



CONTINUOUS
GRAIN DRYER
S.N. 33000 - 43656

INSTRUCTIONS FOR ORDERING PARTS:

1. ALL PARTS MUST BE ORDERED FROM YOUR DEALER.
2. GIVE MODEL NUMBER and SERIAL NUMBER that is stamped on the NAME PLATE of your machine.
3. Order from your PARTSLIST, found following each illustration, as this is the ONLY means we have of identifying the parts you need. Order by the QUANTITY DESIRED, the PART NUMBER and the DESCRIPTION OF THE PART.

NOTE: The Company reserves the right to incorporate any changes in design without obligation to make these changes on units previously sold.

**ASSEMBLY-OPERATION AND
MAINTENANCE INSTRUCTIONS**

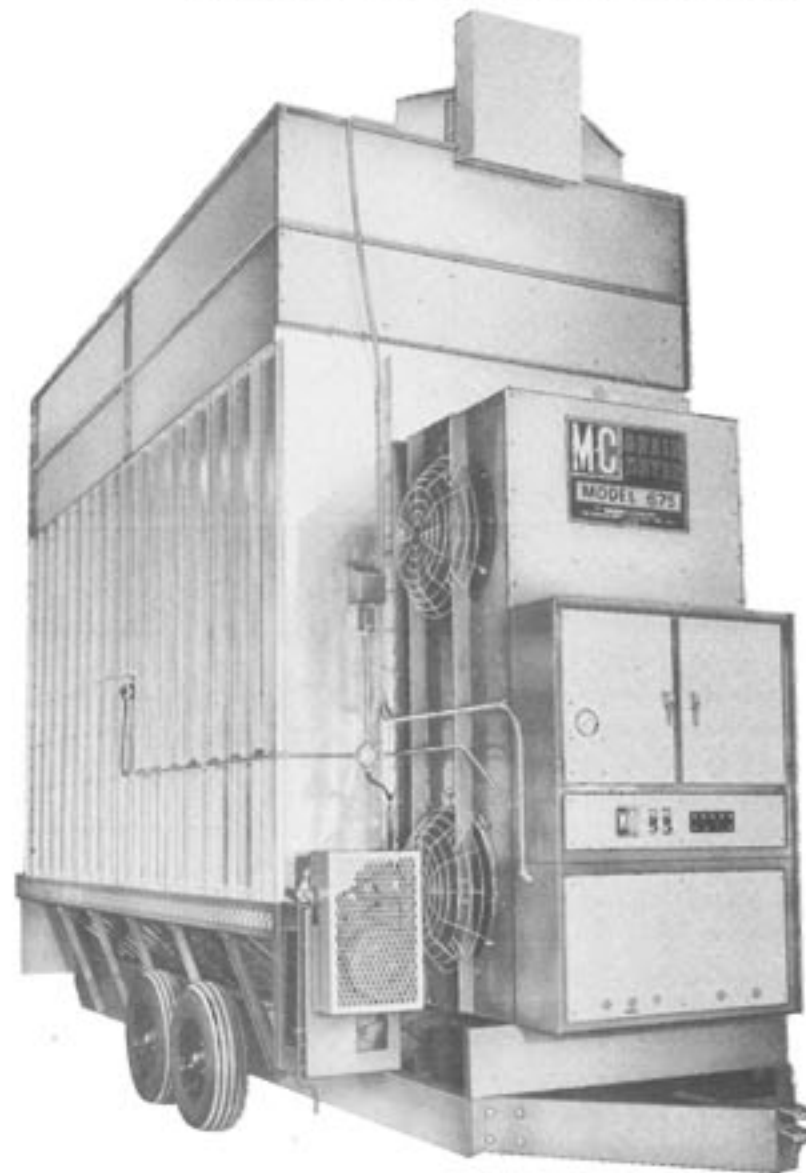
MODELS

- 475B-115 + B-12
- 675B-115 + B-12
- 975B-115 + B-12

- 475EM
- 675EM
- 775EM
- 875EM
- 975EM
- 1075EM
- 1175EM

DM 77(Rev.)

8-79



OWNERS NOTICE

**TO INSURE WARRANTY CLAIMS, BE CERTAIN TO FILL
OUT AND MAIL WARRANTY CARD WITHIN 30 DAYS.**

PRINTED IN U.S.A.

MATHEWS COMPANY

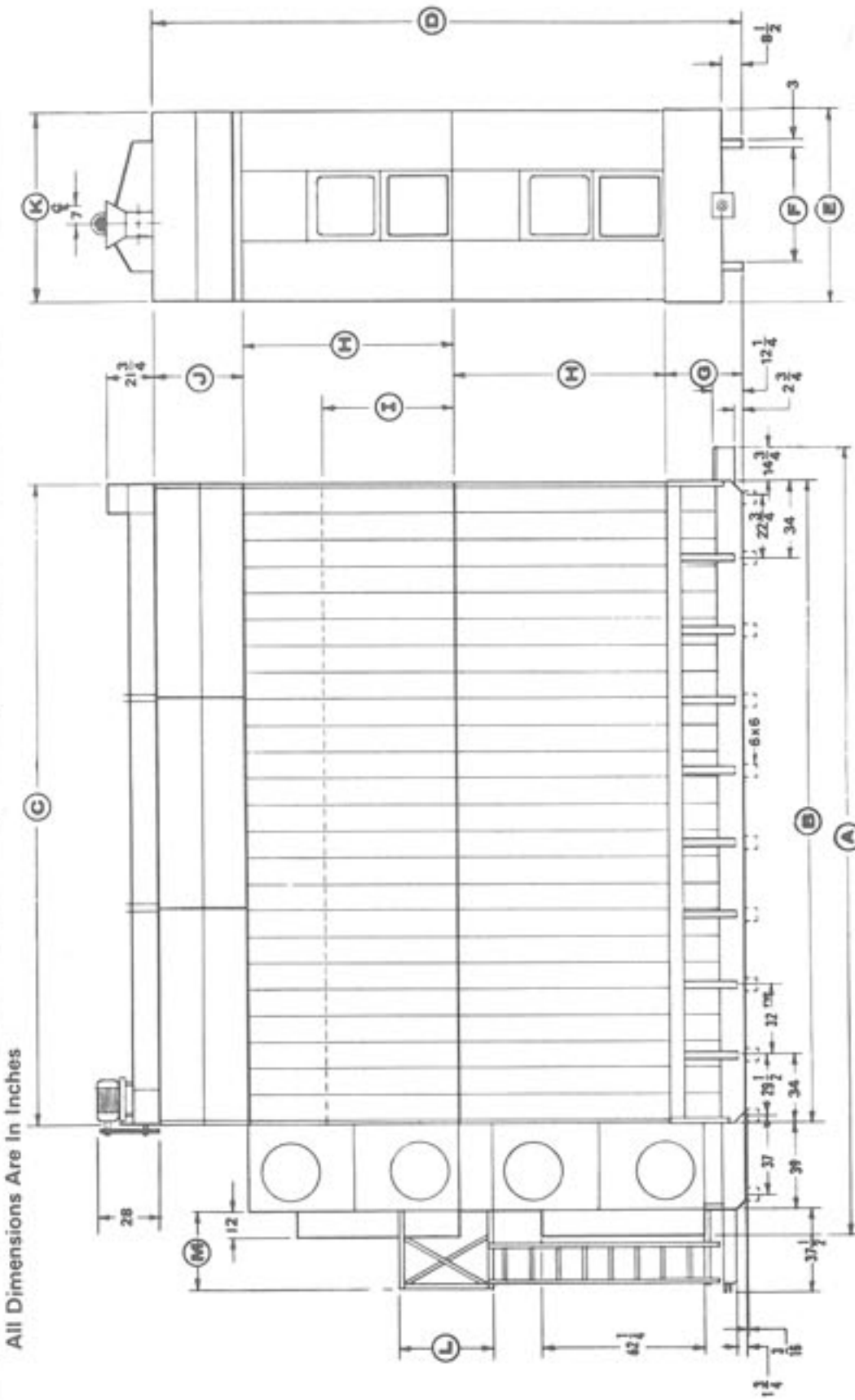
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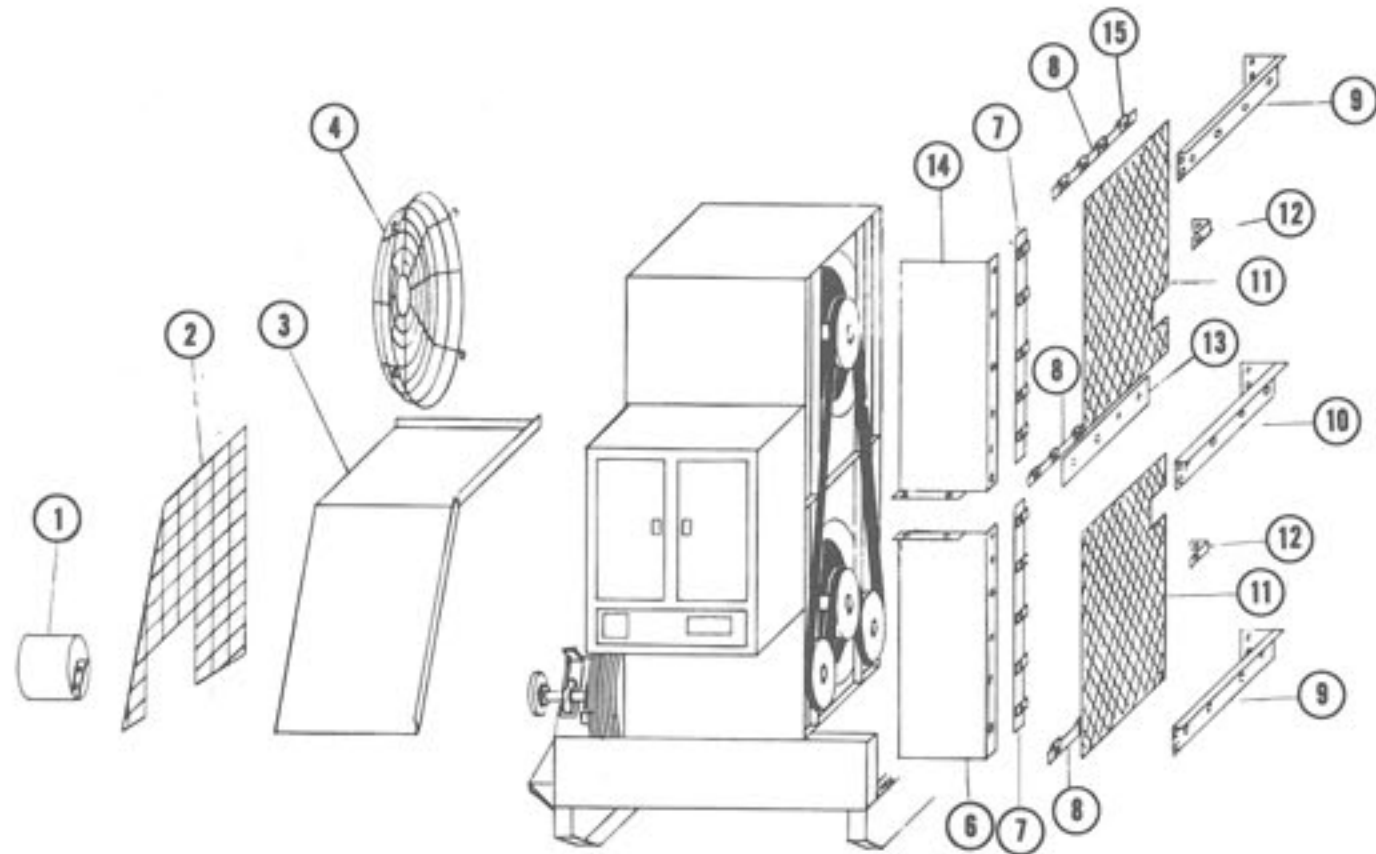
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MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M
475	165 ³ / ₄	100	98 ¹ / ₄	173 ¹ / ₄	88 ³ / ₈	53 ¹ / ₂	36	96	—	41 ¹ / ₄	87	—	—
675	261 ³ / ₄	196	194 ¹ / ₄	173 ¹ / ₄	88 ³ / ₈	53 ¹ / ₂	36	96	—	41 ¹ / ₄	87	—	—
775	261 ³ / ₄	196	194 ¹ / ₄	233 ¹ / ₄	88 ³ / ₈	53 ¹ / ₂	36	96	60	41 ¹ / ₄	87	44	36
875	261 ³ / ₄	196	194 ¹ / ₄	269 ¹ / ₄	88 ³ / ₈	53 ¹ / ₂	36	96	—	41 ¹ / ₄	87	44	36
975	357 ³ / ₄	292	290 ¹ / ₄	173 ¹ / ₄	88 ³ / ₈	53 ¹ / ₂	36	96	—	41 ¹ / ₄	87	—	—
1075	357 ³ / ₄	292	290 ¹ / ₄	233 ¹ / ₄	88 ³ / ₈	53 ¹ / ₂	36	96	60	41 ¹ / ₄	87	44	36
1175	357 ³ / ₄	292	290 ¹ / ₄	269 ¹ / ₄	88 ³ / ₈	53 ¹ / ₂	36	96	—	41 ¹ / ₄	87	44	36

All Dimensions Are in Inches



"B" MODEL FAN GUARDS

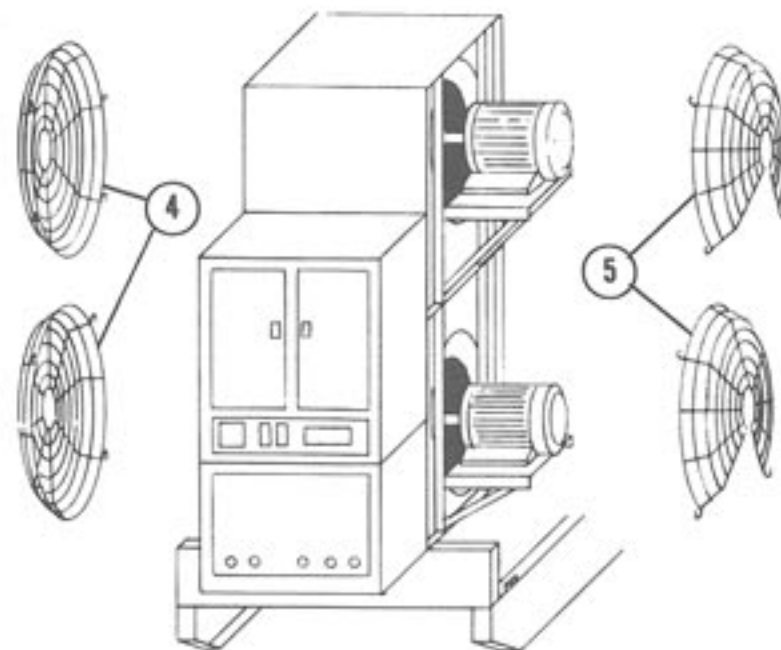


"EM" MODEL FAN GUARDS

REF. NO.	PART NO.	DESCRIPTION
1	1280199	Shear Flange Guard
2	1284713	Drive Ass'y Guard Screen
3	1284806	Drive Ass'y Guard
4	1288964	Full Fan Guard
5	1288965	"EM" Model Fan Guard
6	1284851	Fan Belt Guard Front—Bottom
7	1282021	Vertical Nut Retaining Bar
8	1282020	Horizontal Nut Retaining Bar
9	1284854	Belt Guard Top & Bottom Support
10	1284853	Belt Guard Center Support
11	1285745	"B" Model Guard Screen
12	1282022	Screen Angle Brace
13	1282742	Horizontal Exp. Guard Clamp Strap
14	1284852	Fan Belt Guard Front—Top
15	0018111	5/16-18 Tinnerman Nut Retainer

PORTABILITIES

PART NO.	DESCRIPTION
1200034	A-Frame Pole Weld.
1288195	3/4-10 x 2 HHCS Grd. #5
0008165	3/4-10 Hex Nut
0008182	3/4 Lockwasher
1201028	Wheel Spindle & Hub Ass'y
0018993	Wheel 5 Bolt 15" Rim



SET UP INSTRUCTIONS

NOTICE: IMMEDIATELY AFTER ERECTION OF THIS GRAIN DRYER ON SITE, THE GRAIN DRYER MUST BE SUITABLY ANCHORED AND GUY WIRED (ACCORDING TO LOCAL CONDITIONS) TO AVOID "BLOW-OVER" DAMAGE FROM WIND. ALL ANCHORING MATERIAL AND CABLE ARE TO BE SUPPLIED AND INSTALLED BY THE BUYER

NOTE: The end of the dryer with the fans is considered the front. Left and Right is determined by standing behind the dryer and looking at the rear door

1. Place dryer in a LEVEL position.

(A) Permanent Installation:

Place dryer on a concrete slab designed to carry the weight of the dryer when full of grain. A vibration damper (wood planks, flat belting, etc.) should be used between full length of the skids and the concrete. (See Dryer Base Sketch, page 42). BE SURE TO ANCHOR THE DRYER BASE AND TIE DOWN SECURELY FROM THE TOP.

(B) Installation of 775-875-1075-1175:

The base of these dryers should be set and anchored before installing the top section. You can skid the base onto the foundation, or it can be picked up with a crane. If a crane is used for the base, you must sling it with 4 slings, 2 on each side. Hook down on the skids and come out and up along the vertical screens, then up to the crane hook. When using this system on the base, you must use spreaders across top of screens to avoid damage. After the base is set in place and assembled, inspect and remove all foreign objects from feed rolls and augers, the top section can then be installed. On 875 and 1175 models, the wet holding bin, peak and level auger will have to be assembled. Both inside and outside seams need to be bolted together; also both ends. Make sure seams fit together tight to avoid any grain leakage. Model 775 and 1075 are shipped completely assembled.

(C) Temporary installation:

Timbers or railroad ties should be placed under every skid support maximum 32" apart as shown on the DRYER BASE SKETCH, page 42. The machine should be anchored at the base and tied down securely from the top.

2. Install Variable Speed Crank. See page 25.
3. Set up Wet Holding Hopper & Solid Peak Assembly. See page 3 and 4. Models 775EM and 1075EM are shipped set up.
4. Install Level Auger. See page 5 and 6. 775EM and 1075EM are shipped already installed except for motor. No level auger used on 475 models.
5. On "B-115" models, remove snap ring from Jackshaft (item 13, page 20) and install PTO shaft and connect to dryer shear flange using two 3/8-16 x 2 1/4 special shear bolts, part number 0018133, supplied with the dryer. DO NOT use hardened bolts or standard long thread bolts. Reinstall the snap ring on Jackshaft.
6. Connect PTO to tractor power take off. Position tractor so there is only a small angle on the universal joints of the PTO shaft. BE SURE that the shield over the universal joint and shear

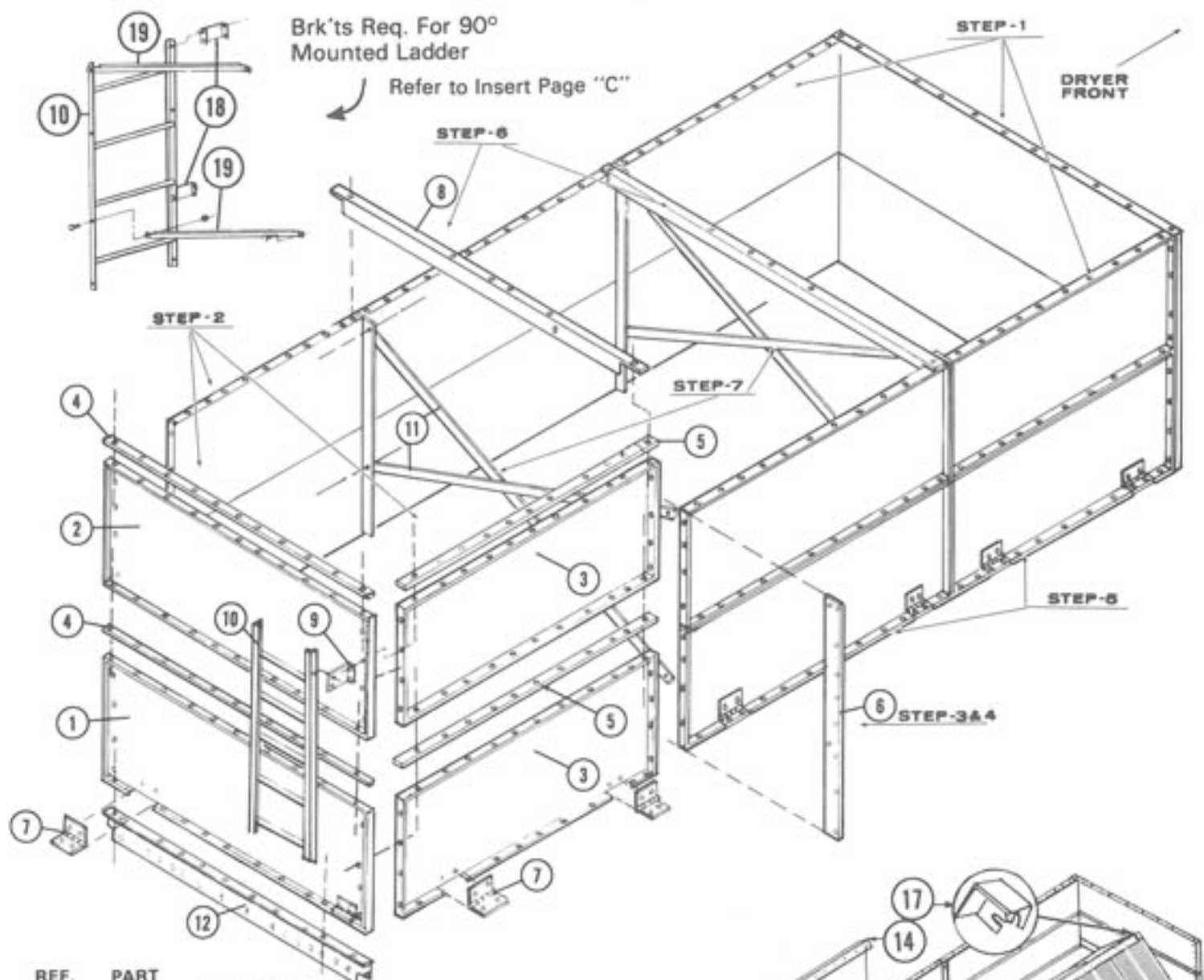
flange at dryer and the tractor guard over the power take off are in place. See page 20.

7. Install Service Platform. See page 26.
8. Install all guards and shields. Do not set any part of dryer in motion without them installed.
9. Have an electrician bring the electric power source into the terminal lugs in the control cabinet. Be sure the electrician hooks the lead-in wires to the proper terminals in order to provide 115 volts to run the controls. (See appropriate wiring diagram near end of manual.) The controls must have 115V power only. If 230V is connected to the controls, they will be damaged. Be sure the electrical service is grounded and ground the dryer by using a ground rod connected to the dryer frame. Scratch the paint to make a good connection at dryer. On 875 and 1175 models, the electrician will need to bring a separate electric power source into the top and bottom section of the dryer to run the fan motors.
10. Electrical wire connections for 115V controls between modules on 775, 875, 1075 and 1175 models will also have to be made. (See wiring diagram that applies to your model.) These same models will require gas line connections between modules.
11. Connect the gas supply to the machine.
 - (A) LP Gas—Advise your LP gas supplier that the burner takes liquid propane from the tanks (not vapor). When the gas supply is connected to the dryer, be sure an EXCESS FLOW VALVE is installed at the tank—preferably the one furnished with the machine as it will shut off quicker (in the event of line breakage) than those normally furnished by gas suppliers. In any case, NEVER have two EXCESS FLOW VALVES on the same line. Use a minimum of 1/2" I.D. gas line between the tank and the dryer. On runs over 100 feet or for dryers with two burner assemblies, use a 3/4" I.D. line. For dryers with three or more burners, use one inch I.D. line. Connect the gas line from the tank to the short flexible rubber hose on the dryer. For dryers with multiple burners, see Page 15. Be sure and check all gas lines for leaks before trying to operate dryer.

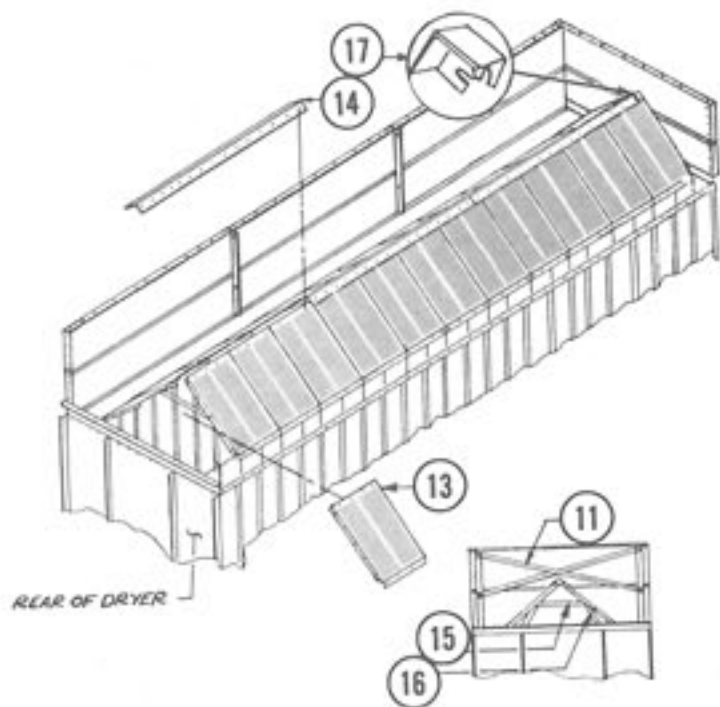
(B) Natural Gas.

A minimum of 5 lbs. of operating pressure is required to the burner. Use a minimum of 2 inch diameter line from the natural gas regulator to the dryer. Use reducing bushing to 1 1/4" just before the connection of the pipe outside the dryer gas control cabinet. On long runs of pipe from the regulator to the dryer or on machines with more than one heat station a larger diameter pipe may be required to supply adequate volume of gas.

WET HOLDING HOPPER AND PERFORATED PEAK ASSEMBLY



REF. NO.	PART NO.	DESCRIPTION
1	1284823	Hopper End Panel—Lower
2	1284822	Hopper End Panel—Upper
3	1284824	Hopper Side Panel
4	1282052	End Hopper Flange Stiffener
5	1282051	Side Hopper Flange Stiffener
6	1282651	Hopper Cross Tie Mn't. Bar
7	1288957	Hopper Hinge
8	1284290	L.A. Support Angle
9	1284529	Ladder Mnt'g. Brk't.
10	1280162	4' Ladder
11	1282013	Hopper Cross Tie
12	1282650	End Panel Joiner Angle
13	1282891	Perf. Peak Panel
	1272834	Solid Peak Panel
14	1282991	Hopper Cap
15	1282012	Horizontal Support Angle (31 1/4" Lg.)
16	1282011	Vertical Support Angle (28 3/4" Lg. 775, 1075)
16A	1282003	Vertical Support Angle (29 1/4" Lg. 375, 475, 675, 975, 875, 1175)
17	1282908	Hopper Seal Angle
18	1282660	Ladder Mounting Bracket
19	1282661	Ladder Mounting Angle



WIRING INSTRUCTIONS FOR LEVEL AUGER MOTOR AND LEVEL SWITCH

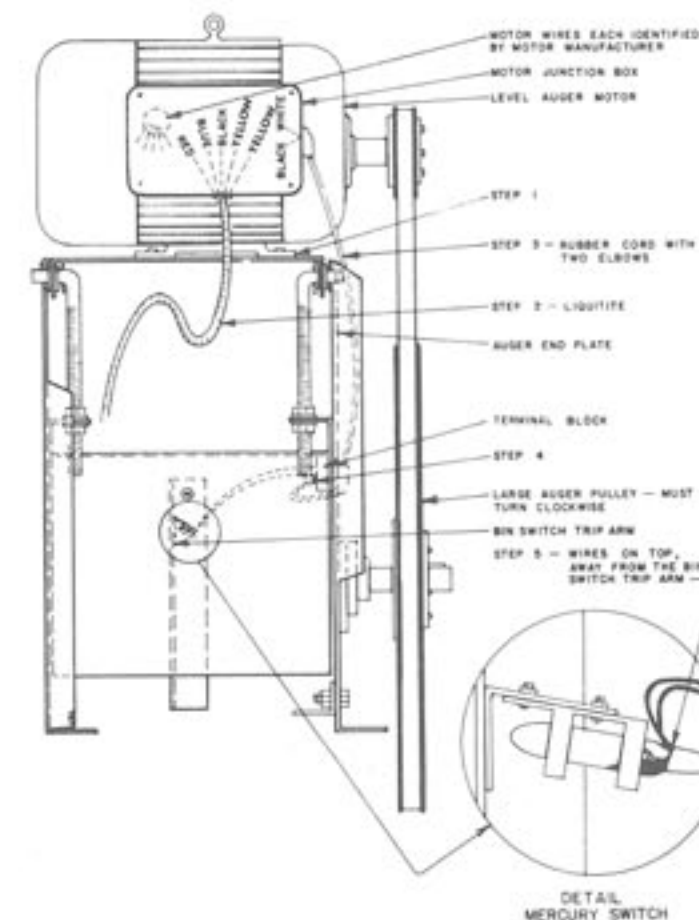


WARNING



Do not make any adjustments on the mercury switch with the electric power turned on, as any movement of the mercury switch could start the level auger. With the bin switch trip arm hanging straight down, the mercury switch mounting bracket should be bent so the mercury in the glass bulb just runs down and makes contact with the two forks in the wire end of the bulb.

1. Mount the motor on the base plate as shown.
2. Install the gray liquitite into the bottom of the motor junction box as shown.
3. Install the short rubber cord with the two elbows as shown from the end of the junction box to the hole in the auger end plate.
4. Attach the two forked ends on the black and white wires to the two bottom screws of the terminal block.
5. Install the mercury switch as shown and attach the two wires to the two top screws on the terminal block. Make sure that none of these wires can come in contact with the auger shaft. The glass bulb **must** be installed with the wires out the top of it and away from the bin switch trip arm as shown.
6. Refer to the wiring information on the inside of the motor junction box cover. Select the voltage the level auger motor is to be run on.
7. Attach the red, blue and black wires to this selection. Keep in mind that looking at the pulley on the end of the level auger, it must turn clockwise.
8. Attach one yellow wire to the black wire and the other yellow wire to the white wire.
9. Use the wire nuts provided to insulate all the above wire connections.
10. Replace the motor junction box cover and gasket. Make sure the gasket is in place so moisture can't get into the motor.



TROUBLE SHOOTING

CAUTION: Never enter machine or attempt to service until all power sources are turned off, all switches are in "OFF" position and all gas valves are turned off.

PROBLEM	POSSIBLE CAUSE & SOLUTION
1. Lights out	a. Electricity off b. Fuse blown c. Bulb burned out d. Loose or broken wire
2. High Limit light not on	a. Bulb burned out b. High Limit switch tripped off Reset—Push red button c. High Limit switch broken (Replace)
3. Air Pressure Switch not functioning	a. Dryer not full—no static pressure b. Air tube plugged—Remove switch before cleaning c. Faulty switch (Replace) d. Switch adjusted too high—adjust for less pressure. (Do not release pressure to the point that the light stays on when fan is not running.
4. Burner does not light	a. Push ignition board reset button on front of control cabinet b. Machine not grounded c. Gas solenoid not opening (Faulty or loose wire) d. High Limit tripped out e. Air Pressure Switch not functioning f. Ignition wire(s) broken g. Faulty Ignition Board (Replace) h. Out of gas or supply valve not open i. Bad Ignition Switch (Replace) j. Electrodes wet (Run fan to dry off) k. Electrode porcelain cracked (Replace)
5. Heat shuts off	a. Dryer low on grain (air pressure switch off) b. Faulty modulating valve (replace) c. High limit tripped off d. Out of gas e. Broken electrodes or ignition wires f. Ignition system not grounded g. Reset on ignition board tripped out. (Cause—possible momentary interruption in power source)
6. Not enough heat	a. Hand valves not completely open b. Check thermometer for correct reading c. Faulty modulating valve or not open far enough (Bad sensor—Replace) d. Increase pressure at pressure regulator—7 to 8 pounds to each L. P. burner e. Partially plugged gas line
7. Level Auger motor does not run	a. Wait for 5 minute delay b. Thermal relay kicked out (push reset button on magnetic starter) c. Faulty Relay—Replace
8. Erratic Moisture	a. Unloading too fast—slow variable speed or take less teeth per stroke of eccentric arm b. Loose or broken electric wire c. Burned out ratchet solenoid (Replace) d. Burned out switch (Replace) e. Blocked grain column or dirty screens (Clean)

SET UP INSTRUCTIONS

Wet Holding Hopper & Solid Peak Installation

(Not required for Model 775EM and 1075EM)

The hopper is shipped folded down and must be assembled at the installation.

