DAIGE

SPEEDCOTE®

ADHESIVE WAX COATER

Operating Manual

MODEL 1215

MODEL 1230

DAIGE PRODUCTS INC.

SALES & SERVICE THROUGH AUTHORIZED DISTRIBUTORS THROUGHOUT THE WORLD

REV. 8-68

PLEASE TAKE 10 MINUTES TO READ THIS MANUAL. IT WILL BE OF INVALUABLE ASSISTANCE TO YOU IN ATTAINING FULL UNDERSTANDING IN THE CARE, USE AND OPERATION OF YOUR NEW DAIGE ADHESIVE WAX COATING MACHINE.

This machine has been carefully tested and packed before leaving our factory to assure you a lifetime of trouble free service. Be sure to remove all packing materials and shipping restraints. It is recommended that you remove the two cover plates and clean off any foreign matter that may have settled on wax in pan due to shipping. Use dry cloth to wipe stainless aluminum rollers to remove shipping particles and dust.

OPERATING INSTRUCTIONS WILL BE FOUND IN THE CENTERFOLD OF THIS MANUAL

Operating instructions are the same for Model 1215 and Model 1230

Model 1215 is for use on 120 volt 60 Cycle A.C. Lines
Model 1230 is for use on 230 volt 50-60 Cycle A.C. Lines

In order to validate guarantee, please fill in guarantee card and return to:-

DAIGE PRODUCTS INC.

GETTING ACQUAINTED WITH YOUR NEW DAIGE SPEEDCOTE ADHESIVE WAX COATING MACHINE

★ THE FRONT PANEL

There are two control switches and two indicating lights on the front panel.

1. The LEFT SWITCH, marked "MAIN", is connected to the heating element and also supplies the motor circuit indirectly through the motor thermostat. When this switch is "OFF", the entire machine shuts down.

2. The "HEAT ON" pilot light goes on as soon as the Heater Switch is thrown "ON", indicating that the machine has been placed in service and is warming up.

3. The "OPERATE" pilot light will light in approximately fifteen to eighteen minutes, indicating that the machine is at proper temperature and the motor may be thrown on if desired to coat materials.

4. The "MOTOR SWITCH" controls the turning of the rollers in order to coat materials and will only start the motor if the "OPERATE" pilot light is on. The foot switch may be plugged in to the rear of the machine and used instead of the motor switch.

FRONT PANEL

★THE TOP DECK

The top stainless steel deck is removable and can be moved forward or backward, depending upon the stiffness or weight of stock you wish to coat. The deck has two adjustment positions. Pins, projecting upward from the carriage, engage the holes you select, and will keep the cover in the forward, or backward position. See photograph below.

1 For coating lightweight, normal materials, engage the pins in the holes so that the cover is all the way forward. Use this position for proofs, paper, newsprint, etc.

2 For coating moderately stiff and medium weight materials, move the cover all the way back toward you and engage the pins in the rear holes. This will move the cover away from the rollers.

- Experience will indicate the best postion for coating your materials and both positions should be tried.

★ THE TOP ROLLER COVER

The top roller cover is removable and should be in place when machine is not in use to keep foreign matter from settling on the rollers. It is also left in place during the warm-up period of the machine to concentrate heat on the rollers. After the machine has warmed up (indicated by Amber "Operate" light being "on"), the cover may be removed. During the day, while using the machine, keep the cover off.

★ THE TOP ROLLER

The top roller may be referred to as the pressure roller. It forces the material into contact with the coating roller and is normally spaced about 1/32" to 1/16" away from the coating roller. (See Top Roller Adjustment Page 9.)

Keep a small cloth handy to wipe top pressure roller occassionally during use to remove specks of wax that may accumulate on the top roller. This is important.

Should a heavy build-up of wax occur on this roller because of failure to observe instructions, remove excess wax and wipe roller clean with a cloth saturated with any wax solvent.

★ STRIPPER FINGERS

The stripper fingers are located at the rear of the roller assembly and can be seen when the Top Roller Cover is removed. These fingers prevent the coated sheet from sticking to the roller as the sheet passes through the machine. The fingers are loosely mounted and can be moved along the shaft to any position you desire while the machine is warm. The fingers have been randomly spaced at the factory, but you may space them evenly across the roller, or, if you are coating narrow pieces, gang several fingers at one end of the machine approximately 1/8" to 1/4" apart to insure better pick-off. Note that the fingers dip into the wax in the pan so that they are kept heated. Keep the wax level high enough so that this condition is maintained.

