

4-94

Operation and Maintenance Manual

2/5-220

200 Series

Heat Seal Machines



PUT IT ON!

THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY

Congratulations!

Your selection of the Insta Graphic heat seal machine is a sound business decision. Insta Graphic equipment is the result of the highest quality engineering and time tested design. Your new machine combined with Insta's reputation of innovation in the heat sealing field, insures the continuing capability of delivering the best decorated garments possible.

This manual describes installation, operation, and maintenance procedures for your new 200 series machine, as well as easy to use instructions for on the spot maintenance. Proper heat sealing instructions and helpful hints are included in a separate brochure.

Your 200 series machine will have a long trouble free life. Read this manual. Keep it with your machine. It's your key to proper operation and lasting service.

Installation

Use a **separate** 15 amp AC circuit. Only industrial extension cords with proper wire size should be used: size 16/3 wire for distances up to 25 feet, and size 14/3 for distances up to 50 feet.

Limited Machine Warranty

Insta Graphic Systems (IGS) warrants this heat seal machine, when operated under normal conditions, to be free from manufacturing defects in material and workmanship for a period of one year on parts (lifetime on the heating element) and 90 days on labor from the date of shipment.

This warranty will be effective only when IGS authorizes the original purchaser to return the product to the factory in Cerritos, California, freight prepaid, and only when the product upon examination has proven to be defective.

This warranty does not apply to any machine which has been subjected to misuse, negligence or accident.

IGS shall not be liable for the injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product.

No claim of any kind shall be greater in amount than the sale price of the product or part to which claim is made.

This is the sole warranty given by the company, in lieu of any other warranties, expressed or implied, in law or in fact, including the warranties of merchantability and fitness for a particular use, and is accepted as such by the purchaser in taking delivery of this product.

Operation

1. It is recommended that you review the "How to Apply Instructions" (in our Product Catalog) before beginning heat sealing operations.
2. Set desired temperature and swing the upper platen arm to its fully open position, away from lower platen.
3. Allow the machine to warm up for approximately 30 minutes. When the selected temperature is reached, the neon lamp above the temperature selector knob will cycle on and off.
NOTE: *The thermometer indicates the internal temperature of the heat platen and will indicate a temperature approximately 25F° (14C°) higher than the actual heat platen surface. The temperature control is calibrated at the factory and indicates the **TRUE** surface temperature of the heat platen.*
4. Set the desired pressure by adjusting the pressure adjust knob on the top of the machine. To reduce pressure, turn knob counter clockwise.
5. Place the garment on lower platen, smoothing out all wrinkles.
6. Position transfer or lettering on garment.

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7. Swing the upper arm into position directly over the lower platen.

8. Close machine by pulling handle down into locked position.

9. Set timer for desired time cycle.

10. Bell will ring at end of time cycle. Lift safety lock and pull handle up slowly and move upper platen handle to its full open position. This technique will avoid transfer paper (cover) from being pulled off prematurely due to suction from the separating platens.

11. **NOTE:** For safety purposes, it is necessary to push the handle into the locked position after it is lifted. This will eliminate the accidental lowering of the heat platen and handle.

12. Swing away upper arm to the extreme right hand position and remove garment.

Preventive Maintenance Suggestions

The **Insta Graphic** heat seal machines are relatively maintenance free. For long trouble-free life, the following preventive maintenance should be followed:

1. Do not heat seal items such as buttons, pins, snaps, or zippers which tend to cut the silicone rubber pad or scratch the Teflon heat platen.
2. Periodically clean the teflon-coated heat platen with a non-abrasive piece of cloth. Stubborn stains may be cleaned, **when platen is cold**, with mineral spirits.
3. When the heat platen is hot and not in use, keep in open position (away from the silicone rubber pad).
4. To prevent soiling of garment, periodic wiping of the entire exterior machine, including platens, with a clean rag is recommended. If necessary, use mineral spirits for cleaning a **cold** machine. Since mineral spirits are flammable, use

precautions and keep away from sparks, flame, or hot heat platen.