NOTE: Inspect and remove all foreign material from feed rolls and augers. Avoid dropping nuts, bolts, parts, etc. down the grain columns. If anything is accidentally dropped, it must be removed before filling dryer.

Use 3/8-16 x 1" bolts and 3/8-16 Whiz Nuts and 3/8" Flat Washers under bolt heads through the first five steps.

STEP 1: Fold up the front Hopper Panel Assembly and its two adjoining side Hopper Panel Assemblies and bolt them together along the corner seams. Put a plank on top to walk on—Avoid standing on tie straps.

STEP 2: Repeat Step 1 with the Rear Hopper Panel Assembly and its adjoining Side Hopper Panel Assemblies.

STEP 3: On Model 675's and 875's, place the Cross Tie Mount Bars, item 6 between each of the two side Hopper Panel Assemblies, (as illustrated) and bolt the seams together.

STEP 4: On Model 975's and 1175's, fold up the center side hopper panel assemblies on each side of the dryer and install a cross tie mount bar the same as in Step 3.

STEP 5: Bolt the bottom flanges of all the Hopper Panel Assemblies to the Joiner Angles.

NOTE: Place a 3/8 flat washer between the head of the bolt and Hopper Panel.

STEP 6: Bolt the Level Auger Support Angle(s), item 8, in place as illustrated) with 3/8-16 x 1" bolts and 3/8-16 Whiz Nuts.

STEP 7: Bolt the Hopper Cross Tie Straps, item 11, to the Cross Tie Mount Bars with 1/2-13 x 1 1/4" bolts, 1/2" lock washers and 1/2-13 Hex Nuts.

STEP 8: Fasten Ladder Mounting Brackets to right rear Hopper Panel Assembly using 3/8-16 x 3/4" bolts and 3/8-16 Whiz Nuts.

STEP 9: Bolt Ladder to Ladder Mounting Brackets using 3/8-16 x 1" bolts and 3/8-16 Whiz Nuts. On Model 875's and 1175's, the Ladders (with cages) will also need to be installed on the top section of the grain column.

SOLID PEAK ASSEMBLY

NOTE: Leave all bolts loose (finger tight) until Step 15.

STEP 10: Beginning at front of dryer, install two Solid Peak Panels, Ref. 13, to the top of the inner perforated screens, one on each side. Use 5/16-18 x 3/4" Truss Head Screws and 5/16-18 Whiz Nuts. The head of screw should be on the inside of grain column. DO NOT bolt the solid peak panels to the End Hopper Panel Assemblies until Step 14.

STEP 11: Bolt a Hopper Cap, Ref. 14, onto these first two Solid Peak Panels using 5/16-18 x 3/4" Truss Head Screws and 5/16-18 Whiz Nuts. The Whiz Nut must be inside the air chamber.

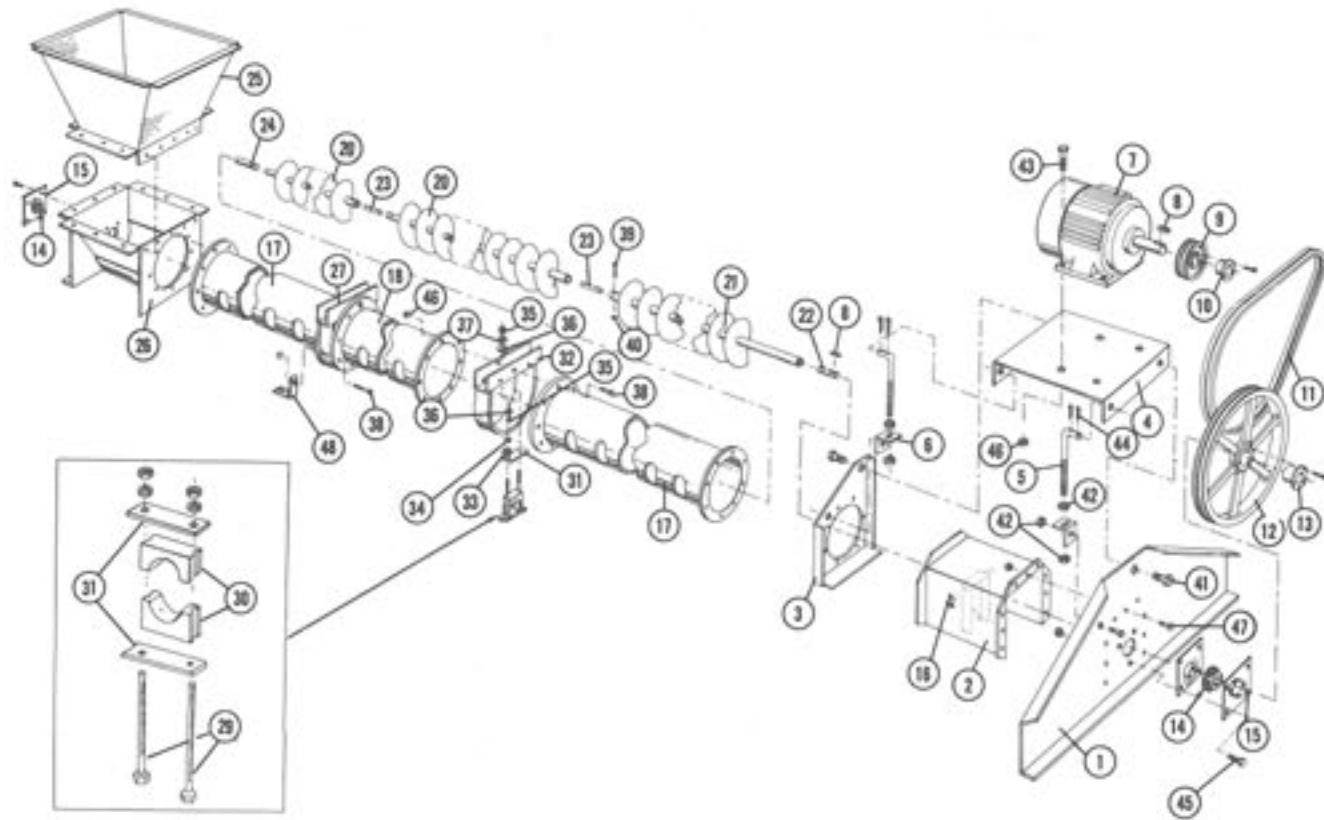
STEP 12: After two sets of Hopper Peak Panels are in place, install 3 1/4" Inner Hopper Cross Ties, Ref. 15, and 2 9/4" Inner Hopper Support Angles, Ref. 16, at the center hole along the Hopper Peak Panel seams using 5/16-18 x 1 1/4" bolts and 5/16-18 Whiz Nuts. The other end of the Inner Hopper Support Angles fasten at the third bolt holes down from the top along the vertical seam of the Inner Perforated Screens on each side. Remove the 5/16-18 x 1/2" bolt and use a 5/16-18 x 3/4" bolt to hold the support Angle. These angles should be installed at each seam of the Hopper Peak Panels.

STEP 13: Continue along the machine installing sets of two Solid Peak Panels (one on each side), fastening to inner perforated sheets, hopper cap and to each other using 5/16-18 x 3/4" bolts and 5/16-18 Whiz Nuts. Install second (and third) Hopper Cap, Inner Hopper Cross Ties and Inner Hopper Support Angles when needed. Use 3/8-16 Whiz Nut to fasten Hopper Peak Panel on the 3/8" tie rod. (The nut will be in Grain Column).

STEP 14: Install the hopper seal angles, Ref. 17, at each end of the Peak. Then bolt the Hopper Peak Panels to the Hopper End Panel Assemblies using 5/16-18 x 3/4" bolts and 5/16-18 Whiz Nuts. The head of the bolts should be on the outside of the Hopper. **TIGHTEN ALL BOLTS AT THIS POINT.**

STEP 15: The Hopper is now complete. If your model has a Level Auger, follow assembly instructions on Pages 5 & 6.

LEVEL AUGER ASSEMBLY



REF. NO.	PART NO.	DESCRIPTION
1	1284496	Motor Mount Front
2	1284501	Level Switch Pivot Housing
3	1284495	Motor Mount Rear
4	1284500	Motor Mount Plate
5	1288955	Adjusting Rod
6	1284265	Adjusting Rod Pivot Brk't.
7	1286815	5 HP 3 Phs. Motor
		(for 875, 1075 & 1175)
	1286818	3 HP 3 Phs. Motor (for 675, 775 & 975)
	1286829	3 HP 1 Phs. Motor
		(for all single phase dryers)
8	0015120	1/4 x 1 1/2 Square Key
9	1286207	2/3V/3.65 SH Pulley
		(for all models but 675)
	1286209	1/3V/3.65 SH Pulley (for 675 only)
10	1286214	SH 1 1/2 Bushing (for Ref. 9)
11	1286103	2/3V/710 Banded Belt (or 3V/710 in matched set of 2) - (For all models but 675)
	1286104	3V/710 Belt (Single) (for 675 only)
12	1286208	2/3V/19.0 S. K. Pulley
		(for all models but 675)
	1286210	1/3V/19.0 S.K. Pulley (for 675 only)
13	1216241	S. K. 1 1/2 Bushing (for Ref. 12)
14	0016003	1 1/4" Bore Bearing w/Lock Collar
15	0016004	1 1/4" Bearing Stamping (3-Bolt, Round)
	1216006	1 1/4" Stamping (4-Bolt) Square
16		Level Switch Assembly (see Page 6)
17	1280120	Level Auger End Tube
18	1280119	Level Auger Center Tube
		(for 975, 1075 & 1175)
20	1280122	Level Auger Weld 93 3/4" Long Flight.

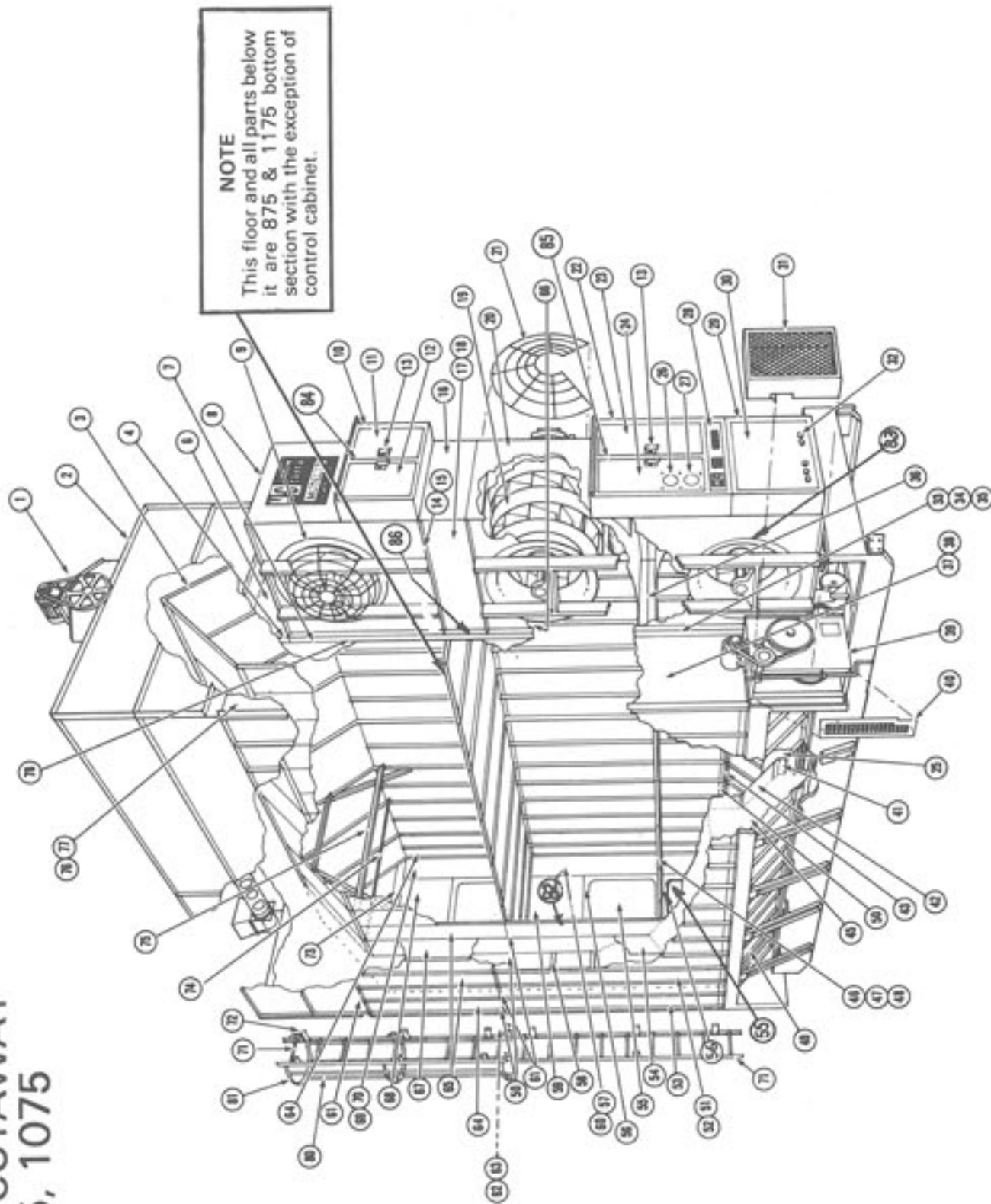
REF. NO.	PART NO.	DESCRIPTION
21	1280121	Front Level Auger Weld. 82 3/4" Long Flight.
22	1285051	Level Auger Front Shaft 1 1/4" x 10"
23	1285050	Level Auger Center Shaft 1 1/4" x 10 1/4"
24	1285052	Level Auger Rear Shaft 1 1/4" x 7"
25	1280116	Upper Receiving Hopper Weld.
26	1280115	Receiving Hopper Base
27	1281055	Hanger Bearing Assembly incl. 29, 30, 31, 32
29	0008257	3/8-16 x 5 HHCS Full Thread 33, 34, 36
30	1286021	1 1/4" Bore Wood Hanger Bearing (2 Halves)
31	1283415	Hanger Bearing Bar
32*	1280117	Hanger Bearing Bracket Weld.
33	0008162	3/8-16 Flanged Whiz Locknut
34	1288133	3/8-16 Jam Nut
35	0008162	3/8-16 Hex Nut
36	0008174	3/8 Flatwasher
37	0008179	3/8 Lockwasher
38	0008132	3/8-16 x 3 1/4 HHCS
39	0018137	3/8-16 x 2 HHCS Grade #5
40	0018149	3/8-16 2-Way Locknut
41	0018163	1/2-13 x 1 1/4 Shoulder Bolt
42	0008170	1/2-13 Whiz Nut
43	0008123	3/8-16 x 1 1/4 HHCS
44	0008199	1/2 x 1 Cotter Pin
45	0008122	3/8-16 x 1 Carriage Bolt
46	0008168	3/8-16 Whiz Nut
47	0008106	5/16-18 x 3/4 HHCS
48	1283432	Level Auger Support Brk't.

*For replacement, see Insert Page "D"

REF. NO.	PART NO.	DESCRIPTION
50	1252732	Outer Upper & Lower Joiner Angle
51	1282945	Outer Screen
52	1282982	Stack Dryer Moisture Control Screen
53	1282965	Outer End Screen
54	1282871	Divider Panel
55	1281183	Rear Door Ass'y.
56	1282715	Rear Door Frame
57	1282866	Left Rear End Panel
58	1212952	Column Stiffener Strap
59	1282876	Panel Above Door
60	1282867	Right Rear End Panel
61	1282382	Screen Joiner Angle (775)
62	1282381	Screen Joiner Angle (1075)
63	1282635	End Panel Joiner - Rear
64	1282857	End Panel Joiner - Front
65	1282972	End Screen—Top Sec.
66	1282973	Screen—Top Sec.
67	1282998	Panel Above Fans
68	1282907	Divider Panel (top sec.)
69	1282847	Panel Above Door (top sec.)
70	1282844	Right Rear End Panel—Top
71	1282843	Left Rear End Panel—Top
72	1280163	9' Ladder Weld.
73	1284529	Ladder Min't.g. Bracket
74	1282650	End Panel to Hopper Joiner Angle
75	1288956	Inner Perf. Sheet Cross Tie
76	1282014	Inner Perf. Sheet Cross Angle
77	1282845	Right Front End Panel—Top
78	1282846	Left Front End Panel—Top
79	1282050	Fan Housing Stiffener Bar
80	1282015	Ladder Cage Hoop
81	1282017	9' Ladder Cage Hoop
82	1282015	Ladder Cage Hoop
83	1282958	Inner Screen Bottom Section
84	1285724	Fan Intake Spinning
85	1284843	Small Gas. Cab. Door Jamb
86	1284827	Center Door Jamb
	1282978	Fan Housing Seal Angle

REF. NO.	PART NO.	DESCRIPTION
1280217		NOT SHOWN
1280216		Front Right Lifting Bar Brace
1280218		Front Left Lifting Bar Brace
1283442		Center Lifting Bar Brace
1281258		Lifting Bar
1282250		Base Panel Access Door
1288958		Screen Stiffener Bar
1284839		Adjusting Rod 3/8 x 4 1/2
1284829		Thermometer Mount Plate—double
1282897		Thermometer Mount Plate—single
1280086		Seal Panel Between Fans
1284940		Vaporizer Mount Plate
1281257		Vaporizer Hole Cover
1212882		Feed Roll Access Cover
1212883		Sensing Bulb Clip
		Sensing Bulb Bracket

REF. NO.	PART NO.	DESCRIPTION
1		Level Auger Ass'y., see Page 5
2		Wet Holding Hopper Ass'y., see Page 3
3		Peak Ass'y., see Page 3
4	1282985	Fan Housing Sealing Angle
6	1282848	Panel Above Fan (top sec.)
7	1282604	Fan Housing Min't. Panel
8	1282862	Fan Housing Top Cover
9	1288964	Full Fan Guard
10	1280195	Small Burner Cab. Weld.
11	1284844	Small Burner Door (only)
12	1281329	Small Burner Door Ass'y.
13	1288975	Control Cab. Door Latch Handle
14	1283425	Control Cab. Door Cam
15	1284551	Fan Housing Spacer Joiner—Right
16	1284552	Fan Housing Spacer Joiner—Left
17	1284553	Spacer Panel Front
18	1284554	Spacer Panel Side—Right
19		Centrifugal Fan Ass'y., see Page 19
20	1284849	Fan Housing Cover Panel
21	1288965	"E" Model Fan Guard
22	1280193	Control Cabinet Weld.
23	1284820	Control Cabinet Door—Left
24	1284821	Control Cabinet Door—Right
25	1282890	Unload Auger Cover
26	1288962	Thermometer (30' Cap.)
27	1288983	Thermometer (15' Cap.)
28	1284834	Control Panel Door
29	1280194	Motor Control Station Weld.
30	1284826	Motor Control Station Door
31	1280196	"EM" Drive Guard Weld.
32	1216874	Reset Mechanism
33	1282646	Vert. Fan Hs'g. Min't. Bottom—Left
34	1282645	Vert. Fan Hs'g. Min't. Bottom—Right
35	1282644	Fan Housing Min't. Top & Bottom
36	1282853	Fan Housing Cut-Off Angle
37	1282868	Left Front End Panel
38	1282869	Right Front End Panel
39		Drive Reduction Base, see Page 22
40	1284707	Inner Perf. M'n't. Weld.
41	1280188	Lower Inner Screen
42	1282953	Lower Perf. M'n't. Angle
43	1282739	Lower Screen Stiffener
45	1282855	Unit Floor Panel
46	1212928	Heat Chamber Door
47	1211113	Heat Chamber Door Frame
48	1210299	Lower Outer Screen
49	1282951	



LEVEL AUGER ASSEMBLY INSTRUCTIONS

On Models 775 and 1075, the Level Auger is factory installed. Only the following need be installed on these models at dryer site.

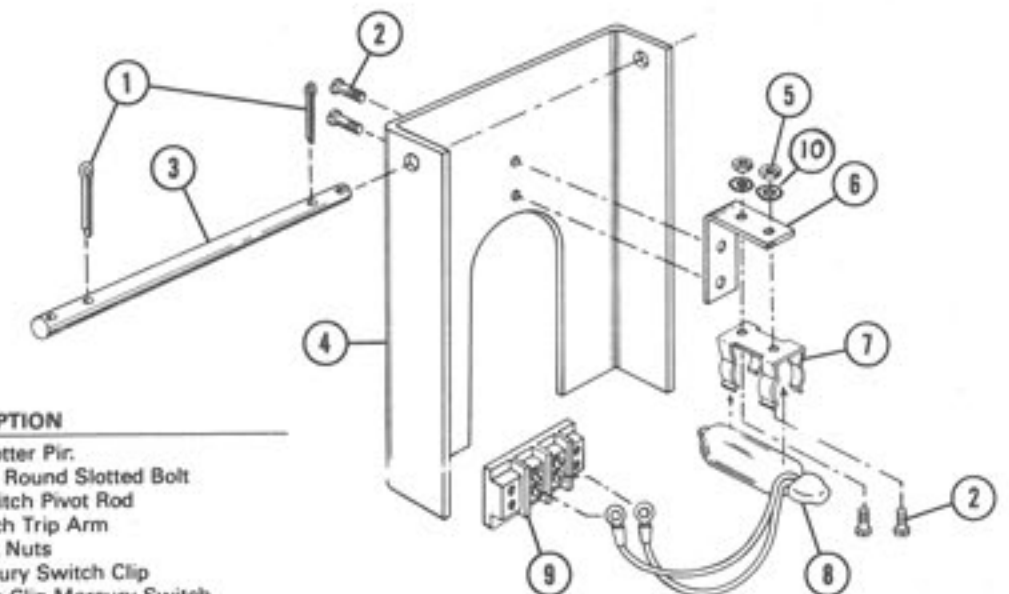
1. Upper Receiving Hopper Weldment, item 25, using 5/16-18 x 3/4" bolts and Whiz Nuts. Note Decal.
2. Mercury Switch, item 8, inserted in Mounting Clip, item 7, and wires connected to Terminal Strip, item 9 (see below).
3. Mount the motor using 3/8-16 x 1 1/4" bolts and Whiz Nuts. (For wiring instructions, see page 32.)
4. Install pulleys and belts on the motor and auger. Check the alignment of pulleys.

On all other models, if facilities are available to lift the entire level auger as a unit, it is advisable to assemble it on the ground and then install it on the hopper. For 675 and 875 models, the level auger unit less motor weighs approximately 400 pounds. On 975 and 1175 models, it weighs approximately 500 pounds. These instructions are for installing the level auger with the receiving hopper at the rear of the dryer and motor at the fan end. If it is desired to have the receiving hopper at the fan end of the dryer, the whole auger assembly must be turned around so the motor is at the rear of the dryer and the auger assembly is then mounted to the right of center.

To assemble, proceed as follows (using Level Auger Parts illustration on page 5):

1. Install the Front Motor Mount assembly, Ref. 1, to the top of Front Hopper Panel Assembly with bearing toward the front and offset to the left of center.
 2. Install the front Level Auger and Tube Assembly, Ref. 2, 3, 17 and 21. Insert the Level Auger Front Shaft, Ref. 22, through the bearing.
 3. Install the Hanger Bearing Assembly, Ref. 32, on the Level Auger Center Shaft (975 and 1175 models require two). Rest the assembly on the Level Auger Support Angle. The Hanger Bearing, item 32, must be installed so the auger is suspended from the top of the tube (as illustrated). The center of the bearing hole should be 2 3/4" down from the "straight across" part of the hanger bracket. LOCK INTO POSITION. Also make sure the bearing holding plates are locked into position. NEVER PUT PRESSURE ON THE WOOD BEARING BY OVER TIGHTENING.
 4. Bolt the Level Switch Pivot Housing (item 2) to the Motor Mount Front (item 1).
 5. Install Motor Mount Plate assembly (item 4) to Front and Rear Motor Mount Plates using Shoulder bolts (item 41). Also install adjusting Rods (item 5) and Pivot Brackets (item 6) at this time.
 6. Position Rear Level Auger and Tube Assembly (item 17, 20) and splice the Auger flightings together by using 5/16-18 x 2" Grade 5 bolts, Lock Washers and Hex Nuts. (975 and 1175 models will require installing Center Auger (item 18, 10) and Tube Assembly before this step.)
 7. Connect the Level Auger Tubes with the Bearing Assembly between them using 3/8-16 x 3 1/4" bolts and whiz nuts. At the same time install the Support Brackets (item 48) from the Tube Flange to the Level Auger Support Angle.
 8. Bolt the Receiving Hopper Base Weldment (item 26) as shown to (item 17). This assembly will line up with holes off center of top flange of wet holding hopper.
 9. Install Upper Receiving Hopper (item 25).
- NOTE 2000 bushel per hour capacity of level auger. Feeding grain at a faster rate could result in overloading the motor and belt drive.
10. Slide the Auger Weldment (item 20) toward the receiving hopper (item 26) until it contacts bearing (item 14). Turn the Auger over by hand making sure it does not rub or catch on any bolt heads. When it is clear, tighten the lock collars and/or set screws in the bearing. Next tighten the bearing set screws on the pulley end.
 11. Install the pulleys and belt(s). Check pulley alignment.
 12. Install the Level Switch assembly as illustrated on page 6 into item 2, page 5. (Refer to page 32 for installing and wiring motor.)

LEVEL SWITCH ASSEMBLY



REF. NO.	PART NO.	DESCRIPTION
1	0008249	1/8 x 3/4 Cotter Pin
2	0008194	8-32 x 1/2 Round Slotted Bolt
3	1285711	Level Switch Pivot Rod
4	1254475	Bin Switch Trip Arm
5	0008188	8-32 Hex Nuts
6	1252902	Bin Mercury Switch Clip
7	1206801	Mounting Clip Mercury Switch
8	1206800	Mercury Switch
9	1206802	Terminal Strip
10	0018270	Star Washer #8

DANGER!

1. KEEP ALL SHIELDS IN PLACE.
 2. DISCONNECT POWER SOURCE TO ADJUST OR SERVICE.
 3. MAKE CERTAIN EVERYONE IS CLEAR OF EQUIPMENT BEFORE APPLYING POWER.
 4. KEEP HANDS, FEET, AND CLOTHING AWAY FROM POWER DRIVEN PARTS IN MOTION.
- FAILURE TO HEED MAY RESULT IN PERSONAL INJURY

OPERATING INSTRUCTIONS

1. Make sure all safety shields and guards are in place. (See Page 33.)
2. Flip all switches to OFF.
3. Close all gas supply valves.
4. Connect or turn on electric power source. Power on and high limit light will glow. (Trouble, see page 31.)
5. Slowly open gas supply valve and check for leaks. LP Gas flip valve is open when handle is straight out from valve body.
6. Fill dryer with grain.

MANUAL AND AUTOMATIC FILLING:

All models except 475. Flip the level auger toggle switch on the control panel to the manual position. For the initial filling, make sure the mercury level switch stops the auger when the dryer is full. If adjustment is necessary, see page 32.

IMPORTANT: Regardless of which position the level auger toggle switch is in, manual or automatic, the level auger will start and the indicator light will glow only if the mercury level switch is in the position calling for grain. The mercury level switch is always in command.

AUTOMATIC: With the level auger indicator light on, flip the level auger toggle switch to automatic and immediately a (5) minute delay is employed. It will take approximately (5) minutes before the level auger will start. This delay will prevent nuisance starting and stopping of the level auger. If the level auger toggle switch is flipped off and back to automatic, it will recycle the delay for another (5) minutes.

CUSTOMER SUPPLIED LOADING AUGERS-CONVEYORS

The 115V coils in the customer furnished magnetic starter(s) of these unit(s) can be connected to the 115V coil in the dryer level auger magnetic starter. One should be connected to the coil terminal that has the wire with the marking LASW-LAS on it.

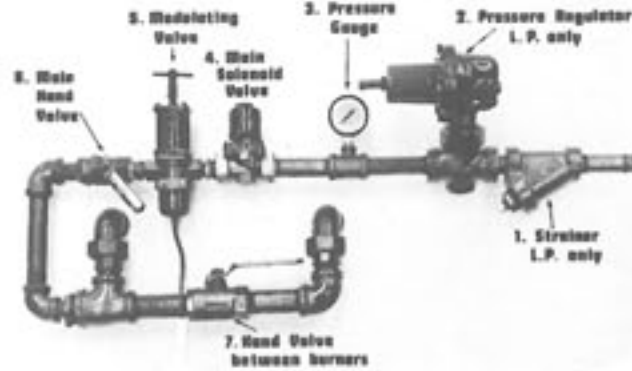
NOTE: The level auger has a maximum capacity of 2000 bushels per hour.

MODEL 475 AUTOMATIC OPERATED FILLING:

A round load switch (optional equipment, see page 25) may be installed on this model. It will automatically activate a customer supplied 115V coil in a magnetic starter for an electric motor powering a fill auger.

7. Start fans if not already running when dryer is full. Air Pressure Light on control cabinet will come on. (If light does not come on, see page 31.)
8. Open Tank Valve and Flip Valve on LP models. Turn on gas supply valve on Natural Gas models.

9. INITIAL START UP OF NEW DRYER BURNER:



(A) Open #7 Hand Valve between burners all the way. All gas hand valves in manifold are open when handle is parallel to piping, closed when handle is 90° to piping. If extremely low drying temperatures are desired, it may be necessary to leave the #7 Hand Valve closed.

(B) Open the #6 Main Hand Valve one-fourth (1/4) of the way.

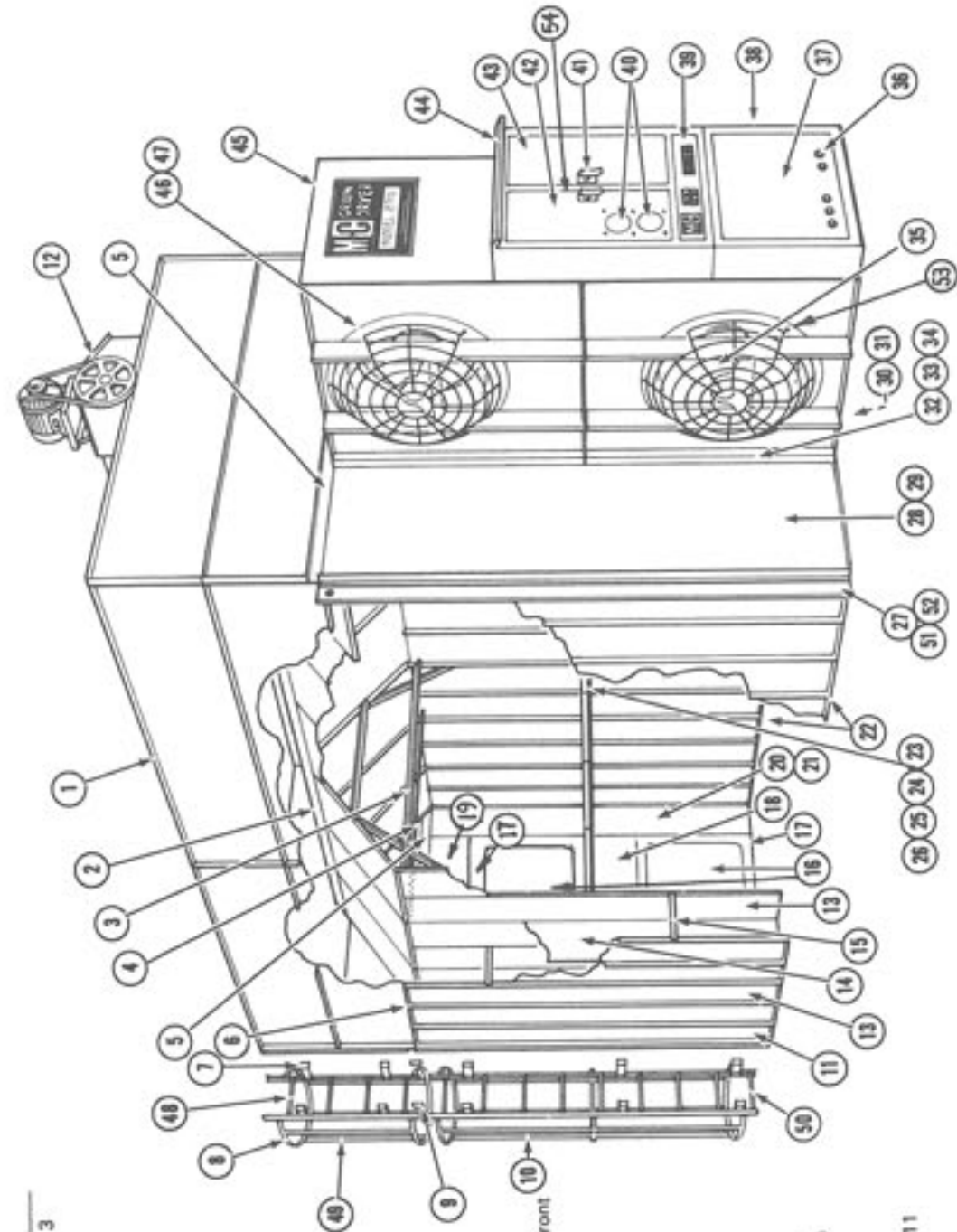
10. Flip Ignition Switch ON to start the burner. When ignition takes place and burner is lit, the main valve indicator light will stay on. If main valve indicator light goes out, flip Ignition Switch Off, wait one (1) minute, and flip Ignition switch On again. (Trouble, see Page 31.)

