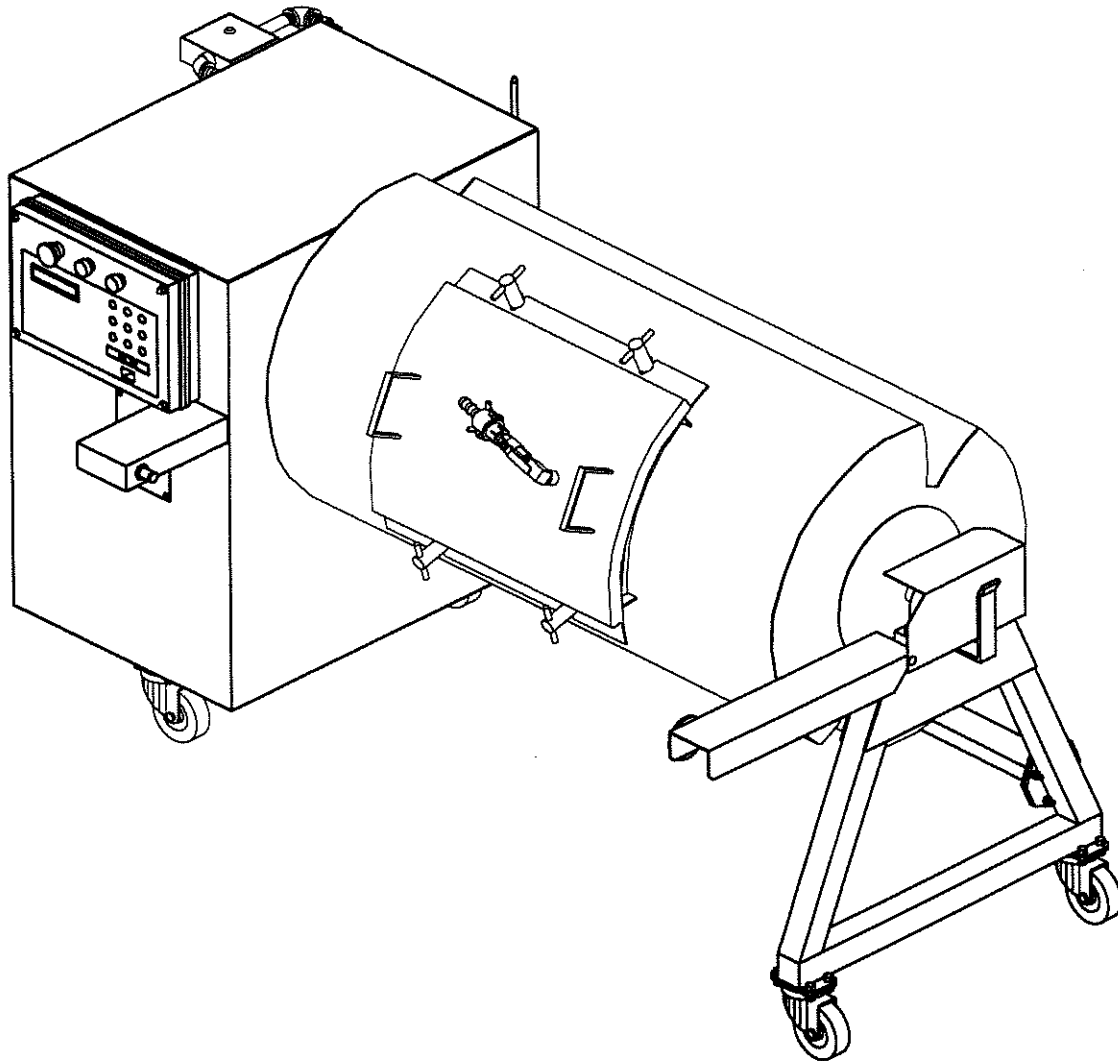




HOLLYMATIC HVTS 200, 300, 500 VACUUM TUMBLERS



OPERATORS MANUAL – PARTS LIST

EVERY PERSON OPERATING THIS MACHINE MUST READ THIS MANUAL INCLUDING ALL SAFETY INSTRUCTIONS BEFORE ATTEMPTING TO OPERATE THIS MACHINE PROPER GUARDS AND SAFETY DEVICES ARE INSTALLED FOR YOUR SAFETY DO NOT OPERATE THE MACHINE UNLESS ALL GUARDS ARE IN PLACE

(C) HOLLYMATIC CORPORATION JULY 1998
ALL RIGHTS RESERVED

M-1902

HOLLYMATIC CORPORATION
600 E. PLAINFIELD ROAD
COUNTRYSIDE, ILLINOIS 60525
PHONE: 708-579-3700
FAX: 708-579-1057

INDEX

SAFETY INSTRUCTIONS _____	1
SAFETY LABEL PLACEMENT _____	2
LABEL LIST _____	3
SPECIFICATIONS _____	4
PRE-OPERATION _____	5-6
OPERATING INSTRUCTIONS ANALOG CONTROL _____	7-9
OPERATING & PROGRAM INSTRUCTIONS _____	10-14
PROGRAM SAMPLE _____	15-16
STRUCTURE ASSY PARTS LIST _____	17
TUMBLER ASSEMBLIES _____	18-20
WIRING DIAGRAM _____	21-22
ELECTRICAL PARTS LIST _____	23
CLEANING & SANITATION _____	24
MAINTENANCE _____	25
VACUUM CONTROL SETTINGS _____	26
OPERATOR SIGNATURE PAGE _____	27

SAFETY INSTRUCTIONS

WARNING TO ALL PURCHASERS, OPERATORS AND OPERATION SUPERVISORS:

MAKE CERTAIN EVERY PERSON WHO IS TO OPERATE THIS MACHINE HAS READ THIS MANUAL BEFORE BEING PERMITTED TO OPERATE THE MACHINE.

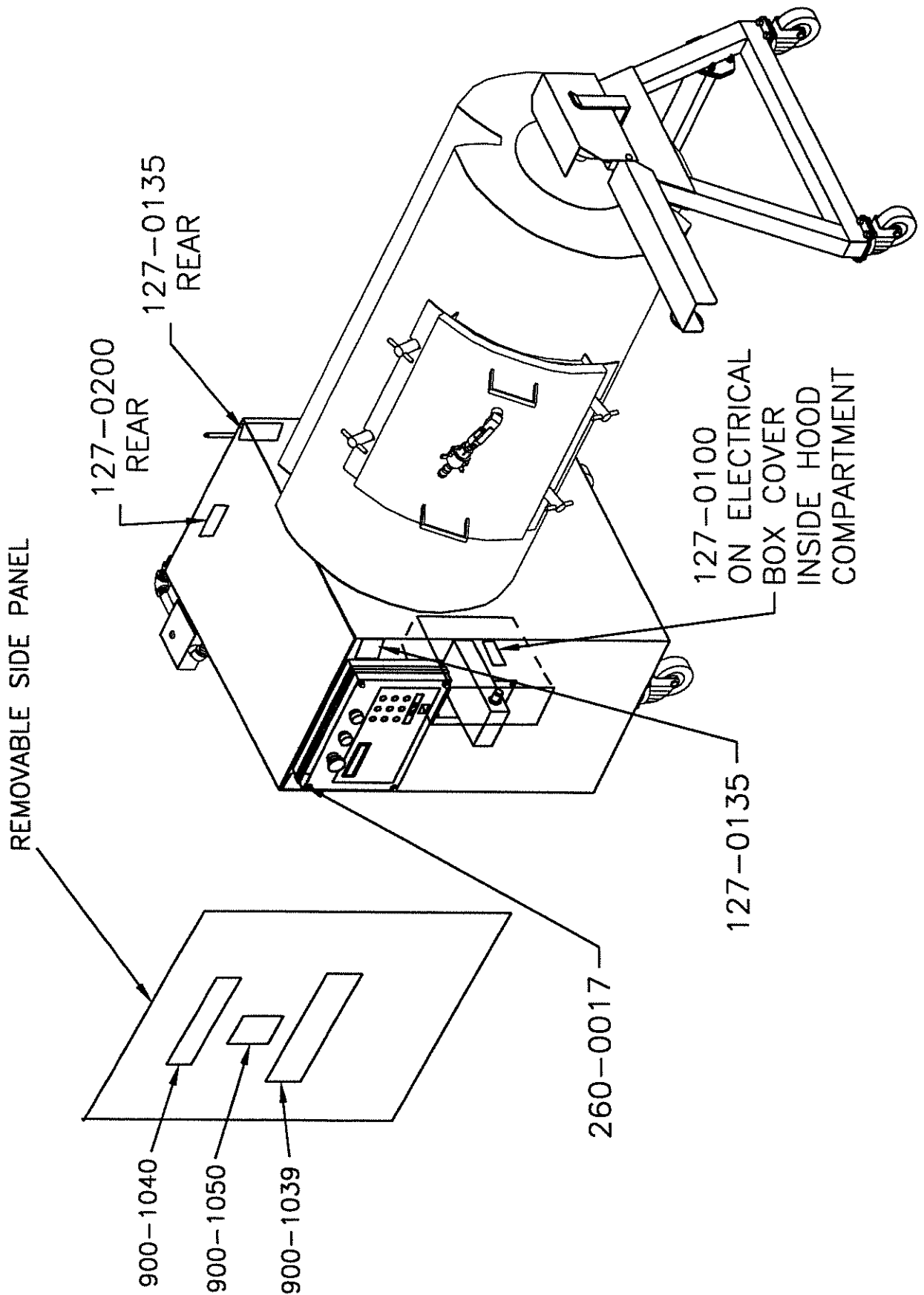
HAVE ALL OPERATORS SIGN THE SIGNATURE PAGE FOUND AT THE END OF THIS MANUAL.

FAILURE TO READ AND ADHERE TO THE FOLLOWING IMPORTANT INSTRUCTIONS COULD RESULT IN BODILY INJURY.

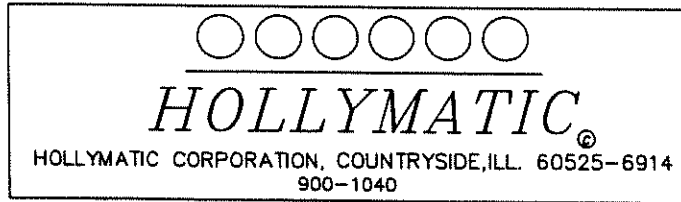
READ THIS MANUAL COMPLETELY BEFORE OPERATING THE HOLLYMATIC MACHINE. ADDITIONAL MANUALS AS WELL AS REPLACEMENT SAFETY LABELS ARE AVAILABLE FROM HOLLYMATIC CORPORATION OR FROM YOUR LOCAL HOLLYMATIC DEALER AT NO COST.

