

# CONAIR MODEL HS 2-4 HIGH SPEED SAWS



## **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This manual is out-of-date and is provided only for its technical information, data and capacities.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](mailto: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containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

**PHONE: 800-458-1960**  
**FAX: 814-432-6345**

UGE002/0597

C A U T I O N ! ! !

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

The primary importance in the operation of any machinery is safety as well as proper maintenance. The following points should be observed in order to provide for the safe as well as long-lasting operation of Conair Gatto equipment.

1. **ALWAYS** replace guards.
2. Train operators to understand the operation of all moving parts.
3. Follow simple instructions regarding lubrication and preventative maintenance.
4. Keep machine clean.

The above steps will ensure a safe and long lasting piece of equipment for many years.

## LIST OF CONTENTS

### PART 1 - GENERAL SPECIFICATIONS

- 1.1 - Technical Data
- 1.2 - Application and Mode of Operation
  - 1.2.1 - Saw Function
  - 1.2.2 - Placement in Line
  - 1.2.3 - Electrical Supply
  - 1.2.4 - Air Supply

### PART 2 - MECHANICAL SYSTEM

- 2.1 - Main Saw Table
- 2.2 - Saw Carriage
- 2.3 - Material Clamping System
- 2.4 - Air Control System
  - 2.4.1 - Test of Functioning - Main Saw Table
  - 2.4.2 - Test of Functioning - Saw Carriage and Clamp
- 2.5 - Saw Spindle
- 2.6 - Parts List

### PART 3 - ELECTRICAL SYSTEM

- 3.1 - Electrical Data
- 3.2 - Saw Rotation
- 3.3 - Electrical Control System
- 3.4 - Target Switch Placement
- 3.5 - Safety Features
- 3.6 - Parts List

PART 4 - SERVICING THE UNIT

- 4.1 - Air System
  - 4.1.1 - Air Cleaner - Air Line Unit
  - 4.1.2 - Air Line Lubricator - Air Line Unit
  - 4.1.3 - Air Cylinders
- 4.2 - Bearing Lubrication
  - 4.2.1 - Linear Ball Bearings - Table
  - 4.2.2 - Saw Spindle Bearings - Saw Carriage
  - 4.2.3 - Hinge Pillow Block Ball Bearings
  - 4.2.4 - Motor Bearings
  - 4.2.5 - Saw Carriage Spherical Drive Bearing
- 4.3 - Drive Belts
- 4.4 - Trouble Shooting

PART 5 - DRAWINGS

- 5.1 - Air Control System
- 5.2 - Electrical Control System
- 5.3 - Piping Layout

PART 1

GENERAL SPECIFICATIONS

## 1.1 - TECHNICAL DATA

Saw Cut-Off Range - Profile	2" Maximum Height 4" Wide Maximum 2" Diameter Maximum <i>15-20 Cuts/Min.</i>
-----------------------------	---

### Pneumatic System

Shop Air Connection	1/2" Diameter Minimum
Air Pressure at Saw	60 PSI Minimum
Air Consumption Per Cut	.17 SCF
Air Consumption Per Minute	5 SCFM Maximum

NOTE: Carry (Green Wire) in Power Plug to Plant Service Ground.

### Dimensions and Weight

Length - Basic Saw	48" Overall
Width	36" Overall
Height	72" Overall
Weight (Approximately)	1,000 Pounds

## 1.2 - APPLICATION AND MODE OF OPERATION

### 1.2.1 - Saw Function

This saw is designed to automatically cut profile extrudate to length by actuation of a remotely positioned target switch normally placed on a run-out dump table in a position to provide a pre-determined length. The saw automatically cycles each time the target switch is actuated by the moving extrudate. The saw may be manually cycled at any time by either operating the target switch manually or by pressing the manual cycle pushbutton on the control panel.

The automatic cycle of the machine is as follows:

1. The cycle is started by closure of the normally open target switch or the normally open manual cycle pushbutton.
2. The table control and saw control valves are energized directly operating air to the table and saw cylinders. The table starts to move forward drive by the table cylinder. (A Toll-O-Matic cable cylinder on a HS-2-4/24)
3. The saw operating cylinder causes the saw carriage to tip toward the work.

4. As the saw approaches the work, the saw carriage mechanically operates the work clamp to rigidly clamp the work to the table. At the full clamp point, the table moves at extrudate speed.
5. The saw carriage moves the saw into the work, effecting cut-off.
6. At full travel of the saw carriage, saw blade is fully extended through the work and a limit switch starts the reset cycle.
7. The table control and saw control valves are de-energized directing air to return table to start position and the saw to up position.
8. When the saw carriage moves the saw up and out of the work, the mechanical work clamp is released and the extrudate is now released. The table is returned to the start position by the table cylinder or calbe cylinder.
9. At full back, the table closes a limit switch to reset for the next operation.

While the extrudate is clamped to the table, the table and extrudate move at extrusion speed. To prevent irregularities in the extrudate profile at or during the time that the extrudate is clamped to the table because of the inertia or table friction the table is started and moved forward by a low pressure pneumatic system that counteracts these forces. A high pressure pneumatic system returns the table at higher than extrusion speed to provide sufficient time for return and reset after work cut-off.

#### 1.2.2 - Placement In Line

The machine should be installed in the extrusion line so that the extrudate is in line with the saw table. Adjust the height and level of the machine with the four corner adjusting screws so that the extrudate is parallel and touches the table.

#### 1.2.3 - Electrical Supply

A 3 phase, 4 wire power cord with a polarized plug for connecting to plant power furnished and connected to the machine. Make certain the plant supply voltage corresponds to the voltage stamped on the machine panel. The polarized prong of the plug should be carried to the plant electrical ground so the machine will be properly grounded. The electrical power source should be fused in accordance with the codes applicable in your plant.

