CONAIR GATTO CENTERARM SAW INSTRUCTIONS

CS 7-9-13

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

This manual is out-of-date and is provided only for its technical information, data and capacities.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containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

Manual Number UGE003/0597

C A U T I O N !

DISCONNECT ALL ELECTRICAL POWER AND AIR SUPPLY TO THIS MACHINE AT THE POWER SOURCE AND MAKE SURE THAT ALL MACHINE MOTION HAS STOPPED BEFORE OPENING CONTROL BOX PANEL, OR DOORS, OR REMOVING GUARDS!

TABLE OF CONTENTS

I - GENERAL INFORMATION

1.1 - GENERAL SPECIFICATIONS

Centerline Height	= 42" + 2"
Power Supply	= 230-460/3Ph./60Hz.
Pneumatic Requirement	= 3 1/2 CFM at 80 P.S.I.
Table Travel	= 24" Maximum
O.A. Length	= 84"
O.A. Height	= 58 1/2"
Blade Type	= Carbide Tipped

1.2 - CS-7-24 SPECIFICATIONS

Capacity	= 7"
Max. Cuts/Minute	= 12*
Blade Diameter	= 20"
O.A. Width	= 34"
Weight	= 1,500 lbs.
Blade Motor	= 3 HP - TEFC
Power Requirements	= 5 KVA

1.3 - CS-9-24 SPECIFICATIONS

Capacity	= 10" O.D.
Max. Cuts/Minute	= 9*
Blade Diameter	= 26"
O.A. Width	= 43"
Weight	= 1,700 lbs.
Blade Motor	= 5 HP - TEFC
Power Requirements	= 7 1/2 KVA

1.4 - CS-13-24 SPECIFICATIONS

Capacity	= 13" O.D.
Max Cuts/Minute	= 6*
Blade Diameter	= 32"
O.A. Width	= 48"
Weight	= 1,900 lbs.
Blade Motor	= 5 HP - TEFC
Power Requirements	= 7 1/2 KVA

* - Theoritical cycle time, actual will depend on product to be cut.

1.5 - MODE OF OPERATION AND APPLICATION

1.5.1 - Saw Function

The Gatto Center Arm Saws perform precision saw cuts to specified lengths. Saw cutting operations are automatically synchronized. When the desired length is reached, it trips a remote target switch which electrically signals a solenoid to activate a clamping cylinder. Two clamps grip the pipe, and the table assembly travels downstream with the pipe while the saw carriage mounted on dual shafts, moves through the table slot completing the cut. The adjustable table travel, saw blade carriage, and clamping action allow easy line synchronization with the extrudate.

1.5.2 - Placement in Line

First inspect for any shipping damage and report at once. The saw is equipped with four swivel casters for easy mobility to extrusion line. The Gatto saw is furnished for right to left or left to right extrudate direction. Install saw into extrusion line so the extrudate is in line with the center of the pass line of the saw. The center of the extrudate should coincide with the center of the trough. Raise or lower the machine by adjusting the floor lock screws supplied with the machine. The floor locks are equipped with rubber cushioned floor pads. Adjust the threaded floor locks so that the table is level and the bottom of the extrudate is centered in the trough. Read instruction manual prior to start-up.

2.0 - MECHANICAL SYSTEM

2.1 - BASE ASSEMBLY

The base assembly is an all welded steel structure supported on four swivel casters. The base assembly houses the electrical control box, the pneumatic regulators and solenoids, the table travel (cable) cylinder, and chip removal system.

2.2 - CARRIAGE ASSEMBLY

The carriage assembly travels longetucinally on the base assembly. The carriage assembly houses the motor drive assembly, blade assembly, clamping attachments, and pipe trough.

3. - PNEUMATIC SYSTEM

The pneumatic system includes an air filter-regulator-lubricator, two electrically activated solenoid valves, various flo-control valves and cylinders. The cable cylinder moves the carriage over the base.

Another cylinder moves the blade in and out for the cutting operation. Two clamping cylinders clamp the extrudate while it is being cut. On the front panel are regulators which will allow the operator to increase or decrease the table speed and increase or decrease the saw cut feed and saw return speed.

