

TM-1620

OPERATING INSTRUCTIONS AND OWNERS MANUAL



TRACO 
MANUFACTURING, INC.

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IMPORTANT: READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

Your Traco L-Bar Sealer and Tunnel was carefully inspected to production standards and thoroughly tested for performance before being packed for shipment. Upon acceptance by the carrier, he assumed responsibility for safe arrival. If you received this product in a damaged condition, apparent or concealed, claim for damage must be by you upon the carrier. Instruction for the handling procedure is outlined on each carton. If you should experience any difficulty, call the distributor or Traco Customer Service for assistance.

GENERAL

All TM-1620 L-Bar Sealer and Tunnel Models are equipped with an electronically timed temperature compensated sealing cycle. The sealing cycle setting will be determined by the type and thickness of film being used. The timer control knob on the control panel is used to control the sealing cycle. **There are three factors in achieving a satisfactory seal; pressure, time or dwell, and temperature.**

SET-UP INSTRUCTION

Model TM-1620 Shrink Systems are complete with an L-Bar Sealer and Shrink Tunnel combined into a single compact unit. Shipment is made on a skid with the tunnel placed under the L-Bar Sealer.

The tunnel chamber is positioned on the base unit over the belt and rests on the flanges of the plate.

Before connecting the power cords to the electrical sources be sure that the voltage and amperage on the rating plate of the sealer corresponds with the incoming power lines.

IMPROPER VOLTAGE WILL DAMAGE THE UNIT ELECTRICALLY.

GENERAL ELECTRICAL:

Two grounded 110/120 Volt circuits with minimum 20 ampere capacity are required to operate the shrink pack system. One circuit provides power for the L-Bar Sealer and the other circuit provides power to the Shrink Tunnel section.

CAUTION:

Installation and operation of Traco equipment must be in compliance with all applicable electrical and safety standards. The equipment is designed for industrial use by qualified personnel only. Depending on the type of film being used and the environmental factors in locating the equipment, it may be necessary to provide positive ventilation in the packaging area.

PRELIMINARY ADJUSTMENTS - L-BAR SEALER SECTION

After assembly and locating the machine, place the roll of centerfold film on the film rollers with the open end facing toward the operator. The film should be positioned on the rollers so that 1 1/2" to 2" is available for selvage across the front of the sealing area.

To secure proper tension on the film, use the film brake located on the back of the film cradle. Turn the thumb screw clockwise to increase tension. Use minimum tension for easy film release.

Once the brake is set place the top layer of the centerfold film over the package loading platform and the bottom layer under the platform. Adjustment of the platform allows for narrower packages. This adjustment is accomplished by lifting the package slide rod under the platform (on the front side) and sliding the platform to the desired position, after which the package slide rod is returned to the locked position.

Adjust the height of the sealing platform (elevator) so that the seal is at the desired height on the package. Adjustment is accomplished by turning the knob below the machine on the center of the sealer.

Adjust the time / temperature cycle to a preliminary setting of "1" on the control panel scale. This setting may require further adjustment depending upon the type and thickness of film being used. For best component life ALWAYS USE THE MINIMUM SETTING THAT WILL PROVIDE A SATISFACTORY SEAL.

NOTE:

If film used is PVC or polyethylene, it is recommended that the element wire be covered with either 3 mil Teflon tape 1/2" wide or a Teflon sleeve. Remove the film clamps if sleeve is chosen.

At the back of the sealing arm is an eccentric cam which starts the sealing process by depressing the micro switch as the sealing arm is brought to sealing position. This is to happen when the seal arm is approximately 1/16" above the seal pad. To adjust the cam bring the arm slowly toward the seal position. If there is a gap of over 1/16" (approx.) between the seal pad and sealing arm when the cam trips the micro switch, rotate the cam away from the micro switch. If there is less than 1/16" (approx.) between the seal pad and sealing arm, rotate the cam to actuate the micro switch at 1/16" (approx.) above seal pad.

OPERATION

There are three steps in creating the package on a shrink packaging system.

- 1.) The item is inserted between centerfold film on the package loading platform and moved to the sealing platform of the L- Bar Sealer.
- 2.) The sealing arm is lowered to the sealing position.
- 3.) Upon completion of the sealing cycle the package is now sealed in loose film. The package is now passed under the sealing arm and into the shrink tunnel.

