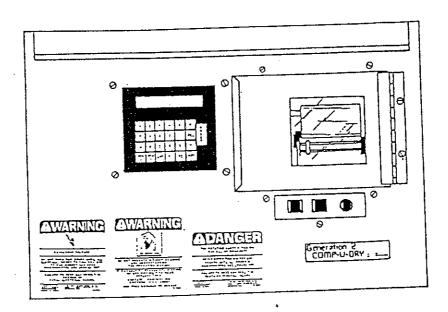
DELUKE COMP-U-ORY Generation 2 By Shivvers



TECHNICAL MANUAL

Shivvers Incorporated 614 West English Corydon, Iowa 50060 515/872-1005

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INTRODUCTION to TROUBLESHOOTING

THE GENERATION 2 COMP-U-DRY

THESE TROUBLESHOOTING CHARTS WILL GIVE THE MOST LIKELY CAUSE OF A PROBLEM. THEY ASSUME A GENERAL KNOWLEDGE OF THE DRYING SYSTEM AND ITS TERMINOLOGY. THEY ASSUME THAT EVERYTHING WAS WIRED CORRECTLY AND HAS BEEN WORKING. IN SOME CASES THEY MAY HELP TROUBLESHOOT INITIAL WIRING PROBLEMS. THEY WILL NOT WORK IN ALL SITUATIONS, AND IT IS ALWAYS POSSIBLE THERE IS MORE THAN ONE PROBLEM.

WHEN SHOWING COMPUTER DISPLAYS, AN "x" MEANS ANY VALUE IS PROBABLY OK. FOR EXAMPLE, "xxxF" COULD BE 120F OR 075F.

******* WARNING *******



IN SOME CASES, IT IS NECESSARY TO TAKE VOLTAGE
MEASUREMENTS WHILE THE CIRCUIT IS "HOT". THESE
CHECKS SHOULD BE PERFORMED ONLY BY EXPERIENCED AND
COMPETENT SERVICE PERSONNEL. VOLTAGE LEVELS MAY
BE AS HIGH AS 220 VOLTS. PERSONAL INJURY IS

POSSIBLE. COMPUTER COMPONENTS AND CIRCUIT BOARD TRACES ARE VERY SENSITIVE. THEY MAY BE DESTROYED BY SHORT CIRCUITS. IF YOU ARE IN DOUBT ABOUT WHAT YOU ARE DOING, DON'T DO IT. SHUT ALL POWER OFF, AND REPLACE THE MAIN ASSEMBLIES UNTIL THE PROBLEM IS FIXED.

******* WARNING *******

Wait for appropriate

time.

OPERATING POINT

The operating point is the computer calculated temperature that is required in the plenum to obtain grain of the desired moisture. There is an entry in the start up procedure to set the "initial operating point" for a starting temperature. This is only a starting temperature. After the Comp-U-Dry obtains a grain sample, the operating point is computer controlled, as determined by the moisture average of the grain samples.

The operating point is programmed to allow a 1% (dry) variation in moisture without a change. If the selected moisture is 16.5%, the operating point will not be changed if the moisture average is between 16.5% and 15.5%. If the average moisture is above 16.5% the operating point will be raised. The amount the temperature is raised is determined by how much over the set point the moisture average is. In no case, will the operating point be raised above the maximum temperature.

If the moisture average is more than 1% less than the set point, (in this example, the moisture would be less than 15.5%) the computer will lower the operating point a small amount, to slow the drying rate. If the next moisture level is still too dry, the operating point will again be lowered a small amount.

As the grain drying process continues, the operating point will probably continue to be adjusted, trying to find equilibrium, where the grain is at the desired moisture without overdrying. In most installations, perfect equilibrium will be impossible to achieve because of variations of the heat under the floor (within the bin) and variations of grain depth and grain moisture. If the drying conditions are conducive to it, the operating point may go lower than the outside temperature, resulting in natural air drying while maintaining the capacity of the machine.

CONTROL CHECK

There is a program execution monitor in the G2 COMPUDRY which will shut off control power if the program stops running. This feature is checked by the computer at the next sample after 6:00 and 12:00. Program version numbers 2.6, or later, do this check only once a day, at 6:00 AM. The computer does the following:

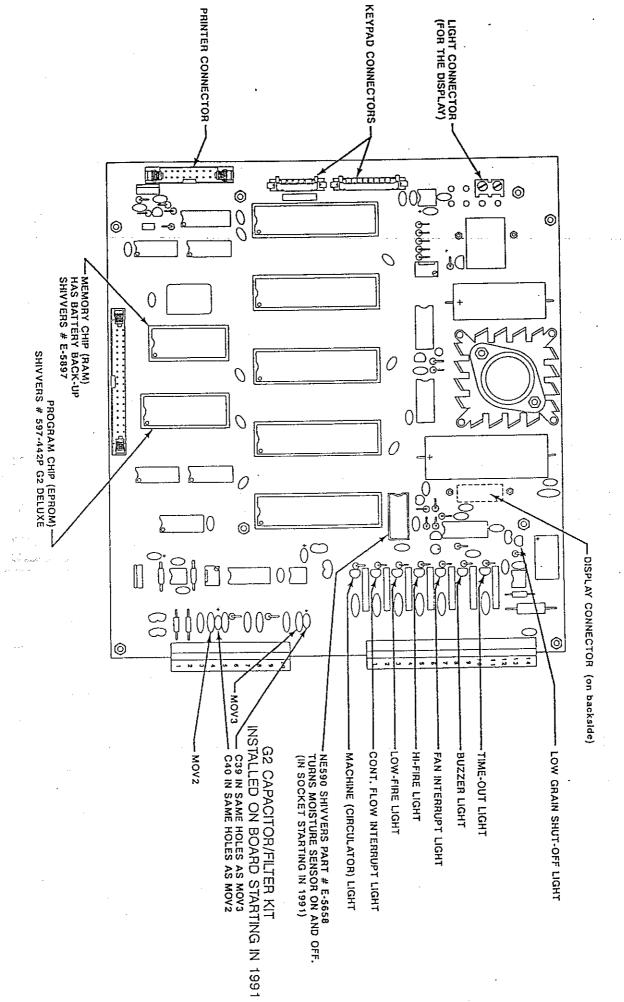
- 1) Displays "CONTROL CHECK".
- 2) Disables program execution monitor.
- 3) Shuts off machine (circulator), and burner fire.
- 4) Waits 80 seconds. Time-out light should come on during this time.
- 5) Tries to turn on machine (circulator). It shouldn't come on.
- 6) Reads moisture meter five times.
- 7) If readings are all the same, assumes that the machine is indeed disabled, and continues with step 8. If the readings are changing, assumes that the machine is running. Tries reading the moisture meter five more times. If the readings are still changing, prints out:

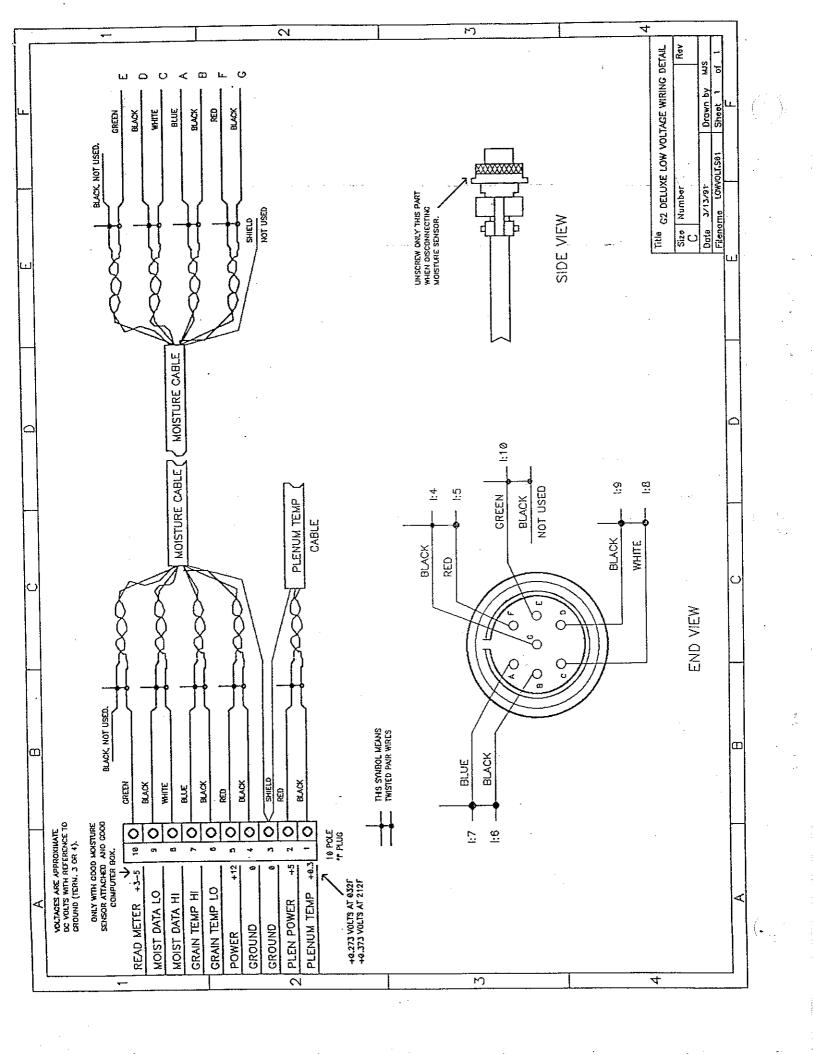
---- CAUTION ---COMPUDRY CONTROL INTERRUPT INOPERATIVE.
SEE OWNERS MANUAL. SERVICE IMMEDIATELY.
---- CAUTION ----

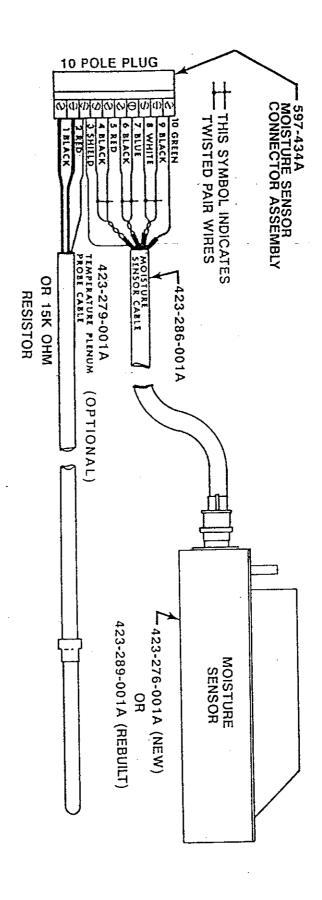
Also sets the buzzer so it will beep on and off. Continues with step 8.

- 8) Turns machine (circulator), off. (It never should have come on). Reenables the program execution monitor. The Time-out light should go off at this time.
- 9) Prints out 6 hour information, and continues drying.

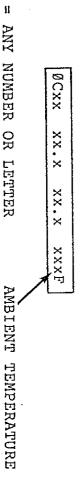
G2 COMPUTER CONTROL BOARD



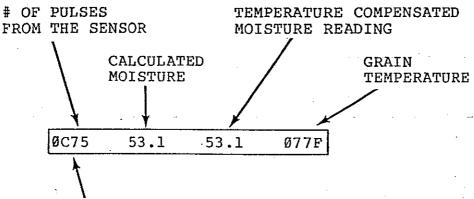




TUHS METER". BOX IS GOOD, THE DISPLAY SHOULD SHOW: POWER OFF. TURN THE POWER ON. GET INTO THE MENU. SEL. MAKE SURE NOTHING IS TOUCHING THE "FLAG". UNPLUG THE 10 POLE "I" PLUG. SELECT "2 PLUG IN THE TEST IF COMPUTER READ



MENU READ METER



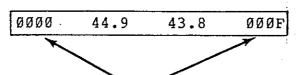
Empty chamber reading, (no grain around the sensor). Can range from \emptyset C4 \emptyset to \emptyset C9 \emptyset . Number of pulses should not vary by more than 1 or 2 pulses each time RET key is pressed.

ØD6E	16.1	15.0	100F
1	. , , , , , , , , , , , , , , , , , , ,		

Grain is around the sensor. Can range from ØCCE to ØFØØ. Number of pulses will vary with moving grain.

0000	44.9	46.2	Ø5ØF
1			

Something is wrong. Either the sensor is wet or bad, or the computer board is not turning the sensor on and off at the proper times. Voltage is getting to the sensor because it is sending a grain temperature.