1. DO NOT OPERATE THIS MACHINE UNTIL IT HAS BEEN INSPECTED AND MADE READY FOR OPERATION BY AN AUTHORIZED HOLLYMATIC DEALER.
2. DO NOT TOUCH MOVING PARTS.
3. DO NOT OPERATE OR WORK AROUND THIS MACHINE WITH LOOSE FITTING CLOTHING. IT COULD BECOME ENTANGLED IN THE MACHINE.
4. NEVER TRY TO MANUALLY STOP OR TURN THE TUMBLER. HOLD DOWN THE NO. 2 KEY TO JOG THE TUMBLER INTO POSITION.
5. FAILURE TO PROPERLY GROUND THIS MACHINE COULD RESULT IN ELECTRICAL SHOCK. ONLY A QUALIFIED ELECTRICIAN, WHO IS FAMILIAR WITH THE APPROPRIATE ELECTRICAL CODES SHOULD PROVIDE THE PROPER ELECTRICAL CONNECTION.
6. DO NOT ALTER OR MODIFY THIS TUMBLER IN ANY WAY FROM ITS ORIGINAL FORM. ALLOW ONLY AN AUTHORIZED HOLLYMATIC DEALER TO SERVICE YOUR MACHINE.
7. ALWAYS TURN OFF THE MACHINE WHEN IT IS NOT IN USE.
8. UNPLUG THE MACHINE FROM THE POWER SOURCE BEFORE REMOVING ANY PANELS OR HOUSING FOR MAINTENANCE OR MAKING ADJUSTMENTS TO THE MACHINE.
9. ALWAYS OPERATE ON A LEVEL SURFACE.
10. KEEP UNAUTHORIZED PERSONNEL AWAY FROM MACHINE.
11. DO NOT REMOVE SAFETY REFLECTOR BRACKET. IF BRACKET IS NOT IN THE OUTWARD HORIZONTAL POSITION AND ALIGNED WITH THE SENSOR, THE DRUM WILL NOT TURN.
12. THE HOLLYMATIC VACUUM TUMBLERS ARE DESIGNED TO HANDLE VACUUM AND NOT PRESSURE. NOTE: DO NOT PUT ANYTHING IN THE DRUM WHICH WOULD GENERATE A PRESSURE SUCH AS CARBON DIOXIDE SNOW OR PELLETS.
13. INSTALL THE MACHINE IN A POSITION THAT PROVIDES ADEQUATE SPACE TO ALLOW SAFE CLEARANCE OF ANY PERSONNEL IN THE AREA.

LABEL PLACEMENT



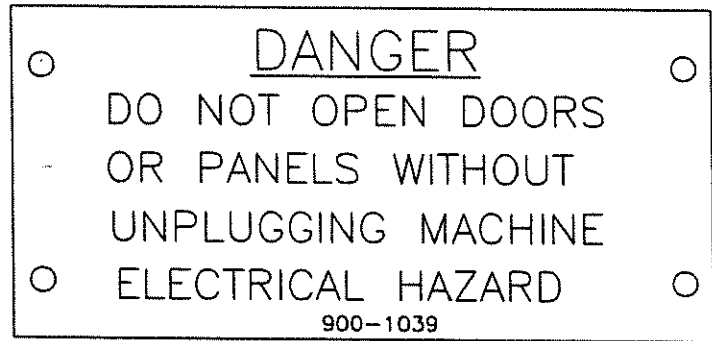
LABEL LIST



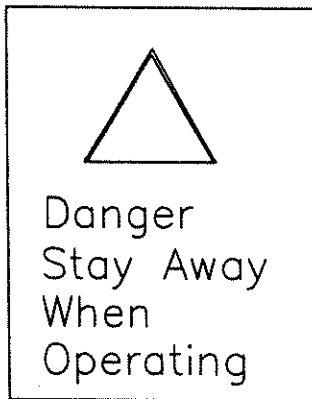
900-1040



260-0017



900-1039



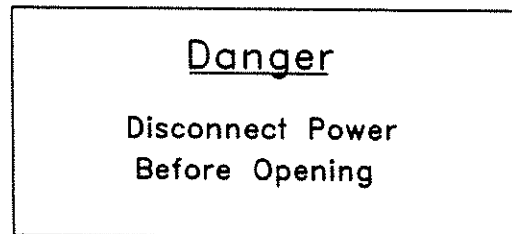
127-0135



900-1050

MOD _____ TYPE _____
VOLT _____ PH _____ HZ _____
AMP _____ KW _____ AMP _____
DATE _____ SER No _____

127-0200



127-0100

Specifications

(HVTS200, 300 & 500)

Power Requirement: 120 Volt, 60 Cycle, 1 phase, 14A.

Drive Motor: 1/2 H.P.

Vacuum Pump: 1 1/4 H.P., 25m³/HR

Construction: Stainless Steel Frame, tank and cabinet

Capacity: 200 (HVTS200), 300 (HVTS300) or 500 (HVTS500) lb. batch sizes

Speed: Variable from 2--15 RPM

Reverse: Can only operate manually at a fixed 2 RPM speed with no time setting.
Programs can not be set for the reverse function.

Exclusive touch pad microprocessor controls featuring:

Cycle time up to 72 hours

Speed infinitely adjustable from 2-15 RPM

Work pause capacity up to 24 hours

Stores up to 10 programs

Error diagnostic coding

Run/Jog for easy load and unload

Photo Electric Safety beam protects operating area of machine.

Mobility: 4- 4" swivel locking casters

Special design: Bolt-on frame extension allows for capacity changes between 200, 300, and 500 pounds.

Overall Dimensions:

HVTS200: 49"L x 40W" x 44"H

HVTS300: 59"L x 40W" x 44"H

HVTS500: 78"L x 40W" x 44"H

*Drum diameter on all models is approximately 24"

PRE-OPERATION

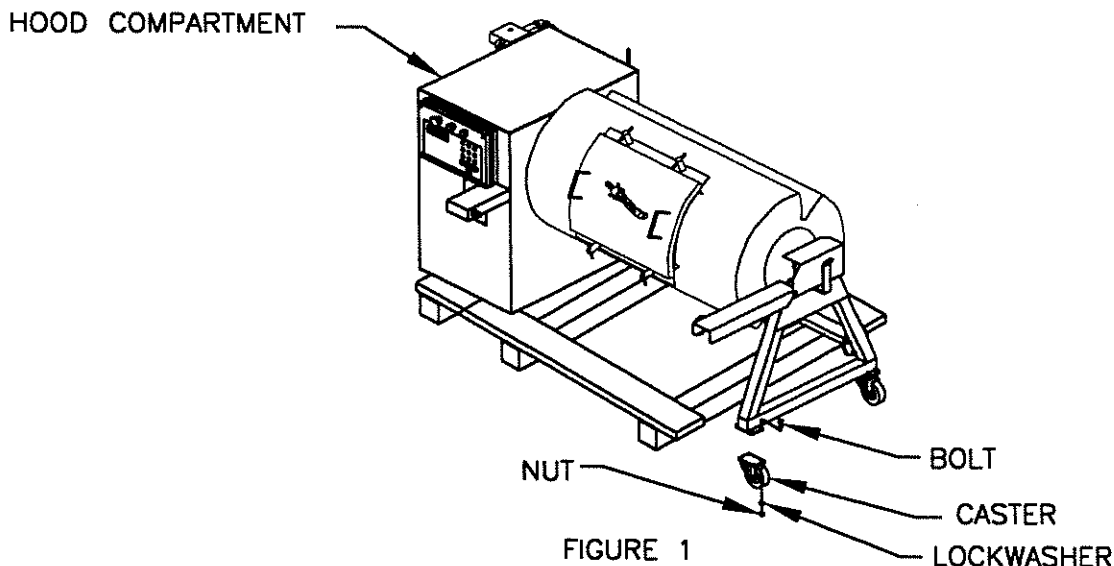
CALL YOUR LOCAL AUTHORIZED HOLLYMATIC DEALER TO PERFORM THE FOLLOWING ASSEMBLY PROCEDURES.

PLUG ASSEMBLY

THIS TUMBLER IS SHIPPED WITHOUT A PLUG. A HOLLYMATIC DEALER OR QUALIFIED ELECTRICIAN SHOULD ATTACH AN APPROPRIATE PLUG TO ACCOMMODATE A MINIMUM 20 AMP CIRCUIT.

CASTER ASSEMBLY

1. THE CASTERS ARE INSIDE THE TUMBLER IN A BOX WITH HARDWARE. YOU MAY WANT TO ROTATE THE TUMBLER OPENING UPRIGHT BEFORE OPENING THE LID. (SEE OPERATING PROCEDURE). UNPLUG THE MACHINE.
2. BEFORE INSTALLING THE CASTERS, REMOVE THE ANCHOR SCREWS THAT HOLD THE MACHINE'S FRAME TO THE WOODEN SHIPPING BASE. YOU MUST REMOVE THE HOOD COVER TO REMOVE ANCHOR SCREWS INSIDE THE HOOD COMPARTMENT.
3. SLIDE THE MACHINE SO END OPPOSITE HOOD COMPARTMENT HANGS OVER WOOD BASE. LIFT THE FRAME UP AND SUPPORT THE FRAME 7 TO 8 INCHES ABOVE THE FLOOR. MAKE SURE THE MACHINE IS STABLE. (SEE FIGURE 1)
4. INSTALL TWO CASTERS TO THE SUPPORTED END OF THE MACHINE'S FRAME. USE THE FASTENERS PROVIDED WITH THE CASTERS. ASSEMBLE AS SHOWN BELOW.
5. AFTER TWO CASTERS ARE SECURELY FASTENED, REMOVE THE SUPPORT AND PIVOT THE MACHINE SO THE HOOD COMPARTMENT HANGS OVER THE WOOD BASE.

