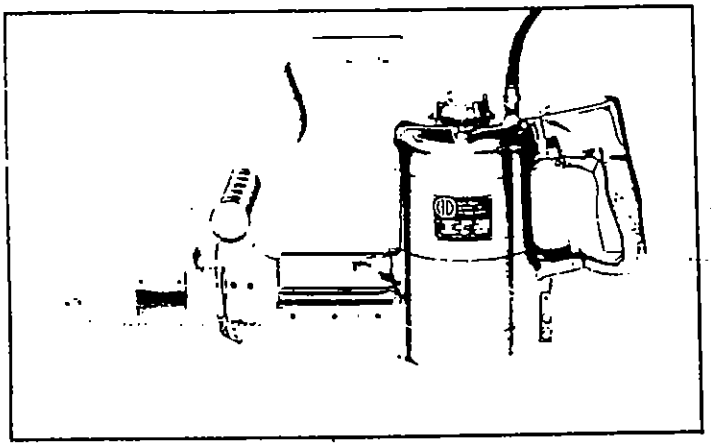
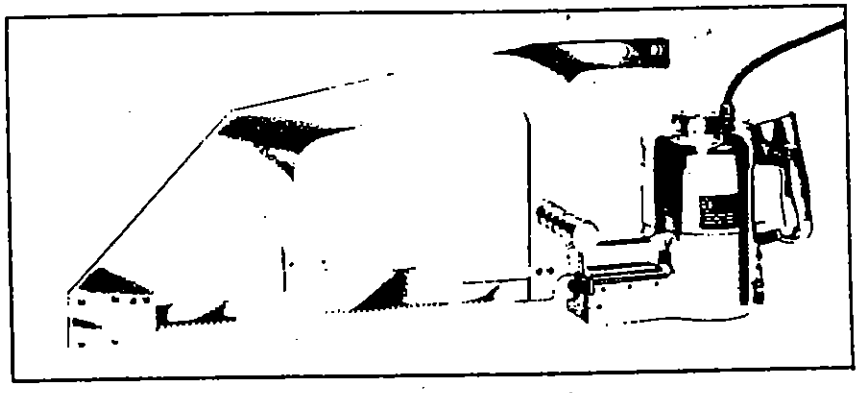
PARTS AND SERVICE MANUAL

ELECTRIC



Model "250"
BEEF BRISKET
OPENER SAW

Model "100"
CARCASS
SPLITTER



WARNING

ALWAYS EXERCISE CARE WHEN OPERATING OR PERFORMING MAINTENANCE, REPAIRS AND ADJUSTMENTS. Always disconnect the air or electrical connector before attempting to work on the machine. Be sure all electrical machines are properly grounded. Never allow any part of your person or any other person to be in the path of the blade when machine is in service.

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INSTALLATION INSTRUCTIONS
MODEL 100 or MODEL 250

The Electric Model 250 requires a 50# (22.5 kg) counter weight system or a 50# counterbalancer (Part #6339500). The Electric Model 100 with a "steel yoke" requires a 70# (30 kg) counter weight system or a 70# counterbalancer (Part #6339600). The Electric Model 100-A with an "aluminum yoke' requires a 50# (22.5 kg) counter weight system or a 50# counterbalancer (Part #6339500).

Your saw requires a three phase electrical line to a 4 prong hubble female connection box. On saws where the 6 wire cord has been specified a 2 HP-3 phase automatic starter is required. See Page 8.

SINGLE PHASE

The Model 100 in single phase is specifically designed for the smaller abattoir. The electric motor will produce all the power your operator needs but should only be used intermittently. All single phase machine require a single panel board (see Page 8) which should have also been ordered with your machine. Part #7105158 for 115 volts or part #7105159 for 230 volts. The 110 volt machine requires a 30 amp breaker and all wiring should be #10 or larger. The 220 volt machine requires a 20 amp breaker and all wiring should be #12 or larger.

MOTOR ROTATION

3 phase electric motors must be connected up so that the motor rotates in the direction as stamped on the top bearing cap (Page 7, #5). The machine parts are made with right-hand threads and running motor in the wrong direction will result in damage.

Before installing the saw into service, remove the top bearing cap (Page 7, #5) and snap the switch intermittently to see that the motor rotates correctly. If your saw does not rotate correctly reverse the white and black line wires at the four wire male hubble twist lock connector (Page 7, #25).

MAINTENANCE

Preventative maintenance is the first step of good maintenance. A periodic check should be made to replace worn parts and to inspect lubrication levels. A worn part replaced in time may save extensive repairs later.

THIS IS A PRECISION MACHINE made up of precision parts and should be handled with extreme care. Do not squeeze machine or parts in holding device or otherwise misuse. Too much pressure exerted in holding device may cause distortion of part. Be sure you have the correct tools and fixtures before assembling (or disassembling) this machine. When assembling (or disassembling) parts which have a press fit, apply pressure evenly to the parts. To assemble (or disassemble) bearings, the pressure should be applied to the face of the inner or outer race, whichever is adjacent to the mating part. If this is not done, it will brinell the bearing races making it necessary to replace them.

OPEN BEARINGS may be washed in only fresh, clean solvent. Bearings should be washed in a container with a screened false bottom to prevent settlings from being stirred up. After washing, blow solvent out of bearing with a dry, clean air and repack with good grade bearing grease. Do not spin bearing, or allow it to spin when blowing off solvent. Do not attempt to wash a sealed or shielded bearing.

BEFORE DISASSEMBLING a machine, the area around the work bench should be clean and free from metal chips and other foreign matter. It is a good practice to spread a clean cloth on the work bench to prevent the loss of small parts, as steel balls, etc.

IT IS IMPORTANT that all parts are thoroughly cleaned and inspected before assembling. The slightest particles of dirt can create excessive runout in spindle or out of squareness in the bearing mounting, causing vibrations and loss of speed, ultimately damaging the machine.

BEFORE REASSEMBLING, all parts should be washed and inspected, replacing any worn parts or defective parts. Applying a small amount of grease to steel balls, springs and other small parts will often hold them in place while reassembling. Lubricant is recommended for the installation of "O" Rings.

