WHEN TROUBLESHOOTING, PERFORM THE STEPS IN ORDER.

BURNER WON'T LIGHT

Control System

1. Is the main interlock in auto? The burner will not light if the dryer is in manual mode
    a. Yes: Proceed to the next step
    b. No: Switch the main interlock to auto
2. Is push to unload engaged? The button will be lit green if it is engaged.
    a. Yes: Proceed to the next step
    b. No: Press push to unload button. If push to unload will not stay engaged, see *Unloads Won't Start* in the troubleshooting section of this manual.
3. Are the fans running/fan status lights are lit?
    a. Yes: Proceed to the next step
    b. No: Start the fans. If the fans do not start, see *Fans Won't Start* in the troubleshooting section of this manual.
4. Is the fuel switch on and lit?
    a. Yes: Proceed to the next step
    b. Yes, it is on but is not lit: Make sure main interlock is set to auto
    c. No: Flip the fuel switch to on
5. Does the low air light come on when trying to light the burner?
    a. Yes: Check that the copper vacuum tube is running to the fan. The tube end must be 1" inside the fan, 1/4" above the blade and pointed in the direction of fan rotation. If the low air light still comes on, call your Superior Dryer Dealer.
    b. No: Proceed to the next step
6. Does the burner control display the burner ignition sequence?
    a. Yes, but the burner won't light: See *Burner Won't Light* in the troubleshooting section of this manual.
    b. No: Contact your Superior Dryer Dealer

BURNER WON'T LIGHT

Fuel System

1. Are all fuel shutoffs between the dryer and the LP tank or natural gas supply open?
    a. Yes: Proceed to the next step
    b. No: Open all valves
2. Is the liquid fuel valve open? (LP models only)
    a. Yes: Proceed to the next step
    b. No: Open the valve and attempt to relight dryer
3. Are there pressure readings on the liquid fuel gauge? (LP models only)
    a. Yes: Proceed to the next step
    b. No: See steps 1 and 2, then restart dryer. If there's still no pressure, call your Superior Dryer Dealer.
4. Is the vapor valve open?
    a. Yes: Proceed to the next step
    b. No: Open the valve
5. Is the drip leg valve open?
    a. Yes: Close the valve
    b. No: Proceed to the next step
6. Is the burner valve open?
    a. Yes: Proceed to the next step
    b. No: Open the valve
7. Is there pressure on the pilot line gauge?
    a. Yes: Proceed to the next step
    b. No: See step 4, then restart dryer. If there's still no pressure, call your Superior Dryer Dealer
8. Is the pilot port in the burner clear of debris?
    a. Yes: Proceed to the next step
    b. No: Clean out the pilot port. You may have to remove the spark plug and flame rod.
9. Is the spark plug in good shape (not bent or burnt)?
    a. Yes: Proceed to the next step
    b. No: Replace the spark plug
10. Is the spark plug wire in good shape?
    a. Yes: Proceed to the next step
    b. No: Replace the spark plug wire
11. If the burner continues to not light, call your Superior Dryer Dealer.

PILOT LIGHTS BUT THE BURNER WON'T LIGHT OR STAY LIT

1. Are all fuel valves open?
    a. Yes: Proceed to the next step
    b. No: Open all valves
2. Does the burner control display a flame signal between 1 and 5 volts?
    a. Yes: Call your Superior dryer Dealer
    b. No: Call your Superior dryer Dealer

UNLOADS WON'T START

1. Are the dryer unloads interlocked with other equipment (leg, takeaway conveyor, etc)?
    a. Yes: Make sure other equipment outside of dryer is running
    b. No: Proceed to the next step
2. If there are field installed disconnects, are they on?
    a. Yes: Proceed to the next step
    b. No: Turn the disconnects on
3. Is the main interlock set to manual or auto?
    a. Yes: Proceed to the next step
    b. No: Switch the main interlock to manual or auto
4. Does push to start stay engaged when pressed?
    a. Yes: But the unloads aren't running, see step 2.
    b. No: Proceed to the next step
5. Is one or more of the unload starters tripped?
    a. Yes: Reset the starter and make sure the unload is not plugged
    b. No: Call your Superior Dryer Dealer

FANS WON'T START

1. If there are any field installed disconnects, are they on?
    a. Yes: Proceed to the next step
    b. No: Turn the disconnects on
2. Is the main interlock set to manual or auto?
    a. Yes: Proceed to the next step
    b. No: Switch the main interlock to manual or auto
3. Are any of the fan starters tripped?
    a. Yes: Reset the starter
    b. No: Call your Superior Dryer Dealer