PERFORATOR

A perforator is provided at the film roll holder. The perforator permits trapped air to escape from the package during the heat shrink process. Adjust the perforator to assure that it is penetrating the film.

For films with more resistance to tear, a hot hole punch or electric punch is recommended.

MAGNETS

Magnets are positioned to allow for even pressure during the seal cycle. Once the cycle is completed, the magnets will release and allow the sealing arm to return to the up position. Check to insure that the latch plates seat firmly on the magnets during the sealing cycle.

POWER TAKE-AWAY CONVEYOR (optional)

The power take-away conveyor moves the package away from the sealing area when the cycle

is finished. The conveyor knob on the control panel adjusts the amount of time the conveyor belt will run.

FINAL ADJUSTMENT

Make a trial seal. If the trial seal is strong and the film cleanly separated, reduce the sealing cycle time slightly and make another trial seal. Component life will be extended and production will be maximized by using the lowest sealing cycle time and heating element setting that will provide a satisfactory seal. If the trial seal is not strong and clean-cut, increase the sealing cycle time in small increments. Some films will seal better at a longer sealing cycle time. Check with film supplier to determine the best combination for the film being used.

The combination of electronically timed sealing cycle with temperature compensation provides the greatest possible flexibility in adjusting the "L" easier to meet the requirements of the particular film being used. The Traco Model TM-1620 Sealer is designed for operation with the controls set for optimum sealing cycle time and element temperature.

CAUTION:

Sealing elements must be properly installed with the tension spring fully compressed. Failure to follow these instructions will result in damage to electronic components in the temperature compensator.

MAINTENANCE INSTRUCTIONS

ELEMENTS:

The heating elements require periodic replacement. Frequency of replacement will be determined by the type of film being used, care in cleaning, and the time / temperature setting.

To replace heating elements first disconnect power supply and allow sealing arm to cool. Remove the broken heating element from tension assembly and from ground connection at opposite end. Replacement is Part No. NW-SPL. Use of any other wire may effect transformer and / or component life.

Pre-stretch the heating element wire to remove kinks and bends. Insert the end of the heating element wire into the tension assembly so that the end is flush with the side of the shaft. Tighten the retaining screw. With the tension spring fully compressed bring the element across the sealing arm and clockwise around the grounding screw, tighten the grounding screw.

A spare set of L-Bar Sealer heating elements and fuses are included with the machine.

SEAL PADS:

Two layers of Teflon tape (10 mil) cover the seal pad, 2" wide tape on the bottom, 1/2" wide on the top. Replace the 1/2" wide tape when wear or burn through is apparent to avoid damage to the 2" tape or pad. Teflon tape 1/2" wide is placed over the seal pad. This tape should be replaced as necessary to avoid damage to the seal pad.

NOTE:

Setting the time / temperature cycle too high will cause rapid burn through and require excessive replacement of Teflon tape.

ELECTRICAL COMPONENTS:

Access to the electrical components is accomplished by first moving the package loading platform and then removing the screws in the plate over the control panel. No routine maintenance is required in this section. In case of malfunction, all components are easily checked and replaced by following standard electrical repair procedures. An electrical schematic is adhered to the underside of the panel.

MICRO-PROCESSOR:

Your TM-1620 Series L-Bar Sealer is equipped with a solid state temperature controller that provides a constant heat pulse in the sealing elements regardless of the frequency of the machine cycle. This is essential in production packaging for effective and consistent seal. This unique impulse system eliminates readjustments of controls after initial setting and will extend the service life of sealing wire, silicone pads and Teflon covers.

The time / temperature dial range is factory set for normal operation with most commercial films. However, should a change in this range be required, internal adjustment of the maximum temperature and burn off are located on the lower right hand corner of the printed circuit board. The printed circuit board is located inside the electrical controls housing under the film separating tray.

