

**OPERATING AND MAINTENANCE
INSTRUCTIONS
FOR
MODEL 7603
WELDOTRON SHRINK TUNNEL**

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CAUTION

THE SAFETY OF PERSONNEL INVOLVED IN THE OPERATION OF INDUSTRIAL EQUIPMENT CAN ONLY RESULT FROM A WELL-CONCEIVED AND RIGIDLY ENFORCED SAFETY PROGRAM DEVELOPED BY THE USER OF SUCH EQUIPMENT. WHILE WELL-DESIGNED EQUIPMENT INCLUDING PERSONNEL SAFETY FEATURES IS EXTREMELY IMPORTANT, OF EQUAL OR EVEN GREATER IMPORTANCE IS THE ROLE PLAYED BY USER MANAGEMENT INVOLVING PROPER INSTALLATION, GOOD MAINTENANCE PROCEDURES BY TRAINED PERSONNEL AND RIGIDLY ENFORCED SAFETY RULES FOLLOWING THE PRACTICES RECOMMENDED BY SUCH ORGANIZATIONS AS A.N.S.I. AND O.S.H.A.

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SAFETY REQUIREMENTS & RECOMMENDATIONS

CAUTION

DO NOT ATTEMPT TO INSTALL, ADJUST, OR OPERATE THIS MACHINE WITHOUT FIRST READING THE CONTENTS OF THIS MANUAL. ALTHOUGH THE DESIGN OF THIS EQUIPMENT INCORPORATES SAFEGUARDS TO PROTECT OPERATING AND MAINTENANCE PERSONNEL, CARE SHOULD BE USED IN OPERATING, ADJUSTING, AND SERVICING.

WHEN MACHINE IS UNPACKED, INSPECT CAREFULLY FOR POSSIBLE SHIPPING DAMAGE. IF ANY IS FOUND, CONTACT CARRIER IMMEDIATELY AND DO NOTHING FURTHER WITH MACHINE UNTIL CARRIER'S AGENT HAS MADE INSPECTION, REPORT, ETC.

The design of this machine includes safety features required to eliminate potential hazards during operation or maintenance.

Applicable OSHA, ANSI, NEMA, and NEC standards have been followed as guidelines in the design and construction of this machine. References are made in this text to special areas of CAUTION. It is strongly recommended that you familiarize yourself with these CAUTION statements.

Tampering with or removing safety devices and/or improper operation or maintenance can result in exposing personnel to possible injury.

Please become familiar with this machine and follow the recommendations for safe operation, maintenance, and sanitation in the following page.

WELDOTRON CORPORATION SAFETY RECOMMENDATIONS

SAFETY IS ENGINEERED INTO ALL WELDOTRON EQUIPMENT; CERTAIN PRACTICES AND MINOR ALTERATIONS BY THE USER COULD INCREASE THE POTENTIAL TO ACCIDENTS AND/OR INJURY. IN THE INTEREST OF SAFE INSTALLATION, OPERATION AND MAINTENANCE, THE FOLLOWING RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO:

1. WARNING

Do not attempt to start or operate the machine until all safety items, installation instructions, operator/s guide & maintenance procedures have been followed & understood.

2. CAUTION

Adjustments, repairs or lubrication should be performed only by qualified maintenance personnel and by following the instructions in this manual and the LOCKOUT/TAGOUT PROCEDURE.

3. WARNING

Operator must keep fingers, hands, clothing or long hair away from the machine while it is in operation.

4. CAUTION

Do not place or leave tools, parts or other objects in or on the machine.

5. ALWAYS

Disconnect the main electrical power supply before performing any electrical work or removing any electrical component.

6. ALWAYS

Keep the machine clean & lubricated and in good operating condition.

Welcome to the Weldotron Family!

Weldotron is a recognized leader in the industrial packaging industry. Whether you own or lease your Weldotron packaging system, you are assured the highest quality in design, workmanship, and performance of any packaging system available.

The purpose of this manual is to familiarize you with the Model 7603 Shrink Tunnel and to provide instructions for the operation, maintenance and, if necessary, repair of the system. This manual also includes a complete set of parts lists and assembly drawings to facilitate maintenance and repair.

If certain unique installation requirements arise, or if there are any questions concerning your Weldotron packaging system which are not answered by this manual, one of our courteous Customer Service representatives will be happy to assist you.

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1. INTRODUCTION

1.1 DESCRIPTION OF MACHINE

The Weldotron Model 7603 Shrink Tunnel is a conveyORIZED heat shrinking device employing electric heating combined with a controllable air-flow system. The main components are the recirculating blower, the heater bank, the shrink chamber, and the package conveyor. Silicone rubber fiberglass curtains cover the entrance and exit of the heat chamber to minimize heat loss as package travels through the tunnel. These machines are ideally suited for shrink packaging operation using all films including polyethylene.

1.2 THE OPERATING AND MAINTENANCE MANUAL

This Operating and Maintenance Manual has been carefully prepared by our Technical Publications Department to provide all information necessary to properly install, operate, and maintain these Weldotron machines. Please read it carefully and refer to it for information on the use and care of this tunnel. It is recommended that extra copies be ordered for use by production, maintenance, and supervisory personnel. Although the design of these tunnels incorporates safeguards to protect personnel, care should be used in operating, adjusting, and servicing.

1.3 IMPORTANT WARRANTY NOTICE

Attention is directed to the Standard Weldotron Parts and Service Warranty which accompanies all new Weldotron machines. The terms and conditions of this warranty apply only to unmodified units. Any unauthorized modifications to the equipment automatically invalidate this warranty.

1.4 PATENT NOTICE

The purchase, use, or possession of any Weldotron machine gives no license express or implied, under any letters patent. This equipment is protected by one or more of the following patents pending:

UNITED STATES PATENTS

3047991, 3135077, 3191356, 3200561,
3116394, 3222800, 3243330, 3253122,
3262833, 3291963, 3299251, 3316653,
3321353

FRENCH PATENTS

1338356, 1326937, 1397917, 1332396

GERMAN PATENTS

1209046

ITALIAN PATENTS

671769, 691457, 673104

BRITISH PATENTS

953490, 984587, 971422

CANADIAN PATENTS

756064

2. UNPACKING

Remove shrink tunnel from its shipping crate and inspect for possible damage. **IF ANY DAMAGE IS NOTED, CONTACT CARRIER IMMEDIATELY. DO NOTHING FURTHER UNTIL CARRIER'S AGENT HAS MADE AN INSPECTION OF THE DAMAGE TO THE UNIT.** If no damage is present, check for the presence of the following items:

	<u>Qty.</u>
1. Main Power Fuses: (1FU, 2 FU, 3FU) 100 Amperes	3
2. Control Circuit Fuse (4FU) 10 Amperes	1
3. Conveyor Cooling fuse (6,-7FU) 3.5 Amperes	2
4. One-half pint can Weldotron Thermolube - LU0855	
5. Lubricant applicator brush	
6. Cooling Fan Fuse (5FU) 3.5 Amperes	1

If any of these items are missing, contact the manufacturer immediately.

3. SPECIFICATIONS

Electrical Requirements	:	230 Volts, 82 Ampères, 3 Phase, 60Hz (Other voltages available upon request)
Overall Dimensions		
Tunnel Length	:	48"
Tunnel Width	:	36"
Height Overall Floor	:	6' 6" (with adjustable pads extended)
Chamber Opening	:	16" H, 31" W
Conveyor Length	:	72"
Heater Bank	:	28,000 watts
Temperature	:	Thermostatically controlled to 700 degrees ($\pm 1\%$ of F.S.)
Conveyor	:	Continuously adjustable speed from 6 to 60 feet per minute.
Controls	:	3 Phase line switch, heater switch, conveyor speed control, precision indicating temperature controller, variable velocity control, conveyor cooling switch

3. SPECIFICATIONS (cont'd)

Electrical Requirements	:	460 Volts, 41 Amperes, 3 Phase, 60Hz (Other voltages available upon request)
Overall Dimensions		
Tunnel Length	:	48"
Tunnel Width	:	36"
Height Overall Floor	:	6'6" (with adjustable pads extended)
Chamber Opening	:	24" H, 31" W
Conveyor Length	:	72"
Heater Bank	:	29,000 watts
Temperature	:	Thermostatically controlled to 700 degrees ($\pm 1\%$ of F.S.)
Conveyor	:	Continuously adjustable speed from 6 to 60 feet per minute.
Controls	:	3 Phase line switch, heater switch, conveyor speed control, precision indicating temperature controller, variable velocity control, conveyor cooling switch

4. ORDERING INSTRUCTIONS

In order to avoid unnecessary delays in filling orders for parts, customers should follow the procedures recommended below:

- a. State the machine name, model number, and serial number.
- b. List the part number, and part name of required part exactly as shown on parts list.
- c. Specify the quantity desired.
- d. Specify when needed.
- e. Specify desired shipping method: Parcel Post, Truck, Air Express, etc.

5. INSTALLATION

A.

Locate the Shrink Tunnel in desired position with required electrical power source available. Make sure that wiring is adequate, to guard against low voltage. If voltage is too low the power company can frequently adjust it to the proper level if the wiring capacity is adequate. In choosing a location for the Shrink tunnel it is important to avoid a drafty area in the path of cooling or ventilating fans or air-conditioning ducts, as heat may be unintentionally drawn from the tunnel and reduce its efficiency.

B.

Shut off the in-house tunnel power-source switch and the tunnels MAIN POWER switch. This switch is located on the control enclosure on the rear of the infeed-side tunnel leg.

C.

Open the tunnels MAIN POWER switch box and wire in the connections to the in-house power-source switch.

D.

Using a wrench, raise, or level the tunnels leg height adjustment to the desired conveyor height for compatibility with sealer and in-house conveyors.

E.

With the tunnels MAIN POWER switch still in its OFF position, turn on the in-house power-source switch.

6. OPERATION

Refer to Figure 6.1 at the rear of this section for locations of controls and adjustments. Be sure to read entire section before operating tunnel.

6.1 PRELIMINARY

Throw the MAIN POWER switch to the ON position.

Set the CONVEYOR SPEED CONTROL to about its mid-range setting on the scale until exact desired conveyor speed is determined later (based on package size and sealer speed). Note that the speed-control scale is in arbitrary units, not in feet-per-minute. The conveyor speed is continuously variable from 2 to 20 feet per minute. This is adjustable by means of the control on the conveyor motor drive unit located below the outfeed end of the tunnel. This should be adjusted, as required, for compatibility with proper shrink results and desired production speed. Note that, as a general rule, the conveyor speed should be set to as low as speed as possible, consistent with production requirements.

6.2 OPERATING WITH ALL FILMS EXCEPT POLYETHYLENE

Set the CONVEYOR COOLING FAN switch to its OFF position.

Set the VARIABLE VELOCITY control to HIGH position.

Depress and release the START pushbutton (PB2). The red pilot light will come on, the CONVEYOR, the MAIN BLOWER and the MAIN BLOWER COOLING FANS will run.

On the control panel, (Figure 6.1) turn on the heater switch, contacts will close and the HEATER BANKS (H1, H2) will be energized.

Set the indicating Thermostatic Control, shown in Figure 6.1, to the temperature recommended by the film manufacturer. Approximate settings for several popular films are as follows:

PVC	: 300 degrees F.
Polypropylene	: 400 degrees F.
D925	: 300 degrees F.
Polyethylene	: 450 degrees F.

These approximate settings are, of course, affected by the conveyor speed selected, the film gauge, and the package size and configuration. The temperature settings should be modified, experimentally, for best shrink results. When the selected tunnel operating temperature has been reached, the two dial scale pointers of the temperature controller will coincide.

6.3 OPERATION WITH POLYETHYLENE FILM

Set the CONVEYOR COOLING FAN switch to its ON position.

Set the thermostat to 450 degrees F. (maximum heat).

Set the CONVEYOR SPEED CONTROL to a setting which is consistent with sealer speed and with production rate requirements.

Set the VARIABLE VELOCITY control initially to a point near its LOW position and, if required, advance in small increments toward the HIGH position, experimentally for best shrink results. It is important to remember that if the hot air velocity is too great, billowing of the film may occur which can cause the film to fold over and stick to itself. A little care in determining the optimum setting will provide excellent results in the production shrinking of polyethylene film.

If desired, the outfeed curtains may be removed from the shrink chamber to prevent marring or sticking of the soft polyethylene film as it emerges from the tunnel in a semi-molten state. To remove the outfeed curtains, unscrew the two mounting screws at the top edge of each side of the curtains and remove the curtains and supporting plates. When operating without the curtains, somewhat different settings of the various tunnel adjustments may be required (such as conveyor speed, and air velocity) to compensate for the heat-loss within the shrink chamber.

6.4 TUNNEL SHUT-DOWN PROCEDURE

Throw the Heater toggle switch to its OFF position. Allow the fans and conveyor to continue to run (approximately 20 minutes) until the indicated temperature has dropped to below 200 degrees F.

After indicated temperature is below 200 degrees F., depress and release the STOP push-button (PB1).

Throw the MAIN DISCONNECT switch to its OFF position.

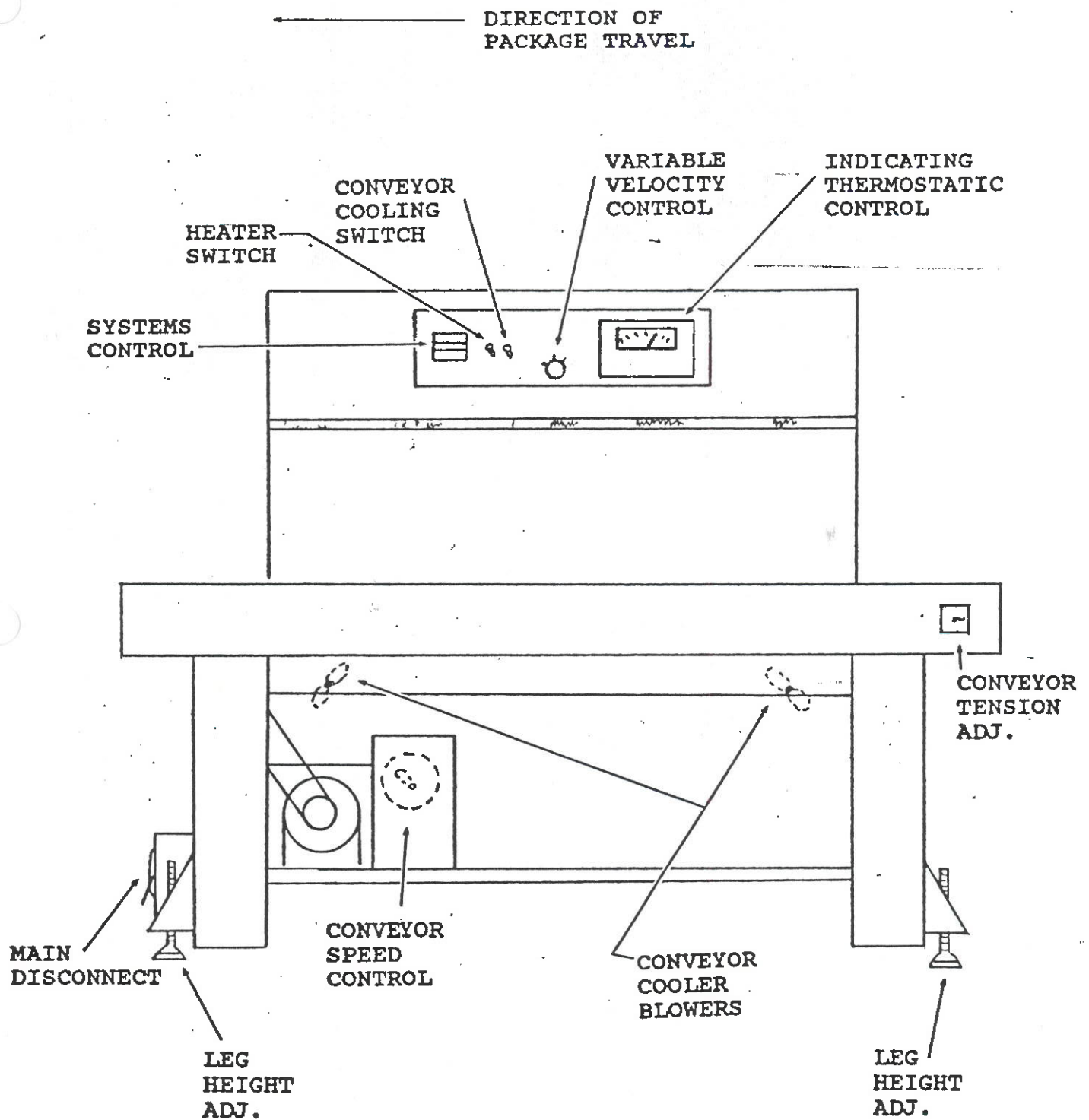


Figure 6.1 Location of Controls and Adjustments

LOCKOUT/TAGOUT PROCEDURE (OSHA Standard 1910.147)
(THE CONTROL OF HAZARDOUS ENERGY)

WARNING

This standard covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy could cause injury to employees. This standard establishes minimum performance requirements for the control of such hazardous energy.

APPLICATION

This standard applies to the control of all energy during servicing and/or maintenance of Weldotron machines and equipment.

PURPOSE

This procedure establishes the minimum requirement for the lockout or tagout of energy isolating devices. It shall be used to ensure that the machine or equipment is isolated from all potentially hazardous energy and locked out or tagged out before employees perform any servicing or maintenance activities.

RESPONSIBILITY

Appropriate employees (Maintenance employees and Machine set-up employees) must be instructed in the safety significance of the lockout (tagout) procedure. Each person transferred or newly hired into such positions shall be trained at time of hire or transfer.

PREPARATION FOR LOCKOUT OR TAGOUT

Identify all isolating devices to be certain which switches, valves, or other energy isolating devices apply to the equipment to be locked or tagged out.

1. Electrical boxes - Power off, remove fuses.
2. Air - disconnect air.
3. Placing a tag on machine, indicates the machine is disconnected from power and out of service.

