CONAIR
www.conairnet.com

USERGUIDE
UGD006/1095

Compu Dry Dehumidifying Dryer

Model CD-30

⚠ **WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!**

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

WARNING:

This dryer utilizes contactors which contain mercury. As of January 1, 1990, mercury is to be considered as a hazardous substance and dealt with accordingly.

In the rare event that a relay should be vaporized, the levels of the mercury vapor in the air would be below public safe levels within one hour. During that hour there is no practical hazard; a person would have to inhale concentrated fumes continuously for weeks before an opportunity existed to experience noticeable symptoms.

Standard procedure in the case of a spill is nearly as simple as cleaning up any spill.

A. Sweep the mercury and parts into a "Ziplock" type of bag or air-tight container.
B. Dispose of mercury in normal fashion as done with scrap metals.

Also included with your instruction packet is an MSDS sheet (#7439-97-6) for your use.

WARNING:

For your safety, DO NOT store or use flammable or explosive materials in the vicinity of this equipment.

CD-30 DEHUMIDIFYING DRYER INSTRUCTIONS

Equipment Description:

Conair Dehumidifying Dryers provide hot, low dewpoint air, circulated in a closed system, for fast moisture pickup from hygroscopic plastic materials.

Drying air is passed through a cartridge containing a molecular sieve desiccant where moisture is deposited. The dry air is then heated to a preset temperature so that air entering the drying hopper is always hot and "thirsty". Moisture picked up from the plastic material passes through a return hose from the drying hopper and once again passes through the molecular sieve desiccant.

Regeneration is accomplished by passing room air, heated to 425°F, through the desiccant and purging the moisture out of the system.

The Desiccant Assembly:

The desiccant cartridge design efficiently exposes the molecular sieve desiccant to moist air returning from the drying hopper. Water molecules in the return air are trapped in the desiccant, while low dewpoint air leaves the cartridge and enters the dryer's air heater compartment. Flowing over the heating elements, the dry air is brought back up to the selected temperature and re-enters the bottom of the drying hopper. There the heated, "thirsty" air again picks up moisture from the plastic pellets.

Before a desiccant cartridge can become completely saturated with trapped moisture, it switches "off-stream" to a high heat, regeneration condition and is prepared for its next cycle through the process air stream. The compact size enables the cartridge to regenerate quickly using less power.

The dryers have been designed with a timed cycle capable of handling the worst conditions.

The desiccant has an almost unlimited life, but should it ever need replacement due to accidental contamination, cartridges may be easily replaced in less than 15 minutes. (See "Maintenance")

Drying Circuit: (Figure 1)

Return air is pulled through the process filter (1) by the blower (2) and delivered into the desiccant cartridge (3), where it is thoroughly dehumidified. Then it passes into the process heater (4), where the air is heated to the temperature selected by the machine operator on the control panel. A microprocessor control (5) assures heating to the proper temperature at the inlet of the hopper.

The process flexible hose (6) conducts the air into the drying hopper to the deflector cone (7), which distributes the flow evenly through the pellets (8), heats them and removes their moisture content. The moisture bearing air is then drawn into the flexible return hose (9), and the entire cycle is repeated.

Process Temperature:

The process temperature is monitored and controlled at the outlet of the dryer. If a thermometer is used, it should be noted that during the regeneration/cooling cycle the process temperature will be reduced. This has no effect on the drying process. The temperature will come back up to process temperature once the dryer switches to the process cycle.

