

# Red Board System Panel Wiring - General Rules

1. Do not run the AC Drive output wires with any other wiring. Also, make sure that these wires are run directly to the motor with the shortest length of wire possible.
2. There should be no wires run alongside of the motor wires (including specifically the COM Cable, Moisture Sensor Cable, or any other control wiring). Please keep the motor wires as far away from all other wiring as possible. (Minimum of 1.5ft if in rigid conduit, 2.5ft if in sealtight). Although rigid conduit provides the best shielding of these wires, it is still not sufficient to eliminate radiated emissions. Remember: The greater the distance from these wires, the better the protection against radiated emissions.
3. If there are other wires that must come in the vicinity of these motor wires, it is best that they cross or intersect at a 90 degree angle to minimize the induction of radiated emissions.
4. Do not run the Com Cable with any other wiring. The Com Cable should be run in conduit. Also, do not coil up excessive Com Cable in the control panel or at the monitor end. It is better to keep the lengths of exposed wire as short as possible to minimize the effects of radiated emissions.
5. Do not run auxiliary wiring inside the Control Panel directly across the RedBoard CPU, I/O CARRIER or POWER SUPPLY printed circuit boards. The wiring must run over to the side of the panel, up the side, and then over to its termination point.
6. The solid #4 wire that connects to the Ground Rod must be terminated directly to the Control Section backplate at the bottom of the RedBoard CPU board. Dryers which are grounded via connection on the dryer frame may eventually have moisture sensor floating problems.
7. Bonding of the backplates must be done with #8 or #10 solid copper wire (in other words, NOT STRANDED CONDUCTOR). This Bonding must be between the control and power panel sections and then to the backplates of any additional control cabinetry which may be on a tower type dryer.
8. It is imperative that the power service have its own ground. (A ground wire from the main three phase power coming into the power panel).

**THE PANEL'S GROUND ROD IS FOR THE RED BOARD SYSTEM AND SHOULD NOT BE EXPECTED TO PROVIDE GROUNDING FOR ANY REMAINING EQUIPMENT CONNECTED TO THE PUBLIC UTILITY LOCATED ON THE FARM OR ELEVATOR PREMISES.**

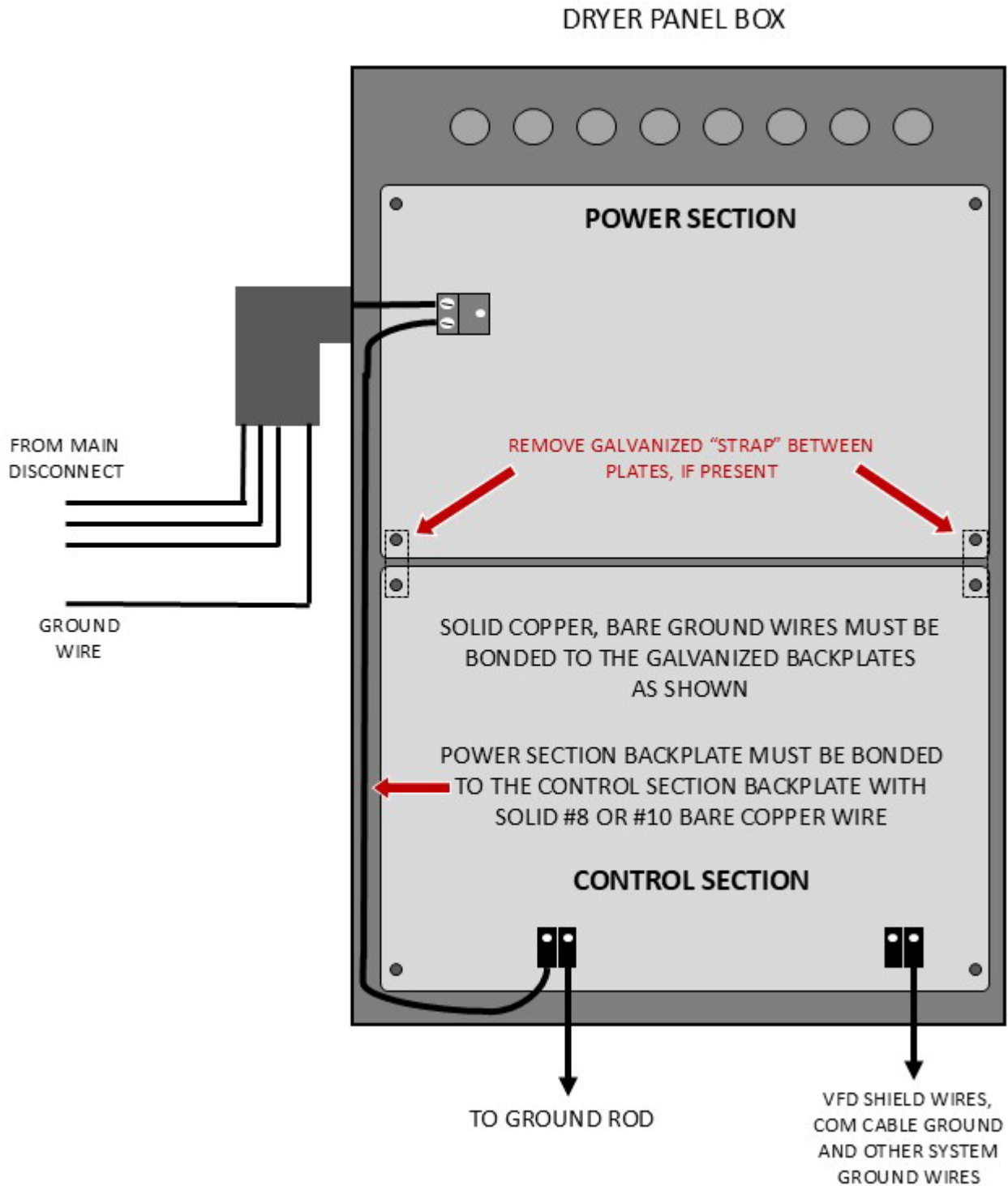
9. All AC Drives must be mounted in a separate enclosure. (Though multiple drives in one box is okay). This means that under no circumstances should there be an AC Drive mounted in the control or power panel boxes.



