

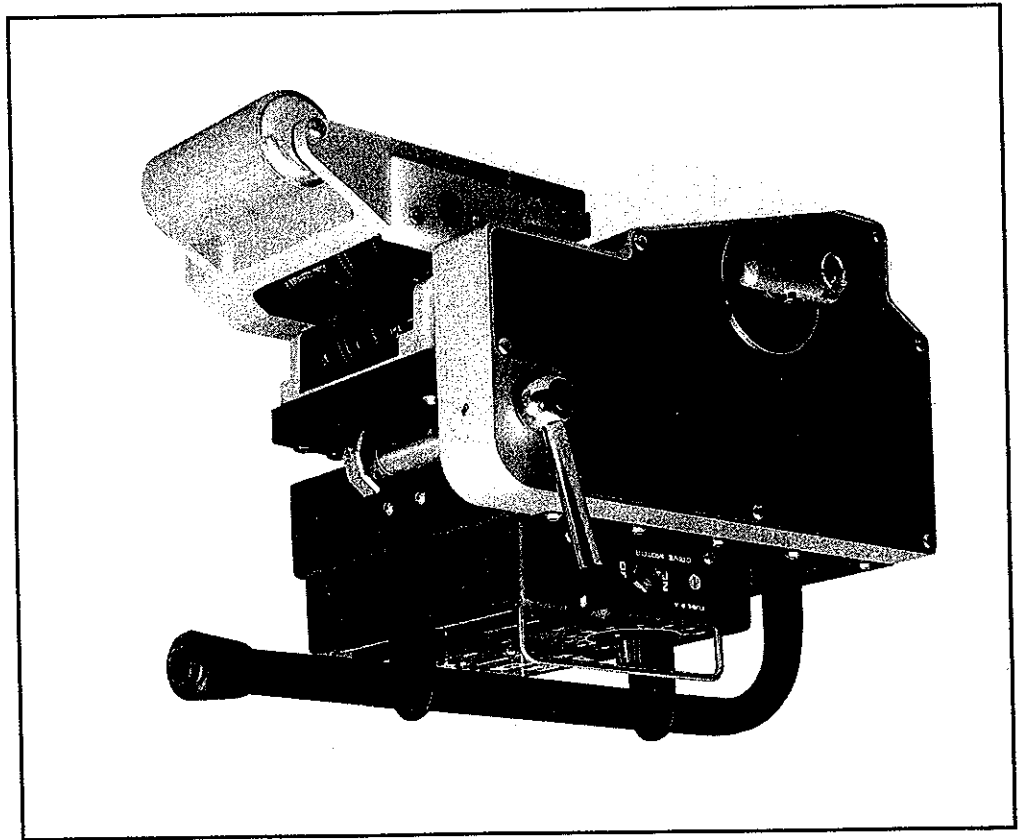
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MANUFACTURED BY:

SERIES 2000

INSTRUCTION MANUAL



WEDGE IT HOT WEDGE WELDER

PLASTIC WELDING TECHNOLOGIES
6125 Enterprise Drive #10
Diamond Springs CA 95619

LIMITED WARRANTY

Plastic Welding Technologies warrants that the products it manufactures are free from defects in materials and workmanship. If a product fails because of any such defect, and Plastic Welding Technologies is notified within twelve (12) months from the date of shipment, Plastic Welding Technologies will, at its option, repair the defective product and restore it to its normal operation, or provide a replacement in exchange for the defective product, providing the product has not been subjected to mechanical, electrical, or any other abuse or modification. Any product that fails under conditions other than those covered above will be repaired at Buyer's expense, at the price of parts and labor in effect at the time of repair. Such repairs are warranted for a period of twelve (12) months from the date of reshipment to Buyer. Replacement or spare components are also warranted for a period of twelve (12) months from date of shipment. Electronic components are warranted for a period of 90 days. Warranty does not include carbon motor brushes, bearings, bushings, ceramic heat elements and chains.

Products supplied by Plastic Welding Technologies and manufactured by others carry the respective manufacturer's warranty. Plastic Welding Technologies assumes no warranty obligation, either

This publication, written by the technical staff of Plastic Welding Technologies, is recommended reading, as it is considered an

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All products manufactured by Plastic Welding Technologies carry an unconditional 10-day Satisfaction Guarantee. If for any reason our product does not meet with your approval, return it complete with all accessories and manuals in its original condition, shipping prepaid and insured and the purchase price will be refunded, or a credit memo will be issued within 30 days. The Buyer is required to pack the product in such a way as to ensure its safe delivery to Plastic Welding Technologies. Should the product be returned in damaged condition, the Buyer will be responsible for the cost of repair.

10-DAY SATISFACTION

expressed or implied, for equipment manufactured by others and supplied by Plastic Welding Technologies.

important source of information in the use of the **Wedge-It** Hot Wedge
Welder.

The quality of any weld produced by the **Wedge-It** is the sole
responsibility of the field technician/operator of the particular
Wedge-It machine. Plastic Welding Technologies accepts no liability
for any failure of seams produced by the **Wedge-It** Hot Wedge Welder.

PRODUCT IMPROVEMENT

Plastic Welding Technologies reserves the right to make any changes
in or improvements on its products without incurring any liability or
obligation to update or change previously sold machines and/or the
accessories thereto.

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INTRODUCTION

The Wedge-It Hot Wedge Welder, designed and manufactured by PWT INTERNATIONAL INC, is a self-propelled, heat/pressure, fusion machine, used for the seaming of thermoplastic geomembranes and related materials. Although this unit was designed for use in the field, it can be used in-house as well.

INTRODUCTION

CAUTION

This machine is an electro-mechanical device with moving parts capable of exerting powerful force. "Care should be taken to prevent the accidental engagement of clothing, hair, or personal extremities with any moving parts.

NOTES:

KEY ELECTRICAL CONTROLS AND COMPONENTS

IDENTIFICATION

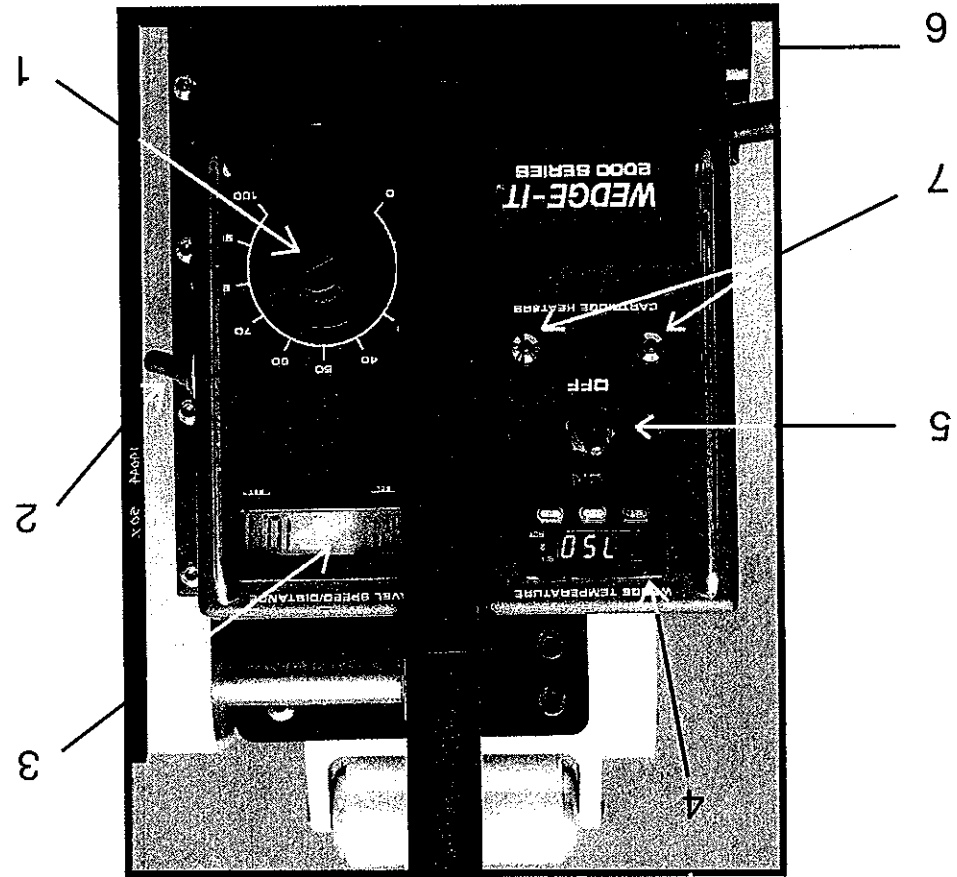


FIGURE 1

1. Motor Speed Control (Set Point)
2. On/Off Switch (Drive Motor)
3. Speed Readout
4. Temperature Control
5. On/Off Switch (Temperature)
6. Drive Motor
7. Heat Element Indicator Lights

KEY MECHANICAL COMPONENTS AND FUNCTIONS

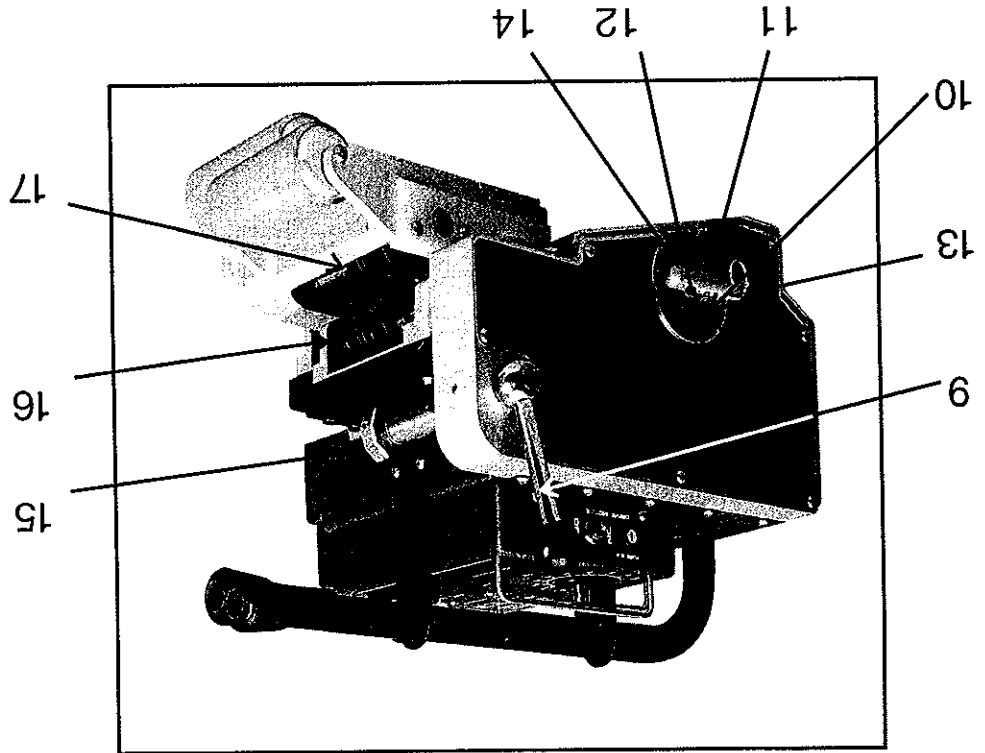


Figure 2

- 9. Nip Pressure Cam Lever
- 10. Lock-in Hole
- 11. Adjustment Hold-down Screw
- 12. Wedge Movement Handle
- 13. Wedge Lock-in Plunger
- 14. Wedge Lock-in Plate
- 15. Nip Pressure Cam
- 16. Upper Nip Roller
- 17. Lower Nip Roller

Figure 3

- 18. Lower Contour Roller Assembly
- 19. Lower Contour Roller Adjustment Cover
- 20. Wedge Up/Down Centering Adjustment
- 31. Contour Roller Plate

Figure 4

- 21. Wedge
- 22. Upper Contour Roller Adjustment
- 23. Upper Contour Roller Assembly