SEQUENCE OF LOCKOUT OR TAGOUT SYSTEM PROCEDURE

1. Notify all affected employees that a lockout or tagout system is going to be utilized and the reason therefore, i.e.: Foreman and operator.
2. Shut down equipment by normal stopping procedure.
3. Open switch, disconnect air, and unplug equipment isolating it from its energy source. Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc.
4. Lockout and/or tagout the energy isolating devices with assigned individual locks or tags. In the case of a disconnect switch tagout and/or lockout. In the case of a plug, unplug, and tagout.
5. After ensuring that no personnel are exposed and as a check on having disconnected the energy sources, operate the pushbutton or other normal operating controls to make certain the equipment will not operate.

CAUTION

Return operating controls to "NEUTRAL" or "OFF" position after test.

6. The equipment is now in a lockout and/or tagout condition.

RESTORING MACHINES OR EQUIPMENT TO NORMAL PRODUCTION OPERATIONS

1. After servicing and/or maintenance is complete and equipment is ready for normal use, check the area around the machine or equipment to ensure that no one is exposed.
2. After all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, remove all lockout or tagout devices. Reinstall fuses and undo any other energy isolating devices to restore energy to the machine or equipment.

PROCEDURE INVOLVING MORE THAN ONE PERSON

In the preceding steps, if more than one person is required to lockout or tagout equipment, each shall place his or her own personal lockout device or tagout device on the energy isolating device. Maintenance personnel will use multiple locks. When mechanic and electrician work together, each will tagout the plug and no one but the person installing the tag can remove it and equipment is not to be plugged in with any tagout on it.

BASIC RULES FOR USING LOCKOUT OR TAGOUT SYSTEM PROCEDURE

All equipment must be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device where it is locked or tagged out.

7. MAINTENANCE

7.1 LUBRICATION OF GREASE FITTINGS

All grease fittings should be lubricated once every 6 months with a good quality automotive type grease. There are a total of 6 fittings, as follows:

- 2 on conveyor infeed shaft bearings
- 2 on conveyor outfeed shaft bearings
- 2 on idler shaft from motor-reducer unit

7.2 LUBRICATION OF DRIVE CHAINS

There are two drive chains (one from the motor-reducer unit to the idler shaft, and one from the idler shaft to the package conveyor). Remove the sheet metal access panel (on left side of outfeed end) and, using a pressure oiler, lubricate both chains, every 6 months, with SAE #10 non-detergent motor oil. Replace the access panel.

7.3 MAIN BLOWER BEARINGS

Refer to Figure 7.1. Under conditions of continuous operation (16 hours per day), add 2 teaspoons of SAE #10 motor oil after removing oil plugs, once every 6 months to both oil cups. Access to the motor is gained by removing the tunnels top cover plate by turning the 6 retaining screws counterclockwise.

7.4 MAIN BLOWER COOLING FAN MOTOR BEARINGS

Refer to Figure 7.1. Under conditions of continuous operation (16 hours per day), add a small amount of light machine oil to the two oil holes on the motor once every 6 months.

7.5 TENSION ADJUSTMENT OF DRIVE CHAIN (MOTOR TO IDLER)

Proper tension adjustment is obtained by loosening the drive motor mounting bolts and repositioning the motor forward or backward to adjust chain tension. Remove the sheet metal access panel (on left side of the outfeed end) to observe effect of motor repositioning. Tension should be moderate to avoid excessive wear on bearings. Correct tension is achieved when it is possible to deflect the chain inward about 3/4" at the center of the chain on either top or bottom sides of the chain. When proper tension has been obtained, tighten motor mounting bolts securely and replace access panel. No adjustment is required on the idler to conveyor drive chain.

7.6 CONVEYOR TENSION AND TRACKING ADJUSTMENT

Package Conveyor tension and tracking should be adjusted with shrink tunnel operating at normal operating temperature. Refer to Figure 6.1, with the conveyor running, loosen the locking jam-nuts (visible through the access holes at each side of the conveyor infeed roller). Using a wrench, turn the left and/or right side bolt as required (and as observed), to achieve proper tension. Tension should be moderate, as excessive pressure may prematurely wear bearings. When tension is correct, tighten the locking jam-nuts.

7.7 CONTACTOR-CONTACT CLEANING AND REPLACEMENT

If the contacts of contactor (used for heater bank control) should require cleaning or replacement due to pitting, sticking, or burning, proceed as follows:

- a. Locate the contactor in the control enclosure, mounted on the rear of the infeed leg. **BE SURE THE TUNNEL IS SHUT OFF.**
- b. Press down on metal retainer and slide off along the slot at the top of the contactor.
- c. Lift section marked "TOP" up and out of the metal frame. Contacts are now available.
- d. Using a soft brush, saturate the contacts (including the stationary ones on the contactor itself) with carbon tetrachloride. Allow to dry. A soft cloth may be used but make sure no threads are left on the contacts. Do not touch or scrape surface of contacts. **NEVER USE EMERY CLOTH OR ANYTHING THAT MAY ABRASE CONTACT SURFACE.**
- e. Even though troubles may have been encountered only on one or two of the three contacts, it is recommended that all three contact sets be cleaned, or replaced, to assure proper contactor operation.
- f. To replace, reverse the order used in removal. **ALTHOUGH SCRAPING OR FILING OF CONTACTS IS NOT RECOMMENDED, A VERY FINE FILE MAY BE USED TO CLEAN BADLY PITTED CONTACTS, AS A TEMPORARY MEASURE ONLY, UNTIL NEW CONTACTS HAVE BEEN INSTALLED. AFTER FILING, CLEAN CONTACTS WITH CARBON TETRACHLORIDE TO REMOVE ANY LOOSE PARTICLES.**

7.8 HEATER BANK REPLACEMENT

If the shrink tunnel will not develop or maintain proper operating temperature, one or both sections of the heater bank may be defective. Before replacing the heater bank, however, the following tests should be made. Refer to Figure 6 and the schematic diagram. Locate the Main Power Fuses in the Control enclosure, mounted on the rear of the outfeed leg.

7.8 HEATER BANK REPLACEMENT (continued)

- a. Check that in-house power, on all 3 power phases is present.
- b. Check that main power fuses, FU1, FU2, and FU3 are good.
- c. Using an Amprobe (or equivalent clamp-on type ammeter) around each, in turn, of the six heater-power cables from contactors to the heater banks, a reading of 45 (nominal) amperes should be indicated, as read from each of the six cables. If substantially lower readings, or no readings are obtained from any one of the cables, a heater bank section is open or defective, and should be replaced. **BEFORE ASSUMING THAT A HEATER SECTION IS DEFECTIVE, HOWEVER, BE SURE TO CHECK FOR THE PRESENCE OF PROPER VOLTAGE THROUGH CONTACTORS CONTACTS (THUS CHECKING THE CONTACTOR CONTACTS OR OPERATING COIL). BE SURE, ALSO THAT THE INDICATING TEMPERATURE CONTROL TC1 IS SET TO A HIGH ENOUGH TEMPERATURE AND IS OPERATING PROPERLY.**
- d. Make sure, also that Fuse FU4 is not defective, thus preventing operation of contactors.
- e. If it has been determined that the heater bank is defective and must be replaced, remove the shrink tunnels left-side heater bank access cover by unscrewing the retaining screws (cover visible within the shrink chamber from the outfeed side). Remove the sheet-metal screws on the cover of the connection box of the heater bank and remove the cover.

CAUTION

Disconnect power to tunnel.

- f. Unscrew the terminal lugs and cables to the heater banks. Pull the cables out of the entrance hole.
- g. Pull the heater bank out of the tunnel.
- h. Push in the heater bank, being careful to orient the same way as the old heater bank.
- i. Reconnect the heater bank cables.
- j. Replace the sheet-metal heater bank cover, and replace the tunnels left-side access cover.

7.9 GEAR SHIFT DRIVE

It is recommended, when tunnel is in extended use, that once a week the speed of the drive be varied over the range in use. This will assist in the lubrication of parts normally stationary with a constant fixed speed.

7.10 CONVEYOR ROLLER COVERS

The silicone rubber covering on the conveyor rollers should be inspected regularly to assure that no scrap pieces of film are wrapped around the rollers to cause sticking or marring of packages. Use a cloth and a household detergent, such as Mr. Clean, and wipe the rollers thoroughly. Use a clean dry cloth to dry the rollers. If the rollers have accumulated an excessive amount of film scrap which cannot be removed by the use of the detergent, carefully scrape the film residue from the rollers using a dull, blunt-edged tool to prevent damage to the roller covering.

7.11 REPLACEMENT OF CONVEYOR-ROLLER COVERING

Under conditions of heavy, continuous use, the silicone rubber covering of the conveyor rollers may eventually require replacement. To replace this covering proceed as follows:

- a. At idler end of conveyor (infeed end), loosen conveyor chain tension adjustments to allow moderate conveyor chain slack.
- b. Remove the chain-guard covers covering both conveyor chains at the input end of the conveyor by removing the three sheet metal screws from each cover.
- c. Pull up on each roller and spread the conveyor chain to remove each roller. Run conveyor slowly, as required, for access to all rollers.
- d. Remove the old roller-covering rubber tubing from each roller and discard. If necessary, carefully slit tubing to remove, being careful not to score the roller.
- e. Thoroughly clean all rollers, using fine steel wool if necessary. Make sure all rollers are completely smooth and free of residue and burrs.
- f. Fit the new silicone rubber tubing onto each roller and work on, by hand, at least a half-inch. At the opposite end of the tubing fit on and hold, by hand, an air supply hose of moderate pressure. While the tubing is slightly expanded by the air pressure, push the tubing onto the roller and work it into final position on the roller.
- g. Replace rollers on conveyor by lifting one chain to allow insertion of each roller. Run conveyor, as required, for access.
- h. At idler end of conveyor adjust conveyor tension and replace the chain-guard covers.

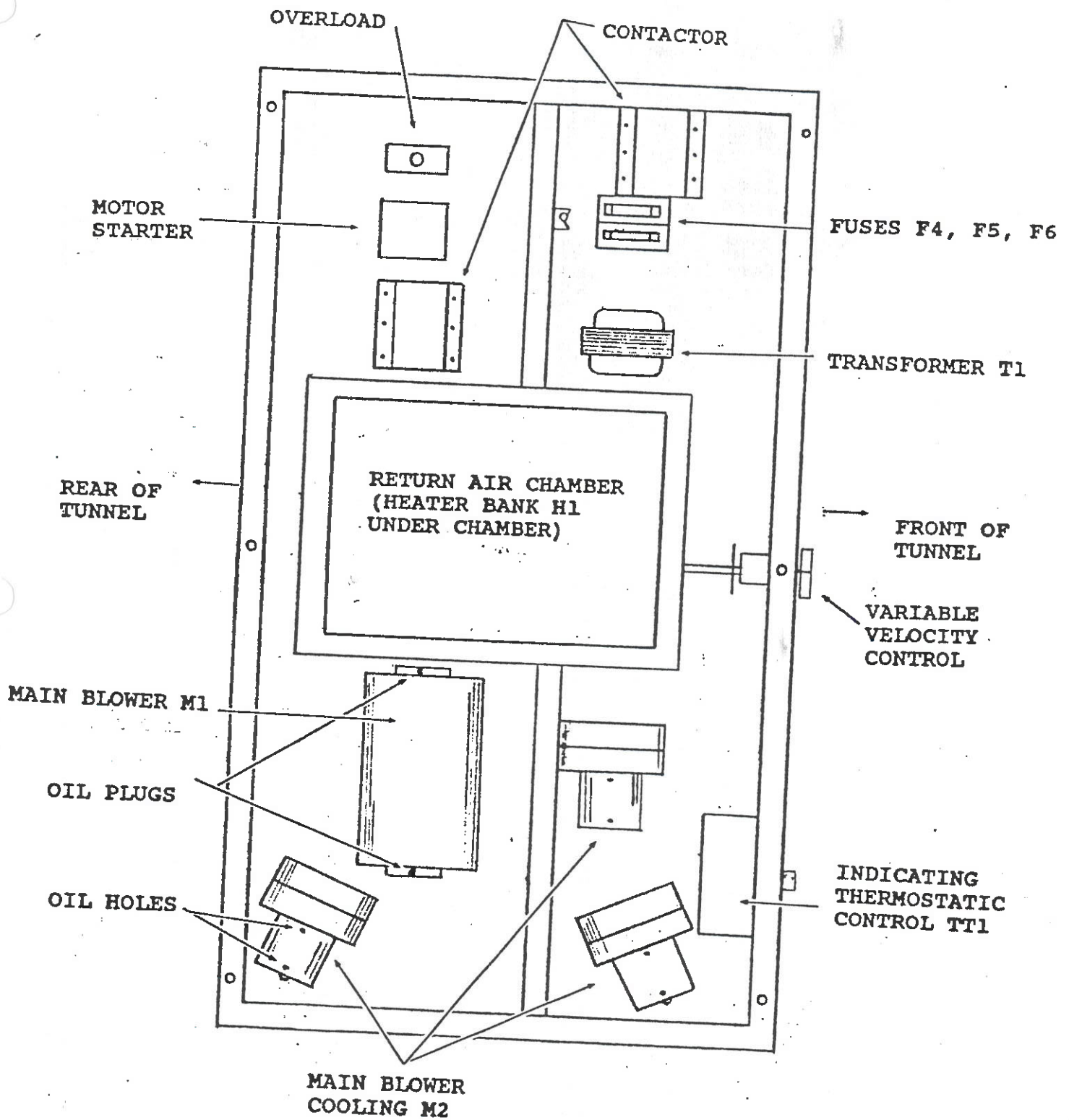


Figure 7.1 Location of Components

8. TROUBLESHOOTING

The following troubleshooting chart is provided to aid in determining the source of any troubles which may be encountered. For checking any electrical troubles the use of test equipment such as a small multimeter, and an Amprobe (or equivalent) clamp-on type ammeter is required. In performing the tests and checks which follow, carefully inspect for loose components, wires touching moving parts, broken cables or wires, poor connections, etc., while testing the transformers, switches, motors and so on. Refer to Figure 6.1 for locations of controls and adjustments and electrical schematic following this chart.

CAUTION

In performing the troubleshooting test and checks which follow, use caution to avoid contact with the voltages and the moving parts of the shrink tunnel. Electrical power should be turned on only when needed for testing. Ohmmeter or electrical continuity test of wiring or components should, of course, be done only with the power turned off. Caution should also be observed to avoid contact with hot surfaces and components of the tunnel.

TROUBLE	PROCEDURE
Inadequate film shrinkage.	Check that tunnel is not in windy location near fans or other drafts which would draw heat from tunnel.
	Check for adequate 230 volt power supply to tunnel.
	Check that all adjustments are as in pertinent sections of paragraph 6.
	Check conveyor speed. May be too high for particular film and package. Also, temperature setting may be too low.
	Check for lack of heat, or defective heater bank (see paragraph 7.6).
Excessive film shrinkage with splitting of packages.	Check for proper film type, gauge and film condition.
	Check that all adjustments are as in pertinent sections of paragraph 6.
	Check conveyor speed. May be too low for particular film and package.
	Poor film seal. Check quality of film seal prior to tunnel entry.
	Check conveyor tension adjustment as per paragraph 7.4.

8. TROUBLESHOOTING

TROUBLE	PROCEDURE
Conveyor speed erratic or too slow.	Check for presence of foreign object impeding drive chains. Check conveyor tension.
	Check lubrication as in paragraph 7.1 or 7.2.
	Check conveyor motor speed setting.
Conveyor does not move.	Check as in step 3, above.
	Check for open windings of conveyor drive motor.
	Check to see that proper voltage is available at the power source.
	Check fuses FU1, FU2, FU3, and FU4.
No tunnel heat, or low tunnel heat.	Check for electrical continuity through contacts of indicating thermostat static control TC1. Make sure unit is set high enough in temperature.
	Check that contactors operate. If not, check coil and wiring continuity.
	Check for presence of 230 volts to heater bank from output side of contactors.
	Check condition of contacts of contactors. If required, clean and/or replace as per paragraph 7.5.
	Check for adequate electrical power voltage to tunnel. Should be nominal 230 volts for best heat results.
	Check for open or partially open heater bank, as per paragraph 7.6.

