

INSTRUCTION MANUAL

HI-CAPACITY



MIX-MILL, INC.
BLUFFTON, INDIANA, U.S.A.

A-4677

MIX-MILL®

PAGE 48
DATE MAR 1964
REPLACES M602S FIG 1

AUTOMATIC FEED PROCESSING SYSTEMS

BLUFFTON INDIANA

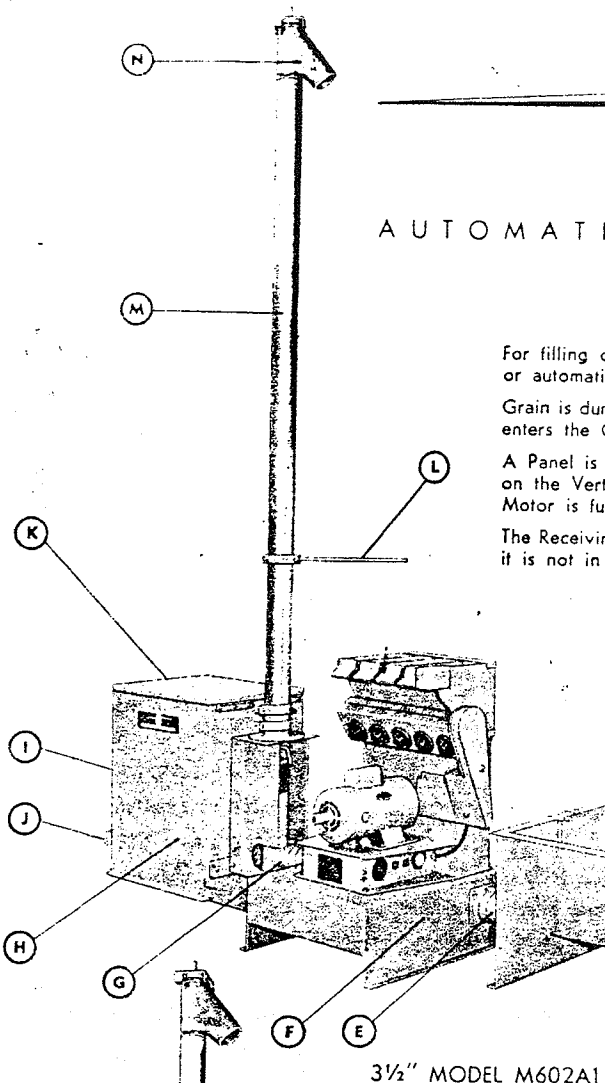
MIX-MILL HI CAPACITY AUGER SYSTEMS

For filling overhead bins and conveying ground feed from a Mix-Mill to an overhead holding bin, auger wagon or automatic feeder.

Grain is dumped into a Receiving Hopper which is equipped with a Valve which controls the amount of material which enters the Cross Auger. The Cross Auger conveys the grain to the Force Fed Tee and then to the Vertical Auger.

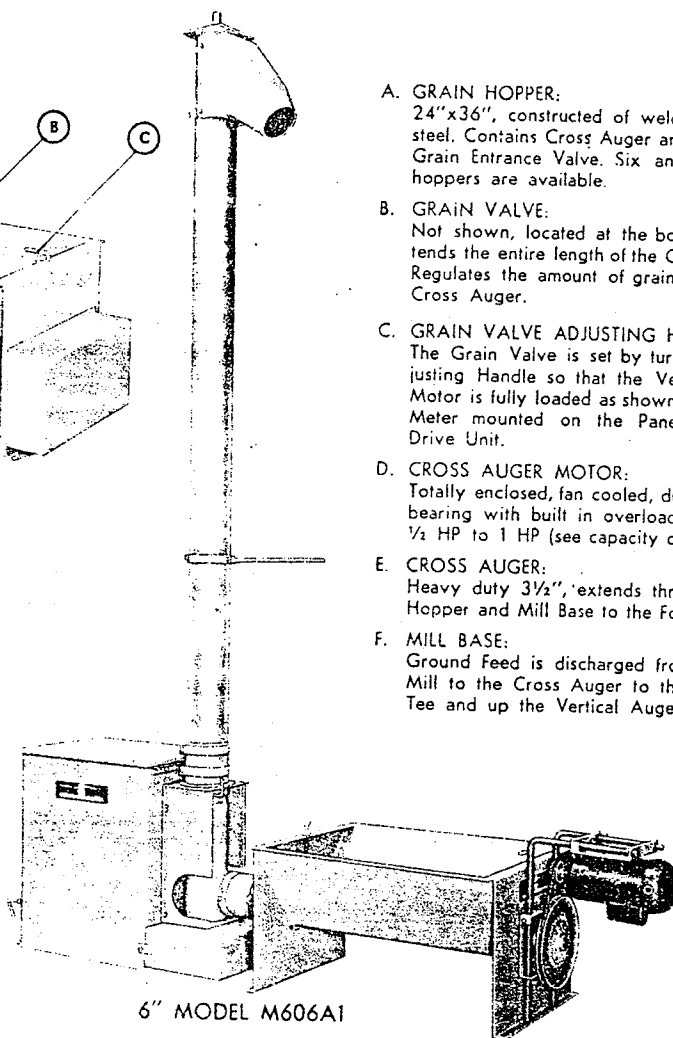
A Panel is supplied as part of the Vertical Drive Unit on which is mounted a Load Meter which indicates the load on the Vertical Auger Motor. The amount of grain entering the Cross Auger is increased until the Vertical Auger Motor is fully loaded.

The Receiving Hopper swivels around Vertical Drive Unit so that the Hopper can be swung to the driveway wall when it is not in use, or the entire Hi Capacity Unit can be installed in a pit so that it can be driven over.



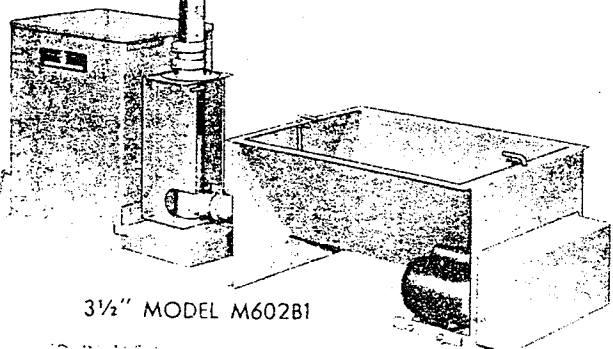
3 1/2" MODEL M602A1

- G. FORCE FED TEE:
Grain or Feed from the Cross Auger is fed into the Vertical Auger at the Force Fed Tee.
- H. DRIVE UNIT:
With Waterproof Hinged Top. Contains the Control Panel, Vertical Auger Motor and Auger Drive with Belt Tightener.
- I. VERTICAL AUGER MOTOR:
Not shown, mounted inside Drive Unit. Totally enclosed, fan cooled, single phase, dust tight, ball bearing motor with built in overload protection; 2 HP or 3 HP (see capacity chart below).
- J. BELT TIGHTENER ADJUSTING HANDLE:
The Vertical Auger Motor is mounted on a swinging panel which is positioned, and the belt is tightened, by turning the Adjusting Handle.



6" MODEL M606A1

- A. GRAIN HOPPER:
24"x36", constructed of welded 12 gauge steel. Contains Cross Auger and Adjustable Grain Entrance Valve. Six and 9 ft. long hoppers are available.
- B. GRAIN VALVE:
Not shown, located at the bottom and extends the entire length of the Grain Hopper. Regulates the amount of grain entering the Cross Auger.
- C. GRAIN VALVE ADJUSTING HANDLE:
The Grain Valve is set by turning the Adjusting Handle so that the Vertical Auger Motor is fully loaded as shown on the Load Meter mounted on the Panel inside the Drive Unit.
- D. CROSS AUGER MOTOR:
Totally enclosed, fan cooled, dust tight, ball bearing with built in overload protection; 1/2 HP to 1 HP (see capacity chart below).
- E. CROSS AUGER:
Heavy duty 3 1/2", extends thru the Grain Hopper and Mill Base to the Force Fed Tee.
- F. MILL BASE:
Ground Feed is discharged from the Mix-Mill to the Cross Auger to the Force Fed Tee and up the Vertical Auger.



3 1/2" MODEL M602B1

- K. CONTROL PANEL:
Not shown, mounted inside Vertical Drive Unit. Equipped with Timer which controls the length of time of operation of the complete system; Load Meter, which indicates the loading of the Vertical Auger Motor; two Auto-Off-Manual Switches, one for controlling the Cross Auger Motor and one for controlling Vertical Auger Motor.
- L. TURNING HANDLE:
Bin to be filled is selected by rotating the Vertical Auger with the Turning Handle.
- M. VERTICAL AUGER:
Driven by the Vertical Auger Motor mounted inside the drive unit. Heavy Duty with sealed, prelubricated ball bearings.
- N. OUTLET SPOUT:
Distributes Grain or Ground Feed into different bins. A Six Way Distributing Head and an Outlet Spout with Grain Switch may be ordered separately. The Grain Switch can be used to shut down the entire system automatically when a bin is full.