FIGURE 4

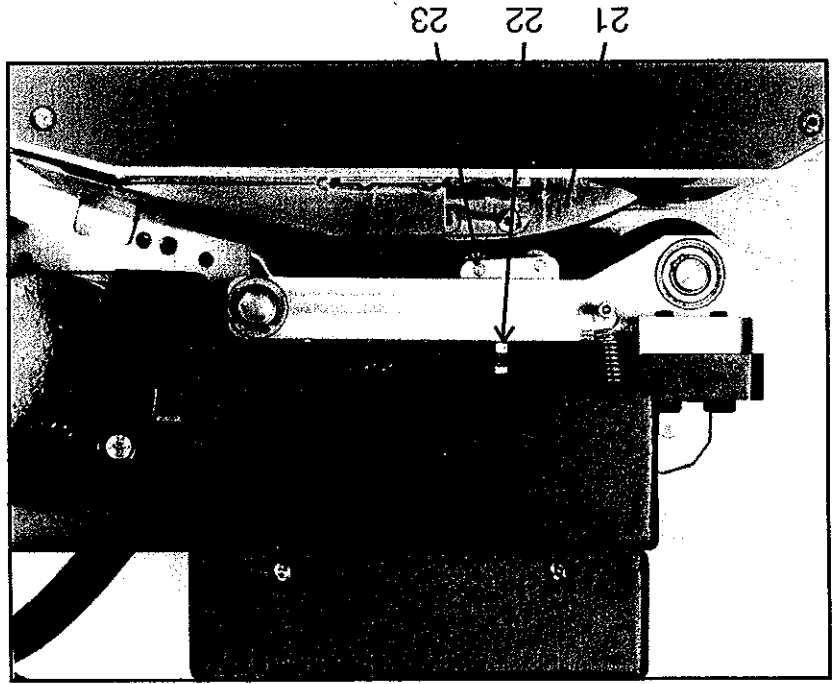
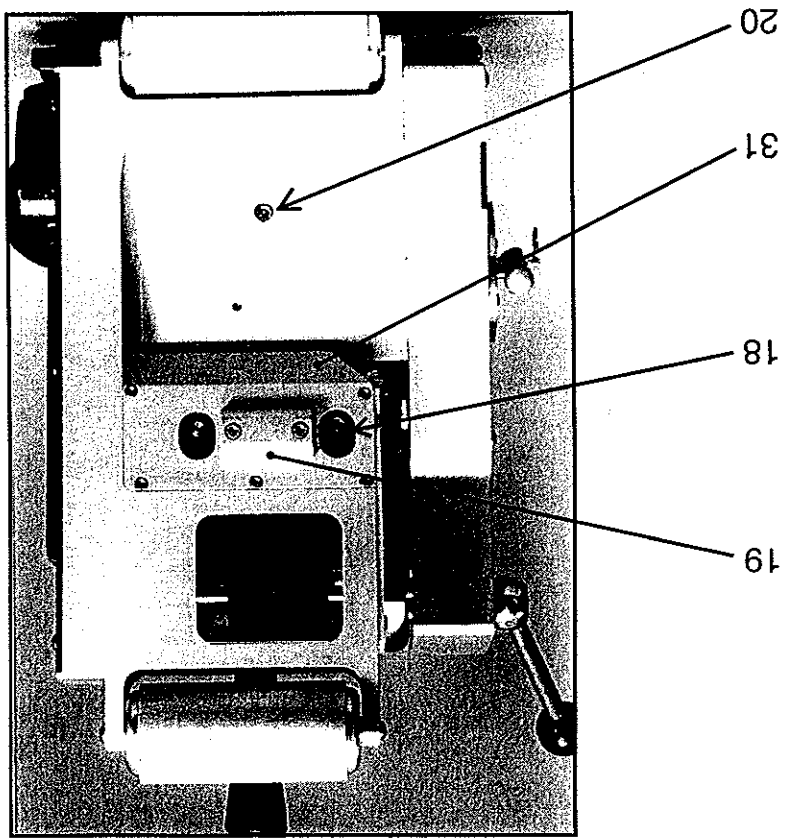


FIGURE 3



IDENTIFICATION

FIGURE 3 (REF)

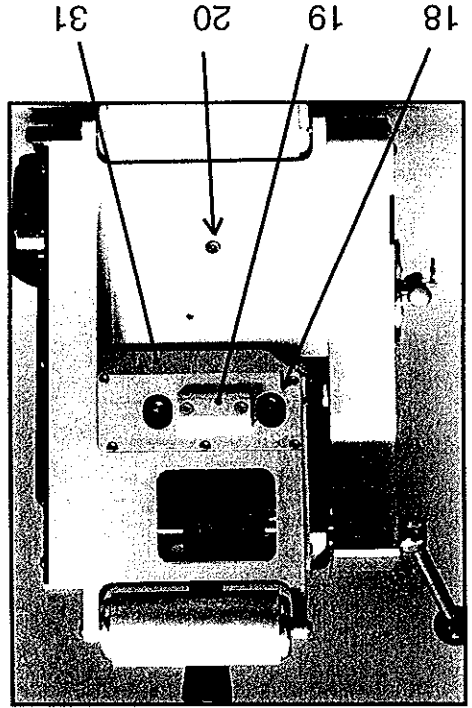


FIGURE 4 (REF)

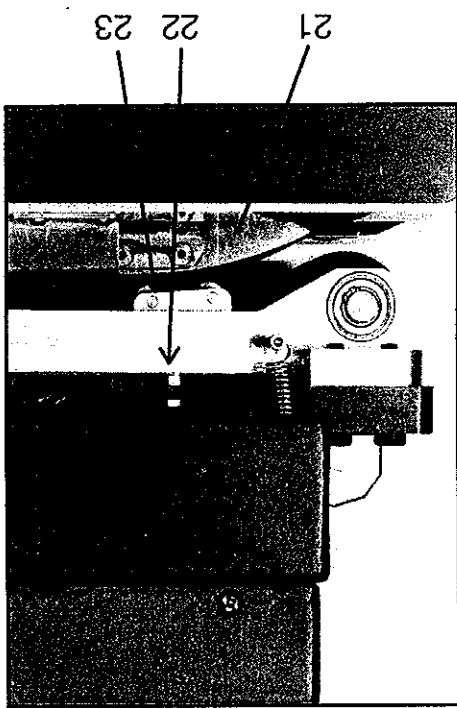
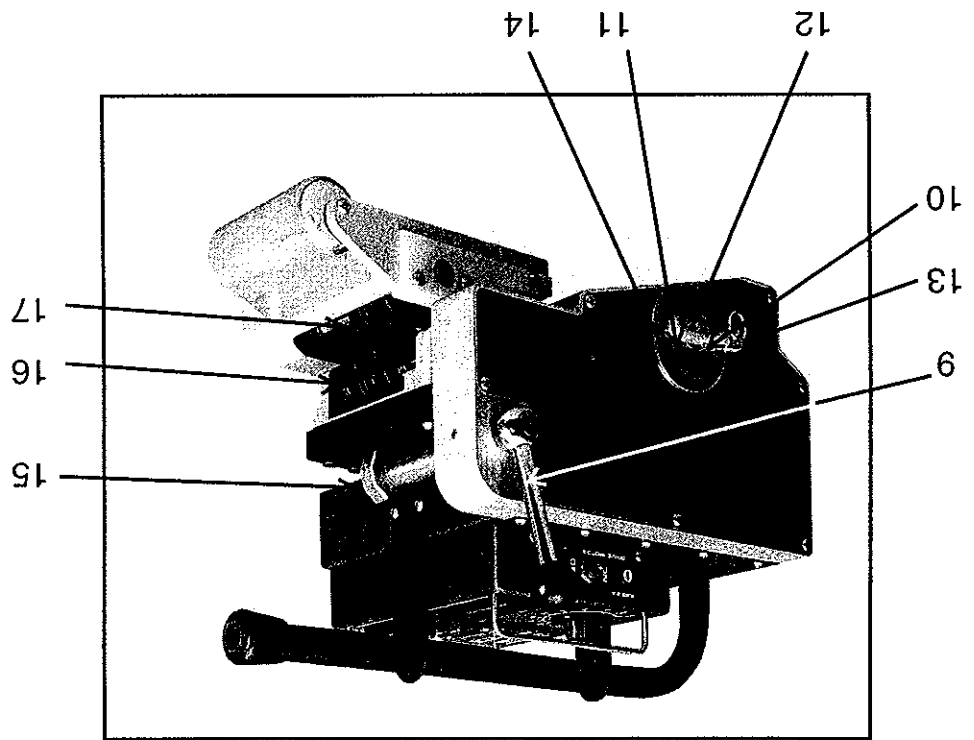


FIGURE 2 (REF)



SET-UP PROCEDURE

INITIAL SET-UP - various mill thickness tolerances

The initial set-up of the Wedge-It is by far the most critical aspect of not only quality welding results, but also wear and tear on the unit itself.

Adjusting the Wedge-It too tightly can result in excessive wear on drive-train parts, such as gears, chains, sprockets, etc.

THE RECOMMENDED SET-UP PROCEDURE--

BEFORE HEATING UP THE UNIT--IS AS FOLLOWS:

From the same mill thickness material as that to be welded, cut 2 pieces approximately 4" x 18", and 2 smaller pieces approximately 1/2" x 2". These 4 pieces of material will be used as "gauges" for setting the 3 adjustments.

ADJUSTMENT #1--WEDGE CENTERING

A. Place the two 1/2" x 2" pieces of material, each folded in half, between the Nip Rollers, Figure 2 (16 & 17). This is to simulate 2 layers of material between the rollers. Be sure these pieces do not extend past the Nip Rollers into the machine. Rotate the nip Pressure Cam (15) to FIRST POSITION by rotating the Nip Pressure Cam Lever (9) Clockwise one "click."

B. Move the Wedge, Figure 4 (21), to the ENGAGED position by rotating Wedge Movement Handle, Figure 2 (12) counterclockwise. With a 5mm hex wrench, adjust the Wedge as needed, up or down, to center the Wedge between the Nip Rollers by turning Wedge Up/Down Centering Adjustment, Figure 3 (20), clockwise, or counter-clockwise.

ADJUSTMENT #2--WEDGE FORWARD TRAVEL

This adjustment determines how close the Wedge is to the Nip Rollers when it is in the ENGAGED or WELDING position.

A. To set clearance, pull out the wedge Lock-in Plunger (13) on the Wedge Movement Handle (12), rotate the handle to a central position between the Hold-down Screws (11), loosen the screws and rotate the handle counter-clockwise until the lock-in Plunger drops into the Lock-in Hole (10).

NOTE: The distance from the upper tip of the Wedge to the Upper Nip Roller should be the same distance as between the two Nip Rollers. This same clearance should also be maintained between the lower tip of the Wedge and the Lower Nip Roller.