PARTS LISTS AND DRAWINGS

ASSEMBLY DRAWINGS DESCRIPTION AND PARTS LIST

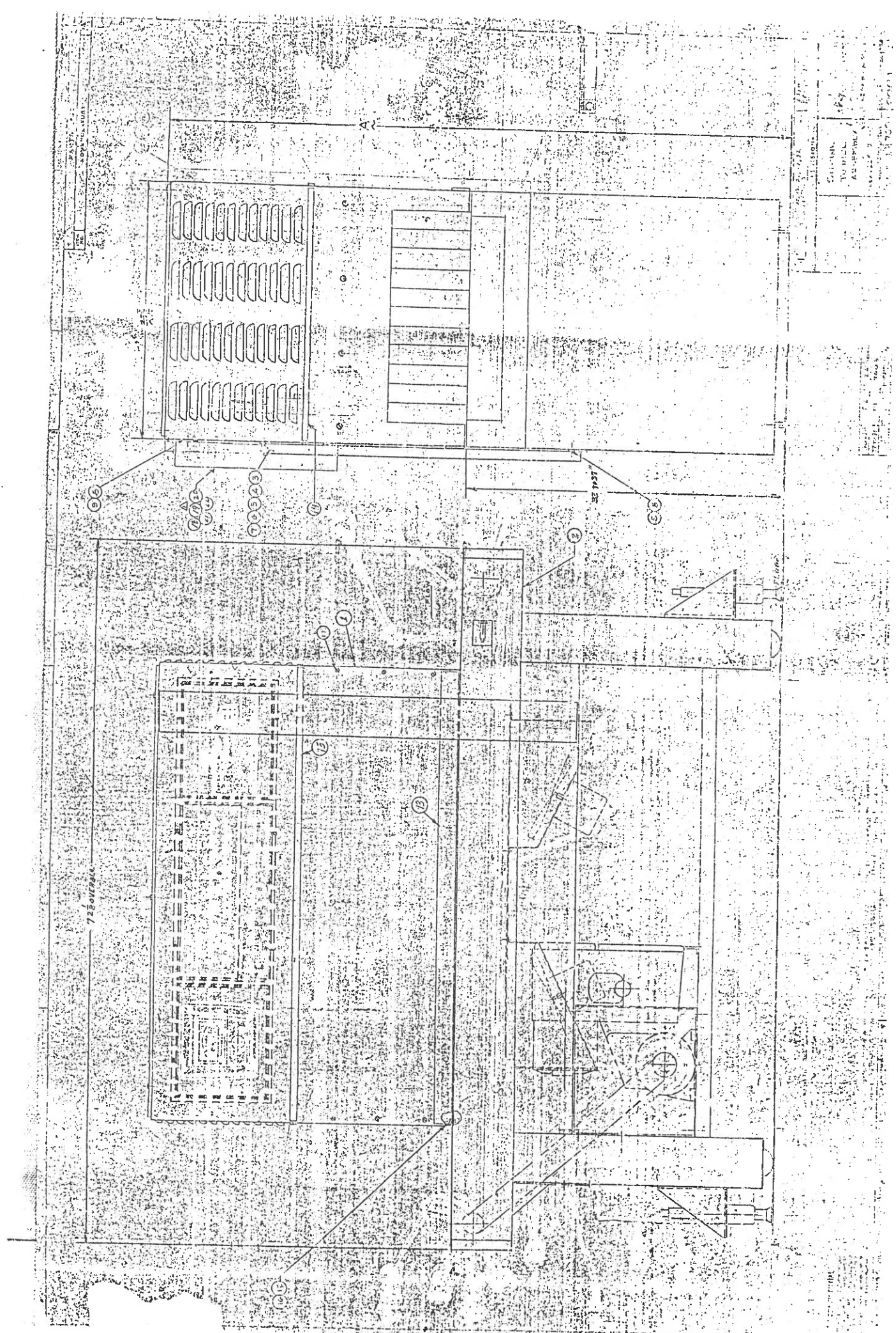
DESCRIPTION	PARTS LIST NO.
SHRINK TUNNEL ASSY	76030001P3
TUNNEL SUB-ASSEMBLY	76030002P3
BLOWER MOTOR&MTG ASSY	72210250P2
END COVER&CURTAIN ASSY	76030104P1
HEATER BANK ASSY	70000805P1
HEATER BANK ASSY	70000804P1
HEATER BANK ASMBLY	70000803P1
UNIVERSAL CONNECTOR ASSY 7 1/2"	70000808P2
UNIVERSAL CONNECTOR ASSY 3 1/2"	70000808P1
DAMPER ACTUATOR ASSY	76030232
DAMPER CONTROL ASSY	72210233P1
CONTROL PANEL ASSY	76030109P3
CHASSIS ASSY&WIRING DIAG	76030110
CHASSIS ASSY #2	76030111P2
CONVEYOR ASSEMBLY	76030003P2
IDLER SHAFT ASS'Y	76030140
CHAIN TAKE UP ASS'Y.	76131054P1
CHAIN TAKE UP ASS'Y.	76131054P2
DRIVE SHAFT ASS'Y	76030141
CENTER SECT VIEW ASS'Y	76030125P1
ROLLER ASSY	76030163

PART NO: 76030001P3

DESCRIPTION: SHRINK TUNNEL ASSY

REV:03 10/05/93
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76030002P3	TUNNEL SUB-ASSEMBLY	1.0	EA	06		AS
2	76030003P2	CONVEYOR ASSEMBLY	1.0	EA	14		AS
3	76007012P1	COVER TUNNEL WIRES	1.0	EA			
4	76007013P1	LOWER COVER-TUNNEL WIRES	1.0	EA			
5	WA0351	ABA,10 WASHER	6.0	EA			
6	WA1003	AAB,10 WASHER LOCK SPRING	6.0	EA			
7	SS2113	AAG,10-32X0.500 LG SCR BIND HD MA CAD PL	6.0	EA			
8	CD3280	1 1/2" CHASE NIPPLE	2.0	EA			
9	CD4186	1 1/2 LOCKNUT BL-150 OR EQ	4.0	EA			
12	SS3603	ABA,0.250-20X0.500 LG SCREW HEX HD MACH	35.0	EA			
13	76031047	MOULDING CAP	2.0	EA			
14	76031048P1	MOULDING CAP	2.0	EA			
15	76031048P2	MOULDING CAP	2.0	EA			
16	WA0619	ABB,0.250 WASHER	35.0	EA			
17	SS0739	AAQ,10X1.500 LG SCR PAN HD SHT MTL CAD	48.0	EA			
18	CU19609	CIRCUIT BREAKER,100A,3POLE, SQUARE D #FA*	1.0	EA			
19	71421000	ENCLOSURE (EN7391)	1.0	EA	01		
20	71422002	SPACER,CIRCUIT BREAKER ENCL	1.0	EA	01		
21	FG20531	AHE,FITTING,NIPPLE 1 1/4" I PS 2" LG	1.0	EA			
22	CD20535	LOCK NUT 1 1/4"IPS	2.0	EA			
9000	DWG76030001	DWG,SHRINK TUNNEL ASSY	1.0	EA	01		D



PART NO: 76030003P2

DESCRIPTION: CONVEYOR ASSEMBLY

REV:14 10/05/93
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
2	76030117	CONVEYOR WELDMENT	1.0	EA			
3	76030121	LEG ASSEMBLY IDLER END	1.0	EA			
4	76030122	LEG ASSEMBLY DRIVE END	1.0	EA			
5	76031041P1	LEG TIE	1.0	EA			
6	76031042	VARI DRIVE SUPP	1.0	EA			
8	76031043	END CAP	2.0	EA			
9	76031044	CHAIN GUARD BOTTOM	1.0	EA			
11	76031045	CHAIN GUARD TOP	1.0	EA			
12	76031046P1	GASKET	2.0	EA			
16	76031075(1IN)	IDLER SHAFT	1.0	EA			AS
17	76031076(1IN)	DRIVE SHAFT	1.0	EA			AS
18	76030125P1	CENTER SECT VIEW ASS'Y	1.0	EA			AS
19	76030163	ROLLER ASSY	112.0	EA	04		AS
21	73000601	BRACKET CONVEYOR	4.0	EA			
22	MR4492	1/20 HP BLOWER MTR	4.0	EA			
23	73001047	FAN, PANEL COOLING (BW1047)	4.0	EA	01		
24	SS0580	AAA,0.250X0.625LG SCREW HEX HD CAP CP	10.0	EA			
25	WA0361	AAA,0.250 WASHER FLAT SAE PLAIN CP	12.0	EA			
26	WA0619	ABB,0.250 WASHER	10.0	EA			
27	76031078P1	FAN COVER	1.0	EA			
29	76031100	SPROCKET 14T MOD - CONVEYOR	1.0	EA			
31	NT2752	ABA,0.375-16 NUT HEX	4.0	EA			
33	WA0981	AAB,0.375 WASHER LOCK CP	4.0	EA			
34	76031079	COVER SPACER	12.0	EA			
35	SS0300	AAQ,4X0.250 LG SCR SHT MTL PAN HD CAD	4.0	EA			
36	SS0051	AAA,0.375-16X1.250LG SCREW HEX HD CAP CP	4.0	EA			
38	SS3603	ABA,0.250-20X0.500 LG SCREW HEX HD MACH	35.0	EA			

PART NO: 76030003P2
DESCRIPTION: CONVEYOR ASSEMBLY

REV:14 10/05/93
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
39	WA0619	ABB,0.250 WASHER	10.0	EA			
40	CH0409	CHAIN,ROLLER,#40,1/2P,SING, CS	5.0	FT			
41	CH0413	#40 CONN. LINK 1/2P, W/SPRG CLIP	1.0	EA			
42	CH1233	CHAIN	26.0	FT	02		
44	FG2848	BBE,0.750 CHASE NIPPLE	1.0	EA			
45	LG1052	T & B #142	1.0	EA			
46	CH1233A	CONN LINK FOR DIAMOND CHAIN	2.0	EA			
47	MR4566	VARIABLE SPEED DRIVE	1.0	EA			
48	76031060	RELOCATE MTR CONT KNOB	1.0	EA			
49	LB1817	SPEC.& PATENT NAMEPLATE	1.0	EA	08		
50	76030191	EXTENSION DEAD PAN INFEED	1.0	EA			
51	SS0575	ACB,0.250-20X0.500 LG SCREW RD HD CAD PL	2.0	EA			
52	76030165	LEVELING PAD ASSEMBLY	4.0	EA			
53	NT1336	AAA,0.750-10 NUT HEX CP	4.0	EA			
54	WA9259	AAA,0.750 WASHER FLAT CP	4.0	EA			
55	LB1365	LABELS "LUBRICATE CHAIN"	2.0	EA			
100	76031041P2	LEG TIE	1.0	EA			
101	76031078P2	FAN COVER	1.0	EA			
9000	DWG76030003	DWG,COVEYOR ASSY	1.0	EA	04		D

PARTS LIST
NONINCULCATED

12 FASTEN TO (2)
WITH
ADHESIVE RTV

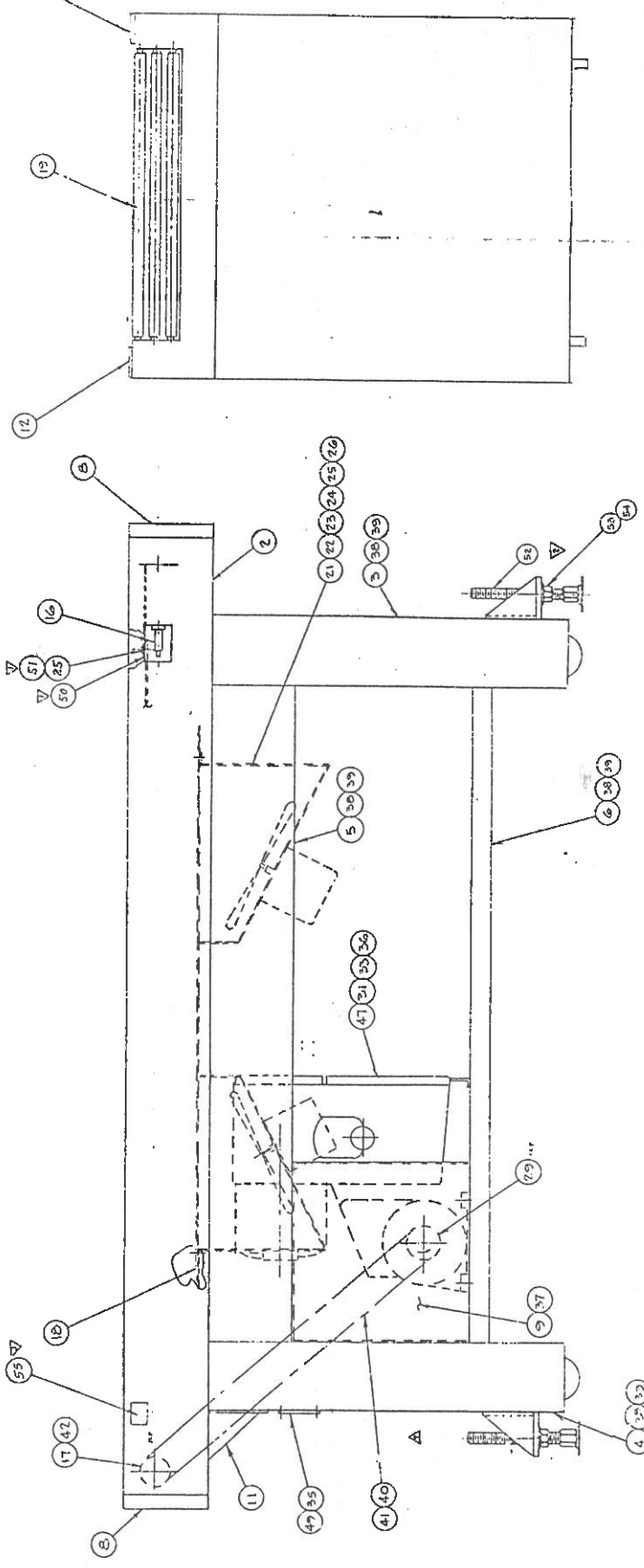


FIGURE 1

REVISIONS		CONTRACT NO.		PROJECT NO.		DATE	
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	INITIAL DESIGN	1	INITIAL DESIGN	1	INITIAL DESIGN	1	INITIAL DESIGN
2	REVISED DESIGN	2	REVISED DESIGN	2	REVISED DESIGN	2	REVISED DESIGN
3	REVISED DESIGN	3	REVISED DESIGN	3	REVISED DESIGN	3	REVISED DESIGN
4	REVISED DESIGN	4	REVISED DESIGN	4	REVISED DESIGN	4	REVISED DESIGN
5	REVISED DESIGN	5	REVISED DESIGN	5	REVISED DESIGN	5	REVISED DESIGN

PART NO.	MODEL NO.	REV.	DATE	BY	CHKD.
P2	7605	1	10/25/51	J. H. H.	J. H. H.
P2	7603	1	10/25/51	J. H. H.	J. H. H.
P1	7605	1	10/25/51	J. H. H.	J. H. H.
P1	7603	1	10/25/51	J. H. H.	J. H. H.

ASSEMBLY
CONTRACT NO. 1
PROJECT NO. 1
DATE 10/25/51
BY J. H. H.
CHKD. J. H. H.

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PART NO: 76030002P3
 DESCRIPTION: TUNNEL SUB-ASSEMBLY

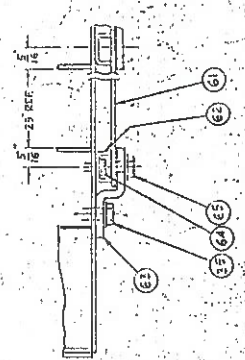
REV:07 12/22/93
 ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76030100P1	TUNNEL WELDMENT ASSY	1.0	EA			
2	72210250P2	BLOWER MOTOR&MTG ASSY	1.0	EA	02		AS
3	76030104P1	END COVER&CURTAIN ASSY	2.0	EA			AS
5	70000805P1	HEATER BANK ASSY	2.0	EA			AS
6	76031016	BACK COVER HEAT BOX	1.0	EA			
11	76030108	BLOWER TOP ASSY	1.0	EA			
12	76032031	DAMPER SUBSHAFT	1.0	EA			
13	72212012	DAMPER SHAFT COUPLE	1.0	EA			
18	76031018	TOP COVER	1.0	EA			
20	SS0987	AAI,10-32X0.250 LG SCR SOC	2.0	EA			
21	76030232	HD CONE PT CP DAMPER ACTUATOR ASSY	1.0	EA			AS
22	72210233P1	DAMPER CONTROL ASSY	1.0	EA			AS
23	BW0511	BLOWER AIR COOL 115V 80W 14 OCPM	3.0	EA			
24	SS2780	ABQ,6-20X0.500LG SCREW PAN	20.0	EA			
26	FN2631	HD POZIDRIVE STUD ASSY 1/4 TURN	6.0	EA			
27	FN2632	RECEPTACLES 1/4 TURN	6.0	EA			
28	FN2633	RECEPTACLE NUT 1/4 TURN	6.0	EA			
29	FN2634	WASHER	6.0	EA			
30	76030109P3	CONTROL PANEL ASSY	1.0	EA	01		AS
31	76031019	BLOW MTR MTG BRCK	2.0	EA			
32	76030110	CHASSIS ASSY&WIRING DIAG	1.0	EA			AS
33	76030111P2	CHASSIS ASSY #2	1.0	EA			AS
34	CD3840	LOCKNUT	4.0	EA			
35	SS1170	ABQ,10-24X0.500LG SCR SWAGE	12.0	EA			
36	CD3150	FORM SHT MTL 3/4" NIPPLE, CLOSE, CONDUIT	2.0	EA			
37	NT0287	AAA,10-32 NUT HEX CAD PL	12.0	EA			
39	WA2223	AAA,10 WASHER FLAT CP	22.0	EA			

PART NO: 76030002P3
DESCRIPTION: TUNNEL SUB-ASSEMBLY

REV:07 12/22/93
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
40	76031020	PROBE RETAINER	1.0	EA			
41	NT0283	ABB,0.250-20 NUT HEX JAM	2.0	EA			
42	WA2224	AAA,0.250 WASHER FLAT CP	10.0	EA			
43	SS2113	AAG,10-32X0.500 LG SCR BIND	18.0	EA			
46	SS7293	HD MA CAD PL ACA,10-32X0.500 LG SCR HEX	12.0	EA			
47	TL0774	HD SST SPLICE WIRE	4.0	EA			
48	LB1696	LABEL,WIRE MARKERS VINYL	1.0	EA			
49	WE3293	CLOTH TY-WRAP	10.0	EA			
50	CQ0778	CONN-WIRE JOINT INSULATED	2.0	EA			
51	BU0153	AGG,0.500 OD SNAP LOCK	1.0	EA			
52	GM1177	GROMMET AS PER MI	1.0	EA			
56	KB1101	KNOB	1.0	EA			
57	SS0738	AAG,6-32X0.375 LG SCR BIND	6.0	EA			
58	NT0198	HD MCH CAD PL AAA,6-32 NUT HEX CAD PL	6.0	EA			
59	WA1292	AAA,6 WASHER PLAIN CP	6.0	EA			
60	AH0635	ADHESIVE LOCTITE RED 10CC	1.0	EA			
9000	DWG76030002	DWG,TUNNEL SUB-ASSEMBLY	1.0	EA 02			D