To adjust the maximum temperature range of the time / temperature dial, follow this procedure:

- 1.) Turn the internal temperature control adjustment on the printed circuit board to minimum (counter-clockwise).
- 2.) Set the time / temperature dial on the front panel to maximum.
- 3.) Observing the side seal wire at the tension pin, cycle the machine with the element micro switch, increasing (clockwise) the internal temperature adjustment on the printed circuit board, until the wire glows red at the hot spot. This setting will provide an effective time / temperature range for the dial.
- 4.) Return the time / temperature dial to zero.

Setting the burn off temperature:

- 1.) Set the time / temperature dial on the front panel to zero.
- 2.) Turn the internal burn off control adjustment to minimum (counter clockwise).
- 3.) Close the burn off switch once and observe the sealing wires. They should glow red. If they do not, turn the internal burn off control up (clockwise) slightly and repeat the procedure until the proper (red glow) burn off temperature is achieved.

With these two adjustments completed, the unit is set for normal operation. The normal range can be increased on both the time / temperature and burn off control for unusual applications, but caution is recommended for maximum sealing wire service.

CONVEYOR TRACKING:

Tracking is adjusted by the adjusting screws at the discharge end of the conveyor. The adjustments will permit the crown roller to move back and forth.

TROUBLE CHECKS

Elements do not heat

- 1.) Check electrical current, plug, fuses etc.

- 2.) Depress micro switch manually. If sealer operates, check setting of the cam. If cam setting is correct check wiring of switch. If wiring is correct replace micro switch.
- 3.) Check for loose heating element connections.
- 4.) Check for broken heating elements or broken wires to heating elements.
- 5.) Check output of transformer. Replace if necessary.

Machine operating intermittently.

- 1.) Check for loose connections.
- 2.) Replace micro switch.

Excessive heating element burnout's.

- 1.) Time / Temperature setting too high.
- 2.) Too rapid cycling.
- 3.) Tension assembly in-operative.

Weak seals

- 1.) Micro switch activator not set properly. Elements should not be activated until sealing arm is completely in the down position.
- 2.) increase time / temperature setting in small increments.
- 3.) Eliminate stress on film when sealing arm is brought down.
- 4.) Dirty elements. Clean with stiff brush.
- 5.) Pressure on film is uneven between sealing arm and lower jaw. Replace Teflon tape and seal pad as necessary.
- 6.) Inadequate pressure during sealing cycle.
 - A. Increase pressure during full period while buzzer sounds. (On units without magnets)
 - B. Check adjustment of sealing pads.
 - C. Check latch plates and magnets.
 - D. Check insulator strip under heating element wire. Replace if grooved.

SHRINK TUNNEL SECTION

GENERAL

The Traco Model TM-1620 Shrink System is equipped with a Teflon mesh conveyor belt. Bottom heat to the belt is provided by hot air circulated under the belt. This provides positive shrink on the bottom of the package. The belt speed control is located on the L-Bar Sealer control panel.

CONVEYOR OPERATION

Turn on master switch (control panel). This will start the conveyor motor. Adjust the conveyor speed control to midpoint on the dial.

CONVEYOR ADJUSTMENT

The conveyor belt tracking can be adjusted by turning the hex adjusting bolts located on the ends of the side rails. The belt must be warm before making the adjustment. Minimum field adjustment is recommended and only if misalignment of the belt occurs.

CAUTION: Adjustment must be done carefully so as not to move conveyor belt to one side causing belt to fray against rails. Turn adjusting bolt only a fractional turn and wait for belt to realign. Excessive belt tension will cause component wear and shorten belt life.

SHRINK TUNNEL OPERATION

Before applying electrical power to the tunnel, make sure the tunnel switch and thermostat (upper panel) are in the "off" position. Then apply power and turn the master switch "on". With the switch "on" the fan will be running.

CAUTION: If the fan is not running, turn the switch "off" and check for damage to the fan case or improper external wiring at the plug or wall receptacle.

The pilot light closest to the switch will glow when the switch is "on" indicating current flow.

Turn the thermostat to 225 degrees F. setting for normal room temperature, approximately 70 degrees F. The thermostat pilot light, located closest to the thermostat, will glow when the thermostat is turned up indicating the heating elements are on and heating. The tunnel requires 15 minutes to accumulate adequate heat for shrinking. After reaching operating temperature, this light will cycle on and off as the thermostat maintains the tunnel temperature.