Power is either not getting to the sensor, or the sensor is bad, because there is not any grain temperature. Check connections on 10 pole "I" plug, especially the red wire in terminal #5.

```
DATE=10/26/91
TIME=12:04P
LOT #=0001
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
       MOIST GRAIN MOIST MACH OPR PLENUM
                           STAT PNT
                                      TEMP
        RDG
               TEMP
                     AVE
 TIME
                            OFF 160F 162F
                     16.9
         16.9
               115F
12:06P
                            OFF 160F 159F
               119F
                     16.6
         16.3
12:17P
                             ON 160F 161F
                     16.3
               122F
         15.9
12:28P
                             ON 160F 157F
                      16.1
12:34P
         15.5
               125F
                             ON 160F 163F
               123F
                      15.8
12:40P
         15.8
                             ON 160F 160F
         15.2
               128F
                      15.6
12:46P
                             ON 157F 155F
                      15.3
         14.9
               130F
12:52P
                             ON 157F 159F
               127F
                      15.3
         15.3
12:58P
                             ON 159F 161F
01:04P
         16.2
               120F
                      15.4
               116F
                      15.8
                             ON 160F 160F
Ø1:10P
         16.8
                            OFF 16ØF 158F
         17.0
               112F
                      16.3
Ø1:16P
          READ=0000
 ERROR
READ=49.3
            READ=47.4
REDO
               115F
                      16.6
                            OFF 160F 162F
Ø1:29P
         16.5
                              ON 160F 162F
         16.0
               121F
                      16.5
Ø1:40P
                              ON 160F 160F
               125F
                      16.3
         15.8
01:45P
                              ON 160F 155F
                      16.0
         15.9
               124F
Ø1:51P
                              ON 160F 159F
                      15.8
         15.5
               127F
Ø1:57P
               125F
                      15.7
                              ON 160F 162F
02:03P
         15.7
                              ON 160F 159F
         16.1
               120F
                      15.8
Ø2:09P
                              ON 160F 163F
               115F
                      16.0
         16.8
Ø2:15P
                             OFF 160F 160F
                      16.1
02:21P
         16.1
               119F
                              ON 160F 159F
         16.0
               121F
                      16.2
Ø2:32P
                              ON 160F 156F
         15.8
               125F
                      16.1
Ø2:38P
                              ON 160F 158F
                      15.9
               124F
         15.9
Ø2:44P
                              ON 160F 162F
               122F
                      15.9
Ø2:50P
         16.1
          READ=0000
 ERROR
            READ=49.3
READ=51.2
REDO
          READ=0000
 ERROR
READ=51.3
            READ=49.4
        ERROR
```

READING OUT OF RANGE

Intermittent "ERROR
READ=0000". Sometimes
will "REDO" and go ahead
and run. Sometimes gets
two in a row and shuts
down on "ERROR READING
OUT OF RANGE".
Circulator or Cont. Flow
augers may also turn on
and off at improper times.

Make sure that a Capacitor/Filter Kit is installed; either on the 10 pole "I" plug, or soldered onto the main computer board.

Check for a good connection with the green wire on terminal #10 of the 10 pole "I" plug.

```
SELECT ONE
F1 RESUME
- 1 MENU
 4 DRY GRAIN
METER CAL=+0.0
 ENTERED +1.0
 ----RESUMED DATA ----
DATE=10/30/91
TIME=07:04P
LOT #=ØØØØ
DRY TO 16.5
METER CAL=+1.0
RDGD TO AVE=6
MAX TEMP=140F
OPR PNT=133F
        MOIST GRAIN MOIST MACH OPR PLENUM
                           STAT PNT
                                     TEMP
                     AVE
 TIME
         RDG
               TEMP
          READ=0000
 ERROR
          READ=0000
 ERROR
          READ=0000
 ERROR
          READ=ØØØØ
  ERROR
  ERROR
          READ=0000
          READ=0000
  ERROR
          READ=0000
  ERROR
          READ=0000
  ERROR
  ERROR
          READ=0000
          READ=0000
  ERROR
 READ=44.9
            READ=44.9
 REDO
          READ=0000
  ERROR
  ERROR
          READ=0000
          READ=0000
  ERROR
          READ=0000
  ERROR
          READ=0000
  ERROR
  ERROR
          READ=0000
          READ=0000
  ERROR
          READ=0000
  ERROR
  ERROR
          READ=0000
  ERROR
           READ=0000
 READ=44.9 READ=44.9
        ERROR
 READING OUT OF RANGE
 READINGS NOT CHANGING
```

Ten "ERROR READ=0000"
readings in a row, then a
"REDO", with ten more
"ERROR READ=0000". Then
"ERROR READING OUT OF
RANGE", and "READINGS NOT
CHANGING". On program
versions G2.7 and above,
it will also print a
grain temperature.
For example:
"ERROR READ=0000 115F"

This is probably one of the most common errors, and unfortunately, it is the hardest to diagnose because it can be so many different things.

Could be a wet or dirty moisture sensor.

Check for a good connection on the green wire to terminal #10 of the 10 pole "I" plug.

Replace the Moisture Sensor or substitute the sensor and cable. If it is not the Moisture Sensor, replace the NE590 if it is in a socket. If it is not in a socket, replace the Computer Box.

It could also be the Moisture Cable, but not very likely.

```
4 DRY GRAIN
METER CAL=+0.0
ENTERED +1.0
 ----RESUMED DATA ----
DATE=10/31/91
TIME=09:15A
LOT #=0000
DRY TO 15.5
METER CAL=+1.0
RDGD TO AVE=8
MAX TEMP=145F
OPR PNT=145F
       MOIST GRAIN MOIST MACH OPR PLENUM
                          STAT PNT
                    AVE
             \mathtt{TEMP}
 TIME
        RDG
         READ=0000
 ERROR
         READ=0000
 ERROR
READ=44.9 READ=45.9
REDO
         READ=0000
 ERROR
          READ=0000
 ERROR
         READ=0000
 ERROR
        READ=0000
 ERROR
         READ=0000
 ERROR
 ERROR
         READ=0000
 ERROR
       READ=0000
 ERROR
          READ=0000
 ERROR
         READ=0000
         READ=0000
 ERROR
READ=44.9 READ=45.9
        ERROR
BAD GRAIN TEMP
READING OUT OF RANGE
READINGS NOT CHANGING
```

SELECT ONE F1 RESUME 1 MENU

Ten "ERROR READ=0000"
readings in a row, then a
"REDO", with ten more
"ERROR READ=0000". Then
"ERROR BAD GRAIN TEMP",
and "READING OUT OF
RANGE", and "READINGS NOT
CHANGING". On program
versions G2.7 and above,
it will also print a
grain temperature.
For example:
"ERROR READ=0000 000F"

Check for a good connection on the red and black wires on terminals #4 and #5 on the 10 pole "I" plug. Also, check for about 12 Volts DC across those terminals. Be careful not to short the terminals together or to the box. If there isn't 12 Volts DC here, replace the Computer Box.

Unless the Moisture Cable is visually damaged, replace the Moisture Sensor. This is the most common solution to this problem.

It could also be the Moisture Cable, but not very likely.

```
SELECT ONE
F1 RESUME
 1 MENU
 4 DRY GRAIN
METER CAL=+2.0
 ENTERED +2.0
 ----RESUMED DATA ----
DATE=11/05/91
TIME=02:11P
LOT #=0000
DRY TO 14.5
METER CAL=+2.0
RDGD TO AVE=6
MAX TEMP=140F
OPR PNT=140F
        MOIST GRAIN MOIST MACH OPR PLENUM
 TIME
         RDG
               TEMP
                      AVE
                           STAT PNT
                                      TEMP
          READ=ØC75
 ERROR
 ERROR
          READ=ØC76
          READ=ØC75
 ERROR
          READ = \emptyset C75
 ERROR
 ERROR
          READ=ØC75
 ERROR
          READ=ØC75
          READ=ØC76
 ERROR
          READ=ØC75
 ERROR
 ERROR
          READ=ØC75
          READ=ØC75
 ERROR
READ=52.7
            READ=54.9
REDO
          READ = \emptyset C75
 ERROR
 ERROR
          READ=ØC75
          READ=ØC76
 ERROR
 ERROR
          READ=ØC75
          READ=ØC75
 ERROR
 ERROR
          READ=ØC75
 ERROR
          READ=ØC75
          READ=ØC75
 ERROR
          READ=ØC75
 ERROR
 ERROR
          READ=ØC76
READ=52.7
            READ=54.9
        ERROR
READING OUT OF RANGE
READINGS NOT CHANGING
```

Ten "ERROR READ=ØCxx"
readings in a row, th
"REDO", with ten more
"ERROR READ=ØCxx". Then
"ERROR READING OUT OF
RANGE", and "READINGS NOT
CHANGING". On program
versions G2.7 and above,
it will also print a
grain temperature.
For example:
"ERROR READ=ØC75 Ø87F"

This usually means that there isn't any grain around the moisture sensor. The readings can be in a range from ØC40 to ØC9F.

Make sure there is grain in the bin.

Make sure the center vertical auger runs by putting the circulator switch in manual. Almake sure it will run by turning the grain T-stat to its lowest (wettest) setting. The grain will have to be at least 55 F. If it doesn't run, start checking fuses, and overloads.

If the circulator runs in manual, check the 1/2 Amp fuse on the Compudry Relay board.

Make sure there is a good connection on terminal #5 of the 16 pole "F" plug.

Make sure the 14 pole "C" plug is securely plugged into the top of the computer box.

Replace the Computer F

SELECT ONE

F1 RESUME

1 MENU

4 DRY GRAIN

METER CAL=+0.0 ENTERED +0.0

----RESUMED DATA -----

DATE=11/07/91 TIME=08:11A LOT #=0123 DRY TO 15.5 METER CAL=+0.0 RDGD TO AVE=6 MAX TEMP=140F OPR PNT=140F

MOIST GRAIN MOIST MACH OPR PLENUM
TIME RDG TEMP AVE STAT PNT TEMP
ERROR
NO TEMP READING

SHIVVERS G2 COMPUDRY

SELECT ONE

F1 RESUME

1 MENU

4 DRY GRAIN

SELECTION 1

MENU

- 1 READ TEMP
- 2 READ METER
- 3 MACHINE
- 4 CONT FLOW ENABLE
- 5 FAN ENABLE
- 6 BUZZER
- 7 HI FIRE
- 8 LO FIRE
- A SET MACHINE OFF TIME
- E EXIT

SELECTION 1

PLENUM=000F GRAIN=059F PLENUM=000F GRAIN=059F "ERROR NO TEMP READING"

This occurs when the computer gets all zeros for a plenum temperature. It will shut the dryer down, and turn on the buzzer.

Check for a good connection on terminals #1 and #2 of the the 10 pole "I" plug.

Replace the plenum temp. probe.

Replace the Computer Box.

```
DATE=11/11/91
TIME=12:04P
LOT #=0005
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=150F
OPR PNT=150F
       MOIST GRAIN MOIST MACH OPR PLENUM
                      AVE
         RDG
               TEMP
                            STAT PNT
 TIME
                                       TEMP
         16.9
               115F
                      16.9
                             OFF 150F 152F
12:06P
               119F
12:17P
         16.3
                      16.6
                             OFF 150F 149F
12:28P
         15.9
               122F
                      16.3
                              ON 150F 151F
12:34P
         15.5
               125F
                      16.1
                              ON 150F 147F
               123F
12:40P
         15.8
                      15.8
                              ON 15ØF 153F
               128F
12:46P
         15.2
                      15.6
                              ON 150F 150F
12:52P
         14.9
               ØØØF
                      15.3
                              ON 147F 155F
        ERROR
BAD GRAIN TEMP
12:58P
         15.3
               127F
                      15.3
                              ON 147F 149F
Ø1:04P
         16.2
               120F
                      15.4
                              ON 149F 151F
Ø1:10P
         16.8
               116F
                      15.8
                              ON 15ØF 15ØF
Ø1:16P
         17.Ø
               112F
                      16.3
                             OFF 150F 148F
               115F
                      16.6
Ø1:29P
         16.5
                             OFF 150F 152F
01:40P
         16.0
               121F
                      16.5
                              ON 150F 152F
Ø1:45P
         15.8
               125F
                      16.3
                              ON 150F 150F
Ø1:51P
         15.9
               124F
                      16.Ø
                              ON 150F 155F
               127F
Ø1:57P
         15.5
                      15.8
                              ON 15ØF 149F
         15.7
               125F
Ø2:Ø3P
                      15.7
                              ON 150F 152F
Ø2:Ø9P
         16.1
               120F
                      15.8
                              ON 150F 149F
Ø2:15P
         16.8
               115F
                      16.0
                              ON 150F 153F
                      16.1
Ø2:21P
         16.1
               119F
                             OFF 150F 150F
                      16.2
               121F
Ø2:32P
         16.Ø
                              ON 150F 149F
         15.8
               125F
                      16.1
Ø2:38P
                              ON 150F 146F
Ø2:44P
         15.9
               124F
                      15.9
                              ON 15ØF 148F
               122F
                      15.9
02:50P
         16.1
                              ON 150F 152F
Ø2:56P
         15.2
               000F
                      15.7
                              ON 150F 147F
        ERROR
BAD GRAIN TEMP
Ø3:02P
         15.3
               ØØØF
                      15.6
                              ON 150F 151F
        ERROR
BAD GRAIN TEMP
         16.5
               120F
                      15.7
03:08P
                              ON 150F 150F
Ø3:14P
         16.8
               118F
                      15.9
                              ON 150F 147F
Ø3:20P
         16.7
               117F
                      16.3
                             OFF 150F 151F
```

"ERROR BAD GRAIN TEMP" Grain temp. reads 000F, either all the time, or intermittently. Buzzer beeps, but does not shut dryer down.