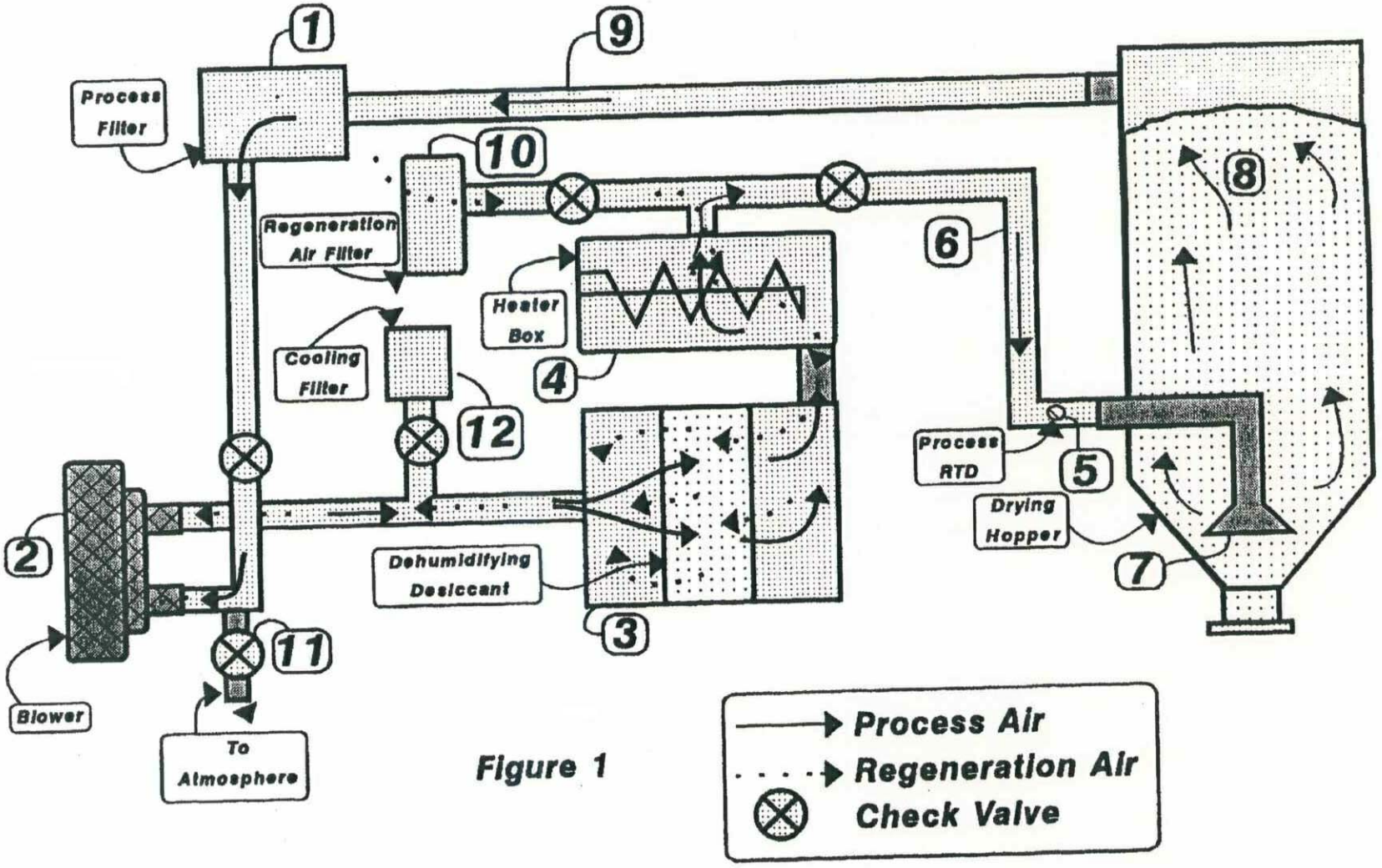

1
9
Process Filter
10
Regeneration Air Filter
Heater Box
6
8
Cooling Filter
4
12
Process RTD
5
Drying Hopper
2
Dehumidifying Desiccant
7
3
11
Blower
To Atmosphere
Process Air
Regeneration Air
Check Valve

Figure 1

Regeneration Circuit: (Figure 1)

As the desiccant tank approaches saturation, the dryer switches from process cycle to regeneration cycle to purge the desiccant. At this time, the blower will reverse rotation, initiating the regeneration cycle.

The blower (2) draws air through a filter (10) and over the heater box (4) where it is brought to an elevated temperature. The heated air flows through the "wet" cartridge (3) and purges it of moisture. The moist air is then blown through the exhaust (11) and out of the system. (For summer operation, or operation in air conditioned rooms, the exhaust air may be exhausted outdoors. However, care should be taken that the vent is large enough and does not restrict air flow.)

Cooling Circuit:

Immediately following regeneration, the fresh cartridge must be cooled before switching to process cycle. This is accomplished by de-energizing the heaters and continuing to run the blower, drawing cool air through the desiccant.

During the regeneration and cooling, while the desiccant is being purged of moisture, the actual temperature shown in the top display (Item #6) will be the last temperature seen in the prior process cycle. Example:

Actual	| 1 | 7 | 9 |
Set Point	| 1 | 8 | 0 |

****

VERY IMPORTANT: The air filters assure that only clean air flows through the drying circuit. Fines carried in the return air stream may eventually clog the filter, which can decrease efficiency. Check filters frequently and clean as necessary. (See "Maintenance")

****

Timing Cycle:

The dryer starts in the last mode of operation. It then follows its standard 72-minute cycle, as follows::

1. Regeneration Cycle	6 Min.
2. Cooling Cycle	11 Min.
3. Process Cycle	55 Min.

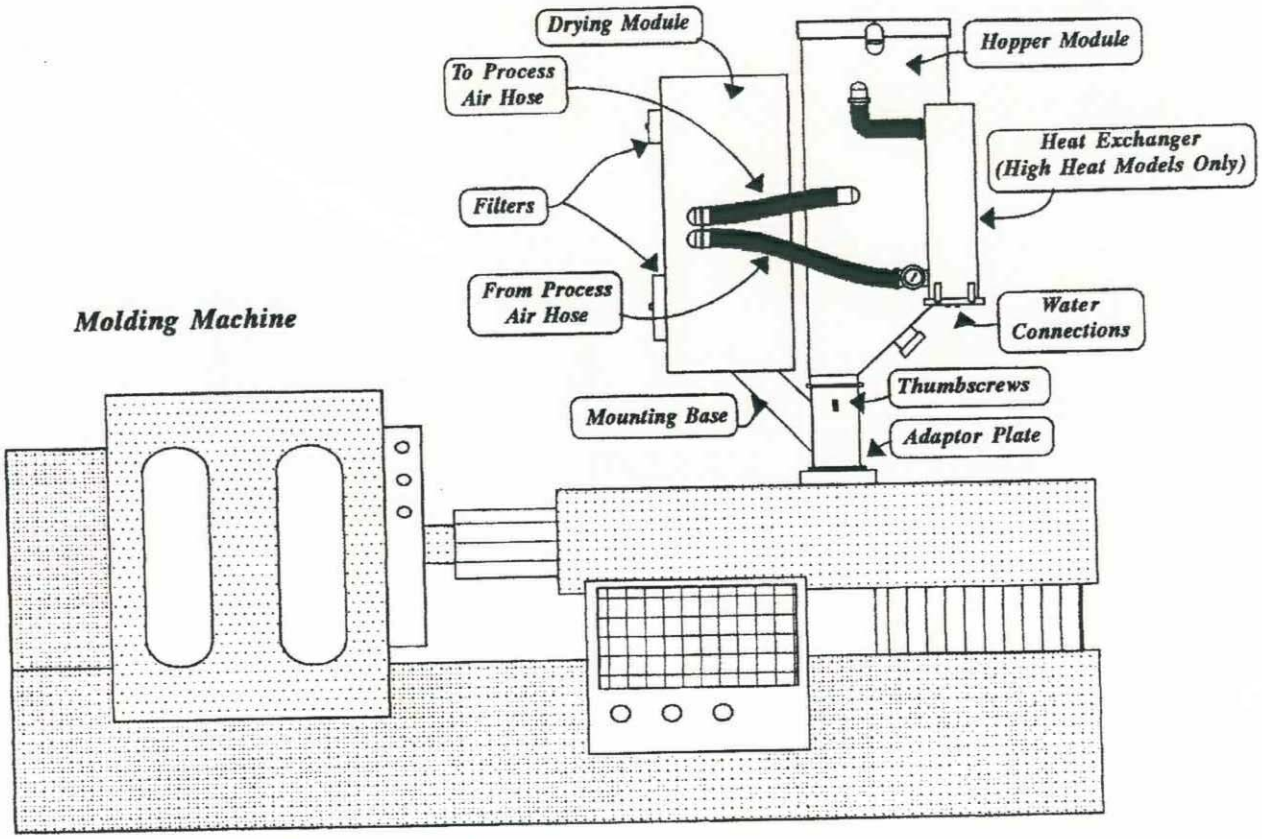
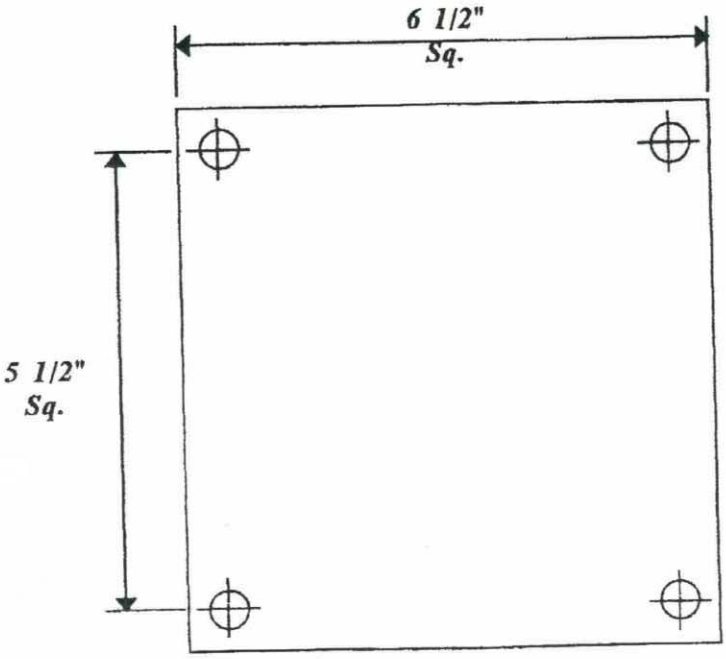