NOTE: The drive motor is dual voltage and the saw may be operated at either voltage provided the motor and control transformer are properly connected for the selected voltage.

#### 1.2.4 - Air Supply

The air supply line to this saw should be 1/4" I.D. minimum. Supply pressure should be 60 PSI minimum.

PART 2

MECHANICAL SYSTEM

## 2.1 - SAW TABLE

The saw table is carried on anti-friction bearings throughout. Two linear ball bearings with shaft seals support and guide the table on a hardened shaft on the back side. A sealed roller bearing riding on a hardened shaft supports the table on the front side. A second underside sealed roller bearing positioned for very small clearance is applied to eliminate any possible lift of the front side of the table.

The table is moved by a Toll-O-Matic Cable Cylinder mounted inside the cabinet.

## 2.2 - SAW CARRIAGE

The saw carriage is mounted on the main table on sealed ball bearing pillow block hinges. The carriage is counter balanced to hold the carriage in the up position.

The carriage carries the drive motor, saw drive pulleys and belts, saw spindle and saw. The motor base is adjusted for proper belt tensioning.

The saw carriage is pivoted by a double air cylinder mounted on the table.

## 2.3 - MATERIAL CLAMPING SYSTEM

The work clamp assembly is mounted on the table top. The work clamp force may be varied by adjusting the air regulator inside front of cabinet (Item 13) on pneumatic schematic.

The clamp is mechanically timed to be effective before cutting action takes place, assuring positive holding at cut-off.

## 2.4 - AIR CONTROL SYSTEM

The air control system is shown on the air schematic diagram, Section 5.1.

The main air filter/regulator (Item 12) is located on the side of the cabinet and may be reached by removing the front bottom cover. Supply pressure should be 60 PSI minimum.

#### 2.4.1 - Test of Functioning - Saw Table

Supply shop air to the air supply and set pressure as shown on the air system diagram. With air on, the table will be held at full back position.

Press the manual operator button on top of the table valve and hold in, manually shifting the valve. The table should start to move forward slowly. Speed of the forward motion is controlled by table assist regulator and regulated air pressure is adjusted if necessary to provide proper motion.

Table return speed is set by flow control valve (Item 9). Release the manual valve operator out and adjust flow control valve to give desired return speed. A number of trials may be required to obtain desired speeds. The flow control valve is located near the rod end cylinder port.

#### 2.4.2 - Test of Functioning - Saw Carriage and Clamp

Press the manual operator button on top of the saw control valve and hold in, manually shifting the valve. The saw carriage will move full down and stop. Down speed is controlled by flow control (Item 7). When the manual button is released, the saw carriage will raise. Speed is controlled by flow control valve (Item 8). To check clamping, place a piece of the work to be cut in the guide below the clamp pad. Operate the saw control valve with the manual operator on the valve. As the saw moves down, positive clamp should take place before the saw contacts the work. Adjust clamp pressure as required. NOTE: Maximum clamp pressure is 25 psig.

#### 2.5 - SAW SPINDLE

The saw spindle is carried on precision, high speed roller bearings. The saw clampnut is left hand and must be turned clockwise to remove. To hold the spindle from turning when tightening or loosening the saw clamp nut insert a 5/16 hex key in the end of the spindle.

PART 3

ELECTRICAL SYSTEM (REF. DRAWING C-PS-008)

### 3.1 - ELECTRICAL DATA

The electrical system drawing shows all pertinent electrical data for this machine. The motor and control transformer are dual-voltage and the saw may be operated at the alternate voltage by reconnection of the motor and control transformer in accordance with their nameplates.

### 3.2 - SAW ROTATION

After connecting electrical power to the saw, first check saw blade rotation. The saw motor is started by a manual starter panel. Momentarily run the motor, using the starter as an on-off switch, noting saw rotation. If it is incorrect, disconnect the power, remove the panel over the starter and reverse any two of the power leads on the one side of the starter. Again start the motor and check saw rotation. If correct, replace the panel.

NOTE: A carbide tipped saw blade will be permanently damaged if it is operated in the wrong direction.

### 3.3 - ELECTRICAL CONTROL SYSTEM

Power is brought to the saw by a 4 wire power cable terminated by a 3 phase, 4 wire polarized plug. The saw motor is controlled by a 3 phase manual starter. Overload heaters are selected on the basis of motor nameplate current ratings.

Control power is taken from the motor side of the manual starter, requiring that the motor be running before control power is available to electrically cycle the saw. Control power at 115 volts is supplied by transformer. The saw circuit is simple automatic reset type. The system operates the table control valve and saw control valve to produce the saw cut-off cycle. With air and electric power on the machine, the table is full back holding LSI closed and the saw is up and rotating. When the target switch or the manual cycle pushbutton are closed, control power is applied to TDRI, and control relay CR, through I-TDR-I (N.C.) and LS-I (NO.O. held closed).

Relay CRI is energized closing its contacts ICRI and 2 CRI. Contact I-CR-I seals in the relay and it remains energized when the target switch or manual cycle pushbutton opens.

Contact 2-CRI energizes the table control solenoid valve and the saw control valve shifting both valves. The main table starts to move forward. Limit switch LS-I opens and the saw carriage is tipped moving the saw toward the work.

The work is clamped to the table and the table starts to move at

extrusion speed. The saw carriage continues down and the work is cut-off. When the saw is through the work, a signal opens LS-3 and relay CRI is de-energized. Contacts I-CRI and 2-CRI open. Opening of I-CRI opens the interlock circuit so that CRI remains de-energized when LS3 recloses as the saw is moved out on reset.

Opening of I-CRI de-energizes the table control solenoid valve and the saw control solenoid valve and the spring off-set on the valves shift them to reset or normal. Air is applied to the table cylinder in a direction to move the saw up. The saw moves up, LS-3 recloses, and the work unclamps from the table, the saw carriage continuing to move to full out. At the instant that the work clamp releases, the table starts to move back and travels to full back position, reclosing LS-I, resetting the system for the next cycle.