11. After flame is established, gradually bring temperature up inside the dryer by slowly opening the #6 main hand valve all the way. Slow opening of #6 main hand valve is necessary to prevent freezing of the LP gas line and to prevent a fast temperature rise which could trip off the High Limit Switch. If High Limit Switch trips off, first close #6 Main Hand Valve on gas line, then flip off Ignition Switch. Reset High Limit Switch by pushing the reset button on the High Limit Switch. (See illustration, Page 11) Follow ignition procedure again, but open #6 main hand valve slower.

12. Once flame is established, the heat causes the LP gas to vaporize, and a steady controlled heat is possible (2-3 minutes). With both #6 and #7 Valves open, check the pressure reading on the #3 pressure gauge. The pressure should be approximately ten (10) pounds. For LP burner, the pressure setting may be adjusted if necessary by loosening the lock nut on the #2 Pressure Regulator and turning the adjusting bolt in for more pressure and out for less pressure. Any adjustment in

875EM-1175EM TOP SECTION CUTAWAY

For Bottom Section Cutaway See Page 29



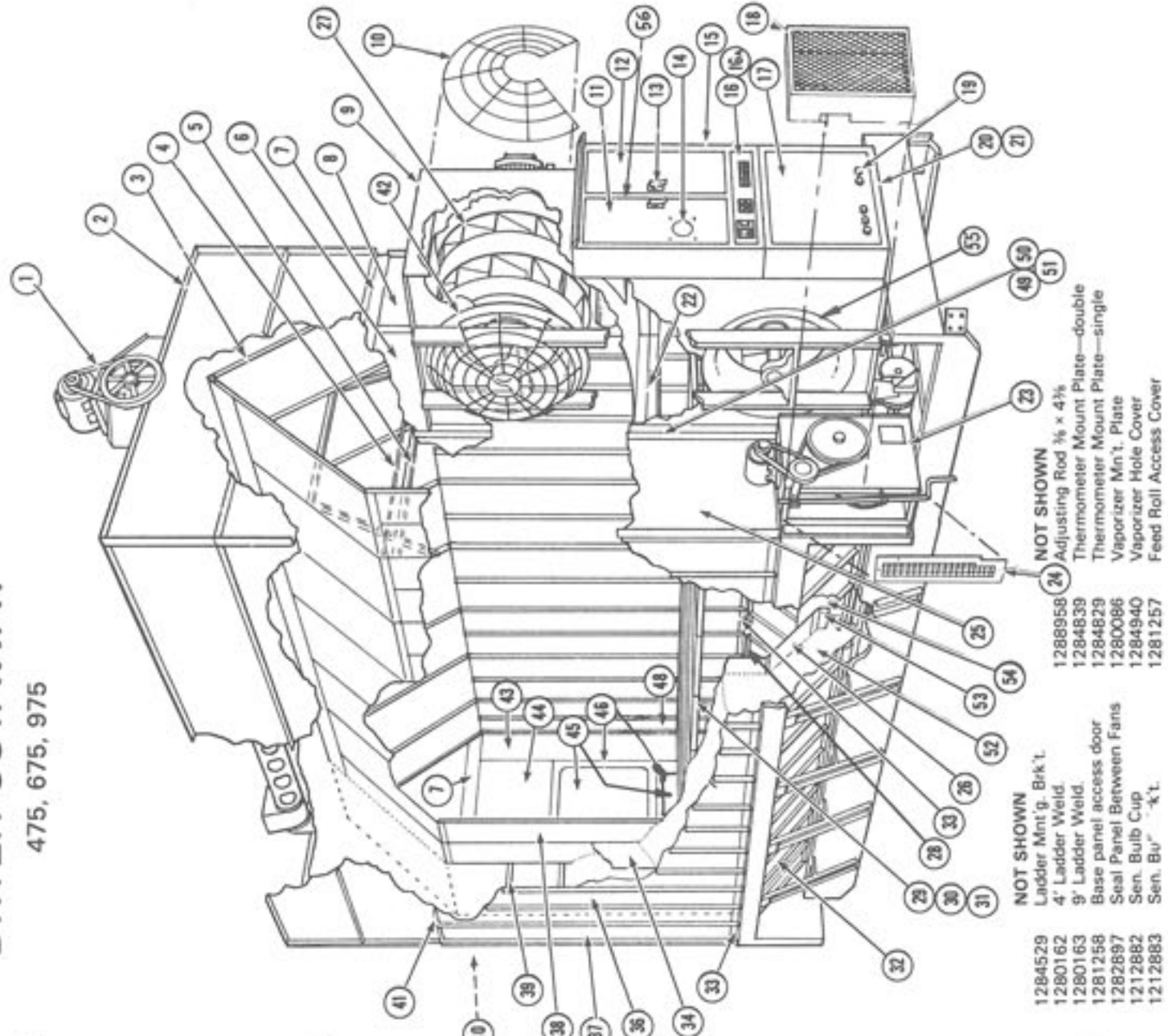
REF. NO.	PART NO.	DESCRIPTION
1		Wet Holding Hopper Ass'y. see Page 3
2		Peak Ass'y. see Page 3
3	1282014	Inner Perf. Sheet Cross Angle
4	1288956	Inner Perf. Sheet Cross Tie
5	1282650	End Panel to Hopper Joiner Angle
6	1282382	Hopper Joiner Angle (875)
7	1282381	Hopper Joiner Angle (1175)
8	1284529	Ladder Mnt'g. Bracket
9	1282015	Ladder Cage Hoop
10	1282016	Ladder Cage Tie
11	1282965	8" Ladder Cage Strap
12		Level Auger Ass'y. see Page 5
13	1282945	Outer & Inner Screen
14	1282901	Divider Panel
15	1212952	Column Stiffener Strap
16	1281183	Rear Door Ass'y
17	1282715	Rear Door Frame
18	1282926	Panel Between Doors
19	1282925	Panel Above Door (top)
20	1282866	Left Rear End Panel
21	1282867	Right Rear End Panel
22	1252732	Perf. Sheet Min'l. Angle
23	1202835	Top Sec. Front Floor Panel (also for front floor panel on double burners)
24	1212928	Unit Floor Panel
25	1210299	Heat Chamber Door Frame
26	1211113	Heat Chamber Door
27	1280221	Lifting Bar (front right-875)
28	1282869	Right Front End Panel
29	1282868	Left Front End Panel
30	1282900	Top Spacer Panel (top)
31	1282899	Bottom Spacer Panel (top)
32	1282653	Right Vert. Fan Housing Mount
33	1282654	Left Vert. Fan Housing Mount
34	1282644	Upper & Lower Fan Housing Mount
35		"EM" Model Fan Ass'y. see Page 19
36	1216874	Reset Mechanisms
37	1284826	Motor Control Station Door
38	1280194	Motor Control Station Cabinet
39	1284834	Control Panel Door Ass'y. see Page 11
40	1288983	Thermometer (15" Cap.)
41	1288975	Cabinet Door Handle
42	1283425	Cabinet Door Handle Cam
43	1284821	Control Cabinet Door—Right
44	1284820	Control Cabinet Door—Left
45	1284825	Control Cabinet Weld.
46	1288964	Fan Housing Top Cover
47	1288965	Full Fan Guard
48	1280162	"E" Model Fan Guard
49	1282018	4" Ladder Weld.
50	1280161	8" Ladder Weld.
51	1280203	Lifting Bar (center-875-2, 1175-4)
52	1280220	Lifting Bar (left front-875)
53	1285724	Fan Intake Spinning
54	1284827	Door Jamb

- NOT SHOWN**
- 1284839 Thermometer Mount Plate—double
 - 1284829 Thermometer Mount Plate—single
 - 1282897 Seal Panel Between Fans
 - 1280086 Vaporizer Mount Plate
 - 1284940 Vaporizer Hole Cover
 - 1212882 Sensing Bulb Clip
 - 1212883 Sensing Bulb Brk'l.

DRYER CUTAWAY

475, 675, 975

REF. NO.	PART NO.	DESCRIPTION
1		Level Auger Ass'y.—See Page 5
2		Wet Holding Hopper Ass'y.—See Page 3
3		Peak Ass'y.—See Page 3
4		Inner Perf. Sheet Cross Tie
5		Panel Above Fans
6		End Panel To Hopper Joiner Angle
7		Left Front End Panel
8		Fan Housing Top Cover
9		"E" Model Fan Guard
10		Right Con. Cab. Door
11		Con. Cab. Door Handle
12		Con. Cab. Door Handle Cam
13		Thermometer
14		Control Cab. Weld.
15		Control Panel Door - "E" Model—for ass'y.—See Page 11
16		Control Panel Door - "B" Model—for ass'y.—See Page 11
16A		"EM" Drive Guard
17		Reset Mechanisms
18		Motor Control Cabinet
19		Cover Panel (for "B" Models only)
20		Fan Housing Cut-Off Angle
21		Drive Reduction Base—See Page 22
22		Right Front End Panel
23		Lower Inside Screen
24		Fan Assemblies—See Page 19
25		Lower Perf. Mn'l. Angle
26		Unit Floor Panel
27		Heat Chamber Door
28		Heat Chamber Door Frame
29		Lower Outside Screen
30		Screen Mn'l. Angle
31		Divider Panel
32		Outer Screen
33		Moisture Control Screen
34		Outer End Screen
35		Inner Screen
36		Column Stiffener Strap
37		Right Rear End Panel
38		Hopper Joiner Angle (475)
39		Hopper Joiner Angle (675)
40		Hopper Joiner Angle (975)
41		Full Fan Guard
42		Left Rear End Panel
43		Panel Above Door
44		Rear Door Ass'y.
45		Rear Door Frame
46		Inner End Perf. Sheet
47		Vert. Fan Hsg. Mn'l.—Right
48		Vert. Fan Hsg. Mn'l.—Left
49		Fan Hsg. Mn'l. Angle—Top & Bottom
50		Lower Screen Stiffener
51		Inner Perf. Mn'l. Weld.
52		Unload Auger Cover
53		Fan Intake Spinning
54		Center Door Jamb
55		128956 Level Auger Ass'y.—See Page 5
56		1282014 Wet Holding Hopper Ass'y.—See Page 3
57		1282898 Peak Ass'y.—See Page 3
58		1282650 Inner Perf. Sheet Cross Tie
59		1282868 Panel Above Fans
60		1284825 End Panel To Hopper Joiner Angle
61		1284821 Left Front End Panel
62		1289965 Fan Housing Top Cover
63		1284820 "E" Model Fan Guard
64		1289975 Right Con. Cab. Door
65		1283425 Con. Cab. Door Handle
66		1289983 Con. Cab. Door Handle Cam
67		1280193 Thermometer
68		1284834 Control Cab. Weld.
69		1284807 Control Panel Door - "E" Model—for ass'y.—See Page 11
70		1284826 Control Panel Door - "B" Model—for ass'y.—See Page 11
71		1280196 "EM" Drive Guard
72		1216874 Reset Mechanisms
73		1280194 Motor Control Cabinet
74		1284817 Cover Panel (for "B" Models only)
75		1282853 Fan Housing Cut-Off Angle
76		1284707 Drive Reduction Base—See Page 22
77		1282869 Right Front End Panel
78		1282953 Lower Inside Screen
79		1282739 Fan Assemblies—See Page 19
80		1212928 Lower Perf. Mn'l. Angle
81		1211113 Unit Floor Panel
82		1210299 Heat Chamber Door
83		1282951 Heat Chamber Door Frame
84		1252732 Lower Outside Screen
85		1282871 Screen Mn'l. Angle
86		1282945 Divider Panel
87		1282971 Outer Screen
88		1282965 Moisture Control Screen
89		1282958 Outer End Screen
90		1212952 Inner Screen
91		1282867 Column Stiffener Strap
92		1282380 Right Rear End Panel
93		1282382 Hopper Joiner Angle (475)
94		1282381 Hopper Joiner Angle (675)
95		1288964 Hopper Joiner Angle (975)
96		1282866 Full Fan Guard
97		1282876 Left Rear End Panel
98		1281183 Panel Above Door
99		1282715 Rear Door Ass'y.
100		1282974 Inner End Perf. Sheet
101		1282645 Vert. Fan Hsg. Mn'l.—Right
102		1282646 Vert. Fan Hsg. Mn'l.—Left
103		1282644 Fan Hsg. Mn'l. Angle—Top & Bottom
104		1282855 Lower Screen Stiffener
105		1280188 Inner Perf. Mn'l. Weld.
106		1282890 Unload Auger Cover
107		1285724 Fan Intake Spinning
108		1284827 Center Door Jamb



NOT SHOWN
Adjusting Rod 1/8 x 4 3/8
Thermometer Mount Plate—double
Thermometer Mount Plate—single
Vaporizer Mn'l. Plate
Vaporizer Hole Cover
Feed Roll Access Cover

NOT SHOWN
Ladder Mn'l. g. Brk'l.
4" Ladder Weld.
9" Ladder Weld.
Base panel access door
Seal Panel Between Fans
Sen. Bulb Cup
Sen. Bu" -k'l.

- pressure should only be done after the Vaporizer has warmed up and with the burner on. If pressure adjustment is needed, be sure to tighten lock nut again. **NOTE:** If the #7 Hand Valve between the two burners is closed so only one burner is burning, the pressure will be a little higher than with both burners going. This is a normal condition and the Pressure Regulator does not need to be changed. On Natural Gas Burners, the pressure reading will remain nearly constant.
- The drying temperature is regulated by the #5 modulating valve. To increase the temperature, slowly turn the handle in. To reduce the temperature, slowly turn the handle out. Proper temperature is acquired by reading the thermometer.
- After initial operation of several hours burning, the Pressure Regulator and Modulating Valve will be functioning properly and will need no further adjustment on start-ups.
- On initial start-up of each season, the cooling section will have wet grain in it and it must be recycled before putting into storage.
- Auxiliary switch must be on before moisture control will work. Make sure the automatic moisture switch is in **Off** position. In order to dry all the grain in the upper section, it will require approximately one hour of continuous heat to dry from 30% to 13% moisture. Less moisture removal will require less time.
- For safe bin storage, the grain is normally dried to 13% moisture. After one hour of drying, turn Moisture Control Switch to **Manual** position. This will engage Ratchet Solenoids and begin unloading the grain. When grain in cooling section has moved through and dried grain begins to auger out, test it for moisture content. If moisture content is too high, slow down the unloading. If moisture content is too low and continues to read lower than desired for another hour, speed up unloading.
- To change unloading speed, a combination of two adjustments are available.
 - The Metering Roll ratchets can be adjusted independently of the unload augers by sliding the Eccentric Connecting Arm along the slotted bracket on the Eccentric Sprocket. The Eccentric Sprocket is located at the front lower right-hand corner of the dryer. Moving the Eccentric Connecting Arm towards the center of the sprocket will decrease amount of notches and slow down the unloading of the Metering Rolls. Moving it away from the center of the sprocket will increase the amount of notches and speed up the unloading of the Metering Rolls. **Caution: Never make adjustments on sprocket until it has come to a complete stop.**
 - The Variable Speed Pulley determines the rate at which the Eccentric Connecting Arms move back and forth. The speed is changed by turning the crank (item 13, page 25) connected to the Variable Speed Pulley Arm (item 9, page 25). **Adjust Variable Speed Pulley only when machine is operating.** By moving the arm on the Variable Speed Pulley Up (item 9, page 25), the rate at which the Eccentric Connecting Arms move is slowed down. By moving the arm of the Variable Speed Pulley Down, the rate at which the Eccentric Connecting Arms move is increased. This is normally used for fine adjustment. **Note:** Run through the complete cycle from fast to slow at least once a day when machine is operating. This will keep all moving parts free. **Caution: Always note position of Variable Speed Pulley setting before moving crank in order to return to original position or to become familiar with amount of movement of Connecting Arms. Never put extreme pressure on belts (force one or the other belt to bottom on one side of the center sheave).**

19. After your dryer is operating properly and is discharging grain at the desired moisture content for one hour, flip the moisture control switch to Automatic position, then set the moisture control on each side of the dryer by turning the indicator knob just to the point that the solenoid lifts the weight off the outer ratchet dog. Most likely, each moisture control will have a slightly different setting since they are independent switches. The following chart shows approximate dial settings when drying and cooling are performed at the same time.

APPROXIMATE SETTING FOR SHELLED CORN AND MOST SMALL GRAINS

THERMOMETER SETTING	SET CONTROL DIAL AT	TO GET—PERCENT MOISTURE
180°	3.5	13-14%
180°	4.0	14-15%
180°	4.5	13-15%
180°	5.0	12-13%

If the moisture content of the grain coming out of the dryer starts to increase, increase the setting of the control one mark at a time until the correct moisture content is reached. Allow ample time between adjustments for machine to correct itself, suggest time to be one (1) hour.

Adjust the unloading mechanism to correspond with the rate of feeding of the grain by the automatic control. These adjustments will only be slight if you have had your dryer operating correctly before switching it to Automatic Operation.

The speed of the Variable Drive should be fast enough to cause the Automatic Moisture Controls to operate intermittently but having the Metering Rolls engaged 85% to 90% of the time. If the unloading mechanism is working too slow, the Moisture Control Solenoids will operate constantly and the grain will come out drier than desired. If you have followed the instructions carefully, your dryer will operate continuously without watching or adjusting as long as you keep it full of grain.

DRYING CHART FOR MODELS WITH ONE HEAT UNIT

TYPES OF GRAIN	DRYING TEMP.
CORN	180°F to 200°F
GRAIN SORGHUM	160°F to 180°F
WHEAT OR OATS	160°F to 170°F
SOYBEANS OR BARLEY	130°F to 140°F
SEED GRAINS	NOT OVER 110°F

SHUT-OFFS AND RESTARTS

When turning the burner off, flip the ignition switch to Off, close both gas line valves, flip liquid line valve (LP only) closed, and close main gas supply valve. Let fans run 15 to 20 minutes to cool grain down. To restart burner, repeat Step 9, 10 and 11.

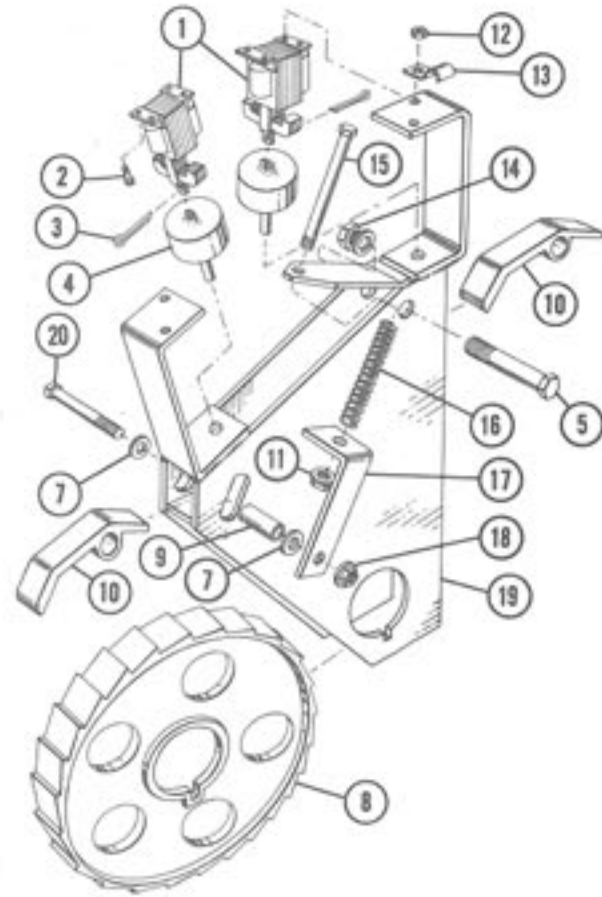
FINAL SHUT DOWN OF DRYER

Your dryer is a continuous flow dryer, and it is necessary to hold the grain in the dryer for a period of time when finishing a run. Ratchet Pawls should be disengaged by flipping Moisture Control Switch to Off. This will give the grain remaining in the dryer time to become dried. Allow about 30 minutes of drying time for high moisture grain (30%) and proportionately less for drier grain. Then turn Moisture Control Switch to Manual position for emptying. At end of season, lubricate all moving parts and drop the unloading auger pan underneath the dryer.

DOUBLE RATCHET ILLUSTRATION

1211163

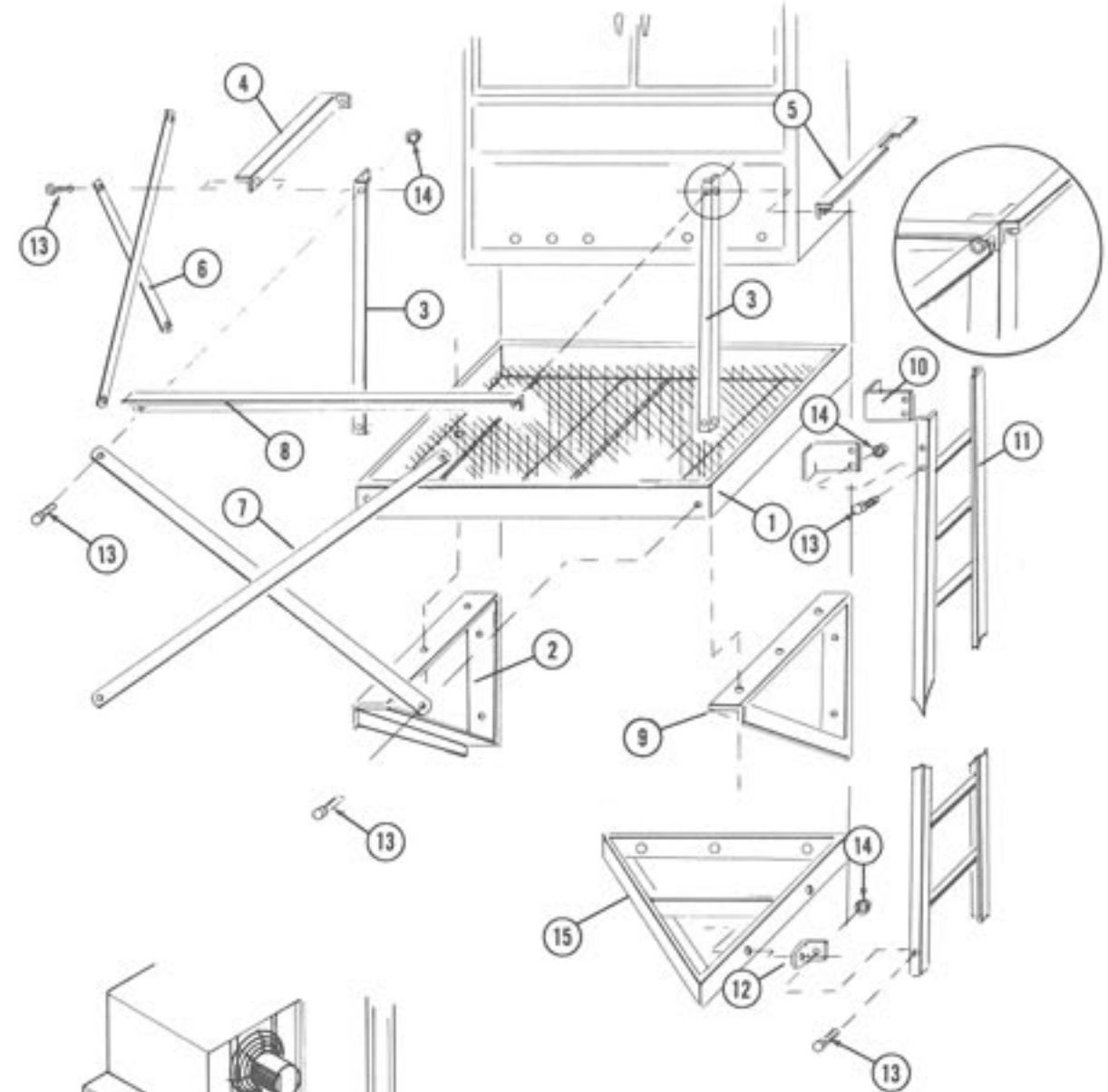
REF. NO.	PART NO.	DESCRIPTION
1	1216856	Solenoid constant duty (115V ratchet solenoid)
	1256883	Solenoid constant duty (12V ratchet solenoid)
2	0008186	6-32 x 1/2" Slotted Machine Screw
3	0008249	1/4 x 3/4 Cotter Pin
4	1210029	Solenoid Weight Weld.
5	0008144	1/2 x 3 1/2" HHCS
7	0008173	5/16 Flat Washer
8	1216404	Ratchet Wheel
9	1215571	Ratchet Dog Bushing
10	1215724	Ratchet Dog
11	0008167	1/4" Lock Nut
12	0008157	6-32 Hex Nut
13	1216859	Jiffy Clip #115
14	0008163	1/2" Hex Nut
15	0008102	1/4 x 2 1/2" HHCS
16	1218261	Ratchet Spring .325 O.D. x 2.45
17	1213357	Pivot Arm Slide
18	0008169	5/16" Flange Whiz Lock Nut
19	1210326	Double Ratchet Arm Weld.
20	0008110	5/16-18 x 1 1/2 HHCS



SERVICE PLATFORM

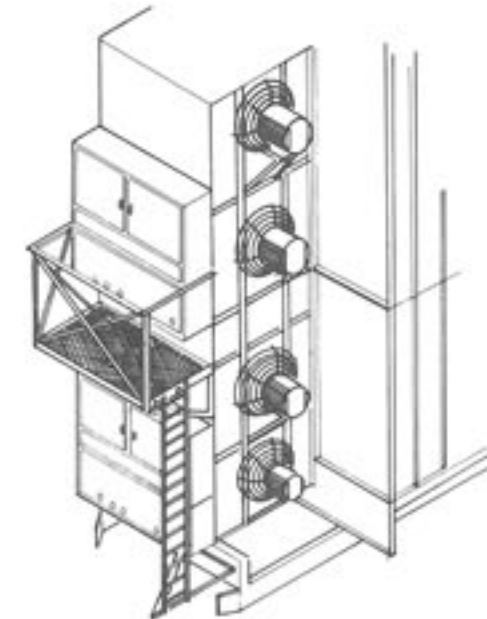
Standard on Models 875 & 1175—optional on Models 775 & 1075

M-C #1201034



OPERATION OF DOUBLE RATCHET SYSTEM

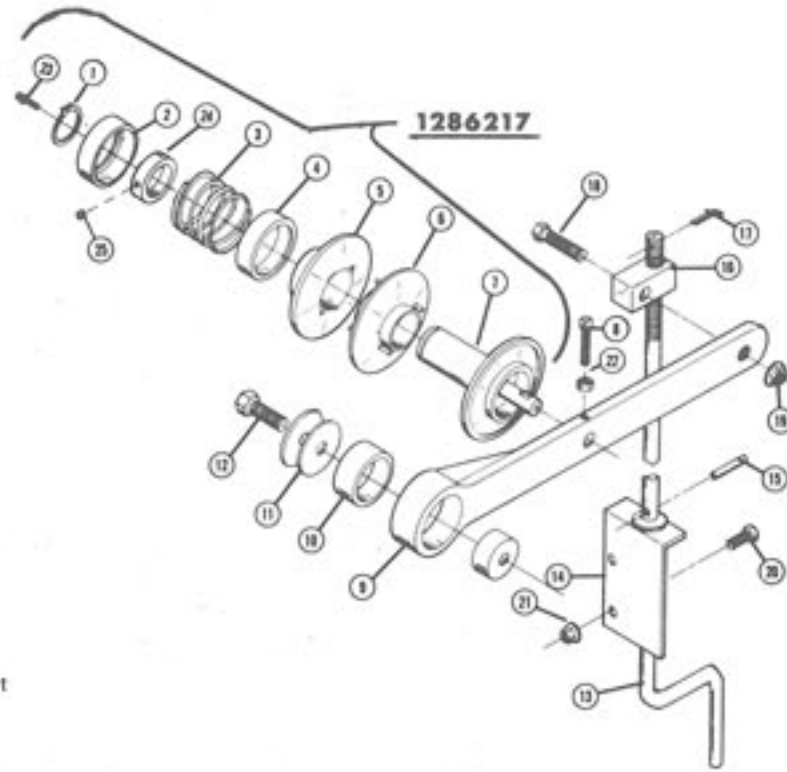
- The Outer Ratchet Pawls will be activated by two different switch positions.
 - When the Automatic Moisture Control Toggle Switch is in the MANUAL position (located on control panel).
 - When the Automatic Moisture Control Toggle Switch is in the AUTOMATIC position and the grain is warm and dry enough to activate the independent Moisture Controls located on each side of the dryer.
- The Inner Ratchet Pawls engage only when the Automatic Moisture Control Toggle Switch is in the AUTOMATIC position.
- The Inner and Outer Ratchet Pawls are disengaged when the Automatic Moisture Control Toggle Switch is in the "OFF" position.
- The Inner Ratchet Pawls are set to engage one less notch than the Outer Ratchet Pawl (when Outer Ratchet Pawl engages one notch, the Inner Ratchet Pawls engage none).
- When drying extremely high moisture grain (approx. 30% and higher), we recommend setting the Outer Ratchet Pawls on the metering rolls to engage one notch per stroke. They are set at the factory for two notches. To change amount of notches, see Operating Instructions, Step 18 (A).
- The dryer operates at its best when the Outer Ratchet Pawls operate approximately 90% of the time. This will vary according to weather and grain conditions.



REF. NO.	PART NO.	DESCRIPTION
1	1200039	Platform Flou-
2	1200040	Right Platform Support
3	1204457	Vertical Rail
4	1204459	Side Rail - Right
5	1204458	Side Rail - Left
6	1203315	Side Cross Strap
7	1203316	Front Cross Strap
8	1204456	Front Rail
9	1200041	Left Platform Support
10	1284529	Ladder Mnt'g. Br'k't.
11	1280163	9' Ladder
12	0013302	Universal Angle Clip
13	0008119	3/8 - 16 x 3/4 HHCS
14	0008168	3/8 - 16 Whiz Nut
15	1200042	Lower Ladder Mn't. Weld.