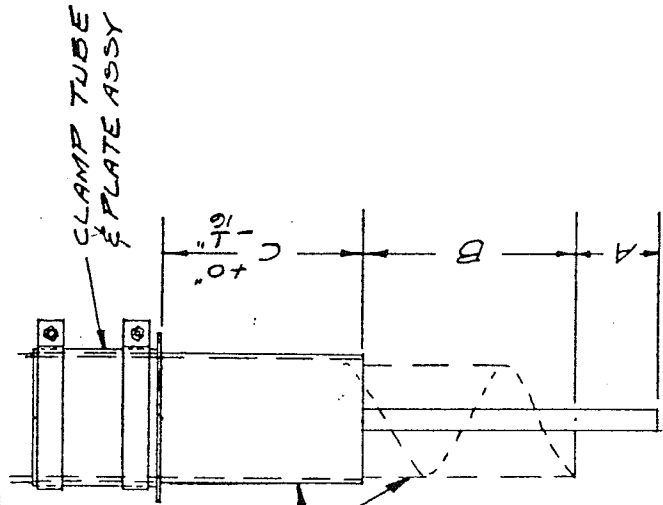
MIX

MILL®

AUTOMATIC FEED

PROCESSING SYSTEMS

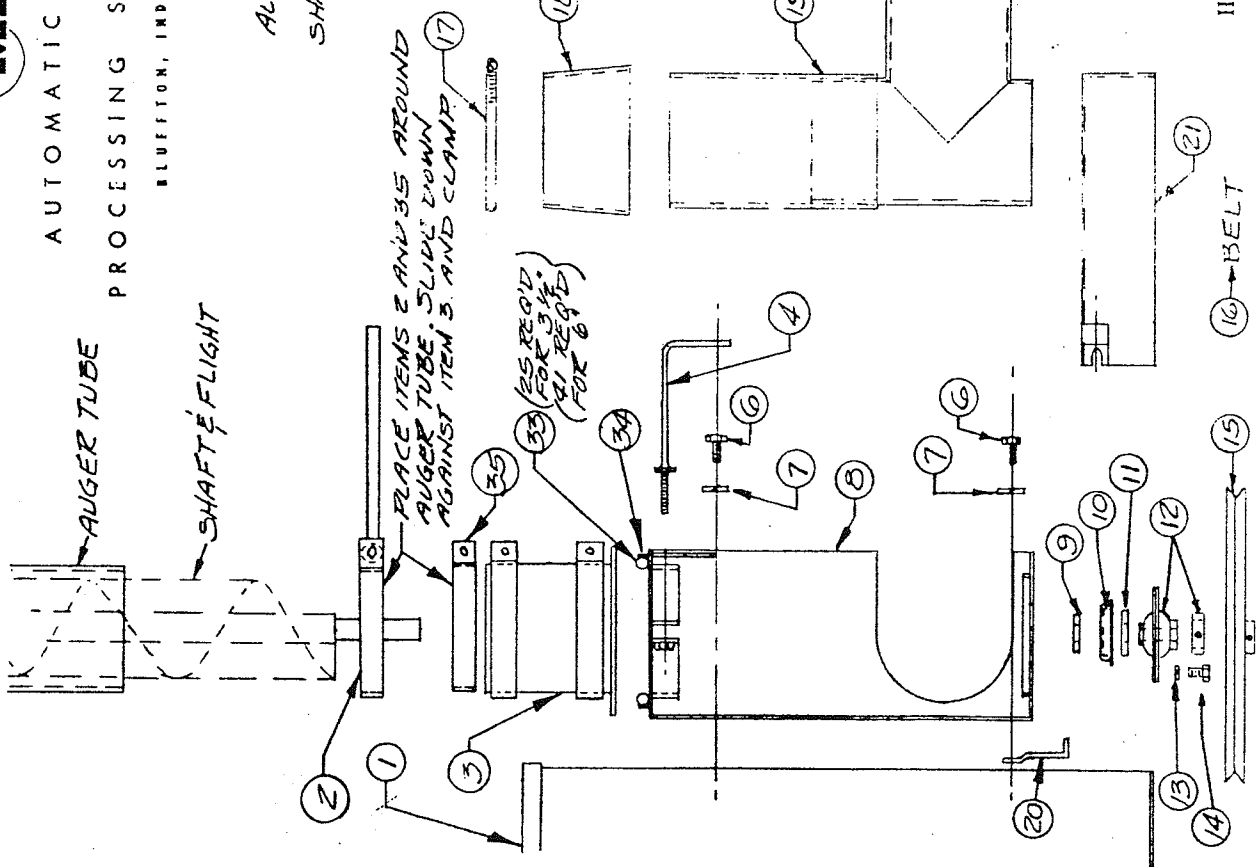
BLUEFTON, INDIANA



ASSEMBLY OF LOWER END OF AUGER

AUGER SIZE	A	B	C
3 1/2"	2 3/4"	6 3/4"	13 3/8"
6"	4"	10"	10"

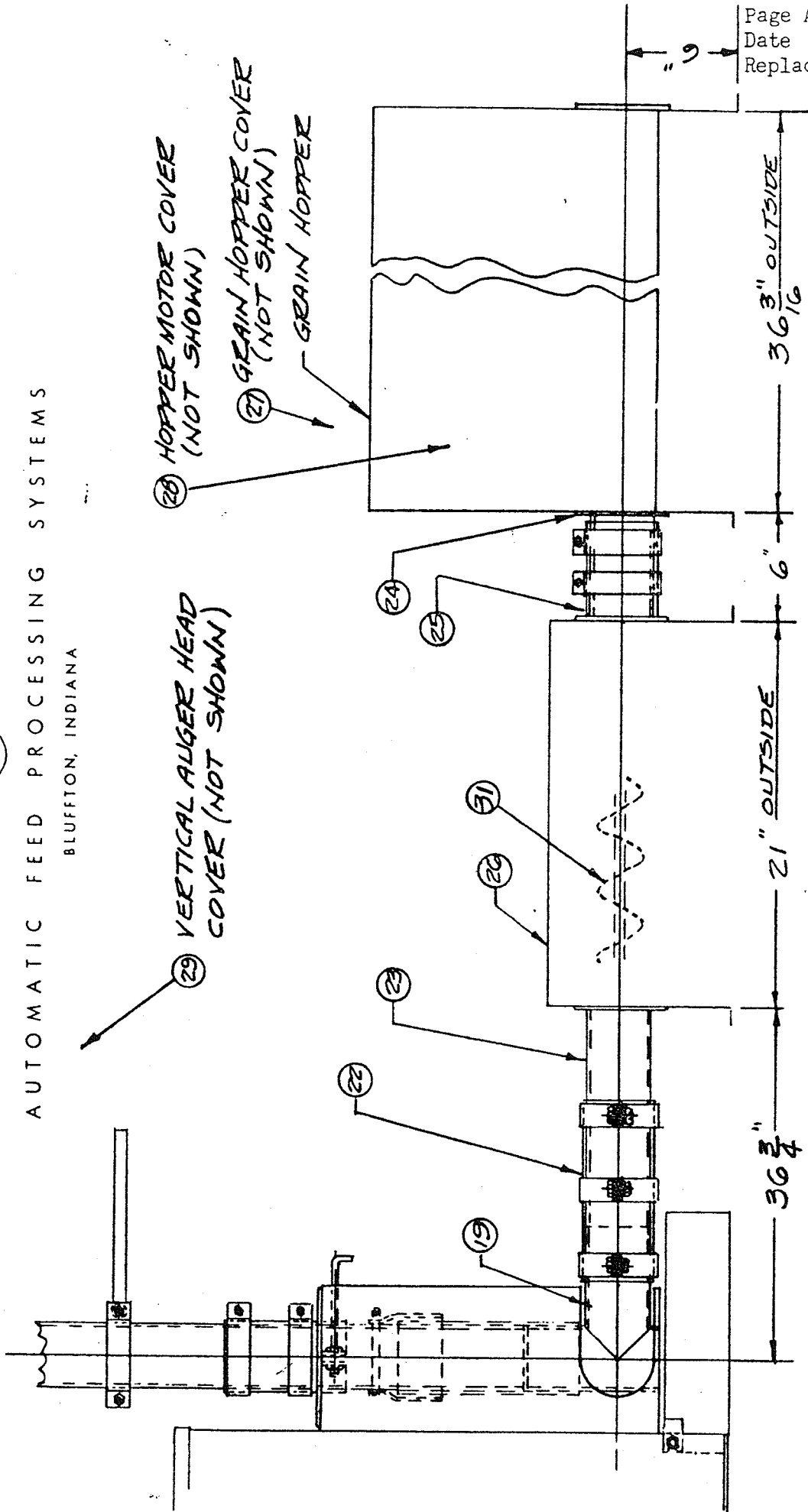
ASSEMBLY INSTRUCTIONS AND PARTS LIST



III CAPACITY AUGER SYSTEM 3 1/2" AND 6"