Check for good connections on terminals #6 and #7 of the 10 pole "I" plug. These will be the blue and black wires.

Replace the Moisture Sensor.

```
DATE=11/11/91
TIME=12:04P
LOT #=0005
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=150F
OPR PNT=150F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
                     AVE
                           STAT PNT
                                      TEMP
        RDG
               TEMP
TIME
                            OFF 150F 152F
                     16.9
12:06P
        16:9
               115F
               119F
                            OFF 150F 149F
        16.3
                     16.6
12:17P
                             ON 150F 151F
               122F
                     16.3
        15.9
12:28P
               125F
                             ON 150F 147F
        15.5
                     16.1
12:34P
                             ON 150F 153F
        15.8
               123F
                     15.8
12:40P
        15.2
               128F
                     15.6
                             ON 150F 150F
12:46P
                             ON 144F 145F
        13.9
               145F
                     15.1
12:52P
                             ON 144F 147F
               127F
                     15.0
        15.3
12:58P
                             ON 146F 141F
               120F
                      15.1
        16.2
Ø1:04P
                             ON 148F 150F
        16.8
               116F
                      15.5
Ø1:10P
                            OFF 150F 148F
                     16.3
        17.Ø
               112F
Ø1:16P
                            OFF 150F 152F
        16.5
               115F
                      16.6
Ø1:29P
                             ON 150F 152F
        16.Ø
               121F
                      16.5
01:40P
                             ON 150F 150F
               125F
                      16.3
Ø1:45P
        15.8
                             ON 150F 155F
               124F
                      16.0
Ø1:51P
        15.9
                             ON 144F 147F
        13.5
               157F
                      15.3
Ø1:57P
                             ON 144F 142F
        15.7
               125F
                      15.2
02:03P
               120F
                             ON 146F 149F
                      15.3
        16.1
Ø2:09P
                      15.5
                             ON 148F 150F
        16.8
               115F
Ø2:15P
                            OFF 150F 152F
               119F
                      16.1
Ø2:21P
        16.1
                              ON 150F 149F
                      16.2
Ø2:32P
        16.Ø
               121F
                              ON 150F 146F
Ø2:38P
               125F
                      16.1
        15.8
                              ON 150F 148F
         15.9
               124F
                      15.9
Ø2:44P
                              ON 150F 152F
                      15.9
02:50P
        16.1
               122F
                              ON 144F 147F
         13.2
               161F
                      15.2
Ø2:56P
        ERROR
BAD GRAIN TEMP
                              ON 141F 145F
Ø3:02P
         14.3
               152F
                      14.8
         15.5
               13ØF
                      14.7
                              ON 141F 140F
Ø3:08P
                              ON 141F 143F
         15.8
               128F
                      14.7
Ø3:14P
                              ON 141F 141F
                      15.3
         15.7
               127F
Ø3:20P
                              ON 141F 144F
         15.2
               132F
                      15.5
Ø3:26P
                              ON 141F 139F
Ø3:32P
         15.Ø
               133F
                      15.4
                      15.1
                              ON 138F 140F
               133F
         14.8
Ø3:38P
                              ON 135F 137F
               145F
                      14.7
         14.0
Ø3:44P
                              ON 132F 134F
Ø3:50P
         14.5
               135F
                      14.5
```

"ERROR BAD GRAIN TEMP" Grain temp. reads above 160F intermittently. Buzzer beeps, but does not shut dryer down.

Look on the tape for a recurring spot where the grain temperature is Usually about high. every 5-8 "ON" samples. Also notice if when the grain is hot, that the moisture reading is low. If it is, there is probably a hot spot in This usally the bin. occurs with a single sweep unit. Find out where the sweep is when the hot reading occurs, to find the hot spot. Try to capture a sample of grain and verify that the grain is as hot as the computer says it is.

Also, if the grain temp. is hotter than the plenum temp., make sure the plenum temp probe is not in a cold spot, or not reading accurately.

Make sure the grain is level in the bin. Even the heat out under the floor.

If the grain is really not that hot and the moisture readings aren't much lower, then check for good connections on terminals #6 and #7 of the 10 pole "I" plug. These will be the blue and black wires.

If the connections look ok, then replace the Moisture Sensor.

```
DATE=09/06/91
TIME=12:04P
LOT #=0001
DRY TO 15.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=140F
OPR PNT= 55F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
                           STAT PNT
 TIME
        RDG
               TEMP
                      AVE
                                       TEMP
        15.Ø
               Ø85F
                      15.0
12:06P
                              ON Ø55F Ø92F
12:12P
        14.8
               Ø89F
                      14.9
                              ON Ø55F Ø93F
12:18P
        14.9
               Ø82F
                      14.9
                              ON Ø55F Ø93F
12:24P
        14.6
               Ø85F
                      14.8
                              ON Ø55F Ø93F
12:3ØP
         14.8
               Ø83F
                      14.7
                              ON Ø55F Ø93F
12:36P
        14.7
               Ø88F
                      14.7
                              ON Ø55F Ø92F
12:42P
        14.9
               Ø85F
                      14.7
                              ON Ø55F Ø93F
12:48P
        14.8
               Ø87F
                      14.8
                              ON Ø55F Ø92F
12:54P
        15.Ø
               Ø85F
                      14.8
                              ON Ø55F Ø92F
Ø1:00P
        14.8
               Ø86F
                      14.8
                              ON Ø55F Ø93F
Ø1:06P
        15.Ø
               Ø84F
                      14.9
                              ON Ø55F Ø93F
READ=15.0
            READ=14.8
REDO
Ø1:12P
        14.5
               Ø85F
                      14.8
                              ON Ø55F Ø92F
                      14.8
Ø1:18P
        15.Ø
               Ø85F
                              ON Ø55F Ø92F
Ø1:24P
        14.8
               Ø86F
                      14.8
                              ON Ø55F ØØ3F
Ø1:31P
         14.9
               Ø84F
                      14.8
                              ON Ø55F Ø93F
Ø1:37P
        14.5
               Ø85F
                      14.8
                              ON Ø55F Ø93F
Ø1:43P
         14.7
                      14.7
               Ø85F
                             ON Ø55F Ø92F
               Ø86F
Ø1:49P
        14.6
                      14.6
                              ON Ø55F Ø93F
                      14.6
Ø1:55P
       .14.8
               Ø85F
                             ON Ø55F Ø93F
02:01P
        14.6
               Ø85F
                      14.6
                             ON Ø55F Ø92F
Ø2:07P
        15.0
                      14.7
               Ø86F
                             ON Ø55F Ø92F
Ø2:13P
        14.8
               Ø84F
                      14.8
                             ON Ø55F Ø92F
Ø2:19P
        14.9
               Ø86F
                      14.8
                             ON Ø55F Ø92F
Ø2:25P
        15.1
               Ø85F
                      14.9
                             ON Ø55F Ø92F
READ=15.2
           READ=15.0
REDO
READ=15.1
            READ=14.9
       ERROR
READINGS NOT CHANGING
```

Intermittent "ERROR READINGS NOT CHANGING".

There is not enough variation in the ten moisture readings per sample, to get a valid reading. The computer errors only occasionally. Sometimes it will "REDO" and go ahead and run.

This will usually not occur when drying corn. It can occur when drying wheat and milo, especially when just taking out a few points of moisture, at a low drying temp. The moisture readings are so even, the computer thinks that the grain is not moving by the sensor.

About the only cure for this is to install a special program chip.

It can also occur when the moisture sensor is not properly installed, (usually in a DRI-SMART). Also check the moisture sensor for a build-up of dried crud. SELECT ONE
F1 RESUME
1 MENU
4 DRY GRAIN

METER CAL=+2.0 ENTERED +2.0

----RESUMED DATA ----

DATE=11/05/91 TIME=02:11P LOT #=0000 DRY TO 14.5 METER CAL=+2.0 RDGD TO AVE=6 MAX TEMP=140F OPR PNT=140F

MOIST GRAIN MOIST MACH OPR PLENUM
TIME RDG TEMP AVE STAT PNT TEMP
READ=17.2 READ=15.3
REDO
READ=17.3 READ=15.4
ERROR
READINGS NOT CHANGING

"ERROR READINGS NOT CHANGING".

There is not enough variation in the ten moisture readings per sample, to get a valid reading. The computer errors and shuts down. It does not print "REDO", then go ahead and run.

This will usually occur when installed on a Dri-Flow (bottom unload), and on some 6" center verticals. Usually the auger is not running and there is a stationary slug of grain on the moisture sensor.

Make sure the discharge auger runs by putting the circulator switch in manual. Also make sure it will run by turning the grain T-stat to its lowest (wettest) setting. The grain will have to be at least 55 F.

If it doesn't run, start checking fuses, and overloads.

If the auger runs in manual, check the 1/2 Amp fuse on the Compudry Relay board.

Make sure there is a good connection on terminal #5 of the 16 pole "F" plug.

Make sure the 14 pole "C" plug is securely plugged into the top of the computer box.

Replace the Computer Box.

```
Ø5:16A
        15.9
                      16.3
               122F
                              ON 160F 161F
Ø5:22A
        15.5
               125F
                      16.1
                              ON 160F 157F
Ø5:28A
        15.8
               123F
                      15.8
                              ON 160F 163F
        15.2
Ø5:34A
               128F
                      15.6
                             ON 160F 160F
Ø5:40A
        14.9
               130F
                      15.3
                              ON 157F 155F
Ø5:46A
        15.3
               127F
                             ON 157F 159F
                      15.3
Ø5:52A
        16.2
               120F
                      15.4
                             ON 159F 161F
Ø5:58A
       16.8
               116F
                      15.8
                             ON 160F 160F
            ---- CAUTION -
```

COMPUDRY CONTROL INTERRUPT INOPERATIVE. SEE OWNERS MANUAL. SERVICE IMMEDIATELY.

DATE=10/26/91 TIME=06:04A LOT #=0001 DRY TO 16.0 METER CAL=+0.0 RDGD TO AVE=4 MAX TEMP=160F OPR PNT=160F

MOIST GRAIN MOIST MACH OPR PLENUM TIME RDG TEMP AVE STAT PNT TEMP 16.9 Ø6:06A 115F 16.9 OFF 160F 162F Ø6:17A 16.3 119F 16.6 OFF 160F 159F Ø6:28A 15.9 122F 16.3 ON 160F 161F Ø6:34A 15.5 125F 16.1 ON 160F 157F Ø6:40A 15.8 123F 15.8 ON 160F 163F 06:46A 15.2 128F 15.6 ON 160F 160F Ø6:52A 14.9 13ØF 15.3 ON 157F 155F Ø6:58A 15.3 127F 15.3 ON 157F 159F 07:04A 16.2 120F 15.4 ON 159F 161F Ø7:1ØA 16.8 116F 15.8 ON 160F 160F

Computer failed "CONTROL CHECK" at 6:00 AM. Buzzer starts beeping, but dryer continues to run.

Program version G2.6 and later only does a control check at 6:00 AM. Earlier versions do the check every 6 hours, at 6:00 and 12:00.

Make sure that the grain T-stat in the dryer control box is turned to the highest (driest) setting.

If it only occurs once twice a season, don't worry about it.

