-13	1	1630-15	1
6	Bed Knife	723-160	2	1212-042-5441	2	KNF-00007	2	1630-114	2
7	Bed Knife Cover Downstroke	910B-67*	1	1412-16	1	1420-16	1	1630-18	1
8	Standard Screen	910B-62-3	1	1412-25-6	1	1420-25-6	1	1630-27-3	1
10	Rotor Knife	723-159-01	3	1212-041	3	KNF-00014	3	1630-20	3
11	Rotor Shaft Assembly	910B-44-3	1	1412-17-3	1	1420-17-3	1	1630-28-3	1
12	Rotor Shaft Bearing Set	65192	1	BRG-00365	1	BRG-00365	1	BRG-00346	1
13	Rotor Shaft Pulley	80684	1	66563	1	66563	1	64545	1
14	Drive Belts	66840	2	66833	3	66833	3	66830	4

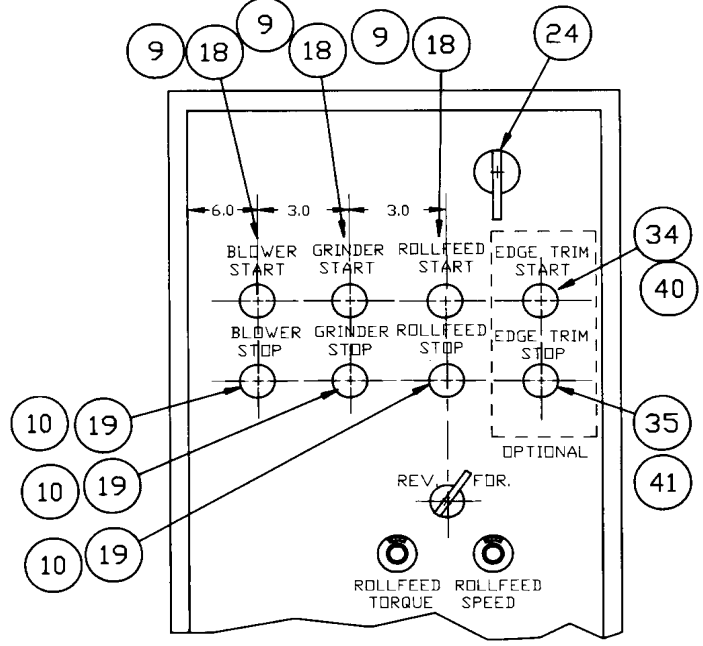
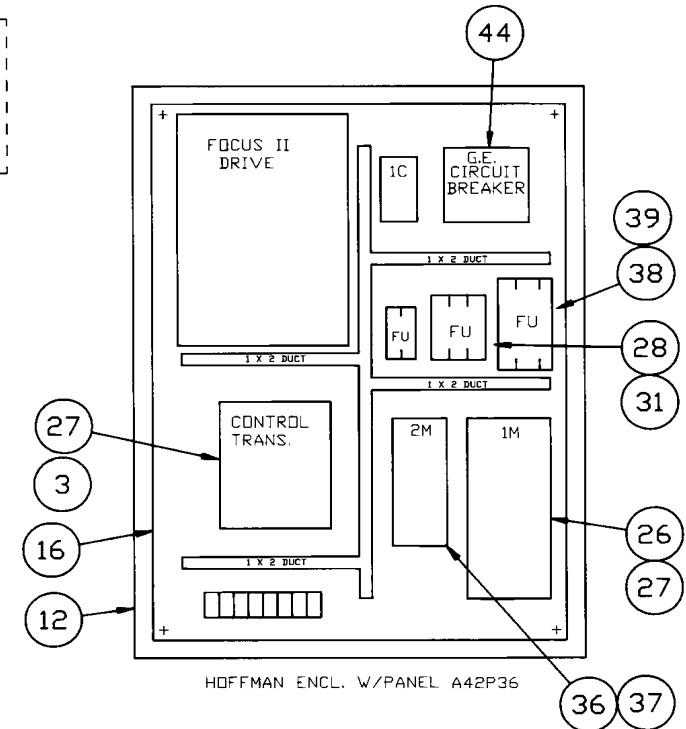
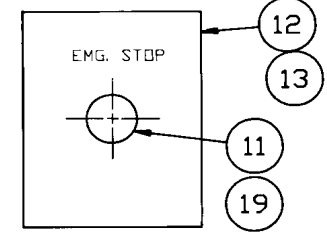
*casting