For safety, a pressure switch monitors the input air source. If the pressure is to low, the saw will not start. If the input air pressure drops below operating level when the machine is running, the saw will stop and return to a safe condition.

4.4 - ELECTRICAL CONTROL SYSTEM

(Ref. Drawing #CCS-136)

Power is supplied to the saw by a 4 wire power cable terminated by a 3 phase 4 wire plug. The saw motor is controlled by a 3 phase manual starter. Overload heaters are selected on the bases of motor nameplate current rating.

Control power, 115 volts, is supplied by transformer T1 (Item 7). Limit switch #1 (Item 10) will stop all motion if the safety guard is not in position. The pressure switch (Item 31) will inhibit machine operation or stop the machine if the input air pressure drops below 40 PSI.

Depressing the "start" pushbutton (Item 12) will energize the magnetic starter (Item 14) and start the saw motor. The green light on the start push-button will now light. The holding contact, 1MS-1, will latch the starter in the run position.

Depressing the "Manual Cycle" pushbutton (Item 16) will cause the saw to perform one cutting operation.

The "Target Switch" (Item 26) performs the same function as the "Manual Cycle" pushbutton. In operation, the "target switch" is usually actuated by the product. Because the product may still be actuating the switch after the cut is complete, the need to convert the "target switch" signal to a "one-shot" action. 1TDR performs this "one-shot" function.

Limit switch #2 will not allow the saw to start if the table is not in the "home" or start position.

The "Product Counter" (Item 21) will count each saw cycle if the "Enable Switch" (Item 20) is in the "on" position.

When the "Manual Cycle" or "Target Switch" is actuated and the table is in the home position, the "Master Control Relay", 1CR will energize. 1CR is

held in the energized state by 1CR-1, 2CR-1 and LS3. LS3 is a safety switch which will open if the saw has not completed its cycle before the table is at the end of its stroke.

Once the master control relay is energized, 1CR-2, line 15 will close and supply power to the table and clamp solenoid. At this point in the cycle the clamps will grip the product and the table will begin to move at the product line rate.

1CR-3 supplies power to the "Saw Carriage" time delay relay (Item 18). 2TDR is set to close in approximately 2 seconds. This will allow the clamps to get in position before the saw is moved forward.

When LSW4 is actuated, the saw has cut through the material. This will cause 2CR (Saw Reset) relay to energize. 2CR is then latched in and held by its own contact, 2CR-3.

Then 2CR is energized 2CR-2, line 17, will open. This will cause the saw carriage to return to its home position. When the saw is in the home position LS5 will open and drop out 1CR. The saw is now ready for the next cycle.

5. - SET-UP / START-UP / SAFETY

5.1 - SET-UP

After the machine is installed into the extrusion line. (section 4.5.2), the machine is ready for set-up as follows:

1. Adjust the two clamp brackets to suite the extrudate diameter by use of the hand knobs on sides of clamp bracket.

2. On the CS-7 and CS-9 models the extrudate will pass through troughs; however, for larger diameter pipes on the model CS-13, the triangular shaped fences on the saw table should be adjusted to suit the diameter of the extrudate.

3. The forward traverse of the saw carriage can be limited by adjusting the roun rods which activate the limit switches near the top of the carriage. The saw blade should never penetrate the product more than is necessary to make a complete cut.

4. Plug the power cord into a power source as described in section 4.1. Make certain that electrical source is the same voltage as that which is labeled on machine. Make sure that electrical source is adequately fused in accordance with the National Electrical Code, and any applicable state or local codes.

5.2 - START-UP

1. Connect machine to air source. Make certain that regulator at the bottom of machine is set to 60-80 P.S.I.

2. After connecting power, push start button to check motor rotation. If blade is not rotating in the proper direction, (cutting into extrudate) STOP MACHINE.

NOTE: A carbide tipped blade will be permanently damaged if it is operated in the wrong direction. (To correct direction, see section 6.1.2).

3. Without any extrudate in the machine, initiate the cut cycle, by means of the manual push-button switch.

   NOTE: There cannot be any cycling of the machine unless the saw motor is operating, for the protection of the saw blade.

   Note the speed of the advance and retraction of the saw carriage. These speed may be adjusted by means of the knob controls on the panel.