★ THERMOSTAT CONTROL UNDER THE TOP DECK "LOW-HIGH"

The top deck is removable simply by lifting it up. Close to the left hand end of the sub-plate under the top deck you will find a control marked "LOW-HIGH." Moving the lever of this control sets the thermostat for lower or higher wax temperatures. Normally it is shipped with the lever close to the center to keep the wax at approximately 175°. The temperature may be raised or lowered as desired. To prevent "bleed-through" on thin materials, keep the temperature on the low side. For heavier stocks it may be raised. (See "Operating Temperature", Page 5.)

★ OPERATING TEMPERATURE

The machine has been shipped from the factory with the "Low-High" lever in the approximate center position. This should provide the proper operating temperature for coating most papers. As a guide, observe the coating after running a sheet through the machine. It should have a striated appearance with fine lines running the length of the sheet. If the coating is flat and the adhesive wax appears dull and even, without striations, the temperature is too high... or if there is bleed through the sheet, the temperature is too high. Move the "Low-High" lever toward the "low" end. Should the coating be very rough and bumpy with "hairs" hanging from the trailing edge, the temperature is too low. Move the "Low-High" lever toward the "high" end.

Thin papers, such as onion skin, news print, etc. should be coated at the lowest possible temperature to prevent the adhesive wax from penetrating the paper and bleeding through. Film, and other non-porous materials, may be worked at a higher temperature if desired.

★ Remember to allow some time for the machine to adjust to the working temperature after the "Low-High" lever has been moved.

KEEP WAX LEVEL UP TO MARKER OR MACHINE WILL NOT OPERATE PROPERLY.

★ THERMOSTAT PILOT LIGHT UNDER TOP DECK

Underneath the top deck, you will find a small pilot light projecting through the wiring cover. Disregard this pilot during normal operation as it merely indicates when the heating element goes "on" or "off". Its main purpose is for adjustment of the thermostat in the field. (See paragraphs "Automatic Thermostat Controls" and "Thermostat Adjustments" Pages 11, 12 and 13.)

★ WAX TRAY

KEEP WAX LEVEL UP TO THE MARKER OR THE MACHINE WILL NOT OPERATE PROPERLY

The machine is shipped with sufficient wax to start operations immediately. With use, the wax level in the tray will go down. Add Daige Flexible Adhesive Wax type BB 9 to keep wax level up to the wax level marker in the tray. DO NOT allow the level to fall substantially below the marker. Lift the top deck for access to the fill section of the tray, and add one half to one full bar of Daige Wax as required. Do not attempt to use other waxes in the machine. The wax level should be checked each morning when starting up. Too much wax may cause spill-over. Too little may create spotty coating, and erratic temperature variations. For best results, keep level at marker.

★ CLEANING OF WAX TRAY

After continuous use over long, extended periods, the wax in the tray may become contaminated with dust, dirt, lint, and other foreign matter. It is desirable to discard the old wax, and clean and refill the tray with new wax. In order to do this, the following procedure must be followed:

1. Place a shallow pan, such as an expendable aluminum pie plate at least 12" x 6" x 1" (or equivalent volume), under the drain hole.

2. While machine is hot and wax is liquid, remove drain plug at rear of machine.

3. Raise the machine slightly at the front end by placing a thin book or similar size object under each front corner.

4. Turn MAIN switch off while wax is draining from drain hole into pan. Allow all wax to drain. Screw back drain plug and tighten.

5. Restore machine to level position. Pull out A.C. line cord from outlet. Grasp the horizontal rod at the rear of the machine that supports the stripper fingers, and pull the entire roller assembly upward so that the carriage is at approximately 45° to the base. Clean out paper and miscellaneous pieces from underneath the coating roller and between Doctor Bar and roller. Wipe out tray with a cloth.

6. After the tray has been cleaned, fill the tray with five bars of Daige Adhesive Wax Type BB9. Break up the bars so that they are conveniently seated in the tray. Grasp the rod running across the rear of the frame and gently allow the assembly to fall back into the tray. Be sure that the carriage support bar at left side is tilted at an angle so that carriage will seat in place.

7. Plug in A.C. line cord. Turn MAIN switch on. Allow wax to melt and the roller assembly to seat itself in the wax. Press down firmly on the roller assembly after the wax has melted to seat the entire assembly. Replace top deck. Continue to use machine or shut down until required.