Recommended Spare Parts

DESCRIPTION	(F)HG910 (KIT-00607)		(F)HG1412 (KIT-00608)		(F)HG1420 (KIT-00609)		(F)HG1630 (KIT-00610)	
	PART #	QTY	PART #	QTY	PART #	QTY	PART #	QTY
Inboard Bearing	65192	1	BRG-00365	1	BRG-00365	1	BRG-00346	1
Outboard Bearing	65192	1	BRG-00365	1	BRG-00365	1	BRG-00346	1
Bed Knife	723-160	2	1212-042-5441	2	KNF-00007	2	1630-114	2
Rotor Knife	723-159-01	3	1212-041	3	KNF-00014	3	1630-20	3
Driven Pulley	80684	1	66563	1	66563	1	64545	1
Driven Bushing	80837	1	67807	1	67807	1	64939	1
Motor Sheave	80683	1	80176	1	67785	1	65152	1
Motor Bushing	64925	1	66989	1	65554	1	64922	1
Drive Belt	66840	2	66833	3	66833	3	66830	4
Rotor Shaft	910B-44-3	1	1412-17-3	1	1420-17-3	1	1630-28-3	1
Limit Switch	SWT-00544	1	SWT-00544	1	SWT-00544	1	SWT-00544	1
Motor:	MOR-00039 (5 H.P.)	1	MOR-00037 (10 H.P.)	1	MOR-00050 (20 H.P.)	1	80383 (50 H.P.)	1



HOFFMAN JUNCTION BOX
1008GGCH W/ PANEL A10P8
MTD. ON MACH. BELT GUARD



ITEM	QTY.	MATERIAL	DESCRIPTION	PART NUMBER
44				
42				
41				
40				
39	3	FUSE, FRS-R-90		80277
38	1	BLOCK-FU-GANG		67723
37	3	HEATER D.L. W-52		1563-00305
36	1	STARTER 509-ADD		65431
35				
34				
33				
32				
31	3	FUSE, FRS-R-15		1552-00923
30				
29				
28	1	FUSE BLOCK 30 AMP.		67709
27	3	HEATER D.L. W-69		80639
26	1	STARTER 509-DDD		84251
25	1	TRANSFORMER 2KVA		1634-30016
24	1	G.E. HANDLE		67236
23	1	EMERSON REM. TORQUE TAP.		67690
22	1	EMERSON REV. CONTACTOR		84676
21	1	EMERSON FOCUS II CNTRL		67803
20	1	HOFFMAN FLOOR STAND KIT		67818
19	3	FURNAS CONTACT BLOCK		80287
18	2	FURNAS CONTACT BLOCK		80286
17	1	A.B. CONTACTOR		84124
16	1	HOFFMAN PANEL		2503-00086
15	2	LIMIT SWITCH		66057
14	1	BLOCK-FU-GANG		1502-00078
13	1	HOFFMAN PANEL		2503-00388
12	1	HOFFMAN ENCLOSURE		80388
11	2	FURNAS PUSHBUTTON		80006
10	1	FURNAS PUSHBUTTON		80007
9	2	FURNAS PUSHBUTTON		80004
8	1	A.B. D.L. HOLDER		84533
7	1	FUSE-PDW, FNM 12		1552-00923
6	1	FUSE-PDW, KTK 5		1552-00621
5	2	AUX. CONTACT		67673
4	1	DYNAMIC BRAKE		81144
3	1	G.E. FUSE CLIP KIT		80311
2	1	A.B. OVERLOAD BLOCK		193BSB60
1	1	HOFFMAN ELEC. BOX		2504-01841