- 3.4 - The target switch is equipped with a long line cord so that it may be placed at appropriate location in the line. The position is adjusted to provide minimum variation in cut length.

3.5 - SAFETY FEATURES

The machine is completely safety enclosed and yet the operating efficiency is not impaired, all guards are tightly secured.

The following safety features are built into the control system:

Electrical

- If the target switch jams and remains closed, the machine must be allowed to complete its cycle but not recycle. To provide this feature, a time delay relay RDR-I is used. When the target switch initiates a cycle, TDR-I is energized and if the target switch closure exceeds 1 1/2-2 seconds, TDR-I times out on "On Delay" and I-TDR-I opens. If the target switch does not open during the machine cycle, I-TDR-I is held open with TDR-I held timed out and recycling cannot occur when LS-I recloses as the table moves back to reset position.
- If the main table does not return to full back position reclosing LS-I, the machine will not cycle on target switch closure.
- If a cycle is initiated and the saw carriage does not move the saw in or moves the saw in but does not retract it to unclamp the work from the table, the table may be moved to full excursion and jam. To prevent this from happening, a limit switch LS-2 placed at a set limit to the table travel opens, causing the machine to react for the next cut cycle. When the table reverses the limit switch recloses.

For safety, a pressure switch monitors the input air source. If the pressure is too 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.

NOTE: This unit will NOT function without air.

PART 4

SERVICING THE UNIT

#### 4.1 - AIR SYSTEM

##### 4.1.1 - Air Cleaner - Air Line Unit

The filter air cleaner on the air line unit should be blown-out regularly. If water is allowed to fill the bowl, permanent damage to the air system components may result.

##### 4.1.2 - Air Line Lubricator - Air Line Unit

The lubricator bowl should be filled with a non-chlorinated oil of approximately 10W viscosity. Set the rate at 12 drops per hour. Check bowl regularly for level.

##### 4.1.3 - Air Cylinders

The two air cylinders should be inspected regularly for air leakage on the rod end and for sluffish operation. With adequate lubrication, the cylinders should give long, trouble-free service before replacement of seals is required.

##### 4.1.4 - Air Valves

The two air valves should be inspected regularly for air leakage. Air leakage shows up as continuous air discharge from the exhaust. With adequate lubrication, the valves should give long, trouble-free service before replacement of seals is required.

#### 4.2 - BEARING LUBRICATION

##### 4.2.1 - Linear Ball Bearing

The linear ball bearings on the table are pre-lubricated and sealed. They should require no lubrication for the life of the machine.

##### 4.2.2 - Saw Spindle Bearings - Saw Carriage

The saw spindle bearings are roller type and the pillow blocks have lubrication fittings. Lubricate only with No. 2 lithium base ball bearing grease.

Bearings should be greased as often as necessary to maintain a slight leakage at the seals. Add grease until it shows at the seals; rotate the bearings to distribute grease. Usually high temperature accompanied by excessive leakage of grease indicates too much grease. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to large amounts at infrequent intervals.

<u>Hours of Run Per Day</u>	<u>Suggested Lubrication Period In Weeks</u>	
8	2 (Carbide)	4 (H.S.S.)
16	1 (Blade)	2 (Blade)
24	1 (3100 RPM)	1 (1900 RPM)

#### 4.2.3 - Hinge Pillow Block Bearings

The hinge bearings are ball type pre-lubricated and sealed. They should not require lubrication for the life of the machine. The pillow blocks have lubrication fittings for lubrication, if necessary. Use only No. 2 lithium base ball bearing grease.

#### 4.2.4 - Motor Bearings

The motor bearings are pre-lubricated and sealed with a grease supply adequate for 1000 hours of operation. The motor is furnished with provision for regreasing as required. Regrease with Shell Syprena #3.

#### 4.3 - DRIVE BELTS

The drive belts should be maintained under proper tension at all times. The adjustable motor base allows proper adjustment.

#### 4.4 - SHOCK ABSORBER

The shock absorber that decelerates the table return is adjusted prior to shipping the machine.

#### 4.5 - TROUBLE SHOOTING

4.5.1 - Pilot light does not light when saw is started. Check fuse, replace if blown.

4.5.2 - Fuse blows at frequent intervals: check for short circuit, defective switch, or defective coils in control circuit.

4.5.3 - Table does not move when target switch is actuated or manual cycle pushbutton is depressed:

- Check inlet air pressure and table pressure.
- Check if table is in return position.
- Check for any obstructions in the table travel.
- Check fuse.
- Check table valve and SOLI for proper operation.
- Check control relay for proper operation.
- Check LSI for proper operation.

- 4.5.4 - Table moves when manual cycle pushbutton is depressed, but returns when button is released:
  - Check LS2 and LS3 for proper operation.
- 4.5.5 - Saw carriage does not come down after starts to move:
  - Check inlet air pressure.
  - Check for any obstructions to carriage travel.
  - Check saw carriage valve and SOL2 for proper operation.
- 4.5.6 - Saw carriage does not return after cutting:
  - Check LS3 for proper operation.
  - Check saw carriage valve - it may be stuck in open position.
- 4.5.7 - Table does not return after cutting:
  - Check for any obstructions to table return.
  - Check table valve - it may be stuck in open position.
- 4.5.8 - Clamp does not clamp extrude to table:
  - Check pressure gauge on clamp regulator (Item 13) located next to saw carriage valve. Adjust clamp pressure to suit part, up to 25 psig maximum.
- 4.5.9 - Saw spindle bearing runs hot (too hot to touch for more than a few seconds) accompanied by excessive grease leaking through seals:
  - Excessive grease in bearing.
- 4.5.10 Noise coming from saw spindle bearings:
  - Bearing needs lubrication and/or dirt entering bearing through seal.
  - Bearing should be greased as often as necessary to maintain a slight leakage at the seals.
- 4.5.11 Air valves stick in one position and/or erratic operation:
  - Check air filter. The air filter mounted on this machine is the self-draining type. Occasionally these filters clog and the self-draining function is inoperative. If this happen, water and dirt can enter the pneumatic circuit causing damage to components and/or faulty operation.
  - Check lubricator, if empty - fill with (SAE 10) oil.
- 4.5.12 Excessive shock to machine when table returns:
  - Replace shock absorber.
- 4.5.13 Clamp bars rebound and bounce off extrudes when saw carriage returns to saw out position:
  - Decrease speed of "Saw Return Feed".

