PORTABLE EMCS OPERATION TIPS

Present Software Version 3.09 though Version 3.03 works nearly the same.

Special Wire Terminals

J5-11 and J5-12 on the IO board are the only 12 volt ground points for use with a tester.
User Supplied Safety - Replace jumper between J1-20 and J5-9.

Special Access Keys

1. Hold down the Aux 1 key while turning on the Control Power to do a Hard Boot. Remember this will reset all settings to Factory and will reset the Model number to a 1108 so write down the settings before hand and re-enter the Model number after.
2. Hold down the Modify key while powering up to edit the User Message Line or set a Phone Call Out number.
3. To get to the Setup Screens (Options) push both arrow keys at the same time with the Control Circuit off, or hold down the Out of Grain key as you turn on the Control Power Switch to access the following settings.
    A. Safety Circuit Shutdown Log.
    B. Dryer Model Number.
    C. Fan Delay.
    D. BPH Factor.
    E. Metering Roll Monitor disabling Feature.
    F. Air Switch Disabling feature. Air Switch monitoring will be reset any time the power is turned off.
4. Pushing and holding the RESET button for 5 seconds will access the following features.
    A. Calendar Year, Calendar Month and Calendar Day Settings.
    B. Clock Hour and Minute Settings.
    C. Bushel Counter Reset feature.
    D. Batch Counter Reset feature.
5. Changing the Marquee on the Display (Appears at the first Start up screen)
    A. Press and hold the Modify key while turning on the "Control Power".
    B. To change a character press the "Increase" or "Decrease" key.
    C. Press the "Unload" key to move the cursor to the right and the "Dry" key.
    D. To delete a character press the "Cool" key.
    E. Press "Enter" when the desired marquee is displayed.
6. When you change any timer setting you can force the new time by pushing the Reset Button.
7. You can skip through the opening screens by repeatedly hitting the Stop Button after powering up.

Service Tips

1. If you experience a **"Grain High Limit" Warning** and you push the Stop Button instead of one suggested on the screen by the "Emergency Cooling" procedure you will lock the system with an erroneous "Motor Overload" warning appearing in addition to the "Grain High Limit" Warning.
    There is only one way out of this lockup. Turn off the "Control Power" to the system. Put a temporary jumper between J5-8 and J6-19 and turn back on the "Control Power". After seeing the regular operation screen, pull the jumper. You will be presented with the "Grain High Limit" Warning again. Push only one of the two buttons that the "Emergency Cooling" procedure tells you to.
2. Version 3.06 eliminated the need to hard wire jump the Mercoid's. It was changed to a software setting as a Canadian Dryer.
3. If the Load Auger is set for Center Fill or Dual Fill in Setup the Auger will run all the time.
4. If you have been running **software version 3.01** or prior and **flash in versions 3.01C to 3.06** you will get a mercoids failure warning due to the system defaulting to the Canadian setup. You must temporarily jump in daisy chain fashion J5-8 to J4-20 to J4-18 to J4-03 to J4-16. This was fixed in version 3.07 as the system will default to US which does not look for the mercoids.
5. To access the Screen Alignment Screen jump the C9 Capacitor on the CPU board to 12 volts.
    It's the bottom capacitor near the unused white plug.
6. **Temperature Sensor Testing**
    1. You can find charts with the Resistance readings at various Temperatures in the following manuals
        Located in **Resource 2003 CD** in the "Manuals and Other **Resources**" Folder in the various Product Tips folders.
        PNEG-630 Portable Dryer – Trouble Shooting Feb 1999.pdf **Page 54** (Portable Dryers | Trouble Shooting – Operating Tips)
    You have to disconnect the wires before testing and the reading if the sensor is good will be around 3140 ohms on a single sensor and 3400 ohms if you have four sensors in the series parallel configuration as used in the dryer at around 60 degrees. Check the charts listed above for readings at other temperatures.
7. As Dryers age the contacts in the safeties start reducing the DC voltage passed through and may have to be replaced. Check the voltage if you get repeated error warnings from what seems to be a good safety.

Undocumented Error Warnings

1. The Warning "20 Second Safety Circuit Failure" is not in the manual. It means a Burner Safety Circuit is open. Often the relay in the fan and heater box is just not seated.
2. Prior to 3.01 there was a warning called Unknown Safety. It was changed in 3.01 to Safety System Failed. This warning should never show up as it is not used. A jumper from J4-12 to J5-10 jumps it out. If you see it and have 12 volts on J5-10 you probably have a bad I/O board.
3. There was a monitor circuit that was never implemented for the Maxon Gas Valve which will show on the screen as something like "Gas Valve Error" if 12 volts is not supplied to terminal J5-2. Again if you see this error with 12 volts on J5-2 you probably have a bad I/O board.

Software Oddities

1. Do not put a software version prior to 3.03 in a Dryer newer then July 1st 1996 as the Dryer will not run in Batch Mode.
2. Putting Software version 3.04 or newer in a Dryer older then August 28 1997 will work fine but will Incorrectly identify an Adjustable Hi-Limit as Fixed.
3. Version 3.06 eliminated the need to hard wire jump the Mercoids. It was changed to a software setting as a Canadian Dryer.
4. If you have been running **software version 3.01** or prior and **flash in versions 3.01C to 3.06** you will get a mercoids failure warning due to the system defaulting to the Canadian setup. You must temporarily jump in daisy chain fashion J5-8 to J4-20 to J4-18 to J4-03 to J4-16. This was fixed in version 3.07 as the system will default to US which does not look for the mercoids.

Therefore it is better on any dryer to either put in the same software that it is using as long as it is 3.00 or newer "or" to use 3.07 and up to avoid the potential headache issues 1,3 and 4 above.

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