4. The air counter-force system is adjusted by means of the small regulator knob mounted on the panel. The air pressure of this syter should be maintained at the minimum pressure which tends to move the saw table, without any extrudate in the saw.

5.3 - SAFETY

As with all Gatto machines, safety is designed into the machine and not just added on as an after thought. The machine is completely safety-enclosed and yet the efficiency is not impaired. For added safety, a micro-switch is installed that automatically stops the blade from rotating once the saw guard assembly is lifted. All guards are OSHA color coded. Be certain that all guards are secured tight while operating the machine.

SECTION 6

SERVICING

C A U T I O N: WHEN SERVICING MACHINE, DISCONNECT POWER SUPPLY AND AIR SUPPLY !!!

6. - SERVICING

The model C5 series of Gatto saws was designed for continuous operation with a minimum amount of maintenance. Keep the machine cleaned and well lubricated and it will remain in good working condition. Operators respect and enjoy working with clean machinery.

The door on the rear of the machine will give access to the chip collector cabinet. The major portion of chips generated should accumulate in this area and should be removed from time to time. An industrial vacuum system for chip removal is available upon request.

6.1 - SAW BLADE

6.1.1 - Changing Blade

To change saw blade, proceed as follows:

1. Disconnect power and air supply.

2. While holding Allen head bolt (located in center of saw arbor) with Allen wrench, loosen nut securing spindle. On a right to left machine, the nut has left handed threads (and vice-versa). Using Allen wrench will avoid the necessity of holding the blade by hand.

3. Remove flange and blade.

4. Install new blade with teeth facing in proper direction, cutting into extrudate.

5. Place flange and nut on to arbor.

6. Tighten nut with wrench while securing blade by using Allen wrench as explained in step 2 above.

6.1.2 - Blade Rotation

If blade rotation is incorrect and must be changed, disconnect plug at power supply. On machine plug, reverse the red and black wires. This will change polarity and enable the motor to rotate in proper direction. DO NOT change green wire as it is the ground wire. Re-connect plug.

6.2 - BEARINGS

The bearings have been greased at factory and are ready for operation. The following is a schedule at which these bearings should be lubricated at 1725 R.P.M.

Hours Run Per Day	Suggested Lubrication
8	Every 4 Weeks
16	Every 2 Weeks
24	Every 1 Week

A No. 2 consistency lithium base grease or a grease which is compatible should be used. Add grease until it shows at the seals and rotate the bearing to distribute grease. Abnormal bearing temperature may indicate faulty lubrication. Unusually high temperature accompanied by excessive leakage of grease indicates too much grease. High temperature with no grease showing at the seals, particularly if the bearing seems noisy, usually indicates too little grease. Normal temperature and a slight showing of grease at the seals indicates proper lubrication. Remember, a small amount of grease at frequent intervals is preferrable to a large amount at infrequent intervals.

6.3 - BELTS

The drive V-belts are a matched set (3). To change belts proceed as follows:

1. Disconnect power.
2. Loosen the 4-bolts securing the motor.

3. Loosen adjustment screw at top of machine.
4. Replace belts and reverse procedure.

6.4 - CLAMP BUMPERS

Replace worn clamp bumpers as they could damage or mark extrudate. Loosen locknut and remove threaded bumper.

6.5 - PNEUMATIC SYSTEM SERVICING

When dirt appears in the glass bowls of the filter, it is time to clean out as follows:

First, disconnect air supply. Then clean plastic bowl using warm water only. Clean other parts using warm water and soap. Blow air thru filter element in direction opposite that of normal air flow to dislodge surface contaminants. Dry parts and blow out internal passages in body using clean, dry compressed air. Inspect each part carefully. Replace any parts that are damaged.

6.6 - A.C. MOTOR

6.6.1 - Motor Bearings

Ball bearings housings are packed with grease at the factory. Greasing is not required before the motor is put into service. Since the oil will ultimately become depleted, it is necessary to relubricate periodically.

For best lubrication results, regrease with Lithium Base Ball Bearing Grease. Lubricate motor at standstill. Replace top grease plug with a lubrication fitting and remove lower grease plug. Use hand operated grease-gun only. Pump grease until new grease appears at lower grease hole. After greasing, allow motor to run ten minutes to permit excess grease to drain out BEFORE replacing grease plug.