Drying Module
Hopper Module
To Process Air Hose
Heat Exchanger (High Heat Models Only)
Filters
From Process Air Hose
Water Connections
Molding Machine
Thumbscrews
Mounting Base
Adaptor Plate

Figure 2


6 1/2" Sq.
5 1/2" Sq.

Installation: (Figure 2)

Mounting Plate: (Figure 3)

Prior to installing CD-30, an adapter plate may be required to be fitted to the throat of the process machine. (This plate may have been provided with the dryer if ordered that way.) Figure 3 shows the relative dimensions of the CD-30 mounting base. If you cannot fabricate an adapter plate yourself or have it done locally, send Conair a template of the throat and we will make the adapter plate (price on request).

Dryer:

Note: Before installing Dryer/Hopper Assembly, check inside carefully for parts which may have been placed inside for shipping. Check also for air inlet and outlet obstructions. Inspect screen cone, and clean hopper thoroughly to remove rust prohibitor and any dirt which may have accumulated during shipping.

Dryer Assembly:

1. Separate dryer and hopper from mounting base. The dryer is bolted to a plate that is part of the mounting base and these bolts may be removed from below the dryer. The hopper is positioned over a fitted slip tube and held in position by thumbscrews. Loosen the thumbscrews and the hopper module may be simply lifted off to free it from the base. Be sure to disconnect hoses from the dryer before separating the two modules.

2. Bolt the adapter plate (discussed above) to the molding machine.

3. Bolt the mounting base of the dryer assembly to the adapter plate. Orient accordingly to permit easy access to the controls and the hopper for loading once the modules are installed on the mounting base.

4. Carefully lift the dryer and mount in position on the mounting base with the bolts removed in Step #1.

5. Attach vacuum loader (if used) to the top of the hopper module, using the clamping lugs provided. It is not necessary to drill holes in the top of the hopper. If other than a Conair loader is used, or loader flange does not rest flat on top of hopper, provide gasketing to prevent air loss.

6. Mount hopper in position and secure with thumbscrews.

7. Connect hoses as shown in Figure 2.

NOTE: An alternative arrangement for installing the dryer is possible if you experience restrictions in mounting both modules on your process machine. The dryer may be mounted to the side of your machine or in close proximity to it and connected to an alternative drying hopper with hoses. Contact Conair for the necessary hardware for this type of installation and for information on alternative hopper choices.