PART 5

DRAWINGS

CONAIR GATTO

5.1 - AIR CONTROL SYSTEM

Drawing No. C-PS-009 Part # 0211-00805

5.2 - ELECTRICAL CONTROL SYSTEM

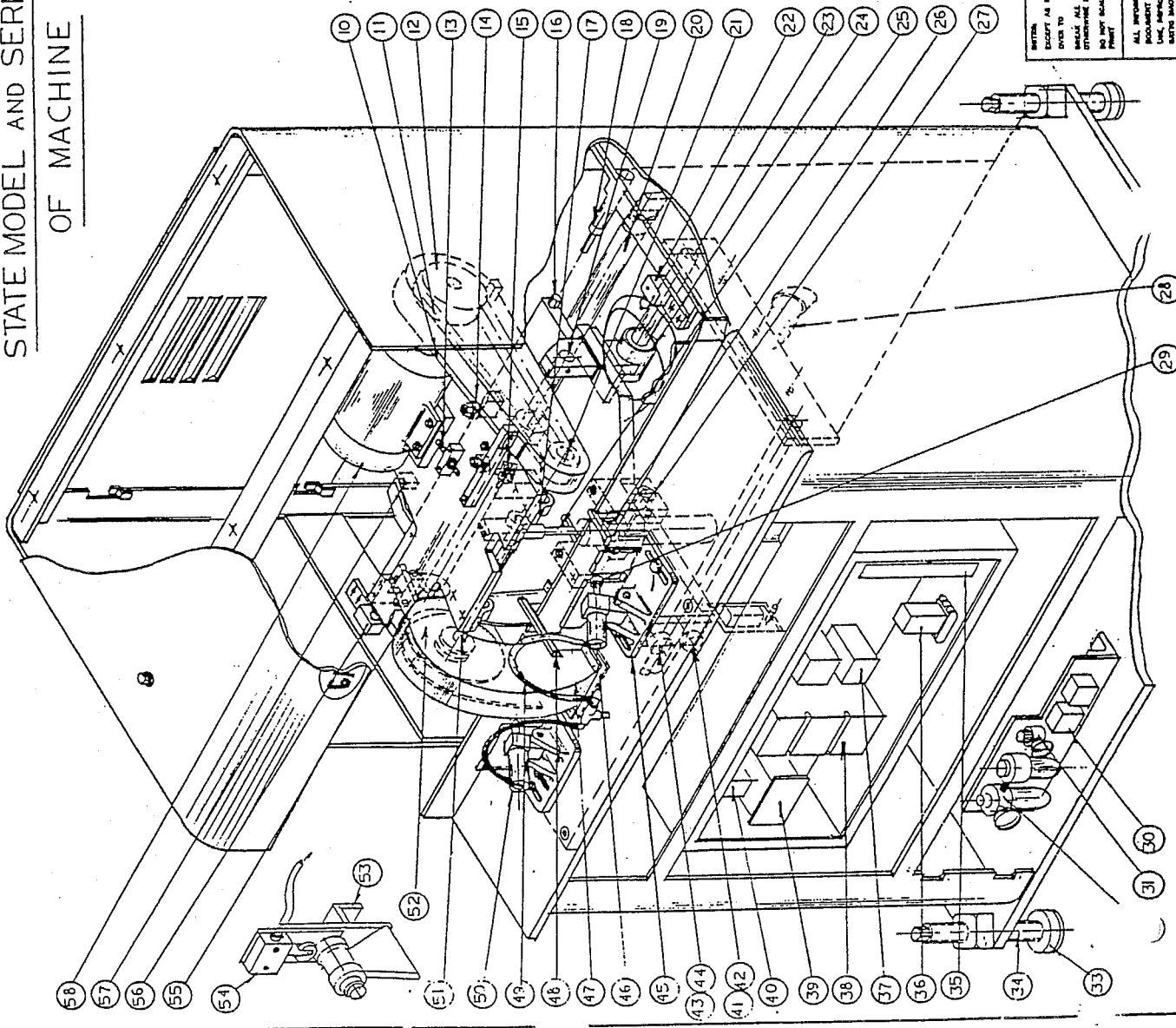
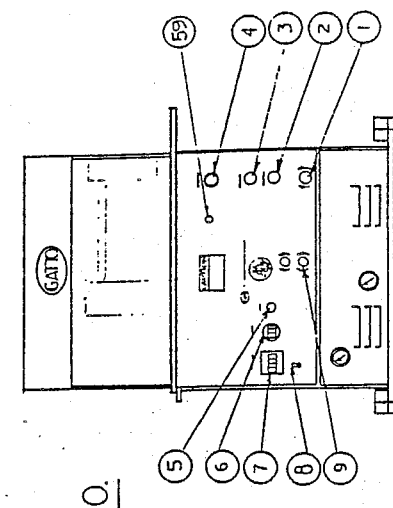
Drawing No. C-PS-008 Part# 0211-00074  
Length control 0811-30136

5.3 - PIPING LAYOUT

Drawing No. B-PS-007

REV.	DESCRIPTION	DATE	BY	APP.