MIX-MILL®

AUTOMATIC FEED PROCESSING SYSTEMS
BLUFFTON, INDIANA



Page A20.402
Date 13 Aug. 1964
Replaces Pg.2 3372-

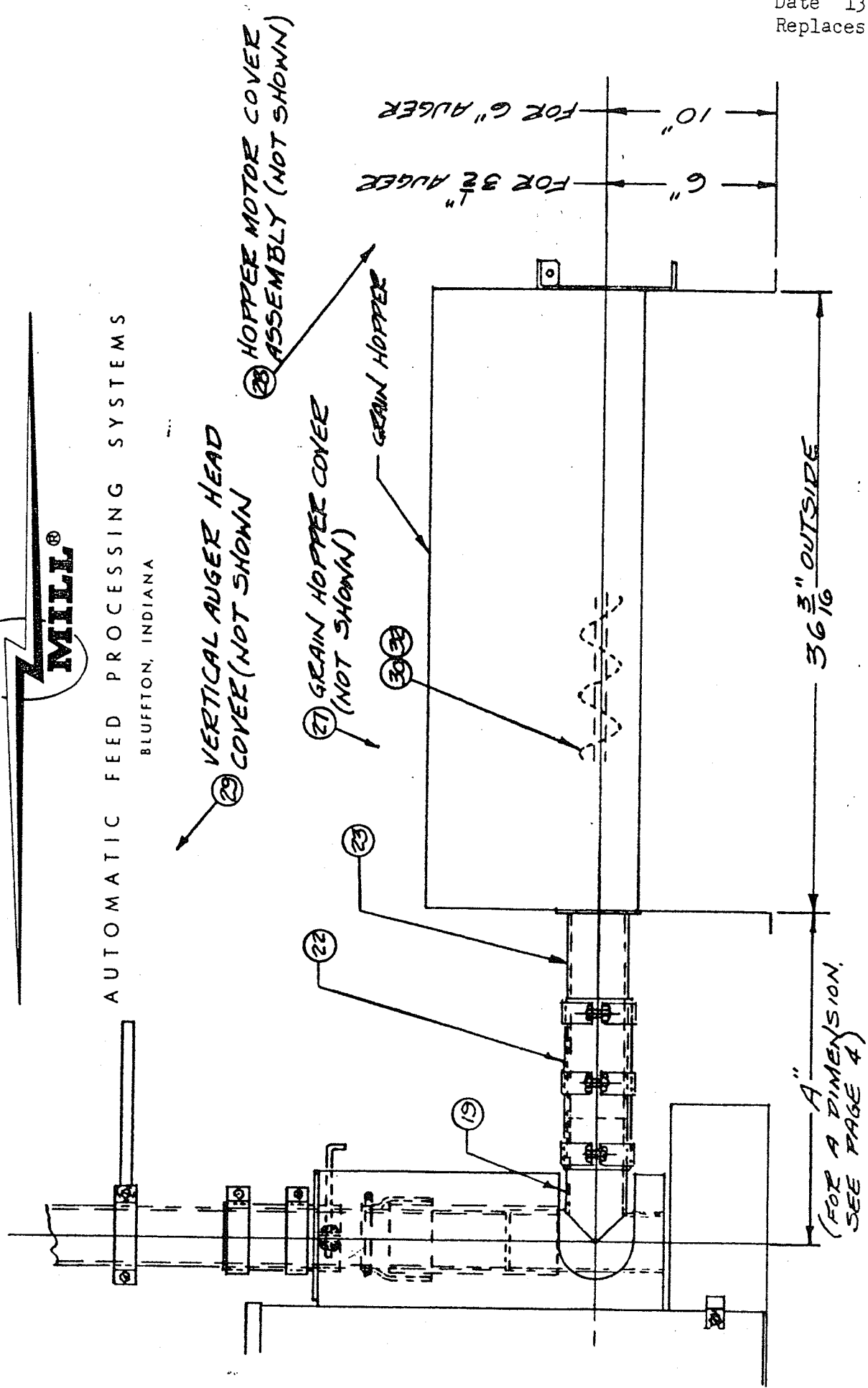
ASSEMBLY INSTRUCTIONS AND PARTS LIST
HI CAPACITY AUGER SYSTEM 3 1/2"

PRINTED IN U.S.A.

MIX-

MILL®

AUTOMATIC FEED PROCESSING SYSTEMS
 BLUFFTON, INDIANA



ASSEMBLY INSTRUCTIONS AND PARTS LIST
 HI CAPACITY AUGER SYSTEM 3 1/2" AND 6"

MIX

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AUTOMATIC FEED PROCESSING SYSTEMS
BLUFFTON, INDIANA

Page 20.406
Date 10 Oct. 1963
Replaces 5 Mar. 1963
Engr. Dwg. A3372 Pg. 4

ITEM NO	PART NAME	PART CAT. NO. OLD DESIGN		ITEM NO	PART CAT. NO. NEW DESIGN	
		For 3 1/2" Hi-Cap	For 6" Hi-Cap		For 3 1/2" Hi-Cap	For 6" Hi-Cap
		M602 A1	M606 A1		M602 A1	M606 A2
		M602 B1	M606 B1		M602 B2	M606 B2
		M602 C1			M602 C2	
	For A see page 3	A=36 3/4"	A=22 1/2"		A=63 3/4"	A=58 1/2"
1	Vert. Auger drive unit	A3142-G1	A3143-G1	1	A-3142-G1	A-3143-G1
2	Turning handle assy. for vert. auger	A3360-G1	A3360-G2	2	A-3360-G1	A-3360-G2
3	Clamp Plate & Tube Assy.	A3148-G1	A3271-G1	3	A-3148-G1	A-3271-G1
4	Hook Bolt	A2502-2	A2502-2	4	A-2502-2	A-2502-2
5				5		
6	Mach. Screw 5/16-18x3/4 Self Tap	A475-1	A475-1	6	A475-1	A475-1
7	Lockwasher 5/16	A345-1	A345-1	7	A345-1	A345-1
8	Bracket Assy.	A3145-G1	A3146-G1	8	A3145-G1	A-3146-G1
9	Thrust Washer 5/8 x 1 x 1/8	A49-1	None	9	A49-1	None
10	Seal Retaining Cup	A1936	A3215	10	A1936	A3215
11	Felt Seal	A1686	A3216	11	A1686	A3216
12	Bearing with lockcollar	A1457	A3079	12	A1457	A3079
13	Lockwasher	A344-1	A345-1	13	A344-1	A345-1
14	Machine Screw	A427-1	A475-1	14	A427-1	A475-1
15	Pulley	B3303-8	B3319-1	15	B3303-8	B3319-1
16	Vee Belt	B3339-1	B3339-1	16	B3339-1	B3339-1
17	Clamp Assy.	A461-G1	A3263-G1	17	A-461-G1	A-3263-G1
18	Boot	A3144	A3262	18	A-3144	A3262
19	Tee Assy.	A3256-G1	A3257-G1	19	A-3256-G1	A-3257-G1
20	Belt Guard Deflector	A3281	None	20	A3281	None
21	Belt Guard Assy.	A3278-G1	A3282-G1	21	A-3278-G1	A-3282-G1
22	Auger Extension Splice	M517-G1	M517-G3	22	M-517-G1	M-517-G3
23	Tube & Plate Assy.	A2133-G2	A-1593-G4	23	A2133G1	A-1593-G3
24	Tube & Plate Assy.	A1593-G2	None	24	None	None
25	Tube Clamp Assy. Complete	A1484-G1	None	25	None	None
26	Mill Base Assy.	A3363-G1	None	26	None	None
27	Grain Hopper Cover	A2129-1	A2129-1	27	A2129-1	A2129-1
28	Hopper Motor Cover	A2084	A3385-G1	28	A2084	A-3385-G1
29	Vertical Auger Head Cover	A2072-G1	A3381-G1	29	A2072-G1	A-3381-G1
30	Shaft and Flight for M602B1 and M602C1	A3371-G2		30	A3371G3	
31	Shaft and Flight for M602A1	A3371-G3		31	A-3371-G3	
32	Shaft and Flight		A3393-G2	32		A3392G1
33	Steel Ball (1/2" dia.)			33	A-138G2	A138G2
34	Retainer Thrust Bearing			34	A-4613G1	A-4614G1
35	Clamp Ring			35	A-449G1	A-449G5
	Control Panel (2 & 3 HP)	M64B1	M64B1		M64B1	M64B1
	Control Panel (5 HP)	M64C1	M64C1		M64C1	M64C1
	Enclosure Box for Control Panel	A3427	A3427		A3427	A3427
	Contact for M64B1 Panel	A2832	A2832		A2832	A2832
	Contact for M64C1 Panel	A3012	A3012		A3012	A3012
	Timer Dial	A65	A65		A65	A65
	Timer Knob	A66	A66		A66	A66
	Timer 2 HR	B-67-1	B-67-1		B-67-1	B-67-1
	Selector Switch	A1241	A1241		A1241	A1241
	Nameplate, Cross auger switch	A3426	A3426		A3426	A3426
	Nameplate, Vertical Auger Switch	A3419	A3419		A3419	A3419
	Load Meter	A2865	A2865		A2865	A2865
	1/2 HP Motor, Cross Auger	A1685			A1685	
	3/4 HP Motor, Cross Auger	A1272			A1272	
	1 HP Motor, Cross Auger		A1273			A1273
	2 HP Motor, Vert. Auger	A99-3	A99-3		A99-3	A99-3
	3 HP Motor, Vert. Auger	A2703	A2703		A2703	A2703
	5 HP Motor, Vert. Auger		A2864			A2864

Hi capacity, catalog numbers M-602 B1, M-602 C1, for 3 1/2" & M-606A1 & M-606 B1 for 6" are old design built prior to May, 1963.

Current production Hi-capacity catalog numbers are M602 A1, M602 B2, M-602 C2 for 3 1/2" and M 606A2 and M-606 B2 for 6" For replacement of items 23, 30, 31 or 32 the "A" dimension (distance from center of vertical auger to end of grain hopper) must conform with the "A" dimension listed at the top of catalog number column, or be stated on the order if it is different.

