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USER GUIDE

UGE026-0596b

CAT-A-CUTTER

Corporate Office: 724.584.5500 | Instant Access 24/7 (Parts and Service): 800.458.1960 | Parts and Service: 814.437.6861

TABLE OF CONTENTS

SECTION 1

GENERAL SPECIFICATIONS

SECTION 1 - GENERAL SPECIFICATIONS

1.1 - Technical Data

PROFILE SIZE CAPACITY - Tubing up to 1" Diameter with standard O.D./I.D. ratios, and irregular shapes that can be circumscribed by a 1" Diameter circle.

CUT-OFF RATE - Up to 150 cuts per minute.

CUT-OFF LENGTHS - Up to 99.99 inches with minimum adjusting increments of .01 inch (standard), lengths up to 9999.99 available with optional count expander.

BLADE VELOCITY - 155 inches per second through profile. Blade velocity is constant and independent of cut length.

OVERALL DIMENSIONS AND WEIGHT:

HEIGHT	56"
CENTERLINE HEIGHT	42" $\pm$ ½"
WIDTH	28"
DEPTH	25"
WEIGHT	400 lbs. (Approx.)

1.2 - OPERATION AND INSTALLATION

1.2.1 - OPERATION

A Knife Holder carrying the Cutting Blade (s) is mounted to the Cutter Shaft, which is driven from the motor through an electrically operated Single Revolution Clutch.
The signal to initiate clutch rotation is supplied by an Electronic Counter operating in conjunction with a Pulse Generator Wheel which is driven by the Puller. When the Clutch Solenoid is actuated, the Cutter Shaft makes 1 complete revolution, and stops within $\pm$ ½° of its nominal starting position. This precise repeatability of the starting position of the blade along with the constant blade velocity assures greater Cut-Length accuracy along with clean, square, and uniform cuts throughout the Cut-Length range.

1.2.2 - PLACEMENT IN LINE

The machine should be installed in the Extrusion Line so that the Extrudate is in line with the Cutter Bushings. Adjust the height and level of the machine with the Four Adjusting Screws located at the corners of the Base.

1.2.3 - ELECTRICAL SUPPLY

A.C. - A Three-Phase, Four Wire Power Cord with Polarized Twist-Lock Plug for connection to Plant Power is furnished, connected to the machine.
Make certain that the Plant Supply Voltage corresponds to the Voltage stamped on the specification plate located at the front of the machine.
The Polarized Prong of the plug should be connected to the Plant Ground. The Electrical Power Source should be fused in accordance with applicable Electrical Codes.
CHECK TO ASSURE THAT DIRECTION OF MOTOR ROTATION IS CORRECT.

NOTE: The electrical noise generated by the extruder or other auxilliary equipment could cause the cutter to cycle unintentionally. To avoid this, do not operate the cutter from the same supply line used to supply power to the extruder or any other equipment which could generate electrical noise in the power mains.

SECTION 2

MECHANICAL SYSTEM

(SEE DWG. NO. D-114G-106)

SECTION 2 - MECHANICAL SYSTEM (SEE DWG. NO. D-114G-106)

2.1 - KNIFE ASSEMBLY

The Knife Assembly comprises the Knife Arm, Cutter Blades(s), and Clamp Plate(s), which support the blade edges and clamp the blade(s) to the Knife Arm.

2.2 - SHEARING ANVIL

A Shearing Anvil guides and supports the Extrudate during the cutting operation.

The Shearing Anvil consists of TWO Bushings mounted on a support with just enough clearance between the Bushings to facilitate passage of the Cutting Blade (approximately .001 inch on either side of the blade). When cutting tubing or rod, the Bushing I.D. should be about .025" larger than the diameter of the Extrudate. When cutting shapes, a Round Bushing may be used, but if the cutting action distorts the cut ends, the Bushing Hole should be made the same shape as the Extrudate Profile.

2.3 - SINGLE REVOLUTION CLUTCH

The Single Revolution Clutch is a Rugged Clutch-Brake of the Wrap-Spring type. After Solenoid Actuation, the clutch will rotate the Knife Arm for one revolution and stop the arm within $\pm \frac{1}{2}^{0}$ of nominal position (non-cumulative).

SECTION 3

ELECTRICAL SYSTEM

SECTION 3 - ELECTRICAL SYSTEM

3.1 - SCHEMATIC DRAWING

Refer to Electrical Schematic Drawing No. C-114G-094 in Drawing Section.

3.2 - DRIVE MOTOR SPECIFICATIONS

MOTOR HORSEPOWER	1 H.P.
MOTOR RPM	850 RPM
MOTOR VOLTAGE/PHASE/HZ	220/440V/3Ø/60HZ
MOTOR AMPERAGE	1.8 Amps at 460V 3.6 Amps at 230V

3.3 - CUT-LENGTH PROGRAMMER

The Cut-Length Programmer is a Solid State Electronic Device that counts pulses from a Pulse Generator located on the Puller. When a predetermined count is reached, the counter initiates a signal to actuate the Single Revolution Clutch Solenoid.
The Pulse Generator has a wheel circumference of 12 inches, which generates 1200 pulses per revolution or 100 pulses per inch.
Length of cut is pre-set by adjustment of the Thumb-wheels located on the Control Panel. The minimum adjusting increment is .01 inches.

3.4 - CONTROL BOX

Listed below are the functions of the push buttons, switches and other controls located on the face of the Control Box.

"START" PUSH BUTTON (ILLUMINATED)

Turns on the Main Drive Motor and the Control Power. When actuated, the button will be illuminated with an amber light. If signals are being supplied by the Pulse Generator, the Cutter will begin to cycle at the interval indicated on the cut length adjustment numerical display.
The cutter may also be actuated at this time by pressing the "Manual Cut" push button.

3.4 - Continued

"STOP" RED PALM SWITCH

Shuts off all power to machine.

"MANUAL" CUT PUSH BUTTON

Actuation of this switch will initiate a single cycle of the Cutter Shaft. (Encoder Wheel must be turning)

"CUT LENGTH PROGRAMMER"

Cut Length of the Extrudate is selected by adjustment of the FOUR Thumbwheels until the desired Cut Length Reading is set up on the numerical display. The standard maximum cut length is 99.99 inches.

"PRODUCT COUNTER ON-OFF" TOGGLE SWITCH (OPTIONAL)

When in the "ON" position, the SIX Digit Counter is actuated and begins to count cuts. Each cut is registered and totalled on the numerical display. The Counter is reset by depressing the Reset Button located on the face of the Counter.

SECTION 4 - SET UP

4.1 - SET UP (DO NOT PLUG IN ELECTRIC LINE)

Set the Cutter in the Extrusion Line as explained in Section 1.2.2.

4.2 - OPERATION (Drawing #0219-01398)

Open the hinged cover and make sure that the cutting blade is passing cleanly between the TWO Cutter Bushings by rotating the Knife Holder by hand. It will be necessary to release the Clutch to rotate the blade. To release the Clutch, push in on the Clutch Release Lever (item 13 on Drawing.). This will allow the Clutch to be rotated by hand for one revolution.

4.3 - AUTOMATIC (ENCODER) OPERATION

Connect the cable from the Encoder to the Encoder Input Jack, located at the rear of the cutter. Caution, DO NOT connect or disconnect the Encoder with the power on. Set the cut programmer Thumb Wheel Switch to 99.99. After checking to see if all guards are closed, plug the line cord into a source of power. (Check machine identification plate) Depress the Start Push Button. The yellow light, part of the Start Push Button, should light and the 1 H.P. Motor should run. If the Encoder Assembly is being driven by the Puller, start the puller. If not, rotate the Encoder Wheel by hand until the cutter actuates. (Approx. 9 rev.) The Encoder Wheel measures 12 inches circumference. When the wheel rotates 1 complete revolution, the encoder will generate 1200 pulses. Therefore, the 12 inch wheel is divided by 1200. So, each pulse will be equal to .01 inch of wheel travel. To cut a length 10.01 inches set the thumb wheel switch to 10.01.

SECTION 4

SET-UP

SECTION 5 - SERVICING AND MAINTENANCE

5.1 - CHANGING KNIFE BLADE(S)

1) With machine power turned off, lift front hinged cover and, by pressing clutch release lever, release the Single Revolution Clutch.
2) Rotate Knife Holder to vertical position.
3) Remove FOUR screws securing Clamp Plate and blade to Knife Holder.
4) Remove and replace blade, and reverse above procedure to secure new blade in place.

5.2 - LUBRICATION

The Cutter Shaft Piloted Ball Bearings are pre-lubricated with provision for regreasing. They should be regreased on a regular basis at 1000-hour intervals. Use No. 2 Lithium-Base Ball Bearing Grease.

5.3 - TIMING BELT (SEE DWG. NO. D-114G-106)

The Timing Belt (item No. 10 on Dwg.) should run for years before replacement is required. However, when the belt does require replacement, remove Bearing Bracket (item No. 2 on Dwg.), and loosen screws in motor mount bracket (item 5). Slide entire motor toward front of machine as far as it will go, and slip off old timing belt. Replace with new belt and replace bearing bracket in original position. Slide motor mount bracket back until timing belt is snug. With proper belt tension, timing belt should deflect approximately one-sixteenth inch when light finger pressure is applied to the back of the belt between the pulleys.