WHEN ORDERING PARTS  
STATE MODEL AND SERIAL NO.  
OF MACHINE



ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
70	1		36	1	RELAY
69	1		35	1	TERMINAL STRIP
68	4		34	4	JACK SCR.
67	4		33	4	PAD
66	1		32	1	REG. FILT. LUBE.
65	2		31	1	REGULATOR
64	2		30	2	VALVE
63	2		29	2	BUMBER
62	1		28	1	HOSE
61	2		27	2	BUSHING
60	1		26	1	HOLD DOWN BAR
59	1		25	1	CYLINDER
58	1	FUSE 2-A	24	2	BALL BUSHING
57	1	MOTOR	23	2	SHAFT
56	1	SWITCH	22	1	SWITCH
55	2	SWITCH	21	1	PULLEY
54	1	SWITCH	20	1	CYLINDER
53	1	SWITCH	19	1	SHAFT
52	1	FLAG SW. ASSY	18	1	SHOCK ABSORBER
51	1	SAW BLADE	17	2	BEARING
50	2	ARBOR SHAFT	16	1	STOP
49	2	HOSE	15	1	SWITCH
48	1	ENTRANCE LIP	14	2	BUMBER
47	1	SAW GUARD	13	1	MCTGR ADJ. SCR.
46	1	CHIP TROUGH	12	1	DRIVE PULLEY
45	1	SIDE GUIDES	11	3	BELT S
44	2	SPACER S	10	2	FLO. CONTROL
43	1	ROLLER	9	2	TOGGLE SW.
42	2	SPACER S	8	1	COUNTER
41	1	ECCENTRIC ROLLER	7	1	CLOCK
40	1	TERMINAL	6	1	RESET
39	1	TRANSFORMER	5	1	START
38	1	RELAY	4	1	STOP
37	2		3	1	MANUAL RUN SW.
			2	1	REGULATOR
			1	1	REGULATOR

**GATTO MACHINERY DEVELOPMENT CORP.**

DESIGNED BY: ALLOIA DATE: 1-73

REVISIONS: RIGHT TO LEFT SHOWING

TITLE: PARTS LIST HS-24 SAW

NO. C P5000-113

REVISIONS TABLE:

NO.	DESCRIPTION	DATE

ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE IN INCHES AND DECIMALS THEREOF. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE TO CENTER UNLESS OTHERWISE NOTED. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE TO CENTER UNLESS OTHERWISE NOTED. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE TO CENTER UNLESS OTHERWISE NOTED.

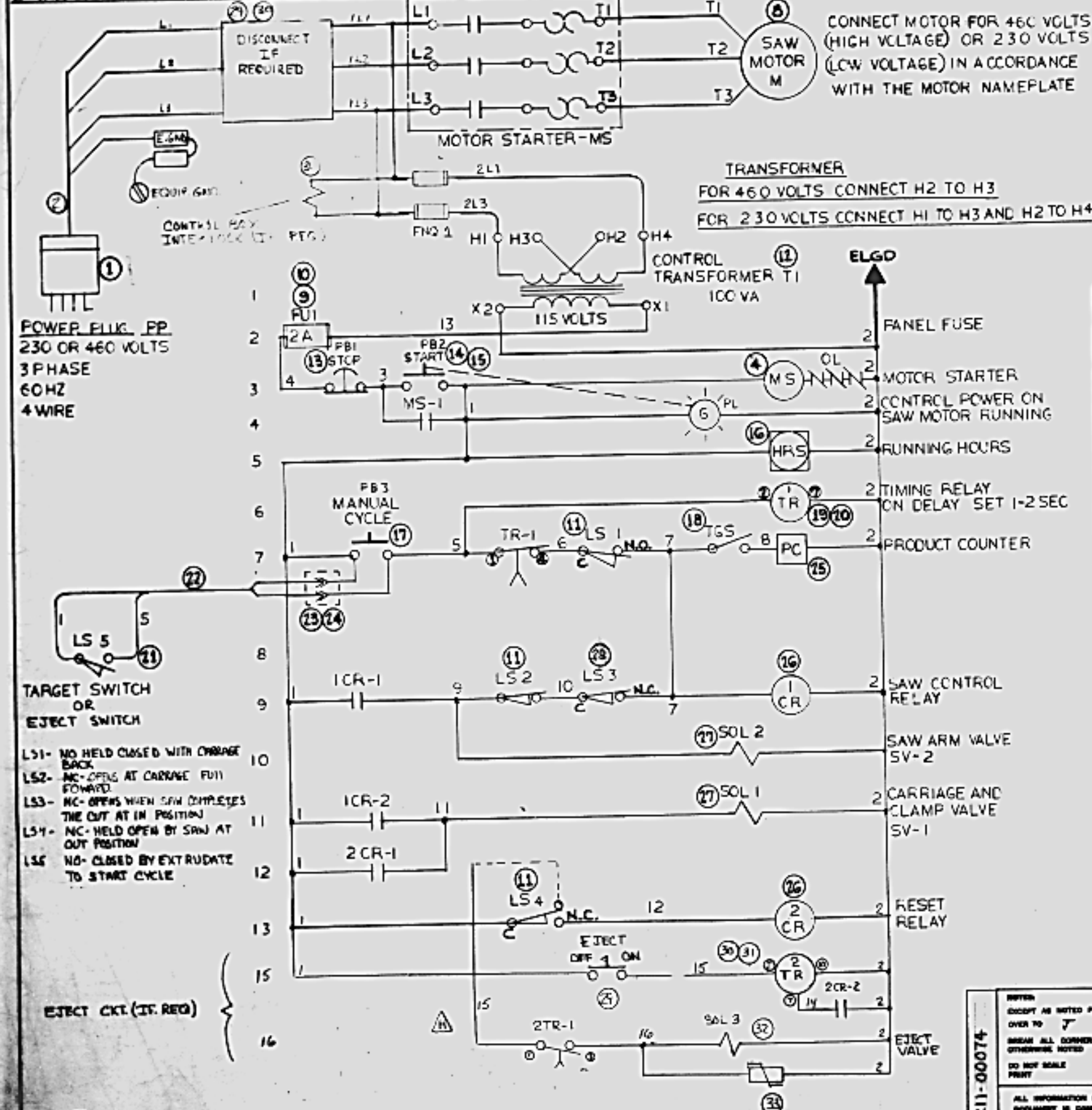
Machine Model #	List Item #	Description	Part #
HS-2-4	1	1-10PSI Regulator (Table) #RO7-200-RNAA	5548-00086
HS-2-4	1A	O-15PSI Gauge P844-U	5518-00324
HS-2-4	2	Switch-Manual #800T-A9D1	1593-00091
HS-2-4 to 77	3A	Push button - Stop #800T-B6A	1593-00148
HS-2-4 78 - on	3B	Push button - Stop #800T-D6D2	1593-00679
HS-2-4	4	Push button - Start #800-PA16	1594-00036
HS-2-4	4A	Green Lens #800T-N41G	1519-00039
HS-2-4	4B	Bulb 6.3V #800T-N65	1569-00048
HS-2-4	5A	Rubber boot #800T-N5	2502-00015
HS-2-4	5B	Boot Ferrule B-24681	1648-00029
HS-2-4	5C	Reset Button Z-20161	1601-00039
HS-2-5 50 Hz	6A	Timer #EF2735-A-2-5-000	1632-00037
HS-2-4 60 HZ	6B	Timer #EF2735-A-2-6-000	1632-00045
HS-2-4 to 79	7A	Counter, SIMpson #103	1538-00031
79/On	7B	Counter, Durant	1538-00163
HS-2-4	8	Toggle Switch #11OS-73	1622-00039
HS-2-4	9	Flo-Control Valve	5540-00192
HS-2-4	10	Fiberglass Belt Guard	0211-01402
HS-2-4	13	Motor Adj. Screw	0211-00252
HS-2-4	14	Bumper Spring #ES3540	4542-00177
HS-2-41	15	Micro Switch #BZE6-2RQ	1613-00042
HS-2-4	17	1 1/4" Pillow Block Brg. Type E	3507-00079