5. The 200 series machines require periodic lubrication with a high-temperature, non-melting grease, such as Lubramatic SM-111 or equivalent.

A. Lubricate the post, handle and cam assembly depending upon usage. (Once every month if used continuously.)

B. There are four (4) points of lubrication:

- a. Post
- b. Lower Cam
- c. Guide Post
- d. Upper Pin Area

In addition, occasionally apply a few drops of heavy machine oil to the upper portion of the cam assembly. To lubricate adjustment knob and cover retaining screw, raise cover an inch or two and apply heavy machine oil to threads.

NOTE: Wipe off any excess oil or grease. Replace cover, screw, and knob.

Specifications

Voltage	120 Volts AC (+6% -10%) 50/60 Hertz	
Model 215	Current	12.5 Amps
	Wattage	1500 Watts
Model 220	Current	14.6 Amps
	Wattage	1750 Watts

Voltage	240 Volts AC (+6% -10%) 50/60 Hertz	
Model 215	Current	6.3 Amps
	Wattage	1500 Watts
Model 220	Current	10.4 Amps
	Wattage	2500 Watts

Weight Model 215	69 Pounds (31.3 KG)
Weight Model 220	87 Pounds (39.5 KG)

FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY

200 series General Maintenance

A maintenance chart has been prepared to assist you in locating and correcting problems when the equipment is not operating properly. To locate the problem area, it may be necessary to refer to more than one symptom listed in the chart. The table directs your attention to the fault. It does not rule out other possibilities.

It is also recommended that you have the following items available:

- A. Regular screw driver
- B. Phillips head screw driver
- C. Small adjustable wrench
- D. Needlenose pliers with insulated handle

- E. Set of Allen wrenches
- F. Grease gun
- G. Special high temperature grease
- H. Fuses (15 amp/250 volts)
- I. Test jumper wires (clips leads)*
- J. Neon lamp tester*

With the above items and the maintenance chart you should be able to accomplish most repairs.

NOTE: *Disconnected or a defective wire may be checked by using the test jumper wire. Make sure that you connect only points which terminate in the same color wire, unless instructed to do otherwise.*

*Items available at most electronics supply stores

200 SERIES MAINTENANCE CHART

PROBLEM	TEST PROCEDURE	TEST RESULTS	PROBABLE CAUSE AND REPAIR
Temperature of the platen gets too hot and cannot be controlled.			Defective temperature control. Replace with a new unit.
Platen DOES NOT heat when temperature control is turned on. Temperature indicator lamp DOES NOT light.		Temperature indicator lamp DOES light.	1. Is machine turned on? 2. Check fuse 3. Temperature control is defective. Replace with a new unit.
	DISCONNECT POWER. Place jumper wire across terminals of temperature control. RECONNECT POWER	Temperature indicator lamp DOES NOT light.	4. Wire harness or power cord is either disconnected or broken
Platen DOES NOT heat when temperature control is turned on. Temperature indicator lamp DOES light.			1. One of the connections from the heat platen is either disconnected or broken. 2. Defective heat platen assembly. Repair or replace with a new unit.

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Replacement of Silicone Rubber Pads

1. Make sure heat platen is cool.
2. Use tube of RTV-106 (or RTV-108) adhesive to bond silicone rubber pad to metal platen.
NOTE: *Read instructions on the tube package.*
3. Be sure that the surface of the silicone platen is clean. Use a **mild** solvent such as **mineral spirits**.
4. The pad and metal must be thoroughly dry and clean, before starting the bonding operation.
5. Apply adhesive sealant to the metal platen. Spread a thin even coat and apply pad immediately. Apply pressure and position pad making sure that there is no air entrapment.
NOTE: *A serrated blade such as used for laying down rubber floor tiles would be helpful.*
6. Allow to cure overnight under low pressure at normal room temperature.