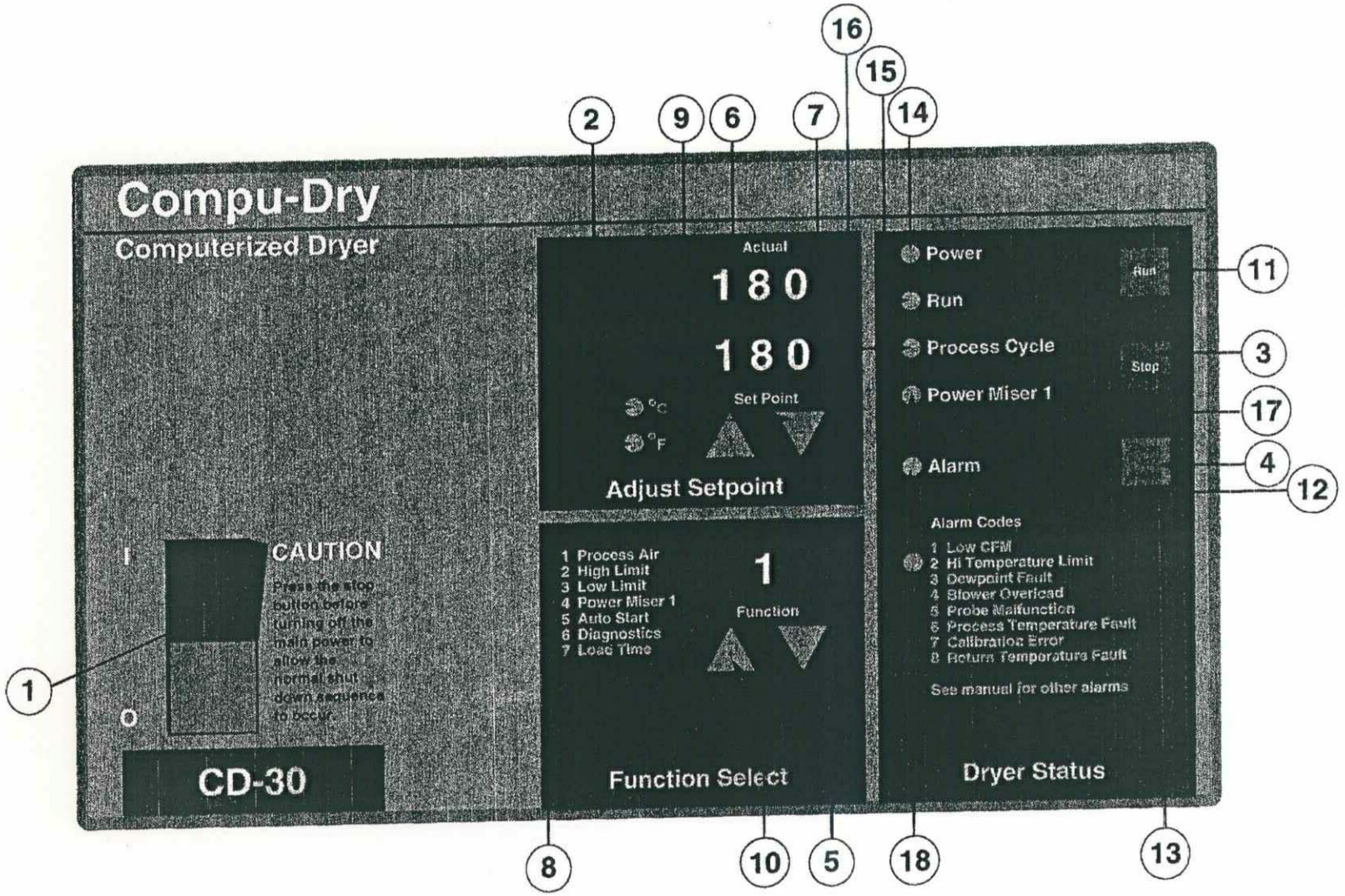

Compu-Dry
Computerized Dryer
Actual
180
180
Set Point
°C
°F
Adjust Setpoint
Power
Run
Process Cycle
Power Miser 1
Alarm
Run
Stop
Alarm Codes
1 Low CFM
2 Hi Temperature Limit
3 Dewpoint Fault
4 Blower Overload
5 Probe Malfunction
6 Process Temperature Fault
7 Calibration Error
8 Return Temperature Fault
See manual for other alarms
Dryer Status
1 Process Air
2 High Limit
3 Low Limit
4 Power Miser 1
5 Auto Start
6 Diagnostics
7 Load Time
1
Function
Function Select
I
O
CAUTION
Press the stop button before turning off the main power to allow the normal shut down sequence to occur.
CD-30
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

Figure 4

DRYER START-UP (Figure 4)

Function Set-Up:

By switching the "ON/OFF" or the reset switch (Item #1) to the ON position, the power on light (Item #14), and LED displays (Items #5, 6 & 7) will be energized as follows:

Actual	0 7 9
Set Point	1 5 0
Function Display	1

Depending on how your unit was set up, either the Degree "C" or the Degree "F" LED (Item #2) will be on. The function display (Item #5) has been designed to give the operator an indication as to what function is being monitored or displayed at any time.

The word "Function" refers to the parameters listed in Item #8, of which the first three relate to the process circuit of the dryer. The remaining three parameters relate to other functions of the dryer. With the Function display (Item #5) indicating Function #1 "Process Air", we may increase or decrease the setpoint by using the setpoint up and down keys (Item #9). As you press the setpoint up and down keys, you will see the "Setpoint" display (Item #7) scroll accordingly. There are two scrolling speeds designed into the control. When the setpoint up and down keys (Item #9) are pressed, the first scrolling speed is invoked. After 5 seconds, the faster speed is invoked. The following is a list of all functions, along with a brief description and setup procedure for each one.

Functions:

1. Process Air - Process delivery air temperature should be set for the material being processed (eg. ABS at 180°F). As before with the function display (Item #5) indicating Function #1, use the setpoint up and down keys (Item #9) to adjust the setpoint to the desired process air temperature. The actual display (Item #6) displays the actual process temperature as seen by the process RTD.

*2. Hi Limit - This function safeguards against someone raising the process air setpoint above an acceptable level for a given material. The process air setpoint cannot exceed the "Hi Limit" setting. Therefore it is impossible to accidentally raise the process setpoint above the "Hi Limit". This number may be any number greater than or equal to the "Process Air" setpoint (400°F maximum). A safe setting normally would be 10 degrees above the "Process Air" setpoint.

*3. Lo Limit - This function is similar to the "Hi Limit". The setting may be any number less than or equal to the "Process Air" setpoint (100°F minimum). A safe setting normally would be 10 degrees below the "Process Air" setpoint.

* These functions require an access code in order to change the setpoint. With an access code of 54, it is possible to raise or lower the setpoint.

The access code can be entered at any time. Press the function down key (Item #10) until the function display (Item #5) indicates #6. While in diagnostics (Function #6), use the setpoint up key (Item #9) until the setpoint display reads 054. Then scroll up to the desired function to be adjusted by pressing the function up key (Item #10). Once you have adjusted both Hi and Lo Limits to the desired settings, you can reset the access code to read 000 or the unit will automatically reset after a two-minute timer counts down.

4. Power Miser 1 (optional) - Setpoint display (Item #7) will read noP if not installed. This function relates to Power Miser 1 "Deluxe". This option is for extending the process cycle time of your dryer by measuring the process dewpoint. If this option has been factory installed, it has been pre-adjusted to -3°F. This is an acceptable setpoint for most materials, but you may adjust the setpoint should your application require a different setpoint. With the function display (Item #5) indicating Function #4, use the setpoint up and down keys (Item #9) to adjust to the desired setpoint. It is adjustable from -40°F to 0°F.

5. Auto Start - This function permits automatic startup at the predetermined time. It is adjustable from 0 to 150 hours. With Function display (Item #5) indicating #5, enter the number of hours before the dryer is to start by using the setpoint up and down keys (Item #9). Then by pressing the "RUN" key (Item #11), the timing cycle will start. The actual display (Item #6) will read "ON" and the run LED ((Item #15) will flash on and off to give operator the indication of "Auto Start" in process.

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CAUTION: Make sure the temperature parameters are properly adjusted before using this parameter. Failure to do so could result in severe damage to your material.

****

The timer must be reset each time you wish to use this feature. On power interruptions, the microprocessor retains where the timer left off and will resume the countdown once power is restored.

To de-activate the auto start timer, press the "STOP" key (Item #3). Then, with Function display (Item #5) indicating #5, set the timer to zero by using the setpoint down key (Item #9).

6. Diagnostics - This function is reserved for entering access codes and setup codes for various functions. These codes are referred to throughout the manual as required.