5.4 - TROUBLE SHOOTING - MECHANICAL

CAUTION: WHEN SERVICING ANY MACHINE, DISCONNECT POWER PLUG.

1) Cutter Shaft does not turn; machine will not start
   a) Check incoming power to machine and make certain it corresponds to specification plate.
   b) Check Interlock Micro-Switch under hinged cover.
   c) Check Thermal Overload Protectors in Magnetic Starter located in Electrical Cabinet.
   d) Check plug connecting Encoder to Electrical Cabinet.
   e) Check Fuses in Electrical Box

SECTION 5

SERVICING AND MAINTENANCE

4.5 - Continued

CAUTIONS: Remove power to machine before making any wiring changes.

NOTE: After installation, the operator will observe that the cutter will initiate one cut cycle for each actuation of the Limit Switch or Relay contacts. The contacts must close, then open, then close again to initiate a new cut cycle.

4.6 - SAFETY

As with all GATTO equipment, safety is designed into the machine and not added on as an afterthought. The machine is completely safety-enclosed and yet the efficiency and accessability are not impaired. All of the operating controls are carefully clustered at eye level for safety and convenience.
For added safety, a Micro-Switch Interlock stops the motor if the front cover is opened while the machine is in operation.
The Guards are "OSHA" color coded.

4.3 - Continued

The actuation of the cutter depends on the rotation of the encoder. Therefore, the speed of rotation will have no effect on the cut length. This enables the operator to vary line speed with little or no effect on cut length. CAUTION: The maximum cut rate is 150 cuts/min. To exceed this rate, will shorten the life of the mercury relay in the unit.
The program counter can be reset at any time by depressing the manual cut phush button. For example, suppose the line is running and the operator wishes to cut a length for inspection. He would depress the manual cut push button. The machine would actuate and cut the product. The "Program Counter" would be reset and the next length of product would be cut to the original length set into the cut programmer. (NOTE: The manual cut push button will function only when the encoder wheel is rotating.)

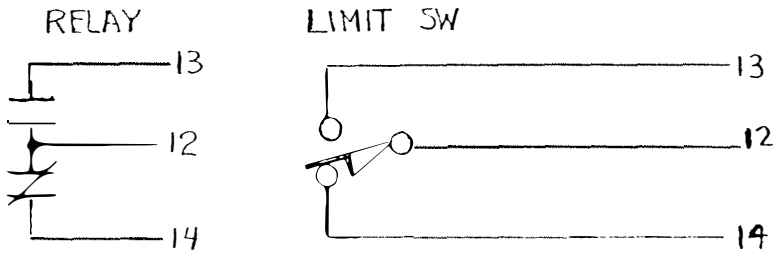
4.4 - PRODUCT COUNTER

The Product Counter, (if supplied) located to the left of the control panel, will increment each time the cutter operates. The switch, located below the counter, will deactivate the counter when it is in the down position. The product counter may be manualy reset at any time.
CAUTION: PLACE THE SWITCH IN THE OFF POSITION BEFORE DEPRESSING THE MANUAL RESET.

4.5 - REMOTE OPERATION

Operating the cutter from a Remote Limit Switch or Relay.

Refering to schematic number 0219-01231, disconnect the three (3) wires #12, #14, #13 that are connected to the Clutch Driver Assembly, gold unit, mounted mid center of equipment panel. Tape these leads and connect limit switch or relay as shown below:



5.4 - Continued

2) Motor starts but Knife Holder does not cycle.

a) Check Timing Belt.
b) Check for broken Shaft or Key.
c) Check to insure that Clutch Solenoid is being energized.
d) Check that pawl of clutch is being pulled clear of step on stop collar by solenoid.

Check to insure that the pawl pivots freely. To do this apply finger pressure against the pawl in the area of the Solenoid Plunger. The pawl should move against the spring with very light pressure. If it does not, the Solenoid should be removed, Two 10-32 Allen Cap Screws retain the Solenoid. Then remove Paul which is retained by a Snap Ring.

3) Clutch builds up excessive heat.

The clutch will build up heat in normal operation and, as with an electric motor, this temperture rise is not detrimental. To detect excessive heat, feel the rectangular clutch plate upon which the solenoid is mounted. It should be warm, but not so hot that you can not keep your finger on it. If this is the case, proceed as follows:

a) Check Timing Belt tension. Adjust if too tight.
b) Check to insure that the clutch plate is free to "Float" (approximately $\pm$ 1^{0} radially and $\pm$ 1/32" axially). This "Float" is controlled by the bracket and shoulder screw (items No. 6 and 27 on Dwg. No. D-114G-106).

4) Clutch does not rotate freely when turning by hand with pawl disengaged.

If checks "A" and "B" above do not alleviate problem, call GATTO Service Department.

5.5 - TROUBLE SHOOTING - ELECTRICAL

Referring to schematic #C-114G-094, 115 volt power is connected to one end of R1 (500) when the machine is running. The other side of R1 (wire #9) connects to the yellow input terminal of the clutch driver assembly, gold unit, mounted mid center of equipment panel. The three (3) terminals marked C, NC, and NO, control the action of the clutch driver assembly. The assembly will output a 150 volt pulse whenever the "C" to "NC" connection is broken. At the same time, the "C" to "NO" connection must be completed. Referring to schematic #B114G-133 , the relay contacts that perform this function are shown to the extreme right. Each time the relay ICR is energized, the contacts will change state and the clutch driver assembly will output a 150 volt pulse, 15 M Sec. long. This pulse will cause the clutch solenoid to pull in and allow the clutch to complete one cut cycle.
Note that one end of the relay ICR is connected to the positive terminal of the 24V D.C. power supply. Therefore, all that is needed to cause a cut cycle is to connect the other end of the coil of ICR to common (wire #16). This is precisely the function of the cut programmer. At count-out pin #13, on the programmer, is connected to common for approx. 100 milli second.

The TWO led indicators at the right edge of the program counter are useful trouble shooting tools. The indicator, at the right, will light each time an encoder pulse is received by the counter. If a problem develops, where the machanic does not know if the encoder or program counter is at fault, the following may prove helpful:

1) Stop the cutter.
2) Remove the jack which connects the encoder to the cutter.
3) Set the cut programmer to 0003.
4) Connect a wire to wire #20.
5) Start the cutter.
6) While observing the led, on the right side of the product counter, touch the wire to #16. The led should light each time the connection is made. If the led does light, the encoder or wiring to the encoder is at fault. After touching wire #16 three (3) times (we set the programmer to 0003) the led, on the left, should flash and the clutch should complete one revolution.

5.5 - #6 continued.

If the led, to the left, does flash, in response to the above test, the problem is with the mercury relay, located to the left of the equipment panel or with the clutch drive assembly, gold unit, mounted mid center of equipment panel. To test the clutch driver assembly, connect a limit switch as described on page 11.
If the clutch functions with the limit switch, the problem is with the relay. If not, the clutch driver assembly is at fault.

5.5 - Continued

The TWO led indicators at the right edge of the counter printed circuit board are useful trouble shooting tools. The upper indicator will light each time an encoder pulse is received by the counter. If a problem develops, where the mechanic does not know if the encoder or program counter is at fault, the following may prove helpful:

1) Stop the cutter
2) Remove the jack which connects the encoder to the cutter.
3) Set the cut programmer to 0003.
4) Connect a wire to wire #20.
5) Start the cutter.
6) While observing the upper led touch the wire to #16. The led should light each time the connection is made. If the led does light, the encoder or wiring to the encoder is at fault. After touching wire, #16 three (3) times (we set the programmer to 0003) the lower led should flash and the clutch should complete one revolution.
If the lower led does flash, in response to the above test, the problem is with the mercury relay, located to the left of the equipment panel or with the clutch drive assembly, gold unit, mounted mid center of equipment panel.
To test the clutch driver assembly, connect a limit switch as described on Page 11.
If the clutch functions with the limit switch, the problem is with the relay. If not, the clutch driver assembly is at fault.

5.6 - ENCODER TESTING (DWG. B114G-133)

The encoder requires a 15 volt source of power. The 15 volts is supplied to the encoder between wire #15 and #16. To test the encoder connect a volt meter, set to 15 V D.C., between wire #20 and #16. Rotate the encoder wheel slowly. The meter should swing up to 15 volts and then to 0.

5.7 - OPERATION AT OTHER VOLTAGE

To operate the machine at line voltages, other than shown on machine name plate, the following items must be changed:

VOLTAGE	ITEM 1 PLUG	ITEM 7 FUSE (3)	ITEM 8 HEATER (3)	ITEM 10 XFMR	ITEM 9 MOTOR
440	71630-NP	KTK 4	N15	Rewire to 440V	Rewire for 440
220	71530-NP	FNM 7	N22	Rewire for 220V	Rewire for 220
208	71530-NP	FNM 8	N23	1634-00247	Rewire for 220

SECTION 5.8 - CLUTCH OPERATION AND SERVICING

ODC-1 CLUTCH FUNCTION

Just as the spring clutch can be used to transmit rotation from an input to a load by joining two hubs in a positive engagement, it can also be used to brake the rotation of the load by joining a rotating hub to a stationary hub in a positive engagement in the Spring Brake. The control tang holds the spring open to permit rotation of the load. When released, the spring wraps down on the output hub, braking the load.