MIX- MILL®

Page A30.701
10 Apr 1964
Engr Dwg 4076
Replaces New

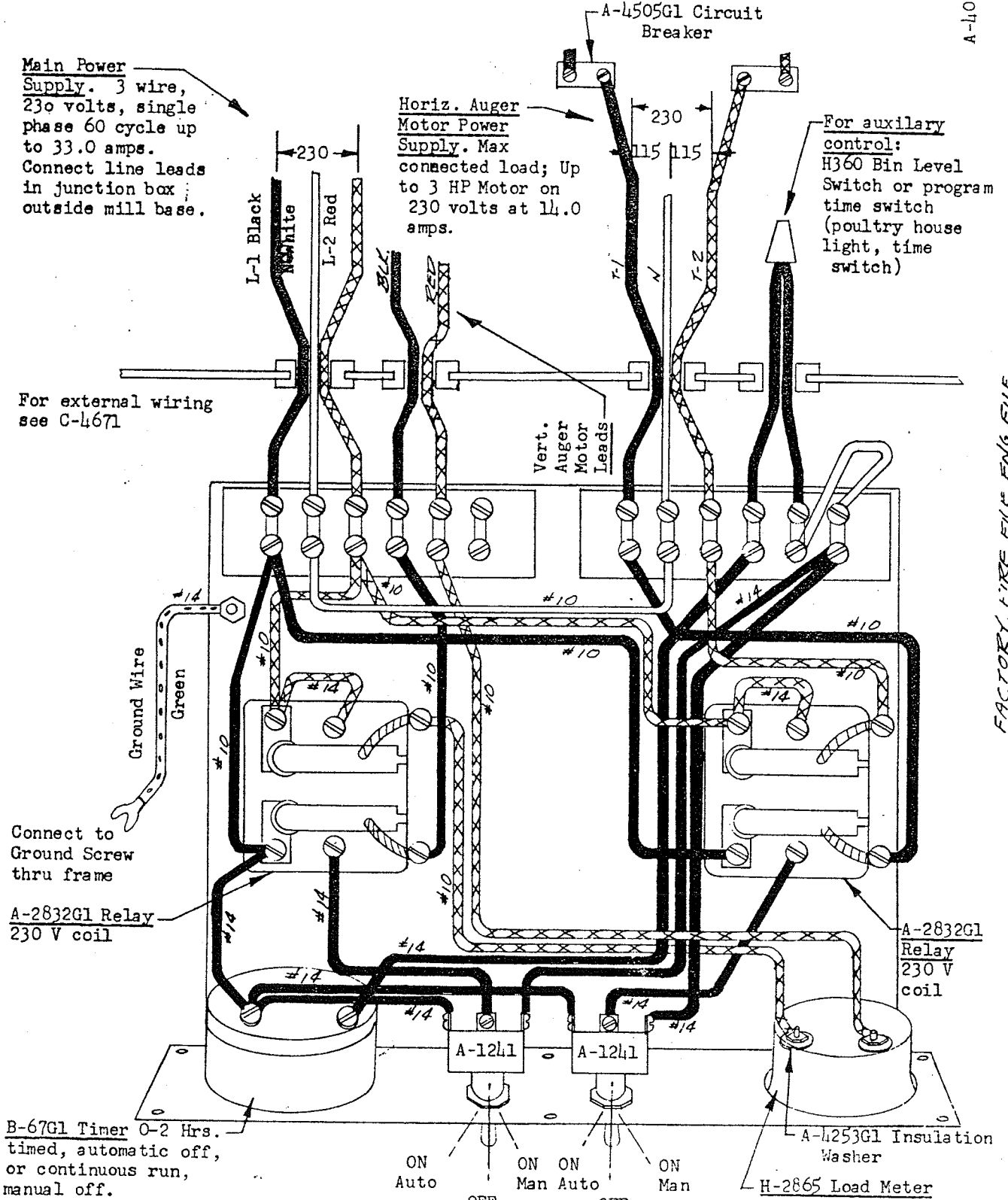
AUTOMATIC FEED PROCESSING SYSTEMS

BLUFFTON, INDIANA

PANEL WIRING DIAGRAM PANEL MODEL M64B1 CANADIAN 2 HP & 3 HP HI-CAPACITY SYSTEMS

A-4076

FACTORY FIRE FILE, ENG. FILE



MIX

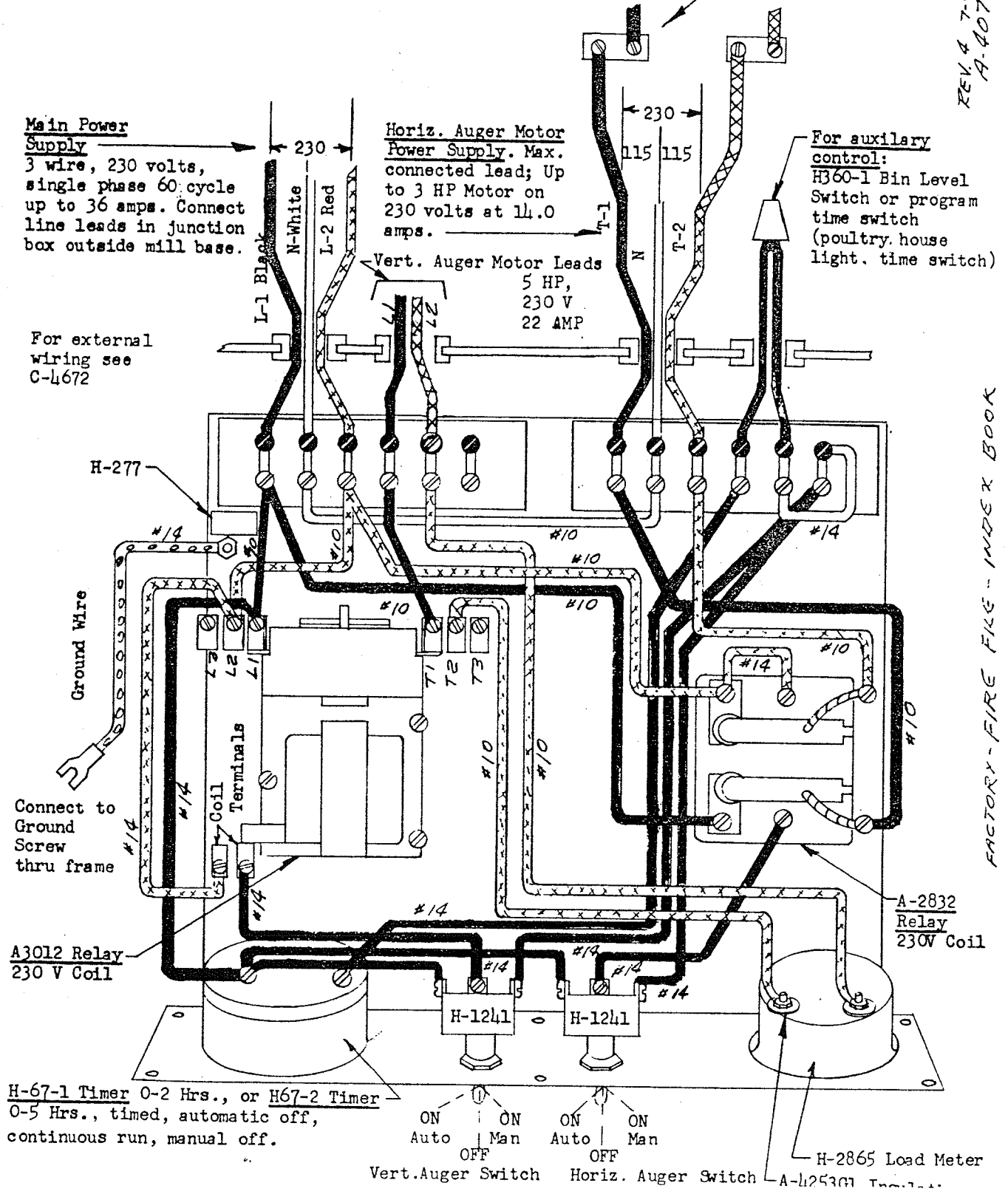
MILL®

Page A30.720
10 Apr 1964
Engr Dwg L078
Replaces New

AUTOMATIC FEED PROCESSING SYSTEMS

BLUFFTON, INDIANA

PANEL WIRING DIAGRAM
PANEL MODELS M64C1 & M64K1
CANADIAN 5 HP SINGLE PHASE HI-CAPACITY SYSTEMS