Temperature Control Replacement

NOTE: *Disconnect Power Supply*

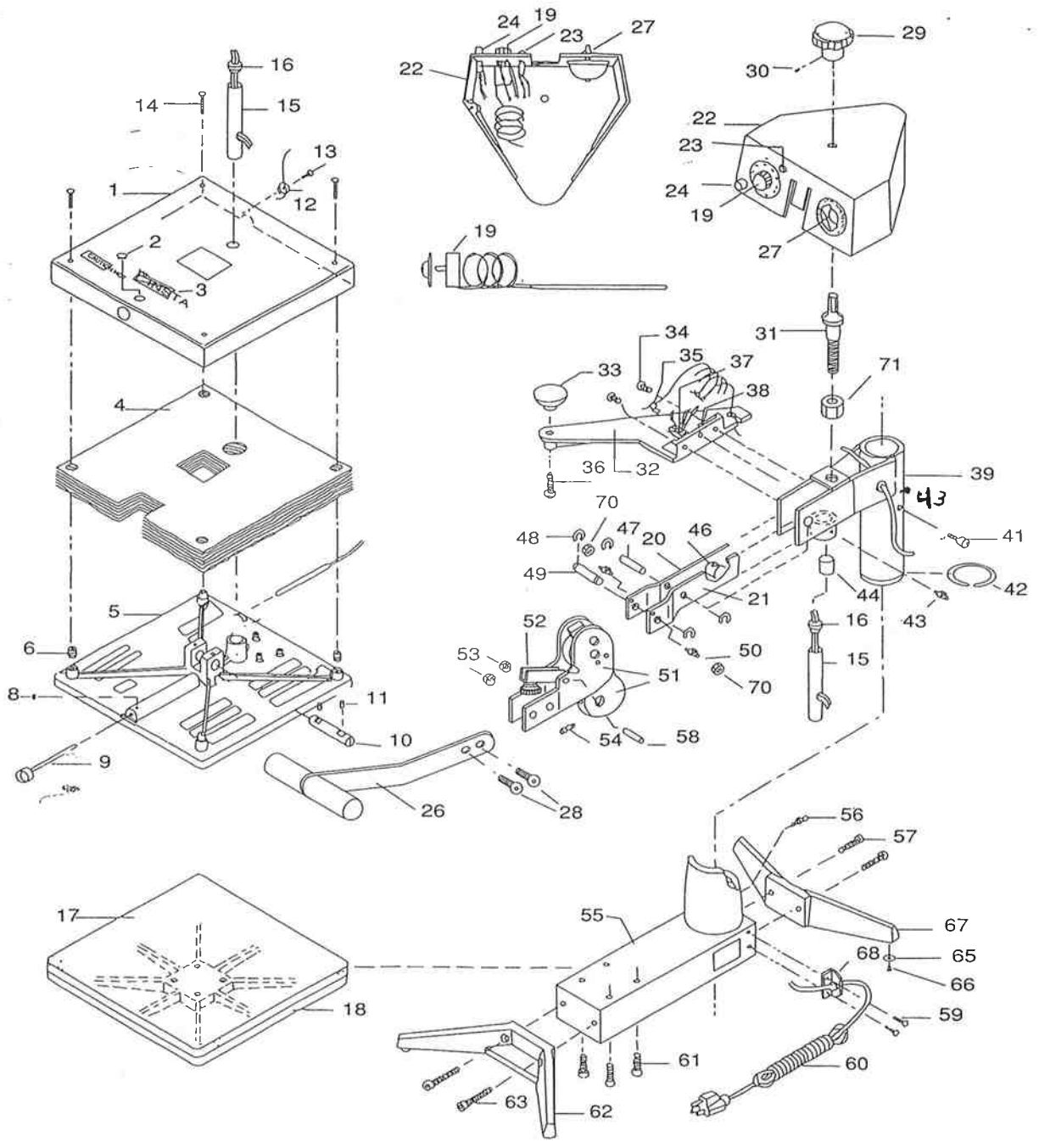
1. Remove knob.
2. Remove the two screws which secure the control to the front panel.
3. Disconnect the wires going to the control.
NOTE: *There is only one wire going to the terminal (this is the **HOT** side of the line). The other terminal has two wires--one from the heating elements and one from the lamp.*
4. Carefully remove the capillary tube clamp and temperature sensing bulb from the rear of the upper heat platen.
NOTE: *Do not squeeze or sharply bend the thin capillary tube which connects the temperature control of the sensing bulb.*