5.6.2 - Motor Brushes

Replace worn-out brushes to avoid damage to commutator.

1. Un-fasten two pigtails.
2. Pull spring back.
3. Remove brush.

SECTION 7

RENEWAL PARTS

The high productivity which industry seeks to maintain demands a well planned maintenance program - the success of which often can depend on the number and type of spare parts on hand. Serious consideration should be given to having all vital replacement components on hand to protect the units against costly down time.

A detailed parts list is enclosed with recommendations for spare parts that should be stocked for your equipment. (Asterisk *)

Be sure to include model number and serial number listed on nameplate when ordering replacement parts.

SPARE PARTS LIST

Machine Model No.	List Item No.	Description	Gatto Part No.
CS-7	1A	Air Cylinder 1 1/2" x 7 1/2" stroke	5503-00016
CS-9	1B	Air Cylinder 1 1/2" x 11" stroke	5503-00085
CS-13	1C	Air Cylinder 1 1/2" x 13 1/2" stroke	5503-00093
CS	1D*	Air Cylinder - Repair Kit	5508-00083
CS	4	3/4" - 16 L.H. Nut	4510-00108
CS	5	Loose Flange	0212-00078
CS-7	6A	Blade, 20" x 144T Carbide	3514-00033
OPTION	6B	Blade, 20" x 450T Steel	3517-00042
CS-9	6C	Blade, 26" x 180T Carbide	3514-00084
OPTION	6D	Blade, 26" Steel	3517-
CS-13	6E	Blade, 32" x 220T Carbide	3514-00041
R-L	7A	Saw Shaft CS-024	0212-00132
L-R	7B	Saw Shaft CS-025	0212-00159
CS-7	8A	Air Cylinder 1 1/8" x 2"	5503-00042
*	8B	Air Cylinder "Bimba"	5503-0113B
CS-9-13	8C	Air Cylinder 1 1/8" x 3"	5503-00069
CS	8D*	Air Cylinder Repair Kit	5508-00075

* MODEL CS-7 BUILT IN 1980 USES THIS CLAMP CYLINDER

SPARE PARTS LIST

Machine Model No.	List Item No.	Description	Gatto Part No.
CS	9	Hand Knob	0212-00302
CS-7	10A	Saw Guard	0213-01043
CS-9	10B	Saw Guard	0213-00245
CS-13	10C	Saw Guard	0213-00346
CS	10D	Saw Guard Hinge	0212-00604
CS	13A	Upper Cam Follower	3501-00093
CS	13B	Lower Cam Follower	3501-00107
CS	15	Delrin Roller	3559-00018
CS	19	Filter/Regulator/Lubricator	5501-00037
CS	20	*Flo Control Valve	5540-00192
CS	21A	*Solenoid Valve "Versa"	5553-00051
Alternate	21B	*Solenoid Valve "Ross"	5553-00027
CS	27	Microswitch BZE02RQ	1613-00042
CS	29	Cable Cylinder 24" Stroke	0212-00493
CS	29A	*Repair Kit, Cables & Parts	5508-00229
CS	29C	Cable Only	5508-00237
CS	31	Shock Absorber	5528-00039

* DEPENDENT ON MODEL, SPEED, BLADE TYPE AND CYCLE

SPARE PARTS LIST

Machine Model No.	List Item No.	Description	Gatto Part No.
50 HZ	46B	Timer (Hour Meter)	1632-00037
CS	47A	Reset Only	
CS	47B	Rubber Boot Only	2502-00015
CS	47C	Boot Ferrule Only	1648-00049
CS	48	Flo-Control Valve	5540-00192
CS	49	*Clamp Pad 1/2 - 13 Thread	4558-00029
*	49A	Clamp Pad BN-7	4558-00061
CS	50	*Fuse, AGC-2	1552-00443
CS	51	"Start" button	1594-00036
CS	51A	Green Lens Only	1519-00039
CS	51B	Bulb Only	1569-00048
CS	52	Air Gauge 0-15 P.S.I.	5518-00359
CS	53	"Manual Run" Button	1593-00091
CS	54	Regulator	5548-00086
CS	55	"Stop" Button	1593-00379
CS	59	Pillow Block Bushing PB-20	3507-00109
CS	60	*Microswitch BZE6-2RN80	1613-00034
	61	Pressure Switch	1615-00015