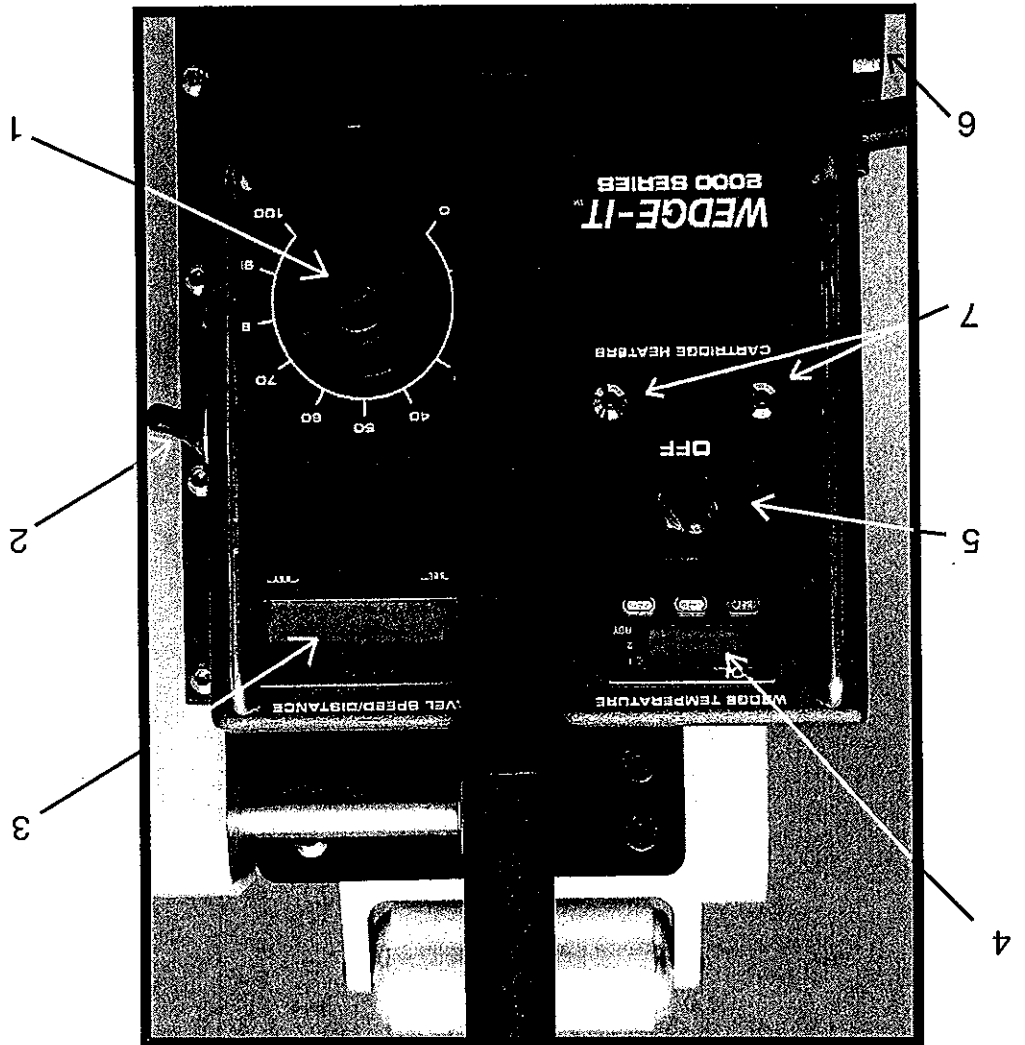
To lock down the setting, hold down the Wedge Lock-in Plate, (14), pull Lock-in Plunger (13) out, and rotate handle to central location between Hold-down Screws (11). Tighten Hold-down Screws and move Lock-in Plunger back to Lock-in Hole.

ADJUSTMENT #3--UPPER AND LOWER CONTOUR ROLLERS

- A. Remove the Lower Contour Roller Adjustment Cover, (19), to expose the adjustment. With a 10mm box end wrench, loosen the lock-nut. With a 3mm hex wrench, back off the adjustment until it bottoms out.
- B. With a 10mm wrench, loosen the lock-nut on the Upper Contour roller Adjustment, (22). Turn the adjustment counter-clockwise, raising the Upper Contour Roller Assembly (23) out of the way.
- C. With the Wedge (21) locked into the Engaged position, and the 1/2" x 2" pieces of material still between the Nip Rollers, you are ready to make adjustments.

Insert one of the 4" x 18" pieces of material between the Lower Contour Roller Assembly (18) and Wedge. This piece should extend out of the Front of the machine (opposite end from the Nip Rollers).

FIGURE 1 (REF)



BASIC WELDING OPERATION

HEATING UP THE WEDGE:

(See Figure 1 on opposite page for references)

- A. Plug Power Cord (7) into a 110V or 220V power supply depending on which voltage the unit has been set-up for.
- B. Turn Temperature ON/OFF Switch (5) to the ON position. L.E.D. Temperature Control (4) should display Ambient Temperature and audible alarm will sound.
- C. To silence audible alarm, press "Set" button once.
- D. Depress and hold "Set" button. Set Point Temperature will be displayed. While holding down "Set" button, select desired set point temperature using ∇ and \blacktriangledown buttons. Release "Set" button.

NOTE: Readout is in degrees Fahrenheit, unless otherwise specified. Recommended temperature settings can be found on page 14 of this manual.

- E. Whether you are welding small sample pieces, or large sheets, the loading of the material will be the same--with the Nip Rollers and Wedge in the Disengaged Position and Motor On/Off Switch in the Off position.

Position the Wedge-It in the seam, inserting first the bottom sheet of material Under the Wedge, and between the Nip Rollers, and then the top sheet of material Over the Wedge and between the Nip Rollers. Sheet overlap should be approximately 5 to 6 inches.

NOTE: Once the bottom sheet of material has been loaded you may need to manually roll the welder forward and backward as you are loading the top sheet to prevent a "Burn-Out" at the beginning of the weld.

**YOU ARE NOW READY TO EXECUTE A WELD--
FOLLOW THESE STEPS:**

STEP 1

Engage welding pressure by rotating Nip Pressure Cam Lever (9) clockwise to desired pressure setting for thickness of material being welded.

The following Nip Pressure Cam (15) positions will assist you in achieving the desired pressure:

FIRST POSITION (Click)	=	100 mil Setting
SECOND POSITION (Click)	=	80 mil Setting
THIRD POSITION (Click)	=	60 mil Setting
FOURTH POSITION (Click)	=	40 mil Setting
FIFTH POSITION (Click)	=	20 & 30 mil Setting

STEP 2

Turn Drive Motor ON/Off Switch (2) to the ON position and rotate the Motor Speed Control (1) to achieve the desired travel speed. (See Table on page 14). At this point, Speed Readout (3) should be displaying current travel speed.

NOTE: The speed at which the **Wedge-It** must travel to produce a quality weld will vary according to the mil thickness of the material being welded, the temperature of the Wedge, the ambient (surrounding) temperature, and the temperature of the material, etc. All these variables must be taken into consideration when choosing a speed setting. (Again, refer to table on page 14)

STEP 3

As soon as the **Wedge-It** begins to travel, rotate the Wedge Movement Handle (12) counter-clockwise until the Wedge Lock-in Plunger drops into the Lock-in Hole. This should take little or no effort on the part of the operator. If it does, the Wedge has been set too close to the Nip Rollers and will need to be re-adjusted (See Set-Up, page 7)

WELDING PROCEDURE

**REMOVING THE UNIT
AT THE END OF THE SEAM**

STEP 4

Just when the Nip Rollers have reached the end of the seam, extract the Wedge-It in the following order:

1. Disengage Nip Roller pressure.
2. Turn Drive Motor Switch (2) to OFF.
3. Disengage Wedge by pulling out ring on Wedge Lock-Plunger (13) and rotating Wedge Movement Handle (12) clockwise.

WELDING PROCEDURE SUMMARY

STARTING WELD--

1. Engage welding pressure
2. Turn Drive Motor ON
3. Engage Wedge

ENDING WELD--

1. Disengage welding pressure
2. Turn Drive Motor OFF
3. Disengage Wedge

REMEMBER: Always engage wedge last when starting a weld and disengage wedge last at the end of the weld.

NOTES:

TABLES

All parameters above are specified for use with a split Wedge (air channel) and split steel, or rubber, Nip Rollers.

Material	Wedge Temp Setting	Travel Rate (Speed)	w/Nurled Steel Nip Rollers	w/Silicon Rubber Nip Rollers
HDPE 20 mil	660°F / 350°C	18 ft./min.	--	20 & 30 mil or 40 mil
HDPE 30 mil	660°F / 350°C	16.5 ft./min.	20 & 30 mil or 40 mil	20 & 30 mil or 40 mil
HDPE 40 mil	660°F / 350°C	13.5 ft./min.	40 mil or 60 mil	40 mil or 60 mil
HDPE 60 mil	700°F / 370°C	10.5 ft./min.	60 mil	--
HDPE 80 mil	700°F / 370°C	7.5 ft./min.	80 mil	--
HDPE 100 mil	700°F / 370°C	4.5-6 ft./min.	100 mil or 80 mil	--
HDPE 120 mil	700°F / 370°C	3-4.5 ft./min.	100 mil or 80 mil	--
LLDPE 20 mil	620°F / 326°C	18 ft./min.	--	40 mil or 60 mil
LLDPE 30 mil	620°F / 326°C	16.5 ft./min.	--	40 mil or 60 mil
LLDPE 40 mil	640°F / 337°C	13.5 ft./min.	--	40 mil
LLDPE 60 mil	660°F / 350°C	7.5 ft./min.	80 mil	80 mil
PVC, HYFALON XRS, POLYPRO ETC	625°F / 285°C	9 ft./min.	--	40 or 60 mil

Pressure Settings (See Page 13)

NOTE: The parameters listed below are only suggested starting points to be used when making a "Prequalifying" sample weld. As ambient conditions and other variable change (i.e., dirt, moisture, etc.), the welding parameters must be adjusted by the field technician or operator.

Again, PWT INTERNATIONAL, INC assumes no liability for weld quality, or lack thereof, when using a Wedge-It Hot Wedge Welder.

WELDING PARAMETERS -- HDPE AND LLDPE

TABLE I

Keeping your **Wedge-It** clean is the most important factor in prolonging the life of the unit. Simple cleaning practices, such as brushing-off the hot wedge, and removing small rocks and dirt or mud from the lower contour roller area, should be performed after each seam is completed.

Other, more involved maintenance practices, should be performed on a daily or weekly basis, depending on how much welding you are doing. **Part I** of this Section will explain in detail how to accomplish these tasks.

PREVENTIVE MAINTENANCE TIPS

1-800-635-6693

...someone on **PWT INTL'S** technical staff is usually available 24 hours a day to help with any questions or problems you may have. -- Just call --

REMEMBER...

WARNING

THESE SERVICE INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID PERSONAL HARM, OR DAMAGE TO THE MACHINE, DO NOT PERFORM ANY PROCEDURES IN THIS SECTION UNLESS YOU ARE QUALIFIED TO DO SO.

This section presents maintenance information for the **Wedge-It**, including preventive maintenance tips, troubleshooting, and other general information.

MAINTENANCE (QUALIFIED PERSONNEL ONLY)

**PART I
LUBRICATING GEARS, SPROCKETS AND CHAINS**

WARNING
TO PREVENT ELECTRIC SHOCK AND OTHER
BODILY HARM, MAKE SURE UNIT IS UNPLUGGED!

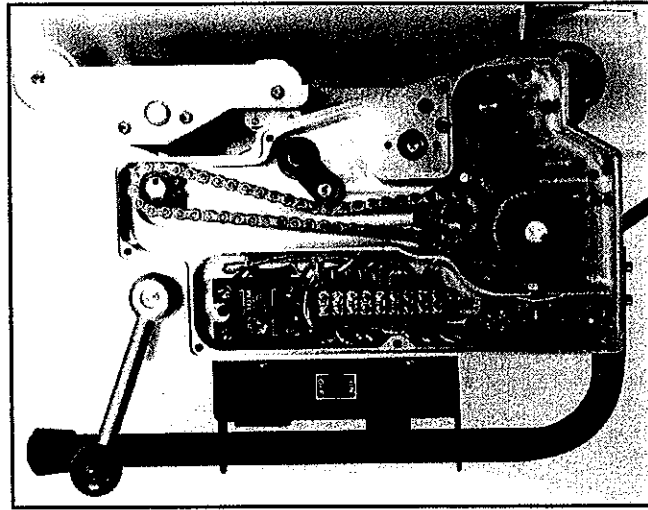


FIGURE 5

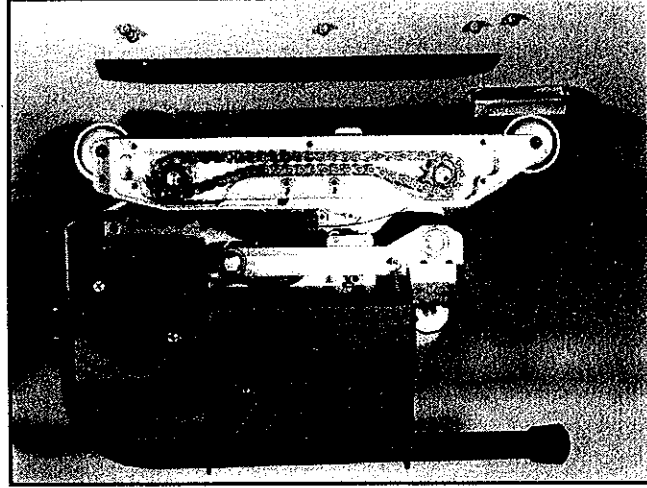


FIGURE 6

A. Remove blue Drive-side Cover to expose main drive mechanism and main wiring terminal (See Figure 5). The Wedge Movement Handle and Adjustment Plate will need to be removed for this. Also remove Lower Drive Chain Cover on opposite side to expose Lower Drive Chain (figure 6).