If it happens every time, replace the computer box. If that doesn't fix it, a ground strap from terminal #3 of the 10 pole "I" plug, to the box ground lug, may help.

```
DATE=10/26/91
TIME=12:04P
LOT #=0001
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
                           STAT PNT
                      AVE
                                       TEMP
               TEMP
         RDG
 TIME
                            OFF 160F 162F
                      16.9
               115F
12:06P
         16.9
                            OFF 160F 159F
                      16.8
               119F
         16.8
12:17P
                            OFF 160F 161F
                      16.8
12:28P
         16.9
               118F
                            OFF 160F 157F
               120F
                      16.7
         16.5
12:39P
                            OFF 160F 163F
                      16.6
               121F
         16.4
12:50P
                             OFF 160F 160F
                      16.5
               128F
         16.2
Ø1:01P
                             OFF 160F 165F
                      16.3
Ø1:12P
         16.1
               13ØF
                              ON 160F 159F
         16.0
               127F
                      16.1
Ø1:23P
                             OFF 160F 161F
               120F
                      16.3
         16.9
Ø1:29P
                             OFF 160F 160F
               116F
                      16.4
         16.7
Ø1:40P
                             OFF 160F 158F
                      16.6
                118F
         17.Ø
Ø1:51P
                             OFF 160F 162F
                125F
                      16.8
Ø2:02P
         16.8
                             OFF 160F 162F
                      16.7
         16.6
                121F
Ø2:13P
                             OFF 160F 160F
                125F
                      16.7
         16.4
Ø2:24P
                             OFF 160F 155F
                124F
                      16.5
         16.2
Ø2:35P
                             OFF 160F 159F
                      16.3
                127F
         16.1
Ø2:46P
                              ON 160F 162F
                129F
                      16.1
         15.9
Ø2:57P
                              ON 160F 159F
                       16.0
         16.1
                125F
03:03P
                             OFF 160F 163F
                115F
                       16.2
         16.8
Ø3:Ø9P
                       16.3
                             OFF 160F 160F
                119F
         16.7
03:20P
                             OFF 160F 159F
                       16.5
                121F
Ø3:31P
         16.5
                             OFF 160F 156F
                       16.6
                125F
Ø3:42P
         16.4
                             OFF 160F 158F
                       16.4
         16.2
                124F
Ø3:53P
                             OFF 160F 162F
                126F
                       16.3
         16.1
04:04P
                             OFF 160F 161F
                       16.2
                129F
         16.3
Ø4:14P
                             OFF 16ØF 157F
                       16.2
                125F
          16.5
Ø4:25P
                             OFF 160F 160F
                       16.3
          16.4
                127F
 Ø4:36P
                             OFF 160F 162F
                130F
                       16.3
          16.2
 Ø4:47P
                             OFF 160F 163F
                       16.3
                129F
          16.1
 Ø5:58P
```

DATE=10/26/91 TIME=06:10P LOT #=0001 DRY TO 16.0 METER CAL=+0.0 RDGD TO AVE=4 MAX TEMP=160F OPR PNT=160F Grain does not dry. Even with a fairly high temperature.

Make sure that the sweep is going around the bin. It could be stuck, and it keeps pulling wet grain down, instead of advancing into the dry grain.

It could be a bin with a bin liner that is too low. All the hot air is going up the outside and not drying the grain.

There may not be any air flow thru the grain.

Make sure that grain T-stat is turned to the highest (driest) setting. Especially if the auger is running all the time, even when the computer says "OFF".

When the computer is off the augers should not run. If they do, the problem is not in the computer.

```
DATE=11/26/91
TIME=12:04P
LOT #=0001
DRY TO 16.0
METER CAL=+2.0
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
 TIME
        RDG
               TEMP
                      AVE
                           STAT PNT
                                       TEMP
12:06P
        16.9
               115F
                      16.9
                             OFF 160F 162F
               119F
12:17P
        16.4
                      16.6
                            OFF 160F 159F
12:28P
        16.0
               123F
                      16.4
                              ON 160F 161F
12:34P
        15.5
               125F
                      16.2
                              ON 160F 157F
                      15.8
12:40P
        15.4
               126F
                              ON 160F 163F
12:46P
        15.2
               128F
                      15.5
                              ON 160F 160F
12:52P
        14.7
                      15.2
               13ØF
                              ON 157F 159F
               .127F
12:58P
        15.Ø
                      15.Ø
                              ON 157F 129F
01:04P
        15.4
              123F
                      15.Ø
                              ON 157F 092F
Ø1:10P
        15.7
               119F
                      15.2
                              ON 157F 060F
Ø1:16P
         16.0
               118F
                      15.5
                              ON 157F 054F
        16.8
               105F
Ø1:22P
                      15.9
                              ON 159F Ø52F
Ø1:28P
         17.0
               Ø99F
                      16.3
                            OFF 160F 051F
Ø1:39P
         16.9
               Ø95F
                      16.6
                            OFF 160F 050F
         16.7
01:50P
               090F
                      16.8
                            OFF 160F 051F
02:01P
         16.8
               Ø87F
                      16.8
                            OFF 160F 051F
Ø2:12P
        16.9
               Ø85F
                      16.8
                            OFF 160F 050F
         17.1
Ø2:23P
               Ø80F
                      16.8
                            OFF 160F 050F
Ø2:34P
         16.8
               Ø77F
                      16.9
                            OFF 160F 049F
Ø2:45P
         16.7
               074F
                      16.8
                            OFF 160F 050F
               071F
         16.5
                      16.7
Ø2:56P
                            OFF 160F 049F
               Ø69F
Ø3:07P
         16.4
                      16.6
                            OFF 160F 049F
         16.2
               Ø65F
Ø3:18P
                      16.4
                            OFF 160F 050F
Ø3:29P
         16.0
               Ø64F
                      16.2
                             ON 160F 049F
Ø3:35P
         16.3
               Ø62F
                      16.2
                            OFF 160F 049F
03:46P
        16.5
               Ø59F
                      16.2
                            OFF 160F 050F
Ø3:57P
        16.4
               Ø57F
                      16.3
                            OFF
                                 160F 050F
Ø4:08P
         16.7
               Ø55F
                      16.4 OFF 160F 051F
Ø4:19P
         16.6
               Ø54F
                      16.5
                            OFF 160F 050F
```

Burner stopped burning.

This is almost always a problem with the burner.

Turn up the plenum
T-stat. If the burner
does not light, the
problem is not in the
Compudry. Check the
plenum Hi-limit, Low
grain shut-off relay
burner contacts, burner
safeties. Also make sure
there is gas available.

If the burner fires wit'
the plenum T-stat, then
check the Compudry Relay
board. See if the lights
for the Low and Hi Fire
relays are coming on, and
the relays are pulling
in. If they are, replace
the relays or the relay
board.

If the Low and Hi Fire relays aren't pulling in, and the lights aren't lighting, replace the computer box.

```
DATE=11/06/91
TIME=12:04P
LOT #=1234
DRY TO 16.0
METER CAL=+1.5
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
                           STAT
                                       TEMP
                                 PNT
               TEMP
                      AVE
TIME
        RDG
                             OFF
               115F
                      16.9
                                 160F 132F
12:06P
        16.9
               119F
                      16.6
                             OFF 160F 129F
        16.4
12:17P
                              ON 160F 131F
               123F
                      16.4
12:28P
         16.0
                              ON 160F 127F
                      16.2
12:34P
         15.5
               124F
                              ON 160F 133F
         15.4
               123F
                      15.8
12:40P
                              ON 160F 130F
                      15.5
               122F
         15.2
12:46P
                              ON 157F 129F
                      15.2
               125F
12:52P
         14.7
                              ON 157F 129F
               124F
                      15.0
12:58P
         15.Ø
                              ON 157F 130F
         15.4
               123F
                      15.0
01:04P
                              ON 157F 130F
               119F
                      15.2
         15.7
01:10P
                              ON 157F 131F
                      15.5
               118F
         16.0
Ø1:16P
                              ON 159F 132F
                      15.9
Ø1:22P
         16.8
               115F
                                 160F 131F
                      16.3
         17.Ø
               109F
                             OFF
Ø1:28P
                             OFF 160F 130F
               105F
                      16.6
Ø1:39P
         16.9
                      16.8
                             OFF 160F 131F
               100F
         16.7
01:50P
                             OFF 160F 131F
                      16.8
               102F
         16.8
02:01P
                             OFF 160F 130F
                      16.8
               105F
02:12P
         16.9
                             OFF 160F 130F
Ø2:23P
         17.1
               103F
                      16.8
               102F
                      16.9
                             OFF 160F 131F
Ø2:34P
         16.8
                      16.8
                             OFF 160F 130F
               104F
Ø2:45P
         16.7
                             OFF 160F 129F
                      16.7
               105F
         16.5
Ø2:56P
                             OFF 160F 129F
               109F
                      16.6
Ø3:07P
         16.4
                             OFF 160F 130F
         16.2
               115F
                      16.4
Ø3:18P
               118F
                      16.2
                              ON 160F 129F
         16.0
Ø3:29P
                              ON 160F 129F
                      16.1
               120F
Ø3:35P
         15.9
                              ON 160F 130F
               121F
                      15.9
Ø3:41P
         15.8
                              ON 160F 130F
                      16.0
         16.4
                117F
Ø3:47P
                             OFF 160F 131F
                115F
                      16.2
         16.7
Ø3:53P
                             OFF 160F 130F
                114F
                      16.3
         16.6
04:04P
                                       130F
                             OFF 160F
                112F
                       16.6
         16.8
Ø4:15P
                             OFF 160F 131F
                115F
                       16.6
Ø4:26P
         16.6
                             OFF 160F 131F
         16.5
                116F
                       16.6
Ø4:37P
                             OFF 160F 131F
                       16.5
         16.3
                118F
Ø4:48P
                             OFF 160F 130F
                       16.4
                119F
Ø4:49P
         16.2
                             OFF 160F 131F
                120F
                       16.2
05:00P
         16.1
```

Burner is not getting up to the temperature the Compudry is calling for.

In this case, the Compudry wants 160F, and is only getting 130F.

Drying capacity is slowed down.

Increase the gas pressure.

DATE=11/16/91 TIME=12:04P LOT #=0034 DRY TO 16.0 METER CAL=+1.5 RDGD TO AVE=4 MAX TEMP=160F OPR PNT=160F

	MOIST	GRAIN		MACH		PLENUM	
TIME	RDG	TEMP	AVE	STAT	PNT	TEMP	
12:06P	16.9	115F	16.9	OFF	160F	162F	
12:17P	16.4	119F	16.6	OFF	160F	159F	•
12:28P	16.0	123F	16.4	ON	160F		
12:34P	15.5	124F	16.2	ON	160F	157F	
12:40P	15.4	123F	15.8	ON	160F	16ØF	
12:46P	15.2	122F	15.5	ON	160F	16ØF	
12:52P	14.7	125F	15.2	ON	157F	159F	
12:58P	14.4	128F	14.9	ON	154F		
01:04P	14.1	133F	14.6	ON	151F	165F	
01:10P	13.7	134F	14.2	ON	145F		
Ø1:16P	13.8	133F	14.0	ON	139F	16 1 F	
	ERROR						
PLENUM	TOO HO		300		700-	3 4 A -	
Ø1:22P	13.8	135F	13.8	ON	133 F	162F	
	ERROR	^					
PLENUM	TOO HO		7 . 0	~	7.07-		
Ø1:28P	13.9	132F	13.8	ON	127F	151F	
	ERROR	~					
PLENUM	TOO HO		30 7	017		3.66-	
Ø1:34P	13.6	135F	13.7	ON	TZTF.	16ØF	
	ERROR						
PLENUM	TOO HO		33.0	017	300-	3.6.45	
Ø1:40P	14.0	13ØF	13.8	ON	128F	164F	
	ERROR						
PLENUM	TOO HO						
Ø1:46P	13.8	132F	13.8	ON	122F	161F	
	ERROR						
PLENUM	TOO HO		70.0				
Ø1:52P	13.9	133F	13.8	ON	116F	154F	
	ERROR						
PLENUM	TOO HO	TC					

"ERROR PLENUM TOO HOT"

Buzzer beeps and error prints out, but computer keeps running.

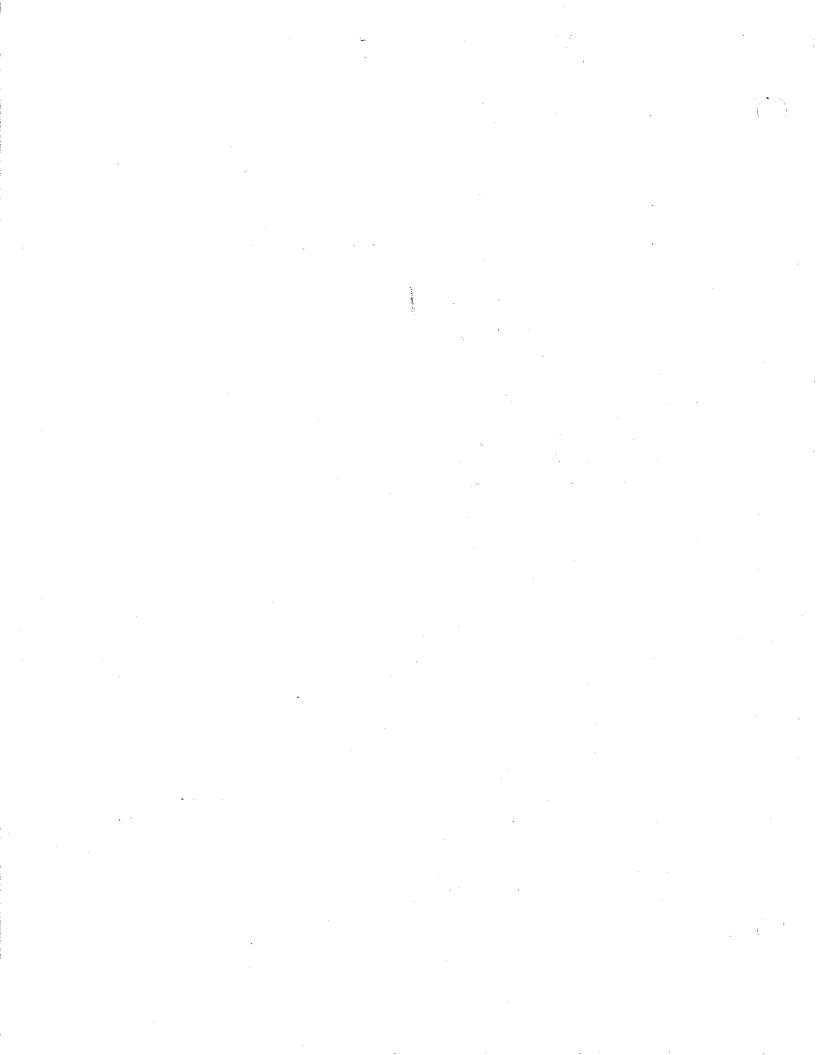
This error occurs when the plenum temp reading is more than 20F above the Operating Point.