5. Make sure that the temperature sensing bulb on the new control is straight. Carefully straighten if necessary.
6. Carefully insert the new sensing bulb into the upper heat platen. If necessary, the **sensing bulb (NOT THE CAPILLARY BULB)** may be grasped **gently** with a pair of pliers to aid in installation.
NOTE: *Do **not** grasp capillary tube with pliers.*
7. Reconnect the three (3) wires to temperature control as stated in Step 3.
8. Insert the two screws which secure the control to the front panel.
9. Replace the knob with the pointer indexed to the **OFF** position.

Heat Platen Removal

1. Remove temperature control as explained in the **Temperature Control Replacement** section.
2. Disconnect the two heat platen wires which come up through the guide post, **one from the terminal block and one from the lamp**.
3. Remove the heat platen wire clamps.
4. Place some padding on the base of the machine to protect the Teflon coating on the heat platen during disassembly.
5. Using an Allen wrench, loosen the two lower pivot pin set screws.
6. Using a long, thin punch or screw driver, drive the lower pivot pin from the platen.
7. Swing the arm to the extreme right and slowly lower the heat platen until the guide post clears the bushing. The wires may then be pulled free.
8. Reverse this procedure to install.

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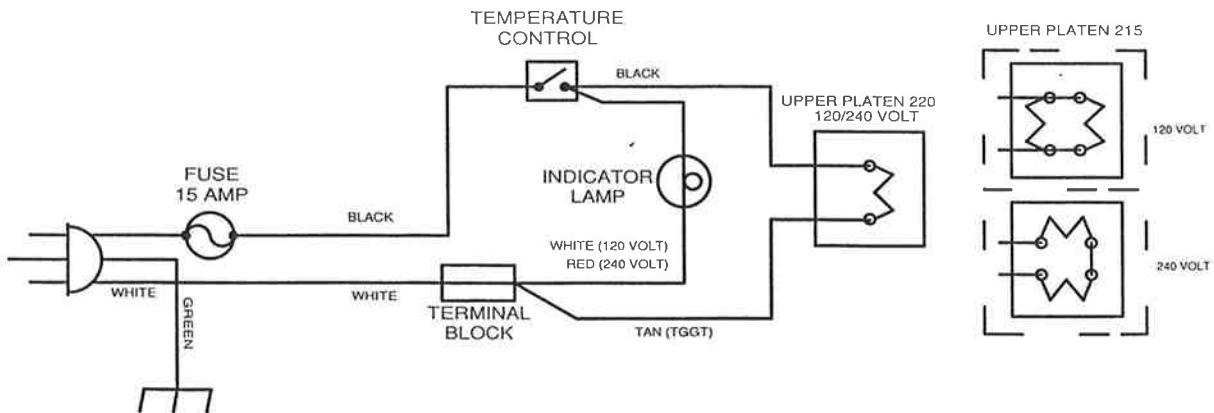
EXPLODED VIEW MODEL 215/220