VARIABLE SPEED ILLUSTRATION

REF. NO.	PART NO.	DESCRIPTION
1	1228919	Snap Ring
2	1228918	Outer Spring Cover
3	1228917	Spring (Green)
4	1228916	Inner Spring Cover
5	1228915	Outer Sheave w/Bushing
6	1228910	Center Sheave w/Bushing
7	1228914	Inner Sheave & Spindle Ass'y.
8	1288130	5/16 x 1 Sq. Hd. Set Screw
9	1280135	Variable Speed Arm Weld.
10	1286017	1 1/4" Bore V.S. Arm Br'g.
11	1288165	Variable Speed Washer
12	1288166	1/2 - 13 x 2 1/2 HHCS Grd. #5
13	1215193	Variable Drive Crank
14	1284270	Drive Adj. Crank Brk't.
15	0008260	Roll Pin 1/4" x 1 1/2"
16	1215190	Variable Crank Nut
17	0008199	1/2 x 1" Cotter Pin
18	0008141	1/2-13 x 2 1/2" HHCS
19	0008170	1/2-13 Flange Whiz Locknut
20	0008106	5/16-18 x 3/4 HHCS
21	0008169	5/16-18 Flange Whiz Locknut
22	0008162	3/8-16 Hex Nut
23	0008996	1/4-28 Nft. Straight Zerk
24	1228906	Set Collar 1 1/2" I.D. (4404-6)
25	0008201	5/16-18 x 5/16 Socket Head Set Screw (32-0505) Knurled Cup Point

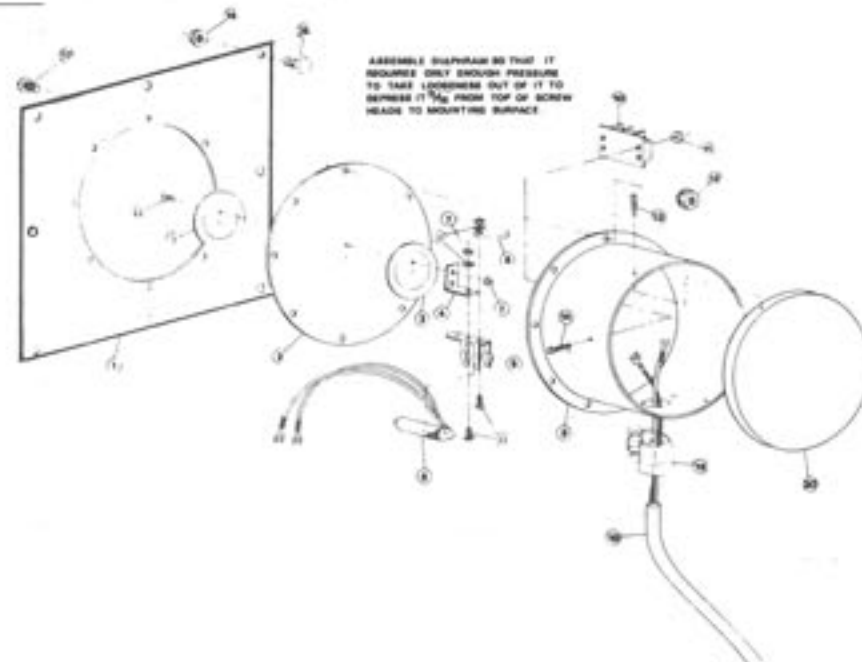


LOAD SWITCH ILLUSTRATION

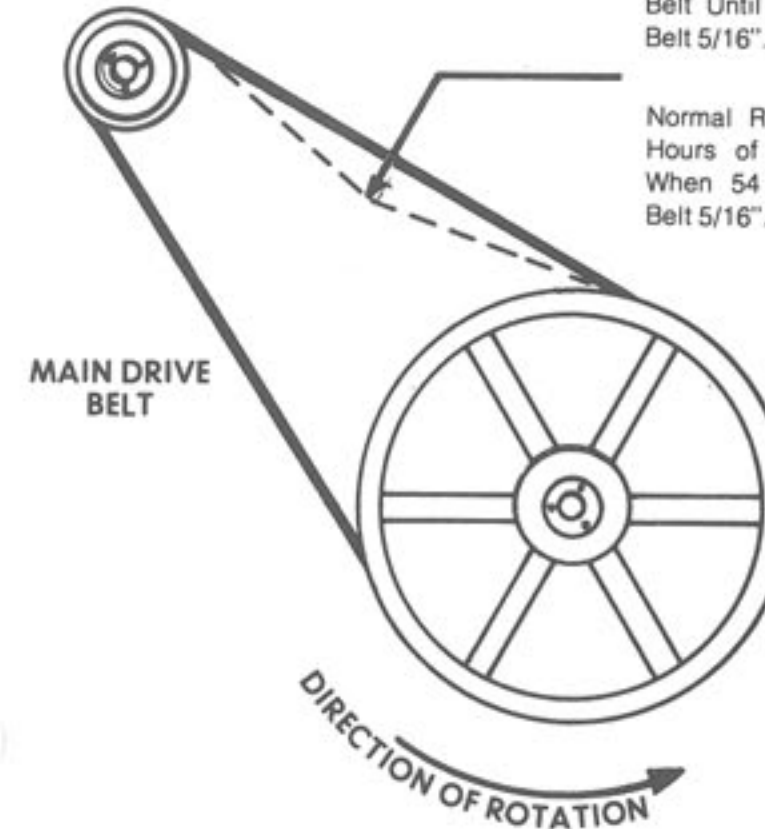
(Optional on 475 Only)

ASS'Y. #1201039

REF. NO.	PART NO.	DESCRIPTION
1	1202833	Load Switch Mn't. Plate
2	1208996	Diaphragm
3	1205200	Merc. Switch Brk't. Washer
4	1202946	Mount Bracket
5	1206801	Merc. Switch Clip
6	1206800	Mercury Switch
7	0008157	6-32 Hex Nut
8	1254486	Level Switch Weight
9	1205201	Level Switch Housing
10	1206802	Terminal Strip
11	0008188	8-32 Hex Nut
12	0008210	1/4-20 Hex Nut
13	0008184	#8 x 1/2 Self Drilling Sheet Metal Screw
14	0008192	8-32 x 1/4 Screw
15	0008105	5/16-18 x 1/2 HHCS
16	0008169	5/16-18 Whiz Nut
17	0008212	1/4 x 20 x 1/2 R.D. Head
18	1216920	18/2 Dynaprene Cable
19	1256901	Strain Relief Bushing
20	1207981	L.A. Control Switch Cover
21	0008245	#6 Lockwasher
22	0008280	6-32 x 1/4 R.D. Head



BELT TENSIONING



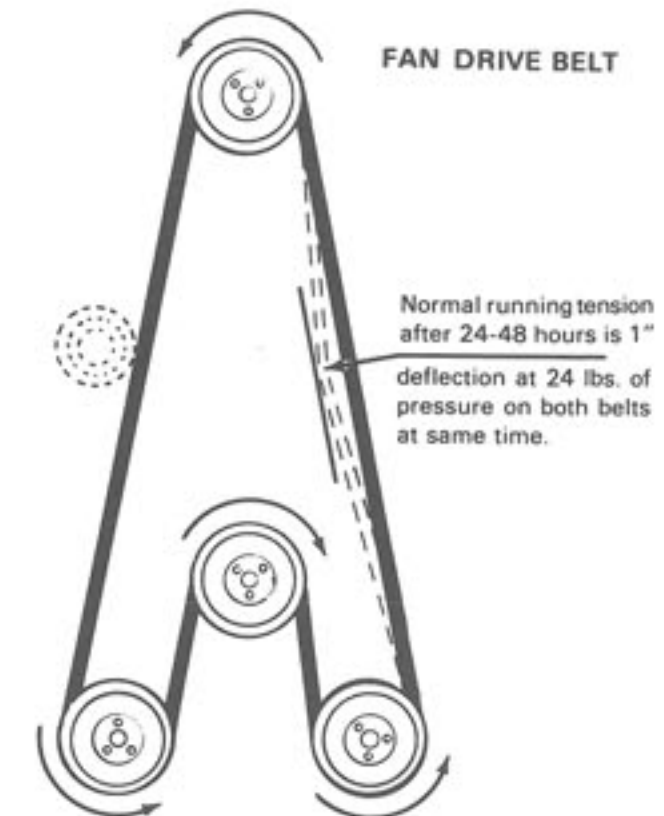
To Obtain proper "Run In" Tension; Tighten Belt Until 66 Lbs. of Pressure Will Deflect Belt 5/16".

Normal Running Tension After 24 to 48 Hours of Operation: Proper Tension is When 54 Lbs. of Pressure Will Deflect Belt 5/16".

LUBRICATION

The fan shaft bearings, drive reduction base, front auger, variable speed pulley and also on PTO models, the idler pulleys, PTO U-Joints and main jack-shaft bearing should be greased every 100 hours of operation using standard grease gun lubricant.

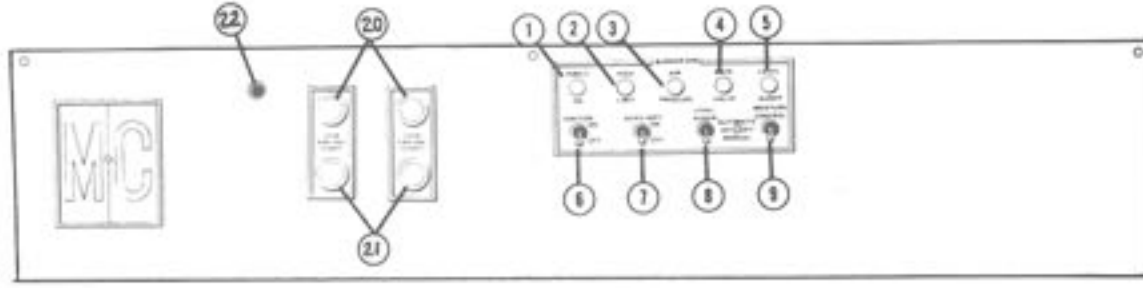
NOTE: DO NOT OVER GREASE. Excess greasing may break seals. When finished drying for the season, fill these bearings with grease. All other bearings used on the dryer are pre-lubricated and require no further greasing.



Normal running tension after 24-48 hours is 1" deflection at 24 lbs. of pressure on both belts at same time.

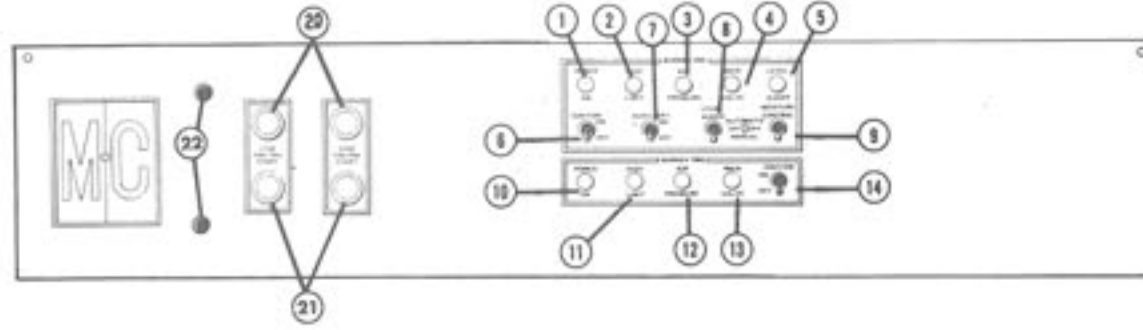
ONE BURNER CONTROL PANEL

(475, 675, 975) (Bottom Panel on 875 & 1175)

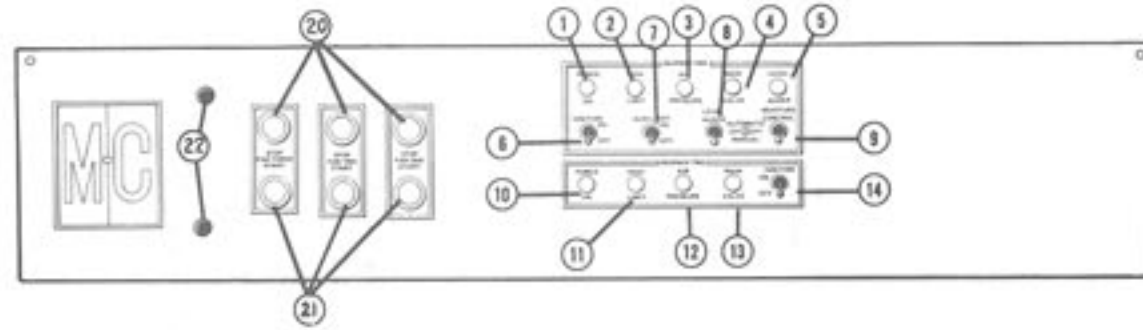


TWO BURNER CONTROL PANEL

Extra Burner On 475, 675, 975, 875 & 1175
Top Panel on 875 & 1175 less Ref. 7, 8 & 9

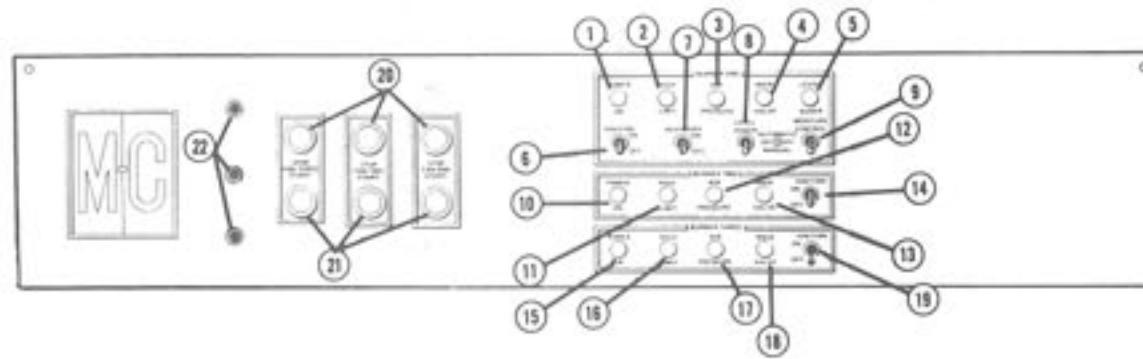


(Standard on 775 and 1075)



THREE BURNER CONTROL PANEL

(Extra Burner On 775 & 1075)



REF. NO.	PART NO.	DESCRIPTION
		Long Unload Auger (Rear)
		Unload Auger (Center)
		Front Unload Auger
		Unload Auger Link
		Unload Auger Br'g. Hanger
		Unload Auger Discharge
		Feed Roll Outboard Br'g. Weld.
		1/2" - 13 Hex Nut
		1/2" Lockwasher
		Feed Roll Br'g.
		5/16" x 1 3/4" Roll Pin
		3/8" - 16 x 3/4" HHCS Grd. #5
		3/8" - 16 Hex Nut
		3/8" Lockwasher
		Stub Shaft 1 1/4" Dia. x 5" Lg.
		Front Shaft 1 1/4" Dia. x 13 1/2" Lg.
		Ratchet Stop Mn't.
		Ratchet Stop Dog
		3/8" - 16 x 1 1/2" HHCS w/1" Shoulder
		1 1/4" Stamping (4-Bolt) Square
		1 1/4" Stamping (3-Bolt) Round
		Cleanout Cover

REF. NO.	PART NO.	DESCRIPTION
23*	1280074	Connecting Arm Ass'y.
24	1280073	1 1/4" O.D. x 1/2" I.D. Bearing
25	1280189	Transfer Arm Ass'y.
26	1285618	Front Feed Roll Ass'y.
27	1283932	Center Feed Roll Ass'y.
28	1280096	Rear Feed Roll Ass'y.
29	1280191	Feed Roll Br'g. w/Bronze Bushing
30	0008163	Feed Roll Washer
31	0008180	1 1/4" Bore Wood Br'g.
32	1286011	1 - 7/16" Bore Pillow Block Br'g.
33	0008259	1 1/4" Bore Br'g. w/ Lock Collar
34	0018136	1/4 x 1/4 x 2 Key
35	0008162	Unload Auger Pan
36	0008179	Unload Auger Front Plate
37	1215042	Ratchet Dog Stop Mn't. Pl't.
38	1285042	Double Ratchet Ass'y. see page 9
39	1210355	RC-40-B Type 45-T Sprocket
40	1210354	Unload Auger Mid Br'g. Supr't.
41	1218162	1/2 - 13 x 8 HHCS F.T.
42	1216006	1 - 15/16" Wood Br'g. (2-Halves)
	0016004	Unload Auger Input (Drilled)
43	1212637	Unload Auger Output (Drilled)

REF. NO.	PART NO.	DESCRIPTION
1	1281261	Connecting Arm Ass'y.
2	1216001	1 1/4" O.D. x 1/2" I.D. Bearing
3	1281262	Transfer Arm Ass'y.
4*	1281254	Front Feed Roll Ass'y.
5	1211083	Center Feed Roll Ass'y.
6	1211082	Rear Feed Roll Ass'y.
7	1281063	Feed Roll Br'g. w/Bronze Bushing
8	1214438	Feed Roll Washer
9	1216022	1 1/4" Bore Wood Br'g.
10	1286018	1 - 7/16" Bore Pillow Block Br'g.
11	0016003	1 1/4" Bore Br'g. w/ Lock Collar
12	0015119	1/4 x 1/4 x 2 Key
13	1282733	Unload Auger Pan
14	1280075	Unload Auger Front Plate
15	1282652	Ratchet Dog Stop Mn't. Pl't.
16	1211163	Double Ratchet Ass'y. see page 9
17	1286418	RC-40-B Type 45-T Sprocket
18	1284250	Unload Auger Mid Br'g. Supr't.
19	0018263	1/2 - 13 x 8 HHCS F.T.
20	1286020	1 - 15/16" Wood Br'g. (2-Halves)
21	1285996	Unload Auger Input (Drilled)
22	1285998	Unload Auger Output (Drilled)

REF. NO.	PART NO.	DESCRIPTION
		475 Unload Auger
		475 Feed Roll Ass'y.

475 Unload Auger

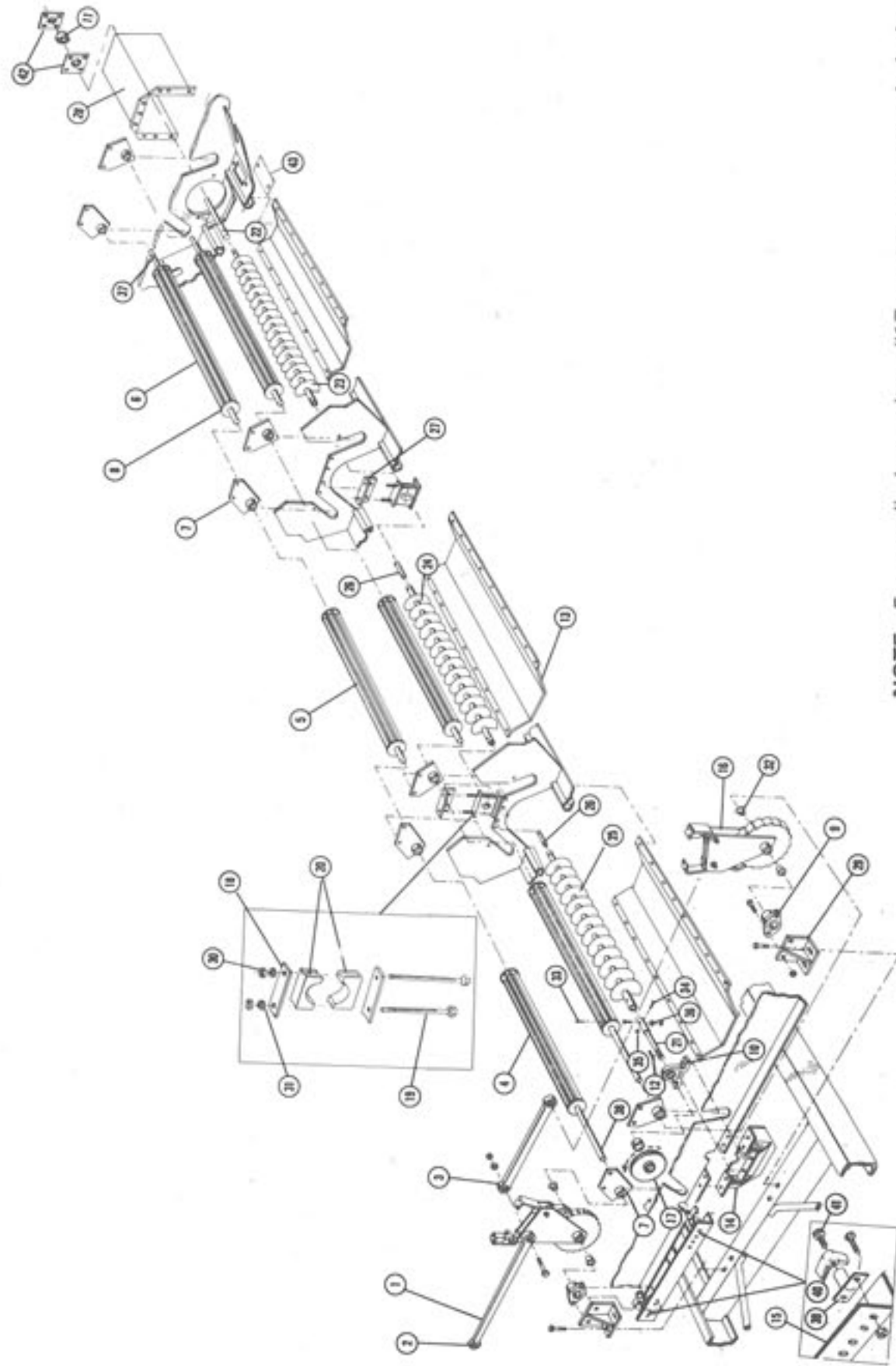
1280079

*

475 Feed Roll Ass'y.

1281186

*



NOTE: For rear discharge, item #17 must turn counter clockwise

CONTROL PANEL LIGHTS & SWITCHES

BURNER ONE (1 thru 9)

REF. NO.	PART NO.	DESCRIPTION & FUNCTION
1	1286825	125V Neon Indicator Light—Lights when electric power is on.
2	1286825	125V Neon Indicator Light—Lights when high limit control circuit is closed. This indicates the high limit temperatures safety device is operating.
3	1286825	125V Neon Indicator Light—Lights when fan is running and dryer is full of grain.
4	1286825	125V Neon Indicator Light—Lights when ignition switch is turned on and electrodes are firing and gas solenoid is open.
5	1286825	125V Neon Indicator Light—Lights when dryer is calling for grain.
6	1216815	D.P.S.T. Toggle Switch—Ignition switch
7	1206827	D.P.S.T. Toggle Switch—Power switch for metering system and unloading auger
8	1216806	3.P.D.T. Toggle Switch (See Operating Instructions)
9	1216807	6.P.D.T. Toggle Switch—Moisture control switch (see Operating Instructions)

BURNER TWO (10 thru 14)

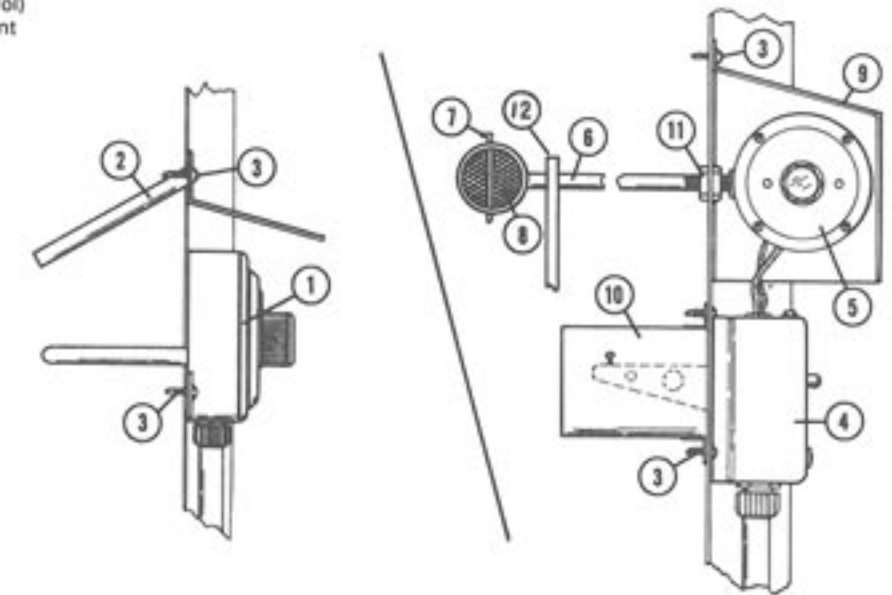
REF. NO.	PART NO.	DESCRIPTION & FUNCTION
10	1286825	125V Neon Indicator Light (same as Ref. #1)
11	1286825	125V Neon Indicator Light (Same as Ref. #2)
12	1286825	125V Neon Indicator Light (Same as Ref. #3)
13	1286825	125V Neon Indicator Light (Same as Ref. #4)
14	1216815	D.P.S.T. Toggle Switch (Same as Ref. #6)

BURNER THREE (15 thru 19)

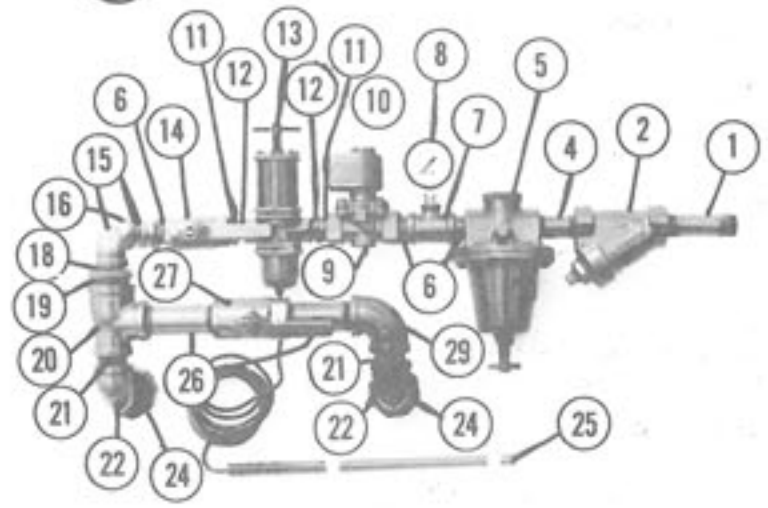
REF. NO.	PART NO.	DESCRIPTION & FUNCTION
15	1286825	125V Neon Indicator Light (Same as Ref. #1)
16	1286825	125V Neon Indicator Light (Same as Ref. #2)
17	1286825	125V Neon Indicator Light (Same as Ref. #3)
18	1286825	125V Neon Indicator Light (Same as Ref. #4)
19	1216815	D.P.S.T. Toggle Switch (Same as Ref. #6)
20	1286845	Stop Button—Red (EM Models)
21	1286844	Start Button—Black (EM Models)
22	1226814	Ignition Reset Button

SAFETY CONTROLS

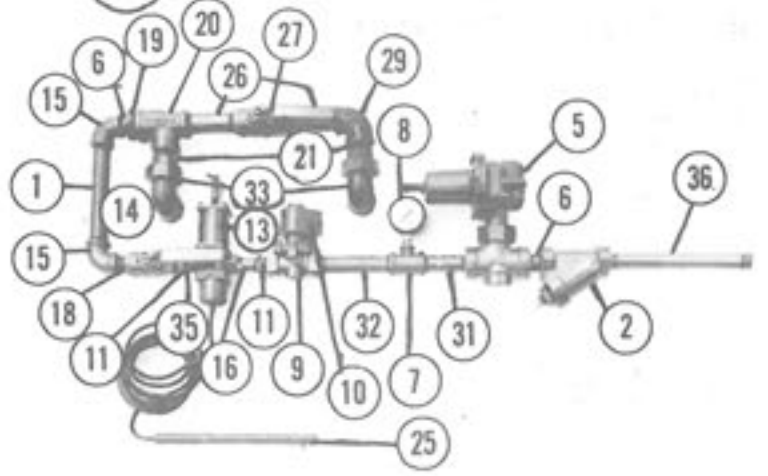
REF. NO.	PART NO.	DESCRIPTION
1	1216851	Thermoswitch (Moisture Control)
2	1210031	Thermoswitch Shield Weldment
3	0008184	#8 x 1/2 Sheet Metal Screw
4	1217018	High Limit Switch
5	1216849	Air Pressure Switch
6	1210169	Air Pressure Tube Weld Wire Filter Retainer
8	1215716	Air Pressure Tube Filter
9	1280160	Air Pressure Switch Cover
10	1210081	High Limit Shield
11	1218000	1/4" Pipe Lock Nut
12	1212007	Air Pressure Tube Brk't.