REV. 4 7-23-63
A-4078

FACTORY-FIRE FILE - INDEX BOOK

MIX- MILL®

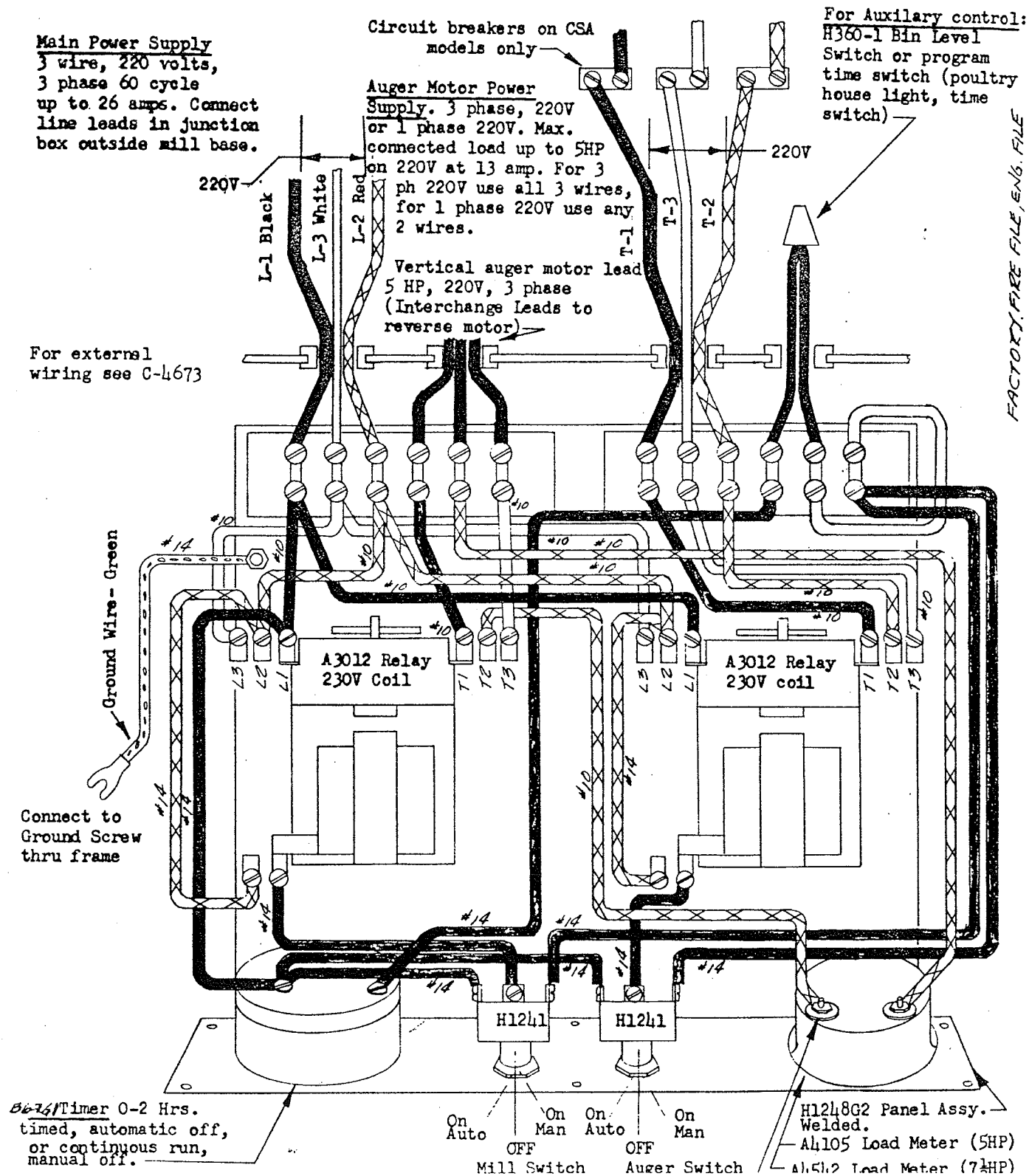
Page A30.750
10 Apr 1964
Engr Dwg 4540
Replaces New

AUTOMATIC FEED PROCESSING SYSTEMS

BLUFFTON, INDIANA

PANEL WIRING DIAGRAM
PANEL MODELS A64P1; M64P1; A64R1 & M64R1
USA AND CANADIAN 5 HP & 7½ HP THREE PHASE HI-CAPACITY SYSTEMS

4540



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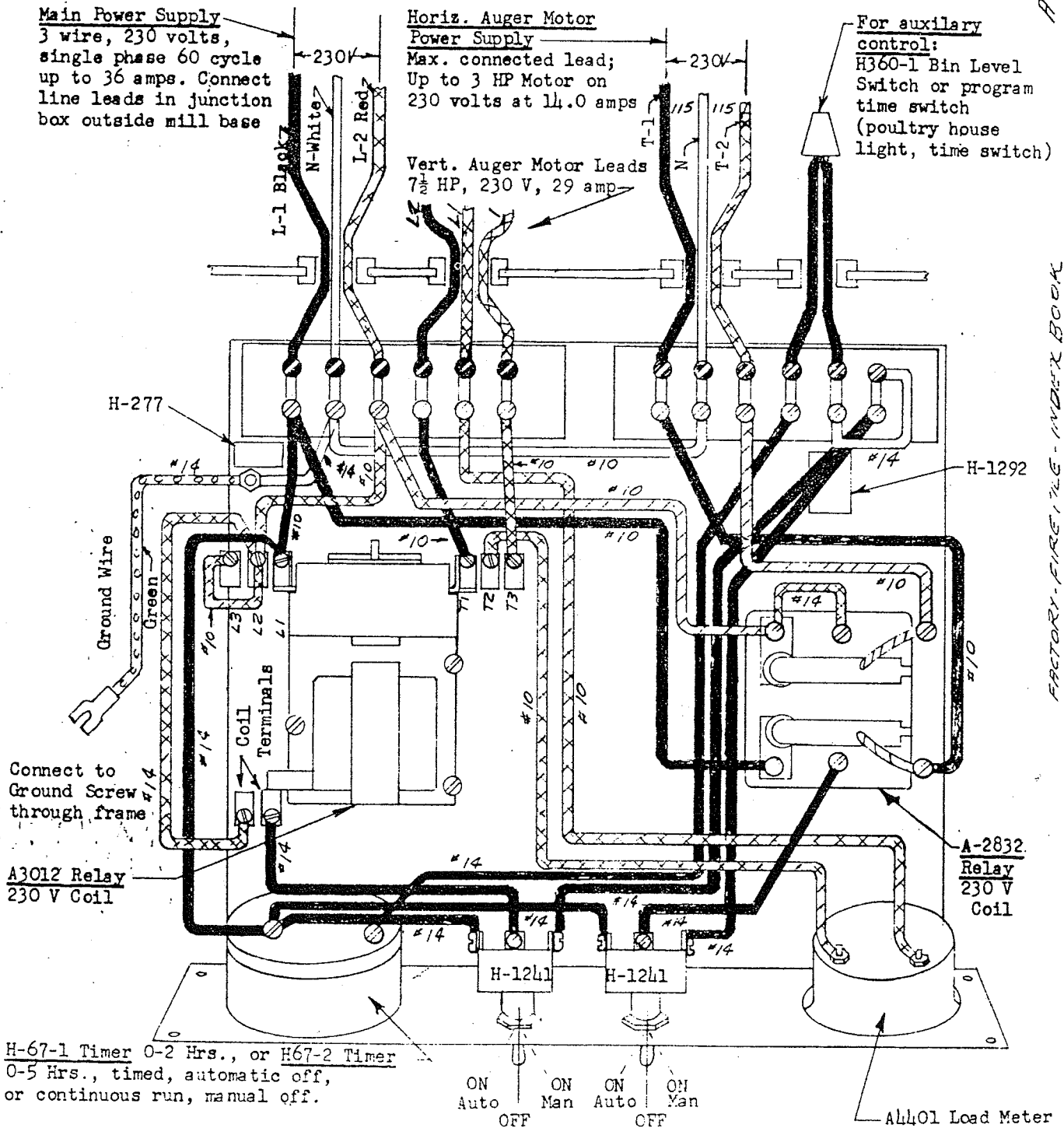
Page A30.770
 10 Apr 1964
 Engr Dwg 4483
 Replaces New