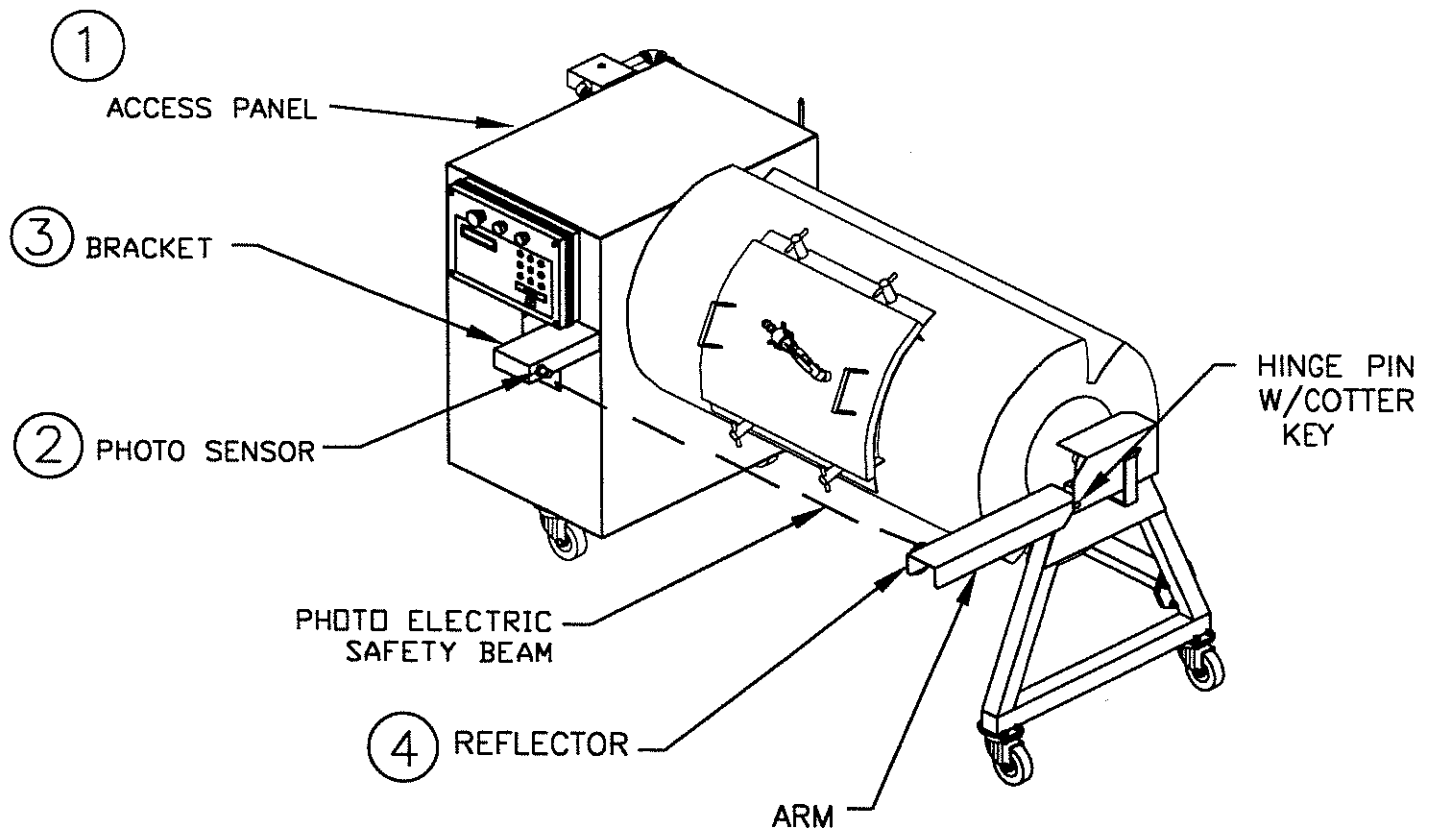


6. LIFT AND SUPPORT THE HOOD COMPARTMENT END OF THE FRAME 7 TO 8 INCHES ABOVE THE FLOOR. CAREFUL, THIS END IS HEAVY.
7. INSTALL THE OTHER TWO CASTERS USING THE FASTENERS PROVIDED.
8. REMOVE THE SUPPORT UNDER MACHINE'S FRAME.

PRE-OPERATION

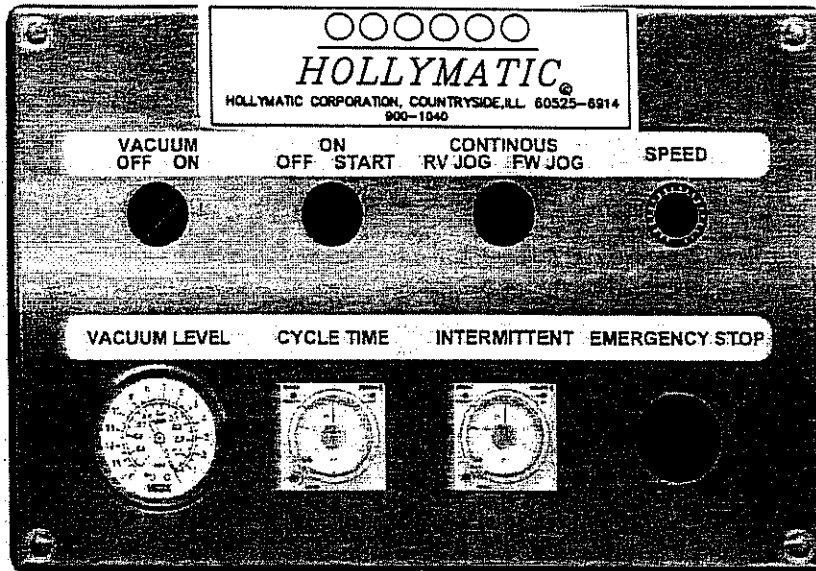
PHOTOELECTRIC SAFETY BEAM ASSEMBLY

THE PHOTO SENSOR BRACKET AND THE REFLECTOR ARM ARE FASTENED TO THE SHIPPING SKID. 1). REMOVE THE ACCESS PANEL ON THE LEFT SIDE OF THE CABINET. 2). UNSCREW THE PLASTIC NUT FROM THE SENSOR AND PASS IT THROUGH THE LARGE HOLE IN THE END OF THE BRACKET. PASS THE SENSOR THROUGH OTHER HOLE AND TIGHTEN WITH THE PLASTIC NUT. 3). FASTEN THE BRACKET TO THE CABINET WITH THE HARDWARE PROVIDED. 4). FASTEN THE REFLECTOR ARM TO THE FRAME USING THE HINGE PIN AND COTTER KEY AS SHOWN. NOTE: THE PHOTO SENSOR AND REFLECTOR MUST BE IN LINE FOR THE MACHINE TO OPERATE. THE HEIGHT OF THE REFLECTOR CAN BE CHANGED BY TURNING THE ADJUSTMENT SCREW ON THE BOTTOM OF THE ARM.



Operating Instructions

FOR ANALOG CONTROLS



VACUUM BUTTON:

1. The **ON** position engages the vacuum pump.
2. The **OFF** position disengages the vacuum pump.

ON/OFF/START BUTTON:

1. The **ON** position starts the tumbler.
2. The **START** position starts turning the drum (cycle).
3. The **OFF** position shuts down the tumbler.

CONTINUOUS/JOG BUTTON:

1. The **RV JOG** position jogs the drum reverse.
2. The **FW JOG** position jogs the drum forward.
3. The **CONTINUOUS** position is needed for doing a cycle.

NOTE: It is recommended to set the speed at minimal position in jog mode.

SPEED BUTTON:

1. Turn left to decrease the speed.
2. Turn right to increase the speed.

VACUUM LEVEL (MANOMETER):

This manometer is graduated in **psi** units & **kPa** units. Indicate vacuum level inside of the drum.

CYCLE TIME-ANALOG TIMER:

This timer is graduated from 1 to 50 units. With the RANGE selector button (bottom left), you must choose the scale factor (see table A). With the mode selector button (bottom right) you must choose the ON mode (1 of 2 timers option). (Other modes included are FO, OF1, SF, OS, OF2, OC). The top left LED is the power indicator. The top right LED is the Operation indicator.

Time unit		Seconds	minutes	hours	hours x 10
Scale					
1	Control Time Range	0.1s to 1s	0.1min to 1min	0.1h to 1h	1.0h to 10h
5		0.5s to 5s	0.5h to 5 h	0.5h to 5h	5h to 50h
10		1.0s to 10s	1.0h to 10h	1.0h to 10h	10h to 100h
50		5min to 50min	5h to 50h	5h to 50 h	50h to 500h

Table A

**Default
Setting**

INTERMITTENT TIMER (OPTION):

Use to switch between rotation on and rotation pause during a timed cycle See example below. With the RANGE selector button (bottom left), you must choose the scale factor (see table A). With the MODE selector button (bottom right) you must choose the FL mode (2 timers option).

EMERGENCY STOP BUTTON:

1. Pushing the button will stop the tumbler.
2. Pulling the button will disengage emergency stop.

POWER:

Plug the machine into a proper electrical outlet that is grounded.

LOADING PRODUCT:

1. To load product, jog tumbler so that lid is facing upward and drain cap on the bottom is securely in place.
2. Remove lid and add product.
3. Place the lid back on the tumbler and secure.

NOTE: It is recommended to reduce the speed at minimal position in jog mode.

WARNING: DO NOT OVERLOAD THE TUMBLER

DOING A NORMAL CYCLE:

1. Turn the **ON/OFF** button to **ON** position.
2. Plug the hose on the drum. (Make sure lid is securely in place, vacuum hose has been attached to tumbler lid and the valve is in the open position).
3. Turn the **VACUUM BUTTON** to **ON** position.
4. Check the **VACUUM LEVEL** and when the desired pressure of vacuum is obtained, turn the **VACUUM BUTTON** to **OFF** position.
5. Close the valve and remove the hose.

WARNING: DO NOT OVERLOAD THE TUMBLER

6. To set cycle time, select the range of the **CYCLE TIME-ANALOG TIMER** with the selector in bottom left (see Table A), turn the time selector at desired position.
7. To start the cycle, turn the button to **START** position during 1 second.
8. The tumbler will stop after the cycle time delay is completed.

DOING AN INTERMITTENT CYCLE (OPTION):

1. Before starting the cycle, set the intermittent timer at desired position.
2. If you don't want to use the intermittent option, set the time of intermittent timer longer than the cycle time.

WARNING: STAY CLEAR OF MOVING PARTS.

INTERRUPT A CYCLE:

If you want to interrupt a cycle in progress by pushing the **EMERGENCY STOP** button or by turning **OFF** the **ON/OFF/START BUTTON**, the timer will reset.

REMOVING PRODUCT:

1. After the tumbler has stopped, jog the tumbler into an unloading position (see tumbler positioning section below).
2. Open valve to allow tank pressure to re-stabilize and remove lid.
3. The product may now be removed.

NOTE: It is recommended to reduce the speed to the minimal position in the jog mode.

TUMBLER POSITIONING:

To accurately position the tumbler for unloading product or make the vacuum, it is possible to jog the tumbler.

1. Turn the **CONTINUOUS/JOG BUTTON** to **RV JOG** position to jog the drum reverse.
2. Turn the **CONTINUOUS/JOG BUTTON** to **FW JOG** position to jog the drum forward.

Tip: Release button to stop the rotation.

SAFETY SENSOR:

The safety sensor arm must be extended outward for the tumbler to operate. Make sure the tumbler area is cleared before initiating a cycle. Stay behind customer security perimeter when a cycle is running. If an obstruction comes in the path of the safety sensor eye, the tumbler will immediately stop. The timer will reset so you can't resume the cycle. The machine will not recall where it left off.