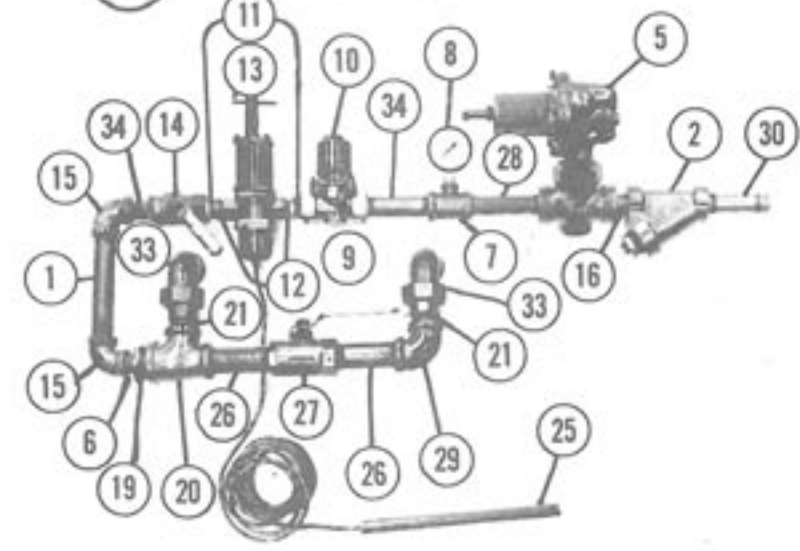
1281132
A L.P. GAS MANIFOLD



1281300
B L.P. GAS MANIFOLD



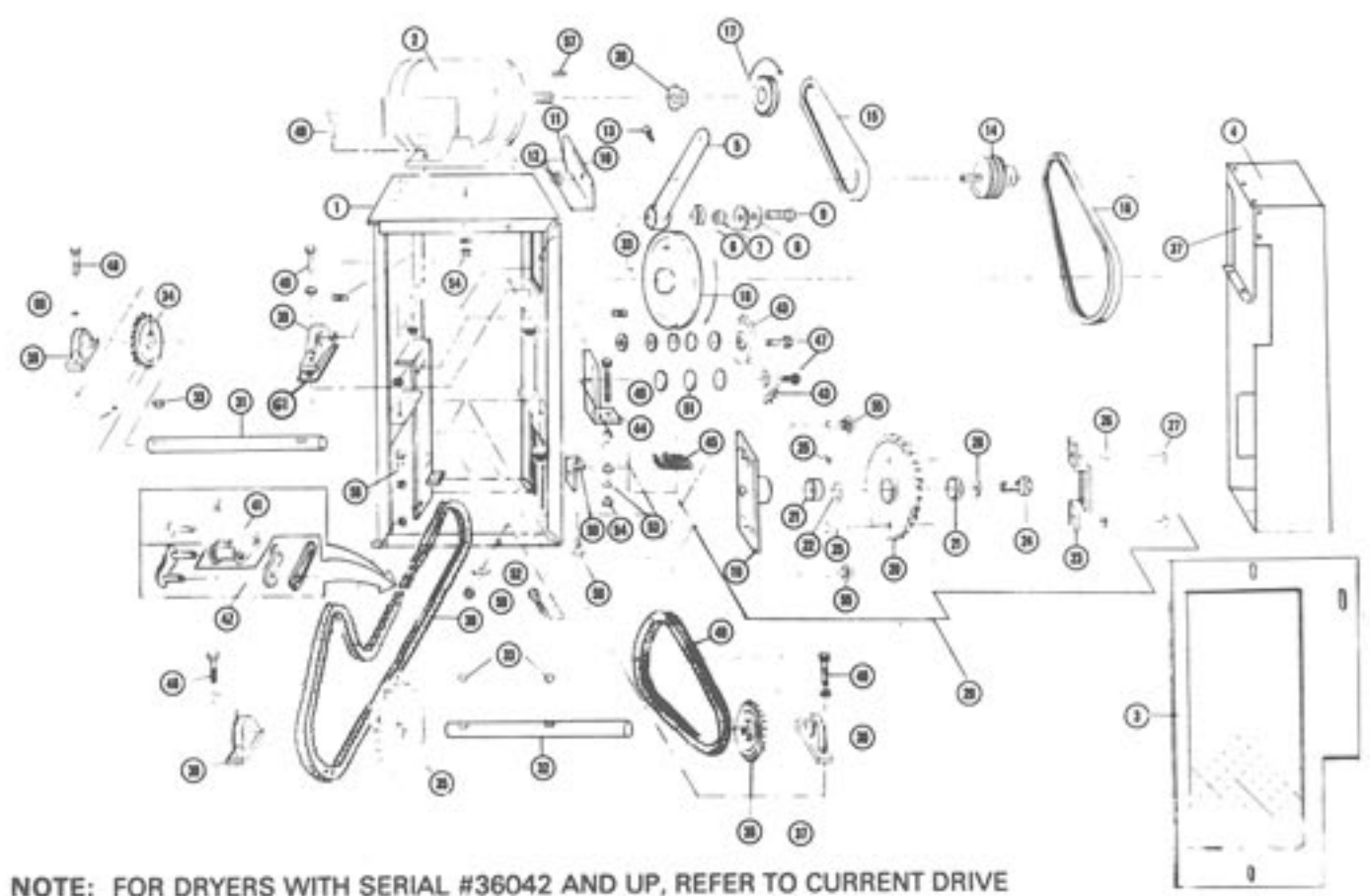
1281403
C L.P. GAS MANIFOLD



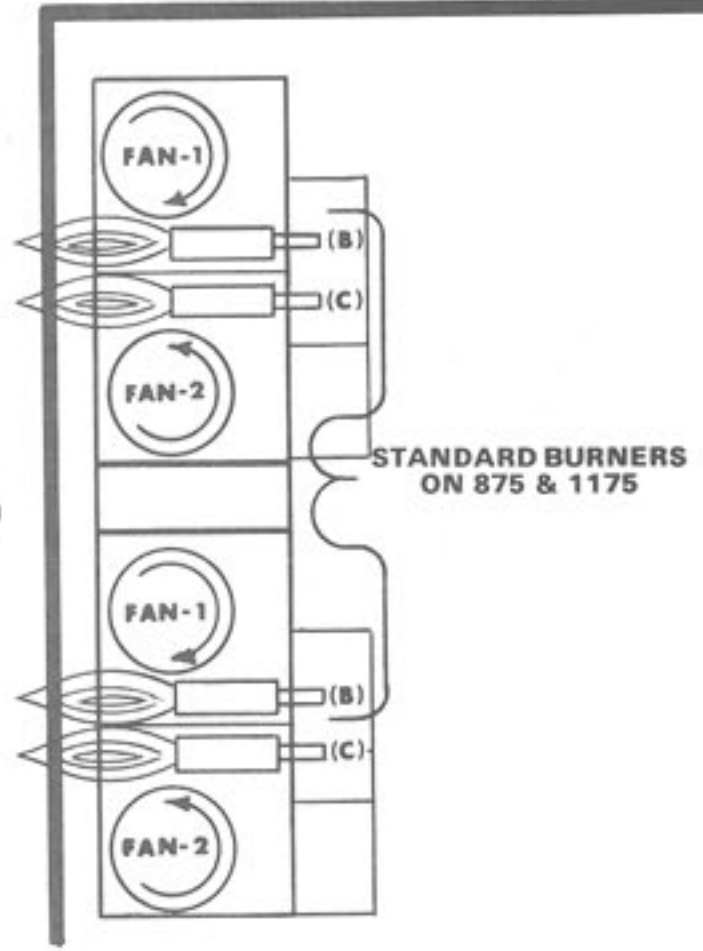
PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	1288006	3/4 x 6 Extra Heavy Nipple
2	1218060	3/4" Strainer
4	1258058	3/4 x 2 1/2 Extra Heavy Nipple
5	1217006	3/4" Reglator specify Fisher or Rego
6	1218067	3/4 x 1 1/2" Standard Nipple
7	1238092	3/4 x 3/4 x 1/4" Standard Tee
8	1207002	Pressure Gauge
9	1217002	3/4" Solenoid Valve for 115V. Dryers
	1217025	3/4" Solenoid Valve for 12V. Dryers
10	1227001	Replacement Coil for 115V. Dryers
	1227024	Replacement Coil for 12 V. Dryers
11	1218029	3/4 x 1/2" Reducing Bushing
12	1218013	1/2" x Close Standard Nipple
13	1217012	1/2" Modulating Valve
14	1217011	3/4" Main Hand Valve
15	1218074	3/4" 90° Standard Elbow
16	1218077	3/4 x 2" Standard Nipple
18	1218007	3/4" x Close Standard Nipple
19	1238078	1 1/4 x 3/4" Reducing Bushing
20	1288007	1 x 1 1/4 x 1" Standard Tee
21	1288013	1" Close Standard Nipple
22	1288014	1" Standard Street Elbow
24	1288015	1" Standard Union
25	1227002	Power Element 90° to 210° "B"
	1227014	Power Element 140° to 250° "D"
26	1288009	1" x 4" Standard Nipple
27	1288012	1" Hand Valve
28	1288008	1" x 4 1/2" Standard Nipple
29	1288016	1" Standard Elbow
30	1218083	3/4 x 9 Extra Heavy Nipple
31	1218089	3/4 x 5 Standard Nipple
32	1288031	3/4 x 3 1/2 Standard Nipple
33	1288029	1" Standard Union Elbow
34	1218008	3/4 x 3 Standard Nipple
35	1258095	1/2 x 1 1/2 Standard Nipple
36	1218021	3/4 x 8 1/2 Ex. Heavy Nipple

UNLOADING DRIVE REDUCTION ILLUSTRATION

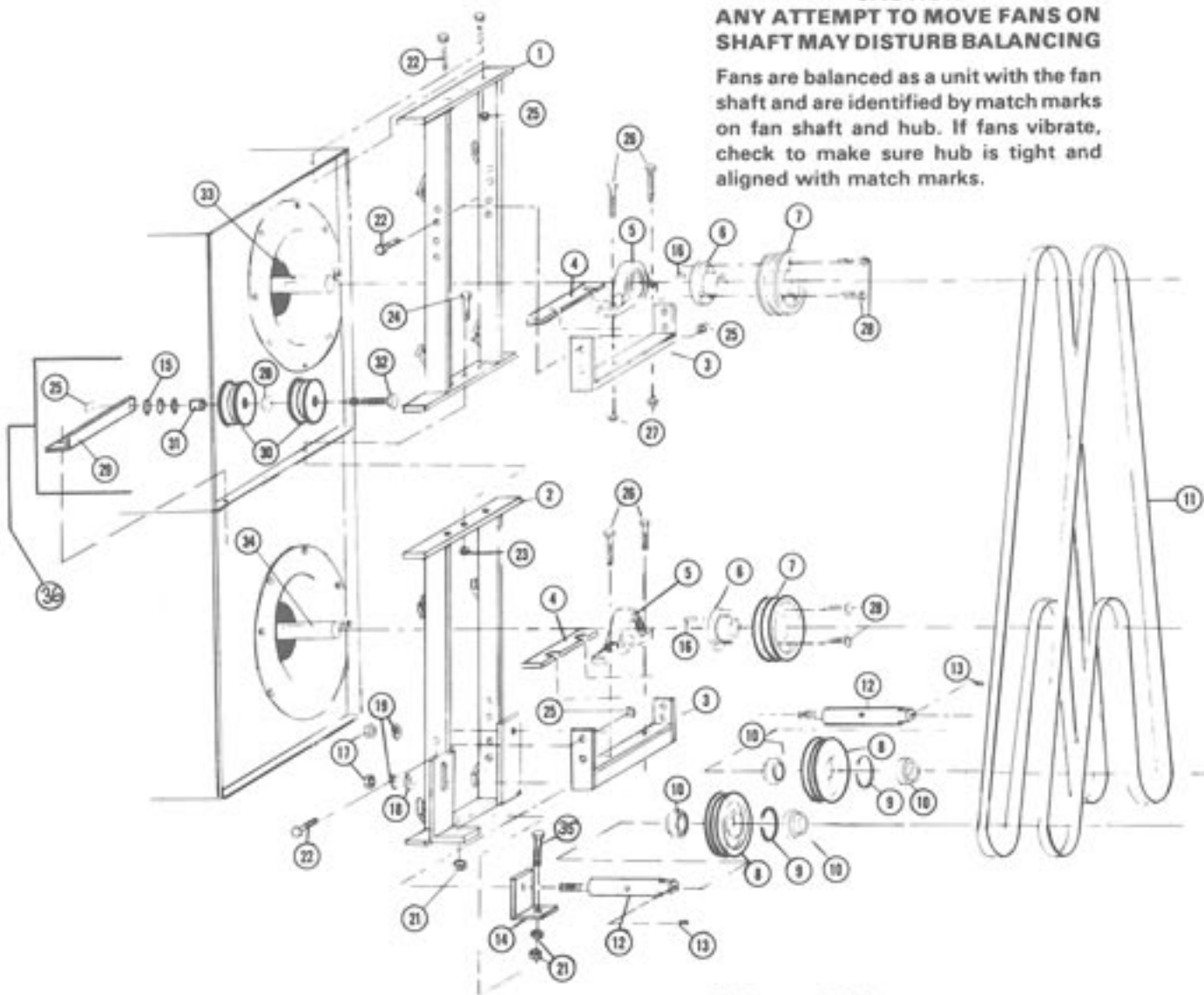


NOTE: FOR DRYERS WITH SERIAL #36042 AND UP, REFER TO CURRENT DRIVE REDUCTION BASE INSERT - PAGE "B".



REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1280192	Drive Reduction Base Weld.	30	1276000	1" Pillow Block Br'g.
2	1216846	1 1/2 HP 1 Phase Motor	31	1285024	Primary Reduction Shaft
	1216845	1 1/2 HP 3 Phase Motor	32	1285025	Secondary Reduction Shaft
	1216862	2 HP 1 Phase Motor	33	0008298	1/4" x 3/4" Woodruff Key
	1216861	2 HP 3 Phase Motor	34	1286419	RC-40-B 18-T 1" Bore Sprk't.
3	1284707	Reduction Base Side Plate	35	1286421	RC-40-B 48-T 1" Bore Sprk't.
4	1280196	"EM" Drive Guard Screen	36	1216405	RC-40 16-T 1" Bore Sprk't.
5	1280135	Variable Speed Arm Weld.	37	1284855	Guard Back (1 Phase Motor)
6	1286017	Variable Speed Arm Bearing		1284885	Guard Back (3 Phase Motor)
7	1285053	Variable Speed Arm Pivot	38	1286230	SH 3/8" Bsh'g. (for 1 1/2 HP—1&3 phs)
8	1288165	Variable Speed Arm Washer		1286214	SH 1 1/2" Bsh'g. (for 2 HP—1 phase)
9	1288166	1/2" -13 x 2 1/2" HHCS Grd. #5		1236222	SH 3/8" Bsh'g. (for 2 HP—3 phase)
10	1283874	Variable Speed Arm Reinforcement	39	1286308	Unload Auger Drive Chain
11	0008180	1/2" Lockwasher	40	1286309	Primary Reduction Chain
12	0008163	1/2" - 13 Hex Nut	41	1226305	RC-40 Offset Link
13	1288130	3/8" - 16 x 1" Sq. Hd. Set Screw	42	0026309	RC-40 Master Link
14	1286217	Variable Speed Pulley	43	1286414	RC-40d 8-T Idler Sprk't.
15	1286114	B-28 Belt	44	1284492	RC-40 Take-up Brk't.
16	1286107	B-43 Belt	45	0018111	5/16" Nut Retainer
17	1216245	3.6 x 1 B. Grv. Sheave	46	0008115	5/16-18 x 2 3/4" HHCS FT
18	1286213	12" O.D. x 1" Bore Pulley	47	0008140	1/2-13 x 2 HHCS
19	1280187	Ecc. Sprocket Mnt'g. Plate	48	0008226	3/8-16 x 2 HHCS
20	1285741	Ecc. Sprocket (Drilled)	49	0008109	5/16-18 x 1 1/4 HHCS
21	0016006	3/4" Double Seal Br'g.	50	0013302	Universal Angle Clip
22	1288101	Snap Ring	51	0018257	1/2 SAE Washer
23	1283414	Slide Bracket	52	1218115	5/16" Push Nut
24	1288196	3/4" - 10 x 2 1/2" HHCS Grd. #5	53	0008222	5/16" Lock Washer
25	0008123	3/8" - 16 x 1 1/4 HHCS	54	0008159	5/16-18 Hex Nut
26	0008179	3/8" Lockwasher	55	0008122	3/8-16 x 1" Carriage Bolt
27	0008162	3/8" - 16 Hex Nut	56	0008168	3/8-16 Whiz Nut
28	0008177	3/4" Flatwasher	57		Key supplied w/motor
29	1281069	Ecc. Sprocket Ass'y.	58	0008106	5/16-18 x 3/4 HHCS
			59	0008169	5/16-18 Whiz Nut
			60	0008174	3/4 Flat Washer
			61	1282896	Shim

B MODEL SERPENTINE FAN DRIVE ILLUSTRATION

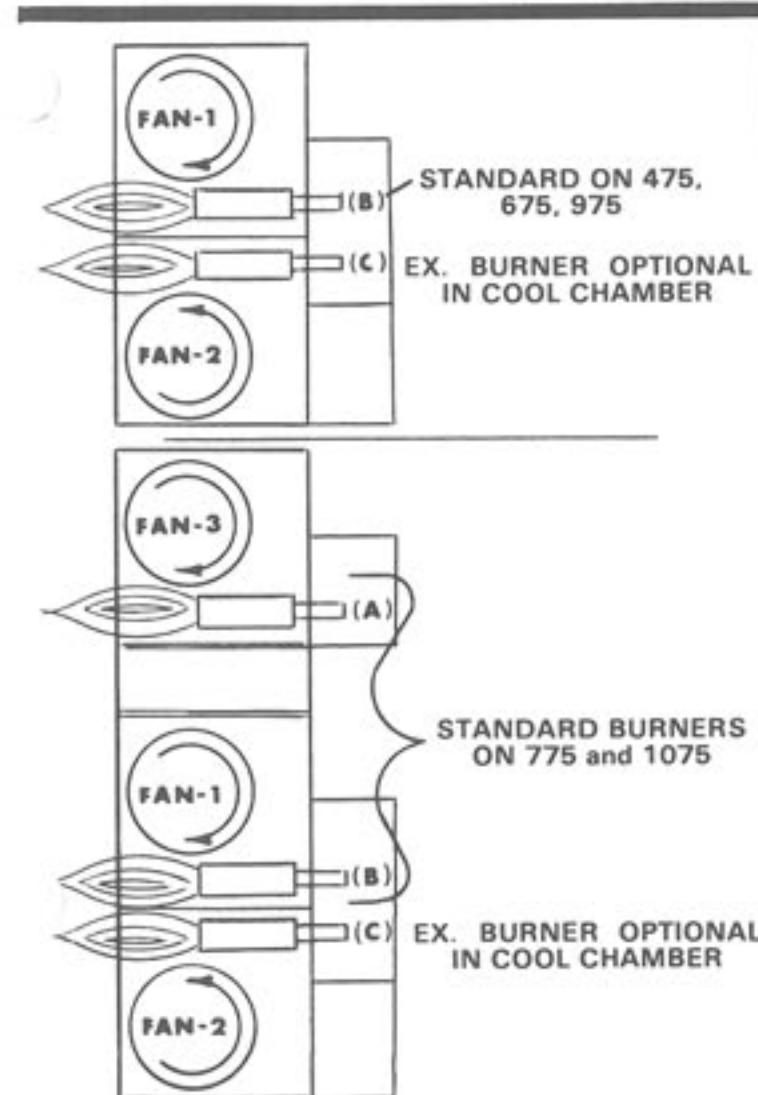


CAUTION
ANY ATTEMPT TO MOVE FANS ON SHAFT MAY DISTURB BALANCING
 Fans are balanced as a unit with the fan shaft and are identified by match marks on fan shaft and hub. If fans vibrate, check to make sure hub is tight and aligned with match marks.

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1280091	Left Fan Br'g. Supr't. Weld.	20	0008164	5/16"-11 Hex Nut
2	1280153	Lower "B" Model Supr't. Weld.	21	0008165	3/4"-10 Hex Nut
3	1280098	Centrifugal Fan Br'g. Supr't. Weld.	22	0008139	1/2"-13 x 1 1/4 HHCS
4	1282849	Br'g. Shim	23	0008169	5/16"-18 Flange Whiz Locknut
5	1286022	2 3/16" Bore P. B. Br'g.	24	0008112	5/16"-18 x 2" HHCS
6	1286216	2 3/16" S F Bushing	25	0008170	1/2"-13 Flange Whiz Locknut
7	1286223	2 C 9.0 Sheave	26	0008268	3/4"-11 x 3 HHCS
8	1286227	"B" Model Drive Idler	27	0008244	3/4"-11 Flange Whiz Locknut
9	0016602	Snap Ring	28		5/16-18 Grd. #5 Bolts inc w/Bsh'g.
10	0016017	1 1/4 Br'g. w/Collar—attached	29	1244429	Kiss Idler Bracket
11	1286111	CC-210 Belt (matched set of 2)	30	0016200	4 1/2" O.D. Flat Back Idler
12	1285066	"B" Model Idler Shaft	31	1315592	Spacer—3/4" O.D. x 3/4" Long
13	0026604	1/2 Pt. Straight Zerk	32	0008228	1/2"-13 x 4 1/2 HHCS F. T.
14	1283470	Fan Drive Tightener Drag	33	1281398	10 HP "B" Upper
15	0018257	1/2" SAE Flatwasher	1281292	20 HP "B" Upper	
16	0018998	3/8 x 1 1/4 Woodruff Key	1281356	30 HP "B" Upper	
17	0918231	1"-8 Hex Nut	1281399	10 HP "B" Lower	
18	0008276	1" SAE Flat Washer	1281293	15 HP "B" Lower	
19	1288231	1" Lockwasher	1281355	20 HP "B" Lower	
			35	1288233	3/4-10 x 8 HHCS FT
			36	1281397	Kiss Idler Assembly, Includes Ref. #15, #20, #25, #29, #30, #31 and #32

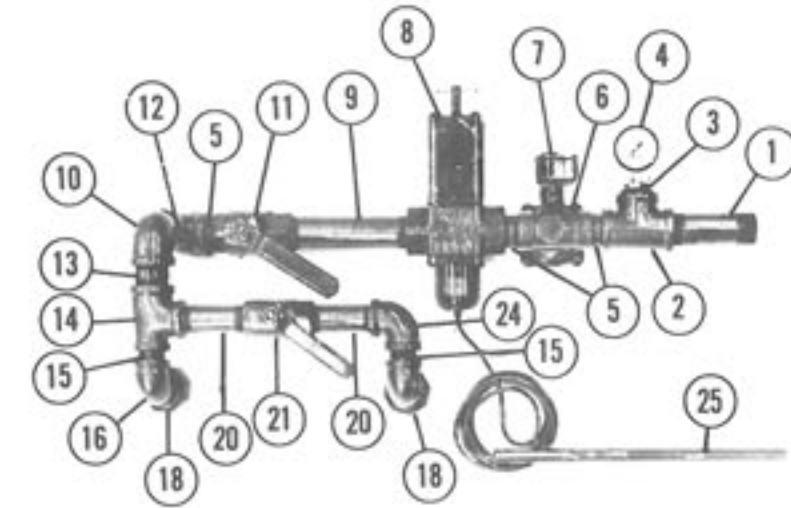
PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	1288024	1 1/4 x 5" Standard Nipple
2	1238057	1 1/4" Standard Tee
3	1238059	1 1/4 x 1/4" Reducing Bushing
4	1207002	Pressure Gauge
5	1238069	1 1/4" x Close Standard Nipple
6	1237000	1 1/4" Main Solenoid Valve 115 VAC
6A	1287000	Solenoid Valve 12V - 1 1/4"
	1227027	Replacement Coil 12V - 1 1/4"
7	1227011	Main Solenoid Replacement 12V Coil 115 VAC
7A	1227027	12V Coil 115 VAC
8	1237002	1 1/4" Modulating Valve
9	1238063	1 1/4 x 7/4" Standard Nipple
10	1238051	1 1/4" 90° Elbow Standard
11	1237003	Main Hand Valve
12	1238062	1 1/4" Standard Street Elbow
13	1258013	1 1/4" x 2" Standard Nipple
14	1288007	1" x 1 1/4" x 1" Standard Tee
15	1288013	1" x Close Standard Nipple
16	1288014	1" Standard Street Elbow
17	1278016	1 1/4" x 5/8" Standard Nipple
18	1288015	1" Standard Union
19	1278021	1 1/4 x 9/8" Standard Nipple
20	1288009	1" x 4" Standard Nipple
21	1288012	1" Hand Valve
22	1258071	1 1/4" x 8" Standard Nipple
23	1288029	1" Standard Union Elbow
24	1288016	1" 90° Standard Elbow
25	1227023	Power Element 90° to 210° "B"
	1227022	Power Element 140° to 250° "D"
26	1238055	1 1/4 x 4 Standard Nipple



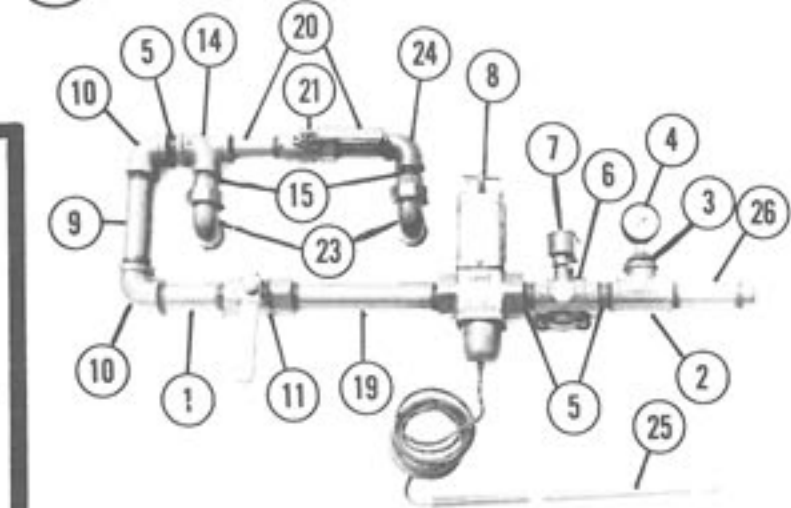
1271034

(A) NATURAL GAS MANIFOLD



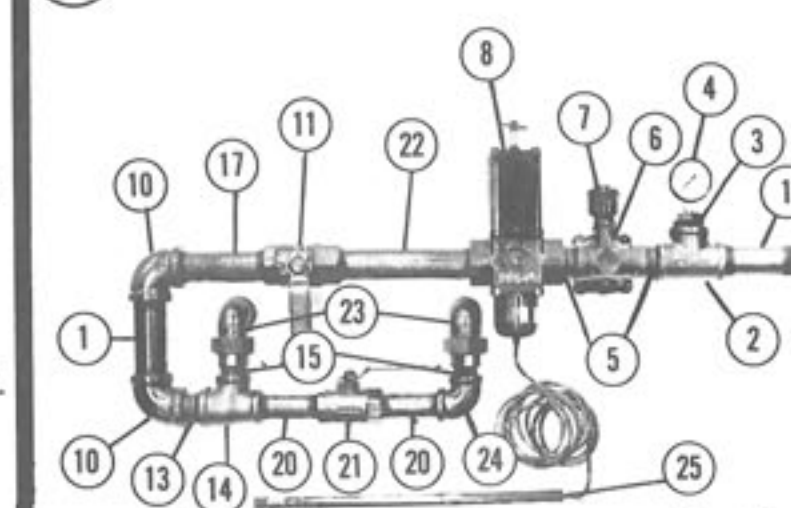
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(B) NATURAL GAS MANIFOLD



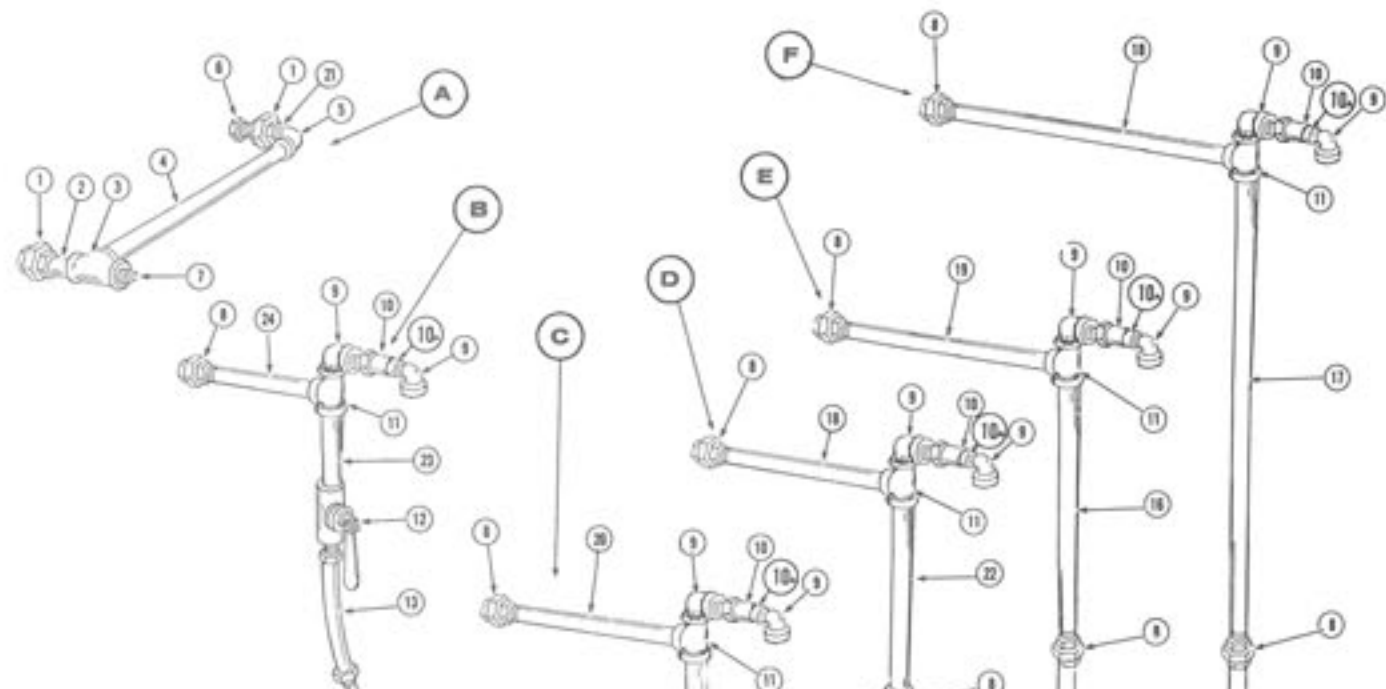
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(C) NATURAL GAS MANIFOLD



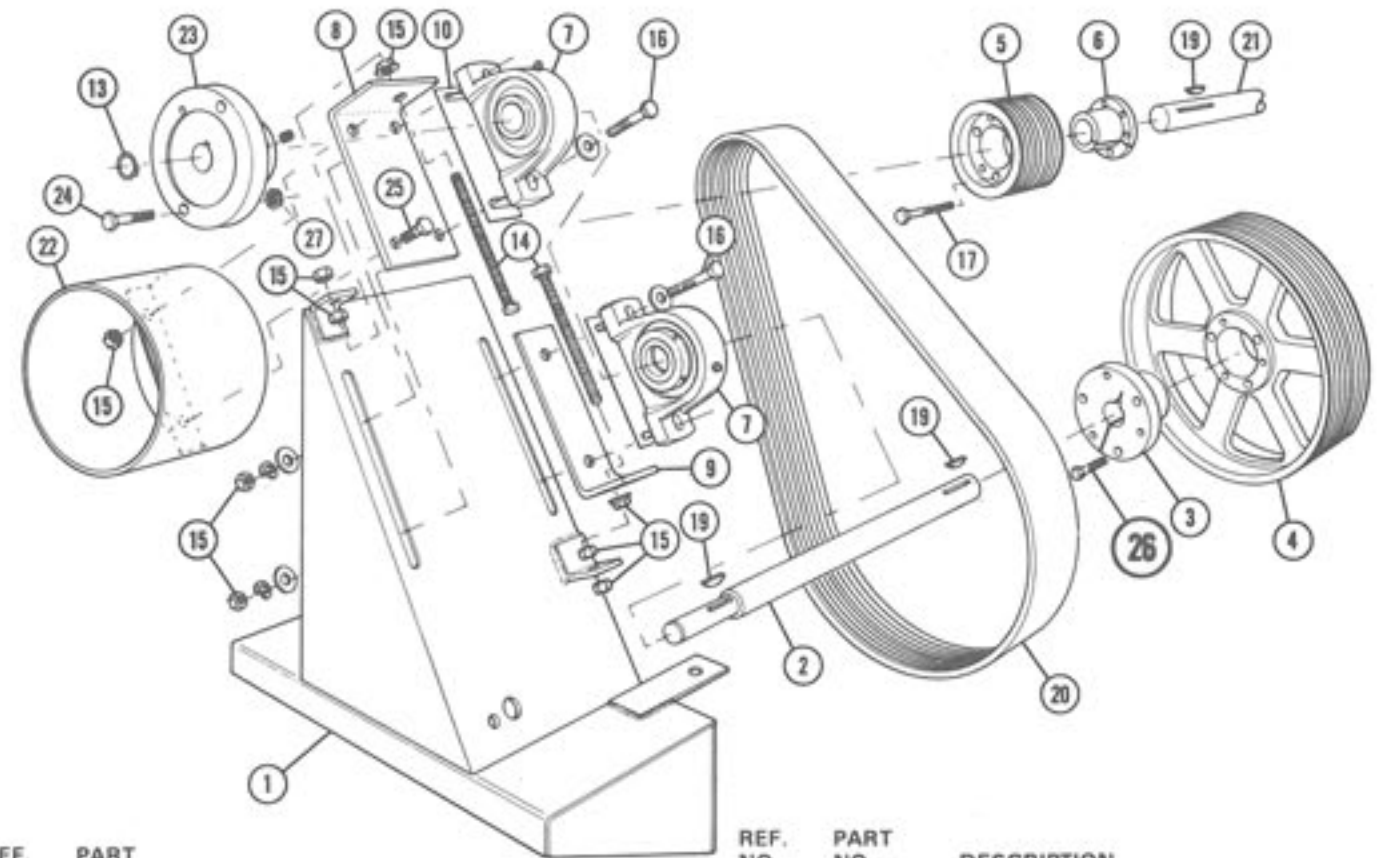
L. P. GAS LIQUID LINES

REF. NO.	PART NO.	DESCRIPTION
A	1281301	Vaporizer to manifold as used with every L. P. burner
B	1271038	Extra burner Liquid Line as used when adding extra burner on bottom of any fan combination
C	1281299	475EM, 675EM, 975EM, Liquid Line, 775EM, 875EM, 1075EM, 1175EM, bottom Liquid Line
D	1281197	775EM & 1075EM Top Liquid Line
E	1281328	875EM & 1175EM Middle Liquid Line
F	1281327	875EM & 1175EM Top Liquid Line