PSI has developed and patented a method of combining the two functions - clutching and braking - in a single wrap-spring rotation control device, which can then be used to start and stop a load, always stopping at the desired spot without cumulative error. In this device, the brake spring is wrapped down to engage by the same collar that unwraps the clutch spring. The essential difference in performance between the Clutch-Brake and the Single-Revolution Clutch is that the former will stop any load that it is able to start, whereas the latter will only stop about 10% of the starting load.

ODC -1 CLUTCH SERVICING

A) CLEANING: The Input Hub (Item #2), the Output Assembly (Item #6), and the Brake Hub (Item #9) are an oil impregnated material and SHOULD NOT be washed in any type harsh degreaser or gasoline. Kerosene is recommended.

B) OILING: After cleaning the Input Hub, the Output Assembly, and the Brake Hub, they must then be oiled. Bring oil solution to a boil, remove from heat, and add parts to be oiled only (Items #2, #6 and #9). Let parts sit for awhile, oil will impregnate itself into parts.

SECTION 5.8 - Continued

DISASSEMBLY:

1) Release Actuator Lever so that clutch is engaged and brake released.
2) Remove Retaining Ring from the input Hub end.
3) Remove input Hub by rotating opposite the drive direction.
4) Remove Retaining Ring from the Mounting Plate end.
5) Remove Output Shaft, Springs, and Control Collar assembly by rotating Output Shaft in the drive direction. (DO NOT DISASSEMBLE BRAKE HUB FROM MOUNTING PLATE)
6) Remove Control Collar from the Output Shaft and Spring assembly by extracting towards the Brake Spring end.

ASSEMBLY:

1) Replace Clutch, Brake, and Anti-Backup Springs as required. (Assemble springs concentric and square to the Output Shaft.)
2) Assemble Control Collar over the Output Shaft and Spring Assembly by inserting from the Brake Spring end (it will be necessary to extend Brake Spring using long nose pliers).
3) Place the Brake Spring Tang in any one of the nine (9) Control Collar slots at random.
4) Assemble Output Shaft, Springs, and Control Collar assembly to the Mounting Plate assembly by rotating Output Shaft in the drive direction.
5) Assemble Retaining Ring to Output Shaft at the Mounting Plate end (smooth surface facing Brake Hub).
6) Rotate Output Shaft in the drive direction, until it reaches a full brake position.
7) With the Clutch Spring Tang not is slot, insert the Input Hub by rotating opposite to the drive direction.
8) Select the one of ten (10) Control Collar slots for the Clutch Spring Tang that will provide a 50" to 75" circumferential overtravel of the Control Collar when released.

NOTE: At this point it may be necessary to re-select one (1) of the nine (9) Control Collar slots for the Brake Spring tang (release Actuator Lever, remove Clutch Spring Tang from slot then move Control Collar axially towards Input Hub end and rotate it opposite to the drive direction to pick up next slot).

9) Repeat Step 8 until the 50" to 75" specification is achieved.
10) Assemble Retaining Ring to Output Shaft at the Input Hub end (smooth surface facing Input Hub).

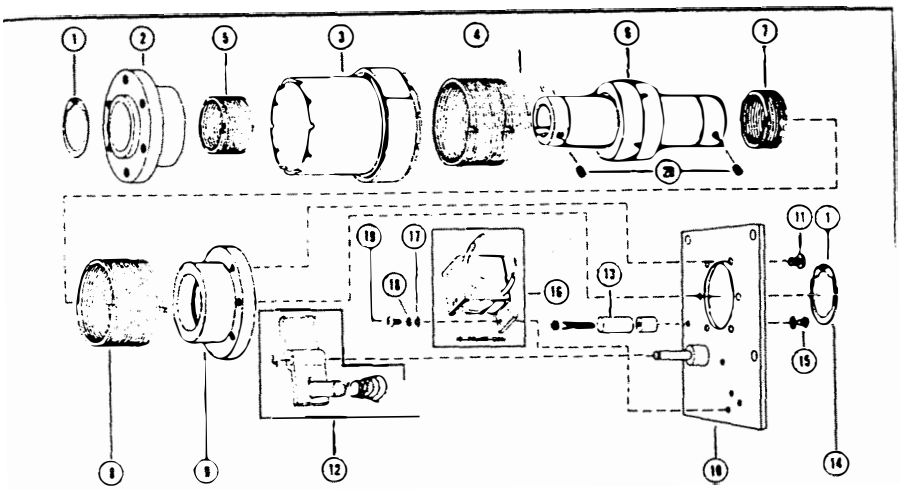
NOTE: Units equipped with Anti-Overrun - for removal of Input of Hub must be rotated in the direction of drive with Spring Tang held stationary.

SECTION 5.8 - Continued

ODC-1 CLUTCH PARTS LIST AND ASSEMBLY INSTRUCTIONS

PARTS LIST:

1) Retaining Ring
2) Input Hub
3) Control Collar
4) Drive Spring
5) Anti-Overrun Spring
6) Output Assembly
7) Anti-Back Spring
8) Brake Spring
9) Brake Hub
10) Plate Assembly
11) Button Head Cap Screw
12) Actuator Assembly
13) Act.Limit Stop Assembly
14) Button Head Cap Screw
15) Lockwasher-Ext. Teeth
16) Coil Assembly
17) Flashwasher
18) Lockwasher Split
19) Headless Soc. Set Screw
20) Button Head Cap Screw



SECTION 6 - INDEX

6.1 - SPARE PARTS BASIC MACHINE

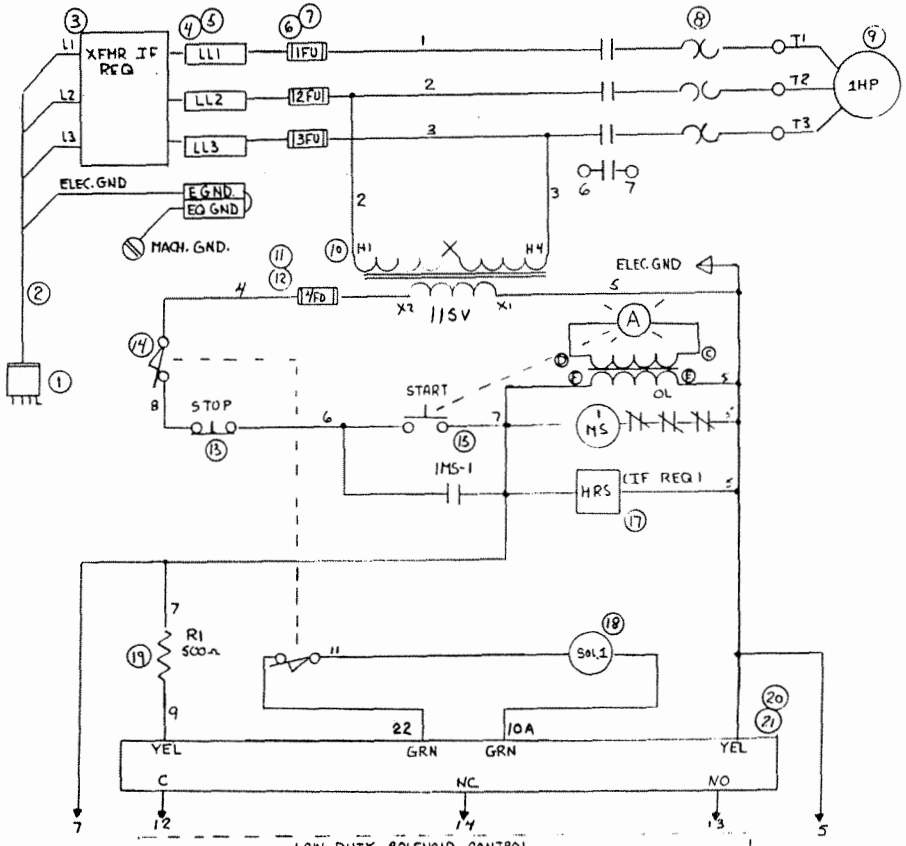
QUANTITY	PART NUMBER	DESCRIPTION
2	1552-00648	fuse KTK 4 (440 V Machine)
2	1552-00206	fuse FNM 7 (230 V Machine)
2	1552-00737	fuse FNM 8 (208 V Machine)
1	1552-01385	fuse MDL 1 6/10
1	5553-00639	Solenoid
1	1613-00093	Limit Switch
1	1569-00218	Light Bulb
1	1563-00119	Heater (440 V Machine)
1	1563-00194	Heater (230 V Machine)
1	1563-00208	Heater (208 V Machine)
1	1522-00074	Magnetic Starter Coil
1	1650-00052	Clutch Driver Power Supply
1	1507-00033	Contack Block
1	1507-00025	Contack Block

SPARE PARTS BASIC MACHINE W/HIGH SPEED COUNTER

ALL parts on page, plus the following:

1	1545-00179	Encoder
1	1540-	Counter
1	1608-00247	Zener Diode
1	1650-00028	Power Supply
1	1593-00997	Contact
1	1601-00535	Relay

REV.	DESCRIPTION	DATE	BY	APP.