WARNING: PROTECT THE BACK AREA OF TUMBLER FROM ACCESS PLACE ALONG A WALL FOR BETTER SECURITY.

Operating and Program Instructions

Power

Plug machine into a proper electrical outlet that is grounded. Press **ON/OFF** to start the Hollymatic high volume tumbler. When the tumbler is energized, the identification of the last executed program is displayed on the LCD screen. If **EMERGENCY STOP** appears on the screen instead press **ENTER** to proceed.

Manual Operation

To manually jog the machine for loading or unloading, press the **START** key and hold down the #2 key until the tank is in the desired position. Press the #1 key to continuously rotate the tumbler. Press Stop key to Stop.

NOTE: Rotation direction of the manual operation is opposite that of the programmed operation.

Programming Operation

The **ESC** key switches you between the Function Menus and Program Menus. The **SELECT** key scrolls you *through* either the Function submenus or the Program submenus depending on which mode you are currently in. The **ENTER** key allows you to access particular functions, programs and options. Below is a list of how each menu is organized.

Function Menus

F1 CREATE A PRGM
F2 DELETE A PRGM
F3 UNLOCK A PRGM
F4 VACUUM: OFF

Program Menus

PRGRM CYCLE NAME: For example, P01: Hollymatic (12 character limit)

PRGRM SEGMENT #1

SEGMT TIME: 0h00
MESSAGE ON: 0h00
MESSAGE OFF: 0h00
SPEED LEVEL: _ _ _ .

PRGRM SEGMENT #2

SEGMT TIME: 0h00
MESSAGE ON: 0h00
MESSAGE OFF: 0h00
SPEED LEVEL: _ _ _ .

PRGRM SEGMENT #3

SEGMT TIME: 0h00
MESSAGE ON: 0h00
MESSAGE OFF: 0h00
SPEED LEVEL: _ _ _ .

Creating a Program Name

1. If **F1 CREATE A PRGM** is not displayed on the LCD screen Press **ESC**. Once **F1 CREATE A PRGM** appears press **ENTER**.
2. **PRGRM CYCLE NAME** will appear on the LCD screen. Press **ENTER** to create a new program name.
3. **Pxx NO NAME** will flash. (The program number (Pxx) will be allocated automatically.) Begin typing the program name by using the numeric keyboard; press a numeric key until the desired character appears. Once the correct letter is displayed press **ENTER** and the cursor will move one space to the right. Upon completion of typing program name press **ENTER** two times. The newly typed program name will flash. Press **ENTER** to confirm. Your program name has been completed.
4. To set program features enter the program menu by pressing **ESC**. The newly created program name will appear on the LCD screen. Press **ENTER** if the displayed program name is the one needing to be set or modified. Or press the **SELECT** key to display other pre-set programs. Once the correct program name appears press **ENTER**. *See Setting Program Options below for more information.*

Setting Program Options

Within each program three segments are available to set the tumbler times and speeds. A complete program duration may be up to 72 hours in length (24 hours per segment). For example, say you do not want to start tumbling immediately. **PRGRM SEGMENT #1** can be set for X amount of time with the **MESSAGE OFF** (no rotation will occur). Then **PRGRM SEGMENT #2** can be set for X amount of time with the **MESSAGE ON** (rotation will occur) at a set RPM (rotations per minute). Perhaps after this tumbling cycle you will want to tumble for X more amount of time but at a different speed. In **PRGRM SEGMENT #3** type this final tumbling time, **MESSAGE ON** and at what RPM. Depending on your tumbling needs, one, two or all three of the segments may be programmed. In short, the different cycles may be used for a pause in tumbling or tumbling at a different speed.

1. **PRGRM SEGMENT #1** will appear once a program name has been selected for modification or programming. To make changes to this segment press **ENTER**.
2. **SEGMT TIME: 0h00** will appear. Enter the length of tumbling segment #1. Hours must be entered in two number increments (i.e. 01, 05, 12, etc. up to 24) followed by the minutes. In total, you must enter 4 numbers to set the tumbling cycle time. When completed the time will flash. Press **ENTER** to confirm and move to the next screen.
3. **MESSAGE ON: 0h00** will appear. Type the length of time you want to *tumble*. Type the same time as the **SEGMT TIME** if tumbling is desired during this. If no time is entered the machine will not rotate. In this case **PRGRM SEGMENT #1** will act as a timer, delaying tumbling until the next segment is activated. Press **ENTER** to confirm time and/or move to the next screen.
4. **MESSAGE OFF: 0h00** will appear. This option is for producers who want to temporarily stop tumbling in a tumbling cycle. No time need be entered if a **MESSAGE ON** time has been entered. If no tumbling is desired in this segment, type the same time as **SEGMT TIME**. Press **ENTER** to confirm time or move to next screen.

5. **SPEED LV:** rpm will appear. Three numbers must be entered for speed level (2.0-15.0). The rpm will flash after it has been entered. Press **ENTER** to confirm.
6. **PRGRM SEGMENT #1** will re-appear. If this is only a one-segment tumbling program press **ESC** to display program name and press **ENTER** to begin tumbling. If additional segments need to be set, press the **SELECT** key to scroll to **PRGRM SEGMENT #2** and press **ENTER** to set options. Same procedure applies for setting **PRGRM SEGMENT #3**. Following instructions from setting **PRGRM SEGMENT #1**.

Modifying Pre-set Program Options

1. To modify a pre-set program press **ESC** if in function mode (i.e. F1, F2, F3 or F4).
2. When a program name appears either press **ENTER** if that is the program to be modified or press the **SELECT** key to scroll through pre-set programs. When the desired program appears press **ENTER**.
3. **PRGRM SEGMENT #1** will appear. To make changes in this segment press **ENTER**.
4. As you press **ENTER**, numbers for each submenu will flash. If you want to make a change, enter the new time or speed and press **ENTER**. If no changes are needed to a time or speed press **ENTER** to confirm and advance you to the next submenu screen.
5. To move onto segments #2 and/or #3 press **ENTER** until **PRGRM SEGMENT #1** appears and press the **SELECT** key to scroll to other segments. Press **ENTER** when desired segment appears. Repeat steps as above.

Loading Product

1. To load product, jog tumbler so that lid is facing upward and drain cap on the bottom is securely in place.
2. Remove lid and add product.
3. Place the lid back on the tumbler and secure.

WARNING: DO NOT OVERLOAD THE TUMBLER

Drawing a Vacuum

1. Press **ESC** after product has been loaded and a program has been created/selected to enter the function menus.
 2. When **F1 CREATE A PRGM** appears press the **SELECT** key to scroll to **F4 VACUUM:OFF**.
 3. Make sure lid is securely in place, vacuum hose has been attached to tumbler lid and the valve is in the open position.
 4. Press **ENTER** to draw vacuum. The vacuum range is from 0.0% to 99.5%.
 5. Press the **START/STOP** button to stop drawing a vacuum when desired value is reached. **NOTE:** This will allow you to exit the vacuum function menu.
 6. Turn the lid valve to "shut" and remove the vacuum hose.
- *After stopping the vacuum or after taking too long to press **ENTER** when the F4 Vacuum screen appeared, the screen will switch back to the program name menu. Press

ESC to switch back to the function menus and follow the above directions to get back to the F4 Vacuum screen.

Note: If the % vacuum on the LCD screen does not increase, the lid is not sealed tight. Press **ESC** to stop the vacuum, tighten the lid and start vacuum again.

WARNING: DO NOT ROTATE THE TUMBLER WITH THE VACUUM HOSE IN PLACE.

Activating a Program

After drawing a vacuum the screen switches from functions to programs.

1. Press **ENTER** if the program name you want to run appears to activate.
2. To select a different program than the one on the screen, press the **SELECT** key.
3. Press **ENTER** after the correct program name appears.
4. The selected program will run until all segments have been completed, the safety sensor is tripped, or the programmed is manually stopped.

WARNING: STAY CLEAR OF MOVING PARTS.

Stopping a Program

1. To interrupt a program in progress press the **Stop/Start** button. Doing so only stops the rotation of the tumbler. The machine will remember how much time has elapsed.
2. Push the **Stop/Start** button again to continue, if so desired.
3. Press **ESC** to access the function menus if you would like to clear out the program memory from a program manually stopped before completion.
4. Press the **SELECT** key to scroll to **F3 UNLOCK A PRGM** and then press **ENTER**. The name of the current program will appear.
5. Press **ENTER** to reset the counters. At this point another program may be accessed.

*A program is locked from the beginning of execution through completion to prevent any unintentional modification to the status of the current program.

Removing Product

1. After the tumbler has stopped, *jog* the tumbler into an unloading position (*see reverse tumbling section below*).
2. Open valve to allow tank pressure to re-stabilize and remove lid.
3. The product may now be removed.

Deleting a Program

1. To delete a pre-set program from the tumbler's memory access the function menus and scroll to **F2 DELETE A PRGM** and press **ENTER**.
2. The first program in memory will blink. Press **ENTER** to delete or the **SELECT** key to move to the next program.
3. Once the program needing to be deleted appears press **ENTER**.
4. Press **ESC** to unconfirm a deletion and/or to exit the delete function.

Reverse Tumbling

1. Press the **#1** key to continuously rotate the tumbler in reverse. Press the **Stop/Start** button to stop.
2. Hold down the **#2** key to *jog* the tumbler in the reverse direction. Letting go of the **#2** key will stop rotation. This is ideal for positioning the tumbler for unloading product or drawing a vacuum.

*Reverse is not an option for pre-set programs. This option only works when in stop mode.

Safety Sensor

The safety sensor arm must be extended outward for the tumbler to operate. Make sure the tumbler area is cleared before initiating a cycle. Stay beyond customer security perimeter when "**CYCLE ON**" indicator is lit. If an obstruction comes in the path of the safety sensor eye the tumbler will immediately stop and **EMERGENCY STOP!** will appear on the LCD screen. Press the **START/STOP** button to resume the program in Progress. The machine will recall where it left off.

WARNING:

PROTECT THE BACK AREA OF TUMBLER FROM ACCESS
PLACE ALONG A WALL FOR BETTER SECURITY.

PROGRAM SAMPLE HVTS 200, 300, 500

OBJECTIVE:

TUMBLE CHICKEN PARTS FOR 15 MINUTES AT 15 RPM, AT 98% VACUUM.