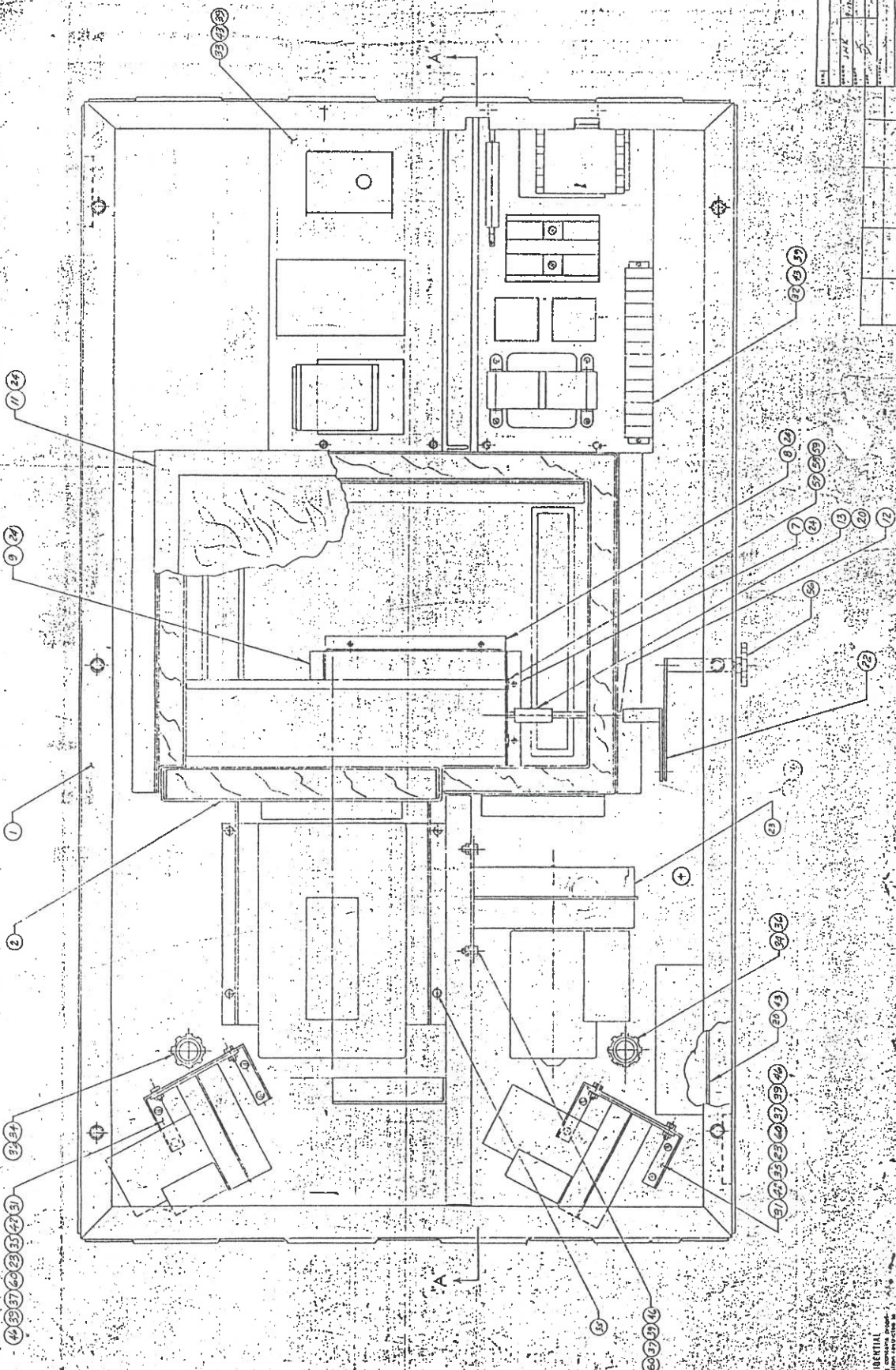
SECTION "B-B" (IN PART ONLY)
(ONLY FOR 7532-1232)
SCALE: FULL

ONLY FOR 7532 MODEL

VIEW-A-A

[illegible]

CONFIDENTIAL



REVISIONS		DATE	BY
1	INITIALS		
2	DATE		
3	BY		
4	DATE		
5	BY		
6	DATE		
7	BY		
8	DATE		
9	BY		
10	DATE		

TUNNELING SURVEILLANCE PLANT	
1	DATE
2	BY
3	DATE
4	BY
5	DATE
6	BY
7	DATE
8	BY
9	DATE
10	BY

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PART NO: 72210250P2

DESCRIPTION: BLOWER MOTOR&MTG ASSY

REV:02 07/12/91
ACT: ROUTE: 1

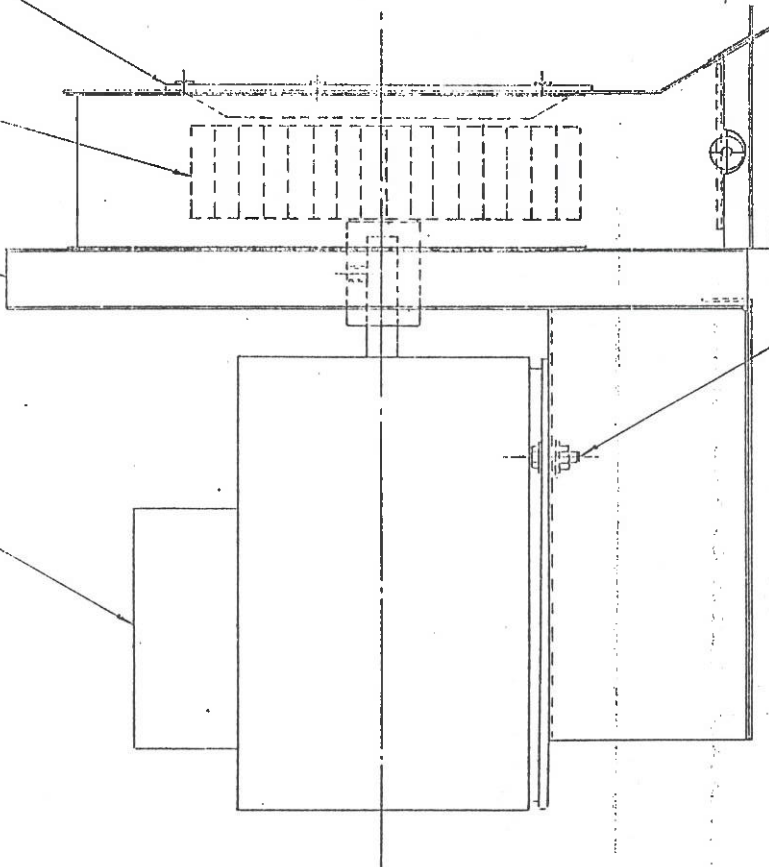
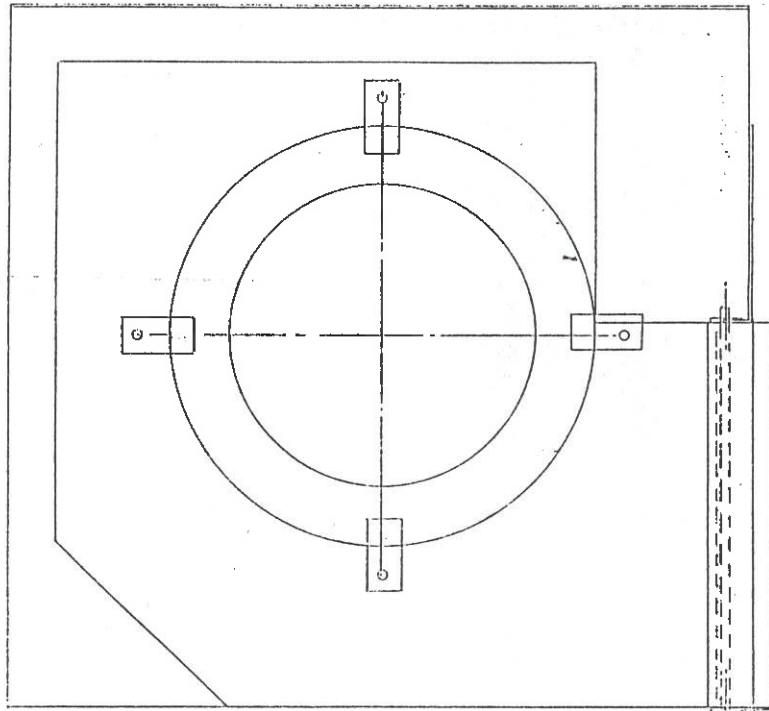
ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	72210248	BLOWER HOUSING &MTR MTG WEL D	1.0	EA			
2	72210252	INLET RING WELDMENT	1.0	EA			
3	SS0072	AAQ,6X0.500 LG SCR SHT MTL PAN HD A	4.0	EA			
4	BW2636	BLOWER WHEEL	1.0	EA			
6	SS0194	AAA,0.312-18X1.000LG SCREW HEX HD CAP CP	4.0	EA			
7	NT0199	AAA,0.312-18 NUT HEX CAD PL	4.0	EA			
8	WA2225	AAA,0.312 WASHER FLAT CP	4.0	EA			
9	WA2232	AAB,0.312 WASHER LOCK CP	4.0	EA			
10	72212032	DAMPER SHAFT	1.0	EA			
11	72212013	DAMPER BLADE	1.0	EA			
12	SS1383	AAB,6-32X0.250 LG SCREW RD HD MACH CP	2.0	EA			
13	WA2228	AAB,6 WASHER LOCK CP	2.0	EA			
14	NT1015	AAD,0.250 NUT	2.0	EA			
15	MR3876	1-1/2HP 3450RPM NEMA 56 FR OPEN DRIPPRO*	1.0	EA			
9000	DWG72210250	DWG,BLOWER & MOTOR ASSEMBLY	1.0	EA	01		C

23

4

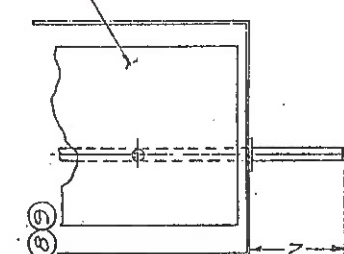
1

502/5



10 11 12 13 14

6 7 8 9



SIZE	TYPE	NO.	REV.
C			

1		CHANGED PICTURE OF ITEM # 2		ECO NO.	DATE/REV
SYN.		DESCRIPTION			
TITLE		BLOWER MOTOR & MOTOR MOUNT ASSEMBLY			
DESIGN	DATE	5-17-71			
CHECKED	DATE				
APP.	DATE				
MATERIAL		7			
FINISH		7			
SCALE		1/2			
PART NO.		C 7221-0250			
REV.		1			
UNL. REC.		± .003			
ANGLES		± 30°			
NO. REG'D		1			
NEXT ASSEMBLY		0020			
MODEL NO.		7221			
PART NO.		2			

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PART NO: 76030104P1

DESCRIPTION: END COVER&CURTAIN ASSY

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76030105P1	LOWER END COVER WELDMENT	1.0	EA			
2	76031033	CURTAIN HOLDER	1.0	EA			
3	76031034P1	CURTAIN	1.0	EA			
4	SS0072	AAQ,6X0.500 LG SCR SHT MTL	3.0	EA			
5	IS3739	PAN HD A - SPIN-GLASS BOARD	0.1	SF			
9000	DWG76030104	DWG,LOWER END COVER & CURTA IN ASSY	1.0	EA			D

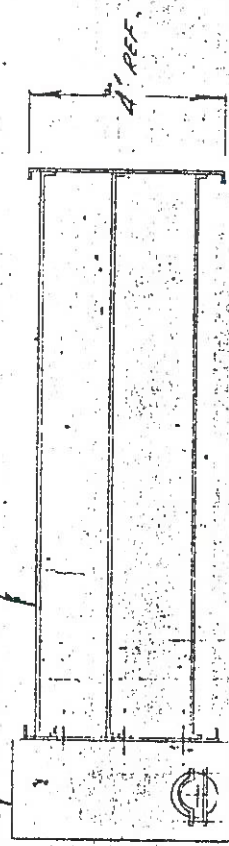
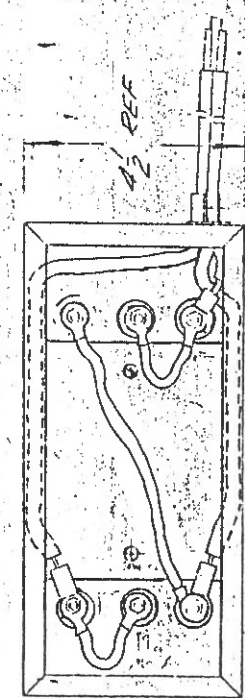
PART NO: 70000805P1
DESCRIPTION: HEATER BANK ASSY

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	70000804P1	HEATER BANK ASSY	1.0	EA			AS
9000	DWG70000805	DWG, HEATER BANK ASSEMBLY	1.0	EA	02		C

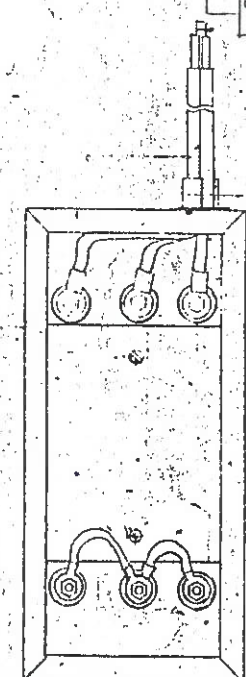
NOMENCLATURE

OMIT ON P5, P6



P1-P7 18" REF
P8-P11 12" REF

230V, 3 PHASE ASSY
7000-0805-1 P1, R3, P5, P7, P8, P10



460V, 3 PHASE
7000-0805-2 P2, P4, P6, P9, P11

230V, 3 PHASE	- P13	7231	D-7232-0002-P2	2
230V, 3 PHASE	- P12	7232	D-7232-0002-P1	2
460V, 3 PHASE	- P11	7222		1
230V, 3 PHASE	- P10	7222		1
460V, 3 PHASE	- P9	7221		1
230V, 3 PHASE	- P8	7221		1
460V, 3 PHASE	- P4	7623		2
230V, 3 PHASE	- P7	7623		2
460V, 3 PHASE	- P6	7613		2
230V, 3 PHASE	- P5	7613		2
460V, 3 PHASE	- P4	7605		2
230V, 3 PHASE	- P3	7605		2
460V, 3 PHASE	- P2	7603		2
230V, 3 PHASE	- P1	7603-7242		2
	PART NO.	MODEL NO.	NEXT ASSY	NO. REQ. PER ASSY

REV.	DESCRIPTION	DATE	APP.
1	CHANGED PICTURE TO SHOW REPLACEMENT OF 2 STRAPS W/ WIRE & TERMINATED A-A & B-B WITH 3/16" C.P. 1	1/15/72	APL
2	CHANGED PICTURE TO SHOW REPLACEMENT OF 2 STRAPS W/ WIRE & TERMINATED A-A & B-B WITH 3/16" C.P. 1	1/15/72	APL

REVISIONS

HEATER BANK ASSEMBLY

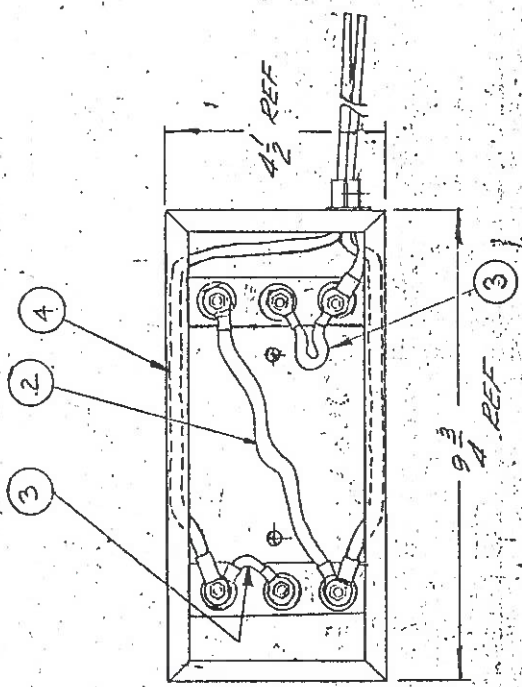
WALDORF Corporation
NEWARK, N.J.

7000-0805-2

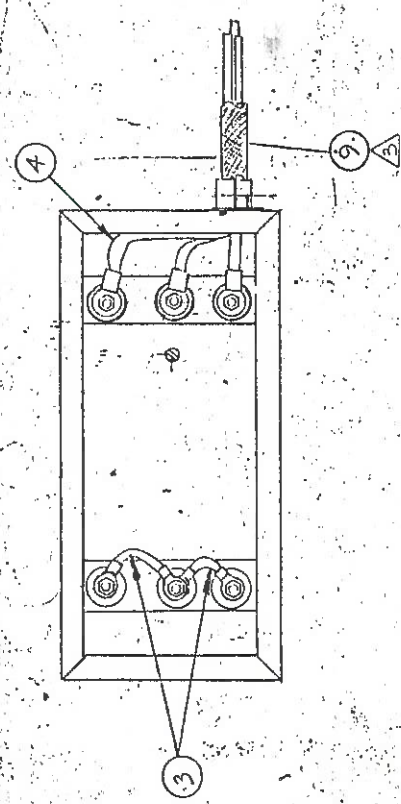
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2	ITEMS # 2 & 3 WERE ST. STL. STRAPS WAS ADDED ALONG WITH TERMINAL UL.	EM # 8 ECO 3776 9-24-84 GKN
5	ADDED ITEM # 9 ECO 4018 4-1-85 G-E-L	

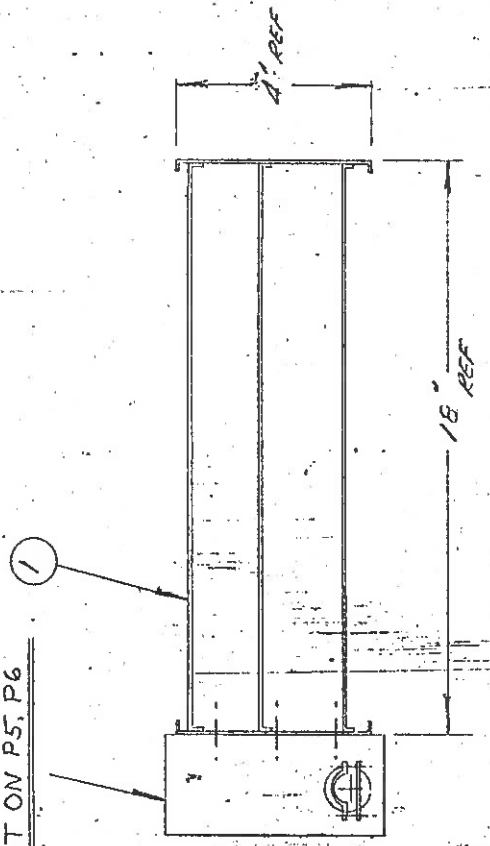
OMIT ON P5, P6



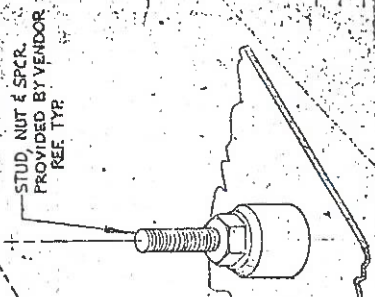
230V, 3 PHASE ASS'Y (DELTA CONNECTION)
7000-0804 - P1, P3, P5, P7, P8, P10, P12, P13



450V, 3 PHASE (Y" CONNECTION)
7000-0804 - P2, P4, P6, P9, P11



SECOND CONNECTOR,
WHERE APPLICABLE,
REF.