After the initial package has been run through the heat shrink tunnel, the following adjustments may be made:

- 1.) Increase or decrease the thermostat setting.
- 2.) Increase or decrease the conveyor speed.

Due to the various types of shrinkable films, room temperatures and voltages, you may have to experiment with various temperatures and conveyor speeds, to get the desired shrink. Your film supplier is familiar with this type of equipment and will be helpful in determining the best settings for the film you are using.

OPERATING RECOMMENDATIONS

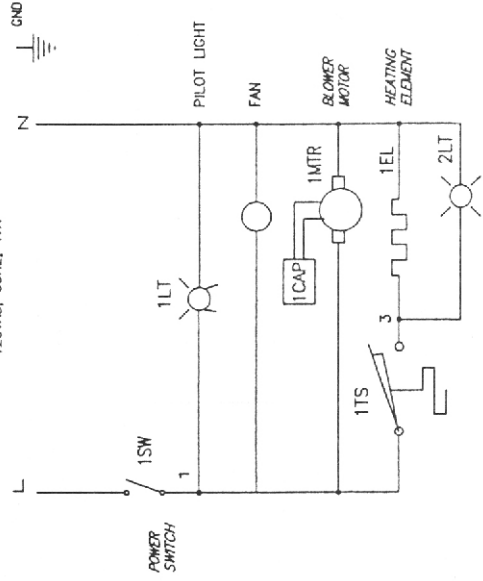
When turning the tunnel "off", element life will be increased if the thermostat is "off" approximately 10 minutes before turning the master switch "off".

When turning the conveyor "off" first turn conveyor speed control "off" then turn the master switch "off". When restarting conveyor turn master switch "on" then adjust speed control knob to desired setting.

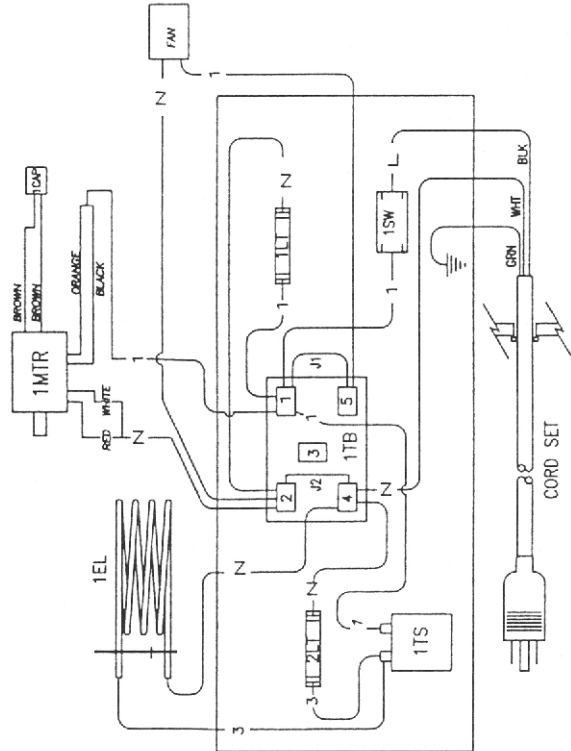
Properly operated, your **TRACO** Model TM-1620 will provide years of trouble free service.

REVISIONS		
SYM	DESCRIPTION	DATE
A	CHANGE TO MARATHON MOTOR	3/11/01 DS
A	START W/ SER.#4214	3/11/01 DS

120VAC, 60HZ, 17A



DEVICE	P/N	DESCRIPTION
FAN	230-83	COOLING FAN
1DP	234-35	MOTOR CAPACITOR
(1)	210-25	CORD SET
1EL	74-2125	HEATING ELEMENT
1MTR	200-114	BLOWER MOTOR
2LT	218-16	HEATING POWER INDICATOR
1TB	208-24	TERMINAL BOARD
1TS	201-2	THERMOSTAT
1LT	218-16	PILOT LIGHT
1SW	215-81	POWER SWITCH