<u>PRESS</u>	<u>RESULTING DISPLAY</u>
1. ON/OFF	DISPLAY LIGHTS
2. ESC UNTIL	F1 CREATE A PRGM
3. ENTER	PRGM CYCLE NAME
4. ENTER	P01 NO NAME (FLASHING)
5. NUMBER KEYPAD UNTIL DESIRED LETTER APPEARS. ENTER AFTER EACH SELECTION. ENTER TWICE	P01 CHICK PARTS PROGRAM CYCLE NAME
6. SELECT	PRGM SEG #1
7. ENTER	SEGMT TIME:0h00 (FLASHING)
8. 0015	SEGMT TIME:0h15
9. ENTER	MESSAGE ON: 0h00
10. 0015	MESSAGE ON:0h15
11. ENTER	MESSAGE OFF: 0h00
12. ENTER	SPEED LV:0.0 RPM
13. 1 5 0	SPEED LV: 15.0 RPM
14. ENTER	PRGM SEGMENT #1
15. ESC	P01 CHICK

PROGRAM IS NOW COMPLETE.

NO OTHER SEGMENTS ARE NECESSARY UNLESS YOU WANT TO CHANGE SPEEDS DURING THE PROGRAM.

IF YOU MAKE A MISTAKE WHEN ENTERING, PRESS ESC KEY.

PRESS ENTER TO REVIEW PROGRAM SELECTIONS.

PROGRAM SAMPLE HVTS 200, 300, 500

JOG

PRESS KEY PAD 2 TO JOG FOR LOAD AND UNLOAD. PRESS KEY PAD 1 FOR CONTINUOUS REVERSE ROTATION. NOTE: WAIT 5 SECONDS AFTER TANK STOPS BEFORE USING JOG.

DRAW VACUUM

- * LOAD PRODUCT AND MARINADE
- * CONNECT VACUUM HOSE AND OPEN VALVE
- * ESC>TIL F1 CREATE A PRGM
- * SELECT>TIL VACUUM OFF
- * ENTER STARTS PUMP DRAW VACUUM TO 98%
- * STARTS/STOP STOPS PUMP
- * CLOSE VALVE AND DISCONNECT VACUUM HOSE

PRESS START/STOP TO BEGIN PROGRAM

TO UNLOCK A PROGRAM

ESC>TIL F1 CREATE A PRGM
SELECT>TIL UNLOCK A PRGM
ENTER

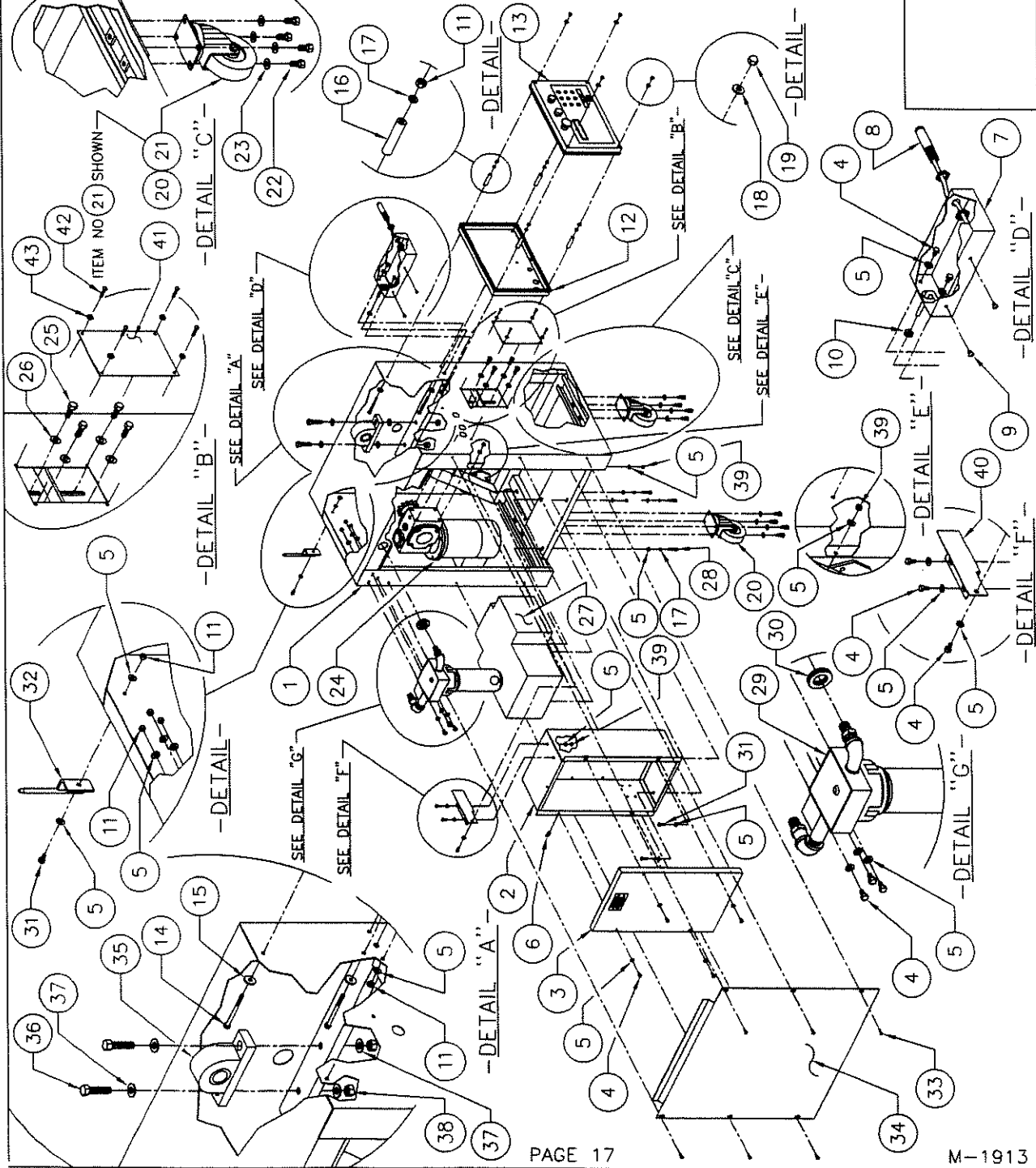
TO CHANGE SPEED DURING PROGRAM

ENTER>TIL SPEED LV: 15.0 RPM (FLASHING)

100 SPEED LV: 10.0 RPM
(RPM CHANGES AUTOMATICALLY)

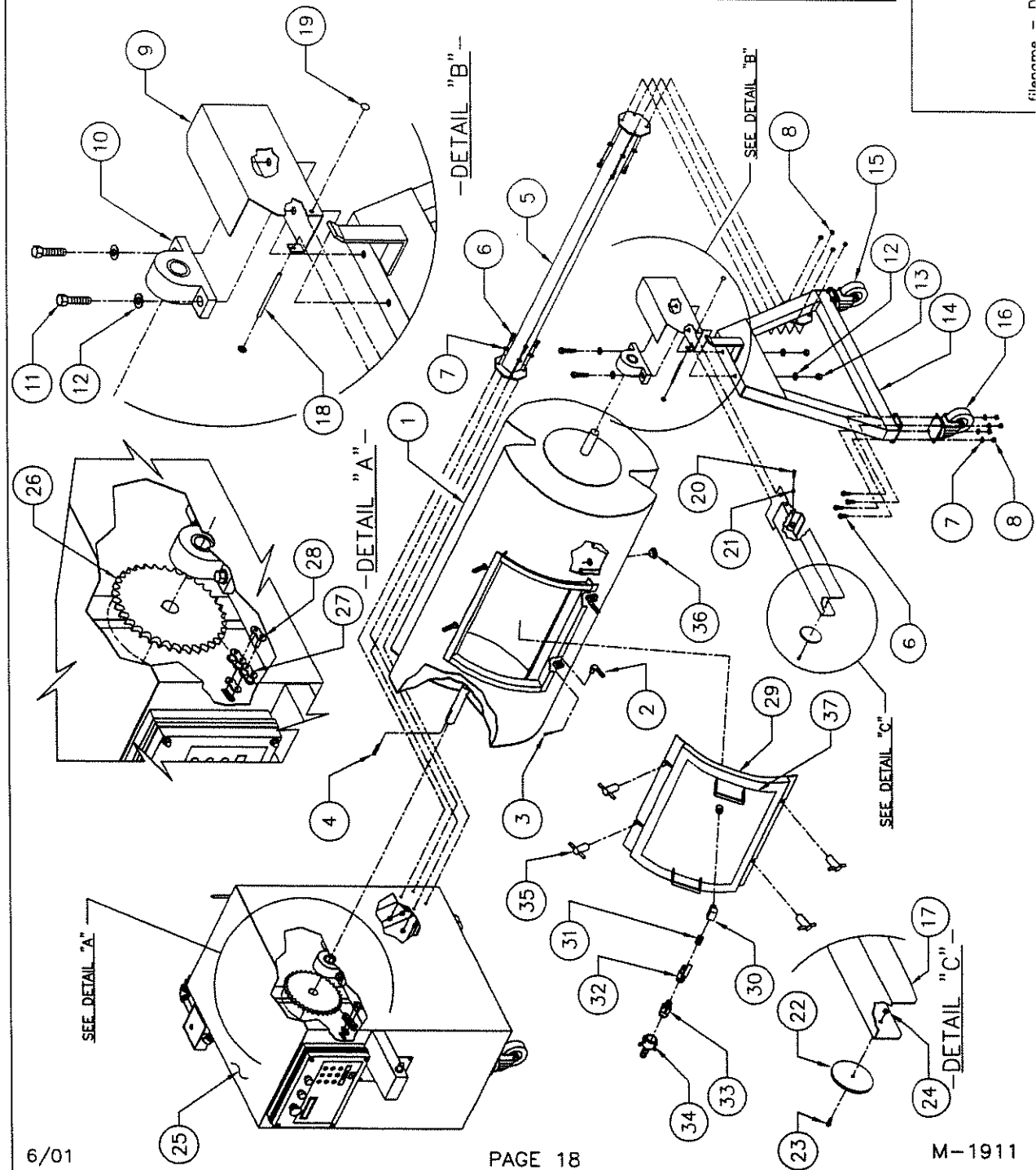
NOTE: PROGRAM WILL REVERT TO ORIGINAL SPEED AFTER (1) CYCLE.
YOU MUST UNLOCK PROGRAM TO MAKE PERMANENT CHANGES.