TERMINAL DETAIL
TYR

NOTE: ALL HARDWARE
MUST BE ST. ST. L.
DO NOT SUBSTITUTE.

2 SEE TOP OF DWG.

REV.	DATE	DESCRIPTION	BY	CHKD.
1	ECO 113/1	REVISED DRAWING TO COMPLY WITH DETAILS		
2				

DRWN	RCN	DATE	1/1/83	TITLE	HEATER
CHG'D		DATE			
APP.		DATE			
PATENT					
PRICE					
NO. REQ'D					
PER ASSY					

SCALE	1\"/>
-------	-------

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PART NO: 70000803P1
DESCRIPTION: HEATER BANK ASMBLY

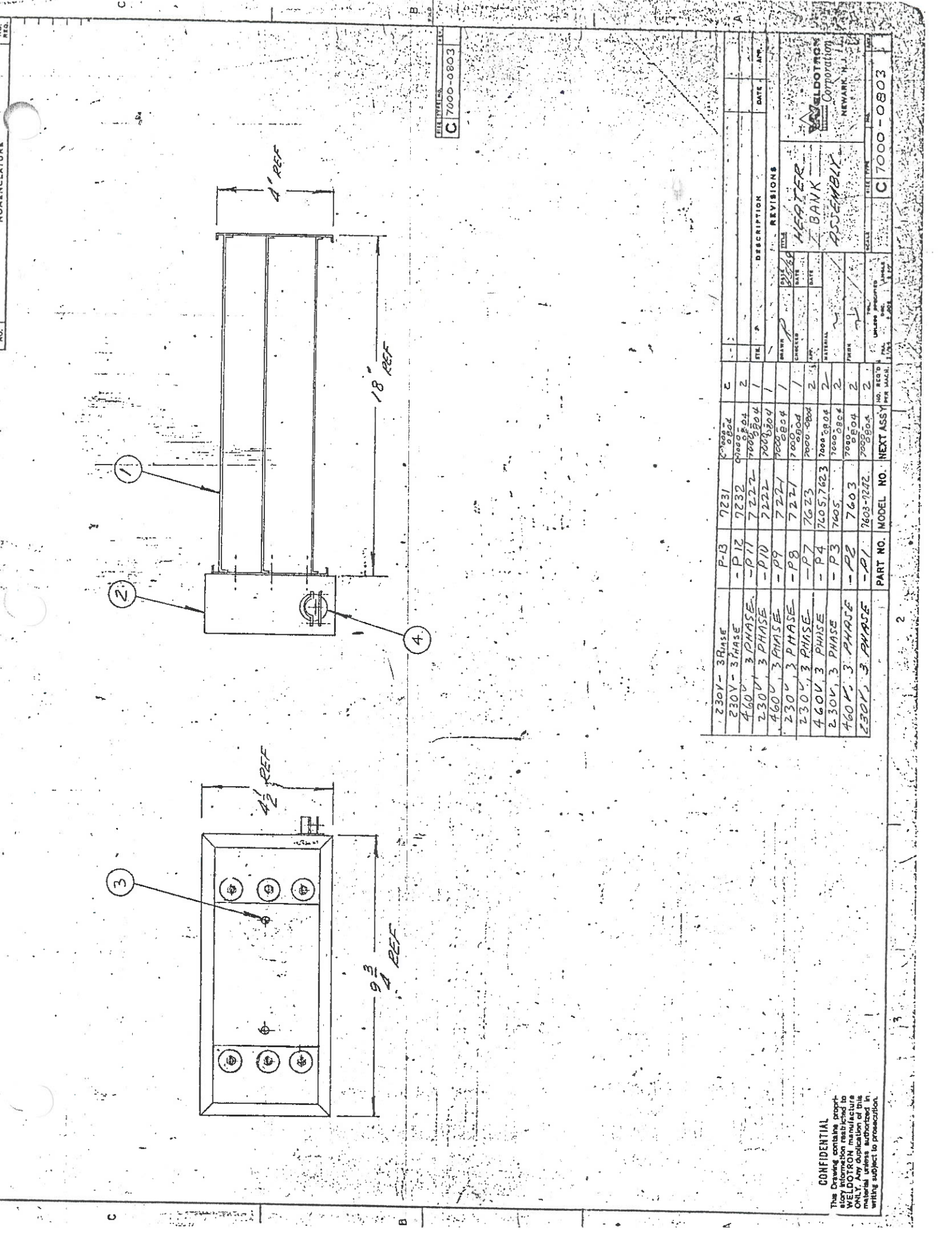
REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	HT1191	HEATER, 14KW-230V-3 PHASE 9X 18	1.0	EA			
2	72210240	WELD HTR BOX	1.0	EA	04		
3	SS0768	AAQ, 8X0.625LG SCREW FLAT HD MACH SHT MTL	2.0	EA			
4	CQ0052	CONNECTOR 3/8" SCREW	1.0	EA			
9000	DWG70000803	DWG, HEATER BANK ASSY	1.0	EA			C

PART NO: 70000804P1
DESCRIPTION: HEATER BANK ASSY

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	70000803P1	HEATER BANK ASMBLY	1.0	EA			AS
2	70000808P2	UNIVERSAL CONNECTOR ASSY 7 1/2"	1.0	EA	01		AS
3	70000808P1	UNIVERSAL CONNECTOR ASSY 3 1/2"	2.0	EA	01		AS
4	70000808P4	UNIVERSAL CONN ASSY 96"	3.0	EA	01		
5	NT2380	ACA, 10-32 NUT HEX ST STL	6.0	EA			
7	WA16087	ACC, #10 WASHER SST	12.0	EA			
8	WA2372	ACA, 10 WASHER PLAIN ST STL	18.0	EA			
9	SV0447	SLVG VARGLAS 7/16 I.D. CLR NATL TYPE H	0.5	FT			
9000	DWG70000804	DWG, HEATER BANK ASSY	1.0	EA	03		C



FILE NUMBER
C 7000-0803

REVISIONS		DESCRIPTION		DATE		BY	
NO.	DATE	DESCRIPTION	DATE	BY	DATE	BY	DATE
1	7/23/68	HEATER					
2	7/23/68	1 BANK					
3	7/23/68	ASSEMBLY					

230V - 3 PHASE	P-13	7231	7000-0804	2
230V - 3 PHASE	P-12	7232	7000-0804	2
460V - 3 PHASE	P-11	7222	7000-0804	1
230V - 3 PHASE	P-10	7222	7000-0804	1
460V - 3 PHASE	P-9	7221	7000-0804	1
230V - 3 PHASE	P-8	7221	7000-0804	1
230V - 3 PHASE	P-7	7223	7000-0804	2
460V - 3 PHASE	P-4	7605, 7623	7000-0804	2
230V - 3 PHASE	P-3	7605	7000-0804	2
460V - 3 PHASE	P-2	7603	7000-0804	2
230V - 3 PHASE	P-1	7603-7622	7000-0804	2

PART NO.	MODEL NO.	NEXT ASSY

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PART NO: 70000808P2

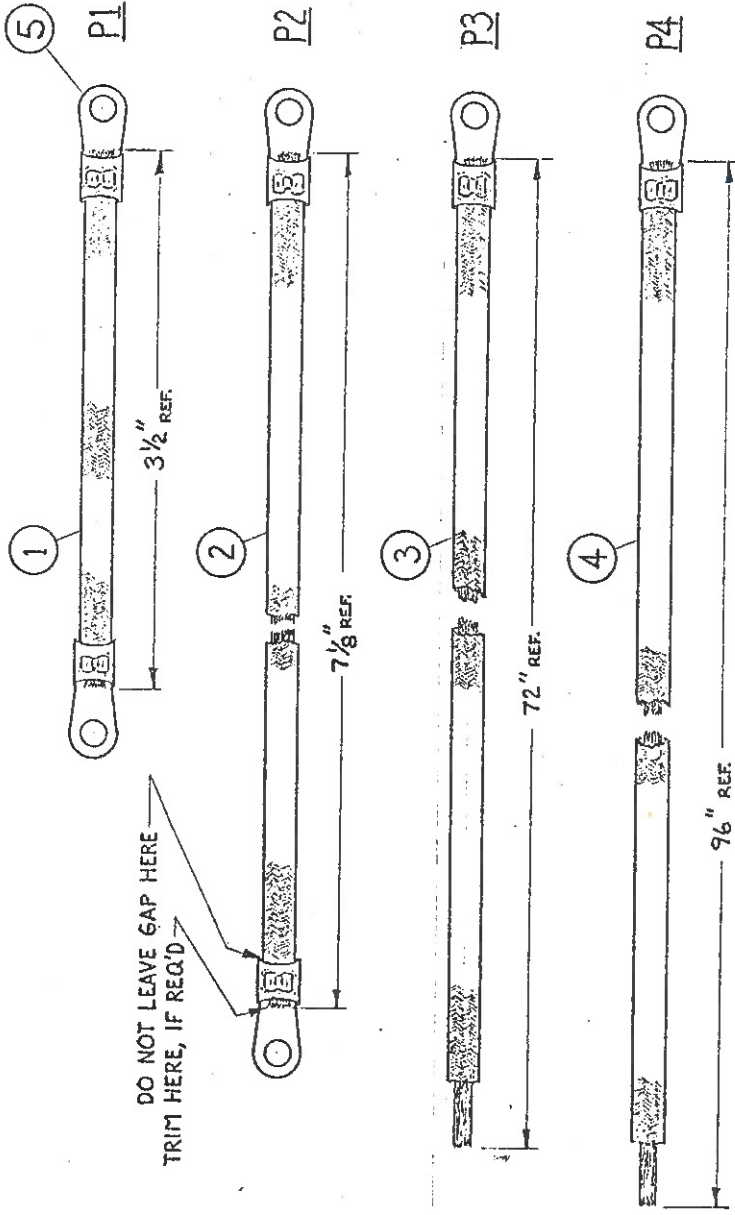
DESCRIPTION: UNIVERSAL CONNECTOR ASSY 7 1/2"

REV:01 02/20/85
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
2	70008081P2	WIRE 7-1/8 LG	1.0	EA			
5	LG4469	LUG,NICK 1200 F 10-12GA 10 STUD	2.0	EA			
9000	DWG70000808	DWG,ASSY;UNIVERSAL CONN	1.0	EA	01		B

REV	1	7000-0808	SIZE	B
-----	---	-----------	------	---

ITEM NO.	PARTS LIST	NO. REQ.
	NOMENCLATURE	

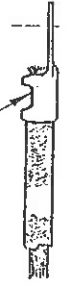


NOTES:

1. CRIMPING TO BE DONE WITH "AMP PNEUMATIC CRIMPER #69010" WITH "AMP #44448 DIE" ONLY.
2. CHECK CRIMPER AIR SUPPLY PRIOR TO USE. AIR PRESSURE MUST BE 85 PSIG MINIMUM, 100 PSIG MAXIMUM.
3. THESE CONNECTOR ASSEMBLIES ARE EXACT REPLACEMENTS FOR WIRE AND STRAP CONNECTORS PREVIOUSLY USED.
4. MAY NOT BE SUPPLIED AS REPLACEMENTS OR SPARE PARTS.
5. PNEUMATIC CRIMPER MUST BE INSPECTED AND MAINTAINED REGULARLY PER MANUFACTURER'S INSTRUCTIONS.

CRIMP TERMINAL FROM TOP ONLY

1	CHANGED AMP DIE NUMBER	3989	64L	12-10-85
SYM	DESCRIPTION	ECONO.	DATE/BY	
REVISIONS				
weldotron corporation				
TITLE				
ASS'Y, UNIVERSAL CONNECTOR, TUNNEL HEATER BANK				
SCALE SIZE PART NO. REV				
FULL B 7000-0808 1				



CONFIDENTIAL

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SEE HEATER BANK ASS'Y DWG FOR USAGE.

PART NO.	MODEL NO.	NEXT ASSEMBLY	NO REQ'D PER ASSEM.
----------	-----------	---------------	---------------------

D-10

PART NO: 70000808P1
DESCRIPTION: UNIVERSAL CONNECTOR ASSY 3 1/2"

REV:01 02/20/85
ACT: ROUTE: 1

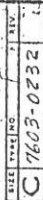
ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	70008081P1	WIRE, 3-1/2 LG	1.0	EA			
5	LG4469	LUG, NICK 1200 F 10-12GA 10 STUD	2.0	EA			
9000	DWG70000808	DWG, ASSY, UNIVERSAL CONN	1.0	EA	01		B

PART NO: 76030232

DESCRIPTION: DAMPER ACTUATOR ASSY

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76030212	LINK SHORT WELDMENT	1.0	EA			
2	76030228	LINK LONG WELDMENT	1.0	EA			
3	72212025	CROSS LINK DAMPER ACT	1.0	EA			
4	AH0635	ADHESIVE LOCTITE RED 10CC	1.0	EA			
5	SS7293	ACA,10-32X0.500-LG SCR-HEX HD SST	2.0	EA			
6	NT0287	AAA,10-32 NUT HEX CAD PL	3.0	EA			
7	SS0960	AAA,10-32X0.750LG SCREW HEX HD CP	1.0	EA			
8	WA0351	ABA,10 WASHER	4.0	EA			
9000	DWG76030232	DWG,DAMPER ACTUATOR ASSY	1.0	EA			C



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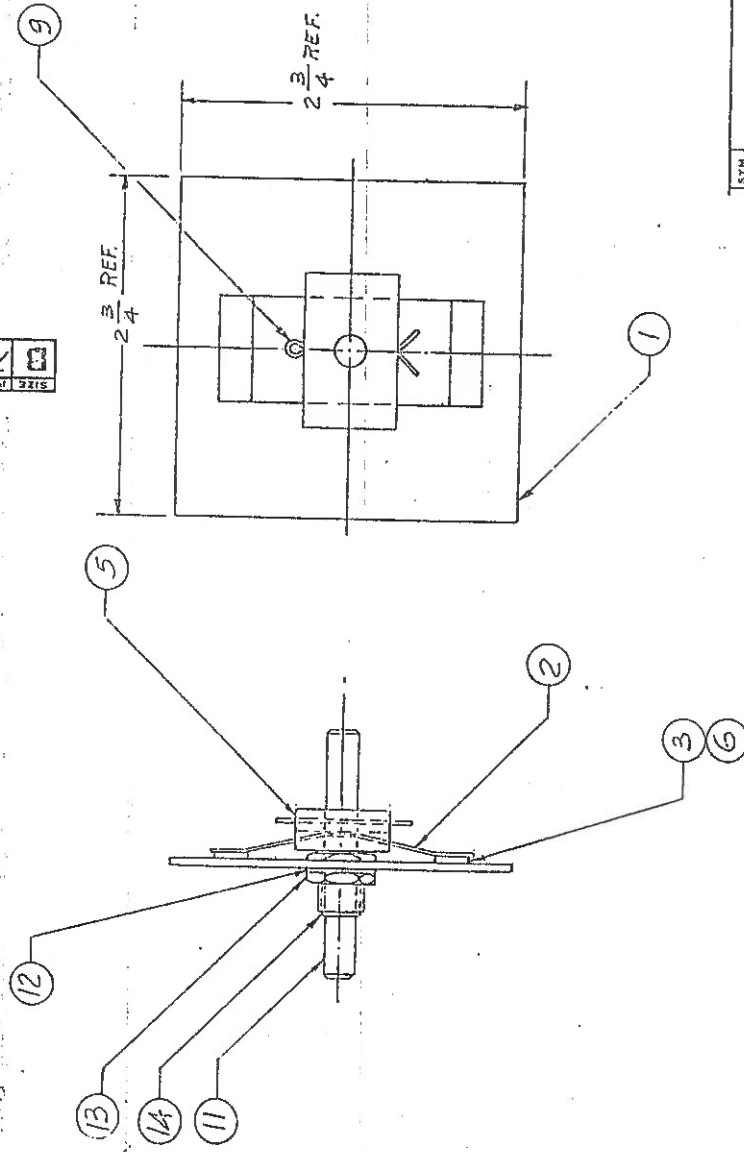
PART NO: 72210233P1

DESCRIPTION: DAMPER CONTROL ASSY

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	73000537	PLATE ASS'Y.	1.0	EA			
2	SG2167	SPRING FLAT .020TK STEEL	1.0	EA			
3	73000699	PAD-CLUTCH	2.0	EA			
5	73000535	RETAINER SPRING	1.0	EA			
6	AH0444	ADHESIVE PLIOBOND #3	1.0	EA			
9	PN1803	ABE, 0.062 DIA X1.250 LG PIN COTTER	1.0	EA			
11	73000704	SHAFT MODIFIED PANEL	1.0	EA			
15	BG1430	ABH, BEAR PANEL ASSEM #HX-1	1.0	EA			
9000	DWG72210233	DWG, DAMPER CONTROL ASSY	1.0	EA			B

7221-0233
 SIZE PART NO



SYM	DESCRIPTION	ECO NO.	DATE/ BY
REVISONS			
DRAWN	A.L.	DATE	7-27-68
CHECKED	1/2	DATE	8-15-68
APP.		DATE	
MATERIAL			
FINISH			
TITLE		SCALE	SIZE PART NO
DAMPER CONTROL ASSY		1/4" = 1"	B 7221-0233
UNLESS SPECIFIED		ANGLE	
TOL			
FRA			
NO REQ			
FOR MACH			

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PART NO.	7221	7221-0020	1
MODEL NO.			
NEXT ASSEMBLY			

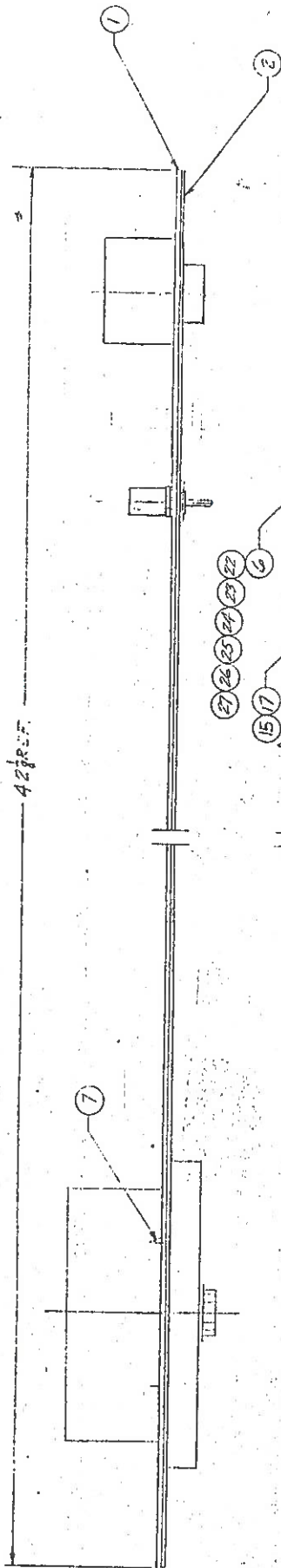
WELDOTRON Corporation
 NEWARK, N.J.