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NO	PART NAME	MODEL	MODEL	MODEL	MODEL
		215 120V AC	215 240V AC	220 120V AC	220 240V AC
1	HEAT SHROUD	MPSS215	MPSS215	MPSS220	MPSS220
2	PLUG, BUTTON	PB12	PB12	PB12	PB12
3	NAME PLATE (DIE CAST)	MPPP033	MPPP033	MPPP033	MPPP033
4	FIBERGLASS-INSULATION	MPSP251	MPSP251	MPSP254	MPSP254
5	UPPER PLATEN	MPSP070	MPSP071	MPSP043	MPSP044 MPSP049
6	SHROUD INSULATORS (4/SET)	MPSI089	MPSI089	MPSI089	MPSI089
7					
8	SET SCREW 1/4-20x3/8	SST142038	SST142038	SST142038	SST142038
9	THERMOMETER	MPPT056	MPPT056	MPPT056	MPPT056
10	PIVOT PIN (PLATEN)	MPSP083	MPSP083	MPSP083	MPSP083
11	SET SCREW 1/4-20x3/8	SST142038	SST142038	SST142038	SST142038
12	STRAIN RELIEF, CAPILLARY	Z15933000	Z15933000	Z15933000	Z15933000
13	SCREW, CAPILLARY STRAIN RLF.	SR632516	SR632516	SR632516	SR632516
14	SCREW, SHROUD	MPSS143	MPSS143	MPSS143	MPSS143
15	GUIDE POST	MPSP085	MPSP085	MPSP085	MPSP085
16	INSULATOR, GUIDE POST	MPSI310	MPSI310	MPSI310	MPSI310 MPSP231
17	PAD, SILICONE RUBBER	MPPP030	MPPP030	MPPP031	MPPP031
18	LOWER PLATEN	MPSP236	MPSP236	MPSP220	MPSP220
19	TEMPERATURE CONTROL	MPPT052	MPPT052	MPPT052	MPPT052
20	PRESSURE ADJUST LEVER (L.H.)	MPSP230	MPSP230	MPSP230	MPSP230 MPSP222
21	PRESSURE ADJUST LEVER (R.H.)	MPSP231	MPSP231	MPSP231	MPSP231 MPSP222
22	INSTRUMENT HOUSING	MPSP215	MPSP215	MPSP215	MPSP215
23	PILOT LIGHT	MPPL019	MPPL018	MPPL020	MPPL021
24	FUSE HOLDER ASSEMBLY	MPPF009	MPPF009	MPPF009	MPPF009
25					
26	PRESSURE HANDLE ASSEMBLY	MPSH515	MPSH515	MPSH515	MPSH515
27	BELL TIMER	MPPT058	MPPT058	MPPT058	MPPT058
28	SCREW, BUTTON HEAD	SB516181	SB516181	SB516181	SB516181
29	PRESSURE ADJUSTMENT KNOB	MPPK018	MPPK018	MPPK018	MPPK018
30	SET SCREW, 1/4-20 x 3/8	SST142038	SST142038	SST142038	SST142038
31	PRESSURE ADJUSTMENT SCREW	MPSS090	MPSS090	MPSS090	MPSS090
32	SWING AWAY HANDLE	MPSH211	MPSH211	MPSH211	MPSH211
33	MUSHROOM KNOB	MPPK017	MPPK017	MPPK017	MPPK017
34	SOCKET HEAD SCREW, 1/4-20x 5/8	SSH142058	SSH142058	SSH142058	SSH142058
35	CABLE CLAMP 1/8	CC18	CC18	CC18	CC18
36	SCREW, 1/4-20 x 7/8	SB142078	SB142078	SB142078	SB142078
37	TERMINAL BLOCK	MPPT054	MPPT054	MPPT054	MPPT054
38	CABLE CLAMP 5/16	CC516	CC516	CC516	CC516
39	POST ARM ASSEMBLY	MPSP218	MPSP218	MPSP218	MPSP218 MPSP218A
40					
41	SOCKET HEAD SCREW	SSH381612	SSH381612	SSH381612	SSH381612
42	SNAP RING	MPSR268	MPSR268	MPSR268	MPSR268
43	GREASE FITTING	MPSF144	MPSF144	MPSF144	MPSF144
44	GUIDE POST BUSHING	MPSB070 ✓	MPSB070	MPSB070	MPSB070