ITEM	PART #	DESCRIPTION	QT.
1	004-0430	STRUCTURE W/ LEFT FRAME SIDE PRE-ASSY	1
2	004-0431	ELECTRICAL BOX PRE-ASSEMBLY	1
3	005-0587	ELECTRICAL BOX COVER ASSEMBLY	1
4	051-0180	HEX. BOLT 1/4"-20 NC. X 1/2" S/S	12
5	051-0740	FLAT WASHER 1/4" S/S	24
6	056-0020	SPRING NUT 1/4"-20 NC. STEEL	4
7	004-0432	DETECTOR GUARD PRE-ASSEMBLY	1
8	028-1121	PHOTOCELL SWITCH	1
9	057-0050	NYLON FLAT TIE HOLDER	2
10	036-0182	GROMMET 17/64" ID. X 5/8" OD. RUBBER	1
11	051-0580	HEX. NUT 1/4"-20 NC. S/S	10
12	005-0589	REAR P.C. BOARD SUPPORT ASSEMBLY	1
13	005-0588	FRONT P.C. BOARD SUPPORT ASSEMBLY	1
14	051-0287	HEX. BOLT 1/4"-20 NC. X 3 1/4" S/S	4
15	051-0757	FLAT WASHER 1/4" (THICK) S/S	4
16	058-0140	PLASTIC SPACER 0.266" X 1/2" X 2 1/4"	4
17	051-0750	LOCK WASHER 1/4" S/S	7
18	052-2045	FLAT WASHER 1/4" COPPER	4
19	051-0591	ACORN NUT 1/4"-20 NC. S/S	4
20	130-4PH0	4" SWIVEL CASTER W/O BRAKES	1
21	130-4PHB	4" SWIVEL CASTER W/ BRAKES	1
22	051-0305	HEX. BOLT 5/16"-18 NC. X 1" S/S	8
23	051-0760	FLAT WASHER 5/16" S/S	8
24	004-0451	GEAR BOX W/ MOTOR & SPROCKET ASSEMBLY	1
25	052-4226	HEX. BOLT M10 X 25 ZINC	4
26	052-2060	FLAT WASHER 3/8" ZINC	4
27	125-4020	VACUUM PUMP LEYBOLD 25 M	1
28	051-0950	HEX. BOLT M6 X 16 S/S	3
29	005-0586	SEPARATOR ASSEMBLY	1
30	036-0250	GROMMET 1 1/8" ID. X 1 7/8" OD. RUBBER	1
31	051-0190	HEX. BOLT 1/4"-20 NC. X 3/4" S/S	4
32	004-0422	HOSE SUPPORT ASSEMBLY	1
33	001-2002	STRUCTURE ACCESS PANEL	1
34	052-0420	SCREW 1/4"-20 NC. X 3/4" PAN SLOT BRASS	4
35	075-1535	PILLOW BLOCK 1 1/4" HCP-207-20	1
36	051-0444	HEX. BOLT 1/2"-13 NC. X 2" S/S	2
37	051-0790	FLAT WASHER 1/2" S/S	4
38	051-0631	HEX. NUT 1/2"-13 NC. NYLON LOCK S/S	2
39	001-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	3
40	001-2095	UPPER E-BOX SUPPORT	1
41	001-2094	GEAR BOX BOLTS ACCESS PLATE	1
42	051-0144	SCREW #10-24 NC. X 1/2" PAN PHIL. S/S	4
43	051-0730	FLAT WASHER #10 S/S	4



T-200, T-300 & T-500
STRUCTURE VIEW ASSEMBLY

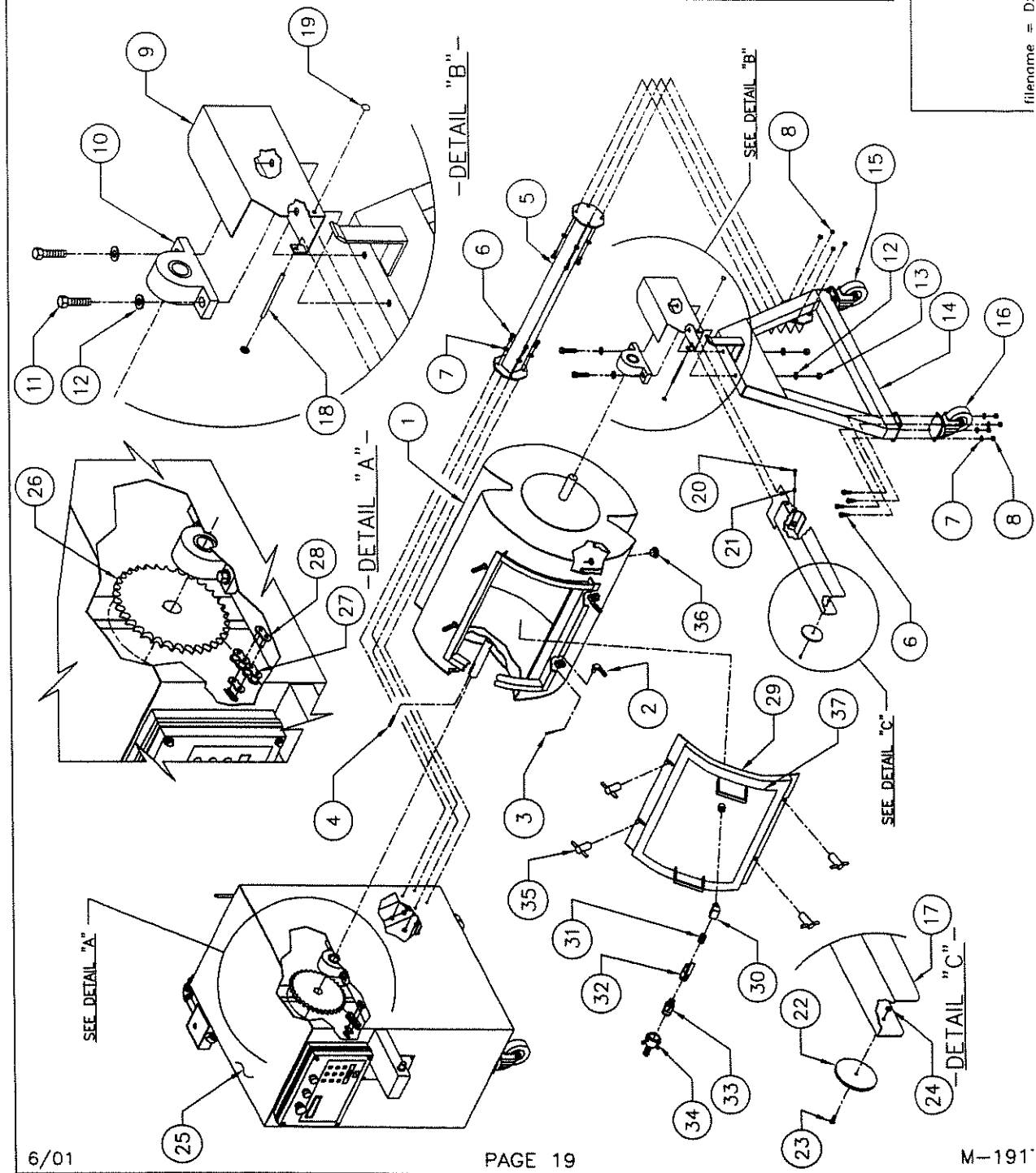
ITEM	PART #	DESCRIPTION	QT.
1	004-0436	CYLINDER ASSEMBLY	1
2	004-0450	COVER FIXATION PRE-ASSEMBLY	2
3	056-0115	COTTER PIN 3/32" X 1" S/S	2
4	002-0548	CYLINDER DRIVE SHAFT KEY	1
5	004-0429	FRAME REAR TUBE FIXATION PRE-ASSY	1
6	051-0305	HEX. BOLT 5/16"-18 NC. X 1" S/S	16
7	051-0760	FLAT WASHER 5/16" S/S	16
8	051-0600	HEX. NUT 5/16"-18 NC. S/S	16
9	004-0423	PILLOW BLOCK GUARD PRE-ASSY	1
10	075-1535	PILLOW BLOCK 1 1/4" HCP-207-20	1
11	051-0444	HEX. BOLT 1/2"-13 NC. X 2" S/S	2
12	051-0790	FLAT WASHER 1/2" S/S	4
13	051-0631	HEX. NUT 1/2"-13 NC. NYLON LOCK S/S	2
14	004-0427	RIGHT FRAME SIDE PRE-ASSEMBLY	1
15	130-4PHO	4" SWIVEL CASTER W/ O BRAKES	1
16	130-4PHB	4" SWIVEL CASTER W/ BRAKES	1
17	004-0424	REFLECTOR ARM PRE-ASSEMBLY	1
18	002-0546	REFLECTOR SUPPORT AXIS	1
19	056-0022	PUSH CAP NUT 1/4" S/S	2
20	051-0210	HEX. BOLT 1/4"-20 NC. X 1" S/S	1
21	051-0580	HEX. NUT 1/4"-20 NC. S/S	1
22	026-1131	REFLECTOR 80# MM.	1
23	051-0144	SCREW #10-24 NC. X 1/2" PAN PHIL. S/S	1
24	051-0571	HEX. NUT #10-24 NC. S/S	1
25	005-0591	STRUCTURE VIEW ASSEMBLY	1
26	080-0035	SPROCKET #60 X 35 TEETH TYPE BS 1 1/4" BORE	1
27	080-2500	CHAIN #60 3/4" PITCH (52 LINKS)	1
28	080-5000	MASTER LINK #60 3/4" PITCH	1
29	004-0435	CYLINDER DOOR ASSEMBLY	1
30	101-0670	ELBOW STREET 90° 1/2" NPT BRASS	1
31	101-0370	CLOSE NIPPLE 1/2" NPT BRASS	1
32	107-0030	BALL VALVE 1/2" NPT BRASS	1
33	102-0901	1/2" NPT MALE COUPLER TYPE F 3/4" X 1/2"	1
34	102-0905	3/4" HOSE FEMALE COUPLER TYPE C 3/4"	1
35	004-0419	DOOR HANDLE ASSEMBLY	4
36	102-0750	MALE NYLON DRUM PLUG W/ GASKET	1
37	008-0478	LID GASKET 4 PIECE SET	1