It is usually caused by the plenum T-stat not being turned to its lowest setting.

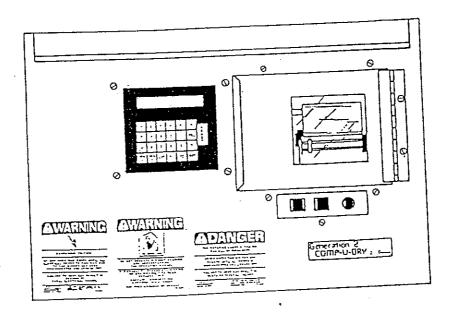
It could be caused by a stuck gas valve, or shorted plenum T-stat.

If the burner shuts off when the Compudry is shut off, it could be a bad computer box.

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DELUKE COMP-U-DRY Generation 2 By Shivers



TECHNICAL MANUAL

Shivvers Incorporated 614 West English Corydon, Iowa 50060. 515/872-1005

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INTRODUCTION to TROUBLESHOOTING

THE GENERATION 2 COMP-U-DRY

THESE TROUBLESHOOTING CHARTS WILL GIVE THE MOST LIKELY CAUSE OF A PROBLEM. THEY ASSUME A GENERAL KNOWLEDGE OF THE DRYING SYSTEM AND ITS TERMINOLOGY. THEY ASSUME THAT EVERYTHING WAS WIRED CORRECTLY AND HAS BEEN WORKING. IN SOME CASES THEY MAY HELP TROUBLESHOOT INITIAL WIRING PROBLEMS. THEY WILL NOT WORK IN ALL SITUATIONS, AND IT IS ALWAYS POSSIBLE THERE IS MORE THAN ONE PROBLEM.

WHEN SHOWING COMPUTER DISPLAYS, AN "x" MEANS ANY VALUE IS PROBABLY OK. FOR EXAMPLE, "xxxf" COULD BE 120F OR 075F.

******* WARNING ******



IN SOME CASES, IT IS NECESSARY TO TAKE VOLTAGE
MEASUREMENTS WHILE THE CIRCUIT IS "HOT". THESE
CHECKS SHOULD BE PERFORMED ONLY BY EXPERIENCED AND
COMPETENT SERVICE PERSONNEL. VOLTAGE LEVELS MAY
BE AS HIGH AS 220 VOLTS. PERSONAL INJURY IS

POSSIBLE. COMPUTER COMPONENTS AND CIRCUIT BOARD TRACES ARE VERY SENSITIVE. THEY MAY BE DESTROYED BY SHORT CIRCUITS. IF YOU ARE IN DOUBT ABOUT WHAT YOU ARE DOING, DON'T DO IT. SHUT ALL POWER OFF, AND REPLACE THE MAIN ASSEMBLIES UNTIL THE PROBLEM IS FIXED.

******* WARNING ******

····

OPERATING POINT

The operating point is the computer calculated temperature that is required in the plenum to obtain grain of the desired moisture. There is an entry in the start up procedure to set the "initial operating point" for a starting temperature. This is only a starting temperature. After the Comp-U-Dry obtains a grain sample, the operating point is computer controlled, as determined by the moisture average of the grain samples.

The operating point is programmed to allow a 1% (dry) variation in moisture without a change. If the selected moisture is 16.5%, the operating point will not be changed if the moisture average is between 16.5% and 15.5%. If the average moisture is above 16.5% the operating point will be raised. The amount the temperature is raised is determined by how much over the set point the moisture average is. In no case, will the operating point be raised above the maximum temperature.

If the moisture average is more than 1% less than the set point, (in this example, the moisture would be less than 15.5%) the computer will lower the operating point a small amount, to slow the drying rate. If the next moisture level is still too dry, the operating point will again be lowered a small amount.

As the grain drying process continues, the operating point will probably continue to be adjusted, trying to find equilibrium, where the grain is at the desired moisture without overdrying. In most installations, perfect equilibrium will be impossible to achieve because of variations of the heat under the floor (within the bin) and variations of grain depth and grain moisture. If the drying conditions are conducive to it, the operating point may go lower than the outside temperature, resulting in natural air drying while maintaining the capacity of the machine.

CONTROL CHECK

There is a program execution monitor in the G2 COMPUDRY which will shut off control power if the program stops running. This feature is checked by the computer at the next sample after 6:00 and 12:00. Program version numbers 2.6, or later, do this check only once a day, at 6:00 AM. The computer does the following:

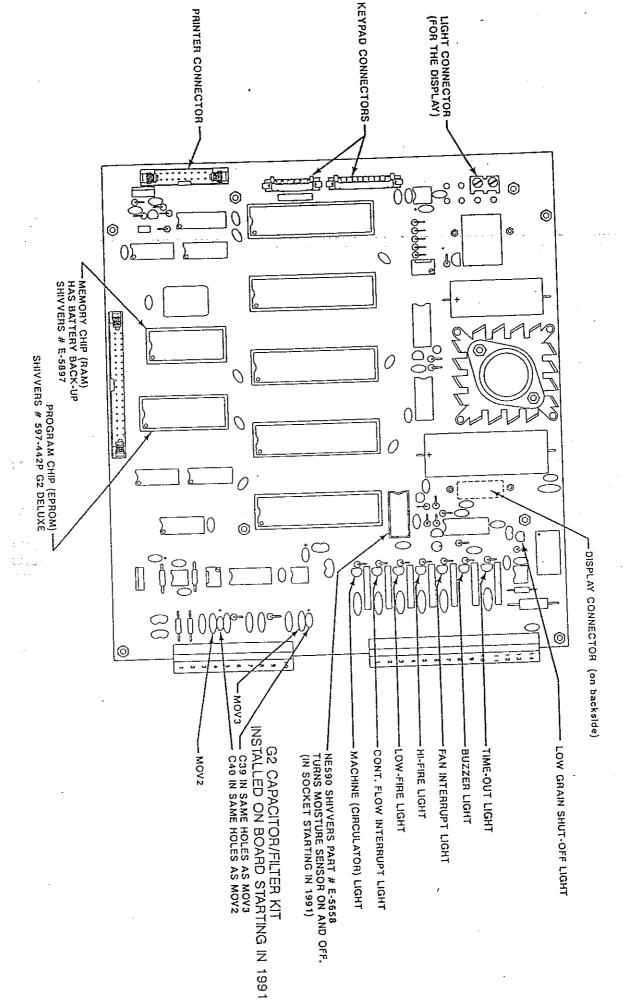
- 1) Displays "CONTROL CHECK".
- 2) Disables program execution monitor.
- 3) Shuts off machine (circulator), and burner fire.
- 4) Waits 80 seconds. Time-out light should come on during this time.
- 5) Tries to turn on machine (circulator). It shouldn't come on.
- 6) Reads moisture meter five times.
- 7) If readings are all the same, assumes that the machine is indeed disabled, and continues with step 8. If the readings are changing, assumes that the machine is running. Tries reading the moisture meter five more times. If the readings are still changing, prints out:

COMPUDRY CONTROL INTERRUPT INOPERATIVE.
SEE OWNERS MANUAL. SERVICE IMMEDIATELY.
---- CAUTION ----

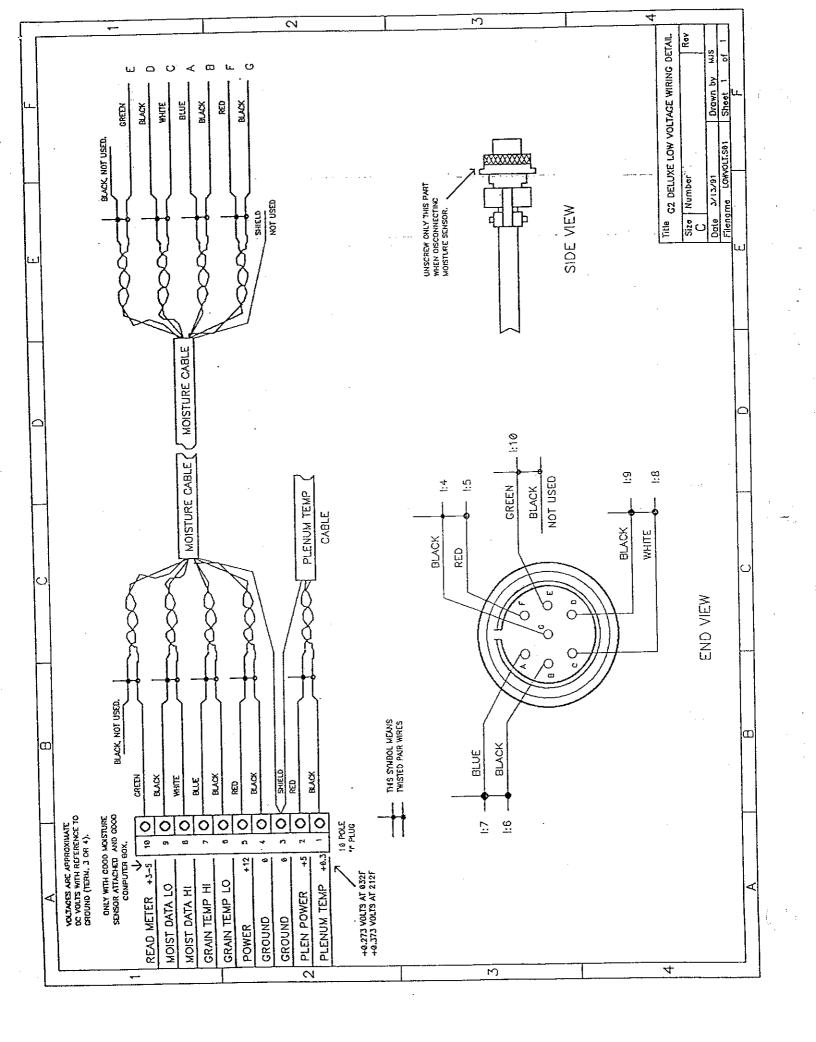
Also sets the buzzer so it will beep on and off. Continues with step 8.

- 8) Turns machine (circulator), off. (It never should have come on). Reenables the program execution monitor. The Time-out light should go off at this time.
- 9) Prints out 6 hour information, and continues drying.

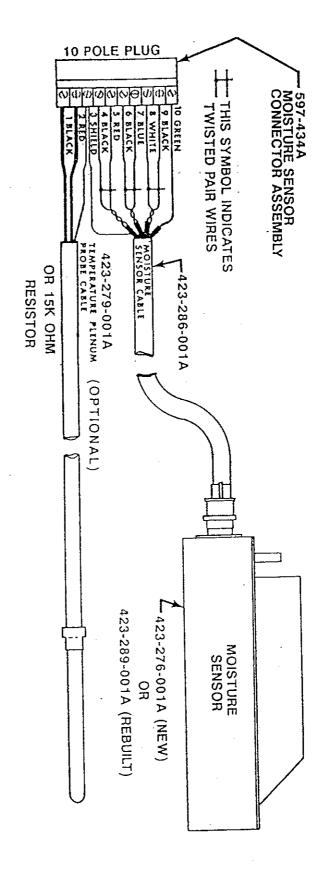
G2 COMPUTER CONTROL BOARD



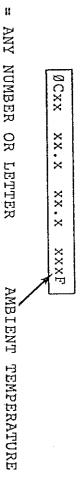
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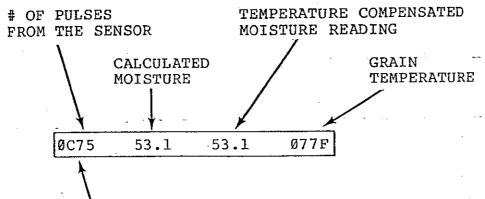
TOOL. SHUT POWER OFF. BOX IS GOOD, THE DISPLAY SHOULD SHOW: METER". TURN THE POWER ON. GET INTO THE MENU. SELECT "2. MAKE SURE NOTHING IS TOUCHING THE "FLAG". IF CO UNPLUG THE 10 POLE "I" PLUG. PLUG IN THE TEST IF COMPUTER



×

 $(x_1,\dots,x_{k-1},x_{k-$

MENU READ METER



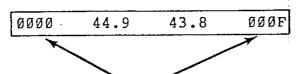
Empty chamber reading, (no grain around the sensor). Can range from 0C40 to 0C90. Number of pulses should not vary by more than 1 or 2 pulses each time RET key is pressed.