WHEN REPAIRS ARE NECESSARY consult drawing containing part, for identification. When ordering repair parts, be sure to list Model Number, Part Number and Part Name to assure prompt and accurate shipment of your order.

LUBRICATION

The connecting rod must be greased on both ends. Once per day on the saw blade end (Page 4, #24) and once per week at the bearing end (Page 4, #34). Whenever the crank-connecting rod bearing (Page 4, #30) is replaced, the outside seal should be removed to allow grease in.

The motor bearings are sealed ball bearings, which requires no lubrication.

Your machine is equipped with carbon guides (Page 4, #16) and require air moisture for lubrication. If your machine should smoke in this area, spray the guides clean of grease with water.

The air motors planetary gears must be lubricated TWICE per day, lightly (one shot).

ADJUSTMENT

On new machines or when new guides are installed, crosshead adjustment will have to be made several times until the guides have developed a shiny black glaze on their surface.

Only adjust one guide at a time. **Loosen the three screws (Page 4, #18) which holds the guide to the main frame ½ turn.** The guide can now be adjusted with the three SET screws (Page 4, #3) on the side of the main frame. These screws should be moved very little at a time in rotation until all the screws have been set with the shake taken out of the crosshead. Retighten the three main frame screws (Page 4, #18) and prove the adjustment by running the machine for one minute. BE SURE TO TIGHTEN ALL SCREWS BEFORE PUTTING THE MACHINE INTO OPERATION.

Align the saw yoke up or down so that the blade guides support the blade without prestressing the crosshead or guide plates.

CLEANING

The complete exterior of the machine may be sprayed clean with water. The bottom cover pivots from the main frame and the exposed parts may be sprayed clean with water.

It is recommended that the air motor be flushed with a cleaning solvent once per week. After flushing it is advisable to put 20 to 30 drops of lubricating oil in the air inlet of the motor.

REMOVAL OF THE MODEL 100 SAW BLADE

The Model 100 saw blade is removed by first removing the saw blade crosshead bolt (Page 4. #10) and then loosening the front saw guide bolts one turn (Page 3. #1). Let the blade drop down and pull back. Reverse this procedure to replace the saw blade. be sure that the bolt is tighten down until the washer is completely compressed. Always rotate the motor by hand at least one full turn to insure that this bolt is down and does not hit the guides.

SAW BLADE AND BLADE GUIDES

Saw guides (Page 3. #2) and (Page 3. #16) should be checked at regular intervals for proper clearance in relation to the blade. Excessive clearance will allow unnecessary vibration which will result in blade breakage, cracking or buckling and also places strain on the drive parts.

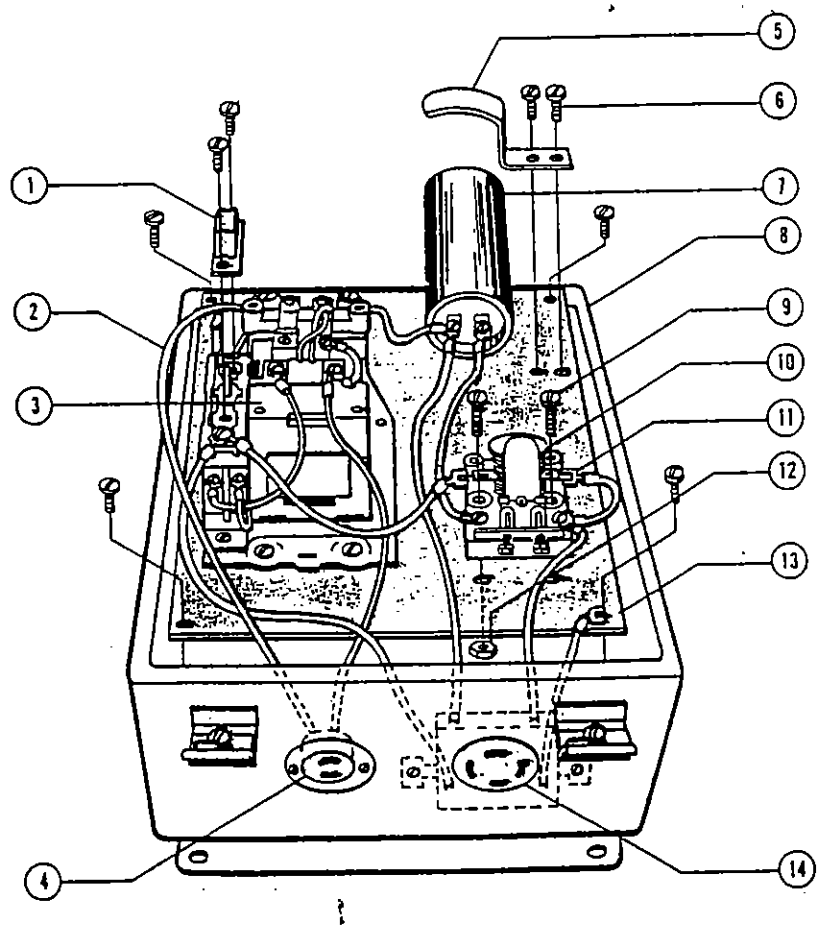
Saw blades should be kept sharp at all times. to neglect this will cause an overload on the motor and the machine will be subject to severe strain and resultant wear.

When saw blades are resharpened file a 20° bevel front & back alternately per tooth. Tooth gullets must be rounded. Do not set teeth.