PART NO: 76030109P3
 DESCRIPTION: CONTROL PANEL ASSY

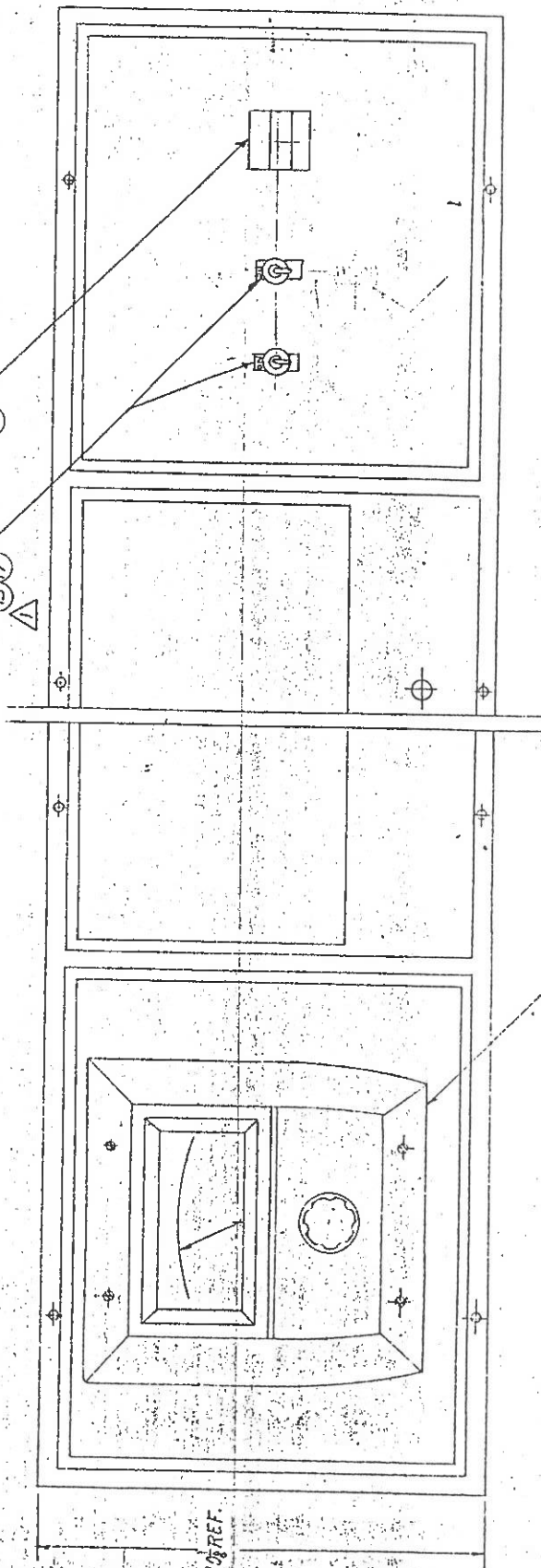
REV:01 12/22/93
 ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76031026	CONTROL SUB PANEL	1.0	EA			
2	LB4567	CONTROL PANEL NAMEPLATE 760 3	1.0	EA	02		
3	CO0075	CONTR TEMP 15A 125/250 VAC	1.0	EA			
6	SW3188	OPERATOR	1.0	EA			
7	SS0334	AAE, 8-32X0.375 LG SCR FILL HD SLOT CP	4.0	EA			
10	CQ0778	CONN-WIRE JOINT INSULATED	2.0	EA			
11	LB1696	LABEL, WIRE MARKERS VINYL CLOTH	1.0	EA			
12	WE3293	TY-WRAP	10.0	EA			
13	LG0775	TERM FORK INSULATED	6.0	EA			
14	LG1053	LUG FORK #8 INSULATED	5.0	EA			
15	SW1345	SWITCH TOGGLE SWITCH PLATE ON-OFF 2 X 6*	2.0	EA			
16	TL0774	SPLICE WIRE	3.0	EA			
17	SW0906	SWITCH TOGGLE 125V	2.0	EA			
22	CX3079	C.H.CONTACT BLOCKS N.O.	1.0	EA			
23	CX3080	C.H. CONTACT BLOCKS	1.0	EA			
24	SW3182	TYPE 'E' BUTTON START	1.0	EA			
25	SW3183	TYPE E BUTTON "STOP"	1.0	EA			
26	SW3181	C-H, COLLAR, BLACK, #E30KR1	1.0	EA			
27	SW3847	CUTLER HAM TYPE J LENS E30K J20 GRN BLANK	1.0	EA			
9000	DWG76030109	DWG, CONTROL PANEL ASSY	1.0	EA	01		C
9001	76038101	SCHEMATIC DIAGRAM 230V	1.0	EA	05		B
9002	76038100	SCHEMATIC, 460V	1.0	EA	06		B

42 REF.



22
23
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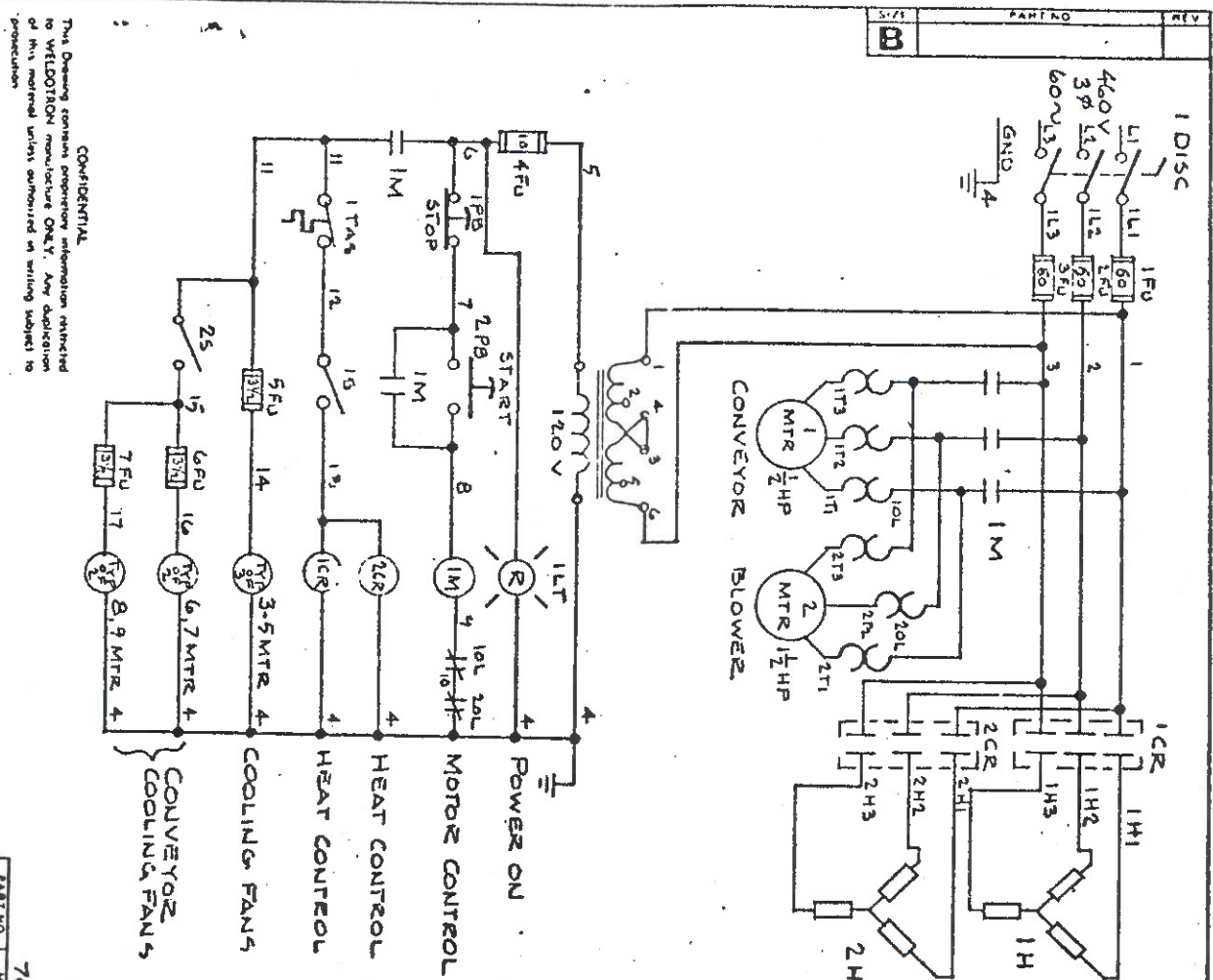
10 REF.

FILE NO. C 7603-0109
REV. 1

1 ADDED ITEM 15 (TOGGLE SW. PLATES)		4117	6-18-57
SYN	DESCRIPTION	ECO NO.	DATE/ BY
GRAND JHK	FILE	7-13-76	DATE
CHECK	DATE		
APP	MATERIAL		
FINISH			
 WELDOTRON Corporation NEWARK, N.J.			
CONTROL PANEL ASSEMBLY		SCALE	HALF
PART NO.		MODEL NO.	C 7603-0109
HEIGHT		TO REED	1
7603		TO REED	1
NEXT ASSEMBLY		TO REED	1

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WAS E517-0230



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7603

PART NO.	MODEL NO.	NEXT ASSEMBLY	NO. OF COPIES
7603	7603	7603	7603

ITEM	WILLODORF CODE NO.	DESCRIPTION	QTY
1 DISC	SW1853	DISCONNECT SWITCH - MAIN	1
1/3 FU	FE3378	FUSE - MAIN 60 AMP - 600 V	3
4 FU	FE1658	FUSE - CONTROL CIRCUIT - 10 AMP - 250 V	1
5-7 FU	FE2924	FUSE - COOLING FAN - 3 1/2 AMP - 250 V	3
1/2 CR	CX4160	CONTACTOR - 60 AMP, HEATER CONTROL	2
1 LT	SW3188	PILOT LIGHT - OPERATOR (SW3847 LENSE)	1
1 PB	CX3060	STOP PUSHBUTTON CONTACT 3/16" (SW3183 LENSE)	1
2 PB	CX3071	START, PUSHBUTTON CONTACT 3/16" (SW3183 LENSE)	1
1/2 S	SW0306	TOGGLE SWITCH - HEAT, CONVEYOR COOLING	2
1 TAS	CO0075	TEMPERATURE CONTROLLER	1
1/2 H	HT1874	HEATER BANK - 14 KW - 450 LB PER C1760-0805	2
1 MTR	MR4666	CONVEYOR MOTOR 1/2 HP	1
2 MTR	MR3876	MAIN BLOWER MOTOR 1 1/2 HP	1
3-5 MTR	BM0511	COOLING FAN	3
1 T	TR3435	TRANSFORMER 110 KVA	1
1 M	CX3127	MOTOR STARTER - SIZE O	1
1 OL	CX3930	OVERLOAD HEATER C H-1010	1
2 OL	SW5372	OVERLOAD RELAY	1
2 OL	CX3817	OVERLOAD HEATER	1
1 M	CX3350	ADJ. CONTACT	3
1 MTR	MR4492	COOL CONVEYOR MOTOR	1
6-9		CURRENT RATING 41 AMPS (20 KW)	4

REV	DATE	DESCRIPTION	ECO NO	DATE BY
1	7/27/76	REDESIGNED 7/27/76		
2	7/27/76	CHANGED 9L-CX-4090 TO CX-3930 FOR		
3	7/27/76	WIRE TO 110V TO 110V TO 110V TO 110V		
4	7/27/76	2 OL RELAY WAS 5W5372 10L 120V		
5	7/27/76	1 MTR WAS 1E551-9300		

WILLODORF
SCHEMATIC
MODEL 7603
CASE BACK TUNNEL
7603-8100

March 14, 1971

PART NO: 76030110
DESCRIPTION: CHASSIS ASSY&WIRING DIAG

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76031056	CHASSIS	1.0	EA			
2	CX4160	CONTACTOR, 3POLE, 60A, 120V	1.0	EA			
3	FZ2601	FUSE HOLDER 30A, 250V	1.0	EA			
4	FZ2924	FUSE FRN 3.5 AMPS 250V	3.0	EA			
5	FZ1658	FUSE, SLOW BLOW, 250V, 10A	1.0	EA			
6	FZ3384	FUSE BLK, 3 POLE, 30A, 250V	1.0	EA			
7	TL3427	TERMINAL BLOCK	21.0	EA			
8	TR3435	UNION MAG 1KVA TRN PRI 208- 240-480V/120*	1.0	EA			
9	SS0331	AAG, 6-32X0.500 LG SCR BIND HD MACH CAD	3.0	EA			
10	SS2113	AAG, 10-32X0.500 LG SCR BIND HD MA CAD PL	11.0	EA			
11	WA0351	ABA, 10 WASHER	3.0	EA			
12	WA1003	AAB, 10 WASHER LOCK SPRING	11.0	EA			
13	WA1333	AAB, 6 WASHER LOCK SPRING CP	2.0	EA			
14	TL0753	MOUNT END	1.0	EA			
9000	DWG76030110	DWG, CHASSIS ASSY #1	1.0	EA			B

PART NO: 76030111P2
DESCRIPTION: CHASSIS ASSY #2

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76031056	CHASSIS	1.0	EA			
2	CX3127	STARTER	1.0	EA			
3	CX3350	AUX CONTACT	1.0	EA			
4	CX3107	CNTOR,OVERLOAD	3.0	EA			
5	CX6213	CNTOR,O/L HEATER	3.0	EA			
6	CX4160	CONTACTOR,3POLE,60A,120V	1.0	EA			
7	SW5372	SWITCH,C300 CN-3	1.0	EA			
8	SS0331	AAG,6-32X0.500 LG SCR BIND HD MACH CAD	2.0	EA			
9	SS2113	AAG,10-32X0.500 LG SCR BIND HD MA CAD PL	6.0	EA			
10	WA0351	ABA,10 WASHER	3.0	EA			
11	WA1003	AAB,10 WASHER LOCK SPRING	6.0	EA			
12	WA1333	AAB,6 WASHER LOCK SPRING CP	2.0	EA			
9000	DWG76030111	DWG,CHASSIS ASSY #2	1.0	EA			B