ØD6E	16.1	15.0	100F
4			

Grain is around the sensor. Can range from ØCCE to ØFØØ. Number of pulses will vary with moving grain.

0000	44.9	46.2	Ø5ØF
1			

Something is wrong. Either the sensor is wet or bad, or the computer board is not turning the sensor on and off at the proper times. Voltage is getting to the sensor because it is sending a grain temperature.



Power is either not getting to the sensor, or the sensor is bad, because there is not any grain temperature. Check connections on 10 pole "I" plug, especially the red wire in terminal #5.

```
DATE=10/26/91
TIME=12:04P
LOT #=0001
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
       MOIST GRAIN MOIST MACH OPR PLENUM
                                      TEMP
                           STAT PNT
                     AVE
               TEMP
 TIME
         RDG
                            OFF 160F 162F
                     16.9
         16.9
               115F
12:06P
                            OFF 160F 159F
12:17P
         16.3
               119F
                     16.6
                             ON 160F 161F
               122F
                     16.3
         15.9
12:28P
                             ON 160F 157F
                      16.1
         15.5
               125F
12:34P
                             ON 160F 163F
                      15.8
12:40P
         15.8
               123F
                             ON 160F 160F
         15.2
               128F
                      15.6
12:46P
                      15.3
                             ON 157F 155F
         14.9
               130F
12:52P
                             ON 157F 159F
                      15.3
               127F
         15.3
12:58P
                             ON 159F 161F
                      15.4
Ø1:04P
               12ØF
         16.2
                             ON 160F 160F
                      15.8
               116F
Ø1:10P
         16.8
                            OFF 160F 158F
               112F
                      16.3
         17.0
Ø1:16P
          READ=0000
 ERROR
READ=49.3 READ=47.4
REDO
                            OFF 160F 162F
                      16.6
         16.5
               115F
01:29P
                              ON 160F 162F
                      16.5
Ø1:40P
         16.0
               121F
                              ON 160F 160F
                      16.3
         15.8
               125F
Ø1:45P
                              ON 160F 155F
               124F
                      16.0
         15.9
Ø1:51P
                              ON 160F 159F
                      15.8
               127F
         15.5
01:57P
                              ON 160F 162F
               125F
                      15.7
02:03P
         15.7
                              ON 160F 159F
                      15.8
Ø2:09P
         16.1
               120F
                              ON 160F 163F
         16.8
               115F
                      16.0
Ø2:15P
                             OFF 160F 160F
                      16.1
               119F
         16.1
02:21P
                              ON 160F 159F
                      16.2
               121F
         16.0
02:32P
                              ON 160F 156F
                      16.1
Ø2:38P
         15.8
                125F
                              ON 160F 158F
         15.9
               124F
                      15.9
Ø2:44P
                              ON 160F 162F
               122F
                      15.9
         16.1
Ø2:5ØP
          READ=0000
 ERROR
READ=51.2 READ=49.3
REDO
          READ=0000
  ERROR
```

READ=49.4

READ=51.3

ERROR
READING OUT OF RANGE

Intermittent "ERROR
READ=0000". Sometimes
will "REDO" and go ahead
and run. Sometimes gets
two in a row and shuts
down on "ERROR READING
OUT OF RANGE".
Circulator or Cont. Flow
augers may also turn on
and off at improper times.

Make sure that a Capacitor/Filter Kit is installed; either on the 10 pole "I" plug, or soldered onto the main computer board.

Check for a good connection with the green wire on terminal #10 of the 10 pole "I" plug.

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```
SELECT ONE
Fl RESUME
- 1 MENU
 4 DRY GRAIN
METER CAL=+0.0
 ENTERED +1.0
 ----RESUMED DATA --
DATE=10/30/91
TIME=07:04P
LOT #=0000
DRY TO 16.5
METER CAL=+1.0
RDGD TO AVE=6
MAX TEMP=140F
 OPR PNT=133F
         MOIST GRAIN MOIST MACH OPR PLENUM
                                       TEMP
                       AVÉ
                            STAT PNT
          RDG
                TEMP
  TIME
           READ=0000
  ERROR
           READ=0000
  ERROR
 READ=44.9 READ=44.9
 REDO
           READ = \emptyset\emptyset\emptyset\emptyset
  ERROR
           READ=0000
  ERROR
           READ=0000
   ERROR
           READ=0000
   ERROR
           READ=0000
   ERROR
           READ=0000
   ERROR
            READ=0000
   ERROR
            READ=0000
   ERROR
            READ=0000
   ERROR
            READ=0000
   ERROR
  READ=44.9 READ=44.9
         ERROR
  READING OUT OF RANGE
  READINGS NOT CHANGING
```

Ten "ERROR READ=0000"
readings in a row, then a
"REDO", with ten more
"ERROR READ=0000". Then
"ERROR READING OUT OF
RANGE", and "READINGS NOT
CHANGING". On program
versions G2.7 and above,
it will also print a
grain temperature.
For example:
"ERROR READ=0000 115F"

This is probably one of the most common errors, and unfortunately, it is the hardest to diagnose because it can be so many different things.

Could be a wet or dirty moisture sensor.

Check for a good connection on the green wire to terminal #10 of the 10 pole "I" plug.

Replace the Moisture Sensor or substitute the sensor and cable. If it is not the Moisture Sensor, replace the NE590 if it is in a socket. If it is not in a socket, replace the Computer Box.

It could also be the Moisture Cable, but not very likely.

```
SELECT ONE
F1 RESUME
 1 MENU
 4 DRY GRAIN
METER CAL=+0.0
 ENTERED +1.0
 -----RESUMED DATA -----
DATE=10/31/91
TIME=09:15A
LOT #=0000
DRY TO 15.5
METER CAL=+1.0
RDGD TO AVE=8
MAX TEMP=145F
OPR PNT=145F
        MOIST GRAIN MOIST MACH OPR PLENUM
                          STAT PNT
                                     TEMP
               TEMP
                     AVE
         RDG
 TIME
          READ=0000
 ERROR
          READ=0000
  ERROR
          READ=0000
  ERROR
          READ=0000
  ERROR
 READ=44.9 READ=45.9
 REDO
          READ=0000
  ERROR
          READ=0000
  ERROR
 READ=44.9 READ=45.9
         ERROR
 BAD GRAIN TEMP
 READING OUT OF RANGE
 READINGS NOT CHANGING
```

Ten "ERROR READ=0000"
readings in a row, then a
"REDO", with ten more
"ERROR READ=0000". Then
"ERROR BAD GRAIN TEMP",
and "READING OUT OF
RANGE", and "READINGS NOT
CHANGING". On program
versions G2.7 and above,
it will also print a
grain temperature.
For example:
"ERROR READ=0000 000F"

Check for a good connection on the red and black wires on terminals #4 and #5 on the 10 pole "I" plug. Also, check for about 12 Volts DC across those terminals. Be careful not to short the terminals together or to the box. If there isn't 12 Volts DC here, replace the Computer Box.

Unless the Moisture Cable is visually damaged, replace the Moisture Sensor. This is the most common solution to this problem.

It could also be the Moisture Cable, but not very likely.

```
METER CAL=+2.0
 ENTERED +2.0
 ----RESUMED DATA ----
DATE=11/05/91
TIME=02:11P
LOT #=0000
DRY TO 14.5
METER CAL=+2.0
RDGD TO AVE=6
MAX TEMP=140F
OPR PNT=140F
       MOIST GRAIN MOIST MACH OPR PLENUM
        RDG
               TEMP
                     AVE
                           STAT PNT
 TIME
         READ=ØC75
 ERROR
         READ=ØC76
 ERROR
         READ=ØC75
 ERROR
 ERROR
         READ=ØC75
        READ=ØC75
 ERROR
 ERROR
         READ=ØC75
 ERROR
         READ=ØC76
         READ=ØC75
 ERROR
 ERROR
         READ=0C75
         READ=ØC75
 ERROR
READ=52.7
           READ=54.9
REDO
 ERROR
          READ=ØC75
 ERROR
          READ=ØC75
          READ=ØC76
 ERROR
         READ=ØC75
 ERROR
          READ=ØC75
 ERROR
 ERROR
          READ=ØC75
 ERROR
          READ=ØC75
          READ = \emptyset C75
 ERROR
          READ=ØC75
 ERROR
 ERROR
          READ=ØC76
READ=52.7 READ=54.9
        ERROR
READING OUT OF RANGE
READINGS NOT CHANGING
```

SELECT ONE

4 DRY GRAIN

F1 RESUME

1 MENU

Ten "ERROR READ=ØCxx"
readings in a row, th a
"REDO", with ten more
"ERROR READ=ØCxx". Then
"ERROR READING OUT OF
RANGE", and "READINGS NOT
CHANGING". On program
versions G2.7 and above,
it will also print a
grain temperature.
For example:
"ERROR READ=ØC75 Ø87F"

This usually means that there isn't any grain around the moisture sensor. The readings can be in a range from ØC40 to ØC9F.

Make sure there is grain in the bin.

Make sure the center vertical auger runs by putting the circulator switch in manual. Als make sure it will run by turning the grain T-stat to its lowest (wettest) setting. The grain will have to be at least 55 F. If it doesn't run, start checking fuses, and overloads.

If the circulator runs in manual, check the 1/2 Amp fuse on the Compudry Relay board.

Make sure there is a good connection on terminal #5 of the 16 pole "F" plug.

Make sure the 14 pole "C" plug is securely plugged into the top of the computer box.

Replace the Computer F

. SELECT ONE

Fl RESUME

1 MENU

4 DRY GRAIN

METER CAL=+0.0 ENTERED +0.0

----RESUMED DATA ----

DATE=11/07/91 TIME=08:11A LOT #=0123 DRY TO 15.5 METER CAL=+0.0 RDGD TO AVE=6 MAX TEMP=140F OPR PNT=140F

MOIST GRAIN MOIST MACH OPR PLENUM
TIME RDG TEMP AVE STAT PNT TEMP
ERROR
NO TEMP READING

SHIVVERS G2 COMPUDRY

SELECT ONE

Fl RESUME

l MENU

4 DRY GRAIN

SELECTION 1

MENU

- 1 READ TEMP
- 2 READ METER
- 3 MACHINE
- 4 CONT FLOW ENABLE
- 5 FAN ENABLE
- 6 BUZZER
- 7 HI FIRE
- 8 LO FIRE
- A SET MACHINE OFF TIME
- E EXIT

SELECTION 1

PLENUM=000F GRAIN=059F PLENUM=000F GRAIN=059F "ERROR NO TEMP READING"

This occurs when the computer gets all zeros for a plenum temperature. It will shut the dryer down, and turn on the buzzer.

Check for a good connection on terminals #1 and #2 of the the 10 pole "I" plug.

Replace the plenum temp. probe.

Replace the Computer Box.