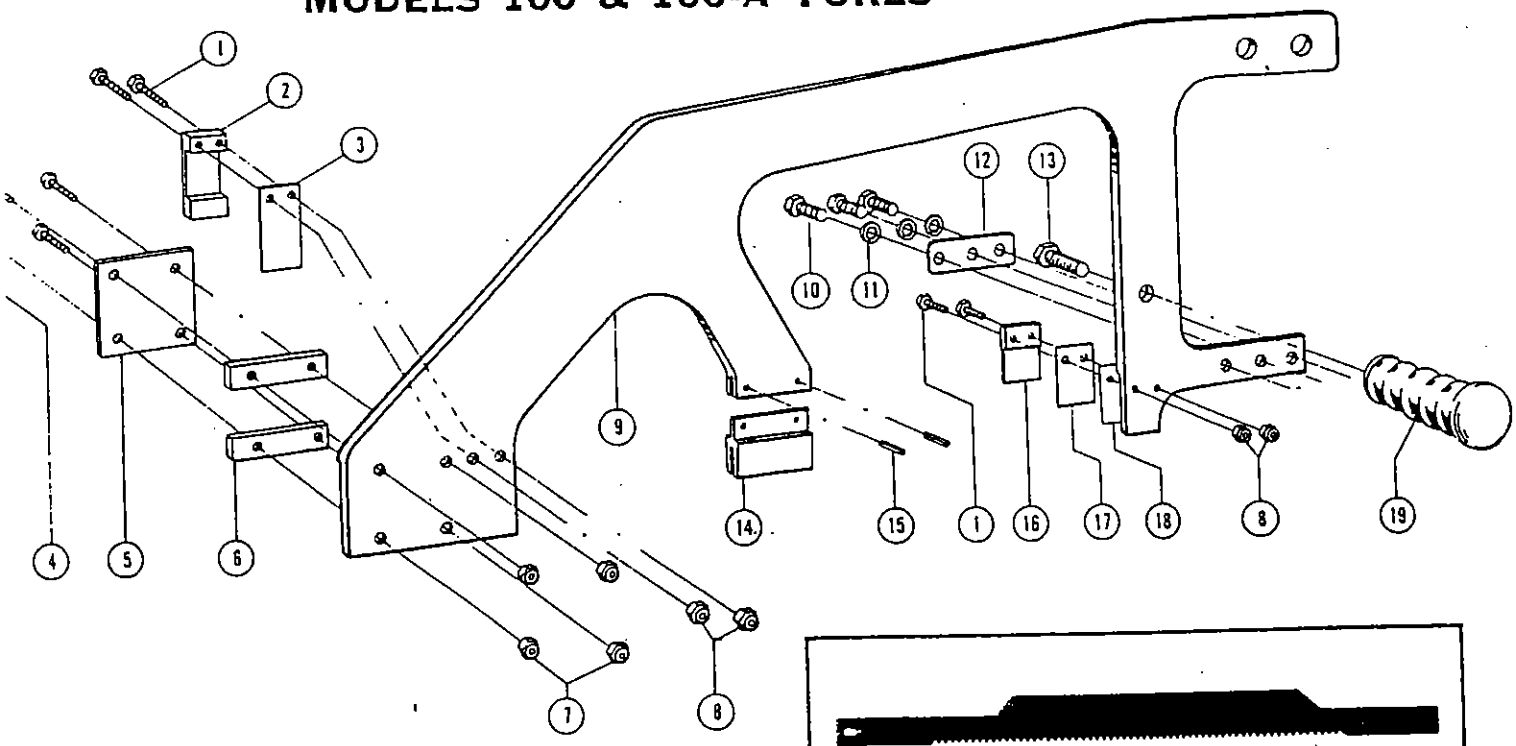
115 Volt Single Phase Panel Board Complete	7105158
230 Volt Single Phase Panel Board Complete	7105159

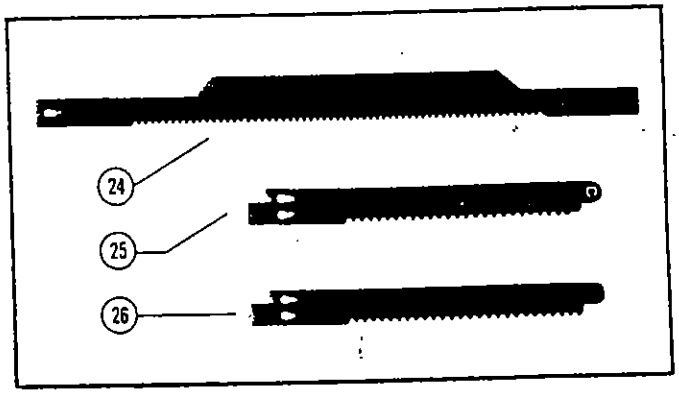
SINGLE PHASE PANEL BOARD

Ref. No.	Description	Quantity used if more than 1	Prime No.
1	Heater Element		
	115 Volt		1132993
	230 Volt		1132493
2	Wire	7 ft.	1116793
3	Single Phase Starter		1132893
4	2 Wire Outlet		1132693
5	Capacitor Clamp		7105300
6	Screw	9	9900122
7	Capacitor *-1		1132593
8	Enclosure		7105200
9	Screw	2	9900127
10	Relay *-1		
	115 Volt		1121993
	230 Volt		1128593
11	Term Spade	9	1114093
12	Nut	11	9901675
13	Base Plate		7105400
14	4 Wire Outlet		
	110 V		1132793
	220 V		1134793