PART NO: 76030003P2
 DESCRIPTION: CONVEYOR ASSEMBLY

REV:13 09/12/89
 ACT: ROUTE: 1

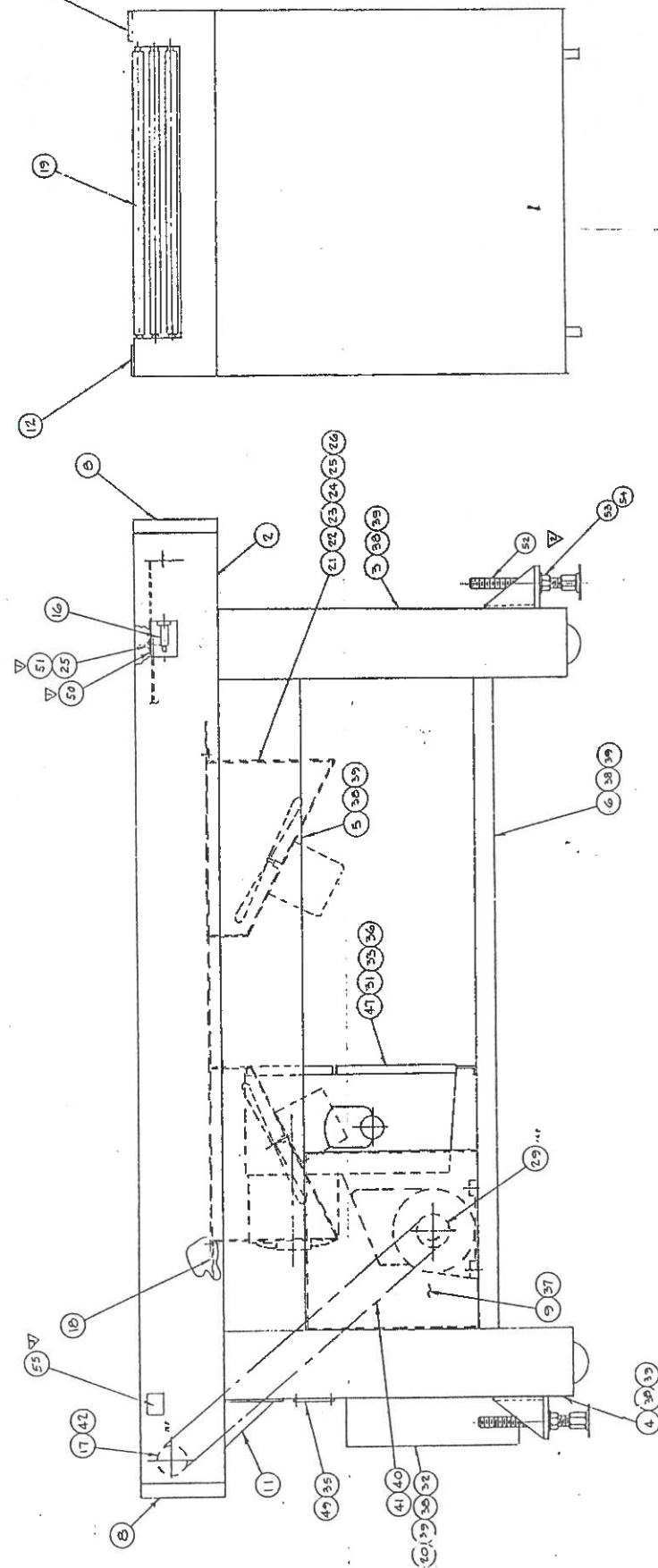
ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
2	76030117	CONVEYOR WELDMENT	1.0	EA			
3	76030121	LEG ASSEMBLY IDLER END	1.0	EA			
4	76030122	LEG ASSEMBLY DRIVE END	1.0	EA			
5	76031041P1	LEG TIE	1.0	EA			
6	76031042	VARI DRIVE SUPP	1.0	EA			
8	76031043	END CAP	2.0	EA			
9	76031044	CHAIN GUARD BOTTOM	1.0	EA			
11	76031045	CHAIN GUARD TOP	1.0	EA			
12	76031046P1	GASKET	2.0	EA			
16	76030140	IDLER SHAFT ASS'Y	1.0	EA			AS
17	76030141	DRIVE SHAFT ASS'Y	1.0	EA			AS
18	76030125P1	CENTER SECT VIEW ASS'Y	1.0	EA			AS
19	76030163	ROLLER ASSY	112.0	EA	04		AS
21	73000601	BRACKET CONVEYOR	4.0	EA			
22	MR4492	1/20 HP BLOWER MTR	4.0	EA			
23	73001047	FAN, PANEL COOLING	4.0	EA			
24	SS0580	AAA,0.250X0.625LG SCREW HEX HD CAP CP	10.0	EA			
25	WA0361	AAA,0.250 WASHER FLAT SAE PLAIN CP	12.0	EA			
26	WA0619	ABB,0.250 WASHER	10.0	EA			
27	76031078P1	FAN COVER	1.0	EA			
28	FZ1192	FUSE,250V,100A DUAL	3.0	EA			
29	76031100	SPROCKET 14T MOD - CONVEYOR	1.0	EA			
31	NT2752	ABA,0.375-16 NUT HEX	4.0	EA			
33	WA0981	AAB,0.375 WASHER LOCK CP	4.0	EA			
34	76031079	COVER SPACER	12.0	EA			
35	SS0300	AAQ,4X0.250 LG SCR SHT MTL PAN HD CAD	4.0	EA			
36	SS0051	AAA,0.375-16X1.250LG SCREW HEX HD CAP CP	4.0	EA			

PART NO: 76030003P2
 DESCRIPTION: CONVEYOR ASSEMBLY

REV:13 09/12/89
 ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
38	SS3603	ABA,0.250-20X0.500 LG SCREW HEX HD MACH	35.0	EA			
39	WA0619	ABB,0.250 WASHER	10.0	EA			
40	CH0409	CHAIN,ROLLER,#40,1/2P,SING, CS	5.0	FT			
41	CH0413	#40 CONN. LINK 1/2P, W/SPRG CLIP	1.0	EA			
42	CH1233	CHAIN 129=LG PER PRT	26.0	FT	02		
43	SW2923	SWITCH SAFETY DISCONNECT	1.0	EA			
44	FG2848	BBE,0.750 CHASE NIPPLE	1.0	EA			
45	LG1052	T & B #142	1.0	EA			
46	CH1233A	CONN LINK FOR DIAMOND CHAIN	2.0	EA			
47	MR4566	VARIABLE SPEED DRIVE	1.0	EA			
48	76031060	RELOCATE MTR CONT KNOB	1.0	EA			
49	LB1817	SPEC.& PATENT NAMEPLATE	1.0	EA	08		
50	76030191	EXTENSION DEAD PAN INFEED	1.0	EA			
51	SS0575	ACB,0.250-20X0.500 LG SCREW RD HD CAD PL	2.0	EA			
52	76030165	LEVELING PAD ASSEMBLY	4.0	EA			
53	NT1336	AAA,0.750-10 NUT HEX CP	4.0	EA			
54	WA9259	AAA,0.750 WASHER FLAT CP	4.0	EA			
55	LB1365	LABELS "LUBRICATE CHAIN"	2.0	EA			
100	76031041P2	LEG TIE	1.0	EA			
101	76031078P2	FAN COVER	1.0	EA			
9000	DWG76030003	DWG,COVEYOR ASSY	1.0	EA	03		D

(12) FASTEN TO
WITH
ADHESIVE RTV



REVISIONS		DATE		APP.	
1	ADDED ITEM # 25	1/1/74	5412		
2	ADDED ITEM # 26	1/1/74	5412		
3	ADDED ITEM # 27	1/1/74	5412		

CONVEYOR ASSEMBLY		DATE		APP.	
P2	7645 (384)	1/1/74	5412		
P2	7603 (384)	1/1/74	5412		
P1	7605 (444)	1/1/74	5412		
P1	7603 (444)	1/1/74	5412		

PART NO MODEL NO NEXT ASSEMBLY		DATE		APP.	
P2	7645 (384)	1/1/74	5412		
P2	7603 (384)	1/1/74	5412		
P1	7605 (444)	1/1/74	5412		
P1	7603 (444)	1/1/74	5412		

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THE ISSUING OFFICE

1722-075/1722-075A

PART NO: 76030140

DESCRIPTION: IDLER SHAFT ASS'Y

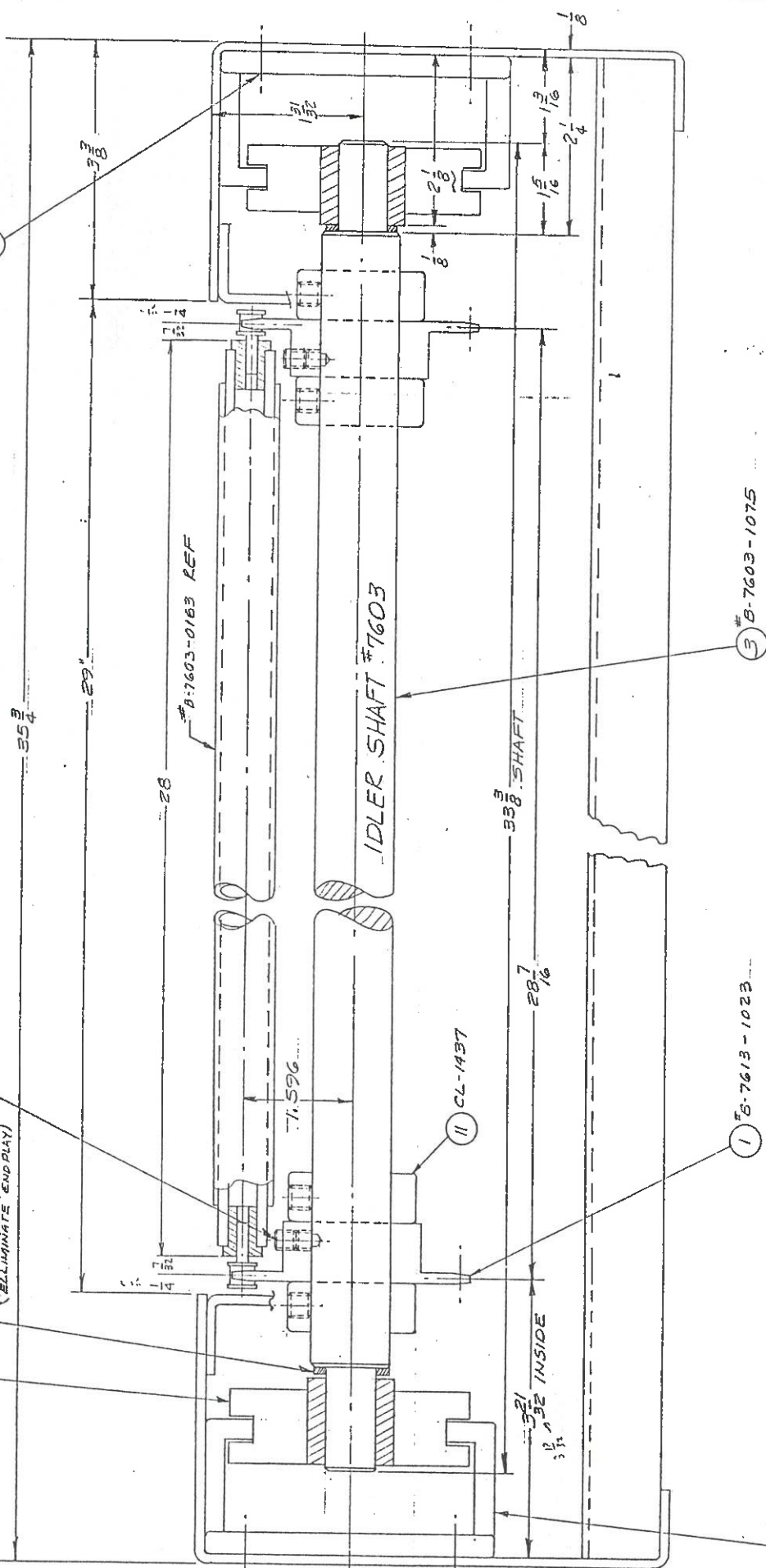
REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76131023	SPROCKET, IDLER 18TX1 DIA	2.0	EA	02		
3	76031075	SHAFT-IDLER	1.0	EA			
7	76131054P1	CHAIN TAKE UP ASS'Y.	1.0	EA			AS
8	76131054P2	CHAIN TAKE UP ASS'Y.	1.0	EA			AS
11	CL1437	AAA, 1.000ID, 1.625OD, 0.562W, CS	4.0	EA			
12	SS0956	ABI, 0.250-20X0.250 LG SCREW SOC HD	4.0	EA			
13	SS1067	ABI, 0.250-20X0.250 LG SCR HD SOC DOG PT	4.0	EA			
14	WA1048	AAA, 0.625 WASHER FLAT SAE PLAIN CP	2.0	EA			
15	SS4339	ABA, 0.500-13X1.250 LG SCREW HEX HD MACH	6.0	EA			
16	NT1918	AAA, 0.500-13 NUT HEX CP	6.0	EA			
17	WA0104	AAA, 0.500 WASHER FLAT SAE CP	6.0	EA			
18	WA1919	AAB, 0.500 WASHER SPLIT LOCK CP	6.0	EA			
9000	DWG76030140	DWG, IDLER SHAFT ASSY	1.0	EA			C

21	55-556	4-20
31	55-1067	4-20

BG-5769
BROWNING TU250

14 WA-1048
(IF NECESSARY TO
(ELIMINATE END PLAY)



8. BG-5768
-BROWNING -IT 200A

[illegible]

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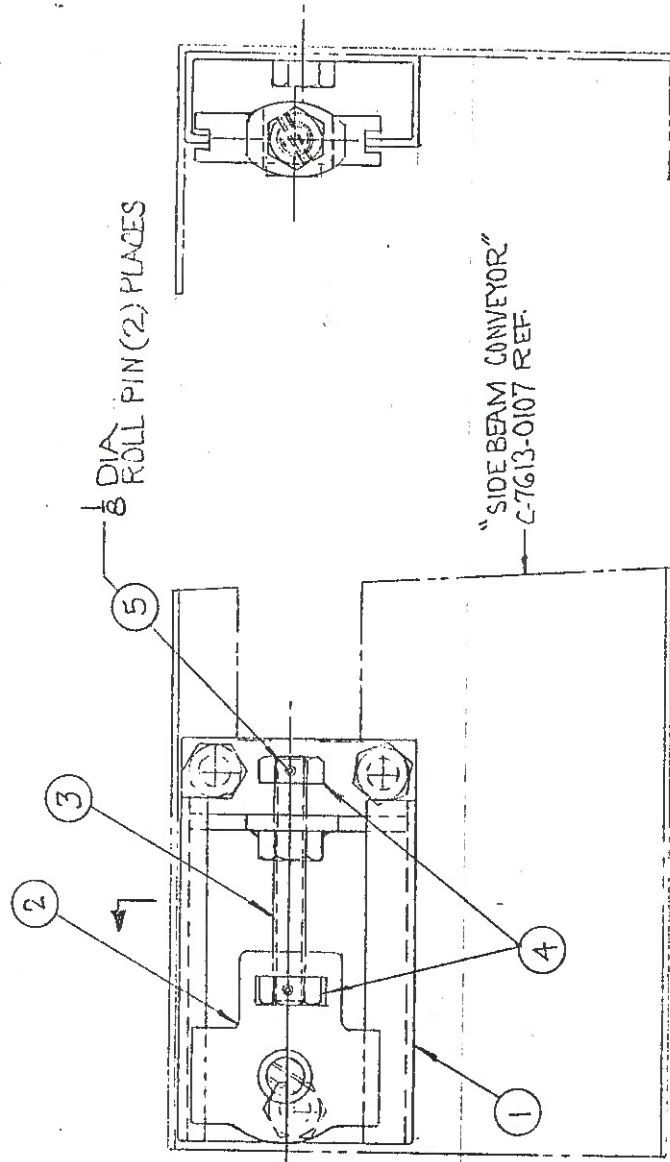
PART NO: 76131054P1

DESCRIPTION: CHAIN TAKE UP ASS'Y.

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76131050P1	TAKE-UP BRACKET	1.0	EA			
2	BG5769	ABA,0.625 BORE BALL BRG FOR TAKE-UP	1.0	EA			
3	76131052	TAKE-UP SCREW	1.0	EA			
4	NT1918	AAA,0.500-13 NUT HEX CP	2.0	EA			
5	PN1780	ABA,0.125 DIA ROLL PIN	2.0	EA			
9000	DWG76131054	DWG,CHAIN TAKE UP ASSY	1.0	EA			B

REV	
PART NO.	B
SIZE	3215



NOTE
P1 AS SHOWN
P2 OPP. HAND

SYM	DESCRIPTION	ECO NO.	DATE/BY
CHAIN TAKE-UP ASSEMBLY			
TITLE			
DRN.	J. SIERNOS	DATE	5/22/74
CHK.		DATE	
APP.		DATE	
MAT'L			
FINISH			
TOL. UNLESS SPECIFIED	FRA	DEC	ANGLE
1/16"	±.005	±.1/2"	
NO. REQ'D PER MACH	1		
PART NO.	7613	MODEL NO.	0-7613-0109
	1		0-7613-0109
		SCALE	SIZE
		B	7613-1054
		PART NO.	REV.

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PART NO: 76131054P2

DESCRIPTION: CHAIN TAKE UP ASS'Y.

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76131050P2	TAKE-UP BRACKET	1.0	EA			
3	76131052	TAKE-UP SCREW	1.0	EA			
4	NT1918	AAA,0.500-13 NUT HEX CP	2.0	EA			
5	PN1780	ABA,0.125 DIA ROLL PIN	2.0	EA			
9000	DWG76131054	DWG,CHAIN TAKE UP ASSY	1.0	EA			B

PART NO: 76030141
DESCRIPTION: DRIVE SHAFT ASS'Y

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	BG4564	ABD, BEARING	2.0	EA			
2	76031077	SPROCKET	1.0	EA	01		
4	76031076	DRIVE SHAFT	1.0	EA	01		
5	76131033	SPROCKET DRIVE 1	2.0	EA			
6	76231067	KEY	2.0	EA			
7	76231086	KEY	1.0	EA			
9	CL1437	AAA, 1.000ID, 1.625OD, 0.562W, CS	4.0	EA			
10	SS0956	ABI, 0.250-20X0.250 LG SCREW SOC HD	2.0	EA			
11	SS1067	ABI, 0.250-20X0.250 LG SCR HD SOC DOG PT	2.0	EA			
12	SS1299	AAA, 0.375-16X1.000 LG SCREW HEX HD CP	8.0	EA			
13	WA2374	ACB, 0.375 WASHER LOCK SST	8.0	EA			
14	WA0260	AAA, 0.375 WASHER FLAT CP	16.0	EA			
15	NT0979	AAA, 0.375-16 NUT HEX CAD PL	8.0	EA			
9000	DWG76030141	DWG, DRIVE SHAFT ASSEMBLY	1.0	EA			C