REF. NO.	PART NO.	DESCRIPTION
1	1218072	3/4" Ex. Hvy. Union
2	1218005	3/4" x 1 1/2" Ex. Hvy. Nipple
3	1218031	3/4" Ex. Hvy. Tee
4	1288030	3/4" x 39 1/4" Ex. Hvy. Pipe
5	1218027	3/4" Ex. Hvy. 90° Elbow
6	1258009	3/4" to 1/2" Reducing Bushing
7	1288000	3/4" Pipe Plug
8	1218022	1/2" Ex. Hvy. Union
9	1218071	1/2" -90° Street Elbow
10	1217013	Gas Pressure Relief Valve
10A	1217014	Adaptor
11	1218035	1/2" Ex. Hvy. Tee
12	1217015	Liquid Line Hand Valve
13	1217005	Inlet Hose
14	1218015	1/2" x 30" Ex. Hvy. Pipe
15	1288034	1/2" x 86" Ex. Hvy. Pipe
16	1288033	1/2" x 33 1/4" Ex. Hvy. Pipe
17	1288032	1/2" x 53 1/2" Ex. Hvy. Pipe
18	1218038	1/2" x 20 1/4" Ex. Hvy. Pipe
19	1218042	1/2" x 19" Ex. Hvy. Pipe
20	1218041	1/2" x 16 1/2" Ex. Hvy. Pipe
21	1218064	1/2" x 7" Ex. Hvy. Pipe
22	1258010	1/2" x 10" Ex. Hvy. Pipe
23	1258011	1/2" x 8" Ex. Hvy. Pipe
24	1288021	1/2" x 15 1/2" Ex. Hvy. Pipe
25	1282738	Liquid Line Support
26	1216906	Minnerlack Size "O"
27	0008215	1/4-20 x 1/2" Phillips Truss Hd.
28	0008167	1/4-20 Whiz Nut
29	0008106	5/16-18 3/4 H.H.C.S.
30	0008169	5/16-18 Whiz Nut

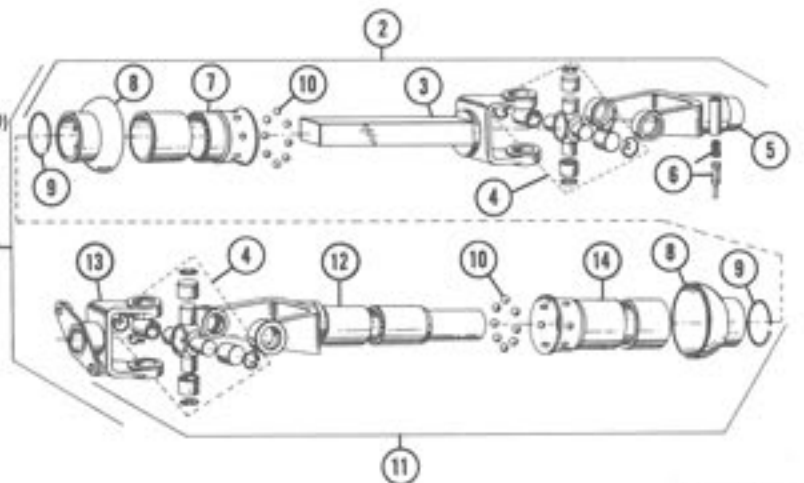
PTO DRIVE JACK SHAFT ILLUSTRATION



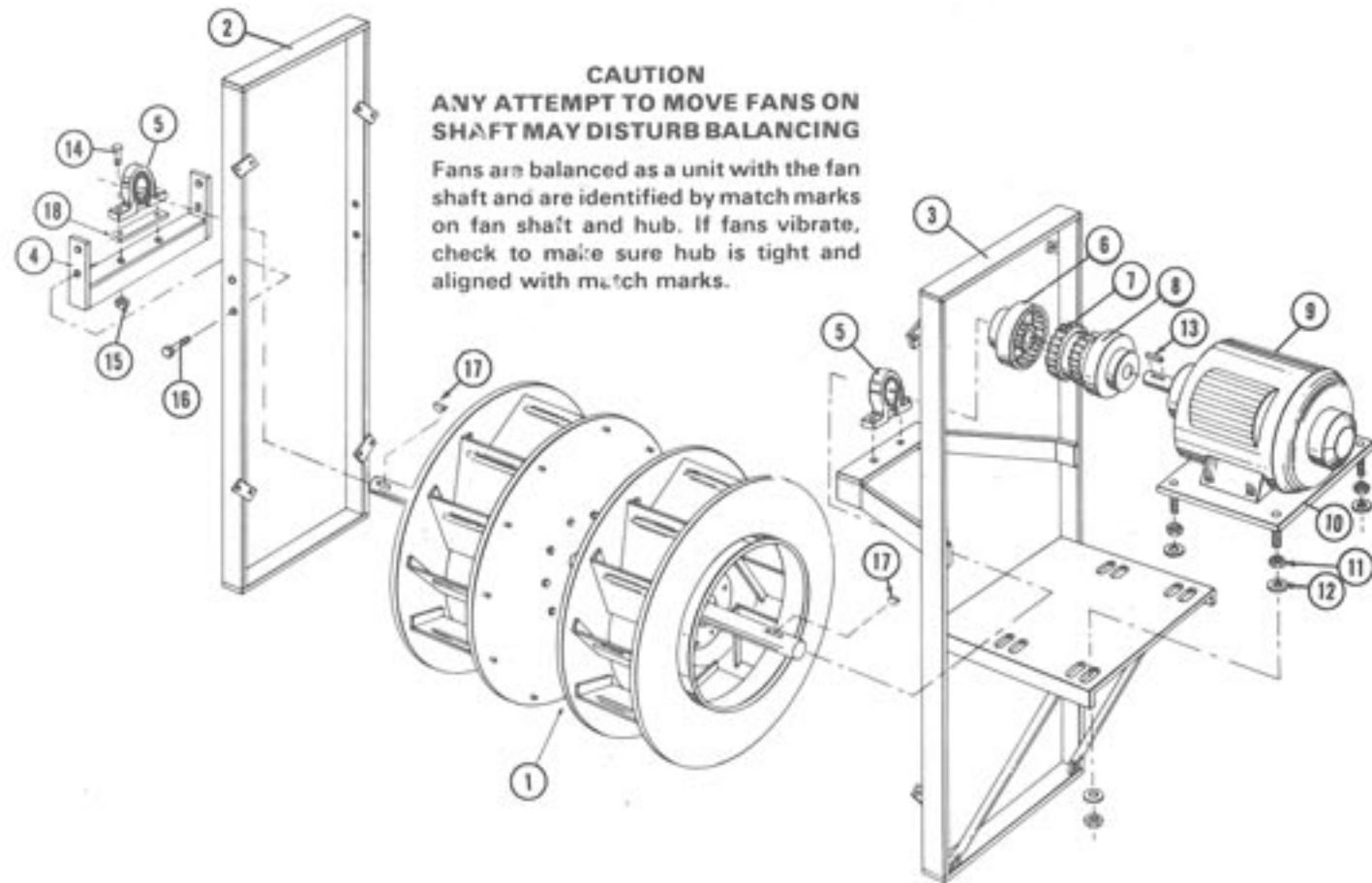
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1280198	Jack Shaft Base	14	1288162	1/2-13 x 8 HHCS Full Thread Gr. #5
2	1285064	PTO Jack Shaft	15	0008163	1/2-13 Hex Nut
3	1216226	1 1/4" Bore E Bushing 540 RPM	16	0008140	1/2-13 x 2" HHCS
3A	1216236	1 1/4" Bore SF Bushing 1000 RPM	17	1218117	5/16-18 x 2" HHCS Grade #5
3B	1276203	1 1/4" Bore SF Bushing 1000 RPM front Gear Box Drive	19	0018998	3/8 x 1 1/4" Woodruff Key
4	1216225	3V/19.0-8 Ultra Sheave, 540 RPM	20	1286106	8/3V 800 Powerband Belt, 540 RPM
4A	1236214	8/3V10.6-8 Ultra Sheave, 1000 RPM	20A	1276101	8/3V/630 Powerband Belt 1000 RPM
5	1206215	8/3V/6.0 Pulley	20B	1276102	8/3V/600 Powerband Belt 1000 RPM Front Gear Box Drive
6	1286228	SK 2-3/16" Bushing	21		Lower Fan Shaft Ass'y, see item 34, page 21
7	1216003	1 1/4" Pillow Block Bearing	22	1280199	PTO & Shear Flange Guard
8	1283527	Outer Bearing Adj. Brk't.	23	1285197	Shear Flange
9	1283526	Inner Bearing Adj. Brk't.	24	0018133	Special Shear Bolts 3/8-16 x 2 1/4"
10	1282854	Bearing Shims (as required)	25	0008135	1/2-13 x 1 HHCS
13	0018250	1 1/4" Snap Ring	26		1/2-13 x 2 1/2 HHCS Grade #5
			27	0018149	3/8-16 Lock Nut

TELESCOPING POWER TAKE OFF SHAFT

REF. NO.	PART NO.	DESCRIPTION
1	0016600	PTO Drive Shaft, 540 RPM
1A	0016601	PTO Drive Shaft, 1000 RPM
2	0026620	Tractor Half Ass'y w/Q.D. Yoke
2A	0026657	Tractor Half Yoke Ass'y w/Q.D. Yoke (1000)
3	0026627	Male Shaft & Yoke
4	0026628	Universal Joint Repair Kit
5	0027651	Quick Detachable Yoke, Only, 540 RPM
5A	0026616	Quick Detachable Yoke, Only, 1000 RPM
6	0026629	Safety Lock Pin & Spring Kit
7	0026624	Female Guard Tube
8	0026628	Bell Shield
9	0026625	External Snap Ring
10	0026606	3/8" Diameter Ball
11	0026621	Complete Machine half PTO w/Shear
12	0026622	Female Shaft & Yoke
13	0027652	Flange Yoke 1 1/4" Bore
14	0026623	Male Guard Tube



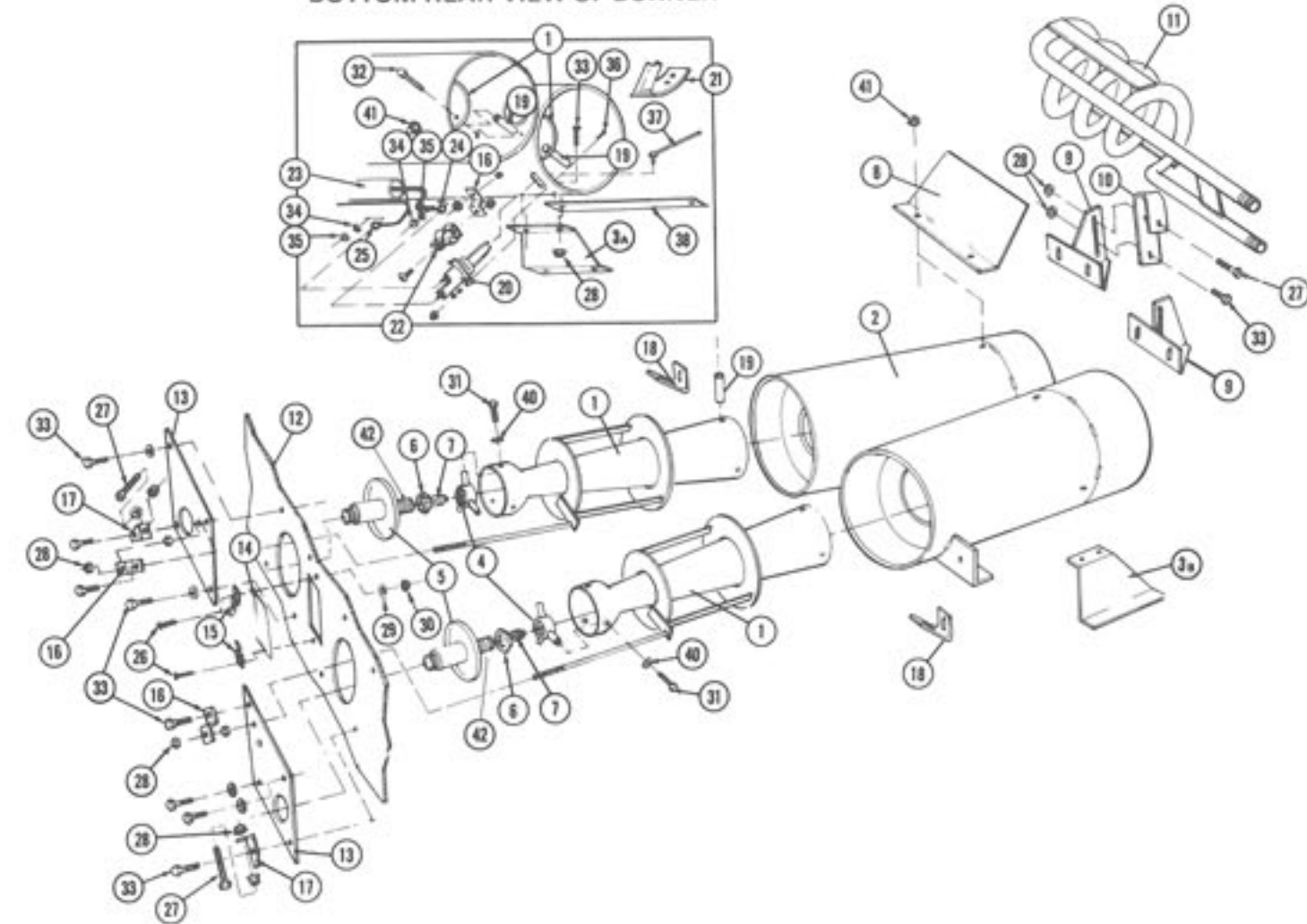
EM MODEL FAN DRIVE ILLUSTRATION



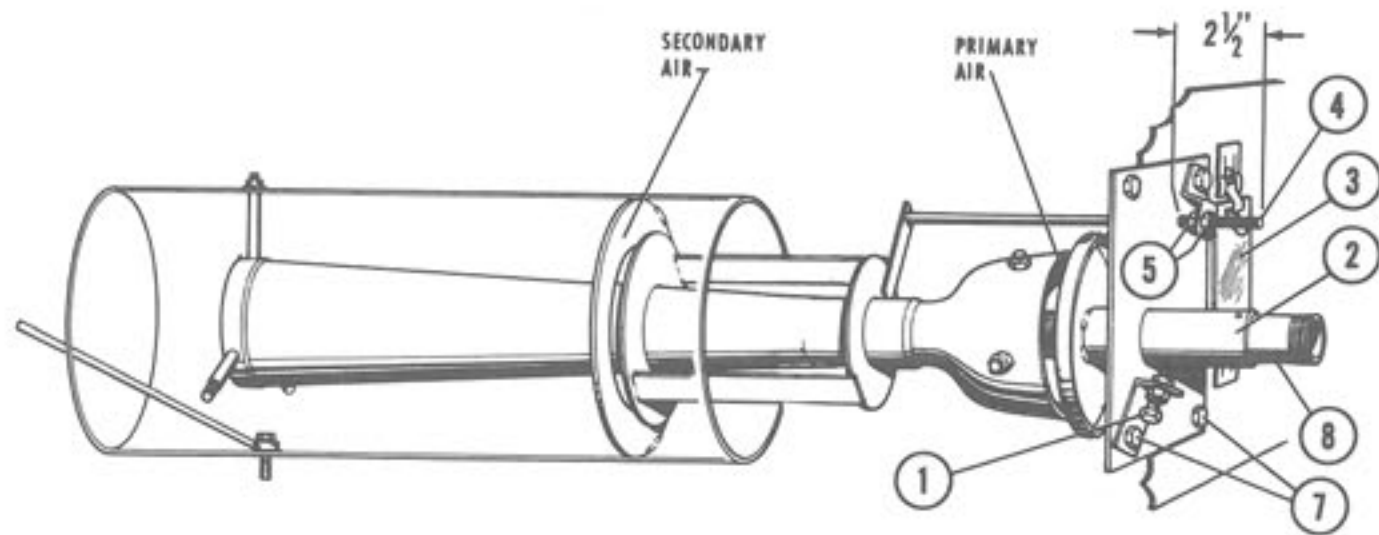
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1281289	10 HP "E" Upper Fan	8	1286623	8J 1 1/2 Flange (10 HP)
	1281288	10 HP "E" Lower Fan		1286604	8J 1 1/2 Flange (15 & 20 HP)
	1281266	20 HP "E" Upper Fan		1286613	9S 1 1/2 Flange (25 & 30 HP)
	1281304	15 HP "E" Lower Fan	9	1216848	10 HP 3 phase motor
	1281315	30 HP "E" Upper Fan		1216924	10 HP 1 phase motor
	1281265	20 HP "E" Lower Fan		1216881	20 HP 3 phase motor
2	1280091	Left Fan Brg. Support		1286816	30 HP 3 phase motor
3	1280138	High Motor Support (Top)	10	1280167	10 HP Motor Mount
	1280106	Low Motor Support (Bot.)		1210343	15 & 20 HP Motor Mount
4	1280098	Br'g. Support		1280090	30 HP Motor Mount
5	1286022	2 3/16 Pillow Block Br'g.	11	0008165	3/4 - 10 Hex Nut
6	1286622	8S 2 3/16 Flange (10 - 15 & 20HP)	12	0008177	3/4 Flat Washer
	1286620	9S 2 3/16 Flange (25 & 30 HP)	13	0015132	3/4 x 2 Key
7	1286606	8JE Sleeve (10 - 15 & 20 HP)	14	0008140	1/2 - 13 x 2 HHCS
	1286609	9SE Sleeve (25 & 30 HP)	15	0008170	1/2 - 13 Whiz Nut
			16	0008137	1/2 - 13 x 1 1/4 HHCS
			17	0018998	3/4 x 1 1/4 Woodruff Key
			18	1284849	Bearing Shim

VENTURI BURNER ASSEMBLY

BOTTOM REAR VIEW OF BURNER



REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1280112	Venturi Burner	20	1216926	Electrode—115 V.
2	1280137	Venturi Extension	21	1270009	Gas Deflector (Natural gas only)
3a	1284523	Burner Front Support—Right	22	1216906	Ignition Wire Tube Clamp
3b	1284524	Burner Front Support—Left	23	1285742	Ignition Wire Tube
4	1280107	Venturi Gas Inlet Mount	24	1281431	Wire (High Voltage)
5	1280109	Primary Air Adjuster	25	1281432	Wire (Low Voltage)
6	1286895	Venturi Lock Nut	26	0008198	10-32 x 1" Round Slotted Bolt
7	1285715	Nozzle—L. P. Gas (1/4")	27	0008293	Air Adjuster Lock Bolt 3/8-16 x 1 1/2" Full Thread
	1275700	Nozzle—Natural Gas (3/8")	28	0008168	3/8-16 Flange Whiz Locknut
8	1285307	Venturi Extension Deflector—30 HP	29	0008183	#10 Lockwasher
	1285308	Venturi Extension Deflector—20 HP	30	0008156	#10-32 Hex Nut
	1275300	Venturi Extension Deflector—15 HP	31	0008291	5/16-18 x 1/2" HHCS
	1285310	Venturi Extension Deflector—10 HP	32	0008114	5/16-18 x 2 1/2" HHCS
9	1280141	Vaporizer Coil Mount L. P.		1288110	5/16-18 x 2 3/4" HHCS
10	1285306	Vaporizer Coil Clamp L. P.	33	0008119	3/8-16 x 3/4" HHCS
11	1280140	Vaporizer Coil L. P.	34	0008245	#6 Lockwasher
12		Back Wall of Control Cabinet	35	0008157	6-32 Hex Nut
13	1284488	Hand Hole Cover Plate	36	0008186	6-32 x 1/2" Screw
14	1288968	Burner Window	37	1280197	Flame Ground Rod
15	1288969	Burner Window Holder Clip	38	1212952	Ground Strap
16	1284515	Air Adjuster Bracket	39	1284487	Cold Air Deflector L.P. (475, 675, & 975 only)
17	1283371	Air adjuster clamp bracket	40	0008222	5/16" Lockwasher
18	1284260	Burner Mounting Strap	41	0008169	5/16-18 Flanged Whiz Nut
19	1285401	Venturi Spacer	42	1288022	Gas Inlet Pipe
				0018272	3/8" Star Washer

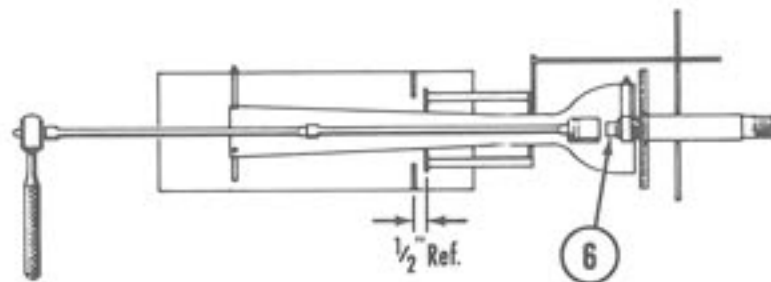


BURNER ADJUSTMENT

The burner air adjustments are initially set at the factory but may require minor changes to suit various conditions.

The primary air is adjusted first. Loosen locking bolt (1). Turn air adjuster pipe (2) clockwise until tight and then turn counter-clockwise approximately 1 1/2 to 2 turns until flame is blue with yellow fringes as viewed through window (3). Retighten locking bolt (1).

The secondary air adjustment is initially set so adjustment rod (4) extends 2 1/2 inches from the cabinet wall and normally should not need adjustment. However, if the flame is unstable and fluctuates greatly, loosen lock nuts (5) and push rod into cabinet 1/4" at a time until the flame smooths out. Retighten locknuts (5). If the rod is pushed in too far, the flame will burn inside the tube and will not operate efficiently.



DETAIL

NOZZLE REPLACEMENT

In cases of extremely low or extremely high required drying temperatures, it may be necessary to change the burner nozzles (6). A standard 3/4 inch pipe plug can be drilled to any orifice size required for low or high heat. Replacement can be accomplished in either of two methods.

METHOD 1

Go inside the heat chamber of the dryer and remove the target behind the burner. Then remove the nozzle with a 12 point 3/4 socket and long extension as shown in detail. Be very careful to push the socket firmly on the nozzle so it won't drop off while the wrench is being pulled back out. Reverse this procedure for installing the new nozzle.

METHOD 2

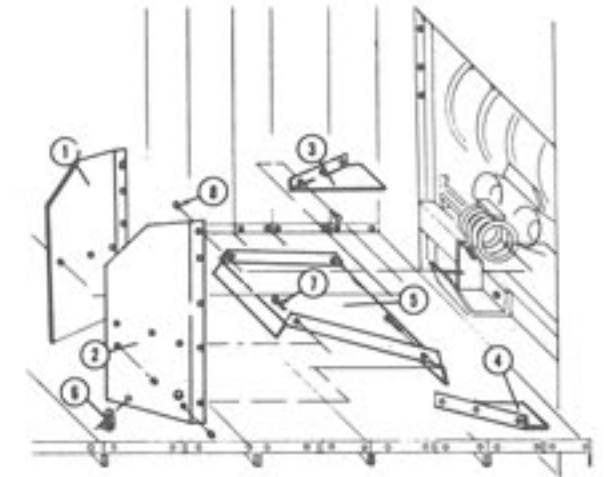
The nozzles may also be changed from outside the dryer. First loosen the unions and disconnect the manifold. Loosen four bolts (7) and locknuts (5). Remove the nozzle holder assembly by unscrewing pipe (8). The nozzle can then be replaced and the burner reassembled in the reverse procedure.

AIR DEFLECTORS

475, 675 & 975

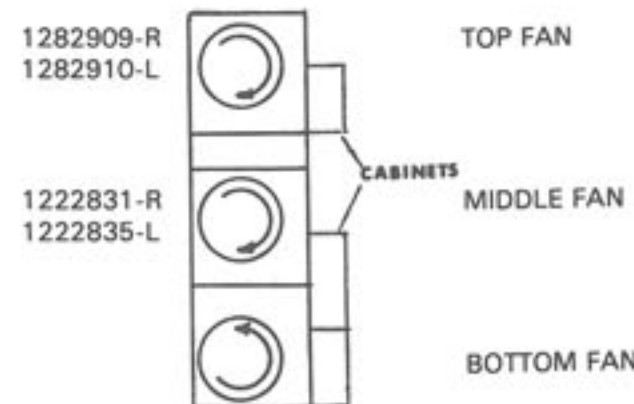
These models are equipped with the floor scoop type air deflectors. All other models use heat deflectors consisting of two side panels only, mounted the same as Ref. 1 & 2 in illustration.

REF. NO.	PART NO.	DESCRIPTION
1	1282902	Air Deflector Side—Left
2	1282903	Air Deflector Side—Right
3	1282904	Air Deflector Gusset—Left
4	1282905	Air Deflector Gusset—Right
5	1282906	Air Deflector Front Panel
6	0013302	Universal Bracket
7	0008104	5/16-18 x 3/4 Std. Truss Head
8	0008169	5/16-18 Whiz Nut

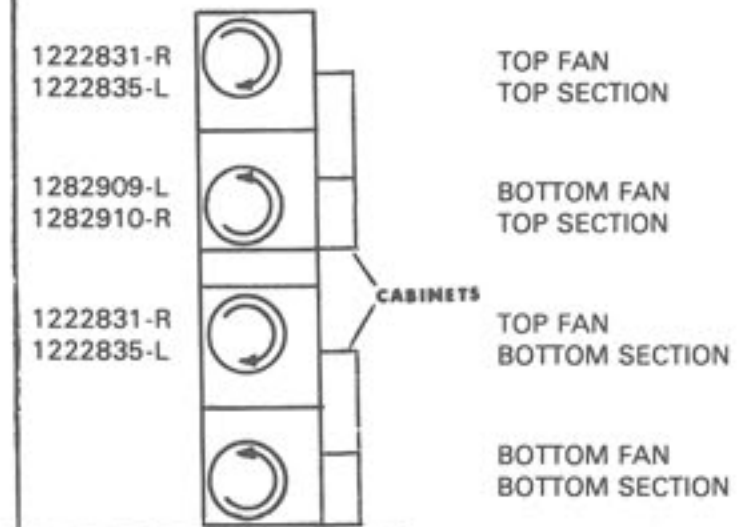


WHEN ORDERING REPLACEMENT DEFLECTORS, USE PART NUMBERS LISTED NEXT TO ILLUSTRATION

775 & 1075 HEAT DEFLECTORS

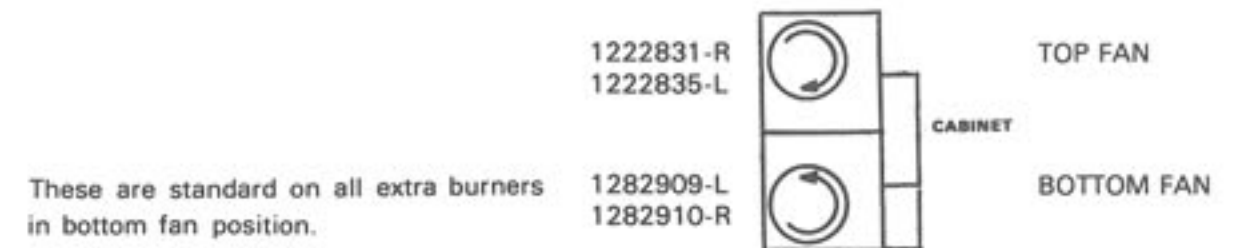


875 & 1175 HEAT DEFLECTORS



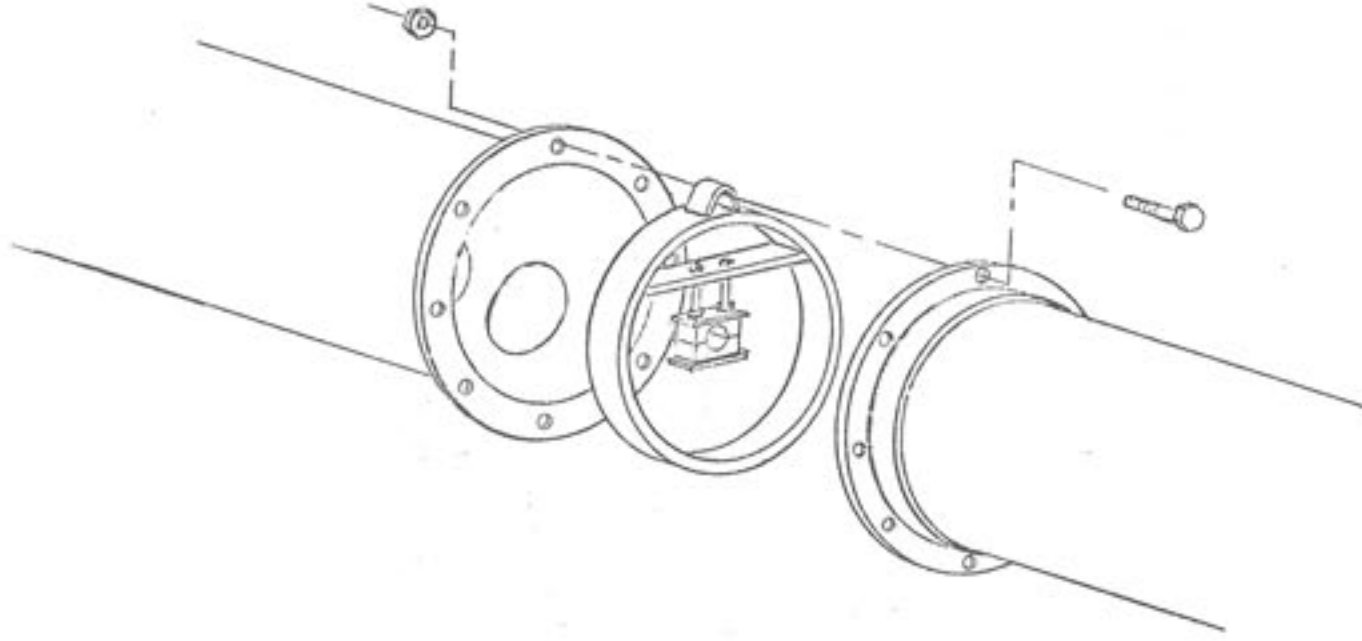
EXTRA BURNER HEAT DEFLECTORS

On Models 475, 675, 975, the floor must be moved up approximately 12", remove all existing parts and replace them with left and right panels as shown.

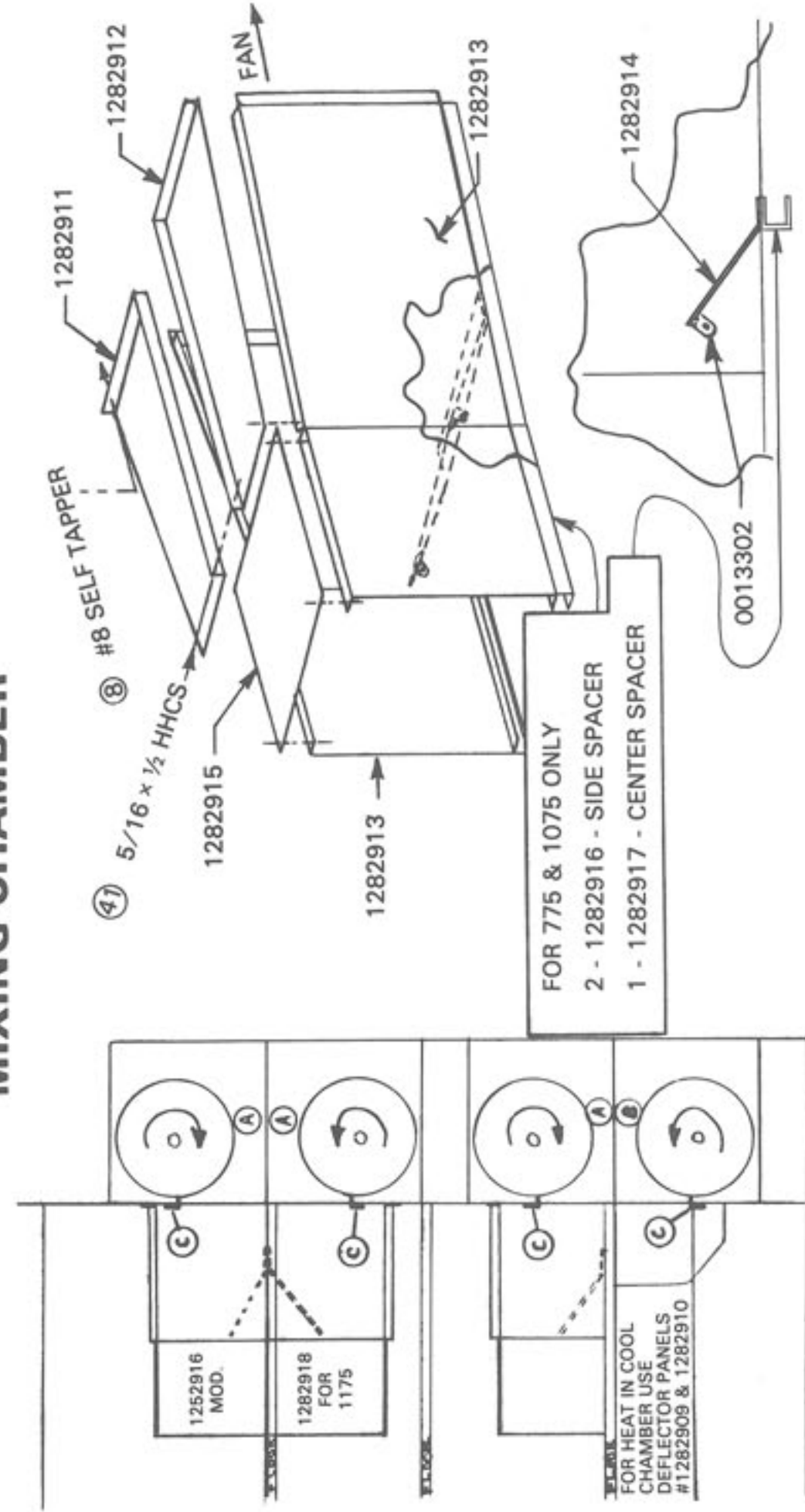


These are standard on all extra burners in bottom fan position.