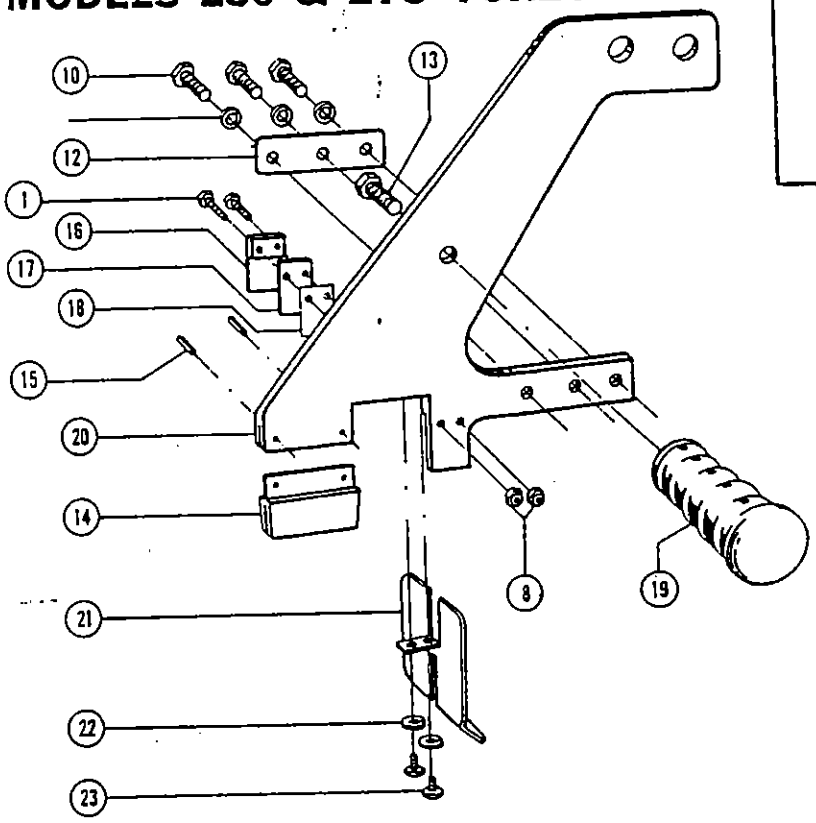


MODELS 100 & 100-A YOKES





MODELS 250 & 275 YOKES



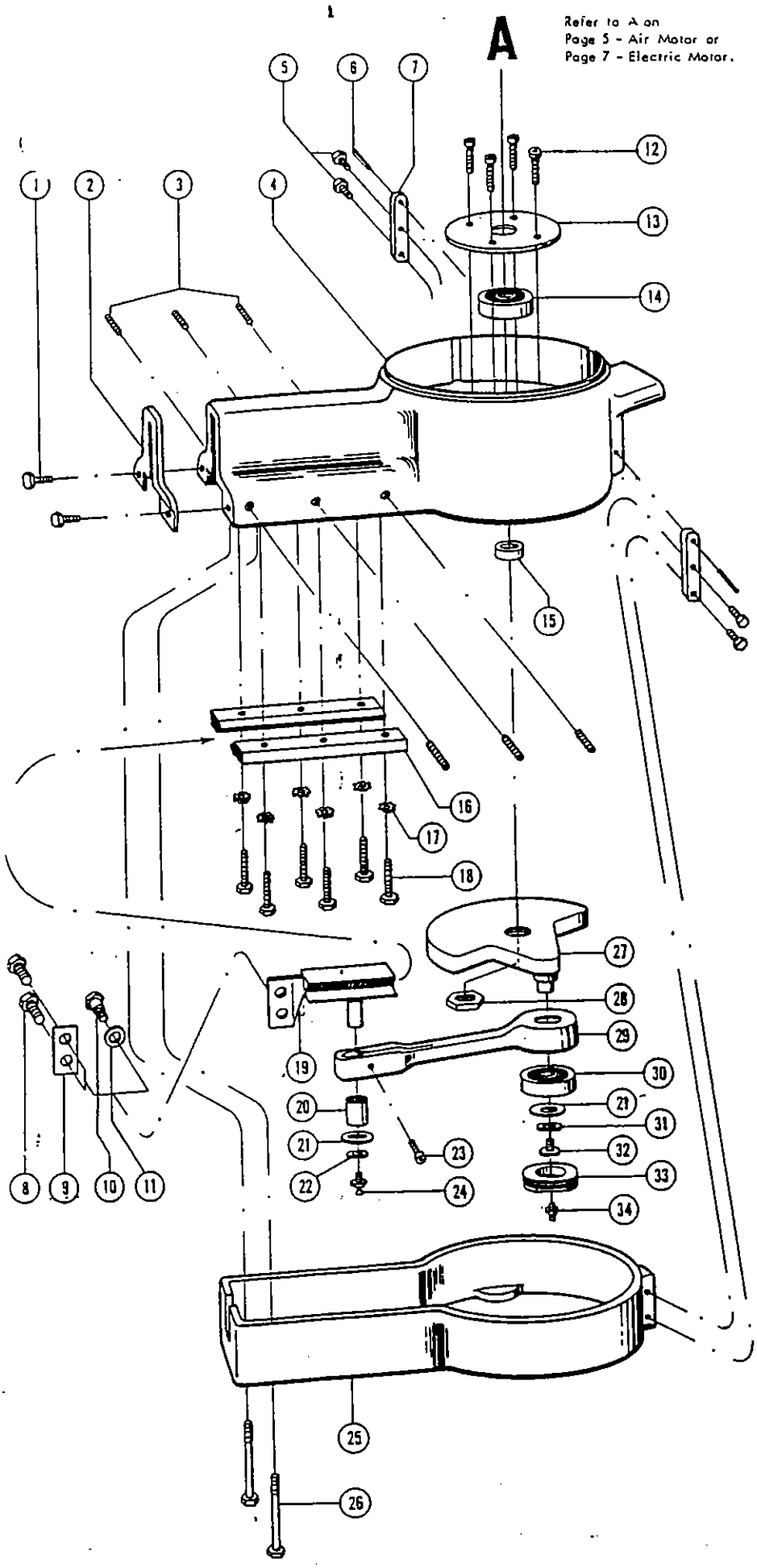
Model 100 or 100-A Steel Yoke Complete		7107559
Model 100 or 100-A Aluminum Yoke Complete		7104159
Model 250 or 275 Saw Yoke Complete		7103159

Ref. No.	Description	Quantity used if more than 1	Prime No.
1	Hex Head Screw *-2	4	9901493
2	Saw Guide - Front *-1		8505700
3	Wear Plate - Front *-1		7104200
4	Hex Head Screw	4	9902705
5	Blade Cover		7104400
6	Spacer	2	7104300
7	Elastic Stop Nut	4	9901731
8	Elastic Stop Nut *-2	4	9902308
9	Model 100 Yoke		
	Steel		7107500
	Aluminum		7104100
10	Hex Head Screws	3	9901443
11	Washer	3	9901937
12	Shim *-2	as req.	7032300
13	Hex Head Screw		9901542
14	Extension Saw Guide *-1		7103300
15	Dowel Pin	2	9902129
16	Saw Guide - Rear *-1		7033100
17	Wear Plate - Rear *-1		7033000
18	Shim - Rear Saw Guide *-3		7104593
19	Handle		6098198
20	Model 250 & 275 Saw Yoke		7103100
21	Splash Guard		7103200
22	Washer	2	9901935
23	Hex Head Screw	2	9901408
24	Model 100 & 100-A Saw Blade (4 TPI) *-5		6101500
25	Model 250 & 275 Blunted Saw Blade *-5		6102760
26	Model 250 & 275 Saw Blade		6102600

*-No. Denotes recommended spare part & numaer recommended.