- KEEP WAX LEVEL UP TO MARKER OR MACHINE WILL NOT OPERATE PROPERLY

OPERATING INSTRUCTIONS

1. PLACE MACHINE ON FIRM, LEVEL SURFACE. PLUG LINE CORD INTO GROUNDED A.C. OUTLET. SEE RATING PLATE FOR VOLTAGE.

2. LIFT UP TOP DECK. SET "HIGH-LOW" THERMOSTAT IN CENTER FOR COATING NORMAL WEIGHT STOCK.

3. POSITION TOP DECK BY ENGAGING COVER HOLES WITH PINS IN CARRIAGE. (SEE "THE TOP DECK" Page 3, FOR COVER POSITIONS.)

4. THROW MAIN SWITCH ON. RED PILOT MARKED "HEAT ON" WILL GLOW, INDICATING THAT MACHINE IS WARMING UP.

5. IN APPROXIMATELY 18 MINUTES, THE "OPERATE" AMBER PILOT LIGHT WILL GLOW. MACHINE IS AT OPERATING TEMPERATURE AND READY FOR USE. MOTOR WILL NOT OPERATE UNTIL AMBER LIGHT GOES ON.

6. TO COAT MATERIALS, THROW MOTOR SWITCH "ON", OR USE FOOT SWITCH CONTROL. PLACE MATERIAL TO BE COATED ON THE DECK OF MACHINE WITH PRINTED MATTER FACING UP. GENTLY PUSH MATERIAL FORWARD UNTIL CAUGHT BY ROLLERS. WITHDRAW THE MATERIAL IMMEDIATELY AS IT IS EJECTED FROM THE MACHINE. DO NOT ALLOW TRAILING EDGE TO STAY IN CONTACT WITH THE ROLLERS. FAILURE TO DO THIS MAY THROW WAX ON TO THE TOP PRESSURE ROLLER. IF THIS SHOULD OCCUR, THE WAX SHOULD BE REMOVED FROM THE ROLLER WITH A CLOTH SATURATED IN ANY WAX SOLVENT

7. THROW MOTOR SWITCH OFF WHEN YOU ARE THROUGH COATING MATERIALS. LEAVE MAIN SWITCH ON DURING WORKING HOURS. AUTOMATIC THERMOSTATS CONTROL THE WAX TEMPERATURE.

8. AT THE END OF THE DAY, THROW MAIN SWITCH OFF. BOTH PILOT LIGHTS WILL GO OUT, INDICATING THAT THE ELECTRICAL CURRENT IS OFF.

— CHECK WAX LEVEL EVERY DAY TO KEEP MACHINE OPERATING PROPERLY —

INSTRUCTIONS FOR MOUNTING COATED MATERIAL

The Daige pressure-sensitive adhesive Type BB 9 in wax form is a product of extensive laboratory research, affording you complete control over the exact adhesive qualities you desire. By varying the pressure applied to the material being mounted, the adhesiveness can be controlled from slight adhesion for easy removal, to permanent bond. Follow these simple instructions to obtain the results you desire.

Where possible, a full proof sheet should be run through the machine in a single pass before cutting it apart. Then each segment you require may be cut from the sheet and mounted. The piece may be mounted immediately, or if you desire, at a later date, as long as the coated side is free from foreign matter and excessive dust.

To obtain more adhesion, use a harder roller, such as wood or bone. This will provide higher pressures over narrower areas. Where point pressure is desired for extreme adhesion, a crowned roller may be used. These rollers are available at your local graphic art supplier.

The standard roller supplied with the machine can be used for most applications. After setting the proof material in the desired position, apply the roller with firm pressure. Roll over the material several times. If there is a possibility of smearing the printed matter, place a piece of acetate or paper between the print and the roller. A firmer pressure will give you more adhesion... a lighter pressure less adhesion.

For extremely firm adhesion and where small pieces are laid down, use a standard plastic burnishing stick and burnish down briskly. Firm high pressure will result in a permanent-type bond.

★ THE COATING ROLLER

The coating roller (large roller) is made of special aluminum alloy for high heat conductivity. It sits in the wax tray and may be lifted out of the tray by lifting the entire carriage assembly as described under "Cleaning of Wax Tray." During operation, heat is conducted from the molten wax adhesive to the roller. The heated roller carries the adhesive past the Doctor Bar, which removes the excess, in order to provide a measured, microthin layer for proper coating. It is therefore important for the roller to be seated securely in place and to be sufficiently immersed in the adhesive wax. Press down firmly on the roller assembly to be sure it is seated before attempting to coat materials. The tray containing the adhesive wax should be filled to the wax level marker. THIS IS IMPORTANT.