CONAIR WORTEX
PART OF THE CONAIR GROUP

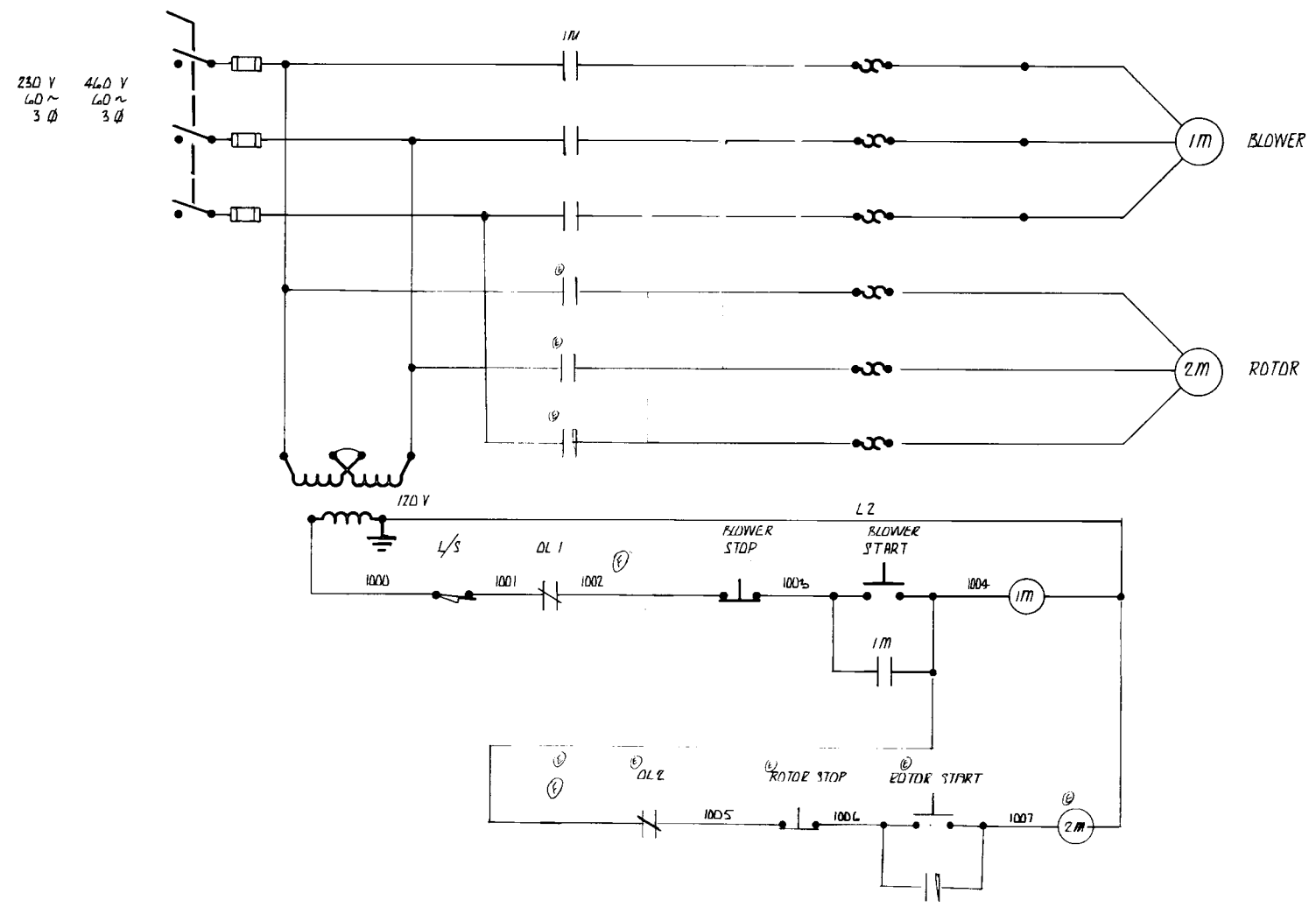
400 HARRY S. TRUMAN PARKWAY
BAY CITY, MI 48706
PHONE 517-686-6600
FAX 517-686-4444

THIS DRAWING IS THE PROPERTY OF CONAIR WORTEX AND MUST BE RETURNED UPON REQUEST. THE REPRODUCER THEREOF WILL BE REPRODUCED WITHOUT THE WRITTEN PERMISSION FROM CONAIR WORTEX.

FINISH (MIN) & TYPE	TOLERANCES	BREAK ALL CORNERS	DO NOT SCALE
UNLESS OTHERWISE SPECIFIED ON DRAWING OR FINISHED SURFACES	UNLESS OTHERWISE SPECIFIED ON DRAWING OR FINISHED SURFACES	NOT REQD SHARP	SCALE
DESIGNED BY	TORCH ON FLANGE OR BUSHINGS	CHECKED BY	DATE
DRAWN BY	FRACTIONS 1/16	APPROVED BY	
CHECKED BY	DECIMALS .005		
APPROVED BY	ANGLES 1/2 ON FINISHED ANGLES		