REASSEMBLY OF THE SAW YOKES

1. Assemble all wear plates & guides to saw yoke, snug all bolts & nuts but do not tighten. Place the yoke & saw blade in the main frame (Pg. 4, #4) with the proper amount of shims (#12). Position the yoke such that the saw blade slides freely and tighten the three screws (#10).
3. If required, shim the rear saw guide with appropriate shims (#18).
4. Tighten all bolts and nuts, check to insure the saw blade slides freely.
5. The slot in the extension saw guide (#14) may be closed to a limited extent. First remove it from the saw yoke, then pound the slot closed using a hammer or squeeze it closed using a vice. Be sure the blade slides freely in the slot after making this adjustment.



MAIN FRAME

Ref. No.	Description	Quantity used if more than 1	Prime No.
1	Screw	2	9902702
2	Front Cover		7100900
3	Socket Head Set Screw	6	9901924
4	Main Frame Sub-Assy (includes #2)		7100155
5	Screw	4	9901410
6	Roll Pin	2	9902050
7	Bracket	2	7100700
8	Saw Bolt (Model 250 & 275) *-2	2	7025600
9	Saw Bolt Strap (Model 250 & 275) *-1		7033400
10	Saw Bolt (Model 100 & 100-A) *-1		7101800
11	Washer *-4		9901937
12	Screw	4	9901151
13	Bottom Bearing Retainer		7100500
14	Bearing *-1		7100693
15	Spacing Washer		7027300
16	Guide Plate *-2		
	Graphitar	2	7100393
	Brass	2	7025100
17	Shake-proof Washer *-6		9901955
18	Hex Head Screw *-6	6	9902766
19	Crosshead *-1		7025400
20	Bushing *-1		8512900
21	Washer	2	7027600
22	Washer		9901935
23	Screw		9901300
24	Grease Fitting-Crosshead *-1		7100893
25	Bottom Cover		7100200
26	Bottom Cover Bolt	2	7101700
27	Crank		7026900
28	Lock Nut *-1		7027400
29	Connecting Rod S. A. (Includes #20 & 23)		7027950
30	Bearing *-1		1058093
31	Washer		9901975
32	Screw		7027500
33	Bearing Cap		7028000
34	Grease Fitting *-1		8512793

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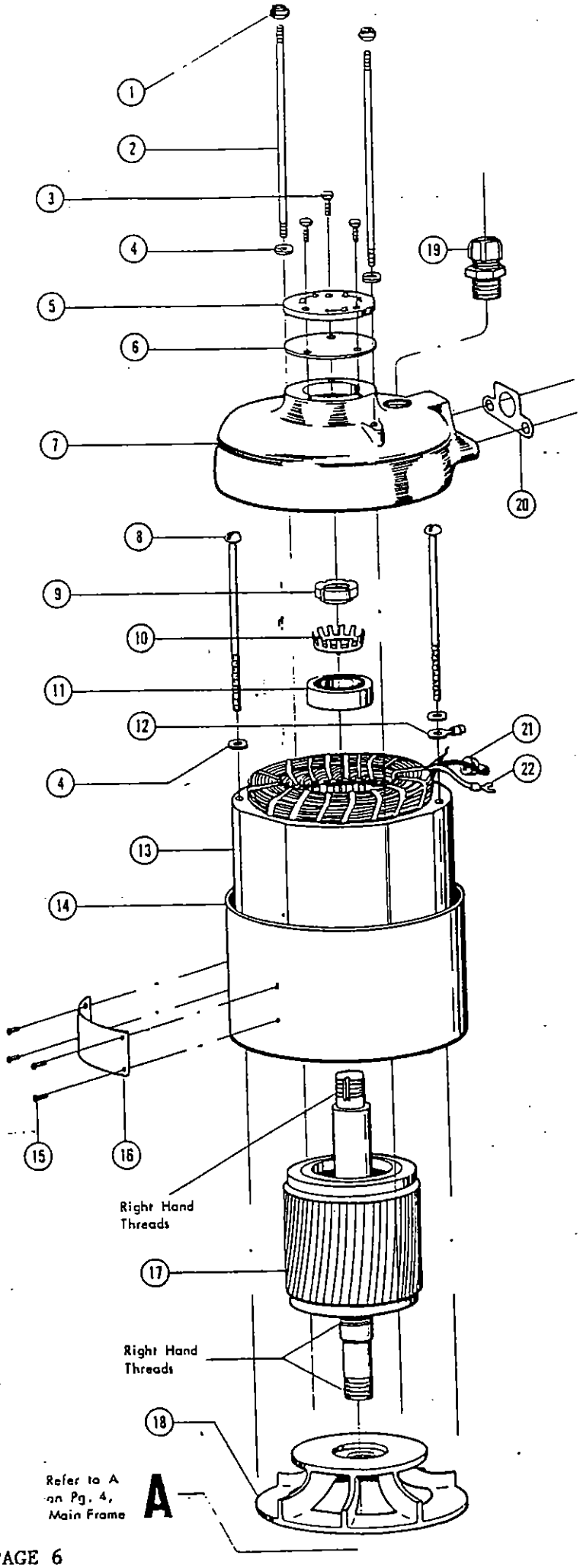
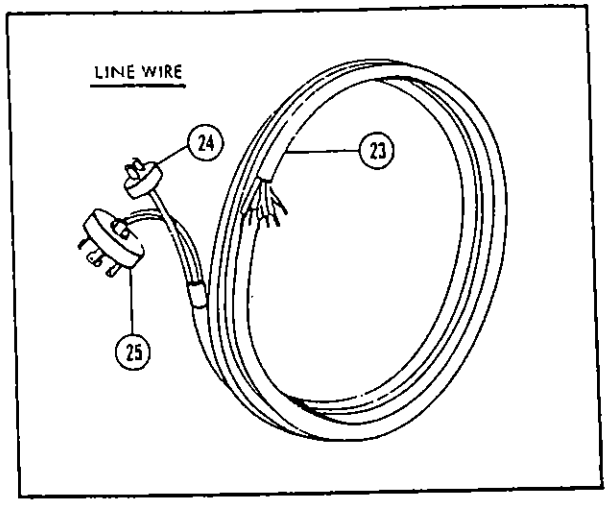
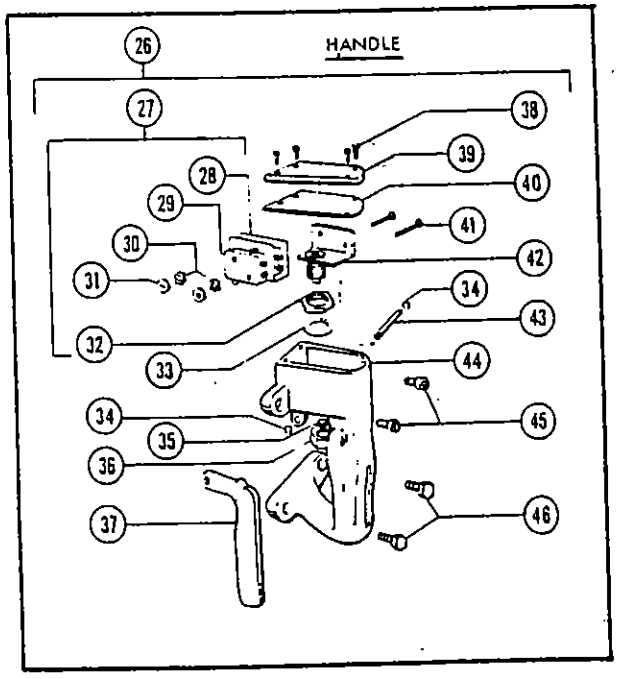
ELECTRIC MOTOR HANDLE & LINE WIRE