LOW DUTY SOLENOID CONTROL
DRAW. C-114G-096 0219-01266

HIGH SPEED COUNTER CONTROL 4 DIGIT
DRAW. B-114G-133

HIGH SPEED COUNTER CONTROL 6 DIGIT
DRAW C-114G-149

LOW DUTY CLUTCH CONTROL
DRAW B 114G-095 0219-01258

DRAWING	ITEM	PART No.	QTY.	MATERIAL	DESCRIPTION

C-114G-094

NOTES:
EXCEPT AS NOTED FINISH ALL OVER TO 125
BREAK ALL CORNERS UNLESS OTHERWISE NOTED
DO NOT SCALE PRINT

TOLERANCE UNLESS OTHERWISE NOTED
FRACTIONS ± .1/64
DECIMALS ± .005
ANGLES ± 1/4°
WELDMENTS ± 1/16

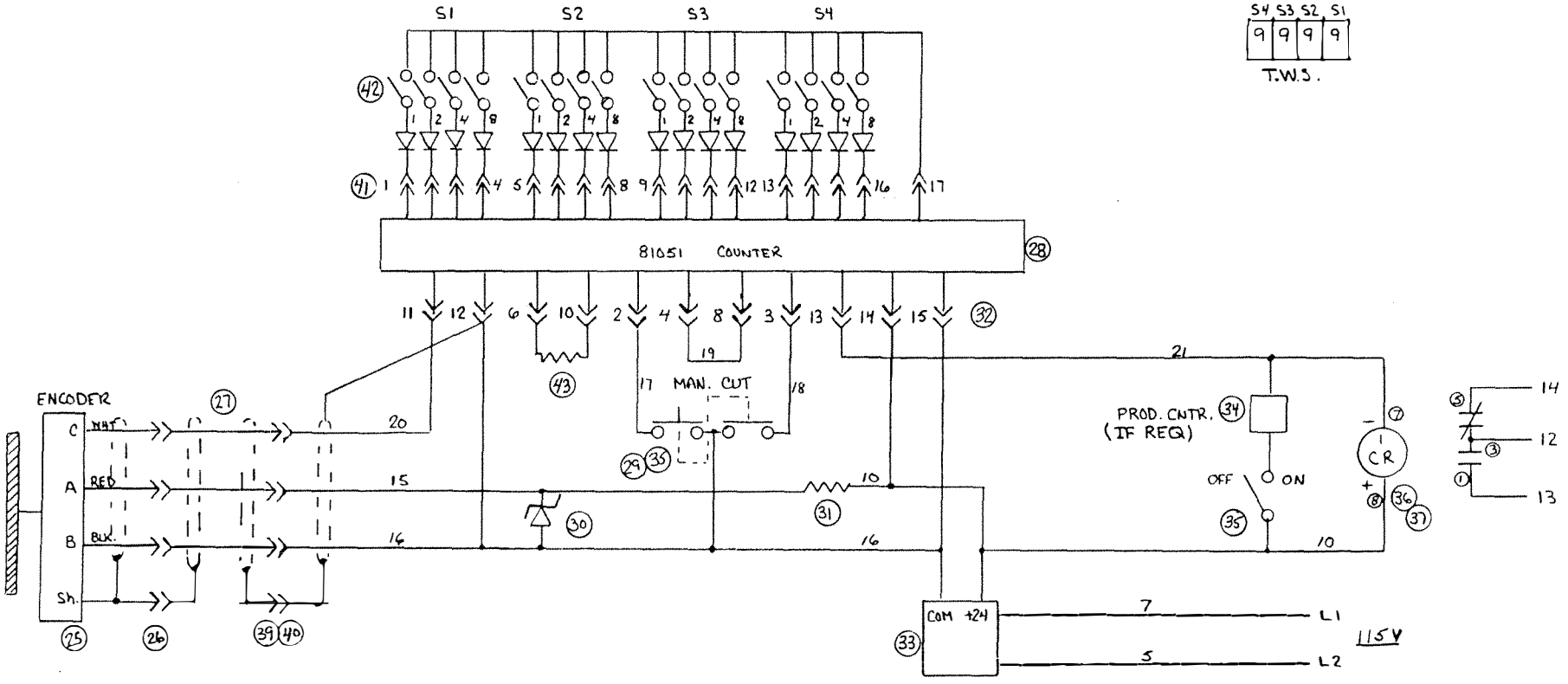
GATTO MACHINERY DEVELOPMENT CORP.

DESIGNED BY	DATE	MATERIAL
DRAWN BY RJC	DATE 9/15/80	

TITLE: ON DEMAND CUTTER
BASIC MACHINE SCHEMATIC

SCALE			REV.
	C	0219-01231	

REV.	DESCRIPTION	DATE	BY	APP.



DRAWING	ITEM	PART No.	QTY.	MATERIAL	DESCRIPTION
B-114G-133					

NOTES:
EXCEPT AS NOTED FINISH ALL OVER TO 7
BREAK ALL CORNERS UNLESS OTHERWISE NOTED
DO NOT SCALE PRINT

TOLERANCE UNLESS OTHERWISE NOTED
FRACTIONS ± 1/64
DECIMALS ± .005
ANGLES ± 1/4°
WELDMENTS ± 1/16

GATTO MACHINERY DEVELOPMENT CORP.

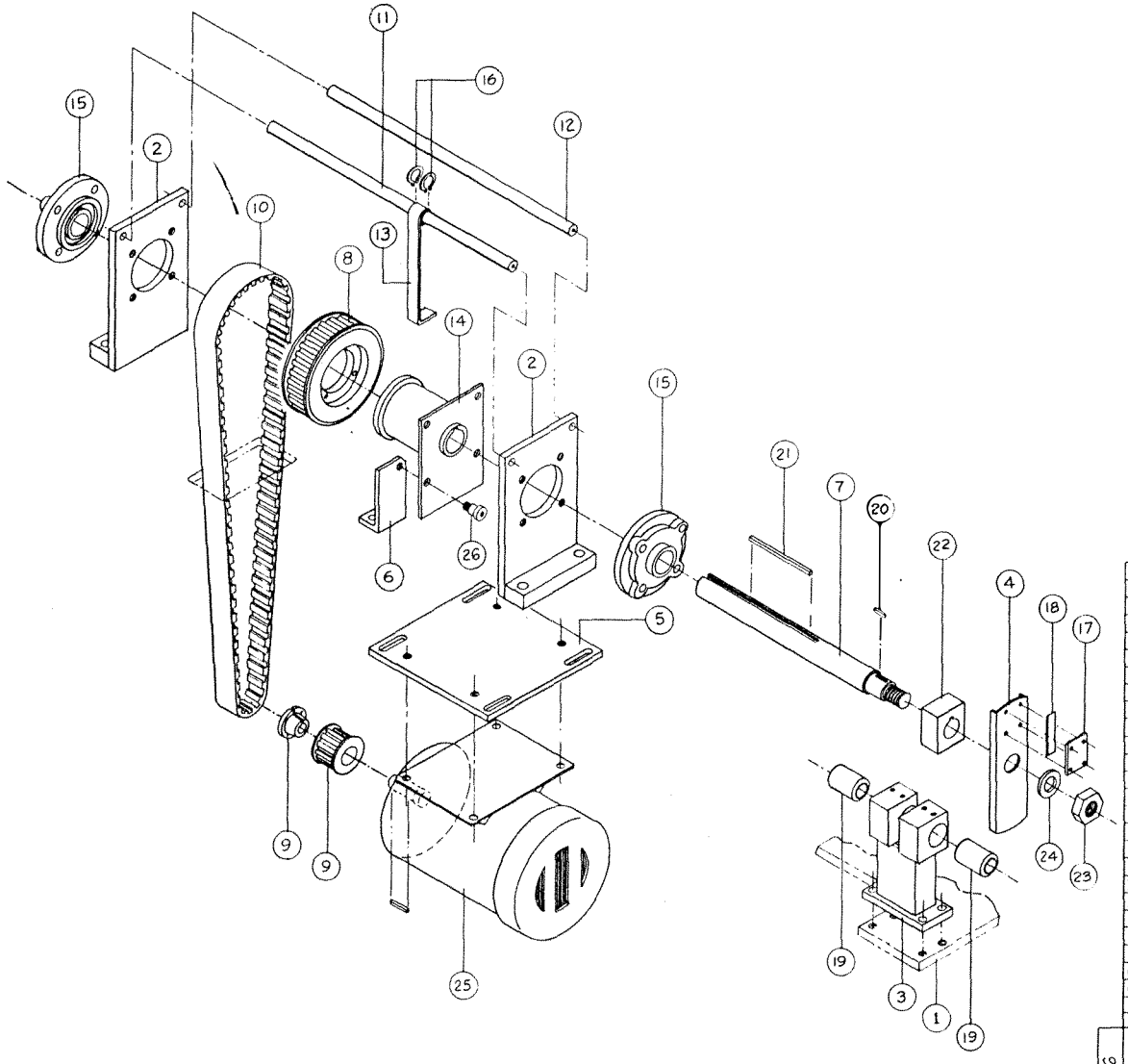
DESIGNED BY	DATE	MATERIAL
DRAWN BY RF	DATE 7/16/81	

TITLE: HIGH SPEED COUNTER CONTROL (4 DIGIT)

SCALE		REV.
	B 0219-01282	

WPG — 6

REV.	DESCRIPTION	DATE	BY	APP.