TUMBLER 500
TUMBLER ASSEMBLY

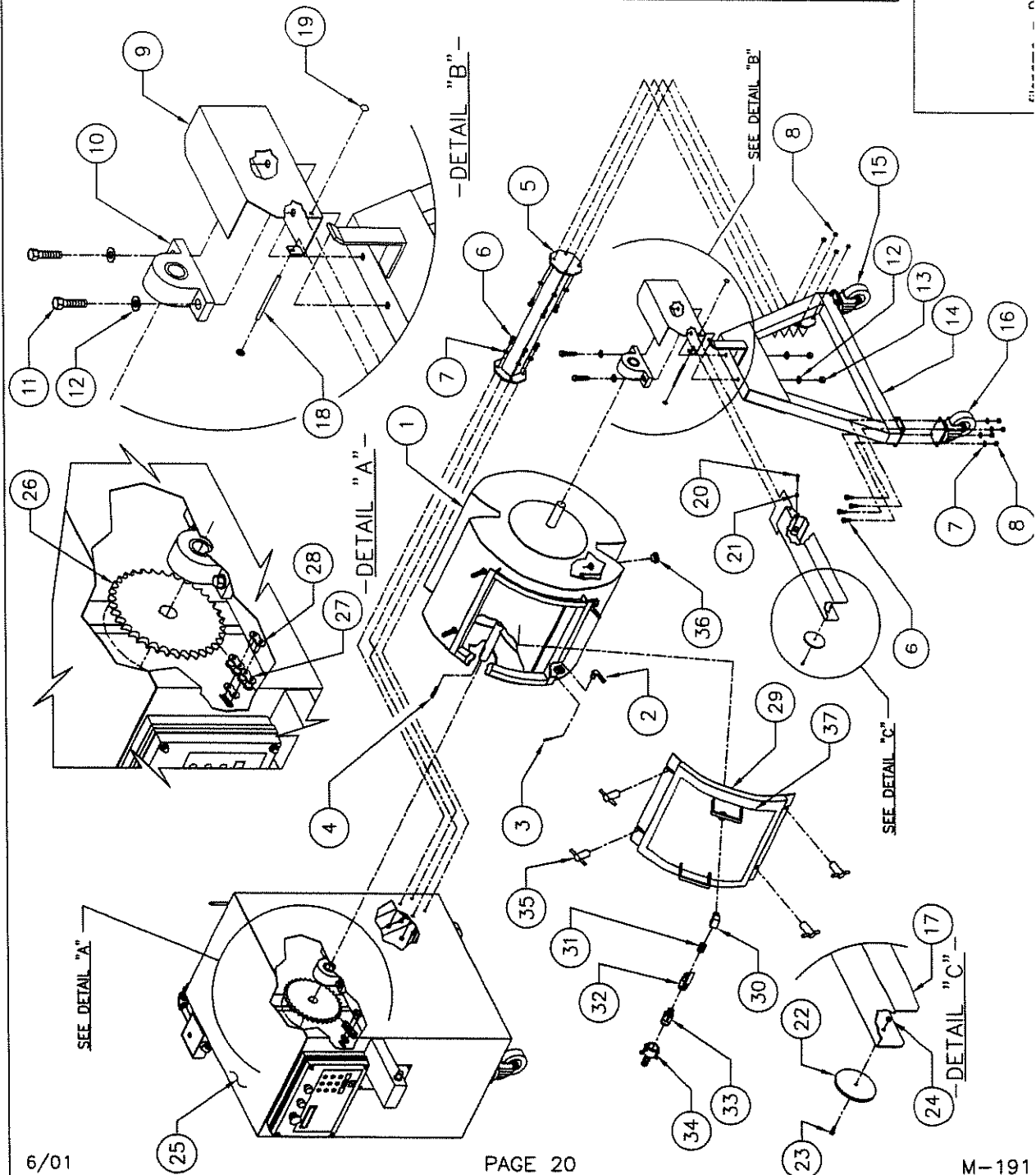
filname - P:\TIMBER\ET5\1500new.dwg

ITEM	PART #	DESCRIPTION	QTY.
1	004-0453	CYLINDER ASSEMBLY	1
2	004-0450	COVER FIXATION PRE-ASSEMBLY	2
3	056-0115	COTTER PIN 3/32" X 1" S/S	2
4	002-0548	CYLINDER DRIVE SHAFT KEY	1
5	004-0454	FRAME REAR TUBE FIXATION PRE-ASSY	1
6	051-0305	HEX. BOLT 5/16"-18 NC. X 1" S/S	16
7	051-0760	FLAT WASHER 5/16" S/S	16
8	051-0600	HEX. NUT 5/16"-18 NC. S/S	16
9	004-0423	PILLOW BLOCK GUARD PRE-ASSY	1
10	075-1535	PILLOW BLOCK 1 1/4" HCP-207-20	1
11	051-0444	HEX. BOLT 1/2"-13 NC. X 2" S/S	2
12	051-0790	FLAT WASHER 1/2" S/S	4
13	051-0631	HEX. NUT 1/2"-13 NC. NYLON LOCK S/S	2
14	004-0427	RIGHT FRAME SIDE PRE-ASSEMBLY	1
15	130-4PHO	4" SWIVEL CASTER W/ O BRAKES	1
16	130-4PHB	4" SWIVEL CASTER W/ BRAKES	1
17	004-0424	REFLECTOR ARM PRE-ASSEMBLY	1
18	002-0546	REFLECTOR SUPPORT AXIS	1
19	056-0022	PUSH CAP NUT 1/4" S/S	2
20	051-0210	HEX. BOLT 1/4"-20 NC. X 1" S/S	1
21	051-0580	HEX. NUT 1/4"-20 NC. S/S	1
22	026-1131	REFLECTOR 800 MM.	1
23	051-0144	SCREW #10-24 NC. X 1/2" PAN PHIL. S/S	1
24	051-0571	HEX. NUT #10-24 NC. S/S	1
25	005-0591	STRUCTURE VIEW ASSEMBLY	1
26	080-0035	SPROCKET #60 X 35 TEETH TYPE BS 1 1/4" BORE	1
27	080-2500	CHAIN #60 3/4" PITCH (52 LINKS)	1
28	080-5000	MASTER LINK #60 3/4" PITCH	1
29	004-0435	CYLINDER DOOR ASSEMBLY	1
30	101-0670	ELBOW STREET 90° 1/2" NPT BRASS	1
31	101-0370	CLOSE NIPPLE 1/2" NPT BRASS	1
32	107-0030	BALL VALVE 1/2" NPT BRASS	1
33	102-0901	1/2" NPT MALE COUPLER TYPE F 3/4" X 1/2"	1
34	102-0905	3/4" HOSE FEMALE COUPLER TYPE C 3/4"	1
35	004-0419	DOOR HANDLE ASSEMBLY	4
36	102-0750	MALE NYLON DRUM PLUG W/ GASKET	1
37	008-047B	LID GASKET 4 PIECE SET	1

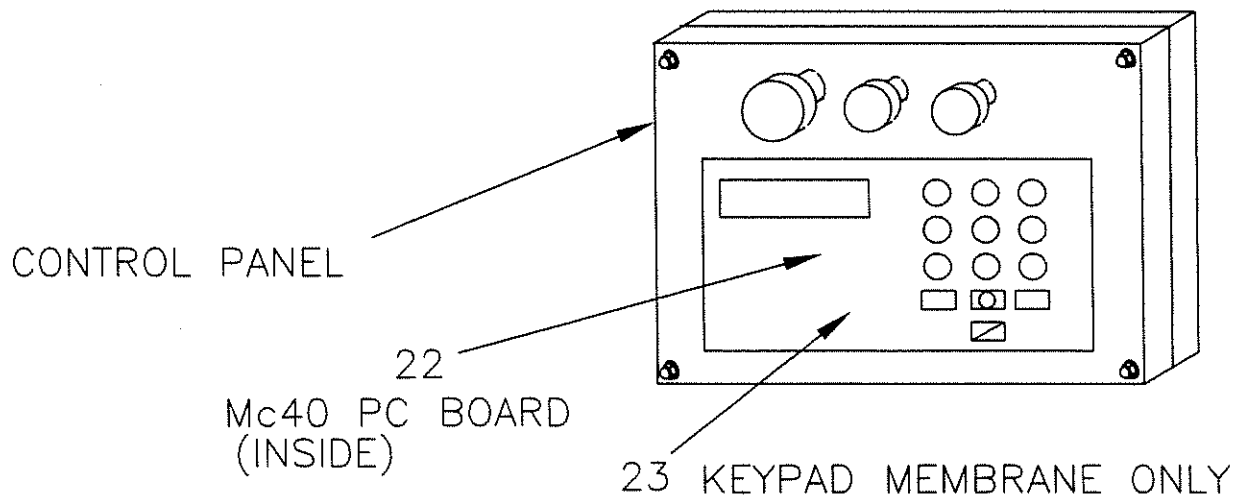
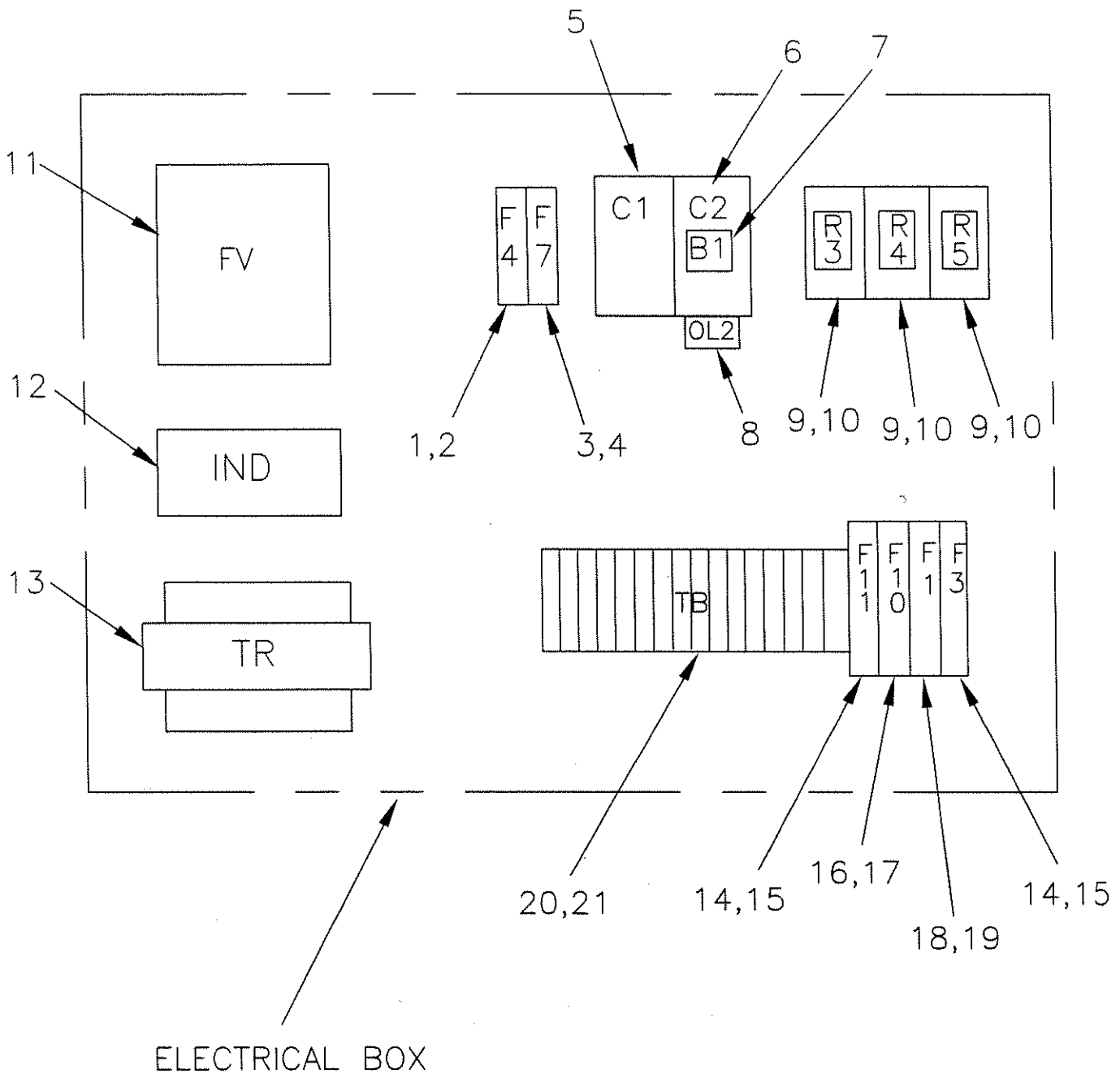