AUTOMATIC FEED PROCESSING SYSTEMS

BLUFFTON, INDIANA

PANEL WIRING DIAGRAM
 PANEL MODELS A6LM1 & A6LN1
 USA 7½ HP SINGLE PHASE HI-CAPACITY SYSTEMS

REV. 1 8-9-63
 T-19-63
 P-4483

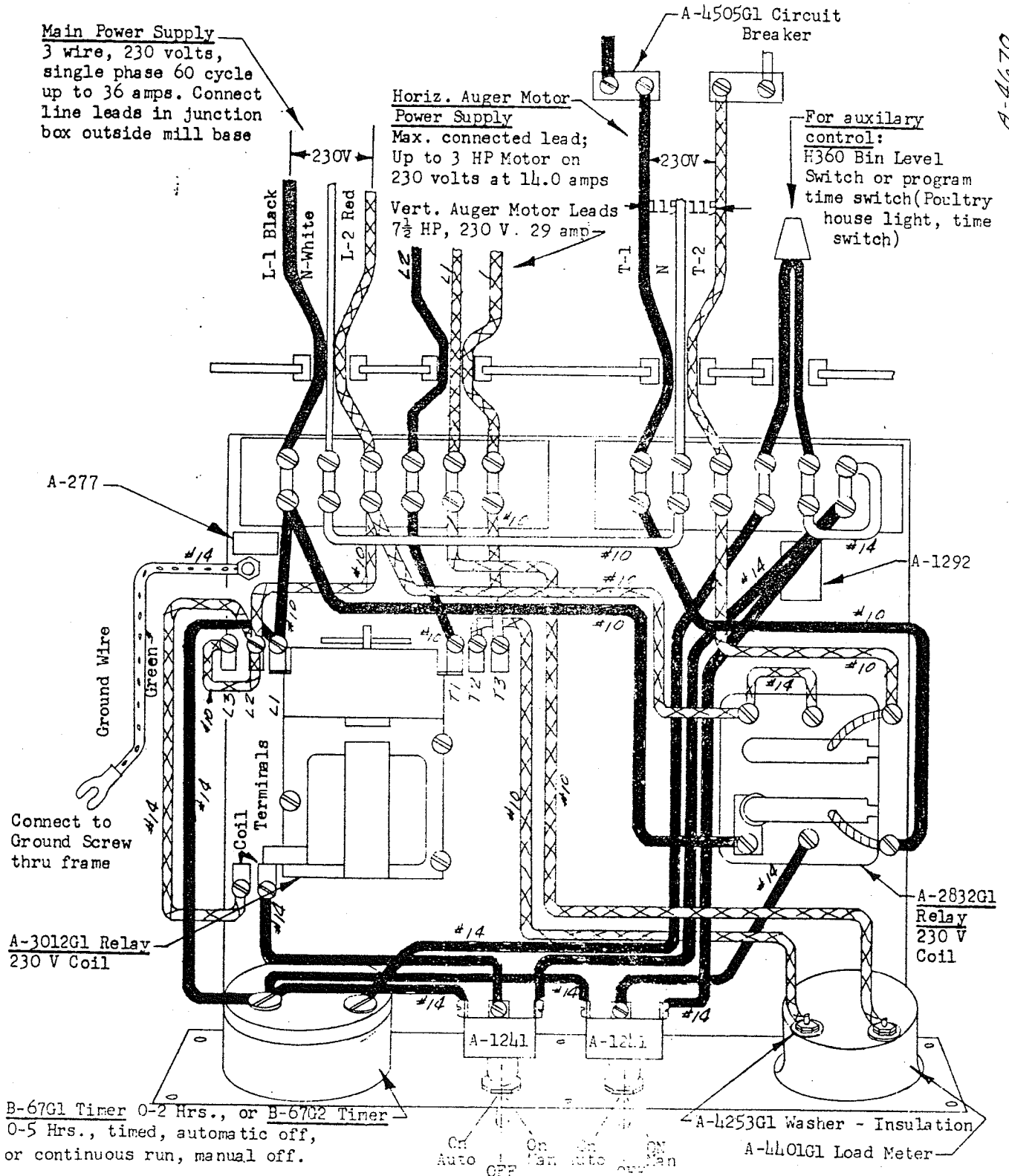


FACTORY-FIRE FILE - INDEX BOOK

AUTOMATIC FEED PROCESSING SYSTEMS

BLUFFTON, INDIANA

PANEL WIRING DIAGRAM
PANEL MODELS M64M1 & M64N1
CANADIAN 7 1/2 HP SINGLE PHASE HI-CAPACITY SYSTEMS



A-4670

DATE	REV	REVISION	RECORD

EXTERNAL WIRING DIAGRAM
2 1/2 HP HI-CAPACITY SYSTEMS
(SINGLE PHASE)

PAGE 9 30,680
DATE FEB 27, 1964
ENG. ENG. C-4671

WIRING OF STD HI-CAPACITY SYSTEMS

WHEN BIN LEVEL SWITCH IS USED, REMOVE THE WIRE NOT JOINING THESE TWO LEADS AND CONNECT BIN LEVEL SWITCH LEADS AS SHOWN DOTTED.

NOTE #1- WIRES SHOWN AS SOLID LINES ARE SUPPLIED BY MIX. MILL ONLY. WIRES SHOWN AS DOTTED LINES ARE SUPPLIED BY CUSTOMER.
NOTE #2- NOT SUPPLIED WITH BASIC MODEL, WIRING TO BE DONE BY CUSTOMER
* BIN LEVEL SWITCH IF USED

* BIN LEVEL SWITCH

* CIRCUIT BREAKER

STD PANEL HOUSING
AUXILIARY JUNCTION BOX (ON CSA MODELS ONLY)
VERTICAL AUGER MOTOR (230V)

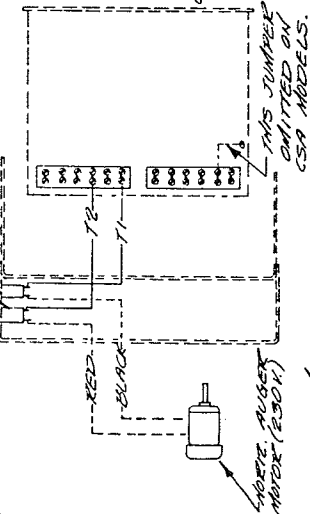
HOBE AUGER MOTOR (230V)
HOBE AUGER MOTOR (230V)
HOBE AUGER MOTOR (230V)

HOBE AUGER MOTOR (230V)

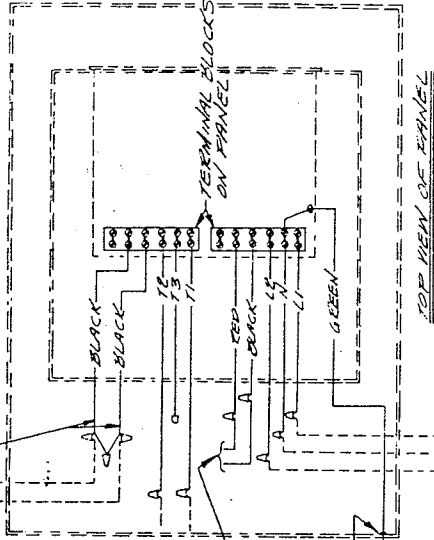
AUXILIARY JUNCTION BOX (ON CSA MODELS ONLY)

CIRCUIT BREAKER'S (ON CSA MODELS ONLY)

STD PANEL HOUSING



WIRING OF CSA HI-CAPACITY SYSTEMS
WIRING OF CSA HI-CAPACITY SYSTEMS IS IDENTICAL TO THAT ON STD HI-CAPACITY SYSTEMS EXCEPT FOR THE MODIFICATIONS SHOWN IN THE NOTATIONS IMMEDIATELY ABOVE.



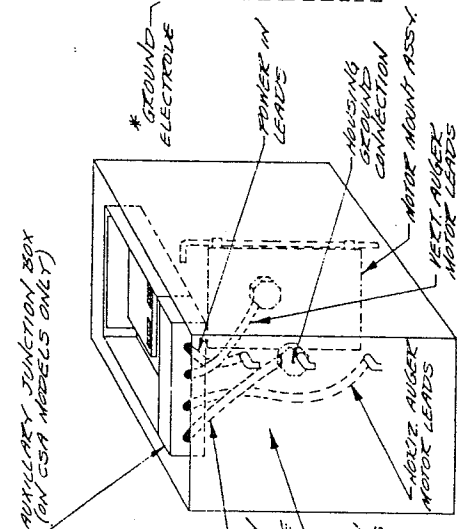
TOP VIEW OF PANEL

USE GROUNDING SCREW SO BREAKER BOX WILL BE GROUNDED

* CIRCUIT BREAKER

FOR STD PANEL WIRING DIAGRAM SEE A 3374 FOR CSA PANEL WIRING DIAGRAM, SEE A 4076

RED WHITE BLACK



* GROUND ELECTRODE

POWER IN LEADS

HOUSING GROUND CONNECTION

MOTOR MOUNT ASSY

HOBE AUGER MOTOR LEADS

HOBE AUGER MOTOR LEADS

* GROUND ELECTRODE

POWER IN LEADS

HOUSING GROUND CONNECTION

MOTOR MOUNT ASSY

HOBE AUGER MOTOR LEADS

HOBE AUGER MOTOR LEADS

* GROUND ELECTRODE

POWER IN LEADS

HOUSING GROUND CONNECTION

MOTOR MOUNT ASSY

HOBE AUGER MOTOR LEADS

HOBE AUGER MOTOR LEADS

* GROUND ELECTRODE

POWER IN LEADS

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MOTOR MOUNT ASSY

HOBE AUGER MOTOR LEADS

HOBE AUGER MOTOR LEADS

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HOBE AUGER MOTOR LEADS

* GROUND ELECTRODE

POWER IN LEADS

HOUSING GROUND CONNECTION

MOTOR MOUNT ASSY

HOBE AUGER MOTOR LEADS

HOBE AUGER MOTOR LEADS

TOLERANCES AS NOTED	DECIMAL	FRACTIONAL	ANGULAR

MIX-MILL INC. BLUFFTON, INDIANA, U.S.A.	
MATERIAL	SCALE
FINISH	NAME
TITLE	DATE
DRAWING NUMBER	
DATE	
DRAWING NUMBER	

COPY TO FACTORY - FIRE FILE - ENG. FILE

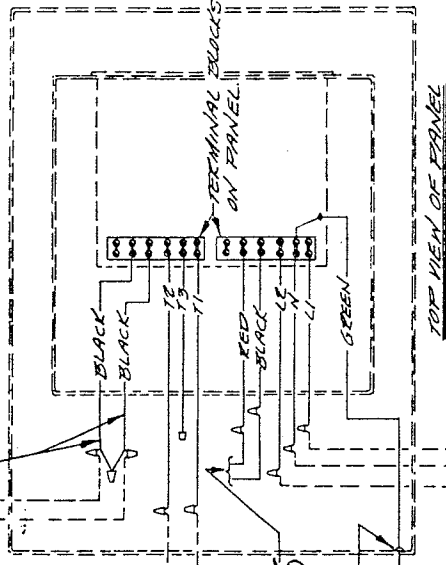
PRINTED IN U.S.A.

C-4671

DATE	BY	REVISION RECORD	DR. C.K.

WHEN BIN LEVEL SWITCH IS USED REMOVE THE WIRE NUT JOINING THESE TWO LEADS AND CONNECT BIN LEVEL SWITCH LEADS AS SHOWN DOTTED.