	26	4533-00687			SHOULDER BOLT
	25				MOTOR
	24	4550-00038			WASHER
	23	4510-00175			NUT
A-114G-104	22	0219-01363			CUTTER DRIVE HUB
	21	9553-00375			SHAFT KEY
A-114G-081	20	0219-01088			SHAFT KEY
	19				CUTTER BUSHING
	18				KNIFE BLADE
A-114G-103	17	0219-01355			CLAMP PLATE
	16	4516-00258			RETAINING RING
	15	3505-00128			PILOTED FLANGE BRG.
	14	3552-00292			S.R.CLUTCH
A-114G-059	13	0219-00782			CLUTCH RELEASE LEVER
A-114G-051	12	0219-00693			TIE ROD
A-114G-060	11	0219-00804			TIE ROD-GROOVED
	10	3512-00311			TIMING BELT
	9	3544-00151			TIMING BELT PULLEY
B-114G-064	8	0219-00855			PULLEY-S.R.CLUTCH
B-114G-062	7	0219-00839			CUTTER SHAFT
B-114G-063	6	0219-00847			CLUTCH BRACKET
B-114G-079	5	0219-01053			MOTOR MOUNT BKT.
C-114G-105	4	0219-01371			KNIFE HOLDER
C-114G-057	3	0219-00766			CUTTER BUSH. HOLDER
C-114G-053	2	0219-00715			BEARING BRACKET
	1				TOP PLATE (REF.)
DRAWING	ITEM	PART No.	QTY.	MATERIAL	DESCRIPTION

D-114G-106

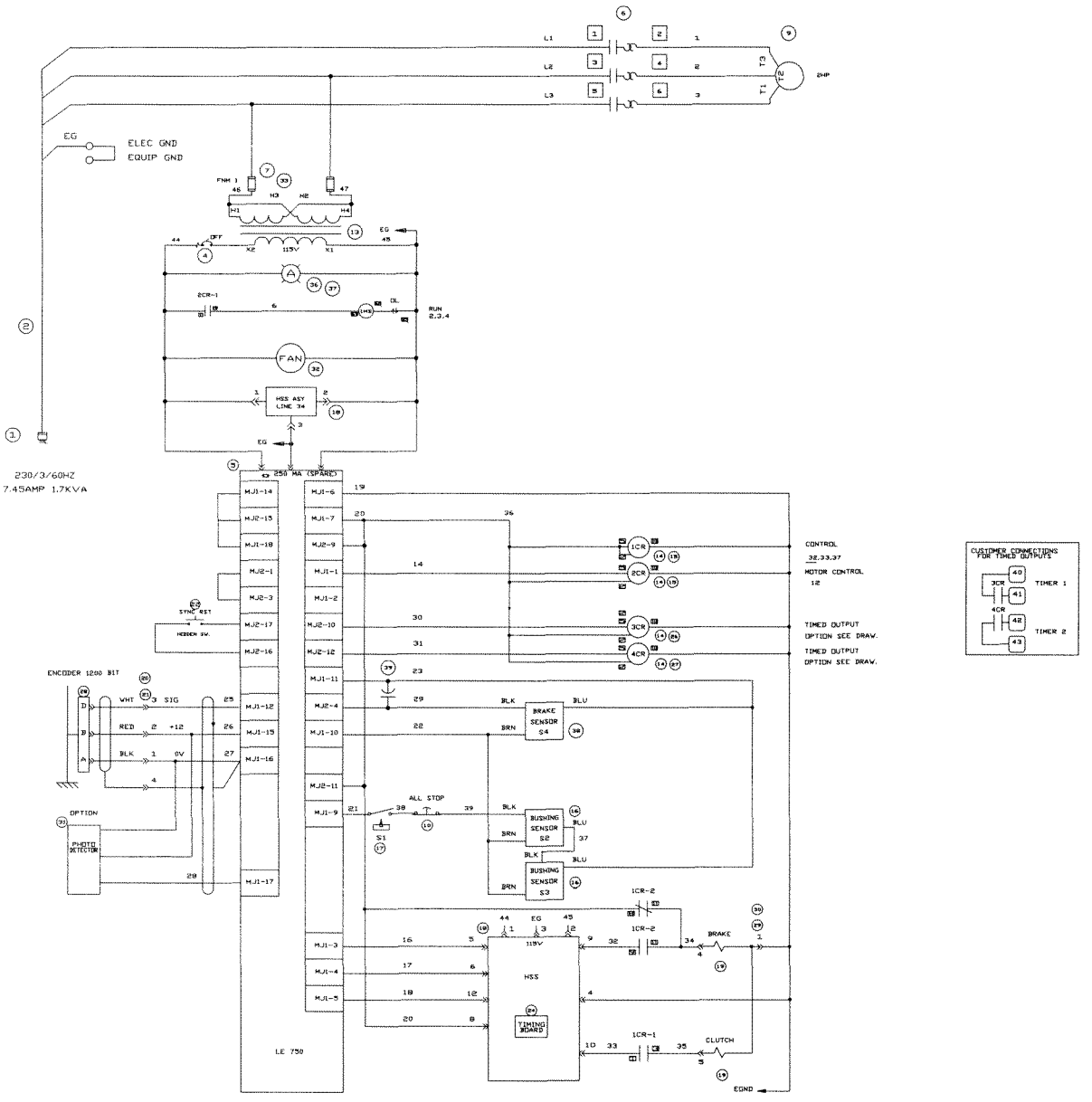
GATTO MACHINERY DEVELOPMENT CORP.

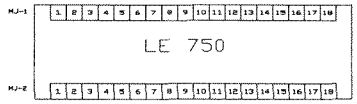
DRAWN BY D. LANIGAN 3-3-61

CUTTER AND DRIVE ASSEMBLY

SIZE D 0219-01398

REV	DESCRIPTION	DATE	BY	APP
A	ADD ITEM #22.	5/22/90	J.M.	





DRAWING ITEM	PART No.	QTY	MATERIAL	DESCRIPTION
40				
39	1518-00337	1		CAPACITOR .22MFD
38	1616-00205	1		PROX. SENSOR
37	1519-00101	1		LENS CAP
36	1584-00127	1		PILOT LIGHT
35	1552-01334	1		FUSE MDL 1.5
34	1503-00152	1		FUSE BLOCK
33	1552-00265	2		FUSE FNM 1
32	1548-00528	1		FAN
31		1	OPTION	BEAM SWITCH
30	1644-00202	1		PLUG
29	1647-00068	1		RECEPT
28	1545-00535	1		ENCODER
27	1601-01132	1	OPTION	RELAY
26	1601-01132	1	OPTION	RELAY
25		1		
24	1620-00074	1		TIMING ASSY
23				
22	1593-01527	1		P.B. SWITCH
21	1644-00555	1		PLUG
20	1646-00587	1		RECEPT
19	3550-00368	1		CLUTCH/BRAKE ASSY
18	1620-00171	1		CLCH/BRKE DRIVER
17	1617-00055	1		MAG. REED SWITCH
16	1616-00159	2		PROX. SENSOR
15	1601-01132	2		RELAY
14	1647-00467	5		RELAY SOCKET
13	1634-00069	1		TRANSFORMER
12				
11				
10	1593-00679	1		P.B. (ALL STOP)
9	1577-01258	1		MOTOR 2HP
8				
7	1502-00078	2		FUSE BLOCK
6	1609-00593	1		MAG. STARTER
5	1590-00317	1		LOGIC CONTROL
4	1508-00673	1		CIRCUIT BREAKER
3		1		
2	1517-00066	15		4 COND #14
1	1644-00245	1		PLUG