★ CLEANING THE COATING ROLLER

After prolonged use, the coating roller may become coated with sludge and foreign matter accumulated from the various materials coming in contact with the roller during coating. To clean, heat the machine as in normal operation, remove the top deck and top roller cover, and throw back the top roller assembly. It is hinged at the rear. With the top roller out of the way, press the edge of a small stiff card (the size of a business card) on the surface of the large coating roller, and move it along the top of the roller as it rotates. The sludge will adhere to the card. Allow the excess clear wax to run off the card as it builds up.

★ THE TOP ROLLER - ADJUSTMENT

The space between the top roller and the coating roller has been factory adjusted with approximately .040 inches between rollers. It can be checked for adjustment by using a .030 to .040 shim and sliding it between the coating roller and the top roller while the machine is hot. If adjustment is needed, turn the screws located at the foot of the two castings that support the top roller. The screws rest on the Doctor Bar. If a .040 gauge is not available, use 10 thicknesses of 20 lb. bond paper as a gauge. Turning the screws clockwise will raise the roller; counter-clockwise will lower the roller. For thin acetate, adjust to .020".

It is not necessary to readjust the top roller clearance when coating thicker materials. Simply slide the feed bed of the machine (The Top Deck) away from the rollers to the next pin position and feed materials as before. For further instructions, see paragraph marked "The Top Deck."

★ WAX THICKNESS ADJUSTMENT

The Daige Adhesive Wax Coater has been accurately adjusted at the factory to apply a wax thickness of approximately .005 to .006 inch to the material being coated, and should remain at this thickness for best all-around general operation. If the Doctor Bar controlling this thickness has been disturbed, it can easily be readjusted as follows:

(The Doctor Bar is the blade that touches the front of the coating roller, accessible when top deck is removed.)

1. Loosen slightly the top screws that hold down Doctor Bar to its support. (See sketch below.)

2. Turn two Brass Knurled thumb screws located at rear edge of Doctor Bar counter-clockwise until the blade moves away slightly from the drum.

3. If a .006 gauge is not available, place two thicknesses of approximately 1" wide strips of 16 lb. bond paper at each end between the Wax Roller and the Doctor Bar. Slowly turn the two rear Brass Knurled screws clockwise, alternately, until a firm even drag is felt on the paper as it is pulled from between bar and roller.

4. Tight the top screws to secure Doctor Bar firmly in place. Recheck the drag on the shims.

If, for any reason, additional wax thickness is needed on materials being coated, they may be passed through machine two or three times to build up required wax thicknesses.

If a continuous need for heavier wax thickness is required, the Doctor Bar can be adjusted so as to provide a larger gap between the roller and the bar by following the above instructions, using a heavier gauge.

★ AUTOMATIC THERMOSTAT CONTROLS

The Daige Adhesive Wax Coater is equipped with a fully automatic thermostat control system, consisting of the following: (See Illustration)

1. "Low-High" thermostat which controls the temperature of the adhesive wax during normal operation. It has an approximate range of 160° to 200° F., and may be manually adjusted by the operator as desired, by moving the lever projecting through the slot on the inside cover.

2. "Override" or bypassing thermostat which controls the preheat cycle during starting period. This thermostat accounts for the fast warm-up of the machine, and is in control only during the warm-up period.

3. "Motor" thermostat, which allows the motor circuit to become operative when the adhesive wax and machine has reached operating temperature.

4. "Thermostat Indicator Pilot Light", located inside the machine adjacent to the tray. This indicator light will glow whenever the heating element is automatically energized as the thermostats operate. The indicator light is used for adjusting the "Low-High" and "Override" thermostats.

5. "Operate" (amber) pilot light, located on the front panel, which glows when the motor thermostat closes, indicating that the machine has reached proper operating temperature and the motor may be operated if desired.

★ THERMOSTAT ADJUSTMENTS

The Daige SpeedCote Adhesive Wax Coater has been fully adjusted at the factory before shipment and should not require furtner adjustments. However, occasionally, due to extreme jarring, rough handling, and vibration during shipment, a readjustment of the thermostat controls may be necessary if the heating cycle does not conform to the prescribing timing and operating temperature as indicated in the following instructions. The following is the procedure for adjusting and resetting the thermostats. (Refer to illustration on previous page for location of thermostats and indicator pilot light.)

PREPARATION

1. The adjustments must start with the machine absolutely cool...at room temperature. Allow several hours for the machine to cool down if it has been in use.