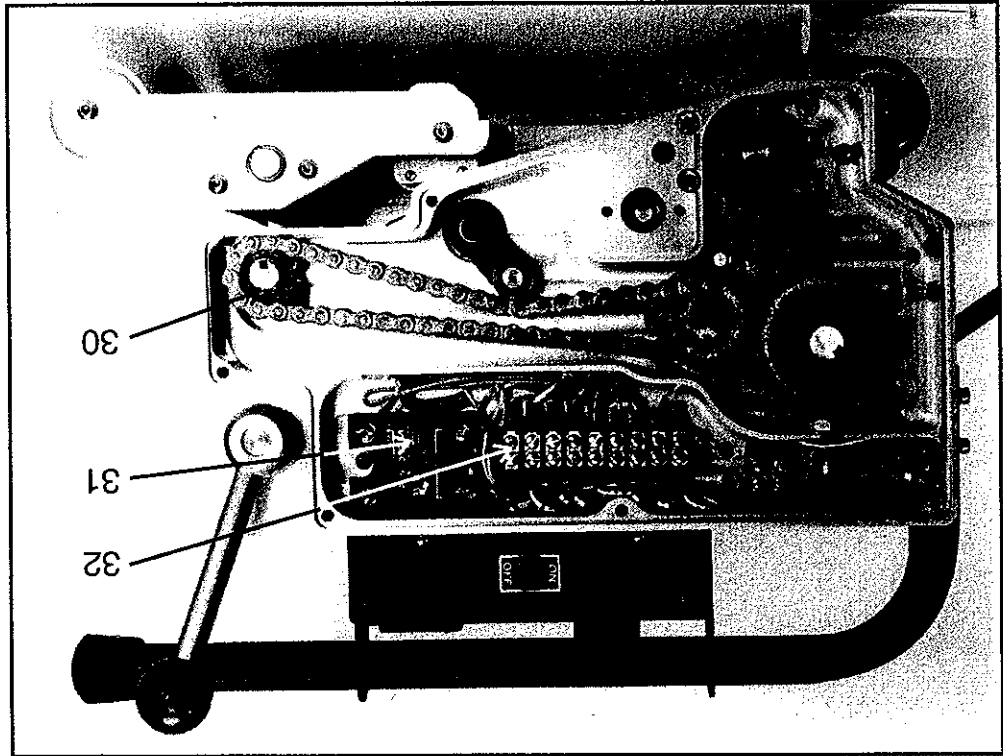
- D. Replace both blue side-covers and wipe down the rest of the unit with a clean rag. Check all other screws and retaining rings on the machine for tightness.
- C. Check chains for proper adjustment, and all shoulder bolts, set-screws, and retaining rings for tightness, including wiring terminal screws.

NOTE: PWT INTL recommends using spray-on white lithium grease which is available at any hardware store or auto parts store. Use WD-40 as a last resort only.

- B. Clean all gears, sprockets and chains with brake cleaner or a cleaning solvent of your choice and a parts brush. Wipe with a clean rag, or preferable, blow dry with compressed air. Make sure all components are clear of dirt and sand, etc. Lightly lubricate all gears, sprockets, and chains.

- 30. Upper Nip Sprocket Snap Ring
- 31. Solid State Relay
- 32. Main Terminal Block

FIGURE 7

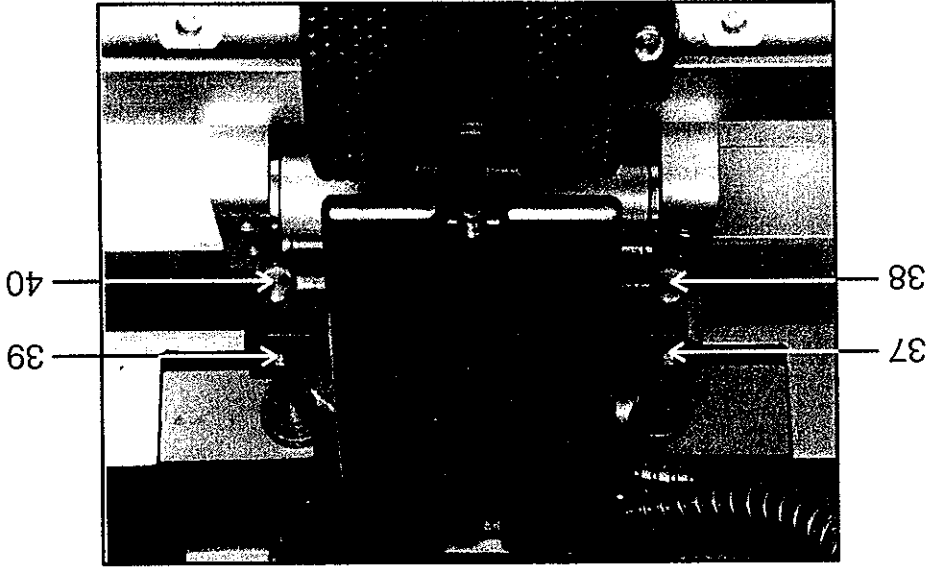


WARNING
TO PREVENT ELECTRIC SHOCK AND OTHER BODILY HARM, MAKE SURE UNIT IS UNPLUGGED!!

**PART II
REMOVING AND REINSTALLING
HOT WEDGE ASSEMBLY**

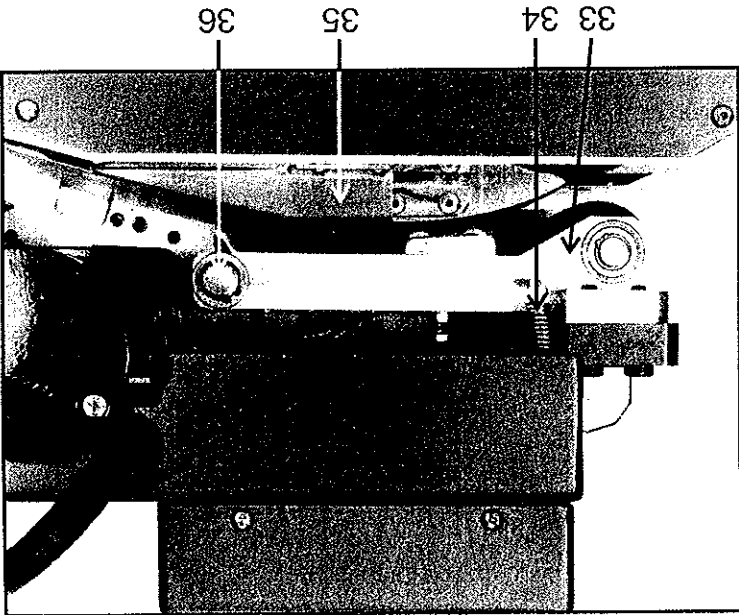
- 40. Linear shaft
- 39. Wedge Mount Set Screw
- 38. Linear Shaft
- 37. Wedge Mount Set Screw

FIGURE 9



- 36. Nip Pivot shaft snap Ring
- 35. Upper Material Guide
- 34. Nip Arm spring
- 33. Nip Arm

FIGURE 8



PART II

REMOVING AND REINSTALLING HOT WEDGE ASSEMBLY

(To replace burned-out Heat Cartridges, Thermocouple, Wedge Style, etc...)

- A. Remove Wedge Movement Handle, Lock-In Plate, and Side Cover to expose Main Drive Mechanism and Main Wiring Terminal (See Figure 7).
- B. Disconnect Thermocouple and Heat Cartridge Wires from Terminal Block, Figure 7 (32).

NOTE: Main Terminal Block is numbered 1-9 starting from left side. Thermocouple wires are 1 & 2 - Heat Cartridge Wires are 3-6.

- C. Remove Upper Nip Sprocket Snap Ring (30) and slide Sprocket off Shaft.
- D. Proceed to other side of welder. Disconnect Nip Arm Spring, Figure 8 (34) from Nip Arm and remove Nip Pivot Shaft Snap Ring (36).
- E. Remove Nip Arm (33) from welder by sliding it off Nip Pivot Shaft. You can now inspect and clean Upper Contour Roller Assembly.

- F. Remove Upper Material Guide (35) to further expose Heating Wedge Assembly.
- G. Remove Wedge Mount Set Screws, Figure 9 (37 & 39), and with 1/4" punch or comparable tool, tap Linear Shafts (38 & 40) back through Wedge Mounts.
- H. After gently guiding Heater and Thermocouple wires through Side Frame Hole, extract Wedge Assembly by carefully lifting up and out over Lower Nip Roller.
- (Now the Wedge Assembly is ready for cleaning, servicing, replacement, etc...)
- I. To replace Wedge Assembly, follow steps a-h in reverse order. Make sure Heat Cartridge and Thermocouple Wires are tucked neatly between Upper Material Guide and Side Frame. Also make sure there is enough slack in these wires to allow free fore and aft movement of wedge.

**PART III
RE-SETTING TIMING OF RACK &
PINION WEDGE MOVEMENT**

Often when removing and reinstalling Hot Wedge Assembly, the relationship of the Lock-In Plate/Wedge Movement Handle to the Fore/Aft position of the wedge itself will be off slightly. This can be corrected by proceeding with the following steps.

A. With Lock-In Plate hold down screws loose, rotate Wedge Movement Handle counter-clockwise moving wedge back as close to Nip Rollers as possible.

B. Insert screwdriver through Access Slot at front of welder between Upper Material Guide and Front Travel Roller. Gently press downward on end of Rack Gear. This will release mesh between Rack Gear and Pinion Gear.

C. With Rack Gear still depressed, rotate Wedge Movement Handle until it is as close to horizontal as possible and Lock-In Plunger is in Lock-In Hole.

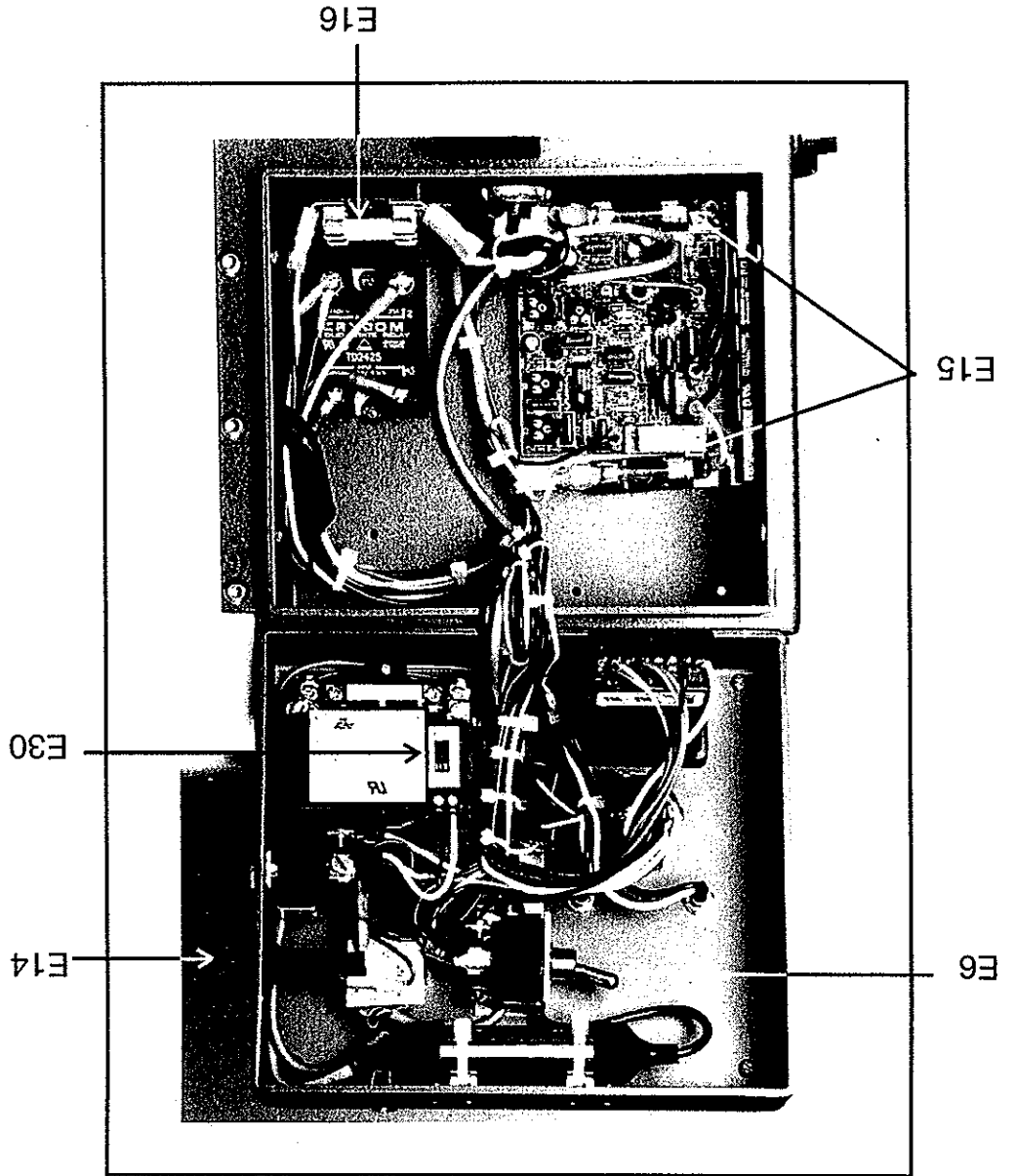
D. Remove screwdriver and check wedge movement to make sure Rack and Pinion Gears are meshing properly.