NOTES:
EXCEPT AS NOTED FINISH ALL OVER 70 $\frac{7}{}$
BREAK ALL CORNERS UNLESS OTHERWISE NOTED
DO NOT SCALE PRINT

TOLERANCE UNLESS OTHERWISE NOTED
FRACTIONS ± 1/64
DECIMALS ± .005
ANGLES ± 1/4°
WELDMENTS ± 1/16

GATTO MACHINERY DEVELOPMENT CORP

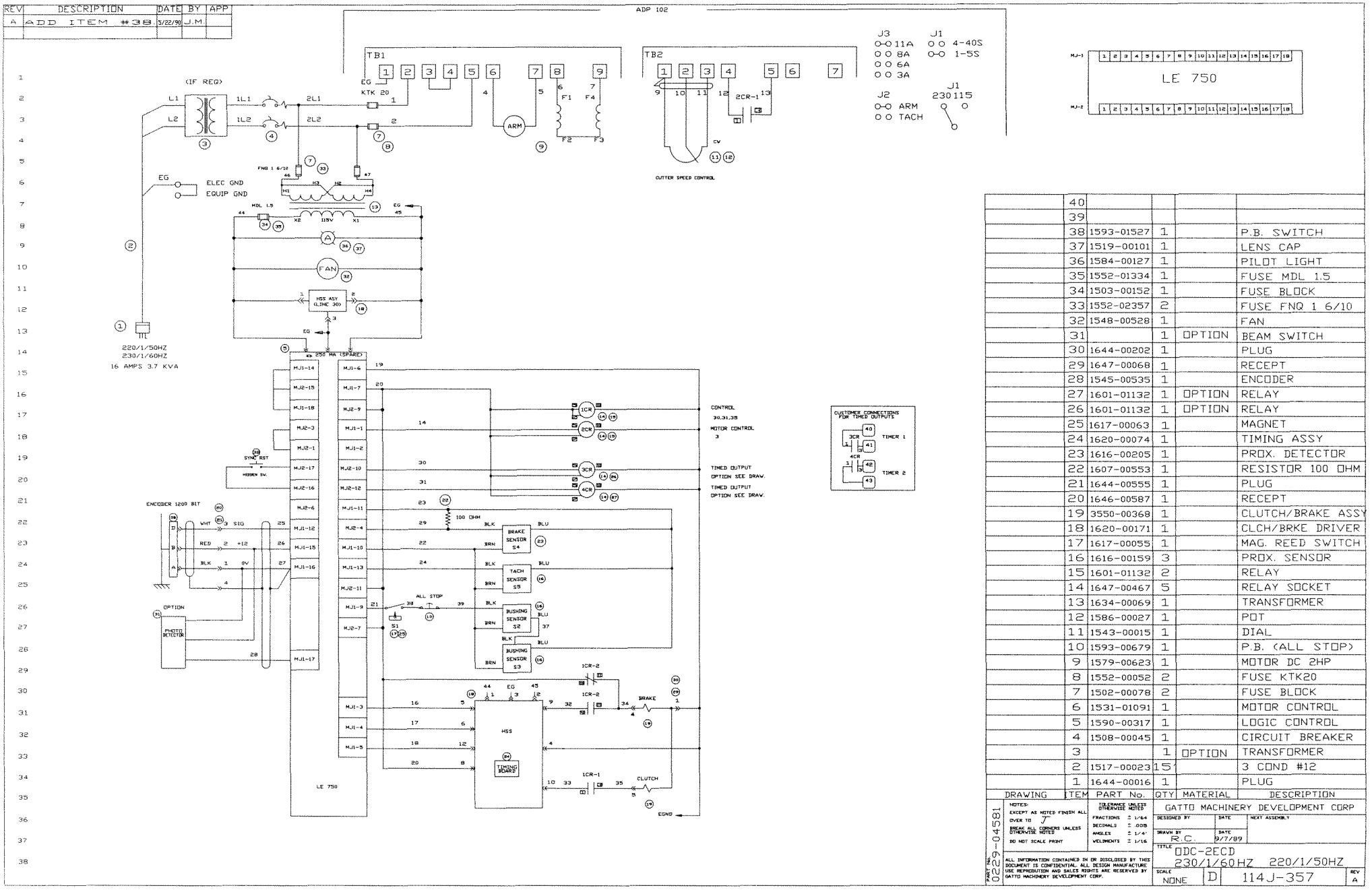
DESIGNED BY | DATE | NEXT ASSEMBLY
DRAWN BY R.C. | DATE 9/7/89

TITLE: ODC-2ECA 230/3/60HZ

PART No. 022904654

SCALE NONE | D | 114J-362 | REV A

REV	DESCRIPTION	DATE	BY	APP
A	ADD ITEM #38	5/22/90	J.M	



	40				
	39				
	38	1593-01527	1		P.B. SWITCH
	37	1519-00101	1		LENS CAP
	36	1584-00127	1		PILOT LIGHT
	35	1552-01334	1		FUSE MDL 1.5
	34	1503-00152	1		FUSE BLOCK
	33	1552-02357	2		FUSE FNQ 1 6/10
	32	1548-00528	1		FAN
	31		1	OPTION	BEAM SWITCH
	30	1644-00202	1		PLUG
	29	1647-00068	1		RECEPT
	28	1545-00535	1		ENCODER
	27	1601-01132	1	OPTION	RELAY
	26	1601-01132	1	OPTION	RELAY
	25	1617-00063	1		MAGNET
	24	1620-00074	1		TIMING ASSY
	23	1616-00205	1		PROX. DETECTOR
	22	1607-00553	1		RESISTOR 100 OHM
	21	1644-00555	1		PLUG
	20	1646-00587	1		RECEPT
	19	3550-00368	1		CLUTCH/BRAKE ASSY
	18	1620-00171	1		CLCH/BRKE DRIVER
	17	1617-00055	1		MAG. REED SWITCH
	16	1616-00159	3		PROX. SENSOR
	15	1601-01132	2		RELAY
	14	1647-00467	5		RELAY SOCKET
	13	1634-00069	1		TRANSFORMER
	12	1586-00027	1		POT
	11	1543-00015	1		DIAL
	10	1593-00679	1		P.B. (ALL STOP)
	9	1579-00623	1		MOTOR DC 2HP
	8	1552-00052	2		FUSE KTK20
	7	1502-00078	2		FUSE BLOCK
	6	1531-01091	1		MOTOR CONTROL
	5	1590-00317	1		LOGIC CONTROL
	4	1508-00045	1		CIRCUIT BREAKER
	3		1	OPTION	TRANSFORMER
	2	1517-00023	15		3 COND #12
	1	1644-00016	1		PLUG
DRAWING	ITEM	PART No.	QTY	MATERIAL	DESCRIPTION