2. Disconnect the A.C. plug from the outlet. Remove Roller Cover, Top Deck and inner cover over the wiring.

3. Set "Low-High" thermostat handle so that it is in the vertical position.

4. Turn "Override" thermostat fully clockwise until it hits the stop.

5. Turn motor thermostat approximately one half turn counter-clockwise.

ADJUSTMENTS

Timing is extremely important, and the elapsed time should be recorded to properly make these adjustments. Proceed as follows:

1. Plug the machine into an A.C. outlet. Both switches on the front panel should be off.

2. Throw MAIN switch on. Immediately record starting time..... _____

3. Use a dial type thermometer with an upper range of 250° to 300° F. and as soon as the wax becomes partially melted, insert it into the wax tray as shown in the illustration on the next page. Push the stem of the thermometer as far as it will go under the coating roller and rest the dial on the edge of the tray. Keep watching the thermometer and move it slightly from time to time to get a good average temperature reading.

4. In about 10 to 12 minutes, when the thermometer reads 210° to 220° F., immediately turn the "Override" thermostat counter-clockwise until the thermostat indicator light just goes out. This completes the setting for the "Override" thermostat.

5. The "Motor" thermostat is located under the Doctor Bar as shown, or mounted on the base close to that location. In approximately 16 to 17 minutes maximum from starting time, as soon as the coating roller appears completely glazed, (Do not prolong time) turn "Motor" thermostat adjusting screw clockwise until the amber light on the front panel marked "Operate" just goes on. This completes the setting for the "Motor" thermostat.

6. The "Low-High" lever should be left in the vertical position. Leave the thermometer resting in the tray for a period of at least 30 minutes for the temperature to stabilize. The thermometer should indicate a reading of 175° to 178° F. at the end of that period with the machine idle. With the machine running, it will indicate a drop of three to five degrees.

7. If the above conditions are not met, adjust as follows:

   A. If the temperature reads low, move the "High-Low" lever counter-clockwise a few degrees by squeezing the lever spring and rotating it, while holding the thermostat shaft in a steady position so that it does not rotate. This will reposition the lever on the shaft so that when the lever is moved to the vertical position, the temperature will increase.

   B. If the temperature reads high, perform the same operation except rotate the lever clockwise.

   C. After these adjustments, set lever in vertical position, allow time for machine to readjust to temperature and take temperature reading to check new setting. Readjust if necessary.

THERMOSTAT LEVER DETAIL

SCHEMATIC WIRING DIAGRAM - Model 1215

SCHEMATIC WIRING DIAGRAM - Model 1230

PARTS LIST

Motor	M-1200	Thermostat "Motor"	M-1210
Belt	M-1201	Heating Element*	M-1211
Motor Pulley (large)	M-1202	Top Roller Bearing	M-1212
Roller Pulley (small)	M-1203	Bottom Roller Bearing	M-1213
Heater Switch	M-1204	Large Gear	M-1214
Operate Switch	M-1205	Small Gear	M-1215
Red Pilot Light*	M-1206	Hand Burnishing Roller	M-1217
Amber Pilot Light*	M-1207	Stripper Fingers	M-1219
Thermostat "Lo-Hi"	M-1208	Foot Switch	M-1220
Thermostat "Override"	M-1209	Tranformer for Model 1230	M-1221

*Please indicate whether for Model 1215 or 1230

EMERGENCY TROUBLE SHOOTING

Symptoms	Possible Causes
Machine completely inoperative. Heater Pilot Light will not go on. Wax remains cold.	Wall outlet dead. Line cord not plugged in. Heater Switch not on. Loose connection internally. Defective line cord - switch.
Heater switch on. Red Pilot Light on. Wax remains cold.	Heater connections loose. Thermostat connections loose. Thermostat defective. Heating element defective.
Amber light will not go on after thirty minutes warm-up. Motor will not run.	Loose connection to motor or to motor thermostat. Motor thermostat set too high. (See Page 13) Motor thermostat defective.
Both pilot lights light, but rollers will not turn after thirty minutes of warm-up, and motor switch is ON.	Belt off drive gear. Loose gears on shafts. Roller jammed in bearings. Loose connections on motor switch Loose wiring in motor circuit including terminal block. Defective motor.
Wax coating too thin or too thick on material.	Doctor Bar adjustment incorrect. (See Page 10) Wax level. (See Page 5) Temperature incorrect. (See Page 11)
Uneven Coating.	Machine not level. Wax level too low. (See Page 5) Doctor Bar set at angle. (See P. 10) Coating roller not seated firmly in tray.
Wax build up on top roller, on stripper fingers or on top of Doctor Bar.	Wax level too low in wax tray. Fill to wax level indicator. Tail end of coated material being left to drag against wax roller. (See Operating Instructions.) Top roller too low. Increase gap. (See Top Roller Adjust. -Page 9)

✶ KEEP WAX LEVEL UP TO THE MARKER IN THE TRAY