SECONDARY FUNCTIONS

These functions are not listed on the control label but may be needed by the operator for certain applications. To access these functions, with the Function display (Item #5) indicating #6, use setpoint up key (Item #9) to enter access code of 064. Then by pressing the Function down key (Item #10), you can scroll through each function you wish to view. The following is a list of all secondary functions, along with a brief description and setup procedure for each one.

1. Return Air - This function is not adjustable and is for monitoring the temperature of the return air from the drying hopper. Your dryer has been equipped with this feature to prevent and protect your dryer from high return air temperatures, which could damage the dryer's blower. Also to alert the operator to the possible need for a return air aftercooler (See Hi Temperature D30 Dryer section in this manual).

2. Software Version - This function simply displays the software version number shown in the setpoint display (Item #7). This function may be needed when contacting Conair Franklin Service Department for information on your dryer and will be helpful to know what software version is installed in your dryer without having to open the control box to check the software version on the actual chip.

3. Access Code - This function is for access code of 054, which is needed to adjust the Hi and Lo Limit functions of your dryer. If you do not want to have to enter an access code of 54 each time to adjust the Hi and Low Limit, you can turn this function off. This can be done with the Actual Display (Item #6) indicating "Acc". Press the setpoint down key (Item #9) so that the setpoint display (Item #7) reads "Off". After doing this, it will no longer be necessary to enter an access code of 54 to adjust the Hi and Lo Limit.

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4. SPI Interface (optional) - If this option has not been installed, the setpoint display (Item #7) will read "noP". This is the display if you communicate with RS232.

If this option has been installed, the setpoint display (Item #7) will read 3.01. This is the SPI version installed in your unit. If you use RS485 to communicate with, this is what should be displayed.

5. Baud Rate - This function is for adjusting the Baud Rate for your communication needs. For RS232 it is adjustable from 3 to 96 which indicates 300 to 9600. For RS485, the adjustment is from 12 to 96 which indicates 1200 to 9600. To adjust the Baud Rate with the actual display (Item #6) indicating "bAu", use the setpoint up and down keys (Item#10) to adjust to the desired Baud Rate.

6. Node Address - This function is also for communication purposes. It is adjustable from 032 to 064. This allows you to give 32 separate unit addresses for communication. To adjust the node address with the actual display (Item #6) indicating "nod", use the setpoint up and down keys (Item #9) to adjust to the desired node address.

Once all functions have been adjusted properly, the dryer may be started by pressing the "RUN" key (Item #11). Upon restarting the dryer, the "RUN" LED (Item #15) will be energized. If any malfunction occurs, the "Alarm" LED (Item #12) will be energized, alerting the operator. By pressing the "Push to Read" key (Item #4), the nature of the malfunction will be indicated in the setpoint display (Item #7). For example:

Actual	E	r	r
Set Point		1	

This indicates error message #1, which indicates Alarm #1 Low CFM.

NOTE: The display will stay energized for three seconds after the "Push to Read" key (Item #4) is pressed.

NOTE: Some alarms are passive, while others are shut down alarms (see trouble-shooting at end of manual).

While the dryer is running, there are LED's (Item #16 & #17) which advise the operator what cycle and options are being energized during operation. It should be noted that the LED for the optional function (Item #17) will not be energized unless the option has been installed.

Use STOP key (Item #3) to shut down the dryer. The STOP key turns off the heaters, but allows the blowers to continue running for a three-minute, cool-down period. When the blowers stop, the dryer has shut down and the ON/OFF switch (Item #1) can be turned to the OFF position.

IMPORTANT: Do **not** use the ON/OFF switch to stop the dryer. Using the ON/OFF switch to stop the dryer prevents the necessary cool-down period and will result in an alarm code the next time the dryer is started. Repeated use of the ON/OFF switch to stop the dryer could damage the heating elements.

Electrical Information:

The appropriate wiring diagram for your model of dryer is included in the packet with this manual. It provides complete details on wiring and an electrical parts list.

CAUTION: MAKE SURE YOUR DRYER IS CONNECTED TO THE CORRECT VOLTAGE, USING THE PROPER SIZE POWER CORD. Verify voltage by checking the nameplate on the side of the control box. All units are pre-wired at the factory for service on one voltage only; check your wiring diagram to verify voltage.

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DO NOT ATTEMPT TO ALTER VOLTAGE CONNECTIONS

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NOTE: A "Cold" dryer may take up to 72 minutes to reach full operating capacity. If the unit has not been used in some time, allow sufficient time for warm-up. Also if the dryer has just been installed or has not been operated for a long period of time, the desiccant cartridge may have reached equilibrium with the surrounding air, in which case it is conceivable that you could actually add moisture to the resin which is being dried. In order to avoid this, the desiccant cartridge should be regenerated by turning the machine on while connected to the hopper (without any material in it) and let it run "closed-looped" for approximately 30 minutes. During this period, the process delivery air temperature should be set at 140°F. At this point, load the hopper and start drying. Be sure to make the proper settings before starting to dry.

Maintenance:

Filters:

The process, regeneration and cooling filters serve to protect the desiccant from contamination by dirt, dust and fines. If contamination occurs, drying efficiency will be severely diminished. Therefore, it is very important that the filter canister be cleaned at regular intervals. Length of time between cleaning will depend on the type of granulate being processed and the working environment, but typical intervals range from three to fourteen days.

To Clean Filters:

First, shut down dryer. This must be done so that dirt and humidity are not drawn into the drying circuit. Then remove filter lid from the front of the dryer and slide out filter cartridge. Use compressed air to blow the dirt and fines out. Always blow from inside-out. MAKE SURE FILTER IS PROPERLY SEATED WHEN RE-INSTALLING AFTER CLEANING.

NOTE: Contamination is the principal cause of desiccant failure; if the desiccant cartridge should become contaminated, drying efficiency will be reduced.

Desiccant Cartridge Replacement:
(See Figure 5)

The desiccant cartridge is located above the control box in the desiccant cartridge chamber. Remove the main cover and the desiccant chamber side panel to obtain access to desiccant cartridge. To remove cartridge, loosen the four set screws which secure the cartridge. The desiccant cartridge will now slide out of its housing. Install the new cartridge and reverse above procedure to re-assemble.