DO NOT SCALE
REMOVE ALL SWAMP EDGES
ANGLES ON STRUCTURAL PARTS MAY VARY
ASST. DWG

MOORE TOLERANCES:	FABRICATION TOLERANCES:
.00X ±.005	.00X ±.015
.XX ±.015	.XX ±.030
X ±.030	X ±.060

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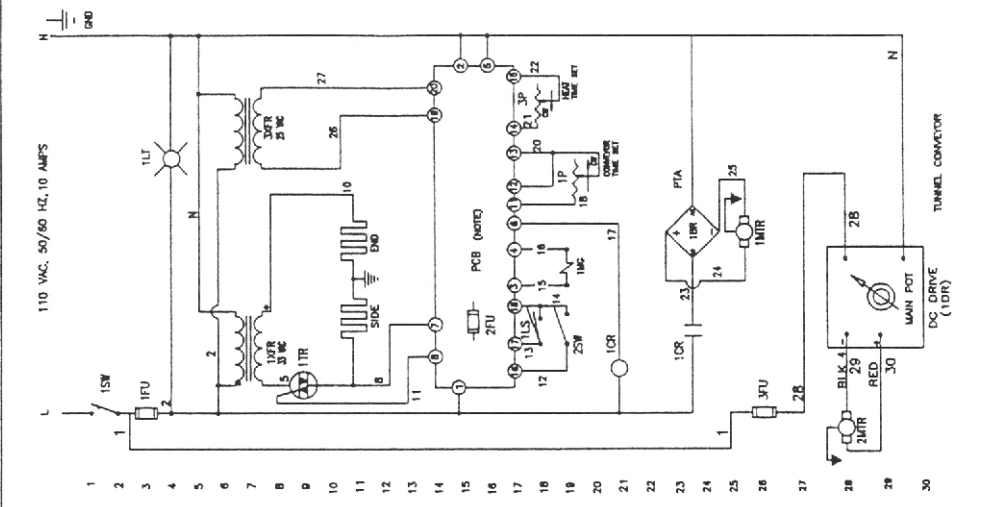
TRACO
MANUFACTURING, INC.
820 S. 1325 W., OREM, UT 84058

MODEL	DAVIDS	SCALE	REV
TM-1620		1/1	A
SUBASSY		B	
HO. RECD			
DATE	05/23/00		

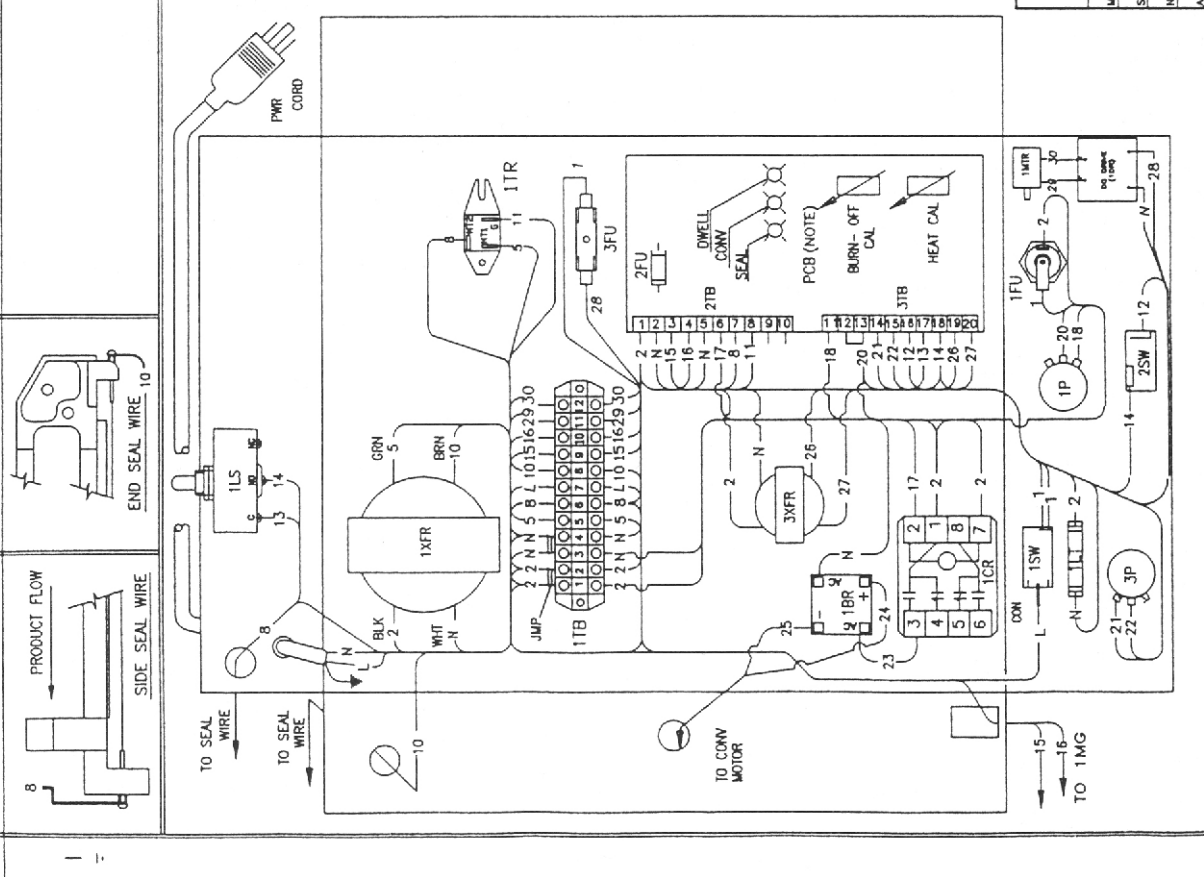
DL BY	DATE	SCALE	REV
DAVIDS	05/23/00	1/1	A
APP'R			