* USED WITH "BIMBA" CYLINDER ONLY (1980) ITEM #B

SPARE PARTS LIST

Machine Model No.	List Item No.	Description	Gatto Part No.
CS	33	Pillow Block Bearing	3507-00079
*	35A	V-Groove Pulley	*
*	35B	Taperlock Bushing	*
*	36A	V-Belt (3) 3V-250	3513-00013
*	36B	V-Belt (3) 3V-265	3513-00021
*	36C	V-Belt (3) 3V-280	3513-00048
CS-7	37A	3 HP Motor	1577-00162
CS-9,13	37B	5 HP Motor	1577-00138
CS	38	V-Groove Pulley	3545-00066
CS	38A	Taperlock Bushing	3518-00518
CS	39	Microswitch BZE62RW	1613-00042
CS	40A	Upper Cam Follower	3501-00093
CS	40B	Lower Cam Follower	3501-00107
CS	43	Microswitch BZE62RQ	1613-00042
CS	44	Product Counter (Durant)	1538-00163
CS	45	Toggle Switch	1622-00039
60 HZ	46A	Timer (Hour Meter)	1632-00045

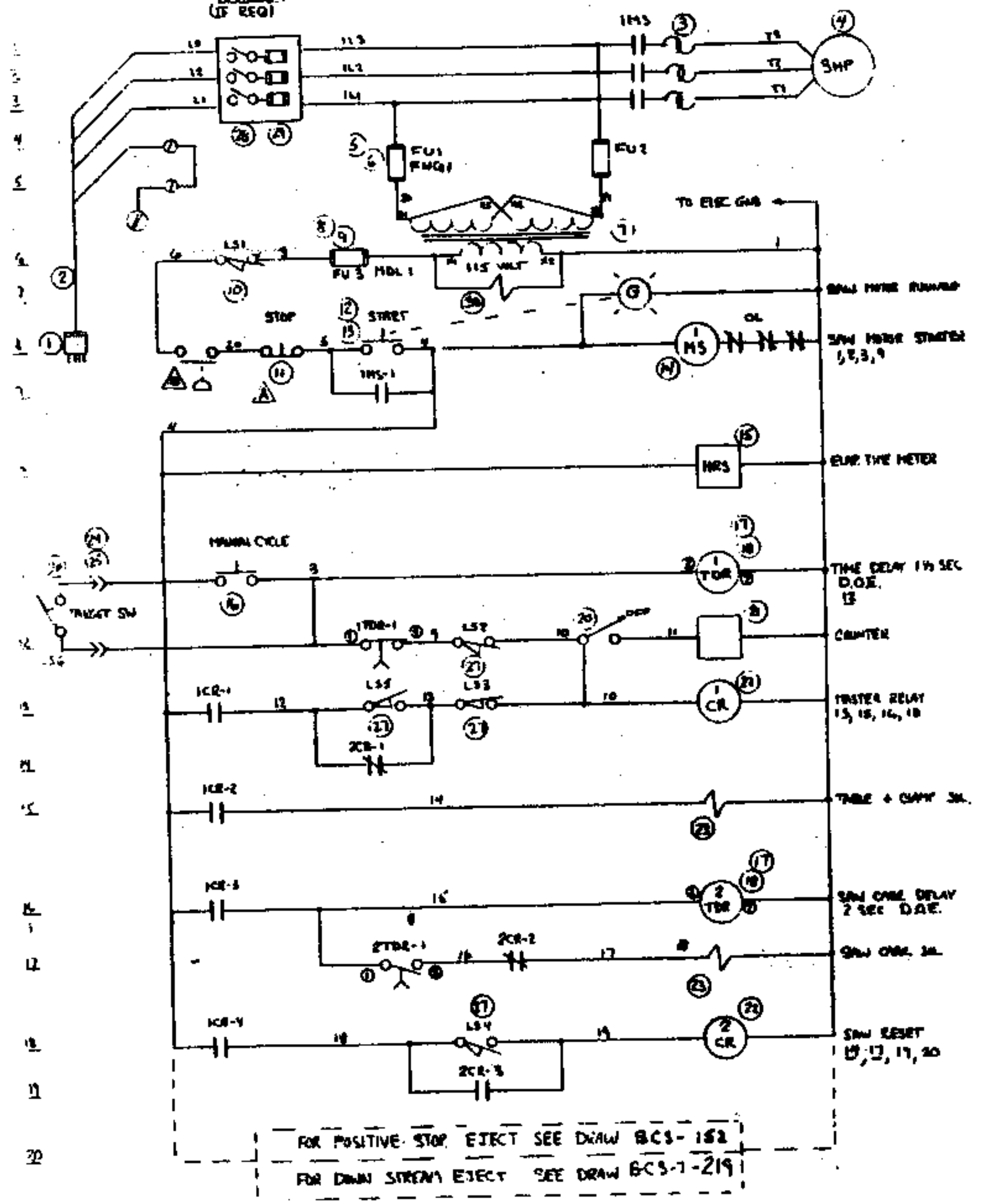
* DEPENDENT ON MODEL, SPEED, BLADE TYPE AND CYCLE

SPARE PARTS LIST

Machine Model No.	List Item No.	Description	Gatto Part No.
CS		ELECTRIC COMPONENTS INSIDE CONTROL BOX	
		Time Delay Relays (2) P+B	1606-00134
		Control Relay (2) A+B	1601-00098
		Magnetic Starter A+B	1609-00089
		Transformer TA1-81211	1634-00026
		VACUUM SYSTEM (Optional)	
		Chip Collector	3555-00013
		55 Gal. Plastic Drum	3555-00021
		5" Clamp	3555-00048
		Galvanized Coupling	3555-00056

REV	DISC	DATE	APP'D
A	WAS PART # 1553-00148	[illegible]	[illegible]
B	PRESS SW ADDED	[illegible]	[illegible]
C	ITEM #17 WAS 1647-00041	[illegible]	[illegible]