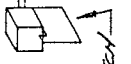
NOTE #1. WIRES SHOWN AS SOLID LINES ARE SUPPLIED BY MIX-MILL INC. WIRES SHOWN AS DOTTED LINES ARE SUPPLIED BY CUSTOMER.
 NOTE #2. NOT SUPPLIED WITH BASIC MODEL WIRING TO BE DONE BY CUSTOMER.
 *BIN LEVEL SWITCH IF USED



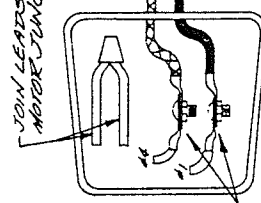
USE GROUNDING SCREEN SO BREAKER BOX WILL BE GROUNDED.

*CIRCUIT BREAKER

FOR STD PANEL WIRING DIAGRAM SEE A-4078 FOR CSA PANEL WIRING DIAGRAM, SEE A-4078.

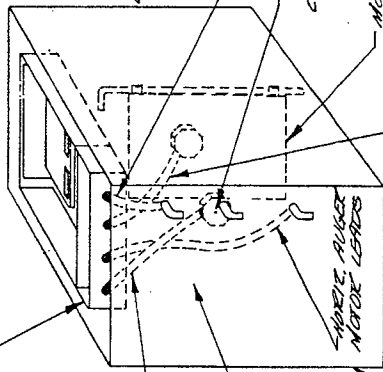


NOTE: AUGER MOTOR (230 V.)



CONNECTIONS IN STD MOTOR JUNCTION BOX

AUXILIARY JUNCTION BOX (ON CSA MODELS ONLY)



*GROUND ELECTRODE

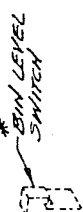
FRAME IN LEADS

HOUSING GROUND CONNECTION

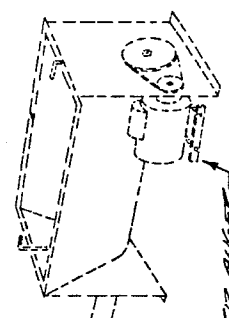
MOTOR MOUNT ASSY.

VERT. AUGER MOTOR LEADS

*CIRCUIT BREAKER



AUXILIARY JUNCTION BOX (ON CSA MODELS ONLY)

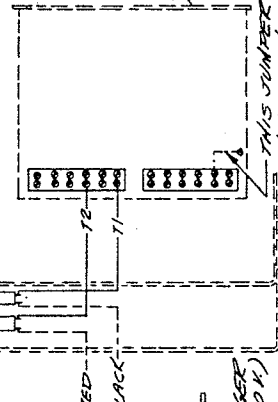


NOTE: AUGER MOTOR (230 V.)

AUXILIARY JUNCTION BOX (ON CSA MODELS ONLY)

CIRCUIT BREAKERS (ON CSA MODELS ONLY)

STD PANEL HOUSING



BIN LEVEL SWITCH LEADS AND GROUND WIRE.

*FLEXIBLE CONDUIT (ON CSA MODELS ONLY)

THIS JUMPER OMITTED ON CSA MODELS

WIRING OF CSA HI-CAPACITY SYSTEMS

WIRING OF CSA HI-CAPACITY SYSTEMS IS IDENTICAL TO THAT OF STD HI-CAPACITY EXCEPT FOR THE MODIFICATIONS SHOWN IN THE TWO VIEWS IMMEDIATELY ABOVE.

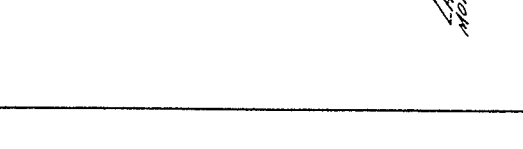
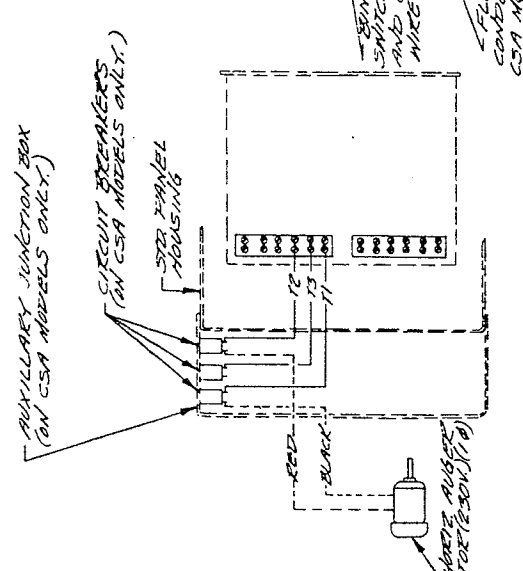
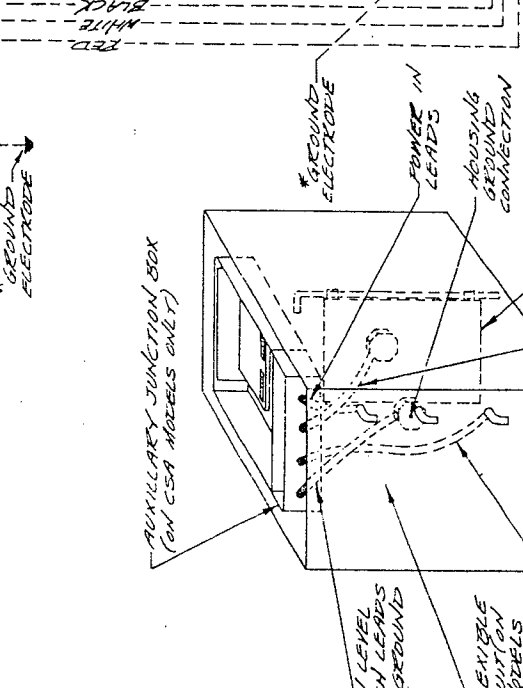
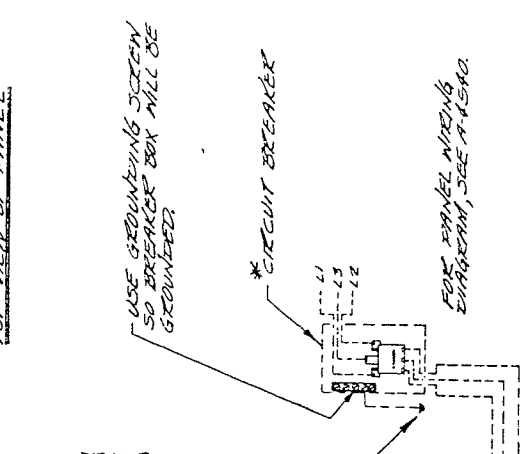
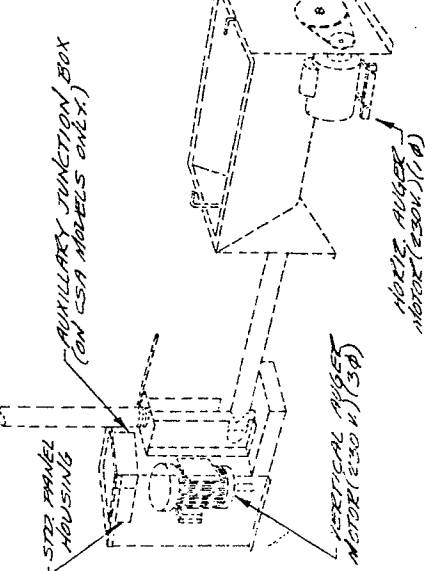
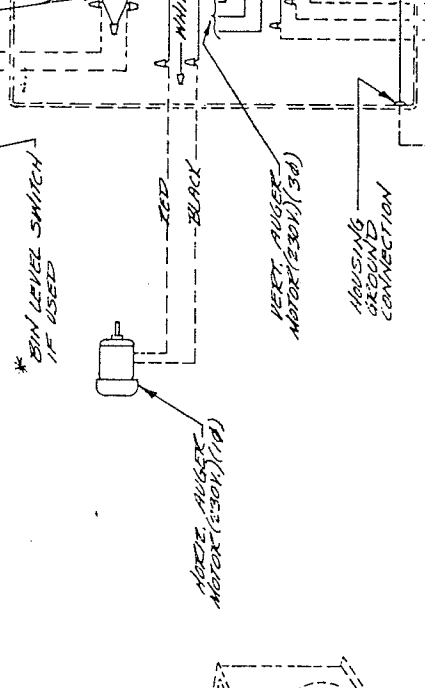
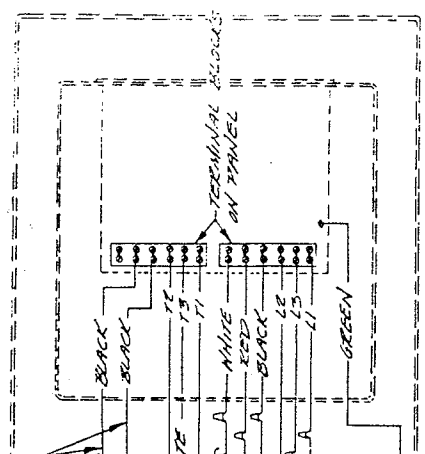
TOLERANCES UNLESS NOTED:	MIX-MILL, INC.
AS FRACTIONAL	BLUFFTON, INDIANA, U.S.A.
DECIMAL	SCALE
1.	DRAWN BY
FRACTIONAL	TITLE
2.	DATE
ANGULAR	DRAWING NUMBER
2.	1-10-63

DATE	BY	REVISION RECORD	DR	LR

NOTE: WIRES SHOWN AS SOLID LINES ARE SUPPLIED BY MIX MILLING. WIRES SHOWN AS DOTTED LINES ARE SUPPLIED BY CUSTOMER.
 *NOTE: 1/2" MOTOR SUPPLIED WITH BASIC HOUSING, ALLOWING TO BE DRIVEN BY CUSTOMER.