MACHINE: GRANULATOR
TITLE: ELECTRICAL SCHEMATIC
PART NO. SHOWN IN OPPOSITE: CD6596

REV	DESCRIPTION	DATE	BY	CHK
A	ADDED LIMIT SWITCH PN	12-24-91	NS	NS
A	ADDED FUSES	12-24-91	NS	NS
A	ADDED WIRE LIST	12-24-91	NS	NS
B	ADDED 460V W/ALTA-4-9 5HPM	12-24-91	NS	NS
C	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
D	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
E	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
F	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
G	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
H	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
I	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
J	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
K	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
L	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
M	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
N	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
O	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
P	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
Q	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
R	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
S	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
T	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
U	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
V	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
W	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
X	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
Y	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS
Z	WAS 109A09AB3XXX-16 IS 112BAR3XXX-16	12-24-91	NS	NS



	460 V	230 V	460 V	230 V	460 V	230 V	460 V
	WB 1010 BLOWER	WB 1010	AL 4-4 BLOWER	AL 4-4 BLOWER	1 HP BLOWER	WB 1010	ACA-4 BLOWER
HP	1 1/2	1 1/2	3/4	3/4	1	10	3/4 HP
RPM	3450	3450	3450	3450	3450	3450	3450
AMPS	2.08	4.16	1.3	2.6	1.8	12	1.3
FRAME	56C	56C	56C	56C	56C	182T	56C
1 EA.	193B5B22	193B5B42	193B5A90	193B5B30	193B5B16	193B5C15	193B5A90
HP	5	5	3	3	10	10	10
RPM	1725	1725	1725	1725	1725	1725	1725
AMPS	6.6	13.2	4.4	8.8	13.2	26	13.2
FRAME	182T	182T	182T	182T	215T	215T	215T
1 EA.	193B5B80	193B5C15	193B5B42	193B5B80	193B5C15	193B5C15	193B5C15
3 EA.	KLDR-10	LPT-20	KLDRB	KLDR-10	LPT-20	LPT-18	LPT-10

460 V
AL 4-4 BLOWER
3/4 HP
3450
1.3
56C
193B5A90
5
1725
6.6
182T
193B5C15
KLDR-10

* FOR HG,ES DRDP B2E62RNB0 ADD 914CE1-6

QTY	ITEM	PART NUMBER	DESCRIPTION
1	SEC 2213		HANDLE ASEA
1	SEC 30N3		DISCONNECT ASEA
1	RZELRNBD		LIMIT SWITCH MICRO SW
1	SEC 6N3		DISCONNECT ASEA
1	914CE1-6		LIMIT SWITCH MICRO SW

WORTEX CORPORATION
Old Brandon Road / Hillsboro, Texas 76645
Phone 817/582-5354

Material: * ADD SEKLOW'S DROP SEKLOW'S PAINT SPEC

FINISH (MIN) & TYPE	TOLERANCES	DRIFT (ALL DIMENSIONS NOT REPEATED)	DO NOT SCALE DRAWING
1/8" (MIN) UNLESS SPECIFIED	UNLESS OTHERWISE SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/16" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/32" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/64" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/128" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/256" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/512" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/1024" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/2048" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/4096" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/8192" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/16384" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/32768" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/65536" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/131072" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/262144" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/524288" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/1048576" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/2097152" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/4194304" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/8388608" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/16777216" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/33554432" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/67108864" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/134217728" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/268435456" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/536870912" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/1073741824" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/2147483648" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/4294967296" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/8589934592" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/17179869184" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/34359738368" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/68719476736" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/137438953472" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/274877906944" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/549755813888" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/1099511627776" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/2199023255552" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/4398046511104" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/8796093022208" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/1759218044416" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/3518436088832" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/7036872177664" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/14073744355328" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/28147488710656" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/56294977421312" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/112589954842624" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/225179909685248" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/450359819370496" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/900719638740992" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/1801439277201984" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/3602878554403968" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/14411514217615872" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/29514781096777304576" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/59029562193554609152" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/241785076657593272433664" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/483570153315186544867328" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/967140306630373089734656" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/386856142521492435893824" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/154742457008596974357296" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/12379396560687557948576" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/792281379644037084708864" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/158456275928807416941728" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/316912551857614833883456" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/5070600829721837422132992" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/4056480643376668977063936" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
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1/16225922735106675088255552" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/32451845470213350176511104" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/64903690940426700353022208" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/129807381880853407066044416" (MIN) UNLESS SPECIFIED	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING	AS SHOWN ON DRAWING
1/259			