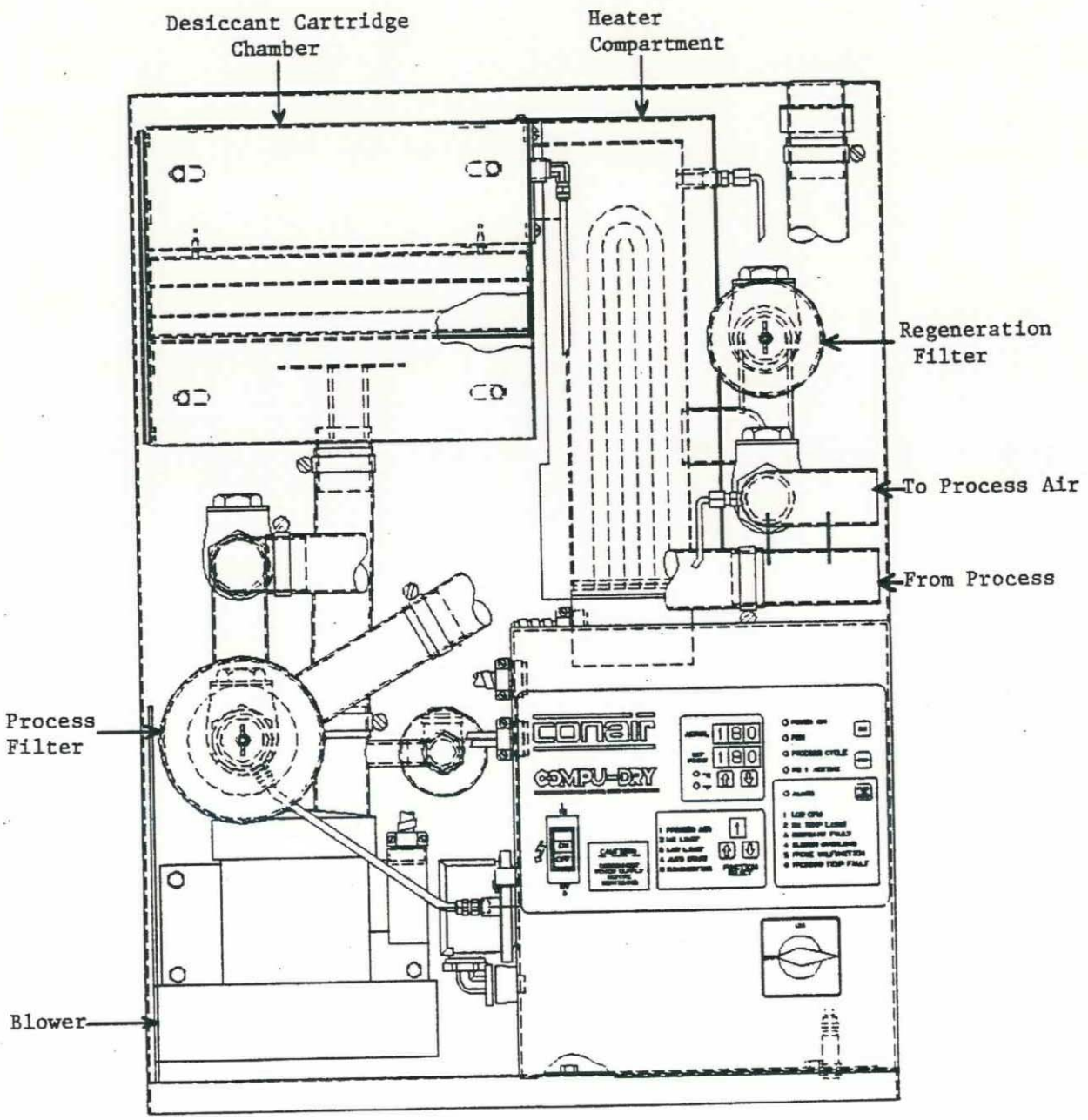

Desiccant Cartridge Chamber
Heater Compartment
Regeneration Filter
To Process Air
From Process
Process Filter
Blower
conair
COMPU-DRY

Figure 5

Heating Element:

The heating elements in your Conair Dryer require no routine maintenance. After a very long term of service, however, elements may eventually require replacement. Should the elements need replaced, care should be taken in rewiring the new elements the same as the defective ones. See Figure 5 for heating element location and check your parts list for the replacement.

CAUTION: Before servicing dryer, be sure to switch main disconnect to "OFF" position.

Lubrication:

All motors are lubricated for life and require no lubrication.

Check Valve Maintenance:

The check valves used in the dryer do not require any regular maintenance, but if it becomes necessary to remove them, care should be taken when they are re-installed in order that the valve is positioned in such a fashion that the check plate will swing straight down. If the valve is tilted, there is the possibility of binding.

HIGH TEMPERATURE CD-30 DRYER

General:

Essentially, the high temperature dryer is the same as the standard dryer with the exception of additional parts necessary to properly handle the higher temperature.

The high temperature dryer is intended to be used in applications where the drying temperature ranges from 250°F to 350°F. Higher temperature ranges can be achieved. To do this, consult Conair for proper sizing.

Auxiliary Equipment:

The auxiliary equipment necessary for high temperature drying includes:

Aftercooler:

Utilizing city or tower water in the range of 55 to 70°F, the return air from the hopper is cooled to an acceptable level before introducing it back into the desiccant tank where moisture is removed from the cool air. In a few cases where material rates are low, it may be necessary to use 40°F coolant temperatures supplied by a chiller in order to lower the high return temperatures. In any case, the flow rates of the cooling agent will range from 1 to 2 GPM. The dryer will operate most efficiently with return air temperature in the area of 125 to 130°F. This temperature can be monitored at the outlet of the aftercooler with a standard in-line thermometer. Pipe couplings are built into the aftercooler in order to hose the water into the coil. Flexible hoses are most suitable.

Insulated Hose:

In order to reduce the temperature drop of the drying air coming from the dryer to drying hopper, an insulated hose is used. It is important that this hose be placed on the delivery side (air to hopper) and not the return side (air coming back to dryer) of the dryer.

All other components necessary for high temperature drying are built into the dryer.

OPERATION:

Because of the higher temperature, prolonged periods of residence time in drying hopper at high temperature should be avoided. If it is necessary to stop the operation for some time, the temperature should be lowered in order to avoid bridging (material becoming soft and tacky and sticking together, not allowing an even flow in hopper).