DISASSEMBLY OF THE ELECTRIC MOTOR

1. Remove the saw blade and saw yoke assembly (Pg. 3, #9 or #20), (3 screws at the main frame (Pg. 3, #10).
2. Remove the rear handle (#26) after disconnecting the switch wires.
3. Remove the top bearing cap (#5).
4. Loosen the wire strain relief (#19) until the line wire will slide freely.
5. Remove the 2 motor bolts (#2) and using a fibre block knock the top head (#7) up and off.
6. Disconnect the line wires, remove the next 2 motor bolts (#8) and knock the motor case and stator (#14) up and off.
7. Remove the bottom cover (Pg. 4, #25) at the hinge.
8. Remove the connecting rod by removing the grease fitting (Pg. 4, #24), the bearing cap (Pg. 4, #33), and the bolt (Pg. 4, #32). Pull the connecting rod up and off.
9. Lock the rotor (#17) in a vice on its largest diameter and remove the crank locknut (Pg. 4, #28) (right hand threads). Unscrew the crank (Pg. 4, #27) by using a steel bar to tap against.
10. Remove the top bearing locking nut (right hand threads) (#9) and locking washer (#10).
11. The rotor may now be tapped up and out of the main frame.
12. Remove the bottom bearing retainer (Pg. 4, #13) and tap the bearing up and out of the main frame.