```
DATE=11/11/91
TIME=12:04P
LOT #=0005
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=150F
OPR PNT=150F
       MOIST GRAIN MOIST MACH OPR PLENUM
               TEMP
                      AVE
                           STAT PNT
                                      TEMP
         RDG
 TIME
                      16.9
                            OFF 150F 152F
         16.9
               115F
12:06P
                            OFF 150F 149F
               119F
                      16.6
         16.3
12:17P
                             ON 150F 151F
               122F
                      16.3
12:28P
         15.9
               125F
                      16.1
                             ON 150F 147F
         15.5
12:34P
                             ON 150F 153F
               123F
                      15.8
         15.8
12:40P
                             ON 150F 150F
                      15.6
               128F
12:46P
         15.2
                      15.3
                             ON 147F 155F
12:52P
         14.9
               ØØØF
        ERROR
BAD GRAIN TEMP
                             ON 147F 149F
               127F
                      15.3
12:58P
         15.3
                              ON 149F 151F
Ø1:04P
         16.2
               120F
                      15.4
                      15.8
                              ON 150F 150F
Ø1:10P
         16.8
               116F
         17.Ø
               112F
                      16.3
                            OFF 150F 148F
Ø1:16P
               115F
                      16.6
                            OFF 150F 152F
Ø1:29P
         16.5
                              ON 150F 152F
               121F
                      16.5
         16.0
01:40P
                              ON 150F 150F
         15.8
               125F
                      16.3
Ø1:45P
         15.9
               124F
                      16.Ø
                              ON 15ØF 155F
Ø1:51P
                              ON 150F 149F
         15.5
               127F
                      15.8
Ø1:57P
                              ON 150F 152F
               125F
                      15.7
         15.7
02:03P
                              ON 150F 149F
               120F
                      15.8
Ø2:Ø9P
         16.1
                      16.0
                              ON 150F 153F
               115F
Ø2:15P
         16.8
                             OFF 150F 150F
                      16.1
         16.1
               119F
Ø2:21P
                      16.2
                              ON 150F 149F.
         16.0
               121F
Ø2:32P
                125F
                      16.1
                              ON 150F 146F
Ø2:38P
         15.8
                              ON 150F 148F
                      15.9
               124F
Ø2:44P
         15.9
                122F
                      15.9
                              ON 150F 152F
Ø2:5ØP
         16.1
                000F
                      15.7
                              ON 150F 147F
         15.2
Ø2:56P
        ERROR
BAD GRAIN TEMP
Ø3:02P
         15.3
                ØØØF
                      15.6
                              ON 150F 151F
        ERROR
BAD GRAIN TEMP
                              ON 150F 150F
Ø3:Ø8P
         16.5
                120F
                      15.7
                              ON 150F 147F
         16.8
                118F
                      15.9
 Ø3:14P
                117F
                      16.3
                             OFF 150F 151F
         16.7
 Ø3:20P
```

"ERROR BAD GRAIN TEMP" Grain temp. reads 000F, either all the time, or intermittently. Buzzer beeps, but does not shut dryer down.

Check for good connections on terminals #6 and #7 of the 10 pole "I" plug. These will be the blue and black wires.

Replace the Moisture Sensor.

The second secon

```
DATE=11/11/91
TIME=12:04P
LOT #=0005
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=150F
OPR PNT=150F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
                           STAT PNT
                                       TEMP
        RDG
               TEMP
                     AVE
 TIME
                            OFF 150F 152F
               115F
                     16.9
        16.9
12:06P
                            OFF 150F 149F
                      16.6
        16.3
               119F
12:17P
                             ON 150F 151F
               122F
                      16.3
        15.9
12:28P
                              ON 150F 147F
               125F
                      16.1
        15.5
12:34P
                              ON 150F 153F
               123F
                      15.8
12:40P
        15.8
                              ON 150F 150F
        15.2
               128F
                      15.6
12:46P
                              ON 144F 145F
               145F
                      15.1
        13.9
12:52P
                              ON 144F 147F
                      15.0
               127F
12:58P
        15.3
                              ON 146F 141F
                      15.1
        16.2
               120F
Ø1:04P
                              ON 148F 150F
               116F
                      15.5
         16.8
Ø1:10P
                             OFF 150F 148F
                      16.3
         17.0
               112F
Ø1:16P
                             OFF 150F 152F
                      16.6
               115F
Ø1:29P
         16.5
                              ON 150F 152F
                      16.5
         16.0
               121F
01:40P
                              ON 150F 150F
               125F
                      16.3
         15.8
Ø1:45P
                              ON 150F 155F
         15.9
               124F
                      16.Ø
Ø1:51P
                              ON 144F 147F
         13.5
               157F
                      15.3
01:57P
                              ON 144F 142F
                      15.2
         15.7
               125F
Ø2:03P
                              ON 146F 149F
                      15.3
               120F
         16.1
Ø2:09P
                              ON 148F 15ØF
                      15.5
         16.8
               115F
Ø2:15P
                             OFF 150F 152F
               119F
                      16.1
Ø2:21P
         16.1
                      16.2
                              ON 150F 149F
               121F
Ø2:32P
         16.0
                      16.1
                              ON 150F 146F
         15.8
               125F
Ø2:38P
                              ON 150F 148F
                      15.9
               124F
Ø2:44P
         15.9
                              ON 150F 152F
                      15.9
         16.1
               122F
02:50P
                              ON 144F 147F
                      15.2
Ø2:56P
         13.2
               161F
        ERROR
BAD GRAIN TEMP
                              ON 141F 145F
               152F
                      14.8
         14.3
Ø3:02P
                              ON 141F 140F
         15.5
               130F
                      14.7
Ø3:08P
                              ON 141F 143F
         15.8
               128F
                      14.7
Ø3:14P
                              ON 141F 141F
                      15.3
         15.7
               127F
Ø3:20P
                              ON 141F 144F
                      15.5
                132F
Ø3:26P
         15.2
                              ON 141F 139F
                      15.4
Ø3:32P
         15.0
               133F
                              ON 138F 140F
               133F
                      15.1
         14.8
Ø3:38P
                              ON 135F 137F
         14.0
                145F
                      14.7
Ø3:44P
                              ON 132F 134F
                      14.5
                135F
         14.5
Ø3:5ØP
```

"ERROR BAD GRAIN TEMP" Grain temp. reads above 160F intermittently. Buzzer beeps, but does not shut dryer down.

Look on the tape for a recurring spot where the grain temperature is Usually about high. every 5-8 "ON" samples. Also notice if when the grain is hot, that the moisture reading is low. If it is, there is probably a hot spot in This usally the bin. occurs with a single sweep unit. Find out where the sweep is when the hot reading occurs, to find the hot spot. Try to capture a sample of grain and verify that the grain is as hot as the computer says it is.

Also, if the grain temp. is hotter than the plenum temp., make sure the plenum temp probe is not in a cold spot, or not reading accurately.

Make sure the grain is level in the bin. Even the heat out under the floor.

If the grain is really not that hot and the moisture readings aren't much lower, then check for good connections on terminals #6 and #7 of the 10 pole "I" plug. These will be the blue and black wires.

If the connections look ok, then replace the Moisture Sensor.

```
DATE=09/06/91
TIME=12:04P
LOT #=0001
DRY TO 15.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=140F
OPR PNT= 55F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
        RDG
               TEMP
                      AVE
                           STAT PNT
TIME
                                      TEMP
               Ø85F
                      15.0
        15.Ø
                             ON Ø55F Ø92F
12:06P
               Ø89F
                      14.9
12:12P
        14.8
                             ON Ø55F Ø93F
        14.9
12:18P
               Ø82F
                      14.9
                             ON Ø55F Ø93F
12:24P
        14.6
               Ø85F
                      14.8
                             ON Ø55F Ø93F
               Ø83F
                      14.7
12:30P
        14.8
                             ON Ø55F Ø93F
        14.7
               Ø88F
                      14.7
12:36P
                             ON Ø55F Ø92F
12:42P
        14.9
               Ø85F
                      14.7
                             ON Ø55F Ø93F
12:48P
        14.8
               Ø87F
                      14.8
                             ON Ø55F Ø92F
        15.Ø
               Ø85F
                      14.8
12:54P
                             ON Ø55F Ø92F
        14.8
               Ø86F
                      14.8
01:00P
                             ON Ø55F Ø93F
        15.0
               Ø84F
                      14.9
Ø1:06P
                             ON Ø55F Ø93F
READ=15.0 READ=14.8
REDO
Ø1:12P
        14.5
               Ø85F
                      14.8
                             ON Ø55F Ø92F
        15.0
               Ø85F
                      14.8
                             ON Ø55F Ø92F
Ø1:18P
Ø1:24P
        14.8
               Ø86F
                      14.8
                             ON 055F 003F
Ø1:31P
        14.9
               Ø84F
                      14.8
                             ON Ø55F Ø93F
Ø1:37P
        14.5
               Ø85F
                      14.8
                             ON Ø55F Ø93F
        14.7
               Ø85F
                      14.7
                             ON Ø55F Ø92F
Ø1:43P
        14.6
               Ø86F
                      14.6
Ø1:49P
                             ON Ø55F Ø93F
Ø1:55P
       14.8
               Ø85F
                      14.6
                             ON Ø55F Ø93F
02:01P
        14.6
               Ø85F
                      14.6
                             ON Ø55F Ø92F
Ø2:07P
        15.0
               Ø86F
                      14.7
                             ON Ø55F Ø92F
        14.8
               Ø84F
                      14.8
Ø2:13P
                             ON Ø55F Ø92F
         14.9
               Ø86F
                      14.8
                             ON Ø55F Ø92F
Ø2:19P
        15.1
               Ø85F
                      14.9
                             ON Ø55F Ø92F
Ø2:25P
READ=15.2 READ=15.0
REDO
READ=15.1
            READ=14.9
       ERROR
READINGS NOT CHANGING
```

Intermittent "ERROR READINGS NOT CHANGING".

There is not enough variation in the ten moisture readings per sample, to get a valid reading. The computer errors only occasionally. Sometimes it will "REDO" and go ahead and run.

This will usually not occur when drying corn. It can occur when drying wheat and milo, especially when just taking out a few points of moisture, at a low drying temp. The moisture readings are so even, the computer thinks that the grain is not moving by the sensor.

About the only cure for this is to install a special program chip.

It can also occur when the moisture sensor is not properly installed, (usually in a DRI-SMART). Also check the moisture sensor for a build-up of dried crud.

SELECT ONE
F1 RESUME
1 MENU
4 DRY GRAIN

METER CAL=+2.0 ENTERED +2.0

----RESUMED DATA ----

DATE=11/05/91 TIME=02:11P LOT #=0000 DRY TO 14.5 METER CAL=+2.0 RDGD TO AVE=6 MAX TEMP=140F OPR PNT=140F

MOIST GRAIN MOIST MACH OPR PLENUM
TIME RDG TEMP AVE STAT PNT TEMP
READ=17.2 READ=15.3
REDO
READ=17.3 READ=15.4
ERROR
READINGS NOT CHANGING

"ERROR READINGS NOT CHANGING".

There is not enough variation in the ten moisture readings per sample, to get a valid reading. The computer errors and shuts down. It does not print "REDO", then go ahead and run.

This will usually occur when installed on a Dri-Flow (bottom unload), and on some 6" center verticals. Usually the auger is not running and there is a stationary slug of grain on the moisture sensor.

Make sure the discharge auger runs by putting the circulator switch in manual. Also make sure it will run by turning the grain T-stat to its lowest (wettest) setting. The grain will have to be at least 55 F.

If it doesn't run, start checking fuses, and overloads.

If the auger runs in manual, check the 1/2 Amp fuse on the Compudry Relay board.

Make sure there is a good connection on terminal #5 of the 16 pole "F" plug.

Make sure the 14 pole "C" plug is securely plugged into the top of the computer box.

Replace the Computer Box.

```
Ø5:16A
        15.9
               122F
                      16.3
                             ON 160F 161F
               125F
        15.5
Ø5:22A
                      16.1
                             ON 160F 157F
               123F
Ø5:28A
        15.8
                      15.8
                             ON 160F 163F
Ø5:34A
        15.2
               128F
                      15.6
                             ON 160F 160F
Ø5:4ØA
        14.9
               130F
                      15.3
                             ON 157F 155F
        15.3
Ø5:46A
               127F
                      15.3
                             ON 157F 159F
Ø5:52A
        16.2
               120F
                      15.4
                             ON 159F 161F
        16.8
Ø5:58A
               116F
                      15.8
                             ON 160F 160F
           ---- CAUTION ----
```

COMPUDRY CONTROL INTERRUPT INOPERATIVE. SEE OWNERS MANUAL. SERVICE IMMEDIATELY. ---- CAUTION ----

DATE=10/26/91

TIME=06:04A LOT #=0001 DRY TO 16.0 METER CAL=+0.0

RDGD TO AVE=4

MAX TEMP=160F OPR PNT=160F

MOIST GRAIN MOIST MACH OPR PLENUM TEMP TIME RDG AVE STAT PNT TEMP 16.9 115F 16.9 OFF 160F 162F Ø6:06A Ø6:17A 16.3 119F 16.6 OFF 160F 159F Ø6:28A 15.9 122F 16.3 ON 160F 161F Ø6:34A 15.5 125F 16.1 ON 160F 157F Ø6:40A 15.8 123F 15.8 ON 160F 163F 128F Ø6:46A 15.2 15.6 ON 160F 160F Ø6:52A 13ØF 15.3 14.9 ON 157F 155F Ø6:58A 15.3 127F 15.3 ON 157F 159F Ø7:Ø4A 16.2 120F 15.4 ON 159F 161F Ø7:1ØA 16.8 116F 15.8 ON 160F 160F

Computer failed "CONTROL CHECK" at 6:00 AM. Buzzer starts beeping, but dryer continues to run.

Program version G2.6 and later only does a control check at 6:00 AM. Earlier versions do the check every 6 hours, at 6:00 and 12:00.

Make sure that the grain T-stat in the dryer control box is turned to the highest (driest) setting.

If it only occurs once twice a season, don't worry about it.

If it happens every time, replace the computer box. If that doesn't fix it, a ground strap from terminal #3 of the 10 pole "I" plug, to the box ground lug, may help.