TUMBLER 300
TUMBLER ASSEMBLY
filename = D:\TUMBLER3\ETJ3\T300assy.dwg

ITEM	PART #	DESCRIPTION	QT.
1	004-0440	CYLINDER ASSEMBLY	1
2	004-0450	COVER FIXATION PRE-ASSEMBLY	2
3	056-0115	COTTER PIN 3/32" X 1" S/S	2
4	002-0548	CYLINDER DRIVE SHAFT KEY	1
5	004-0443	FRAME REAR TUBE FIXATION PRE-ASSY	1
6	051-0305	HEX. BOLT 5/16"-18 NC. X 1" S/S	16
7	051-0760	FLAT WASHER 5/16" S/S	16
8	051-0600	HEX. NUT 5/16"-18 NC. S/S	16
9	004-0423	PILLOW BLOCK GUARD PRE-ASSY	1
10	075-1535	PILLOW BLOCK 1 1/4" HCP-207-20	1
11	051-0444	HEX. BOLT 1/2"-13 NC. X 2" S/S	2
12	051-0790	FLAT WASHER 1/2" S/S	4
13	051-0631	HEX. NUT 1/2"-13 NC. NYLON LOCK S/S	2
14	004-0427	RIGHT FRAME SIDE PRE-ASSEMBLY	1
15	130-4PH0	4" SWIVEL CASTER W/ O BRAKES	1
16	130-4PHB	4" SWIVEL CASTER W/ BRAKES	1
17	004-0424	REFLECTOR ARM PRE-ASSEMBLY	1
18	002-0546	REFLECTOR SUPPORT AXIS	1
19	056-0022	PUSH CAP NUT 1/4" S/S	2
20	051-0210	HEX. BOLT 1/4"-20 NC. X 1" S/S	1
21	051-0580	HEX. NUT 1/4"-20 NC. S/S	1
22	026-1131	REFLECTOR 80# MM.	1
23	051-0144	SCREW #10-24 NC. X 1/2" PAN PHIL. S/S	1
24	051-0571	HEX. NUT #10-24 NC. S/S	1
25	005-0591	STRUCTURE VIEW ASSEMBLY	1
26	080-0035	SPROCKET #60 X 35 TEETH TYPE BS 1 1/4" BORE	1
27	080-2500	CHAIN #60 3/4" PITCH (52 LINKS)	1
28	080-5000	MASTER LINK #60 3/4" PITCH	1
29	004-0444	CYLINDER DOOR ASSEMBLY	1
30	101-0670	ELBOW STREET 90° 1/2" NPT BRASS	1
31	101-0370	CLOSE NIPPLE 1/2" NPT BRASS	1
32	107-0030	BALL VALVE 1/2" NPT BRASS	1
33	102-0901	1/2" NPT MALE COUPLER TYPE F 3/4" X 1/2"	1
34	102-0905	3/4" HOSE FEMALE COUPLER TYPE C 3/4"	1
35	004-0419	DOOR HANDLE ASSEMBLY	4
36	102-0750	MALE NYLON DRUM PLUG W/ GASKET	1
37	008-0478	LID GASKET 4 PIECE SET	1



TUMBLER 200
TUMBLER ASSEMBLY



ELECTRICAL PARTS LIST

ITEM	REQD	DESCRIPTION	PART NO.
1	1	FUSE HOLDER 30A/600V	034-0700
2	1	FUSE MIDGET 15A/600V FAST ACTING	034-0510
3	1	FUSE HOLDER 30A/600V	034-0700
4	1	FUSE MIDGET 20A/250V TIME DELAY	034-0530
5	1	MOTOR CONTACTOR-DRIVE MOTOR	025-0010
6	1	MOTOR CONTACTOR-PUMP MOTOR	025-0030
7	1	AUX. CONTACT BLOCK 1 N.O. & 1 N.C.	025-0682
8	1	THERMAL OVERLOAD	025-0190
9	3	4PDT RELAY 24 VAC (53.34)	025-0600
10	3	4PDT RELAY SOCKET	025-0610
11	1	SPEED CONTROL/FREQ. VAR. 220V	041-0011
	1	SPEED CONTROL/FREQ. VAR. 120V	041-0012
12	1	INDUCTANCE	
13	1	TRANSFO 65 VA/120V/24V-9V	029-0008
14	2	FUSE HOLDER M4/8SF	034-0740
15	2	FUSE 5X20MM 3/4 AMP	034-0200
16	1	FUSE HOLDER M4/8SF	034-0740
17	1	FUSE 5X20MM 2 AMP	034-0210
18	1	FUSE HOLDER M4/8SF	034-0740
19	1	FUSE 5 X 20MM 4 AMP	034-0240
20	A/R	TERMINAL BLOCK M4/6 (SMALL)	028-0008
21	A/R	TERMINAL BLOCK M4/8 (BIG)	028-0018
22	1	MC40 P.C. BOARD	033-0037
23	1	KEYPAD MEMBRANE	033-0016

CLEANING & SANITATION

THE VACUUM TUMBLER DRUM AND MACHINE MUST BE CLEANED AND SANITIZED DAILY, AND WHENEVER ONE MARINATING PRODUCT IS SWITCHED TO ANOTHER.

1. AFTER REMOVING ALL EXCESS MARINATING SOLUTION, FILL THE TUMBLER 1/2 WAY WITH A SOLUTION OF WATER AND MILD DETERGENT.

HOT WATER IS NOT RECOMMENDED IN THE FIRST STEP AS IT MAY CAUSE THE MYOSIN PROTEIN LEFT OVER FROM THE TUMBLING PROCESS TO BUILD UP AND DISCOLOR THE INSIDE SURFACE OF THE DRUM.

2. FASTEN THE LID BACK INTO POSITION AND ROTATE THE DRUM AT FULL SPEED FOR APPROXIMATELY (2) MINUTES.
3. DRAIN THE CLEANING SOLUTION BY REMOVING THE DRAIN PLUG FROM THE CLEAN OUT PORT OR REMOVE THE LID AND JOG THE OPENING OF THE DRUM INTO A DOWNWARD POSITION.
4. WASH THE INSIDE OF THE DRUM WITH HOT SOAPY WATER AND THEN RINSE WITH HOT WATER.
5. ALWAYS UNPLUG FROM THE POWER SOURCE WHEN CLEANING THE TUMBLER EXCEPT WHEN ROTATING DESCRIBED IN STEP 2.
6. LID GASKET SHOULD BE WASHED AND SANITIZED IN WARM SOAPY WATER. THE GASKET IS ATTACHED TO THE LID AND SHOULD BE WASHED IN PLACE. DO NOT REMOVE GASKET FROM LID.
7. THE OUTSIDE SURFACE OF THE MACHINE CABINET AND DRUM SHOULD ALSO BE WIPED DOWN AND CLEANED.
8. DURING CLEANING OF THE MACHINE, DO NOT DIRECT WATER ON THE CONTROLS. INSTEAD, WIPE WITH A DAMP CLOTH AND DRY WITH A CLEAN DRY TOWEL.
9. AFTER CLEANING AND RINSING THE TUMBLER, PLUG IT IN, AND JOG THE TUMBLER UNTIL THE OPENING IS TOWARD THE BOTTOM TO ALLOW TO DRAIN.
10. AFTER CLEANING, THE MACHINE SHOULD BE SANITIZED WITH A USDA, FDA APPROVED SANITIZER.

MAINTENANCE

1. UNPLUG THE MACHINE FROM ITS POWER SOURCE BEFORE DOING ANY MAINTENANCE.
2. CHECK THE CHAIN TENSION AND GEAR REDUCER OIL LEVEL ON A MONTHLY BASIS.
3. REMOVE THE HOOD COVER TO CHECK AND ADJUST THE CHAIN TENSION. DO NOT OVERTIGHTEN, REMOVE EXCESSIVE SLACK ONLY OR PREMATURE WEAR TO BEARINGS AND SEALS WILL OCCUR.
4. LUBRICATE THE CHAIN WITH HOLLY FLUID MONTHLY.
5. GREASE THE TUMBLER SHAFT BEARINGS EVERY 400 HOURS USING A HOLLY LUBE.

TYPICAL VACUUM CONTROL SETTINGS

PRODUCT	PERCENT OF VACUUM	CONTROL SPEED SETTING RPM	TIME
BONELESS CHICKEN BREAST	FULL (98%)	10 1/2	15 MIN.
BONELESS PORK CHOPS	FULL (98%)	10 1/2	15 MIN.
RUFFY FILLET	FULL (98%)	7 1/2	12-24 MIN.
WHITEFISH FILLET	FULL (98%)	6 1/2	ON 5 OFF 5 ON 5 DONE
PEELED AND DEVAINED SHRIMP	FULL (98%)	6 1/2	12-24 MIN.
TURKEY DRUM	FULL (98%)	14	45 MIN. TO 2 HOURS
RIBS	FULL (98%)	12	45 MIN.
BEEF SHISH	FULL (98%)	7 1/2	15 MIN.
CHICKEN SHISH	FULL (98%)	7 1/2	15 MIN.
SIRLOIN STEAK-1" CUT	FULL (98%)	7 1/2	12-15 MIN.
*DELMONICO STEAK-1" CUT	FULL (98%)	7 1/2	12-15 MIN.
*STRIP STEAK-1" CUT	FULL (98%)	7 1/2	12-15 MIN.
**CHUCK STEAK-1" CUT	FULL (98%)	9	15 MIN.
ROUND STEAK-1"CUT	FULL (98%)	10 1/2	15-20 MIN.
TERRIAKI TIP	FULL (98%)	9	15 MIN.

*ADJUST ACCORDINGLY FOR THICKNESS AND LAP LENGTH.

**WITH MOCK TENDER AND SALSE STRAP FAT REMOVED.



HOLLYMATIC CORPORATION 600 E. PLAINFIELD ROAD COUNTRYSIDE, IL 60525 Telephone: (708) 579-3700