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NO	PART NAME	MODEL	MODEL	MODEL	MODEL
		215 120V AC	215 240V AC	220 120V AC	220 240V AC
45					
46	PRESSURE ADJUSTMENT NUT	MPSP232	MPSP232	MPSP232	MPSP232
47	PIVOT PIN, ADJUSTMENT	MPSP233	MPSP233	MPSP233	MPSP233
48	E CLIPS	MPSC240	MPSC240	MPSC240	MPSC240
49	CAM PIVOT PIN	MPSP262	MPSP262	MPSP262	MPSP262
50	PLUNGER SPRING DETENT	MPSP134	MPSP134	MPSP134	MPSP134
51	CAM ASSEMBLY	MPSC213	MPSC213	MPSC213	MPSC213
52	SAFETY LOCK ASSEMBLY	MPSL240	MPSL240	MPSL240	MPSL240
53	JAM NUT	NHJ51618	NHJ51618	NHJ51618	NHJ51618
54	GREASE FITTING	MPSF145	MPSF145	MPSF145	MPSF145
55	BASE ASSEMBLY	MPSB220	MPSB220	MPSB220	MPSB220
56	GREASE FITTING	MPSF145	MPSF145	MPSF145	MPSF145
57	SOCKET HEAD SCREW	SSH3816114	SSH3816114	SSH3816114	SSH3816114
58	ROLL PIN (SAFETY LOCK)	MPSR141	MPSR141	MPSR141	MPSR141
59	SCREW, 10-24 x3/8	SP102438	SP102438	SP102438	SP102438
60	POWER CORD	MPPW141	MPPW142	MPPW141	MPPW142
61	LOWER PLATEN SCREW	SSH5161834	SSH5161834	SSH5161834	SSH5161834
62	FRONT LEG (CASTING)	MPSL220	MPSL220	MPSL220	MPSL220
63	SOCKET HEAD SCREW	SSH3816112	SSH3816112	SSH3816112	SSH3816112
64					
65	RUBBER FEET (4/SET)	MPSF451	MPSF451	MPSF451	MPSF451
66	SCREW, 8-32 x 3/8	SP83238	SP83238	SP83238	SP83238
67	REAR LEG	MPSL222	MPSL222	MPSL222	MPSL222
68	BRACKET, POWER CORD	MPSS163	MPSS163	MPSS163	MPSS163
69					
70	LOCKING HEX NUT	MPSN816	MPSN816	MPSN816	MPSN816
71	PRESSURE AJUST LOCKNUT	MPSN200	MPSN200	MPSN200	MPSN200



WIRING DIAGRAM MODEL 215/220

MP200-9404

Temperature Control Replacement

1. Disconnect power to machine.

- Loosen set screw on pressure adjust knob
remove knob.
- Remove knob from temperature control.
- Remove the two screws which secure the control to the front panel.

- Remove screw from left side of instrument housing. Lift housing about 4 inches and rest it in the open position (see Fig. 2). Note carefully how the capillary tube is coiled and clamped in place.

The replacement must be the same.

- Disconnect the wires going to the control. Note that there is only one wire going to one terminal (this is the hot side of the line). The other terminal has two wires, one from the heating element and one from the lamp.
- Remove plastic cable clamp from capillary tube.

- Carefully remove the capillary tube clamp and temperature sensing bulb from the rear of the upper heat platen. Do not squeeze or sharply bend the thin capillary tube which connects the temperature control to the sensing bulb.

- Make sure that the temperature sensing bulb on the new control is straight. Carefully straighten if necessary.

- Carefully insert the new sensing bulb into the upper heat platen. If necessary, the sensing bulb (the capillary tube) may be grasped gently with a pair of pliers to aid in installation.

Do not grasp capillary tube with pliers.

- Reconnect the three wires to temperature control as stated in Step 6.
- To reassemble, reverse procedure (Steps 5 to 1).