NOTES:
EXCEPT AS NOTED FINISH ALL OVER TO $\sqrt{}$
BREAK ALL CORNERS UNLESS OTHERWISE NOTED
DO NOT SCALE PRINT

TOLERANCE UNLESS OTHERWISE NOTED
FRACTIONS ± 1/64
DECIMALS ± .005
ANGLES ± 1/4°
WELDMENTS ± 1/16

GATTO MACHINERY DEVELOPMENT CORP

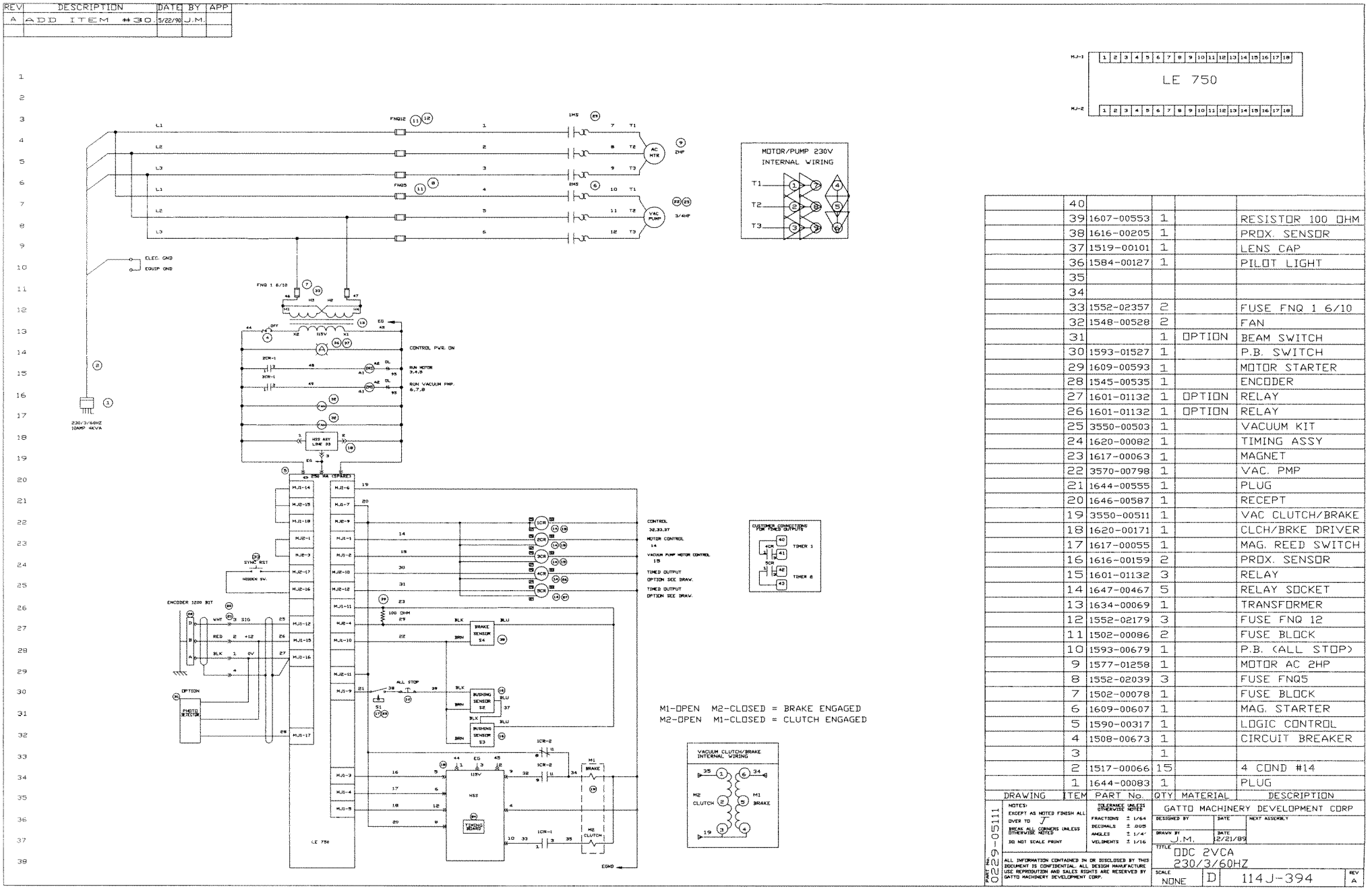
DESIGNED BY	DATE	NEXT ASSEMBLY
DRAWN BY R.C.	DATE 9/7/89	

TITLE: ODC-2ECD 230/1/60HZ 220/1/50HZ

PART No. 022904581

SCALE NONE | D | 114J-357 | REV A

REV	DESCRIPTION	DATE	BY	APP
A	ADD ITEM #30	5/22/90	J.M.	



	ITEM	PART No.	QTY	MATERIAL	DESCRIPTION
	40				
	39	1607-00553	1		RESISTOR 100 OHM
	38	1616-00205	1		PROX. SENSOR
	37	1519-00101	1		LENS CAP
	36	1584-00127	1		PILOT LIGHT
	35				
	34				
	33	1552-02357	2		FUSE FNQ 1 6/10
	32	1548-00528	2		FAN
	31		1	OPTION	BEAM SWITCH
	30	1593-01527	1		P.B. SWITCH
	29	1609-00593	1		MOTOR STARTER
	28	1545-00535	1		ENCODER
	27	1601-01132	1	OPTION	RELAY
	26	1601-01132	1	OPTION	RELAY
	25	3550-00503	1		VACUUM KIT
	24	1620-00082	1		TIMING ASSY
	23	1617-00063	1		MAGNET
	22	3570-00798	1		VAC. PMP
	21	1644-00555	1		PLUG
	20	1646-00587	1		RECEPT
	19	3550-00511	1		VAC CLUTCH/BRAKE
	18	1620-00171	1		CLCH/BRKE DRIVER
	17	1617-00055	1		MAG. REED SWITCH
	16	1616-00159	2		PROX. SENSOR
	15	1601-01132	3		RELAY
	14	1647-00467	5		RELAY SOCKET
	13	1634-00069	1		TRANSFORMER
	12	1552-02179	3		FUSE FNQ 12
	11	1502-00086	2		FUSE BLOCK
	10	1593-00679	1		P.B. (ALL STOP)
	9	1577-01258	1		MOTOR AC 2HP
	8	1552-02039	3		FUSE FNQ5
	7	1502-00078	1		FUSE BLOCK
	6	1609-00607	1		MAG. STARTER
	5	1590-00317	1		LOGIC CONTROL
	4	1508-00673	1		CIRCUIT BREAKER
	3		1		
	2	1517-00066	15		4 COND #14
	1	1644-00083	1		PLUG

NOTES:
EXCEPT AS NOTED FINISH ALL OVER TO 7
BREAK ALL CORNERS UNLESS OTHERWISE NOTED
DO NOT SCALE PRINT

TOLERANCE UNLESS OTHERWISE NOTED
FRACTIONS ± 1/64
DECIMALS ± .005
ANGLES ± 1/4°
WELDMENTS ± 1/16

GATTO MACHINERY DEVELOPMENT CORP

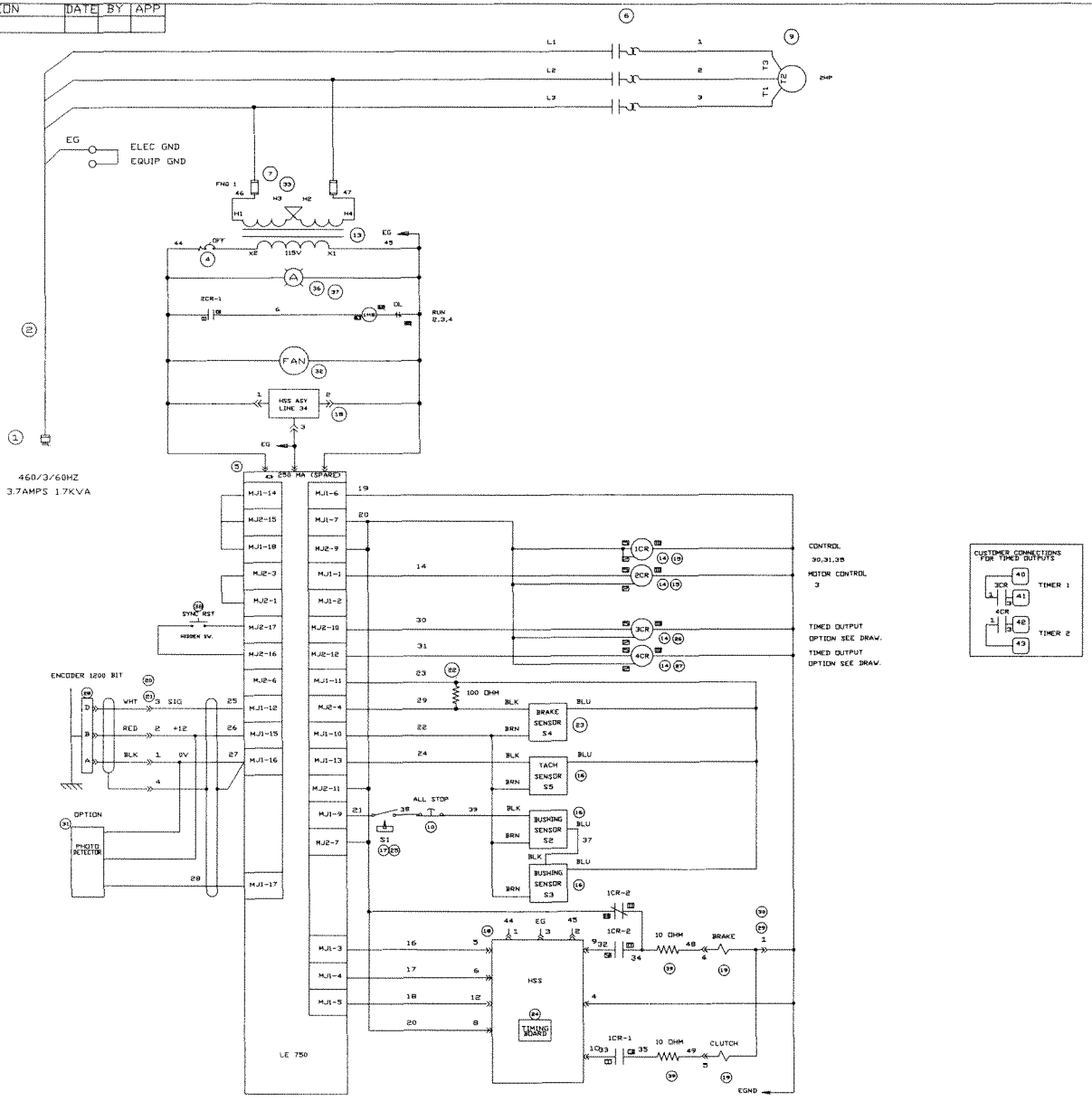
DESIGNED BY | DATE | NEXT ASSEMBLY
DRAWN BY J.M. | DATE 12/21/89

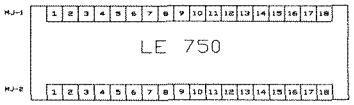
TITLE DDC 2VCA 230/3/60HZ

PART No. 029-05111

SCALE NONE | D | 114J-394 | REV A

REV	DESCRIPTION	DATE	BY	APP





	40				
	39	1607-01622	2		RESISTOR,10 OHM
	38	1593-01527	1		P.B. SWITCH
	37	1519-00101	1		LENS CAP
	36	1584-00127	1		PILOT LIGHT
	35				
	34				
	33	1552-00389	2		FUSE FNQ 1
	32	1548-00528	1		FAN
	31		1	OPTION	BEAM SWITCH
	30	1644-00202	1		PLUG
	29	1647-00068	1		RECEPT
	28	1545-00535	1		ENCODER
	27	1601-01132	1	OPTION	RELAY
	26	1601-01132	1	OPTION	RELAY
	25	1617-00063	1		MAGNET
	24	1620-00074	1		TIMING ASSY
	23	1616-00205	1		PROX. DETECTOR
	22	1607-00553	1		RESISTOR 100 OHM
	21	1644-00555	1		PLUG
	20	1646-00587	1		RECEPT
	19	3550-00562	1		CLUTCH/BRAKE ASSY
	18	1620-00171	1		CLCH/BRKE DRIVER
	17	1617-00055	1		MAG. REED SWITCH
	16	1616-00159	3		PROX. SENSOR
	15	1601-01132	2		RELAY
	14	1647-00467	5		RELAY SOCKET
	13	1634-00069	1		TRANSFORMER
	12				
	11				
	10	1593-00679	1		P.B. (ALL STOP)
	9	1577-01258	1		MOTOR AC 2HP
	8				
	7	1502-00078	1		FUSE BLOCK
	6	1609-00607	1		MOTOR STARTER
	5	1590-00317	1		LOGIC CONTROL
	4	1508-00673	1		CIRCUIT BREAKER
	3				
	2	1517-00066	15'		4 COND #14
	1	1644-00091	1		PLUG
DRAWING	ITEM	PART No.	QTY	MATERIAL	DESCRIPTION