E. Re-set welding tolerances (See set-up section of this manual).

REMEMBER: Someone on "PWT'S" technical staff is usually available 24 hours a day to answer your questions and talk you through most repairs. Just call us.

- E16 Main Line Fuses (15 amp.) (2 ea.)
- E15 Motor Board Fuses (4 amp.) (2 ea.)
- E14 Motor Current Fuse (2 amp.)
- E30 Speed Readout Voltage Selection Switch
- E6 Main Operating Voltage Selection Switch

FIGURE 10



GENERAL INFORMATION
KEY INTERNAL ELECTRONIC COMPONENTS

GENERAL INFORMATION (CONTINUED)

PART I

NOTE: To access key electronic components shown on page 23 Figure 10, the Top Handle, Handle Brackets, and Lid Screws will need to be removed.

A. CHANGING TEMPERATURE READOUT TO DISPLAY EITHER FAHRENHEIT OR CELSIUS.

For your convenience, **PWT INTL** has factory set each Wedge-It temperature readout to display either Fahrenheit or Celsius depending on the shipping destination and/or customer preference. To change readout from °F to °C or vice versa, use the following procedure:

1. With WEDGE-IT turned on, depress \approx and \approx on temperature control simultaneously for 4 seconds. Config. 9 will appear on display.
2. Hold down "set" button. "No" will appear on display. Change to yes with up or down arrow button and release "set" button.
3. Press \approx twice. C-F will appear. Hold down "Set" and select degrees C or F with \approx or \approx .
4. Press \approx and \approx simultaneously for 2 seconds to return to operating mode.

B. CHANGING OPERATING VOLTAGE OF WEDGE-IT UNIT.

For you convenience, PWT INTL. has factory set the operating voltage of each Wedge-It for either 110v or 220v operation depending on shipping destination and/or customer preference. To change operating voltage from 110v to 220v or vice versa, use following procedure:

1. Access Electronic Box (see note on page 24 of this manual).
2. Switch Speed Readout Voltage Selection Switch, figure 10 (E30) and Main Operating Voltage Selection Switch (E6), to desired voltage (110v or 220v).
3. Replace Lid, Handle Brackets, Handle, etc.

C A U T I O N

Plugging a Wedge-It unit that has been set-up to run on 110v into a 220v power supply will result in serious damage to the unit!

Please call our 24 hour-a-day toll free service line if you are in need of assistance. We are here to HELP!

NOTE
 A detailed spare parts list is included with each Wedge-It. If you need an additional list, or would like pricing and availability information, contact:
PLASTIC WELDING TECHNOLOGIES-- 1-800-635-6693

PROBLEM AND/OR REMEDY	SYMPTOM
<ul style="list-style-type: none"> • Check power cord and power supply. • Check main fuses (Figure 10 (E1)) 	No power supplied to "Wedge-It"
<ul style="list-style-type: none"> • Check temp. setting • If setting is correct and wedge still does not heat, contact PWT for advice 	Wedge will not heat up
<ul style="list-style-type: none"> • Turn temperature power switch off before temp. reaches 900°F (482°C) to avoid damage to wedge and/or elements. • Possible bad solid state relay • Possible bad temp. control • In either case, contact PWT 	Wedge heats up to set point temp. and continues to increase infinitely (runaway Temp.)
<ul style="list-style-type: none"> • Possible bad heating element(s) • Possible bad relay or temp. control board. • In either case, contact PWT 	Temp. drops dramatically during welding and will not "catch-up"
<ul style="list-style-type: none"> • Check motor on/off switch • Check motor speed setting • Check motor fuses (Figure 10 (E2)) 	Nip Rollers will not rotate (drive)
<ul style="list-style-type: none"> • Check both Nip Roller set screws for tightness • Check drive chains & sprockets 	Upper Nip Roller turns but Lower doesn't turn or Lower Nip Roller turns but Upper doesn't

TEMPERATURE CONTROL SYSTEM ERROR CODES AND ACTIONS







Display	Probable Cause	Recommended Action
	Reversed thermocouple Connection + to -	Change the sensor lead on Terminals 1 and 2.
	Sensor type mismatch or open RTD.	Go to In prompt, check selection (see p.22), or check RTD, replace as necessary.
	Sensor type mismatch.	Go to In prompt, check selection (see p.22).
	Open Thermocouple, bad connection, or broken wire.	Check the sensor, replace as necessary.
	Electrical noise.	Cycle power to system. See if error clears. Check system for electrical interference.
	Control is inoperable.	Check for line voltage at terminals #7 and #8.