PART #1281055 — L.A. HANGER BEARING ASS'Y. HAS BEEN REDESIGNED. THIS NEW DESIGN IS COMPLETELY INTERCHANGABLE WITH THE PREVIOUS DESIGN. TO BE SURE BEARING HANGER IS INSTALLED PROPERLY, A CLIP IS PROVIDED AT THE 12:00 POSITION OF THE HANGER FOR THE TOP BOLT, SEE ILLUSTRATION BELOW.

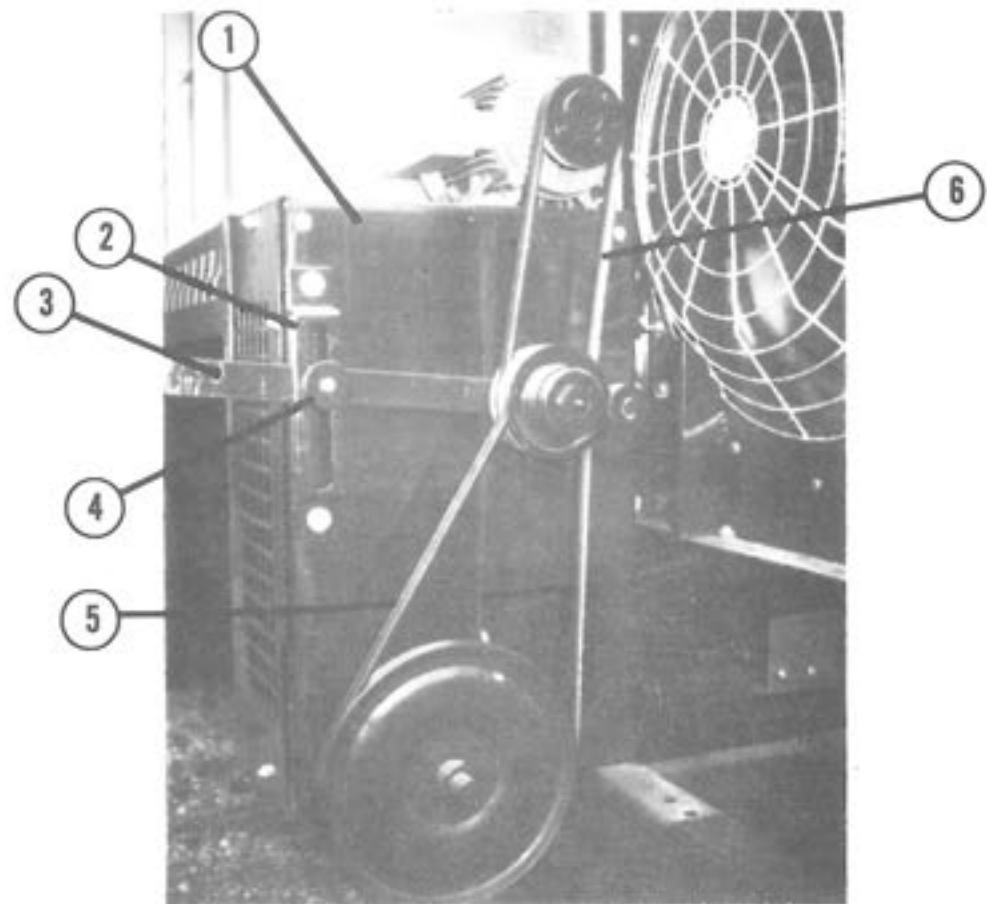


MIXING CHAMBER



CURRENT DRIVE REDUCTION BASE

(FOR MODELS 475 - 1175 STARTING WITH SERIAL #36042)

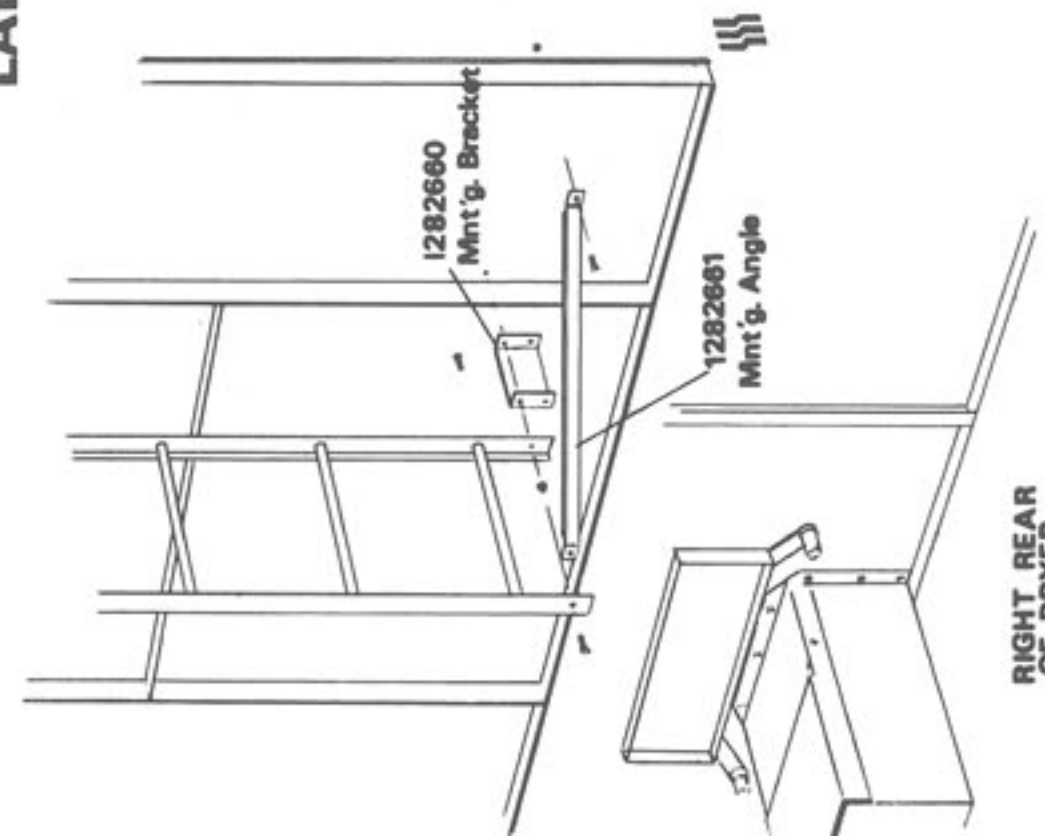
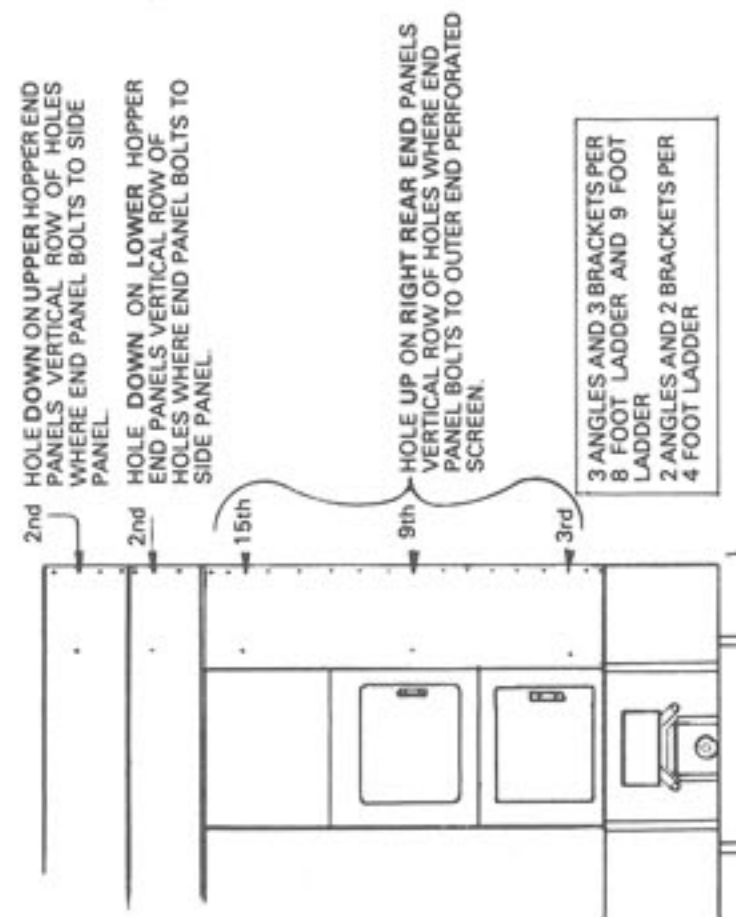


REF. #	PART #	DESCRIPTION
1	1280227	Drive Reduction Base Weldment
2	1244203	Variable Speed Adjustment Bracket
3	1281435	Variable Speed Arm Assembly
4	1284525	Special 3/8" Flat Washer
5	0016100	B-56 Belt
6	1276100	B-35 Belt
	1286117	B-37 Belt (Used with 2 HP Single Phase Only)
Not Shown	1283530	1" P.B. Bearing Shim - 3/8" thick
	1280228	"E" Model Belt Guard
	1284868	Belt Guard Back
	1288951	Rubber Strap w/One Hook
	1281437	"B" Model Guard Fender
	1284713	"B" Model Guard Screen
	1284867	"B" Model Guard Lower Front

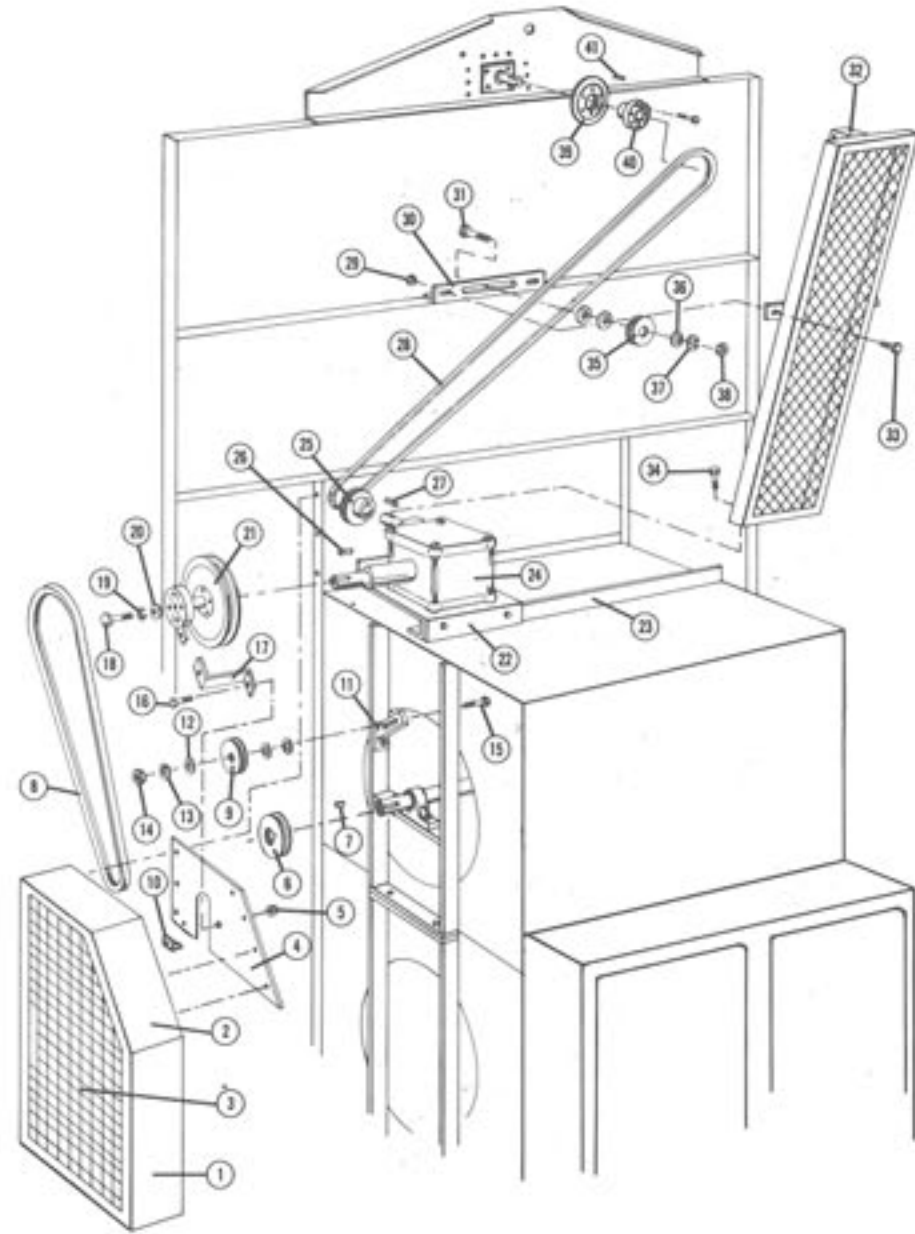
All other parts in this assembly are identical with previous reduction base illustrated on Page 22 of the DM-77, but are assembled differently.

LADDER MOUNTING INSTRUCTIONS

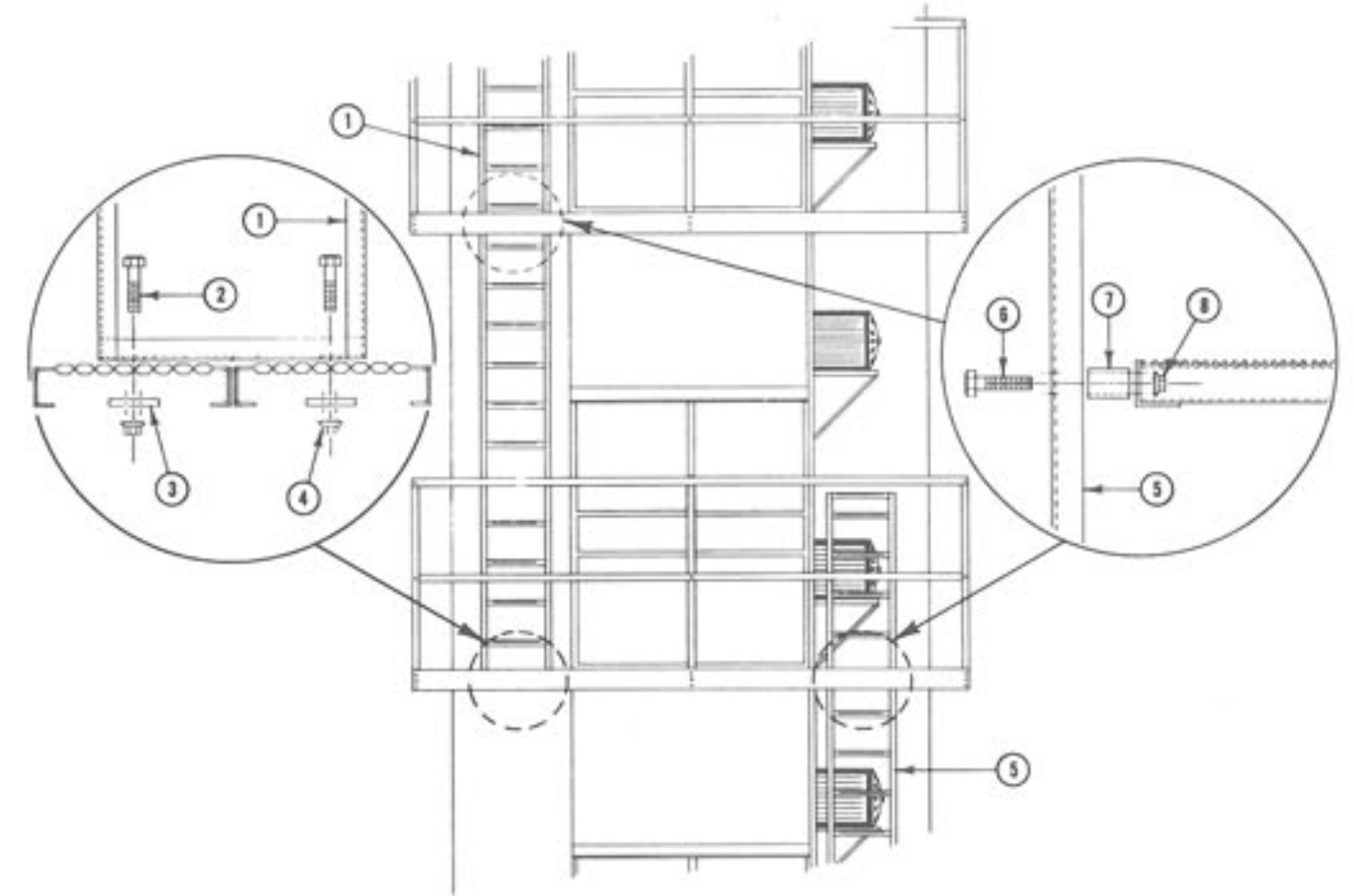
LADDER SUPPORT ANGLES SHOULD BE BOLTED TO THE FOLLOWING HOLES ON THE HOPPER END PANEL AND THE RIGHT REAR END PANEL OF THE DRYER.



B-12 LEVEL AUGER DRIVE



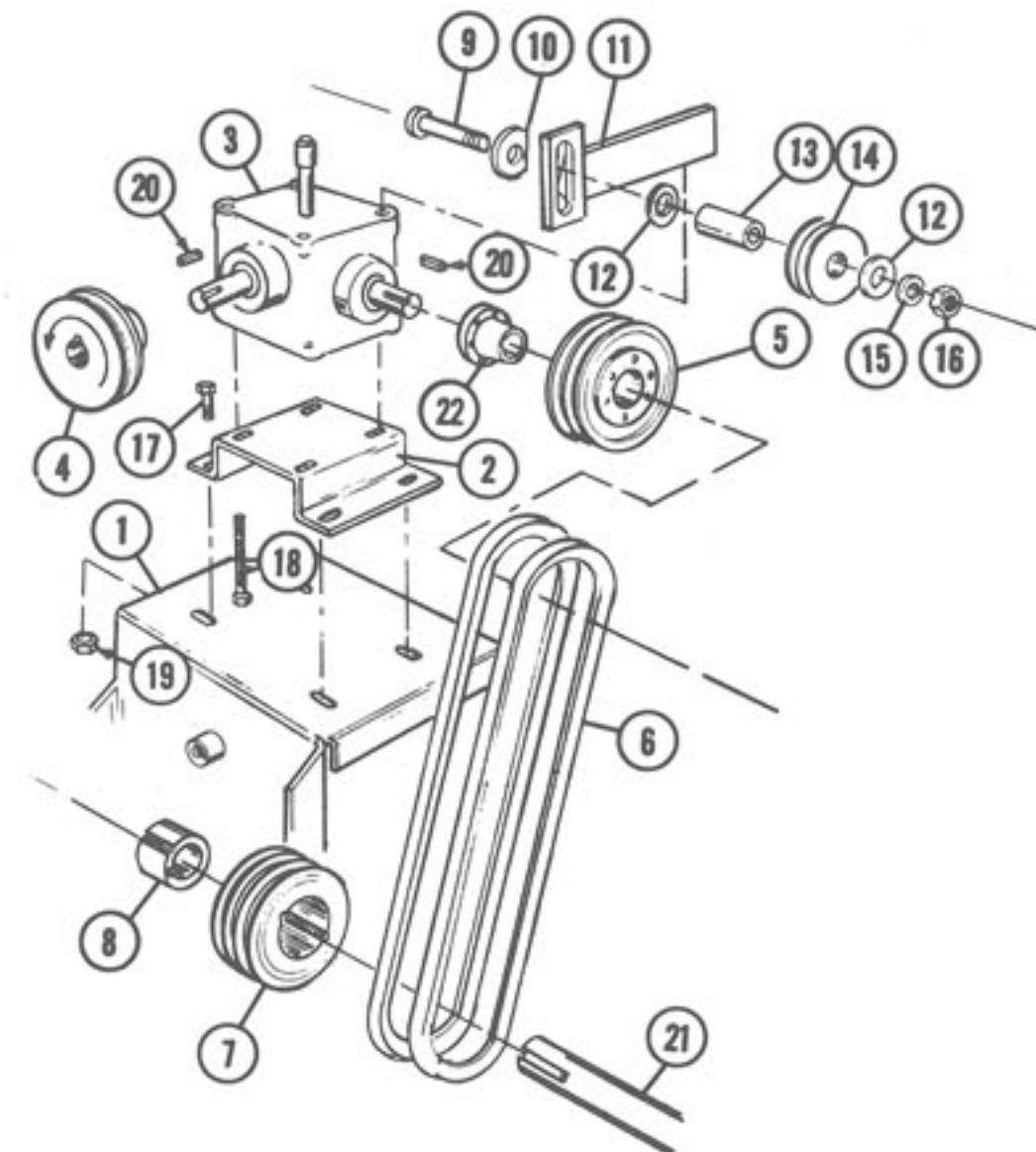
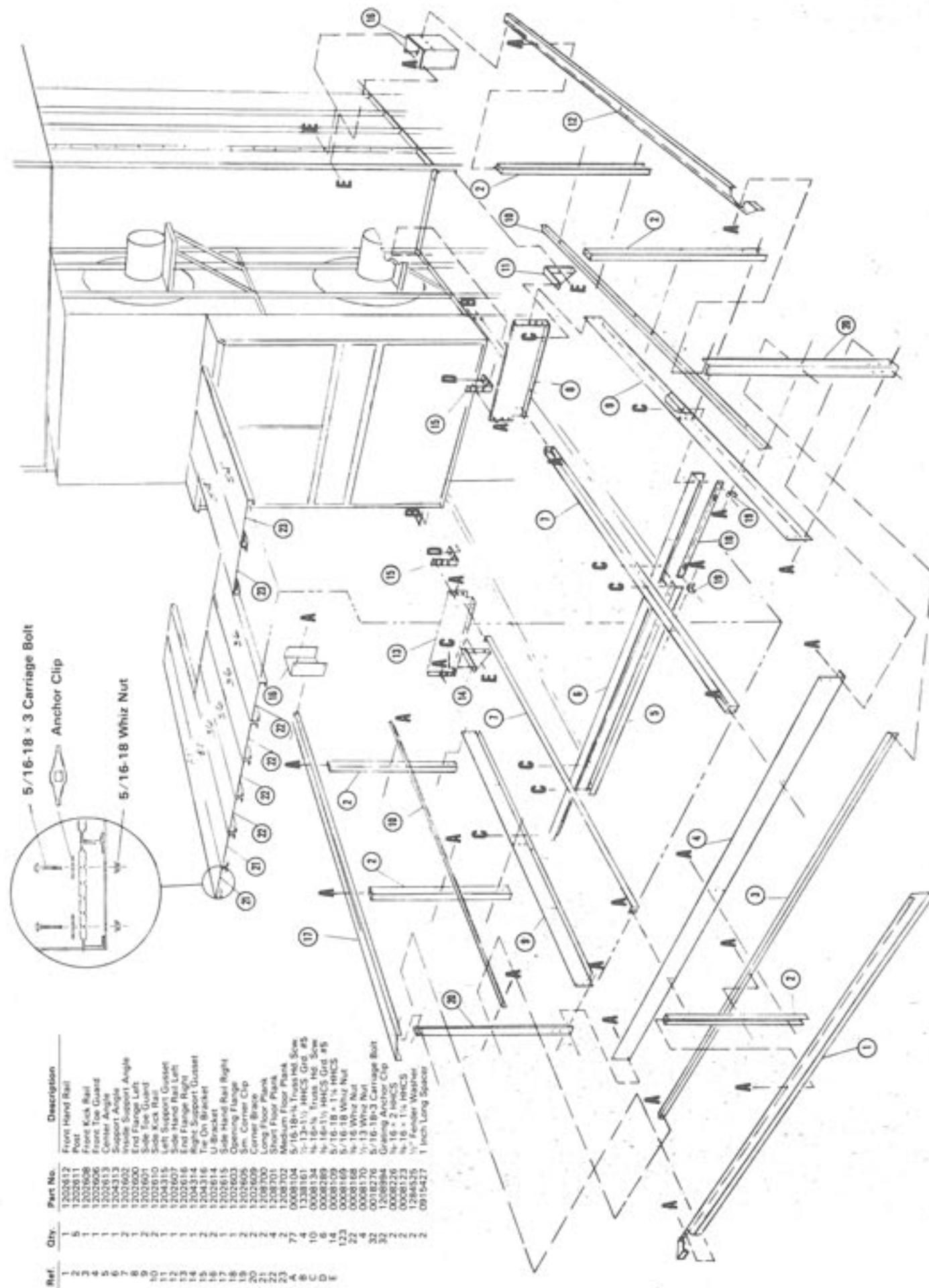
8 FOOT PLATFORM LADDER INSTALLATION ILLUSTRATION



REF.	QTY.	PART #	DESCRIPTION	REF.	QTY.	PART #	DESCRIPTION
1	1	1284880	Lower Level Auger Guard - Bottom	22	1	1280180	Level Auger Gearbox Mount Weld.
2	1	1284883	Lower Level Auger Guard - Top	23	1	1284531	Gearbox Mount Front Angle
3	1	1284534	Lower Level Auger Guard Screen	24	1	1206600	Level Auger Drive Gearbox
4	1	1284881	Lower Level Auger Guard Back Panel	25	1	1286218	4.2 x 1" Bore Pulley
5	1	0008169	5/16-18" Whiz Nut	26	1	0015119	1/4" Square x 2" Key
6	1	1206218	1B/4.4 x 1 1/4" Bore V-Pulley	27	1	0015120	1/4" Square x 1 1/2" Key
7	1	0018998	3/8 x 1 1/4" Woodruff Key	28	1	1286109	B-158 Belt
8	1	1286110	A-73 Belt	29	2	0008169	5/16-18" Whiz Nut
9	1	0016200	4 1/2" Idler x 1/2" Bore	30	1	1284283	Upper Idler Bracket
10	1	0013302	Universal Angle Clip	31	1	0008141	1/2-13 x 2 1/2" HHCS
11	1	1280172	Level Auger Lower Idler Bracket Weld.	32	1	1280165	Level Auger Drive Belt Guard
12	4	0008175	1/2" Flatwasher	33	2	0008106	5/16-18 x 3/4" HHCS
13	1	0008180	1/2" Lockwasher	34	2	0008121	3/8-16 x 1" HHCS
14	1	0008163	1/2-13" Hex Nut	35	1	0016200	4 1/2" Idler x 1/2" Bore
15	1	0008141	1/2-13 x 2 1/2" HHCS	36	4	0008175	1/2" Flatwasher
16	1	0008106	5/16-18 x 3/4" HHCS	37	1	0008180	1/2" Lockwasher
17	1	1284530	Level Auger Clutch Bracket	38	1	0008163	1/2-13" Hex Nut
18	1	1288172	3/8-11 x 2 1/2" HHCS Grade #5	39	1	1286219	1B/8.6 Pulley (SDS Bushing)
19	1	0008181	3/8" Lockwasher	40	1	1286221	SDS 1 1/4" Bushing
20	1	0008299	3/8" S.A.E. Flatwasher	41	1	0015120	1/4" Square x 1 1/2" Key
21	1	1280170	Level Auger Clutch Weldment				

REF. #	PART #	DESCRIPTION
1	1200045	11 1/2' Upper Platform Ladder Weldment
2	0008123	3/8-16 x 1 1/4" HHCS
3	1284525	1/2" Fender Washers
4	0008168	3/8-16 Whiz Nut
5	1200044	14 1/2' Lower Platform Ladder Weldment
6	0008226	3/8-16 x 2" HHCS
7	0915427	1" Long Spacers
8	0008168	3/8-16 Whiz Nut

B-12 UNLOAD SYSTEM DRIVE

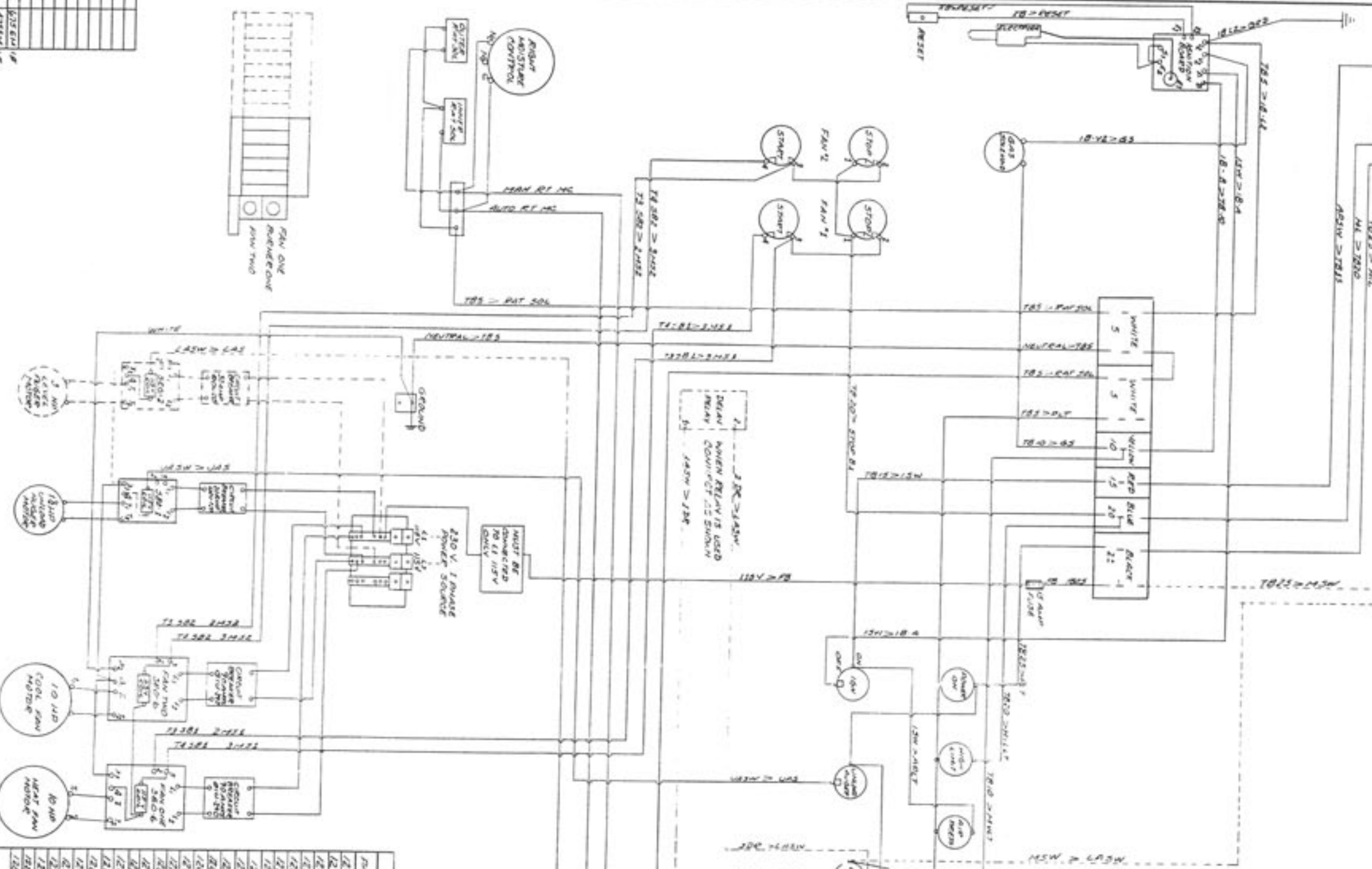


Part No.	Description	Qty.	Ref.
1202812	Front Hand Rail	2	1
1202813	Post	2	2
1202814	Front Kick Rail	2	3
1202815	Front Top Guard	2	4
1202816	Center Angle	2	5
1204313	Support Angle	2	6
1202802	Inside Support Angle	2	7
1202800	End Flange Left	2	8
1202801	Side Kick Rail	2	9
1204315	Side Kick Rail Custom	2	10
1202807	End Flange Right	2	11
1204314	Right Support Gusset	2	12
1204316	Tie On Bracket	2	13
1202815	U Bracket	2	14
1202814	Side Hand Rail Right	2	15
1202802	Opening Flange	2	16
1202803	Corner Clip	2	17
1202809	Corner Block	2	18
1208700	Long Floor Plank	2	19
1208701	Short Floor Plank	2	20
0008104	5/16-18-1/4 Truss Rod Screw	77	21
1208161	1/2-13-1/2 HHCS Grd #5	4	22
0008134	1/2-18-1/4 Truss Rod Screw	10	23
0008135	1/2-18-1/4 HHCS Grd #5	14	24
0008159	5/16-18-1/4 Truss Rod Screw	123	25
0008169	5/16-18-1/4 HHCS Grd #5	22	26
0008170	1/2-13 Whiz Nut	4	27
0018276	5/16-18-3/4 Carriage Bolt	32	28
1208984	Grating Anchor Clip	32	29
0008226	1/2-18-1/4 HHCS Grd #5	32	30
0008227	1/2-18-1/4 HHCS Grd #5	32	31
0008228	1/2-18-1/4 HHCS Grd #5	32	32
0015427	1 Inch Long Spacer	2	33