ELECTRICAL DRAWING 115V
TUNNEL
SHEET 1 OF 2

REV	DESCRIPTION	DATE	BY
A	CHANGE TO MARATHON MOTOR	3/18/01	DS
A	START W/ SER.# 4214	3/18/01	DS



REV	DESCRIPTION	DATE	BY
2MR	230-112 CONVEYOR MOTOR		
3FU	216-29 FUSE, 75A SLO		
CON (1)	208-76 ADAPTOR (110 SERIES ONLY)		
JMP (2)	208-70 TERMINAL JUMPER		
PCB	235-53 TIME/TEMP. CONTROL		
SIDE	218-18 SIDE SEAL ELEMENT		
END	218-18 END SEAL ELEMENT		
2FU	216-42 MAGNETIC FUSE, AGC-3AMP		
1MG	237-8 MAGNETIC COILS		
(1)	216-4 FUSE HOLDER		
(1)	806-6 STRAIN RELIEF BUSHING		
(1)	210-7 POWER CORD		
1MTR	230-112 PTA MOTOR		
1BR	233-5 CONV. MOTOR RECTIFIER		
(1)	231-20 RELAY SOCKET		
1CR	231-10 CONTROL RELAY		
1TB	208-62 TERMINAL BOARD		
1TR	233-44 POWER TRAC		
1XFR	200-4 SEAL TRANSFORMER		
3XFR	200-43 PCB TRANSFORMER		
1DR	203-57 DC DRIVE FOR CONVEYOR MOTOR		
1FU	216-27 FUSE ABC-15A (110 SERIES)		
1LS	215-27 SEAL LIMIT SWITCH		
3P	232-13 TIME/TEMP POTENTIOMETER		
IP	232-14 CONVEYOR RUN TIME POT.		
1SW	215-17 PWR. SWITCH		
1LT	219-16 PILOT LIGHT		
2SW	215-36 BURN-OFF SWITCH		
DEVICE	P/N	DESCRIPTION	
		L SEALER	



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FABRICATION TOLERANCES:
±.015
XXX
±.030
XX
X

MACHINE TOLERANCES:
±.005
XXX
±.015
XX
X

DO NOT SCALE
REMOVE ALL SHARP EDGES
ANGLES ON STRUCTURAL PARTS MAY VARY
AS NOTED

SCALE 1/1

DATE 05/23/00

REV B

APP. 79-907

DAVIDS ELECTRICAL DRAWING 115V

MODEL TM-1620

SUBM. STOCK SIZE

NO. REC'D PURCHASE PART NO.

ASST. DWG FINISH

SHEET 2 OF 2