MAINTENANCE CHECK LIST FOR DRYERS:

This check list is a general guideline for servicing the automatic dehumidifying dryers manufactured by Conair. Understanding the basic points which are outlined should make the troubleshooting and maintenance of the dryer easier.

Air circuits:

1. Are the hoses in good condition?
2. Do all the hoses have a proper fit on the dryer and hopper?
3. Are all the gaskets in place and in good condition (on drying hopper and on filters)?
4. Are all the hoses properly connected, not only externally but also internally? (see Figure 5)

It is important to maintain a "closed-loop" system in order to avoid high moisture-laden ambient air from entering the system and prematurely loading the desiccant cartridge. Under operating conditions, normally the return dewpoints will be between 0°F and +20°F, with a closed system. Under these same conditions the ambient dewpoint may be +65°F.

Filter Condition:

Dryer must be shut off prior to removal of filters to avoid drawing fines and/or dust into blowers and desiccant tanks.

1. Is the process filter clean and sealing properly?
2. Is the regeneration filter clean?

In order to have the amount of air flow necessary for proper regeneration and processing, the filters must be relatively clean. Cleaning of the filter should be done quite frequently when first installed until some logical cleaning schedule can be determined, depending on such variables as rates of material being processed, fines in the material, and amount of regrind material being used with virgin.

Regeneration Temperature:

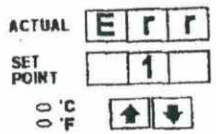
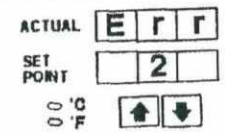
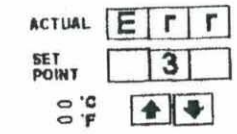
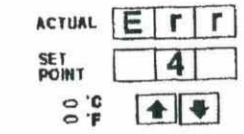
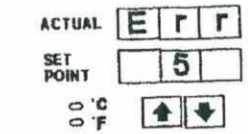
In order to get the proper temperature profile across the desiccant tank, we need to have an inlet temperature of 425°F. This, in conjunction with the proper air flow, are the two main points for adequate regeneration. Check the heater element amperage (check electrical diagram for specifications on your particular model).

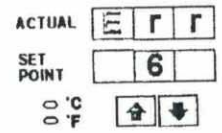
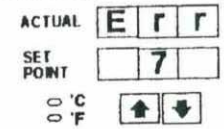
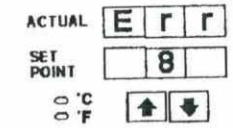
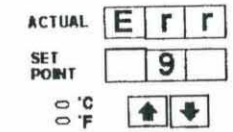
Desiccant Cartridge:

Cartridges must be packed properly using the current procedure and desiccant. Proper drying may be negated by using incorrect packing procedure and desiccant. Conair has a trade-in exchange program for routine replacement of cartridges - call Conair Parts Department toll free at 800-458-1960 for details.

Return Line Air Temperatures:

What is the return air line temperature from the top of the drying hopper to the dryer? This temperature should not exceed 125° to 130°F. It may be necessary to use a return air line cooler (consult Conair).

ALARM DISPLAY	MALFUNCTION	SOLUTION	AUTOMATIC SEQUENCE IF MALFUNCTION OCCURS
	*** LOW CFM** - Incorrect blower rotation. - Check valves may be clogged.	- If blower rotates in the wrong direction, reverse any two leads at the main disconnect. - Check the valves, and replace if necessary.	- Dryer shuts down and alarm light is energized.
	*** HI-TEMP LIMIT** - The high temperature limit has been exceeded during the process or regeneration cycle due to an abnormally high temperature in the heater box. - Faulty high temperature probe.	- Check the heater box for signs of excessive heat. - Clear any restricted hoses. - Check for proper air flow in both circuits. - Check probe for obvious damage and replace if necessary.	- Dryer shuts down and alarm light is energized.
	**DEWPOINT FAULT** - Dryer is not producing the proper dewpoint. - Desiccant may be contaminated. - System may be improperly installed. - Stuck check valve.	- Check the valve and replace if necessary. - Consult Conair.	- Alarm light is energized.
	**BLOWER OVERLOAD** - The overload on the blower has tripped. This could be caused by not having the overload properly. adjusted, or the motor may be drawing excessive current.	- Check the overload setting and adjust if necessary. - Reset the overload. - Check motor current against the name plate current to insure the motor is not drawing excessive amperage	- Dryer shuts down and alarm light is energized.
	*** PROBE MALFUNCTION** - Either the temperature sensor has not been properly connected to the control box or the sensor is defective.	- Check the connection. - Check the probe for obvious damage and replace if necessary.	- Dryer shuts down and alarm light is energized.

ALARM DISPLAY	MALFUNCTION	SOLUTION	AUTOMATIC SEQUENCE IF MALFUNCTION OCCURS
	*** PROCESS TEMP FAULT** - The process temperature is above or below an acceptable level. - The process temperature setting is too high for the dryer to maintain temperature at the set point. - Dryer may be too far from the hopper. - Air flow may be reversed. - Heaters may be defective. - Process temperature probe may not be properly positioned. - Supply voltage may be different than the name plate voltage.	- Check heater amperage for defective heaters. - Check air flow direction. - Make sure the process temperature sensor is positioned at the inlet of the drying hopper. - Check supply voltage against name plate voltage. - Consult Conair for additional assistance.	- Dryer shuts down and alarm light is energized.
	*** CALIBRATION ERROR**	- Press PUSH TO READ to clear the error message. Press STOP, then turn the power off and back on. Press RUN to resume normal operation. - If you can't clear the error message after pressing PUSH TO READ, consult Conair.	- Dryer shuts down and alarm light is energized.
	**A - RETURN AIR TEMP UNSATISFACTORY** - Return air temperature is above 150° F. **B - RETURN AIR TEMP ABOVE LIMIT** - Return air temperature is above 180° F.	- Insure hopper is full of material. - Add aftercooler if one is not already part of the system. - If aftercooler is present, check coils and clean if necessary.	- Above 150° F, dryer alarm is energized. - Above 180° F, dryer shuts down and alarm light is energized.
	**MATERIAL LEVEL TOO LOW** - The conveying filter may be clogged. - The conveying blower maybe phased incorrectly. - Improper insert inside the distribution box. - Improper hose connections or air leaks in the hoses. - Demand sensor may need readjusted, or sensor may be faulty.	- Check and clean the conveying filter. Replace the filter if it is torn or hopelessly clogged. - Check the blower rotation. If necessary, reverse any two leads at the main disconnect. - Make sure the proper material insert is inside the distribution box. - Check conveying hoses for proper connections, or any damage. Replace if necessary. - Check the demand sensor and replace if necessary.	- Alarm light is energized.