```
DATE=10/26/91
TIME=12:04P
LOT #=0001
DRY TO 16.0
METER CAL=+0.0
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
                                      TEMP
                           STAT PNT
               TEMP
                      AVE
         RDG
TIME
                            OFF 160F 162F
               115F
                      16.9
         16.9
12:06P
                            OFF 160F 159F
                      16.8
               119F
         16.8
12:17P
                            OFF 160F 161F
                      16.8
               118F
         16.9
12:28P
                            OFF 160F 157F
                      16.7
               120F
12:39P
         16.5
                            OFF 160F 163F
                      16.6
               121F
         16.4
12:50P
                            OFF 160F 160F
                      16.5
               128F
01:01P
         16.2
                            OFF 160F 165F
                      16.3
               130F
         16.1
Ø1:12P
                             ON 160F 159F
                      16.1
               127F
Ø1:23P
         16.0
                            OFF 160F 161F
                      16.3
               120F
         16.9
Ø1:29P
                            OFF 160F 160F
                      16.4
               116F
         16.7
01:40P
                            OFF 160F 158F
                      16.6
               118F
Ø1:51P
         17.0
                            OFF 160F 162F
               125F
                      16.8
         16.8
Ø2: Ø2P
                            OFF 160F 162F
               121F
                      16.7
         16.6
Ø2:13P
                            OFF 160F 160F
                      16.7
               125F
Ø2:24P
         16.4
                             OFF 160F 155F
                      16.5
                124F
         16.2
Ø2:35P
                             OFF 160F 159F
                      16.3
                127F
         16.1
Ø2:46P
                              ON 160F 162F
                129F
                      16.1
         15.9
02:57P
                              ON 160F 159F
                125F
                      16.0
         16.1
03:03P
                             OFF 160F 163F
                115F
                      16.2
Ø3:Ø9P
         16.8
                      16.3
                             OFF 160F 160F
                119F
         16.7
Ø3:20P
                             OFF 160F 159F
                      16.5
                121F
Ø3:31P
         16.5
                             OFF 160F 156F
                125F
                      16.6
         16.4
Ø3:42P
                             OFF 160F 158F
                      16.4
                124F
         16.2
Ø3:53P
                             OFF 160F 162F
                      16.3
                126F
Ø4: Ø4P
         16.1
                             OFF 160F 161F
                       16.2
                129F
         16.3
Ø4:14P
                             OFF 160F 157F
                       16.2
                125F
         16.5
Ø4:25P
                             OFF 160F 160F
                       16.3
                127F
         16.4
Ø4:36P
                             OFF 160F 162F
                       16.3
                130F
 Ø4:47P
         16.2
                             OFF 160F 163F
                       16.3
                129F
         16.1
 Ø5:58P
```

DATE=10/26/91 TIME=06:10P LOT #=0001 DRY TO 16.0 METER CAL=+0.0 RDGD TO AVE=4 MAX TEMP=160F OPR PNT=160F Grain does not dry. Even with a fairly high temperature.

Make sure that the sweep is going around the bin. It could be stuck, and it keeps pulling wet grain down, instead of advancing into the dry grain.

It could be a bin with a bin liner that is too low. All the hot air is going up the outside and not drying the grain.

There may not be any air flow thru the grain.

Make sure that grain T-stat is turned to the highest (driest) setting. Especially if the auger is running all the time, even when the computer says "OFF".

When the computer is off the augers should not run. If they do, the problem is not in the computer.

```
DATE=11/26/91
TIME=12:04P
LOT #=0001
DRY TO 16.0
METER CAL=+2.0
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
               TEMP
                      AVE
                           STAT PNT
        RDG
                                      TEMP
TIME
                      16.9
        16.9
               115F
                            OFF 160F 162F
12:06P
               119F
                     16.6
12:17P
        16.4
                            OFF 160F 159F
               123F
12:28P
        16.0
                      16.4
                             ON 160F 161F
        15.5
               125F
                     16.2
                             ON 16ØF 157F
12:34P
                      15.8
12:40P
        15.4
               126F
                             ON 160F 163F
        15.2
               128F
                      15.5
                             ON 160F 160F
12:46P
        14.7
12:52P
               130F
                      15.2
                             ON 157F 159F
                              ON 157F 129F
12:58P
        15.0
               127F
                      15.0
        15.4
               123F
                      15.0
                              ON 157F 092F
01:04P
                              ON 157F 060F
        15.7
               119F
                      15.2
Ø1:10P
        16.Ø
               118F
                      15.5
                              ON 157F 054F
Ø1:16P
        16.8
               105F
                      15.9
                              ON 159F Ø52F
Ø1:22P
        17.0
               Ø99F
                      16.3
Ø1:28P
                            OFF 160F 051F
        16.9
               Ø95F
                      16.6
                            OFF 160F 050F
Ø1:39P
               090F
                      16.8
                            OFF 160F 051F
01:50P
        16.7
               Ø87F
                      16.8
                            OFF 160F 051F
02:01P
        16.8
        16.9
               Ø85F
                      16.8
                            OFF 160F 050F
Ø2:12P
Ø2:23P
        17.1
               Ø8ØF
                      16.8
                            OFF 160F 050F
        16.8
               Ø77F
                      16.9
                            OFF 160F 049F
Ø2:34P
        16.7
               Ø74F
                      16.8
                            OFF 160F 050F
Ø2:45P
        16.5
                      16.7
Ø2:56P
               Ø71F
                            OFF 160F 049F
        16.4
               Ø69F
                      16.6
                            OFF 160F 049F
03:07P
        16.2
               Ø65F
                      16.4
                             OFF 160F 050F
Ø3:18P
        16.Ø
               Ø64F
                      16.2
                             ON 160F 049F
Ø3:29P
               Ø62F
                      16.2
                            OFF 160F 049F
Ø3:35P
        16.3
        16.5
               Ø59F
                      16.2
03:46P
                            OFF 160F 050F
Ø3:57P
        16.4
               Ø57F
                      16.3
                            OFF 160F 050F
        16.7
               Ø55F
                      16.4 OFF 160F 051F
04:08P
               Ø54F
                      16.5
                            OFF 160F 050F
Ø4:19P
        16.6
```

Burner stopped burning.

This is almost always a problem with the burner.

Turn up the plenum
T-stat. If the burner
does not light, the
problem is not in the
Compudry. Check the
plenum Hi-limit, Low
grain shut-off relay
burner contacts, burner
safeties. Also make sure
there is gas available.

If the burner fires wit'
the plenum T-stat, then
check the Compudry Relay
board. See if the lights
for the Low and Hi Fire
relays are coming on, and
the relays are pulling
in. If they are, replace
the relays or the relay
board.

If the Low and Hi Fire relays aren't pulling in, and the lights aren't lighting, replace the computer box.

.

.

```
DATE=11/06/91
TIME=12:04P
LOT #=1234
DRY TO 16.0
METER CAL=+1.5
RDGD TO AVE=4
MAX TEMP=160F
OPR PNT=160F
```

```
MOIST GRAIN MOIST MACH OPR PLENUM
                            STAT PNT
                                       TEMP
                      AVE
               TEMP
        RDG
TIME
                             OFF 160F 132F
                      16.9
         16.9
               115F
12:06P
                                       129F
                             OFF 160F
                      16.6
               119F
         16.4
12:17P
                              ON 160F
                                       131F
                      16.4
               123F
         16.0
12:28P
                              ON 160F 127F
                      16.2
         15.5
               124F
12:34P
                                 160F
                                       133F
                      15.8
                              ON
               123F
12:40P
         15.4
                              ON 160F 130F
               122F
                      15.5
         15.2
12:46P
                              ON 157F 129F
               125F
                      15.2
         14.7
12:52P
                              ON 157F 129F
                      15.0
               124F
         15.Ø
12:58P
                              ON 157F 130F
               123F
                      15.0
         15.4
Ø1:04P
                              ON 157F 130F
                       15.2
                119F
         15.7
Ø1:10P
                              ON 157F 131F
                       15.5
                118F
         16.Ø
Ø1:16P
                               ON 159F 132F
                       15.9
                115F
Ø1:22P
         16.8
                             OFF 160F 131F
                       16.3
         17.0
                109F
Ø1:28P
                             OFF 160F 130F
                       16.6
         16.9
                105F
Ø1:39P
                             OFF 160F 131F
                       16.8
                100F
         16.7
Ø1:50P
                             OFF 160F 131F
                       16.8
                102F
         16.8
Ø2:01P
                              OFF 160F 130F
                       16.8
                105F
02:12P
         16.9
                              OFF 160F 130F
                       16.8
         17.1
                103F
02:23P
                                  160F 131F
                       16.9
                              OFF
                102F
Ø2:34P
         16.8
                                  160F 130F
                              OFF
                       16.8
                104F
         16.7
Ø2:45P
                              OFF 160F 129F
                105F
                       16.7
         16.5
Ø2:56P
                                  160F 129F
                              OFF
                       16.6
         16.4
                109F
Ø3:07P
                              OFF
                                  160F 130F
                       16.4
         16.2
                115F
Ø3:18P
                               ON 160F 129F
                       16.2
                118F
         16.0
Ø3:29P
                               ON 160F 129F
                       16.1
Ø3:35P
          15.9
                120F
                                  160F 130F
                       15.9
                               ON
                121F
 Ø3:41P
          15.8
                               ON 160F 130F
                       16.0
          16.4
                117F
 03:47P
                                  160F 131F
                       16.2
                              OFF
          16.7
                115F
 Ø3:53P
                                  16ØF 13ØF
                114F
                       16.3
                              OFF
          16.6
 04:04P
                                  160F 130F
                       16.6
                              OFF
          16.8
                112F
 Ø4:15P
                                  160F 131F
                115F
                       16.6
                              OFF
          16.6
 Ø4:26P
                              OFF 160F 131F
          16.5
                116F
                       16.6
 Ø4:37P
                              OFF 160F 131F
                       16.5
                 118F
          16.3
 Ø4:48P
                              OFF 160F 130F
                       16.4
                 119F
 Ø4:49P
          16.2
                              OFF 160F 131F
                       16.2
                 120F
          16.1
 05:00P
```

Burner is not getting up to the temperature the Compudry is calling for.

In this case, the Compudry wants 160F, and is only getting 130F.

Drying capacity is slowed down.

Increase the gas pressure.

.

DATE=11/16/91 TIME=12:04P LOT #=0034 DRY TO 16.0 METER CAL=+1.5 RDGD TO AVE=4 MAX TEMP=160F OPR PNT=160F

	MOIST	GRAIN	MOIST	MACH		PLENUM
TIME	RDG	TEMP	AVE	STAT	PNT	TEMP
12:06P	16.9	115F	16.9	OFF	160F	
12:17P	16.4	119F	16.6	OFF	16ØF	
12:28P	16.Ø	123F	16.4	ON	160F	
12:34P	15.5	124F	16.2	ON	160F	
12:40P	15.4	123F	15.8	ON	160F	
12:46P	15.2	122F	15.5	ON	160F	16ØF
12:52P	14.7	125F	15.2	ON	157F	159F
12:58P	14.4	128F	14.9	ON	154F	159F
Ø1:04P	14.1	133F	14.6	ON	151F	165F
Ø1:10P	13.7	134F	14.2	ON	145F	
Ø1:16P	13.8	133F	14.0	ON	139F	161F
	ERROR					
PLENUM	TOO HO					
Ø1:22P	13.8	135F	13.8	ON	133F	162F
	ERROR					
PLENUM	TOO HO					
Ø1:28P	13.9	132F	13.8	ON	127F	151F
	ERROR					
PLENUM	TOO HO					
Ø1:34P	13.6	135F	13.7	ON	121F	16ØF
	ERROR					
PLENUM	TOO H					
Ø1:40P	14.0	130F	13.8	ON	128F	164F
	ERROR					
PLENUM	TOO H					
Ø1:46P	13.8	132F	13.8	ON	122F	161F
	ERROR					
PLENUM	TOO H					
Ø1:52P	13.9	133F	13.8	ON	116F	154F
	ERROR					
PLENUM	TOO HO	TC TC				

"ERROR PLENUM TOO HOT"

Buzzer beeps and error prints out, but computer keeps running.

This error occurs when the plenum temp reading is more than 20F above the Operating Point.

It is usually caused by the plenum T-stat not being turned to its lowest setting.

It could be caused by a stuck gas valve, or shorted plenum T-stat.

If the burner shuts off when the Compudry is shut off, it could be a bad computer box.

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