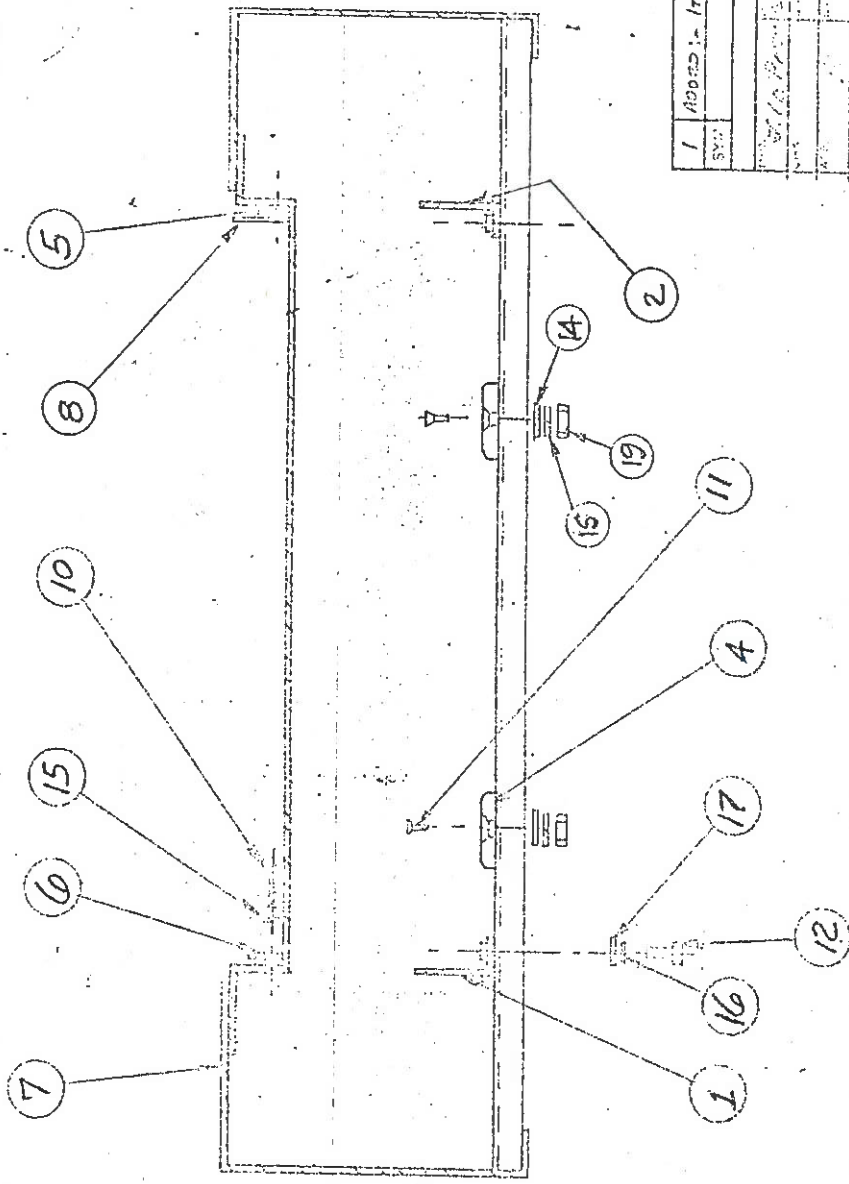
PART NO: 76030125P1

DESCRIPTION: CENTER SECT VIEW ASS'Y

REV: 08/23/80
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76030142P1	GUIDE ASSY LOWER SECT	1.0	EA			
2	76030142P2	GUIDE ASSY LOWER SECT	1.0	EA			
4	76231052	RAIL-BOTTOM	2.0	EA			
5	76031053	SPACER RAIL SADDLE	2.0	EA			
6	76031054	RAIL SADDLE	2.0	EA			
8	76031064	SPACER	1.0	EA			
10	SS1783	ACG,10-32X0.750 LG SCR BIND HD SST	14.0	EA			
11	SS0342	AAH,10-32X1.000 LG SCR FLAT HD MACH CP	12.0	EA			
12	SS3606	ABA,0.250-20X0.750LG SCR HD HEX MACH	12.0	EA			
14	WA0351	ABA,10 WASHER	12.0	EA			
15	WA1003	AAB,10 WASHER LOCK SPRING	26.0	EA			
16	WA0619	ABB,0.250 WASHER	12.0	EA			
17	WA0361	AAA,0.250 WASHER FLAT SAE PLAIN CP	12.0	EA			
19	NT0287	AAA,10-32 NUT HEX CAD PL	12.0	EA			
9000	DWG76030125	DWG,CENTER SECT VIEW ASSY	1.0	EA	01		B

8	7603-0125	SIZE
3210-809L	PART NO.	



1	ADDED: ITEM 8 SP. CEE	12/2	12/2
SYD	DESCRIPTION	NO. TO	DATE BY
REVISIONS			
DATE	BY	NO.	DATE
12/2	SP. CEE	1	12/2
CENTER SECTION VIEW ASSY			
DATE	BY	NO.	DATE
12/2	SP. CEE	1	12/2
7603-0125	1	1	1

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WAS ESE1-8112

PART NO: 76030163
DESCRIPTION: ROLLER ASSY

REV:04 07/12/91
ACT: ROUTE: 1

ITEM	P/N	DESCRIPTION	QTY	U/M	RV	ACT	MD
1	76031061	ROLLER-CONVEYOR HV DTY	1.0	EA			
2	BU5123	AAB,0.155/0.160 ID X 0.391/ 0.392 OD X 0*	2.0	EA	04		
3	TU5820	SILICONE TBG CLEAR 9/16 ID X 1/16 WALL	2.5	FT			
9000	DWG76030163	DWG,ROLLER	1.0	EA			B

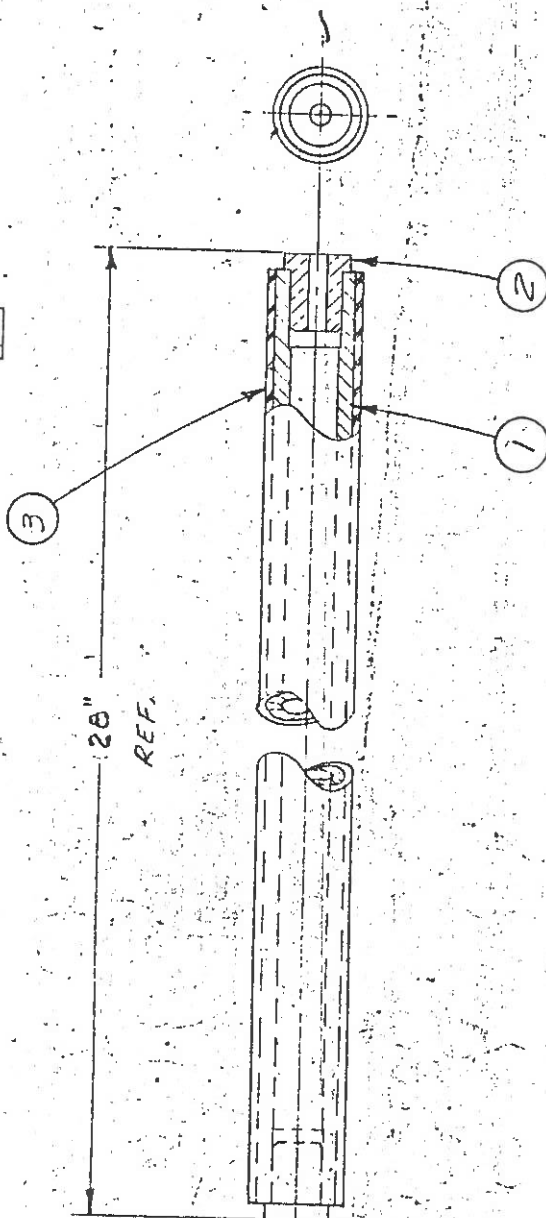
PARTS LIST

ITEM NO.

NOMENCLATURE

NO. REQ.

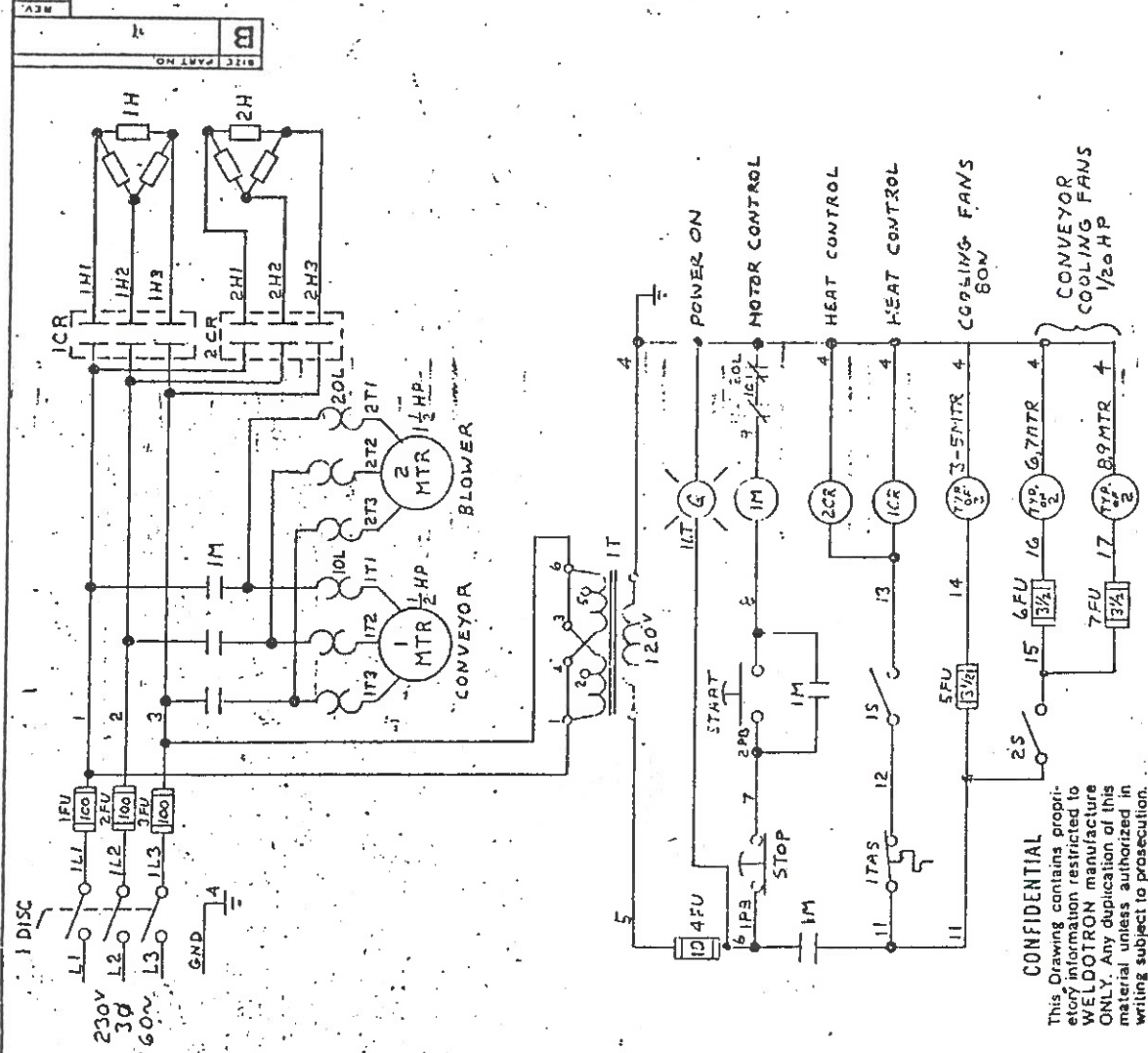
REV	B	7603-016	3
SIZE	TYPE	NO.	



2
PRESS FIT
INTO ITEM 1
BOTH ENDS

SYM	DESCRIPTION	DATE	APP.																		
<table border="1"> <thead> <tr> <th colspan="2">REVISONS</th> <th>TITLE</th> </tr> </thead> <tbody> <tr> <td>DRAWN</td> <td>ROB</td> <td>7-21-72</td> </tr> <tr> <td>CHECKED</td> <td></td> <td>DATE</td> </tr> <tr> <td>APP.</td> <td></td> <td>DATE</td> </tr> <tr> <td>MATERIAL</td> <td colspan="2">H</td> </tr> <tr> <td>FINISH</td> <td colspan="2">NONE</td> </tr> </tbody> </table>				REVISONS		TITLE	DRAWN	ROB	7-21-72	CHECKED		DATE	APP.		DATE	MATERIAL	H		FINISH	NONE	
REVISONS		TITLE																			
DRAWN	ROB	7-21-72																			
CHECKED		DATE																			
APP.		DATE																			
MATERIAL	H																				
FINISH	NONE																				
WELDOTRON Corporation NEWARK, N.J.																					
ROLLER ASSEMBLY - HEAVY DUTY		SCALE	1:1																		
PART NO. MODEL NO. NEXT ASSY		SIZE TYPE	B 7603																		
NO. REQ. PER MACH.		REV.	0163																		

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ITEM	WELDOTRON CODE NO.	DESCRIPTION	RECD
1 DISC	SW2922	DISCONNECT SWITCH - MAIN	1
123 FU	P21192	FUSE - MAIN 100 AMP - 250V	3
4 FU	P23081	FUSE - CONTROL CIRCUIT - 10 AMP - 250V	1
57FU	P22924	FUSE - COOLING FAN - 3 1/2 AMP - 250V	3
12CR	CX4160	CONTACTOR (60 AMP) HEATER CONTROL	2
1 LT	SW3138	PILOT LIGHT & OPERATOR (SW31347 LENSE)	1
1 PB	CX3080	STOP PUSHBUTTON CONTACT BLOCK (SW3183 LENSE)	1
2 PB	CX3079	START PUSHBUTTON CONTACT BLOCK (SW3182 LENSE)	1
12R	SW0906	TOGGLE SWITCH - HEAT, CONVEYOR COOLING	2
1 TAS	CO0075	TEMPERATURE CONTROLLER	1
1,2 H	HT1191	HEATER BANK - 14KW - ASSEMBLED PER C-7000-0805, P1	2
1 MTR	MR4526	CONVEYOR MOTOR 1/2 H.P.	1
2 MTR	MR3876	MAIN BLOWER MOTOR 1-1/2 H.P.	1
3 MTR	BW0511	COOLING FAN	3
1 T	TR3435	TRANSFORMER 1.0 KVA	1
1 M	CX3127	MOTOR STARTER - SIZE 0	1
1 OL	CX4212	OVERLOAD HEATER H-1026	3
2 OL	SK5372	OVERLOAD RELAY	1
2 OL	CX3107	OVERLOAD HEATER H-1020	3
3 M	CX3350	AUX. CONTACT	1
6-MTR	MR4492	COOL CONVEYOR MOTOR	4
CURRENT RATING - 82 AMPS (29KW)			

REV	DATE	DESCRIPTION	ECO NO.	DATE/REV
1	8/1/71	CHANGED 1/2 CX-4095 TO CX-4212, FAN 1695	1695	8-1-71
2	8/1/71	CONNECTION FOR 1LT CHANGED FROM WIRE # 8, 9 TO 4, 6	1698	8-1-71
3	8/1/71	2OL RELAY WAS SW3242, 1OL & 2OL HTR, QTY. WAS 2, 120V	120V	8-1-71
4	8/1/71	1, 2, 3 HTR WERE HT2548, 1 HTR WAS ESS-9302	ESS-9302	8-1-71

WELDOTRON Corporation NEWARK, N.J.	
TITLE SCHEMATIC MODEL 7603 CASE PACK TUNNEL	SCALE 1" = 1'
DATE 8/1/71	DATE 8/1/71
CHECKED J. H. HARRIS	DATE 8/1/71
MATERIAL 1/20 HP	DATE 8/1/71
FINISH 1/20 HP	DATE 8/1/71
TOL. UNLESS SPECIFIED DEC. 2.008 2.30"	PART NO. 7603
NEXT ASSEMBLY 7603	MODEL NO. 7603
REV 4	REV 4

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LIMITED WARRANTY AND DISCLAIMER

Weldotron Food Packaging Systems Division, hereafter called Weldotron, warrants, to the original customer only, each new product to be free from defects in material and workmanship for a period of one (1) year when given normal use and proper maintenance. This warranty applies only to Weldotron fabricated parts, and the extent of Weldotron's liability under this warranty is limited solely to the repair or replacement of any such defective part at no charge to Buyer, except for the costs of freight and installation which shall be borne by Buyer, and provided that Buyer shall, if Weldotron so requests, return any such defective part to Weldotron, freight prepaid, for inspection and determination by Weldotron as to the nature of the defect.

THE FOREGOING WARRANTY IS APPLICABLE SOLELY TO PARTS AND/OR EQUIPMENT MANUFACTURED BY WELDOTRON. WITH RESPECT TO COMPONENT PARTS NOT MANUFACTURED BY WELDOTRON AND AS TO WHICH WELDOTRON IS THE BENEFICIARY OF ANY WARRANTY, BUYER SHALL HAVE, FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SHIPMENT OF THE EQUIPMENT TO BUYER, WHATEVER RIGHTS AND REMEDIES, IF ANY, THAT ARE AVAILABLE TO WELDOTRON WITH RESPECT TO SUCH WARRANTY, PROVIDED THAT BUYER SHALL FULLY REIMBURSE WELDOTRON FOR ALL COSTS OF ENFORCING SUCH WARRANTY.

All parts not manufactured by Weldotron will be warranted according to the policies of the manufacturers. This will apply to all pneumatic and electrical components where the manufacturer's warranty, as applicable, will apply up to a limit of one (1) year.

The warranty does not apply to:

- a. Certain wear parts and expendable items (such as infeed flights, elevator fingers, belts, pilot lights, "o" rings, fuses, springs, etc.);
- b. Damage caused by packaging supply failure, i.e., to machine jams or failure attributable to film tray, and/or other defective packaging material, human error or accident;
- c. Damage caused by misapplication of use, abuse, lack of maintenance, improper installation or abnormal conditions of temperature, moisture, dirt or corrosive matter.

Travel expenses and travel time of service personnel will be charged in accordance with the current service/installation policy of Weldotron, or its authorized Agency.

Customer expense during the warranty period will include all labor, parts and travel expenses incurred during the following types of calls:

- a. Relocation to change layouts or to realign jostled equipment.
- b. Readjustments because of packaging material changes.
- c. Nothing wrong with equipment: i.e., blown fuse, equipment not plugged in, etc.
- d. Replacement of expendable items: e.g., those listed above.
- e. Service calls made because of packaging materials, i.e., film and trays.
- f. Cleaning.
- g. Correcting problems caused by customer negligence or carelessness.
- h. Training of new personnel.

All warranty service performed after normal working hours, or on Saturday, Sunday or holidays will be at the customer's expense in accordance with the current hourly rate schedule of Weldotron or of its authorized Agency for overtime warranty work.

Weldotron reserves the right to make changes, additions or improvement to their products with no obligation to make such changes in any previously shipped product covered by this warranty.

SELLER MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, IN FACT OR IN LAW, INCLUDING WITHOUT LIMITATION, THE WARRANTY OR MERCHANTABILITY OR THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL WELDOTRON BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

weldotron

corporation

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