METERING ROLLS WON'T RUN

1. Is the main interlock set to manual or auto?
    a. Yes: Proceed to the next step
    b. No: Switch the main interlock to manual or auto
2. Is push to unload engaged?
    a. Yes: Proceed to the next step
    b. No: Press push to unload
    c. No: I tried but it won't stay engaged. See the troubleshooting section of this manual.
3. Has the speed potentiometer been used to set a discharge rate?
    a. Yes: Proceed to the next step
    b. No: Try setting to a higher discharge rate temporarily
4. Does the VFD display an error?
    a. Yes: Proceed to step 5
    b. No: Proceed to step 5
5. Are the metering rolls clear of debris? (you will have to open the discharge gates)
    a. Yes: Proceed to the next step
    b. No: Clear the metering rolls of debris
6. Is the metering roll chain too loose/tight?
    a. Yes: Adjust the chain tension. The chain should flex 1-2" on the longer section of chain.
    b. No: Call your Superior Dryer Dealer

WET FILL CYCLES TOO FREQUENTLY

The fill switch position and/or sensitivity inside the roof of the dryer may need adjusting.

1. Typical fill switch positions are:
    a. Top peg for small grains such as wheat and canola.
    b. Middle peg for corn, beans, peas, etc.
    c. Bottom peg isn't used in a typical application.
2. The sensitivity of the switch can be set with a screw on the inside of the switch.
    a. Backing the screw out decreases the amount of pressure required to activate the switch which decreases the amount of product in the roof.
    b. Screwing in the screw increases the amount of pressure required to activate the switch which increases the amount of product in the roof.

The wet fill on delay and wet fill off delay timers may need adjusting.

1. The wet fill on delay timer determines when the wet fill will start after the dryer calls for grain. Its primary purpose is to prevent accidental starts due to shifting grain.
    a. Increasing the on delay timer delays the wet fill by the set time.
    b. Decreasing the on delay timer to zero starts the wet fill immediately when the dryer calls for grain.
2. The wet fill off delay timer determines when the wet fill shuts off after the dryer stops calling for grain. Its primary purpose is to prevent accidental stops due to shifting grain.
    a. Increasing the off delay timer increases the amount of time the wet fill will run after the dryer stops calling for grain.
    b. Decreasing the off delay timer to zero will stop the wet fill immediately after the dryer stops calling for grain.

THE DRYER SHUTS DOWN

In the case of an unplanned dryer shutdown, these are the most common occurrences. If, after checking through this list, your dryer continues to not run, call your Excel Dryer Dealer before attempting to diagnose or fix the dryer as this will void any warranty on the dryer, dryer control panel and/or the optional DM510 System.

Possible Dryer Shut Down Events

1. Is the wet bin empty timer tripped or the wet bin empty light lit?
    a. Yes: Either the wet bin is empty or it is taking too long to fill the dryer at the current discharge rate. Wet fill systems should have a capacity of at least twice the throughput of the dryer in order to keep up. Also see *Wet Fill Cycles too Frequently* in the Troubleshooting section of this manual.
    b. No: Proceed to the next step
2. Are any of the unload starters tripped?
    a. Yes: Before resetting the starters, check to make sure all sections of the unloads and any attached systems such as augers, conveyors and legs are clear as they may be plugged.
    b. No: Still check that any attached systems are clear and not plugged with grain. Even if the unloads don't trip, they may be interlocked with the attached systems and still shut down if one of the attached systems is tripped.
    c. Still No: Proceed to the next step.
3. Is the metering roll VFD displaying an error?
    a. Yes: The metering rolls may have jammed with debris and will need to be cleared.
    b. No: Proceed to the next step
4. Is the high limit temperature controller displaying an error?
    a. Yes: The temperature inside the dryer has risen above the safe set operating temperature. This may be due to grain fires or possible extreme changes in fuel pressure.
    b. No: Proceed to the next step
5. Is the burner control displaying an error?
    a. Yes: This may be caused by low fuel or no fuel. Check your fuel supply. This may also be caused by a bad flame rod or wiring. To check this, reset the burner control and restart the dryer. If the pilot lights but there is no flame signal displayed on the burner control, check the condition of the green and purple wires attached to the burner. If they are in good shape, the flame rod needs to be replaced. If they are not in good shape, the wiring needs to be replaced.
    b. No: If you have checked through the rest of this list, call your Excel Dryer Dealer for more advanced troubleshooting.