PARTS LIST – MOTOR ASSEMBLY

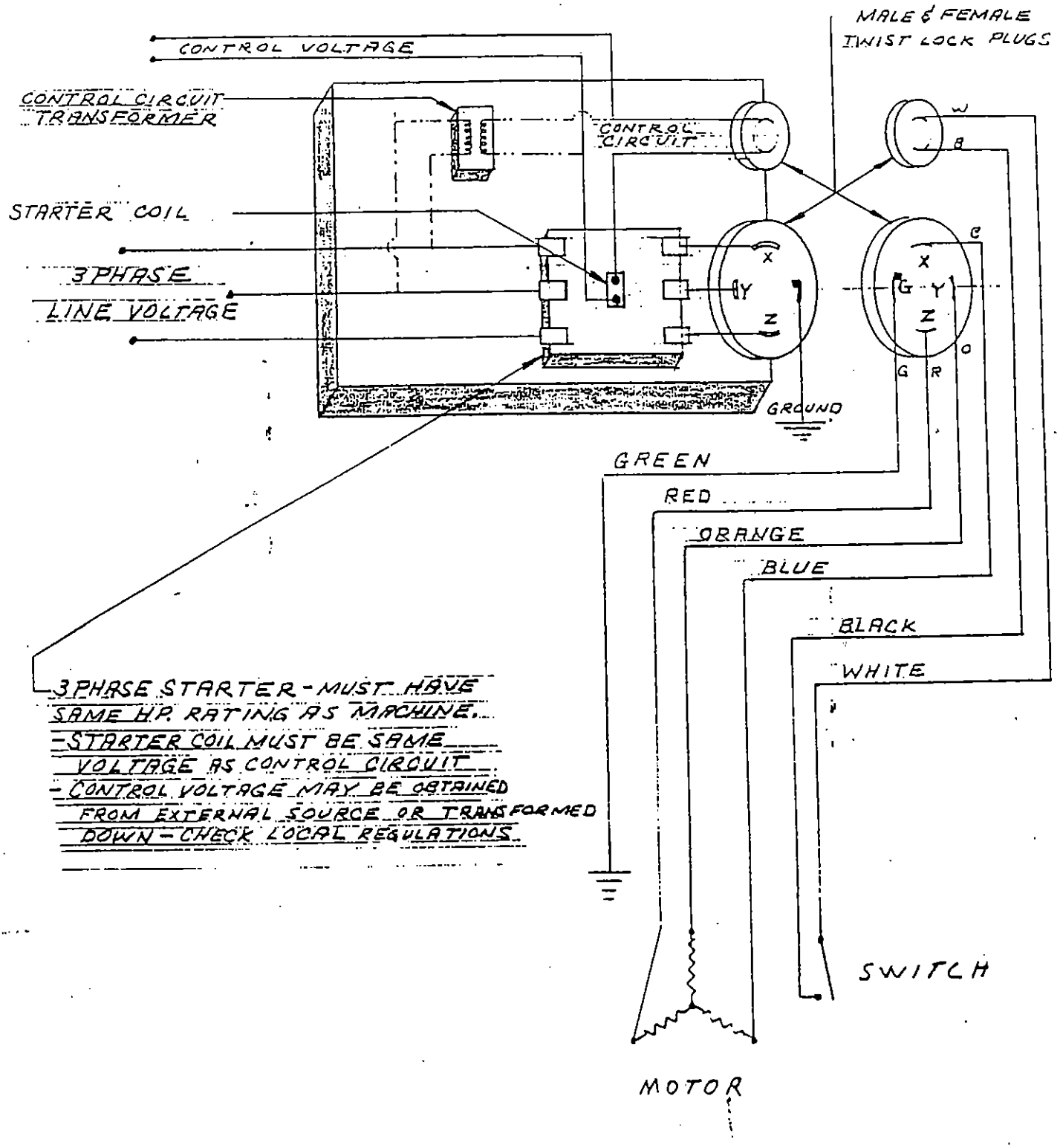
Ref. No.	Description	Quantity used if more than 1	Prime No.
1	Elastic Stop Nut	2	9902306
2	Motor Bolt	2	7024900
3	Hex Head Screw	3	9902702
4	Washer	4	9901933
5	Bearing Cap		7101600
6	Bearing Cap Gasket		7101593
7	Top Head		
	24 or 42 Volt Machines		7101424
	All others		7101400
8	Screw	2	9900180
9	Locking Nut *-1		7036393
10	Lock Washer *-1		8847193
11	Bearing *-2		7100693
12	Term Ring *-1		1114393
13	Stator (Specify: voltage, phase, cycle)		71010XX
14	Motor Case		7101100
15	Escutcheon Pin		9902232
16	Name Plate		8800000
17	Rotor		7101200
18	Fan		7060075
19	Strain Relief		
	24 V. or 42 Volt Line Wire		1133293
	24 V. or 42 Volt Switch Wire		1046200
	4 Wire Cord		1133093
	6 Wire Cord (for Auto-start)		1132293
20	Gasket		6041500
21	Wire Connector *-3		
	24 or 42 Volt Machines	3	1133393
	All other machines	3	1114593
22	Term Spade *-4	4	1114193
23	Line Wire	12 ft.	
	24 or 42 Volt Line Wire		1133193
	24 or 42 Volt Control Wire		1117093
	#18-4 Line Wire		1117493
	#18-6 Line Wire (for Auto-start)		1132393
24	2 Prong Plug		
	3 Phase Auto-start		1107600
	1 Phase Auto-start		1111400
25	Hubble 4 Prong Male Plug		
	110 V		1134193
	220 V		1105400
	380/440 V		1105600
	550 V		1134393
26	Rear Handle Complete		
	1 Switch		6047059
	2 Switches		8815550
27	Switch Assembly (also includes #42) *-1		
	1 Switch		6047559
	2 Switches		1027350
28	Insulator *-2	2	6048500
29	Switch *-4	2	6048600
30	Lock Washer	2	9901951
31	Nut	2	9901671
32	Switch Nut		6045100
33	Lock Nut Gasket *-1		6046500
34	Retaining Ring *-2	2	1208193
35	'O' Ring *-1		6046093
36	Switch Lock Nut		6045500
37	Trigger		6044000
38	Screw	4	9902668
39	Handle Cap		6043000
40	Gasket		6043500
41	Screw	2	
	1 Switch		9900037
	2 Switches		9900040
42	Switch Bracket S. A.		6047660
43	Trigger Hinge Pin		6044500
44	Rear Handle & Cap S. A. (includes #39)		6047155
45	Socket Head Screw	2	9901297
46	Hex Head Screw	2	9901410

*-No. Denotes recommended spare part and number recommended.

REASSEMBLY OF THE ELECTRIC MOTOR

1. When installing bearings, apply even pressure to the bearing race that has the press fit. Use bearing knockers wherever possible.
2. Be sure all mounting surfaces are clean and free of burrs as this may cause the bearings to be out of line and result in premature bearing failures.
3. Reverse the disassembly procedure to assemble your machine making sure to tighten all screws and nuts after each step.
4. The motor must be checked to insure proper rotation.

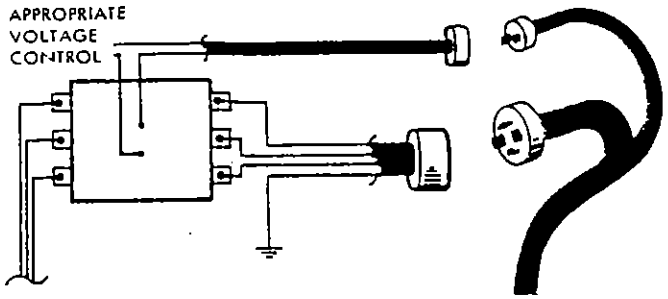
WIRING DIAGRAM FOR 3 PHASE MACHINES



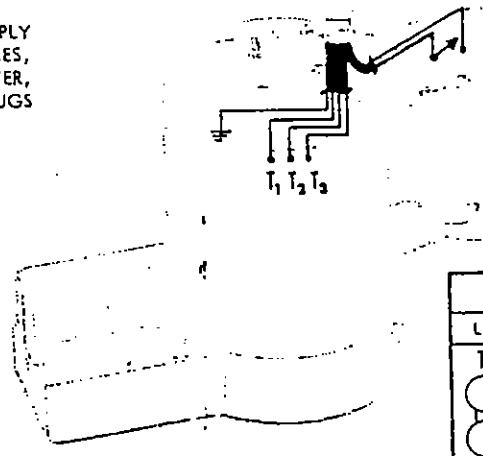
3 PHASE STARTER - MUST HAVE SAME H.P. RATING AS MACHINE.
- STARTER COIL MUST BE SAME VOLTAGE AS CONTROL CIRCUIT
- CONTROL VOLTAGE MAY BE OBTAINED FROM EXTERNAL SOURCE OR TRANSFORMED DOWN - CHECK LOCAL REGULATIONS