REF.	PART #	DESCRIPTION	REF.	PART #	DESCRIPTION
1		Drive Reduction Base	12	0008177	3/4" Flatwasher
2	1284272	Gearbox Mount	13	1285602	Gearbox Idler Bushing
3	1216605	Gearbox (A115 #3010)	14	1281060	Gearbox Idler Pulley Assembly
4	1286218	4.2 Pulley 1" BR w/KW & SS	15	0008182	3/4" Lockwasher
5	1316203	3V/6.5, 2 SDS Pulley	16	0008165	3/4-10 Hex Nut
6	1286101	3V425 Belt (Matched Set of 2)	17	0008122	3/8-16 x 1 Carriage Bolt
7	1286231	3/3V/6.0 Sheave	18	0018135	3/8-16 x 1 HHCS Grade #5
8	1286232	2-3/16" Taper Lock Bushing	19	0008168	3/8-16 Whiz Nut
9	1288191	3/4-10 x 4 1/2 Carriage Bolt	20	0015118	1/4 x 1/4 x 1 1/4 Key
10	1316204	SDS 1" Taper Lock Bushing	21		Lower Fan Shaft
11	1280129	Gearbox Idler Bracket			

ELECTRICAL ABBREVIATIONS

- APSW - AIR PRESSURE SWITCH
- AUTO - AUTOMATIC
- BLACK - 115 V
- BR - DELAY RELAY
- FUSE BLOCK
- GRD - GROUND
- GS - GAS SOLENOID
- HL - HIGH LIMIT
- IB - IGNITION BOARD
- ISW - IGNITION SWITCH
- LA - LEVEL AUGER
- LSW - LEVEL SWITCH
- LIGHT
- MAN - MANUAL
- MANUAL - MANUAL CONTROL
- MG - MAGNETIC SWITCH
- MS - MERCURY SWITCH
- MSV - MAIN VALVE
- POWER
- RAV - ROTARY VALVE
- RAT SOL - ROTARY SOLENOID
- RESET - RESET BUTTON
- RT - RIGHT
- STARTER
- S - STOP
- SBI - STOP BUTTON
- STOP - STOP BUTTON
- SW - SWITCH
- TB - TERMINAL BOARD
- UNLTD - UNLTD AUGER
- WHITE - NEUTRAL

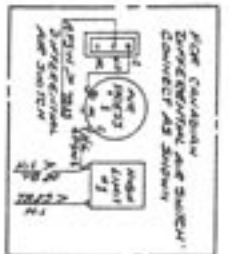


OPTIONAL EQUIPMENT OR PROVIDED BY CUSTOMER FOR 18 OR FORWARD EQUIPMENT FOR LEVEL AUGER FOR 535.6M 18

1800P SWITCH # 2279076 (OPTIONAL)

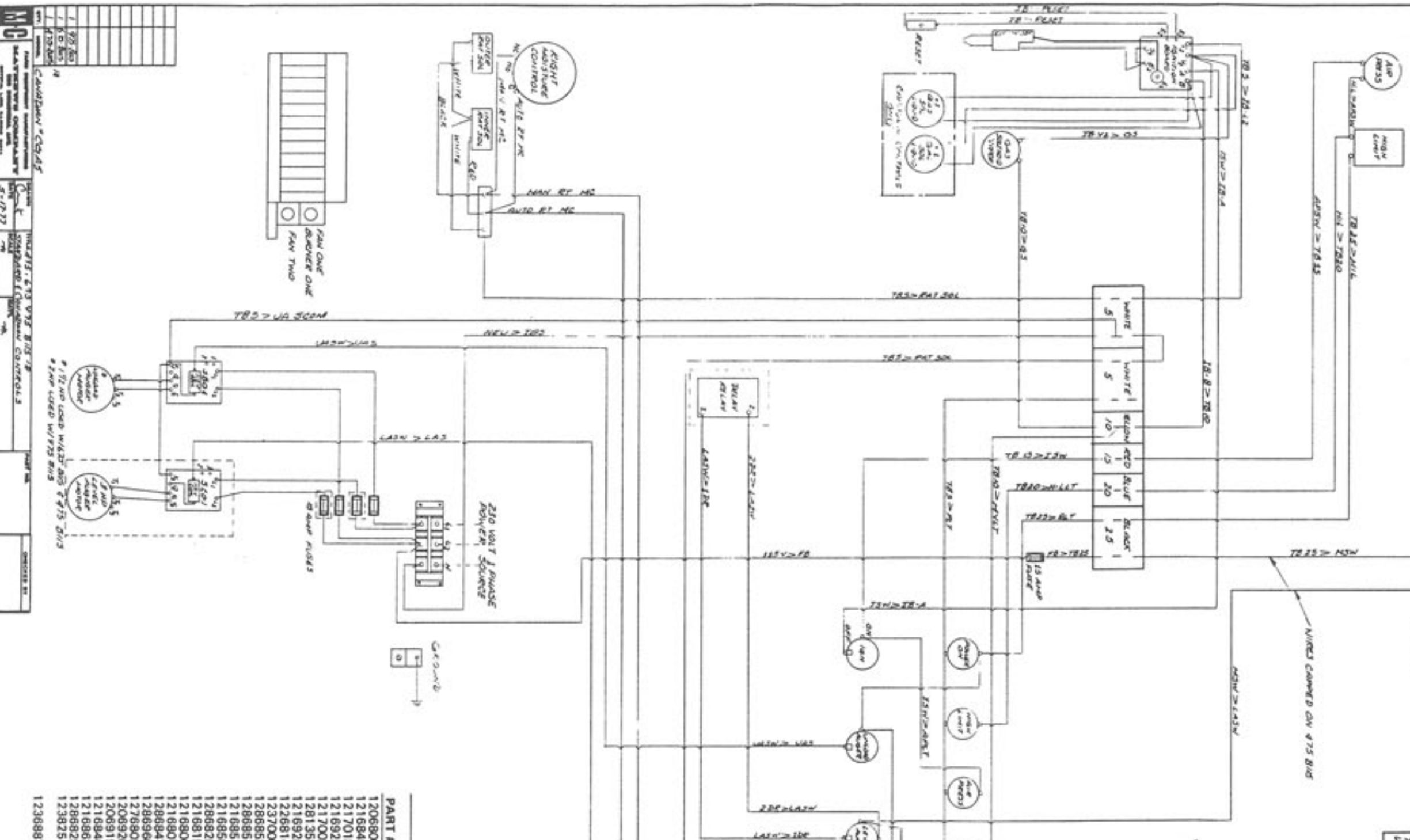
PARTS LIST

PART NO	NO	DESCRIPTION
1216.849	1	AIR PRESSURE SWITCH
1217.018	1	HIGH LIMIT SWITCH
1216.975	1	IGNITION SWITCH BOARD
1217.002	1	GAS SOLENOID 1/2" 115 V
1216.952	1	TERMINAL BOARD
1216.976	1	KEEP TRODE
1216.814	1	RESET BUTTON
1217.000	1	GAS SOLENOID 1/2" 115 V
1216.852	1	FUSE 15 AMP
1216.851	1	FUSE HOLDER
1216.845	2	STOP BUTTON (KA-3)
1216.854	2	START BUTTON (KA-3)
1216.851	2	STOP/START CONTROL
1216.856	4	RELAY 15 AMP
1216.825	5	LEVER
1216.816	2	TERMINAL SWITCH
1216.816	2	TERMINAL SWITCH
1216.817	1	(6) TERMINAL SWITCH 20A
1216.818	2	20A 250V CIRCUIT BREAKER 20A
1216.819	1	20A 1 PHASE POWER SOURCE
1216.840	2	20A 1 PHASE POWER SOURCE
1216.846	1	1 1/2 HP MOTOR 18
1216.824	2	10 HP MOTOR 18
1216.825	1	50A 1 PHASE STARTER
1216.817	1	50A 1 PHASE STARTER



ELECTRICAL ABBREVIATIONS

- ADSW - AIR PRESSURE SWITCH
- AUTO - AUTOMATIC
- BLACK - 115 V
- DR - DELAY RELAY
- PB - PULSE BLOCK
- GRD - GROUND
- GS - GAS SOLENOID
- HL - HIGH LIMIT
- IB - IGNITION BOARD
- LA - LEVEL AUGER
- LSW - LEVEL SWITCH
- LV - LIGHT
- MAN - MANUAL
- MC - MOISTURE CONTROL
- MSM - MERCURY SWITCH
- NAV - MAIN VALVE
- NEU (WHITE) - NEUTRAL
- REN - REVERSE
- RAT SOL - RATCHET SOLENOID
- RSET - RESET BUTTON
- RT - RIGHT
- ST - STARTER
- SW - SWITCH
- TR - TERMINAL BLOCK
- UA - UNLOADED AUGER



PARTS LIST

PART #	REQD.	DESCRIPTION
1206800	1	Mercury Switch
1216849	1	Air Pressure Switch
1217018	1	High Limit Switch
1216925	1	Ignition Control Board
1217002	1	Gas Solenoid 1/4" 115V.
1281352	1	Term. Block Assembly
1216926	1	Electrode
1226814	1	Reset Button
1237000	1	Gas Solenoid 1/4" 115V.
1286852	5	Fuse - 15 Amp.
1286851	5	Fuse Holder
1216851	2	Moisture Control
1216856	4	Ratchet Solenoid
1286828	5	Light
1216815	2	(2) Terminal Switch
1216806	1	(3) Terminal Switch
1216807	1	(6) Terminal Switch
1286947	1	5 Minute Delay Relay
1286960	1	3 Minute Delay Relay
1276902	1	1 Minute Delay Relay
1208920	1	SCO-1 Magnetic Starter
1208919	1	SBO-1 Magnetic Starter
1216846	1	1 1/2 HP Motor 1Ø
1216862	1	2 HP Motor 1Ø
1286829	1	Gas Sol. 1/4" 115V. - L.P.
1238251	2	Liquid Canadian
1236897	1	Differential Air Switch - Canadian

REVISIONS

NO.	DATE	DESCRIPTION
1	5-25-65	REVISED
2	5-25-65	REVISED
3	5-25-65	REVISED
4	5-25-65	REVISED
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6	5-25-65	REVISED
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46	5-25-65	REVISED
47	5-25-65	REVISED
48	5-25-65	REVISED
49	5-25-65	REVISED
50	5-25-65	REVISED

Canadian Controls
 INCORPORATED
 5-17-73
 1100 WINDYBUSH RD. UNIT 10
 MISSISSAUGA, ONT. L4V 1R3
 CANADA
 220 VOLT 1 PHASE CONVERTER SOURCE
 1 1/2 HP MOTOR 1Ø
 2 HP MOTOR 1Ø
 15 AMP FUSE
 15 AMP FUSE

REVISIONS

APPROVED BY

DRAWN BY

CHECKED BY

DATE

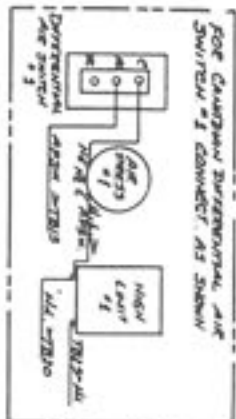
SCALE

TITLE

PROJECT NO.

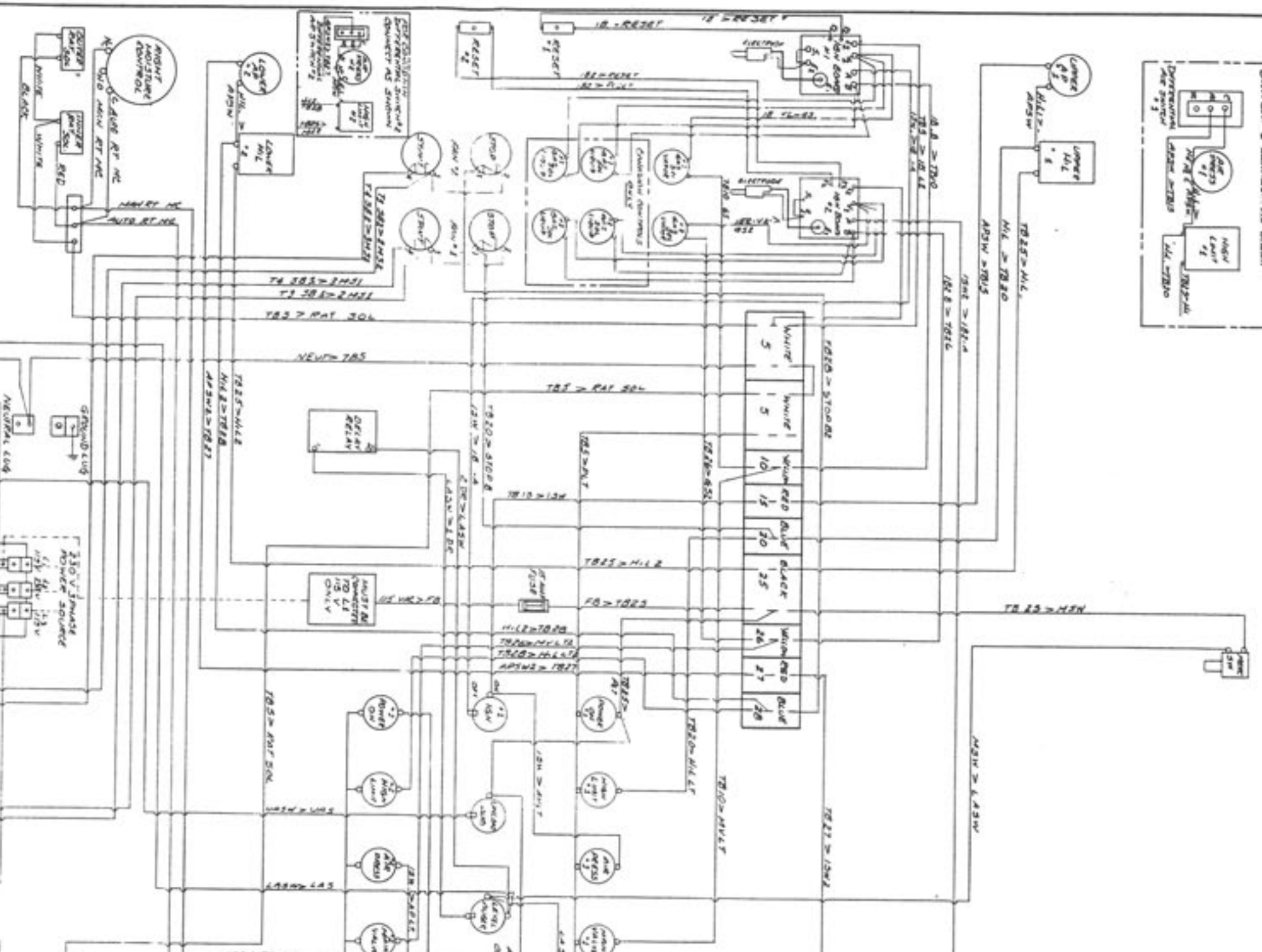
REVISIONS

NO. DATE DESCRIPTION



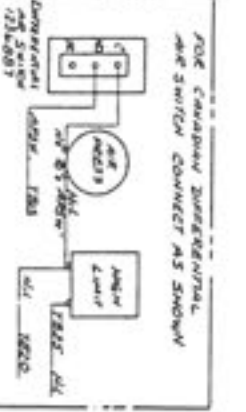
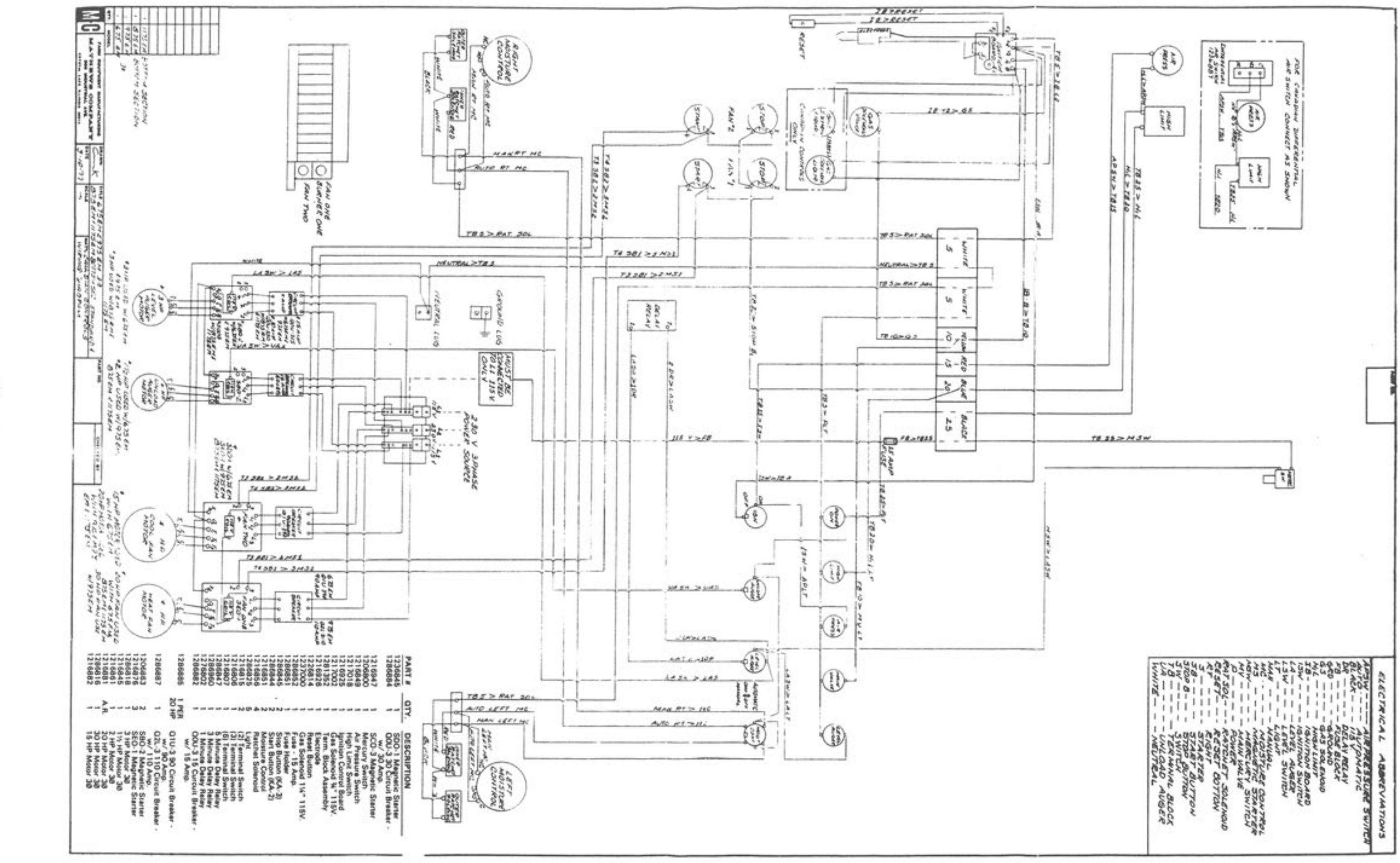
ELECTRICAL ABBREVIATIONS

A.P.	AIR REQUIRED
A.P.W.	AIR PRESSURE SWITCH
AUTO.	AUTOMATIC
BLACK	BLACK WIRING
D.P.	DRAW RELAY
P.B.	FLY BALL
F.R.D.	FLY BALL
G.S.	GROUND SOLID
G.S.	GAS SOLID
H.P.	HIGH LIMIT BOARD
H.P.	HIGH LIMIT SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH
L.S.	LEVEL SWITCH
L.P.	LEVEL SWITCH



PARTS LIST

PART #	QTY	DESCRIPTION
1206800	1	Mercury Switch
1216849	1	Air Pressure Switch
1217018	3	High Limit Switch
1216925	3	Ignition Control Board
1217002	3	Gas Solenoid 1/4" - 115V.
1261354	1	Term. Block Assembly
1216926	3	Electrode
1227000	1	Reset Button
1286892	1	Fuse - 15 Amp.
1286895	1	Fuse Holder
1286844	3	Stop Button (K.A. 3)
1216851	2	Start Button (K.A. 2)
1216852	2	Moisture Control
1286825	4	Ratchet Solenoid
1216915	12	Light
1216806	4	(2) Terminal Switch
1216807	1	(6) Terminal Switch
1286947	1	3 Minute Delay Relay
1286950	1	5 Minute Delay Relay
1276902	1	1 Minute Delay Relay
1286892	1	DDU-3 15 Circuit Breaker
1286884	1	15 Amp. ODU-3 30 Circuit Breaker
1286885	1	30 Amp. ODU-3 90 Circuit Breaker
1286887	1	40 Amp. QDU-3 110 Circuit Breaker
1206863	1	SDO-2 Magnetic Starter
1216876	2	SDO-1 Magnetic Starter
1286918	1	5 HP Motor 30
1286919	1	3 HP Motor 30
1216861	1	2 HP Motor 30
1216862	1	20 HP Motor 30
1286916	1	SCD-3 Magnetic Starter
1216847	1	Gas Sol. 3/4" 115V. L.P.
1286915	1	Liquid Canadian Differential Air Switch
1286887	2	Canadian



ELECTRICAL ABBREVIATIONS

APSW	AIR PRESSURE SWITCH
AUTO	AUTOMATIC
BR	BLIND RELAY
DR	DELAY RELAY
FR	FUSE BLOCK
GED	GAS SOLENOID
G3	GAS SOLENOID
MB	MOTOR BOARD
LSW	LOADING SWITCH
LSW	LOAD SWITCH
LAB	LEVER
MCS	MAGNETIC SWITCH CONTROL
M3	MAGNETIC SWITCH
MOV	MOVABLE SWITCH
MPV	MOVABLE VALVE
D	POWER
FA1 SOL	FAN ONE SOLENOID
RESET	RESET BUTTON
RT	RIGHT
S	STARTER
SB	STOP BUTTON
STOP B	STOP BUTTON
TW	TERMINAL BOARD
TR	TERMINAL BLOCK
UN	UNLOAD AUGER
WHITE	NEUTRAL

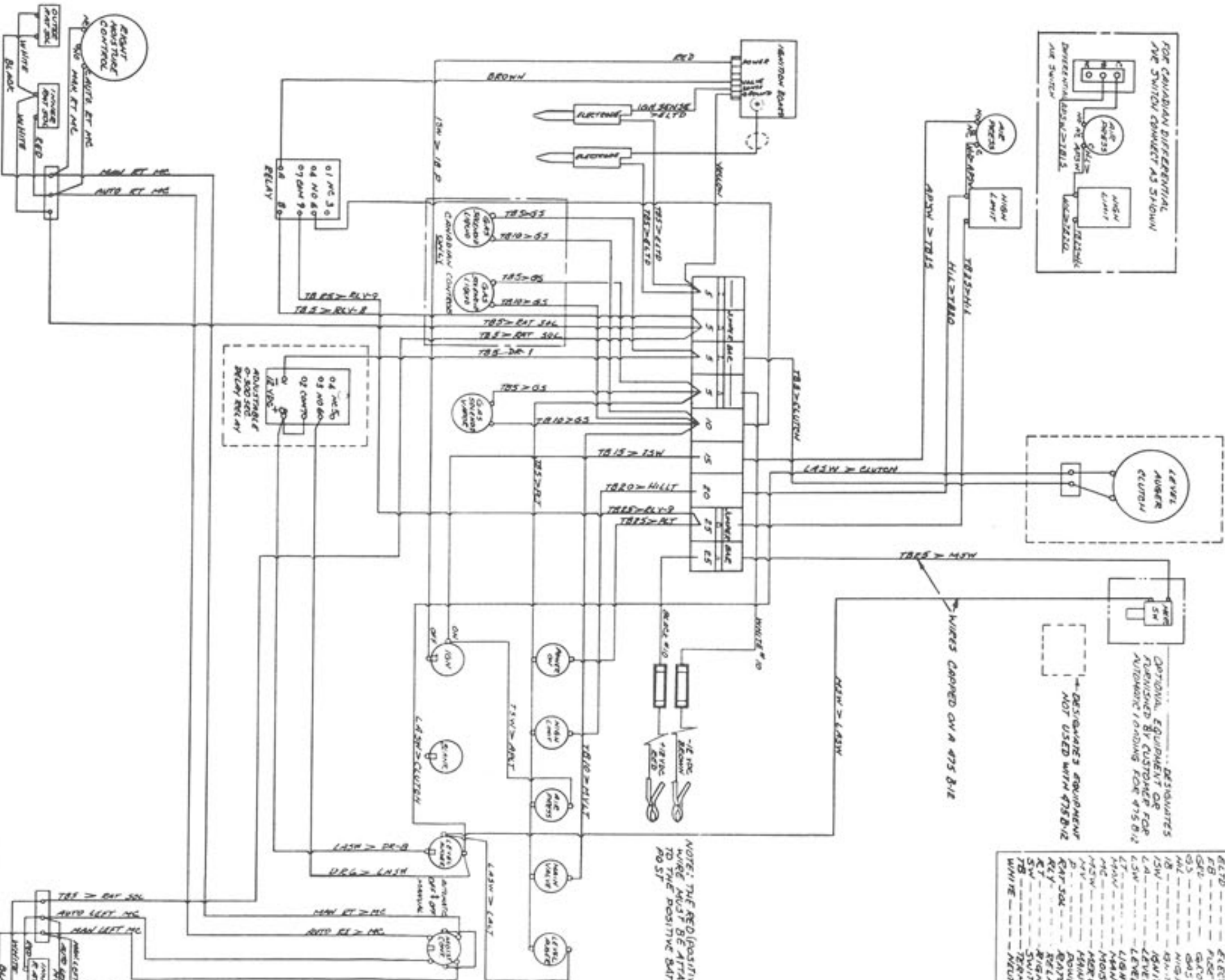
PART #	QTY	DESCRIPTION
1210645	1	SOO-1 Magnetic Starter
1210684	1	DOU-3 30 Circuit Breaker
1210687	1	W/ 30 Amp
1210687	1	1200-110 Amp
1210683	2	SBO-2 Magnetic Starter
1216916	3	SEO-1 Magnetic Starter
1216918	1	3 HP Motor 30
1216945	1	1 1/2 HP Motor 30
1216946	1	2 HP Motor 30
1216981	1	A.R.
1216981	1	A.R.
1216982	1	A.R.
1216982	1	A.R.
1216982	1	A.R.
1286885	1	1200-3 90 Circuit Breaker
1286887	1	w/ 90 Amp
1286887	1	OZ-3 110 Circuit Breaker
1286887	1	w/ 110 Amp
1286887	1	SBO-2 Magnetic Starter
1286887	1	SEO-1 Magnetic Starter
1286887	1	3 HP Motor 30
1286887	1	1 1/2 HP Motor 30
1286887	1	2 HP Motor 30
1286887	1	30 HP Motor 30
1286887	1	30 HP Motor 30
1286887	1	15 HP Motor 30

ITEM	QUANTITY	DESCRIPTION	UNIT
1	1	1200-3 90 Amp Circuit Breaker	
1	1	1200-110 Amp Circuit Breaker	
1	2	SBO-2 Magnetic Starter	
1	3	SEO-1 Magnetic Starter	
1	3	3 HP Motor 30	
1	1	1 1/2 HP Motor 30	
1	1	2 HP Motor 30	
1	1	30 HP Motor 30	
1	1	30 HP Motor 30	
1	1	15 HP Motor 30	

MC MACHINE CORPORATION
 12700 W. 110th Ave., Golden, CO 80431
 PHONE: (303) 440-7700

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FOR CANADIAN DIFFERENTIAL
WIRE SWITCH CONNECT AS SHOWN

OPTIONAL EQUIPMENT OR
FURNISHED BY CUSTOMER FOR
AUTOMATIC LANDING FOR 475 B-12

- ELECTRICAL AW VARIATIONS
- AW5W --- AIR BA. SURE SWITCH
 - AW6A --- AUTOMATIC
 - AW6B --- 12 V
 - AW7 --- LEFT AUSER CLUTCH
 - AW8 --- DELAY RELAY
 - AW9 --- ELECTRODE
 - AW10 --- FUSE BLOCK
 - AW11 --- GAS SOLENOID
 - AW12 --- HIGH LIMIT
 - AW13 --- IGNITION SWITCH
 - AW14 --- LEVEL AUSER
 - AW15 --- LEVEL SWITCH
 - AW16 --- LIGHT
 - AW17 --- MANUAL
 - AW18 --- MOISTURE CONTROL
 - AW19 --- MERCURY SWITCH
 - AW20 --- HIGH VALVE
 - AW21 --- POWER
 - AW22 --- RAT SW. SOLENOID
 - AW23 --- RELAY
 - AW24 --- SWITCH
 - AW25 --- TERMINAL BLOCK
 - AW26 --- WIRING
 - AW27 --- NEUTRAL

NOTE: THE RED (POSITIVE)
WIRE MUST BE ATTACHED
TO THE POSITIVE BATTERY
POST

PARTS LIST

PART NO	QTY	DESCRIPTION
1206900	1	MERCURY SWITCH
1216849	1	AIR PRESSURE SWITCH
1217018	1	HIGH LIMIT SWITCH
1216964	1	IGNITION SWITCH ROUND
1217025	1	GAS SOLENOID 3/4 1/2 IN
1216910	1	TEMP. RELAY ASS'Y
1216936	2	ELECTRODE
1217000	1	GAS SW. 1/2 1/2 IN 11.5V
1216852	2	FUSE 1/8 AMP 10A-15
1216851	2	FUSE HOLDER
1216851	2	MOISTURE CONTROL
1216851	2	RELAY SW. CONTROL
1216851	5	RELAY SW. CONTROL
1216851	2	RELAY SW. CONTROL
1216851	1	(6) TERMINAL SWITCH
1216851	1	RELAY SW. CONTROL
1216851	1	RELAY SW. CONTROL
1216851	2	RELAY SW. CONTROL
1216851	1	Differential, at the Canadian

NO.	REV.	DATE	DESCRIPTION
1	02/02/62		
1	05/02/62		
1	02/01/62		
1	02/01/62		
1	02/01/62		

REVISIONS
 1. 02/02/62
 1. 05/02/62
 1. 02/01/62
 1. 02/01/62
 1. 02/01/62

DATE: 12/28/61 BY: R. J. WILSON
 DRAWING NO: 1216851-1
 PART NO: 1216851
 QUANTITY: 1
 UNIT: 1