DIAGRAM A TOP VIEW

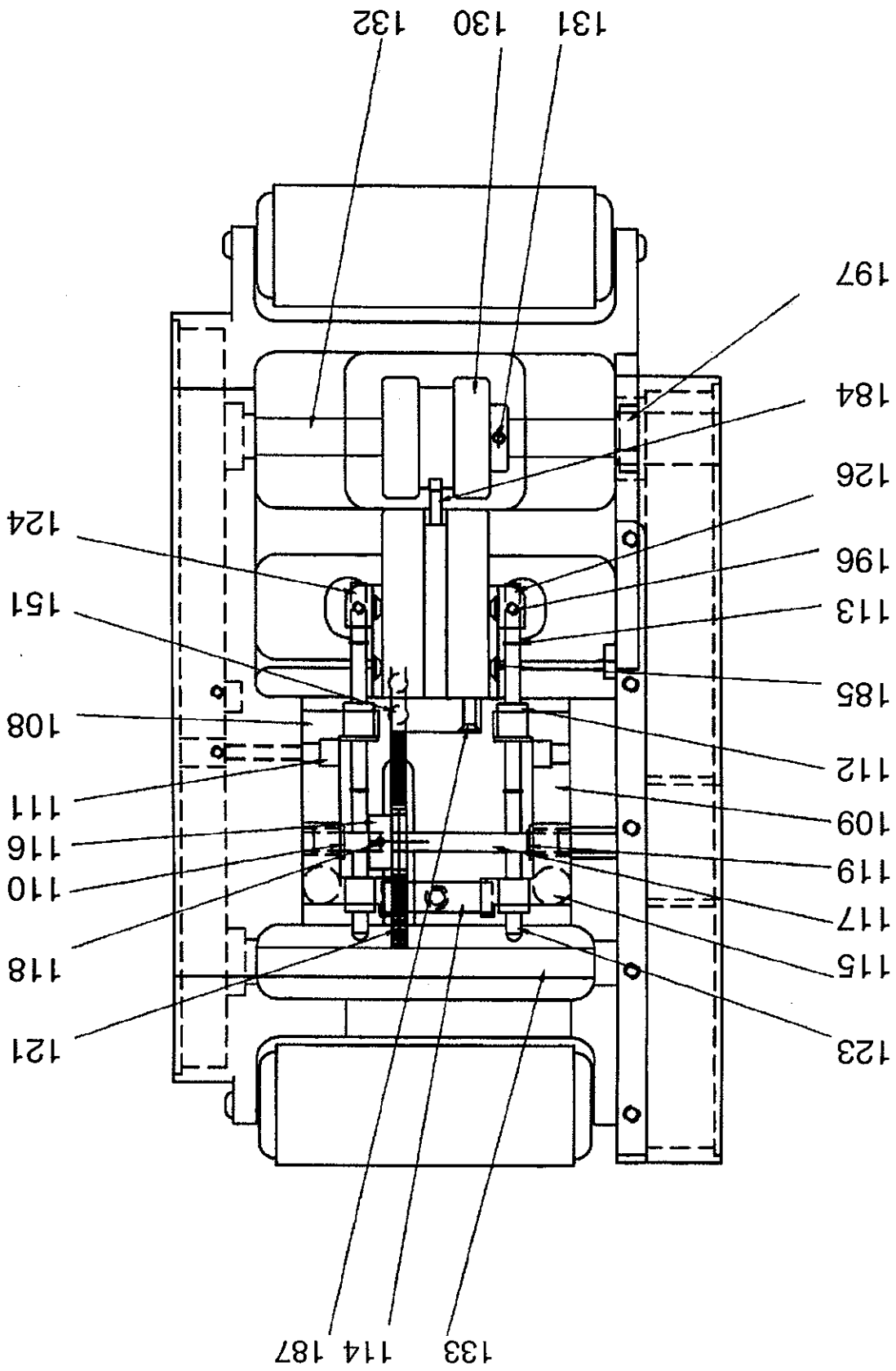


DIAGRAM B LEFT SIDE VIEW

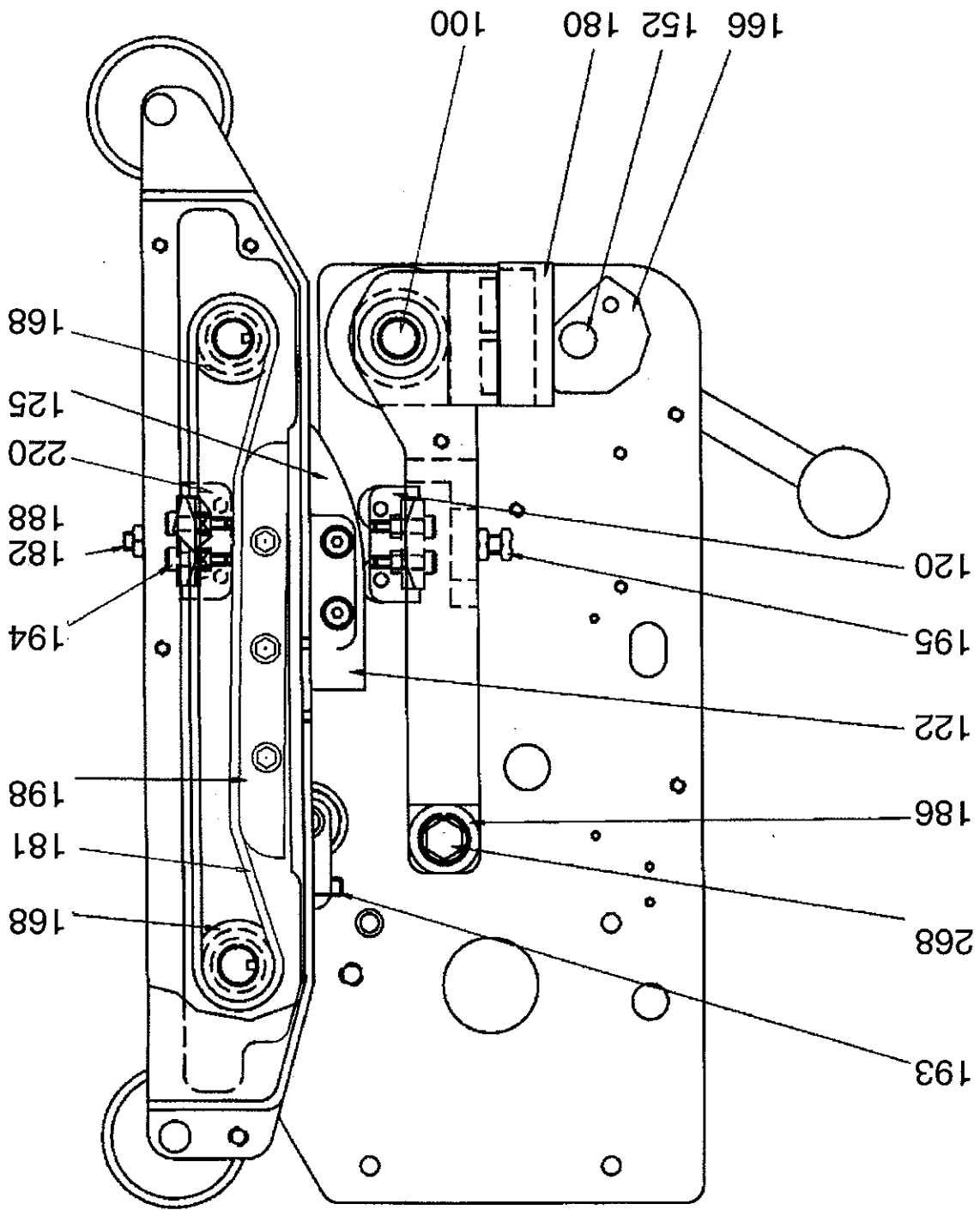


DIAGRAM C BOTTOM VIEW

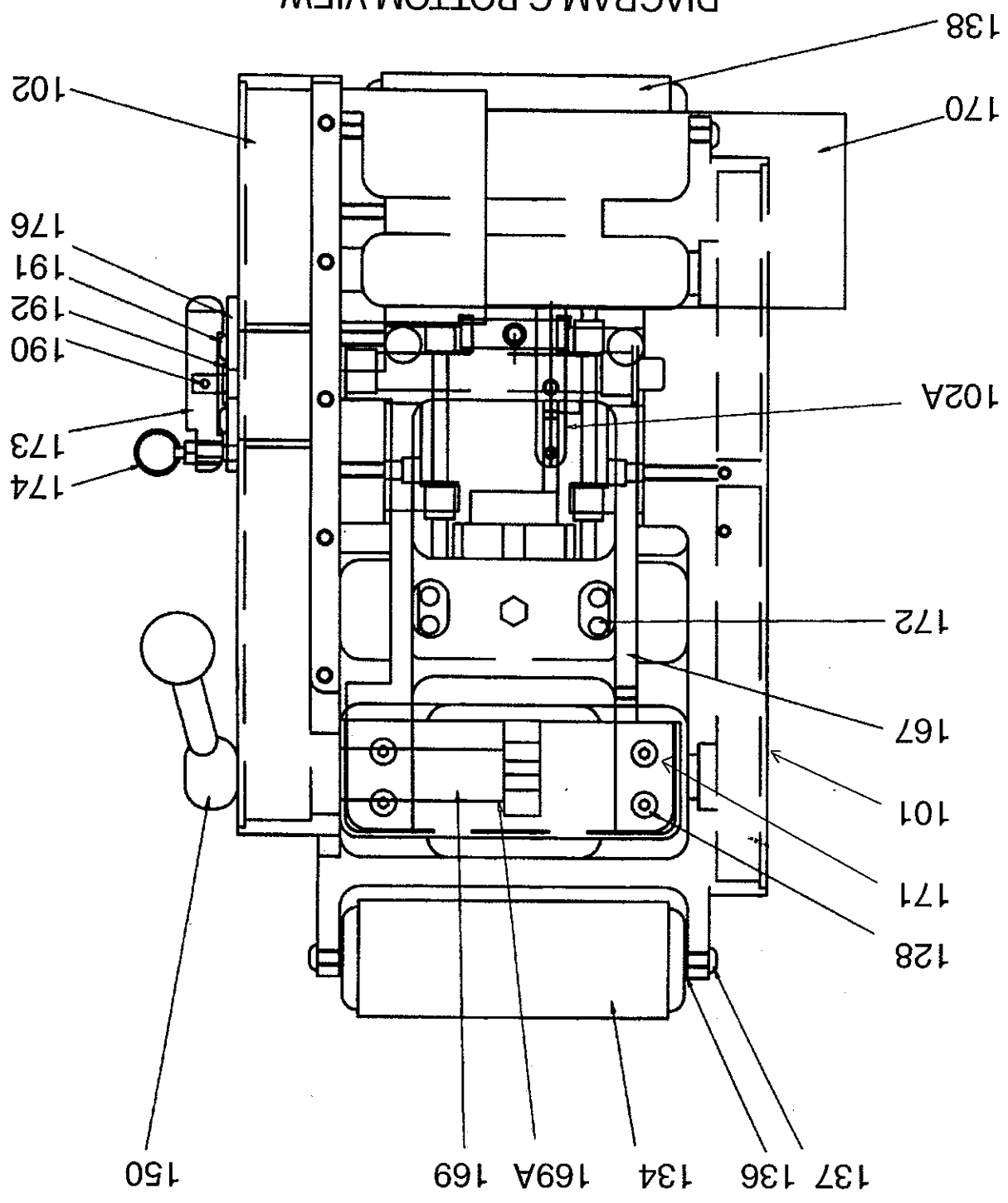
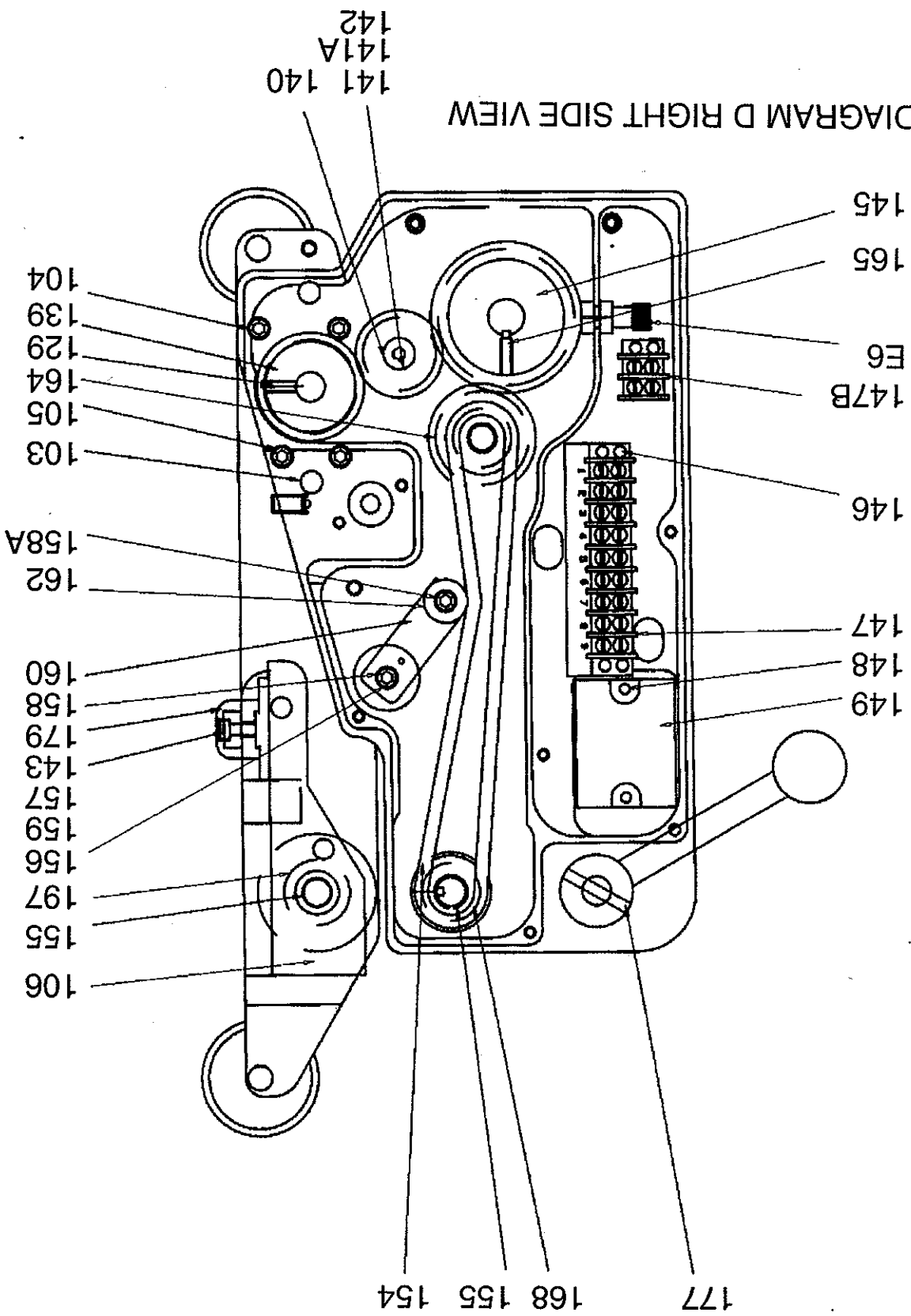


DIAGRAM D RIGHT SIDE VIEW



**SPARE PARTS LIST FOR "WEDGE-IT"
SERIES 2000**

(See previous pages for detail drawings)