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 *NOTE: 1/2" MOTOR SUPPLIED WITH BASIC HOUSING, ALLOWING TO BE DRIVEN BY CUSTOMER.



WIRING OF CSA MI-CAPACITY SYSTEMS
 WHEN BIN LEVEL SWITCH IS USED
 REMOVE THE WIRE NOT JOINING THESE
 TWO LEADS AND CONNECT BIN
 LEVEL SWITCH LEADS AS SHOWN
 LISTED.

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TOLERANCES (UNLESS SPECIFIED)	MIX-MILL, INC. BLUFFTON, INDIANA, U.S.A.
DECIMAL	SCALE
FRACTIONAL	GRADE BY
ANGULAR	DATE
	DRAWING NUMBER

USE GROUNDING SCREW
 SO BREAKER BOX WILL BE
 GROUNDING

*CIRCUIT BREAKER

FOR PANEL WIRING
 DIAGRAM, SEE P-1540.

WIRING OF CSA MI-CAPACITY SYSTEMS IS IDENTICAL TO THAT
 OF 1/2" MI-CAPACITY EXCEPT FOR THE NOTIFICATION
 SHOWN IN THE TWO PAGES IMMEDIATELY ABOVE.

AUTOMATIC FEED PROCESSING SYSTEMS
BLUFFTON, INDIANA

INSTRUCTIONS for installing an H2290 sealed and shielded ball bearing.

These bearings are used where there is a pressure of grain on the bearing such as at the lower bearing of the vertical drive unit of a Hi-Capacity Auger System, in the Power Elbow of a Premixer, etc. They are not needed nor are they used in a top driven auger.

H2290

H49
THRUST
WASHER

H1936
RETAINER

H1686
FELT
WASHER

H1461
FLANGE

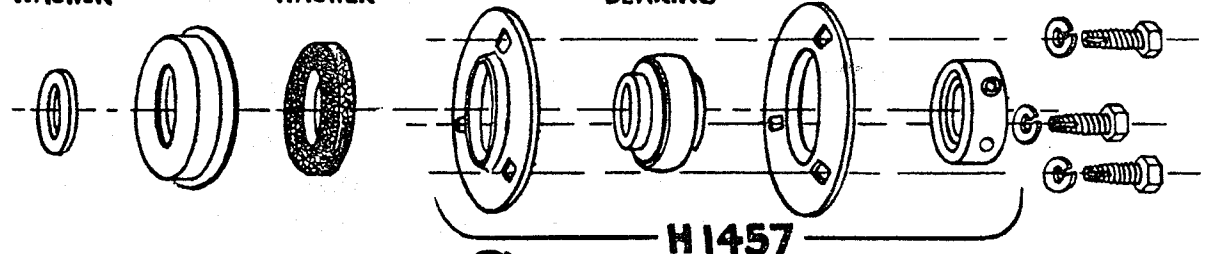
H1459
BALL
BEARING

H1461
FLANGE

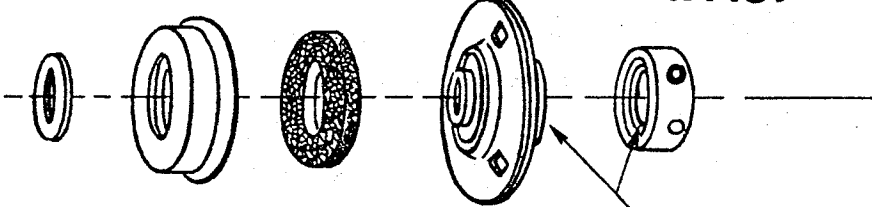
H344 LOCKWASHER

H1460
SHAFT COLLAR

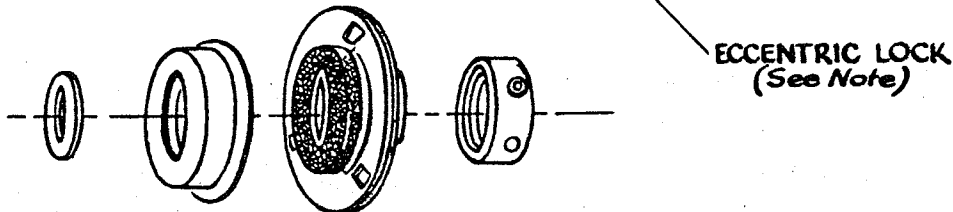
View 1



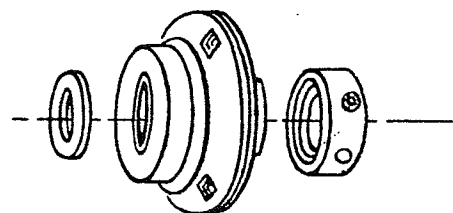
View 2



View 3



View 4

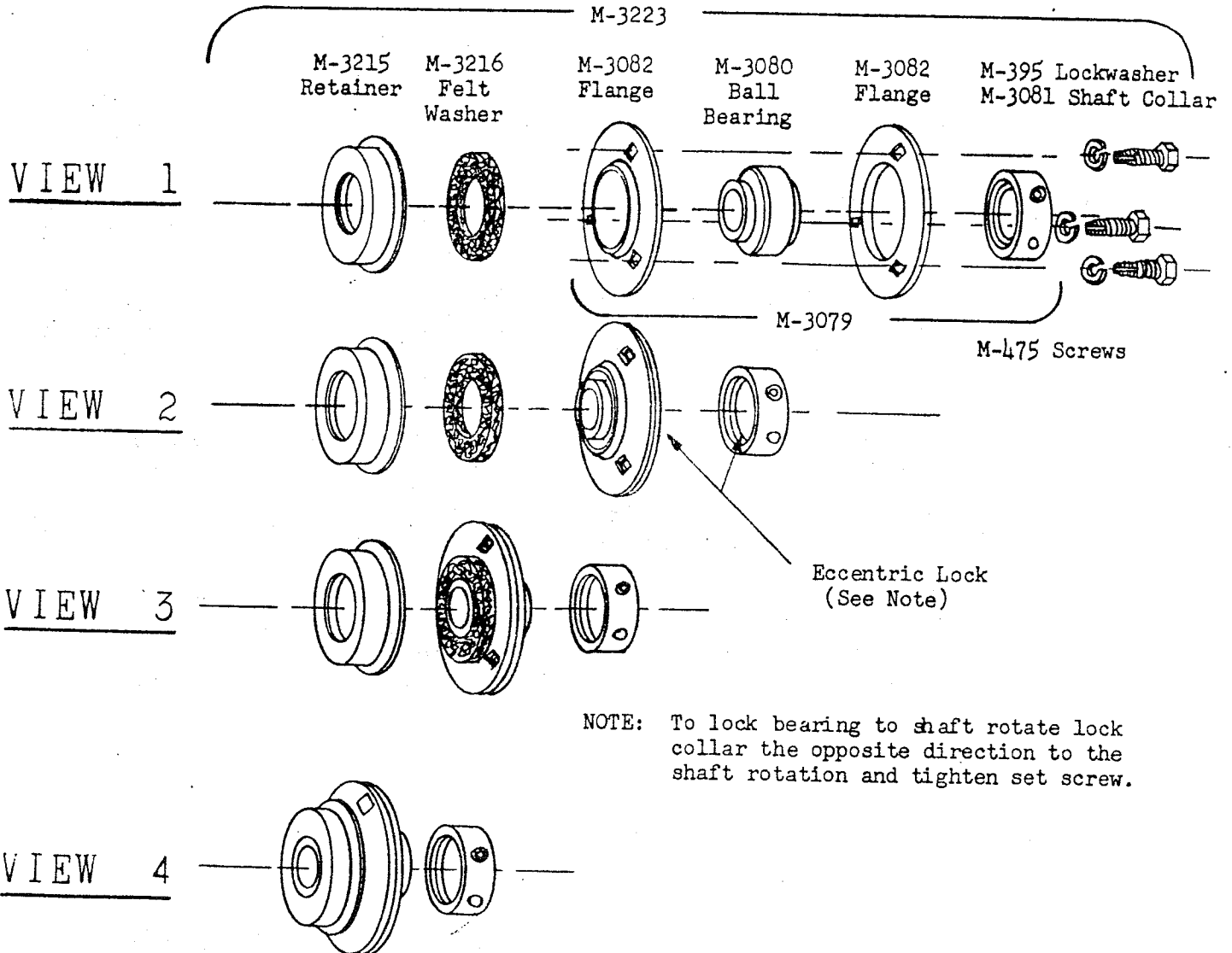


NOTE: TO LOCK BEARING TO SHAFT ROTATE LOCK COLLAR THE OPPOSITE DIRECTION TO THE SHAFT ROTATION and TIGHTEN SET SCREW.

AUTOMATIC FEED PROCESSING SYSTEMS
 BLUFFTON, INDIANA

INSTRUCTIONS for installing an M-3223 sealed and shielded ball bearing.

These bearings are used where there is a pressure of grain on the bearing such as at the lower bearing of the vertical drive unit of a Hi-Capacity Auger System, in the Power Elbow of a Premixer, etc. They are not needed nor are they used in a top driven auger.



NOTE: To lock bearing to shaft rotate lock collar the opposite direction to the shaft rotation and tighten set screw.