Machine Model #	List Item #	Description	Part #
HS-2-4	18	Shock Absorber #AS 3/8 x 1	5528-00039
HS-2-4	19	Pivot Shaft	0211-00368
	11	Pulley Belts	
As Below	11A	Belt 3V375	3513-00412
" "	11B	Belt 3V375	3513-00412
" "	11C	Belt 3V400	3513-00102
" "	11D	Belt 3V425	3513-00129
	12	Drive Pulley and Taperlock	1519-00039
HSS BLD 60 cyc	12A	Pulley 3V3G-3.35 OD	3545-00074
	12A	Taperlock Bushing #1615	3518-00674
HSS Bld 50 cyc	12B	Pulley 3V3G-4.12 OD	3545-00104
	12B	Taperlock Bushing #1615	3518-00674
Car Bld. 60 cyc	12C	Pulley 3V3G-5.30 OD	3534-00147
	12C	Tapelock Bushing #1615	3518-00674
Car Bld 50 cyc	12D	Pulley 3V3G-6.50 OD	3545-00171
	12D	Tapelock Bushing #2517	3518-01204
		Delrin Roller	3559-00018
		L/H Nut	4510-00124
		Cyl Clevis w/ rod	5505-00155
		Saw Clevis w/ Block	0211-00201

Machine Model #	List Item #	Description	Part #
HS-2-4	20	Air Cyl. T-J #SM-3 1 1/2" x 10" Old Style	5503-00263
HS-2-4	20A	Cyl. Kit #6331U-003	5508-00245
HS-2-4	21	Driven Pulley 3V-3G-3" O.D.	3545-00066
HS-2-4	21A	Taper Lock #1210- 1 1/4" bore	3518-00518
HS-2-4	22	Micro Switch BZE6-2RQ	1613-00042
HS-2-4	23	Carriage Rod Shaft	0211-00422
HS-2-4	24	Thompson Pillow Blk. # PB-20A	3507-00109
HS-2-4	25B	Air Cyl. SM-5 2 1/2" x 3"	5503-00352
HS-2-4	25A	Cyl. Kit #6331U-013	5508-00199
HS-2-4	26	Hold Down Bar	0211-00589
HS-2-4	27	Bushing Oilite Bronze 1" x 1 1/8" x 1	3560-00412
HS-2-4	28	Flex tube 3" Dia. x 3' Long	4560-00028
HS-2-4	29	Clmap Pad 5/16" - 24 thd.	0211-00554
HS-2-4	30A	Solenoid Valve #1616A-2020 (Ross)	5553-00027
Alt.	30B	Solenoid Valve (versa)	5553-00051
HS-2-4	30C	Solenoid Kit #679K87Ross only	5553-00035
HS-2-4	31	#RO7-200-RNKA Clamp Regulator (2-100PSI)	5548-00027
HS-2-4	32	Filt.-Reg.-Lube #P24-200-A3CA	5501-00266
HS-2-4	34	Floor Mount Assy. Floorlock	0102-00145
HS-2-4	36	Time Delay Relay#CKB-38-70010+	1606-00134
HS-2-4	36A	8-Pin Base #RB-08	1647-00041