NOTES:
EXCEPT AS NOTED FINISH ALL OVER TO 7
BREAK ALL CORNERS UNLESS OTHERWISE NOTED
DO NOT SCALE PRINT

TOLERANCE UNLESS OTHERWISE NOTED
FRACTIONS ± 1/64
DECIMALS ± .005
ANGLES ± 1/4°
WELDMENTS ± 1/16

GATTO MACHINERY DEVELOPMENT CORP

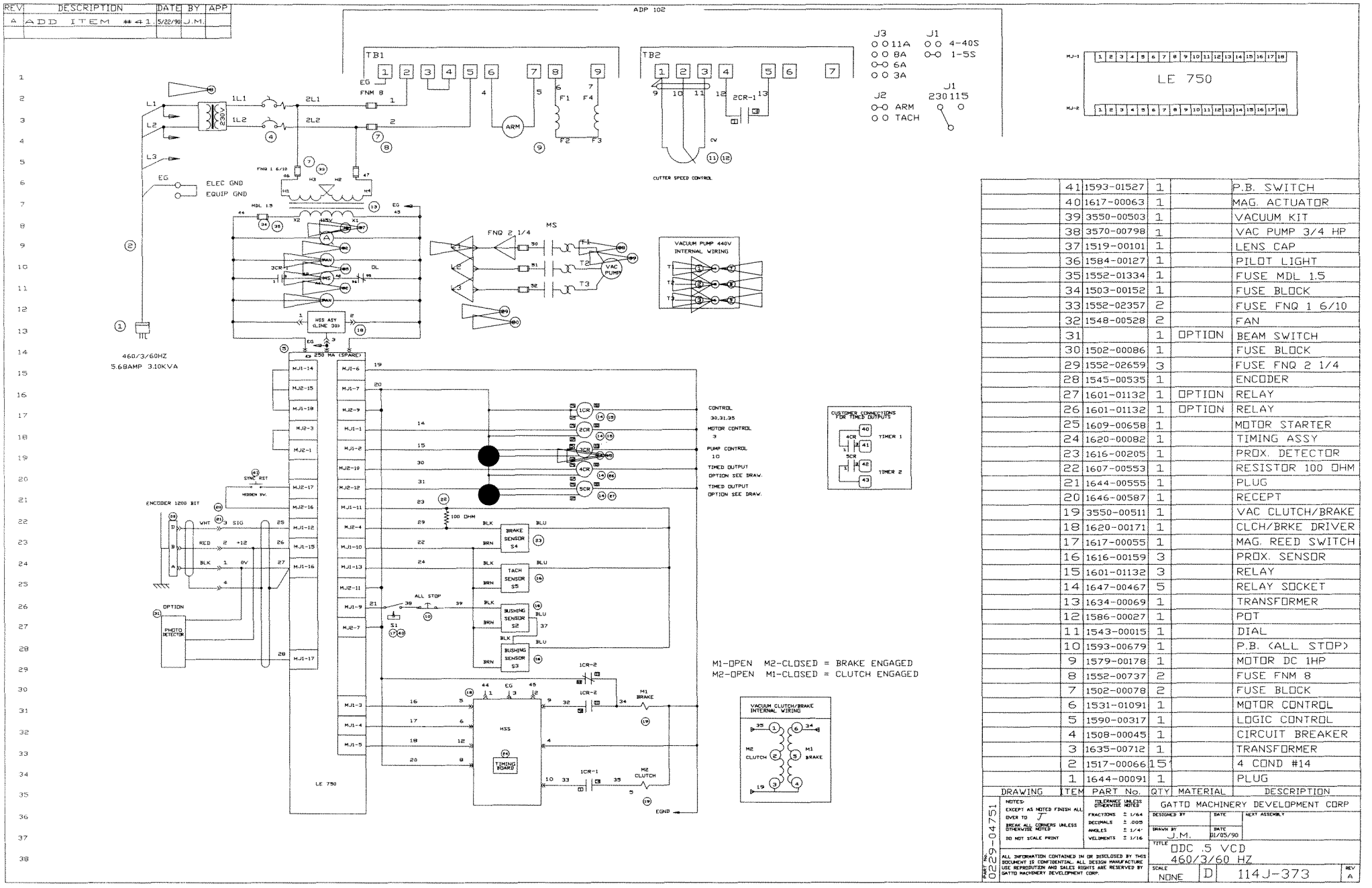
DESIGNED BY | DATE | NEXT ASSEMBLY
DRAWN BY J.M. | DATE 1/8/92

TITLE DDC-2PCA 460/3/60HZ

PART No. 022911243

SCALE NONE | D | 114J-793

REV	DESCRIPTION	DATE	BY	APP
A	ADD ITEM #41	5/22/90	J.M.	



	41	1593-01527	1		P.B. SWITCH
	40	1617-00063	1		MAG. ACTUATOR
	39	3550-00503	1		VACUUM KIT
	38	3570-00798	1		VAC PUMP 3/4 HP
	37	1519-00101	1		LENS CAP
	36	1584-00127	1		PILOT LIGHT
	35	1552-01334	1		FUSE MDL 1.5
	34	1503-00152	1		FUSE BLOCK
	33	1552-02357	2		FUSE FNQ 1 6/10
	32	1548-00528	2		FAN
	31		1	OPTION	BEAM SWITCH
	30	1502-00086	1		FUSE BLOCK
	29	1552-02659	3		FUSE FNQ 2 1/4
	28	1545-00535	1		ENCODER
	27	1601-01132	1	OPTION	RELAY
	26	1601-01132	1	OPTION	RELAY
	25	1609-00658	1		MOTOR STARTER
	24	1620-00082	1		TIMING ASSY
	23	1616-00205	1		PROX. DETECTOR
	22	1607-00553	1		RESISTOR 100 OHM
	21	1644-00555	1		PLUG
	20	1646-00587	1		RECEPT
	19	3550-00511	1		VAC CLUTCH/BRAKE
	18	1620-00171	1		CLCH/BRKE DRIVER
	17	1617-00055	1		MAG. REED SWITCH
	16	1616-00159	3		PROX. SENSOR
	15	1601-01132	3		RELAY
	14	1647-00467	5		RELAY SOCKET
	13	1634-00069	1		TRANSFORMER
	12	1586-00027	1		POT
	11	1543-00015	1		DIAL
	10	1593-00679	1		P.B. (ALL STOP)
	9	1579-00178	1		MOTOR DC 1HP
	8	1552-00737	2		FUSE FNM 8
	7	1502-00078	2		FUSE BLOCK
	6	1531-01091	1		MOTOR CONTROL
	5	1590-00317	1		LOGIC CONTROL
	4	1508-00045	1		CIRCUIT BREAKER
	3	1635-00712	1		TRANSFORMER
	2	1517-00066	15'		4 COND #14
	1	1644-00091	1		PLUG
DRAWING	ITEM	PART No.	QTY	MATERIAL	DESCRIPTION

NOTES:
EXCEPT AS NOTED FINISH ALL OVER TO √
BREAK ALL CORNERS UNLESS OTHERWISE NOTED
DO NOT SCALE PRINT

TOLERANCE UNLESS OTHERWISE NOTED
FRACTIONS ± 1/64
DECIMALS ± .005
ANGLES ± 1/4°
WELDMENTS ± 1/16

GATTO MACHINERY DEVELOPMENT CORP

DESIGNED BY	DATE	NEXT ASSEMBLY
DRAWN BY J.M.	DATE 01/05/90	

TITLE: ODC .5 VCD 460/3/60 HZ

PART No. 022904751

SCALE NONE | D | 114J-373 | REV A

We're Here to Help

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Department for a nominal fee.
Most manuals can be downloaded free of charge from the product section of the Conair website.
www.conairgroup.com

How to Contact Customer Service

To contact Customer Service personnel, call:

✎ **NOTE:** Normal operating hours are 8:00 am - 5:00 pm EST. After hours emergency service is available at the same phone number.

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

Before You Call...

If you do have a problem, please complete the following checklist before calling Conair:

- ❒ Make sure you have all model, control type from the serial tag, and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- ❒ Make sure power is supplied to the equipment.
- ❒ Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- ❒ Check the troubleshooting guide of this manual for a solution.
- ❒ Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.

Equipment Guarantee

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

Performance Warranty

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated, and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices, or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

Warranty Limitations

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.