WIRING DIAGRAMS

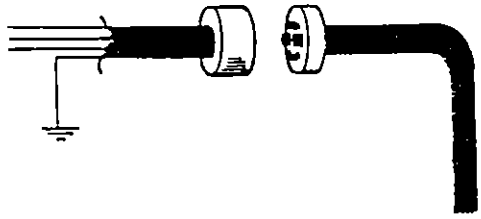
3 PHASE MACHINE WITH AN AUTOMATIC STARTER
(Standard Machine)



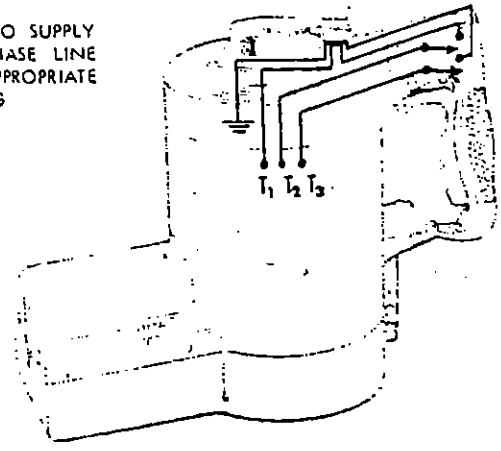
CUSTOMER TO SUPPLY
PROPER LINE WIRES,
AUTOMATIC STARTER,
AND FEMALE PLUGS



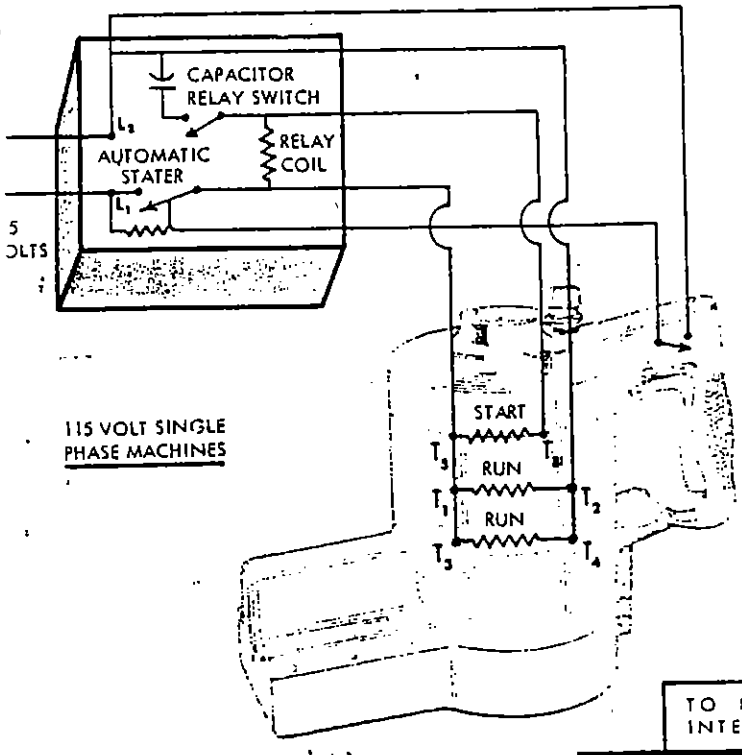
3 PHASE MACHINE WITH NO AUTOMATIC STARTER
(Special Order Only)



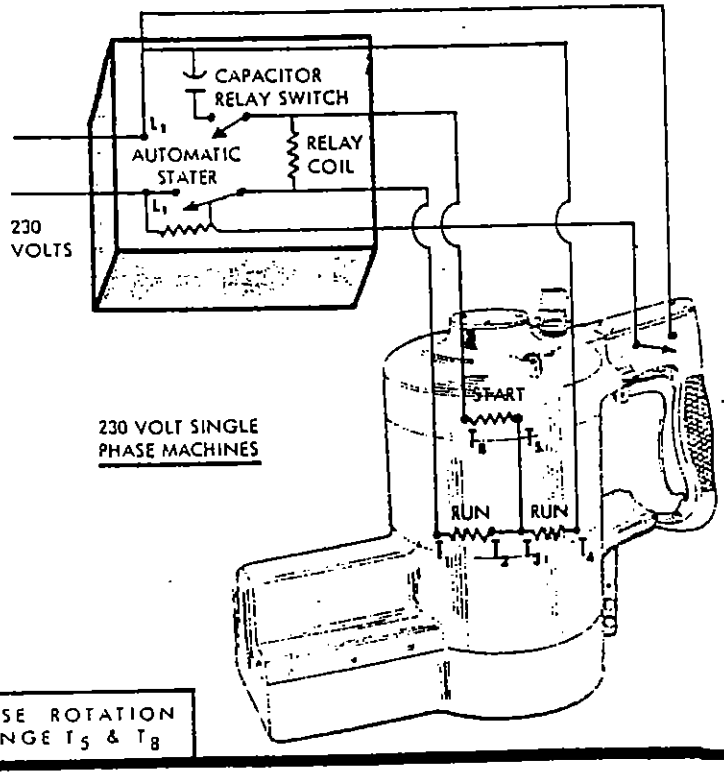
CUSTOMER TO SUPPLY
PROPER 3 PHASE LINE
WIRE AND APPROPRIATE
FEMALE PLUG



Dual Voltage Connections					
Low Voltage			High Voltage		
T1	T2	T3	T1	T2	T3
1	2	3	1	2	3
7	8	9	7	8	9
4	5	6	4	5	6



115 VOLT SINGLE
PHASE MACHINES



230 VOLT SINGLE
PHASE MACHINES

TO REVERSE ROTATION
INTERCHANGE T_5 & T_8

COST & DONOVAN

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