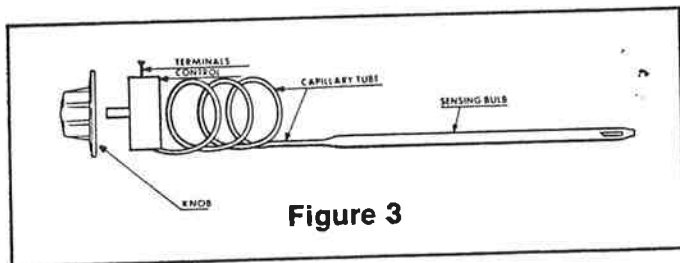


Figure 3

Wiring diagram model 215

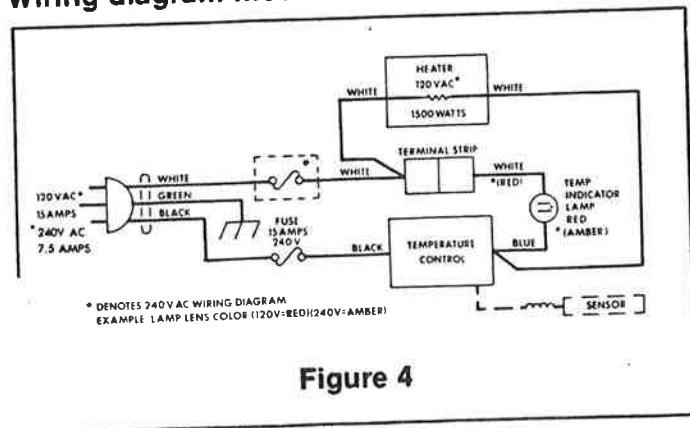


Figure 4

Heat Platen Removal

- Remove temperature control as in Steps 1-8 (under TEMPERATURE CONTROL REPLACEMENT).
- Disconnect the two heat platen wires which come up through the guide post, one from the terminal block and one from the lamp.
- Remove the heat platen wire clamps.
- Place some form of padding on the base of the machine to protect the teflon coating on the heat platen during disassembly.
- Using an Allen wrench, loosen the two lower pivot pin set screws.
- Using a long, thin punch or screw driver, drive the lower pivot pin from the platen.
- Swing the arm to the extreme right and slowly lower the heat platen until the guide post clears the bushing. The wires may then be pulled free.
- Reverse procedure to install.

LIMITED WARRANTY

INSTA GRAPHIC SYSTEMS warrants that for one (1) year from date of purchase, it will repair or replace any part of a machine operated under normal use and maintenance which is found to have been defective in material or workmanship. In order for this warranty to be effective, no return of machine or parts may be made without prior written factory authorization.

Manufacturer shall not be liable for any injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product.

Model 215 principal components

Part	Stock No.
Bushing, arm guide post	MP-SB-070
Cam assembly	MP-SC-209
Cement, silicone rubber	MP-PC-006
Clip E (upper pivot pin)	MP-SC-240
Fuse 15A/3AB (pkg of 5)	MP-PF-008
Fuse holder assembly	MP-PF-009
Grease gun (accessory)	MA-PG-010
Insulator, heat shroud (set)	MP-SI-089
Knob, handle	MP-PK-017
Knob pressure adjustment	MP-PK-018
Knob, temperature control (°C)	MP-PK-019
Knob, temperature control (°F)	MP-PK-020
Lamp assembly (120V)	MP-PL-019
Lamp assembly (240V)	MP-PL-018
Lever, safety stop assembly	MP-SL-238
Lubricant (Plastilube #2)	MP-PL-023
O Ring, post anti-grease	MP-SR-162
Pad, silicone rubber 15"x15"	MP-PP-030
Pin, pivot upper	MP-SP-261
Pin, pivot lower	MP-SP-083
Plate, machine identification	MP-PP-032
Plate, name	MP-PP-033
Platen, heat sub-assembly (120V)	MP-SP-070
Platen, heat sub-assembly (240V)	MP-SP-071
Ring, post retaining	MP-SR-268
Screw adjustment	MP-SS-090
Seal, anti-grease	MP-SS-273
Shroud, heat platen	MP-SS-145
Strain relief	MP-SS-162
Thermometer (°F/°C)	MP-PT-056
Temperature control	MP-PT-052
Timer assembly (Bell)	MP-PT-058
Timer, positive stop (optional)	MP-PT-062
Wire, power cord (120V)	MP-PW-174
Wire, power cord (240V)	MP-PW-176