Machine Model #	List Item #	Description	Part #
HS-2-4	37	Relay #PR7AYO	1601-00063
HS-2-4	38	Magnetic Starter #709-BOD-16	1609-00089
HS-2-4	39	Transformer #TA-81211	1634-00026
HS-2-4	41	Cam Follower CF - 1 1/2 SB	3501-00093
HS-2-4	42/44	Shim 7/8" x 1 3/8" x 1/16"	4545-00275
HS-2-4	43	Ca Follower CFE - 1 1/2 SB	3501-00107
HS-2-4	45A*	Side Guide - Out	0211-01194
HS-2-4	45B*	Side Guide - In	0211-01216
HS-2-4	46	Fiberglas chip trough	0211-01437
HS-2-4	47A	Fiberglass Saw guard R.H.	0211-00961
HS-2-4	47B	Fiberglass Saw Guard L.H.	0211-00988
HS-2-4	48	Entrance Lip * Specify direction right or left	0211-01984
HS-2-4	49	3/8" poly flow tube (9ft.)	5533-00055
HS-2-4	50	Air Cyl. #BF-091	5503-00387
HS-2-4RH	51A	Saw Spindle #C-PS-038B	0211-00953
HS-2-4LH	51B	Saw Spindle #C-PS-046B	0211-01135
HS-2-4	52A	Blade SHSS 10" Dia. 190 teeth	see blade
HS-2-4	52B	Blade Carbide 10" dia. 96 teeth - other blades avail.	see blade
HS-2-4	53	Flag switch assy. C-DT-137	0801-00037
HS-2-4	54	Micro Switch #BZE6-2RN80	1613-00034
HS-2-41	55	Pillow Block SC-1"	3507-00044
HS-2-4	56/57	Micro Switch BZE6-2RQ	1613-00042
HS-2-4	58	Motor 2 HP 145T Frame	1577-00049
HS-2-4	59	Fuse AGC-2 AMP	1552-00443
HS-2-4	60	9/16" Wrench Armstrong #702	4553-00012
		Table Roller	3559-00018
		Flag Switch Assy.	0801-00037

NO.	DATE	BY	APP.
1	4-6-78	RK	
2	4-6-78	RJC	
3	2/2/82	RJC	



OL SIZE ON BASIS OF MOTOR CURRENT HEATERS AT SELECTED VOLTAGE

CONNECT MOTOR FOR 460 VOLTS (HIGH VOLTAGE) OR 230 VOLTS (LOW VOLTAGE) IN ACCORDANCE WITH THE MOTOR NAMEPLATE

TRANSFORMER FOR 460 VOLTS CONNECT H2 TO H3 FOR 230 VOLTS CONNECT H1 TO H3 AND H2 TO H4

POWER FLK. PP 230 OR 460 VOLTS 3 PHASE 60HZ 4 WIRE

TARGET SWITCH OR EJECT SWITCH

- LS1- NO HELD CLOSED WITH CHARGE BACK
- LS2- NC- OPENS AT CHARGE FULL FORWARD
- LS3- NC- OPENS WHEN SAW COMPLETES THE CUT AT IN POSITION
- LS4- NC- HELD OPEN BY SAW AT OUT POSITION
- LS5- NO- CLOSED BY EXTRUDATE TO START CYCLE

EJECT CKT. (IF REQ)

FOR USE AT GATTO. FOR CUSTOMER'S USE SEE CPS-368

ITEM	PART No.	QTY.	DESCRIPTION
33	VARIATOR	1	VARIATOR V130 LA2 GE
32	SOL. VALVE	1	1616A 2020 ROSS
31	SOCKET	1	RB 11 PC CCC
30	TIME DELAY RELAY	1	CKB-38-7B010
29	SWITCH	1	800T-HZD1 AB
28	LIMIT SWITCH	1	MICRO SWITCH B2E6-2RA
27	SOLENOID	2	ROSS-#1616A2020, 115V/60HZ.(4WAY)
26	CONTROL RELAY	2	P&B-#PTAYO, 110V/60HZ.
25	PRODUCT COUNTER	1	SIMPSON-#103
24	RECEPTACLE-T.SW.	1	P&B-#7210
23	PLUG-TARGET SW.	1	P&B-#7102
22	PORTABLE CORD	20'	TYPE "S"-10AWG, 2 COND.
21	TARGET SWITCH	1	MICRO-#B2E6-TRN80
20	BASE RECEPTACLE	1	C.C.C.-#R5 08-PC
19	TIME DELAY RELAY	1	P&B-#CKB 38-70010
18	TOGGLE SWITCH	1	CARLING-#110B-7B
17	MAN. CYCLE PUSHB.	1	ALLEN BRADLEY-#800T-AGD1
16	RUNNING HOUR METER	1	GEN. TIME-#EP 2735-A-2-G-000, 60HZ./120V.
15	COLOR LENS	1	ALLEN BRADLEY-#800T-N41(GREEN)
14	START PUSHBUTTON	1	ALLEN BRADLEY-#800T-PA8
13	STOP PUSHBUTTON	1	ALLEN BRADLEY-#800T-D8D2
12	TRANSFORMER	1	ACME-#TA-1-01211
11	LIMIT SWITCH	2	MICRO-#B2E6-2RQ
10	FUSE HOLDER	1	BUSS-#HXP-HH
9	FUSE	1	BUSS-#1002
8	MOTOR (T.E.P.C.)	1	2 H.P./1725 R.P.M. - 14ST FRAME
7	FERRULE	1	ALLEN BRADLEY-#824GB1
6	RUBBER BOOT	1	ALLEN BRADLEY-#800T-N5
5	HEATER (O.L.)	3	ALLEN BRADLEY-250V.#N27/460V.#N10
4	MOTOR STARTER	1	ALLEN BRADLEY-#709-800-16, SIZE 1
3	TERMINAL BLOCK	5	SUCHANAN-#725 W#730 BND SECTION.(1)
2	CONTROL CABLE	15'	TYPE "S"-10AWG-4 COND.
1	POWER PLUG	1	BRYANT 230V.#Y1530-NP/440V.#T1630-NP.