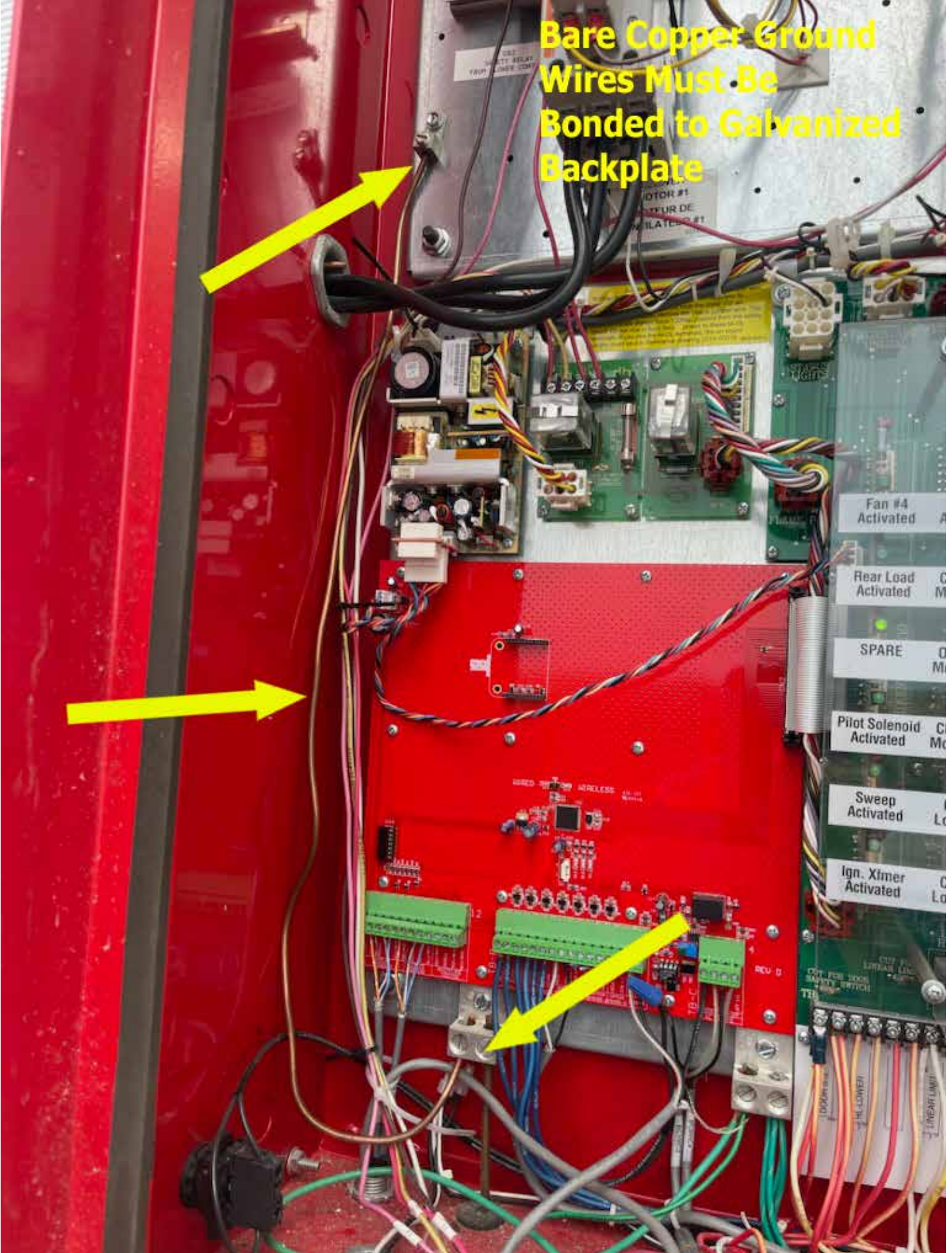
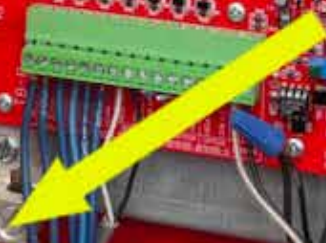
# Red Board Systems

Bringing Modern Technology to Legacy Systems

## Control Panel Grounding Requirements



**Bare Copper Ground Wires Must Be Bonded to Galvanized Backplate**





**Remove Bracket  
"if present"**