SW	FUNCTION
1	GUARD INTERLOCK
2	TABLE IN STOP POSITION
3	TABLE FORWARD
4	SAW FORWARD
5	SAW CAME BACK
6	TARGET SW (START SW)



FOR POSITIVE STOP EJECT SEE DRAW BCS-152

FOR DOWN STREAM EJECT SEE DRAW BCS-1-219

REF BCS 7-219

REF CCS-0

DRAWING	ITEM	PART No.	QTY.	MATERIAL	DESCRIPTION
	31	1615-00015	1		PRESS SW.
	30	1566-00101	1	OPTION	BOX INTERLOCK
	29	1611-00371	1	OPTION	DISCONNECT
	28	1552-01415	3	"	FUSE
	27	1615-00019	4		LIMIT SWITCH
	26	1613-00034	1		LIMIT SWITCH
	25	1614-00059	1		PLUG
	24	1646-00265	1		RECEPT
	23	5555-00051	2		SOLENOID
	22	1601-00098	2		RELAY
	21	1528-00165	1		COUNTER
	20	1672-00039	1		SWITCH
	19				
	18	1606-00134	2		TIME DELAY RELAY
	17	1697-00396	2		SOCKET
	16	1593-00031	1		PUSH BUTTON
	15	1632-00142	1	OPTION	HRS METER 50 HZ
	15	1632-00134	1		HRS METER 60 HZ
	14	1601-00011	1		MAG STARTER
	13	1519-00037	1		LENS CAP.
	12	1594-00066	1		PUSH BUTTON
	11	1593-00675	1		PUSH BUTTON
	10	1613-00115	1		LIMIT SWITCH
	9	1552-01399	1		FUSE MDL 1
	8	1505-30047	1		FUSE BLOCK
	7	1634-00026	1		XFMR
	6	1552-00369	2		FUSE FNQ 1
	5	1582-00078	1		FUSE BLOCK
	4	1571-00162	1		MOTOR 5HP
	3	1563-00286	3		HEATER
	2	1517-00051	15		CABLE 4/COND 12
	1	1649-00035	1		PLUG

GATTO MACHINERY DEVELOPMENT CORP.

DRAWN BY: RTC DATE: 5/3/[illegible]

230/3/60 HZ

TITLE: [illegible] CPS

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