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

TOLERANCE UNLESS OTHERWISE NOTED: FRACTIONS ± .01 IN DIMENALS ± .01 IN ANGLES ± .1 IN WELDEDMENTS ± .1 IN

0211-00074

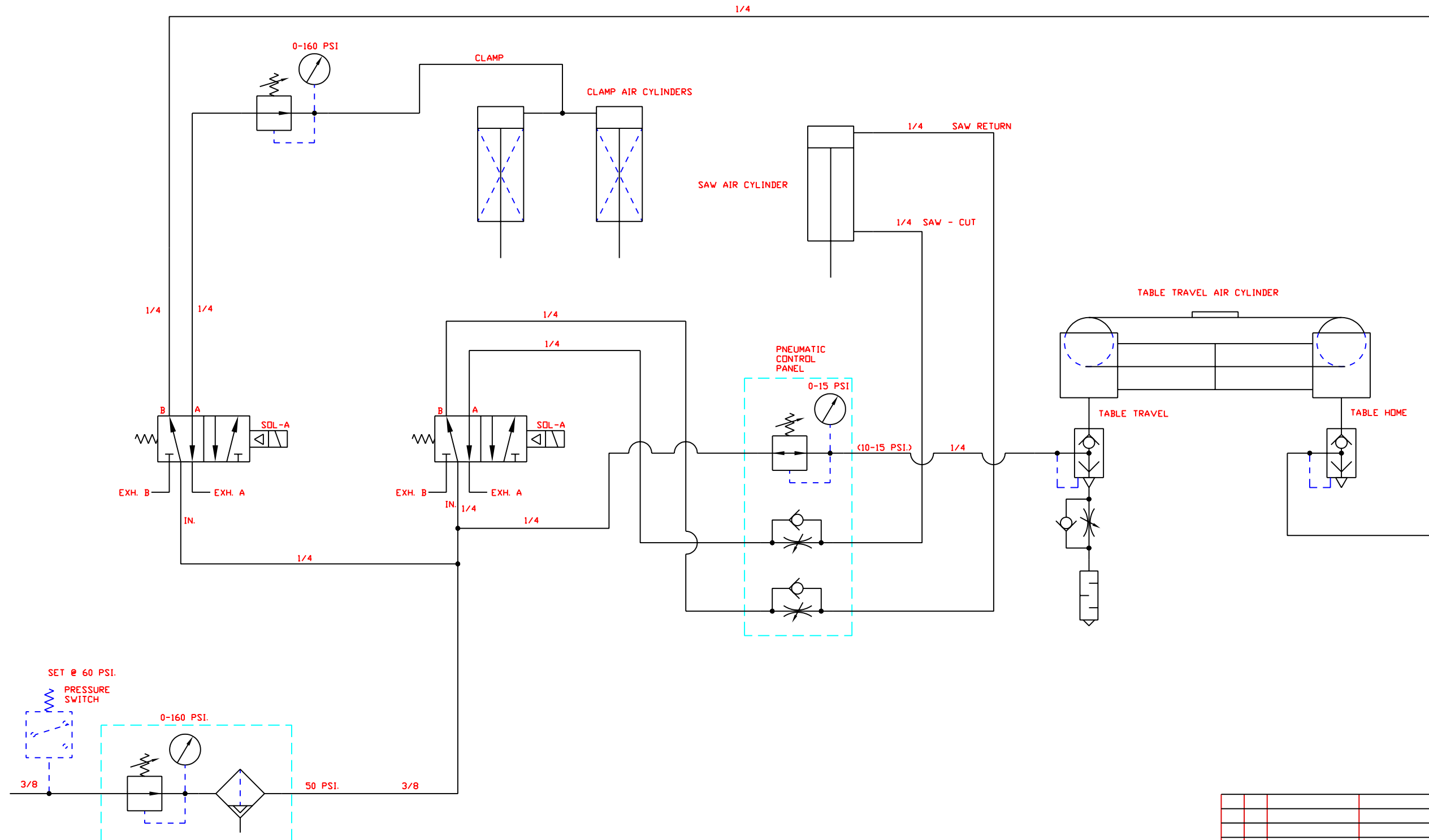
ALL INFORMATION CONTAINED IN OR DISCLOSED BY THIS DOCUMENT IS CONFIDENTIAL. ALL DESIGN, MANUFACTURE, USE, REPRODUCTION AND SALES RIGHTS ARE RESERVED BY GATTO MACHINERY DEVELOPMENT CORP.

GATTO MACHINERY DEVELOPMENT CORP.

DESIGNED BY: RJC DATE: 4-6-78 MATERIAL:

TITLE: H.S. SAWZAM-ELECTRICAL SCHEMATIC RJK/LH

SCALE: C PS-008



REVISION	BY	DATE
REVISION	BM	07-23-92
REVISION	BY	DATE
REVISION	BY	DATE

File Name: VD1003P.DWG Plotted 07-23-92 14:55

SHEET 1 OF 1

DRAWING NUMBER	SYM	QTY	PART NUMBER	DESCRIPTION
NOTES: EXCEPT AS NOTED FINISH ALL OVER TO $\sqrt{\quad}$ BREAK ALL CORNERS UNLESS OTHERWISE NOTED. DO NOT SCALE PRINT.		TOLERANCE UNLESS OTHERWISE NOTED: .XX = $\pm$ 0.010 .XXX = $\pm$ 0.005 ANGLES = 1/2"		<p style="text-align: center;"><b>CONAIR</b> GATTO MACHINERY DEVELOPMENT CORP.</p> <p>TITLE HS-2-4/24 PNEUMATIC DIAGRAM</p>
ALL INFORMATION CONTAINED IN OR DISCLOSED BY THIS DOCUMENT IS CONFIDENTIAL. ALL DESIGN MANUFACTURE USE REPRODUCTION AND SALES RIGHTS ARE RESERVED BY CONAIR - GATTO MACHINERY DEVELOPMENT CORP.		DRAWN BY Monday	DATE 6-3-92	PART NUMBER 0211-00805
		SCALE Full	D	REV A