ALARM DISPLAY	MALFUNCTION	SOLUTION	AUTOMATIC SEQUENCE IF MALFUNCTION OCCURS
ACTUAL Err SET POINT 10 °C °F ▲ ▼	*** CHECKSUM ERROR** - Electronic noise - Calibration error	- Press PUSH TO READ to clear the error message, then press PUSH TO READ a second time to clear error message 7. Press STOP, then turn power off and back on. Press RUN to resume operation.	- Dryer shuts down and alarm light is energized.
ACTUAL Err SET POINT 11 °C °F ▲ ▼	**IMPROPER SHUT DOWN** One of the following situations removed power to the dryer before it completed its cool-down cycle. - Someone stopped the dryer incorrectly by pressing the power ON/OFF switch instead of the STOP key. - A shut down alarm. - A power outage.	- Always use the STOP key to shut down the dryer. - Press PUSH TO READ to clear the error message, then press RUN to resume normal operation. - Press PUSH TO READ. If another error message appears, refer to the alarm code in this section to determine what shut down the dryer. - Check the dryer power supply.	- Alarm light is energized.

) **By pressing the "PUSH TO READ" key, the nature of the malfunction will be shown on the display.**

*** When this alarm condition exists, you will need to switch the dryer OFF to reset the unit. If the malfunction has been orrected, the it will exhibit normal conditions when restarted. If, however, the malfunction is not corrected, the unit will go ıto an alarm condition.**

IOTE 1: For safety reasons, error #2 bypasses the microprocessor. If the error occurs, ERR 2 will not appear in the top isplay until the temperature has fallen below the trip point. During the this time, the red LED to the left of the "HI-LIMIT" ıessage will be energized.

SPI PROTOCOL FOR CD-30 AND CD-60 DEHUMIDIFYING DRYERS

In order to communicate to various devices, Conair supports the SPI Protocol. If you are using this option, it is assumed that you are familiar with the SPI Protocol and are also a licensed user.

Device Address:

Each piece of equipment which is connected to the communications network must have its own unique "Device Address."

In order to assign (or change) an address to each dryer, follow these steps:

1. Go to the Diagnostic screen.
2. Enter an access code of 64.
3. Use the function select up and down arrow keys to scroll to the 'nod' screen.
4. Use the setpoint up and down arrow keys to adjust the device address.
5. The adjustable range is from 32 to 64. The default is 32.
6. Cycle the dryer off and back on by utilizing the rocker switch to accept the new device address.

The dryer will now be accessed and identified by this new device address that you just assigned it.

Baud Rate:

Baud Rate has been preset at the factory at 1200. To change it, follow these steps:

1. Go to the Diagnostic screen.
2. Enter an access code of 64.
3. Use the function select up and down arrow keys to scroll to the 'bAu' screen.
4. Use the setpoint up and down arrow keys to select the desired baud rate.
5. Baud rate designations are as follows:
   12 = 1200
   24 = 2400
   48 = 4800
   96 = 9600
6. Cycle the dryer off and back on by utilizing the rocker switch to accept the new Baud Rate.

SPI Protocol Version:

This display indicates the version of SPI commands the dryer software will support. If your dryers have been equipped with the appropriate SPI software, the display will be visible in the diagnostics section.

1. Go to the diagnostic screen.

2. Enter an access code of 64.

3. Use the function select up and down arrow keys to scroll to the 'SPI' screen.

4. This screen displays the version of SPI software supported in this dryer. There is no setpoint.

Supported Commands:

The following are commands from the SPI Protocol the Compu-Dry will support. Some of the commands mentioned below are not required by SPI but are included for your convenience if you desire to use them. The list titled "Select", are those commands which are necessary to make a change in either a setpoint or the running mode of the dryer. The list of commands titled "Poll", are monitoring commands which give you feedback as to the current values of particular parameters. In both lists, the phrase enclosed in parenthesis is the Conair terminology which correlates to the SPI terminology, shown directly above it.

SELECT: ECHO
SET POINT PROCESS TEMPERATURE
(Delivery Air SP)

ALARM, HIGH TEMPERATURE DEVIATION
(Delivery Air SP + Alarm Band)

ALARM, LOW TEMPERATURE DEVIATION
(Delivery Air SP - Alarm Band)

MODE, MACHINE
(Run / Stop)

NOTE: On the High and Low temperature deviation, the last command sent will determine the alarm band for the dryer.

POLL: ECHO
VERSION
(SPI, Dryer version)

SET POINT PROCESS TEMPERATURE
(Delivery Air SP)

ALARM, HIGH TEMPERATURE DEVIATION
(Delivery Air SP + Alarm Band)

ALARM, LOW TEMPERATURE DEVIATION
(Delivery Air SP - Alarm Band)

STATUS PROCESS
(Alarms)

MODE, MACHINE
(Run / Stop)

TEMPERATURE, TO PROCESS
(Delivery Air Actual)

TEMPERATURE, FROM PROCESS
(Return Air Actual)

DEWPOINT, F
(Power Miser 1 Deluxe Actual)
(if Power Miser 1 Deluxe is installed)

We're Here to Help

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

How to Contact Customer Service

To contact Customer Service personnel, call:

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

Before You Call ...

If you do have a problem, please complete the following checklist before calling Conair:

- ❒ Make sure you have all model, serial and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- ❒ Make sure power is supplied to the equipment.
- ❒ Make sure that all connectors and wires within and between loading control and related components have been installed correctly.
- ❒ Check the troubleshooting guide of this manual for a solution.
- ❒ Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.
- ❒ Check that the equipment has been operated as described in this manual.
- ❒ Check accompanying schematic drawings for information on special considerations.

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Departments for a nominal fee.

EQUIPMENT GUARANTEE

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

PERFORMANCE WARRANTY

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

WARRANTY LIMITATIONS

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.