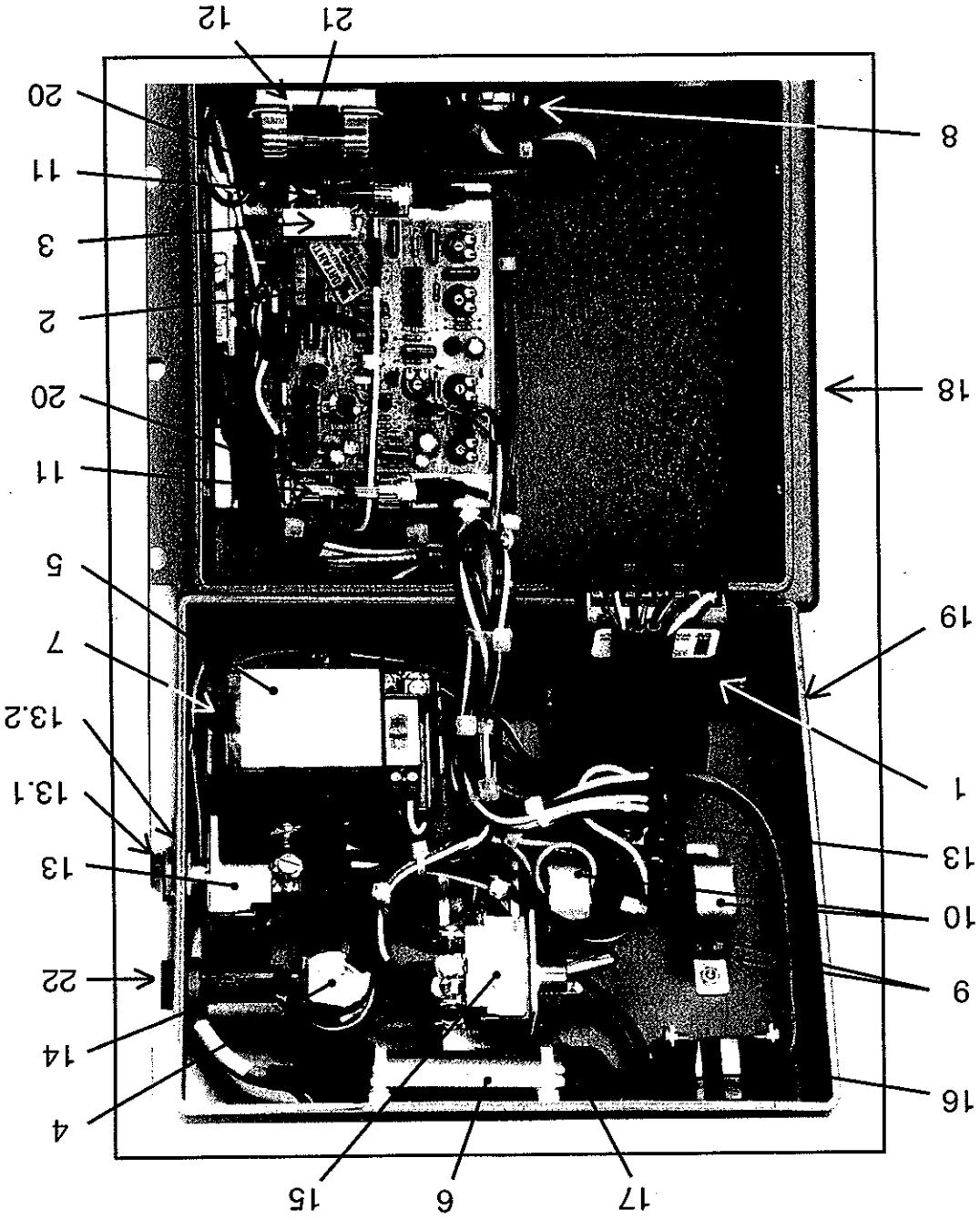
DESCRIPTION:	PART#	QTY:
MAIN FRAME	CW101	101
CONTOUR PLATE	CW101.1	*
SIDE PLATE	CW102	102
TEFLON SKID (NEW STYLE)	CW106.1	106
RIGHT PIVOT ARM	CW108	108
LEFT PIVOT ARM	CW109	109
SHOULDER BOLT (6x8x10)	CW111	111
PINION GEAR SHAFT BUSHING	CW110	110
OIL LIGHT LINEAR BUSHING	CW112	112
WEDGE PIVOT	CW114	114
PIVOT COMPRESSION SPRING	CW115	115
PINION GEAR	CW116	116
PINION GEAR SHAFT	CW117	117
LWR.CONTOUR ROLLER ASSY.	CW120.2	220
UPR.CONTOUR ROLLER ASSY.	CW120.3	120
RACK GEAR	CW121	121
WEDGE TAIL HOUSING	CW122	122
LINEAR SHAFT	CW123	123
RIGHT WEDGE MOUNT	CW124	124
LEFT WEDGE MOUNT	CW126	126
LOWER NIP SHAFT	CW132	132
DRIVE SHAFT	CW133	133
REAR TRAVEL ROLLER-W/CAPS	CW134	134
TRAVEL ROLLER BEARING	CW136	136
FRONT TRAVEL ROLLER-W/CAPS	CW138	138
DRIVE SHAFT DRIVE GEAR	CW139	139
IDLER GEAR	CW140	140
IDLER GEAR BEARING	CW141	141
GEAR SPROCKET COMP. BEARING	CW141A	141A
SHOULDER BOLT (8x10x20)	CW142	142
MOTOR DRIVE GEAR	CW145	145
TERMINAL BLOCK	CW147	147
TERMINAL BLOCK MARKER	CW147A	147
TERMINAL BLOCK-SRO	CW147B	147B
RELAY	CW149	149
CAM LEVER	CW150	150
CAM SHAFT	CW152	152
UPPER NIP CHAIN-52 LINK	CW154-35	154
IDLER TORSION SPRING	CW156	156
IDLER ARM BUSHING	CW157	157
SHOULDER BOLT (5x6x8)	CW158	158
SHOULDER BOLT (5x6x6)	CW158-35	158 A
IDLER SPRING MANDREL	CW159	159
IDLER SPRING ARM	CW160.1	160
IDLER BEARING	CW162	162
GEAR SPROCKET - COMPOSITE	CW164-35	164
CAM	CW166	166
NIP ARM	CW167	167

SPARE PARTS LIST FOR "WEDGE-IT" SERIES 2000

(See previous pages for detail drawings)

DESCRIPTION:	PART#	QTY:
UPPER/LOWER NIP SPROCKET	CW168-35	168
CAM SHAFT SLEEVE	CW169	169
WEDGE MOTOR	CW170	170
SHOULDER BOLT (6X8X25)	CW171	171
WEDGE HANDLE	CW173	173
HAND RETRACTABLE PLUNGER	CW174	174
DROP IN PLATE	CW176	176
CONTOUR ROLLER ADJ. COVER	CW179	179
PRESSURE PLATE	CW180	180
LOWER NIP CHAIN-57 LINK	CW181-35	181
UPPER NIP PIVOT BUSHING	CW186	186
DROP IN PLATE BUSHING	CW192	192
SHAFT BEARING	CW197	197
CAM SHAFT BUSHING	CW199	169A
NIP PIVOT SHAFT	CW1001A	26B
UPPER NIP SHAFT	CW1002	100
HANDLE	CW1007	*
TOP HANDLE BRACKET	CW1008	*
REAR HANDLE BRACKET	CW1009	*
MATERIAL GUIDE, UPPER	CW1014	*
MATERIAL DEFLECTOR	CW1015	*
RUBBER BOOT	CW1019	*
AIR CHANNEL PIN	CW1020	184
RACK GEAR SPRING	CW1021	102A
CHAIN GUIDE	CW1023	198
NIP RETURN SPRING	CW1027	*
LOAD PLATE SPRING	CW1028	128
MAGNETIC PICK-UP	CWE6	E6
THERMOCOUPLE	CWE11.1	*
CHAIN TENSION BEARING	536SS	178
102V/600W CARTRIDGE HEATER	CWE10B	*
120V/500W CARTRIDGE HEATER	CWE10C	*
LONG SPLIT COPPER WEDGE	CW125B	125
SOLID SPLIT COPPER WEDGE	CW125PVC/S	125
SPLIT STAINLESS PVC WEDGE	CW125PVC/SP	125
SPLIT STEEL NIP ROLLER	CW130	130
SPLIT RUBBER NIP ROLLER	CW130B	*
SOLID RUBBER NIP ROLLER-PVC	CW130PVC	*
OUTRIGGERS	CW1016A	*
SIDE FRAME CVR. PLATE-BLUE	CW1012B	*
SIDE FRAME CVR. PLATE-GREEN	CW1012G	*
SIDE FRAME CVR. PLATE-RED	CW1012R	*
LOWER CHAIN COVER-BLUE	CW1013B	*
LOWER CHAIN COVER-GREEN	CW1013G	*
LOWER CHAIN COVER-RED	CW1013R	*
110V PLUG END	MS14W47	*
220V/20A PLUG END	MS1006	*
WEDGE-IT CASE	CWCASE	*

*NOT SHOWN ON DETAIL DRAWINGS



**ELECTRICAL COMPONENTS DETAIL
(IDENTIFICATION)**

ELECTRICAL COMPONENTS LIST FOR "WEDGE-IT" SERIES 2000

(See page 32 for photo)

REF #	ORDER #	DESCRIPTION
1	CWE3.1	935 TEMP.CONTROLLER
2	CWE5	MOTOR CONTROL BOARD
3	CWE5H	.1 HP RESISTOR
4	CWE5J	MOTOR CONTROL POT.
5	CWE7	POWER SUPPLY
6	CWE8	PRE-AMPLIFIER
7	CWE9	SPEED READOUT
8	CWE13	CABLE CLAMP 1/2" 90 DEG.
9	CWE14.1	RED L.E.D. W/TRANSFORMER
10	CWE14.2	TRANSFORMER BRACKET
11	CWE16	FUSE HOLDER-SINGLE
12	CWE16A	FUSE HOLDER-DUAL
13	CWE17	TOGGLE SWITCH-DPST
13.1	CWE17A	TOGGLE SWITCH BOOT
13.2	CWE17B	ON/OFF PLATE
14	1CWE20	FUSE HOLDER-PANEL MOUNT
15	CWE21	TOGGLE SWITCH-DPDT
*	CWE22	MOTOR CONTROL POT.KNOB
*	CWE22A	KNOB LOCK
16	CWE23	SONALERT ALARM
17	CW1004	TOGGLE SWITCH BRACKET
*	CW1010	CONTROL GUARD BRACKETS
18	CW1005B	ELEC.BOX CHASSIS-BLUE
19	CW1006B.1	ELEC.BOX COVER-BLUE
20	N/S	FUSE, MOTOR, 4 AMP, 250V
21	N/S	FUSE, LINE VOLTAGE, 15 AMP, 250V
22	N/S	FUSE, MOTOR, 3 AMP

*NOT SHOWN ON PHOTO

METRIC FASTENERS FOR "WEDGE-IT" SERIES 2000

(See fold-out drawings)

DRAWING#	REQD.	DESCRIPTION	ITEM USE
103	2	DOWEL PIN .375X.87 LONG	SIDE PLATE TO FRAME
104	2	SHCS M6X16MM LONG	SIDE PLATE TO FRAME
105	2	SHCS M6X50MM LONG	SIDE PLATE TO FRAME
107	19	BHCS M5X10MM LONG	SIDE COVERS ETC.
110	3	PINION GEAR SHAFT BUSHING	
111	2	SHDL. SCREW M6X8X10MM LONG	WEDGE CARRIAGE
113	8	RETAINING RING 5100-75	PIVOT
118	1	SET SCREW M5X8MM LONG	PINION GEAR
119	1	SNAP RING 5/16"	PINION SHAFT
127	4	SET SCREW M5X6.35MM LONG	ONLY FOR OLDER VERSION
128	4	SPRING .70 OD X .53D X 1.00 LONG	LOAD PLATE
129	2	SET SCREW M6X15.87MM LONG	MOTOR GEAR,
131	2	SET SCREW M6X9.52MM LONG	LOWER DRIVE GEAR, NIP ROLLERS, OUTRIGGERS
137	4	BHCS M6X15.87MM LONG	TRAVEL ROLLERS
142	1	SHDL. SCREW M6X8X25MM LONG	IDLER GEAR
143	3	SHCS M6X22.22MM LONG	MOTOR MOUNT TO FRAME
144	1	SHCS M6X15.87MM LONG	MOTOR MOUNT TO FRAME
146	2	PHP SCREW M3X12MM LONG	TERMINAL BLOCK
148	2	PHP SCREW M4X12.70MM LONG	SOLID STATE RELAY
151	1	FHSCS M3X10MM LONG	RACK GEAR
155	3	RETAINING RING TRUARO 5100-50	NIP DRIVE SHAFTS
157	1	BUSHING BUNTING FF 312	IDLER ARM
158	2	SHDL. SCREW M5X6X8MM LONG	IDLER ARM
165	1	.125 SQ. X .50 LONG KEYWAY	MOTOR DRIVE GEAR
171	4	SHDL. SCREW M6X8X25MM LONG	LOAD PLATE
172	4	SHCS M4X20MM LONG	UPPER CONTOUR ROLLER
175	1	CABLE HOLD DOWN 8N2596	
177	1	ROLL PIN 3/16" OD X 1" LONG	CAM LEVER
178	1	WASHER .50 OD X .25ID X .06 THICK	GEAR SPROCKET
182	1	SET SCREW M6X20MM LONG	LOWER CONTOUR ROLLER ADJ.
185	4	FHSCS M5X12MM LONG	WEDGE MOUNT
186	2	BRONZE BUSHING FB 1012-5	NIP ARM

*ITEMS NOT SHOWN ON DETAIL DRAWINGS

TAIL HOUSING	FHSC M4x20MM LONG	4	187
UPPER & LOWER	NUT M6xSTANDARD THICKNESS	2	188
CONTOUR ADJ.			
WEDGE HANDLE	SHCS M4x20MM LONG	1	190
DROP-IN PLATE	BRONZE BUSHING FB-56-3	2	191
DROP-IN PLATE	BRONZE BUSHING FB-56-3	1	192
WEDGE CARRIAGE	SHCS M6x40MM LONG	1	193
ADJ.			
LOWER CONTOUR	SHLD. SCREW M4x5x14MM LONG	4	194
ROLLER			
UPPER CONTOUR	HEX BOLT M6x25MM LONG	1	195
ROLLER ADJ			
WEDGE MOUNTS (EARS)	SET SCREW M6x6.35MM LONG	2	196
RACK GEAR TENSION	BHCS M5x8MM LONG	1	*
SPRING			
DROP-IN HANDLE	M4x20MMSHCS	1	*
DROP-IN HANDLE	M4 NYLOCK NUT	1	*

METRIC FASTENERS FOR "WEDGE-IT" SERIES 2000 (CONTINUED)

Advanced Software Map

Configuration Menu		Operations Menu		PID Menu		Access Menus:	
°C	F	750	400	NO	NO	IN	--to Cnf9 then clear TAG, choose deg. F or C -- OUT
J	J	750	400	NO	NO	IN	--Operation Menu then P.I.D. Menu -- OUT
°C	F	750	400	NO	NO	IN	--Cnf9 Menu - Enter Set Points, Redo TAG-- OUT
°C	F	750	400	NO	NO	IN	Check Set Points
32	0	100	38	100	38		
Range Low	Range High						
850	455						
HEAT	HEAT	0E 1	0E 2				
Output 1 Function	Output 2 Function						
AC	AC						
deno	deno						
Alarm Type	Alarm Type						
1	1						
Alarm Hysteresis	Alarm Hysteresis						
NO	NO						
Alarm Latch	Alarm Latch						
YES	YES						
Alarm Silencing	Alarm Silencing						
BPLS	BPLS						
Input Failure Mode	Input Failure Mode						
NO	NO						
Set Point Lockout	Set Point Lockout						
P-A	P-A						
Lockout Tag	Lockout Tag						

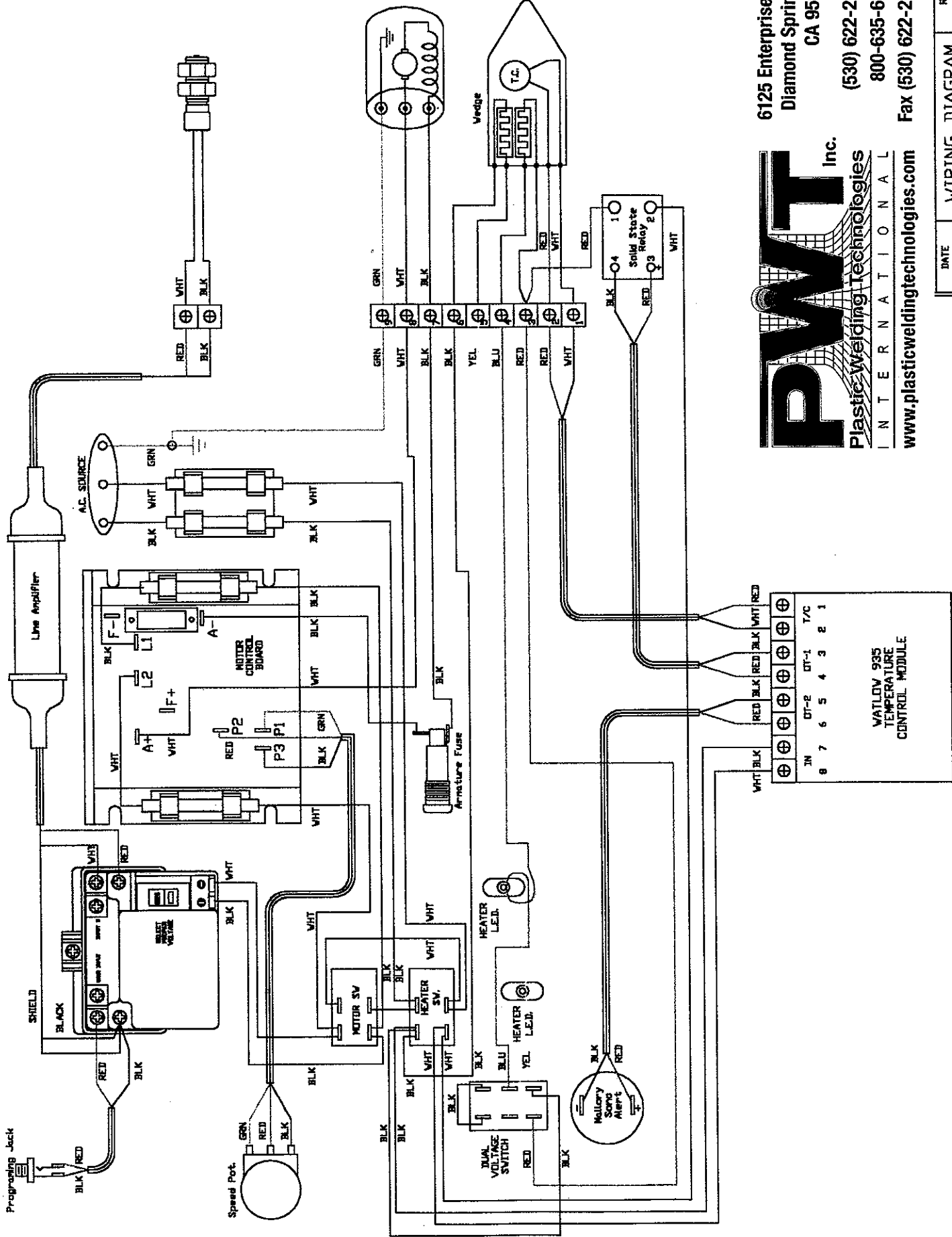
Errors & Troubleshooting

Display	Probable Cause	Recommended Action
0	Reversed thermocouple connection + to -	Change the sensor leads on terminals 1 and 2
Pb 4	Sensor type mismatch or open RTD.	Go to "In" prompt, check selection or check RTD, replace as necessary
Pf 4	Sensor type mismatch.	Go to "In" prompt, check selection.
Pf 5	Open Thermocouple, bad connection, or broken wire.	Check the sensor, replace as necessary.
Pf 6	Electrical noise.	Cycle power to system. See If error clears.
Pf 7	Control is inoperable.	Check system for electrical interference. Check the line voltage at terminals 7 and 8.

** See reverse side for the settings for different styles and wattage of wedges. The settings to the left apply to the CW125C 800 Watt copper wedge only.

935 Wedge-It Settings

<p>Pbh - 30 Cth - .4 H - 1.0 DE - .05 CAL - 0 ALO - (-100) Ahl - (100)</p>	<p>CW125C Long Split Copper - 2 X 800</p>		
<p>Pbh - 20 Cth - .3 H - 2.18 DE - .09 CAL - 0 ALO - (-100) Ahl - (100)</p>	<p>CW125PVC/SP Split Stainless PVC - 2 X 550</p>	<p>CW125PVC/SO Solid Stainless PVC - 2 X 550</p>	
<p>Pbh - 20 Cth - .3 H - .75 DE - 0.0 CAL - 0 ALO - (-100) Ahl - (100)</p>	<p>CW125B Long Split Copper - 2 X 600</p>	<p>Pbh - Cth - H - DE - CAL - ALO - (-100) Ahl - (100)</p>	<p>CW125 Short Split Copper - 2 X 550</p>

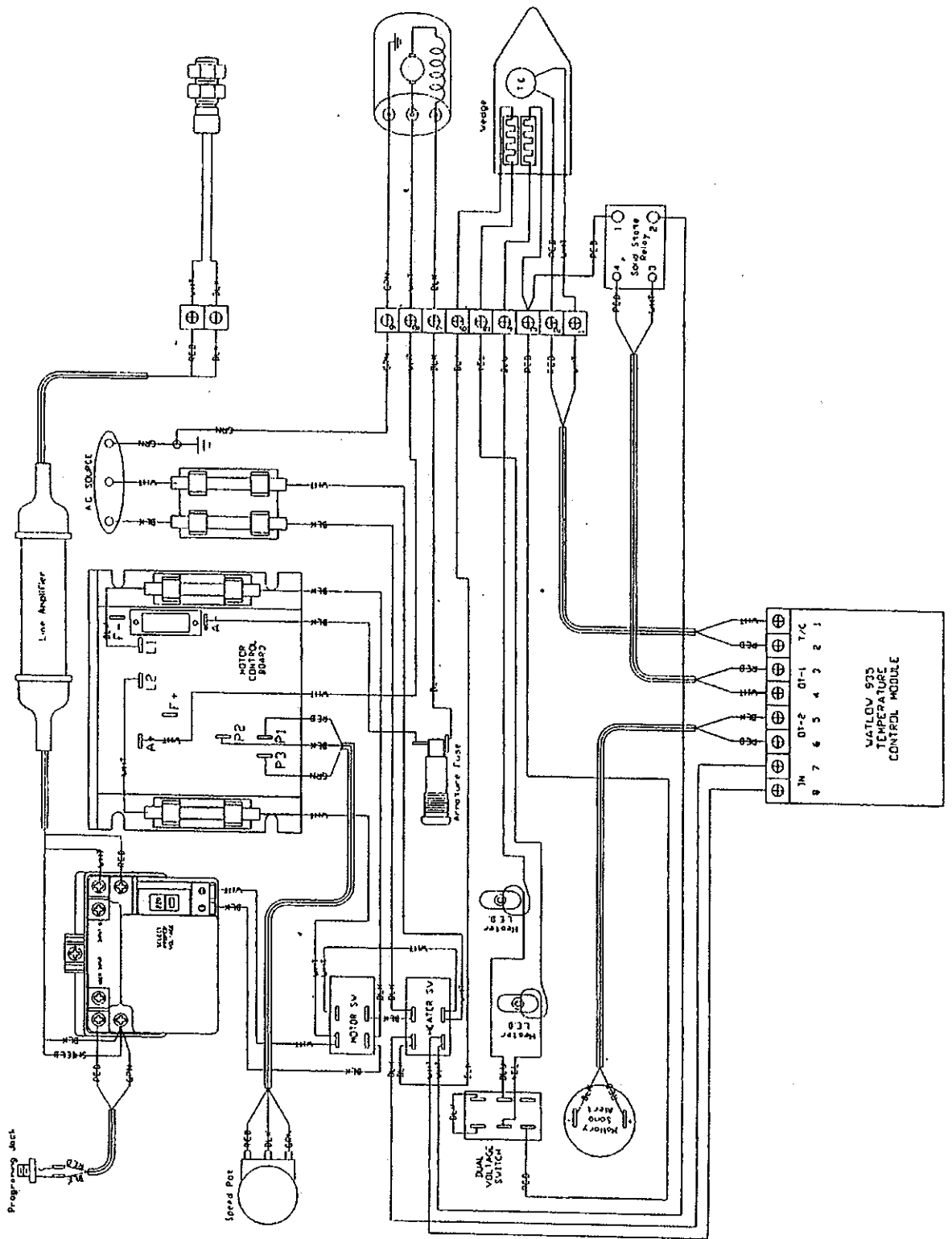


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PWT Inc.
 Plastic Welding Technologies
 INTERNATIONAL
 www.plasticweldingtechnologies.com

DATE	REV.
04-01-97	3A
VOLT & HOUR	DRAWN
METER-ADD.	G.T.
WIRING DIAGRAM	
WEDGE-IT # 2000	

WIRING DIAGRAM FOR WEDGE-IT SERIES 2000





DECLARATION OF CONFORMITY BY MANUFACTURER
As defined by machinery directive 98/37/EEC, Annex II B



PWT
Plastic Welding Technologies
6125 Enterprise Drive, #10
Diamond Springs CA 95619

Hereby declares on its own behalf and responsibility that the

Machine type: Hot Wedge Welder
Design: Wedge-It, Series 2000

To which this declaration refers conforms to the following standards, codes or regulations:

- X EU Machinery Directive 98/37/EG
- X EN 61029-1 (VDE 0740 Part 500)
- X VDE 0701 Part 1
- X VDE 0702 Part 1
- X EU Low Voltage Directive 73/23/EWG
- X EN 60204-1 (VDE 0113 Part 1)
- X EN 61029-1 (VDE 0740 Part 500)
- X EG-Directive EMV 89/336/EWG
- X EN 55011
- X EN 61000-4-11

Conformance of this industrial tool with the above standards is subject to the condition that it is used in accordance with the contractually agreed service conditions, the responsibility for which shall rest with the user.

Modifications to the machine unit or the use of the machine/unit for applications other than the intended service will make this declaration null and void, unless expressly approved in writing by the manufacturer.

Signed:

Greg A. Yapple
President

Diamond Springs, April 2006

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