TROUBLESHOOTING BRYANT CONTROLLERS:

Bryant Control has a proud 30 year history of producing controls of the highest quality for our customers. To date, over 120,000 controls have been manufactured and 100% tested at our Indianapolis facility.

Should a problem arise in a machine with a Bryant control, just follow the steps below to help determine whether there is a mechanical problem with the machine or an electrical problem in the control. Sometimes the solution is quite simple.

If you still need assistance after following the troubleshooting tips, help is always just a phone call away at 317-549-3355. ED HENZ

Opening the Unit

Before attempting to performing any type of service inside the unit,

DISCONNECT THE POWER TO THE CONTROL!!!



Loosen up, but don't remove, the phillips head screws at each corner (4 total).



Locate the screwdriver slot at the bottom center of the faceplate.



Insert a straight blade screwdriver into the slot and pry the faceplate out.



Once the faceplate is free of the bottom groove, it will pivot upwards.
This will allow access to the field serviceable parts of the control.

To close the cover, make sure all of the wires are tucked into the control.
Slide the top edge of the faceplate firmly into the top groove and press on the bottom of the faceplate until it snaps securely into the bottom groove .

The last step is to retighten the 4 phillips screws.

Unit Will Not Power Up

To verify that a control is not powering up and the problem is not in the coil or coil wiring, simply plug a standard incandescent trouble light into the receptacle of the feeder control. Turn the switch on and dial the control knob from 0 to 10. If the control is operating like a "dimmer switch" then the problem lies in the coil or coil wiring. If the light never turns on, then proceed to the checklist below.

1. Make sure the control is plugged in securely.
2. Verify that the power source the control is connected to is live by testing it with either a test lamp or volt meter.
3. Check the fuse located on the end of the control near the power cord. The fuse can not be inspected visually, it must be tested with a continuity tester or multimeter.
4. If everything is good to this point, remove the cover and verify that a connection is being made across the J1 terminals on the trigger board (circuit board that the speed control pot is mounted to). If these two terminals are not connected together by a jumper wire the unit will be inhibited and the output will not turn on. Make sure the jumper is in place and the terminal screws are tight.
5. In some instances, the J1 jumper will have been replaced with wiring to a separate device circuit. Verify that the circuit has hard dry contacts that are CLOSED when the control should be running.
6. If the control still does not function after following all of the steps listed above, the control will have to be repaired with a service kit readily available from the factory.

No Speed Control

The design of a Bryant control consists of two basic components, the Triac Assembly and the Trigger Board. One of the two standard types of Trigger Boards will be mounted directly behind the control knob and one of the two standard types of Triac Assemblies will be mounted on a flat aluminum area to promote heat dissipation.

If a control seems to be running "full on" and turning the control knob has no effect, it is possible the Triac Assembly has failed. When a triac fails, it almost always fails in the conducting "full on" mode.

A simple way to verify that a Triac Assembly needs to be replaced is to remove the cover and temporarily disconnect anything connected to the J1 terminals on the Trigger Board. If the output of the control is still "full on " after removing the J1 jumper or any other device connected to the J1 terminals, the Triac Assembly is defective and will have to be replaced.

Reduced Vibration

A Bryant control should provide a wide range of machine vibration, from nearly motionless to full scale movement. If a control is operating as it should and was tested by varying the intensity of an incandescent (at least 40 watts or more) lamp load, then it should also vary the speed of a hopper, bowl or inline in the same way.

If turning the speed control knob doesn't have the desired effect on your machine and you have confirmed the control is connected to a properly sized power source, there is something simple to check. On all Trigger boards, there is a small slide switch labeled with an "A" and "D" that needs to configured to obtain the best results.

Almost always, the "A" setting is for feeder bowls that are between 12" and 36" in diameter.

The "D" setting should be used for all hoppers, all inlines, bowls that are smaller than12" in diameter or bowls that are larger than 36" in diameter.

To verify or change the A-D switch setting, simply remove the cover and slide the switch to the new position.

Note: Changing the A-D switch setting WILL make a noticeable difference in the operation of the system and will NOT cause any harm while evaluating the different settings. If changing the setting does not cause a noticeable difference, slide the switch back and forth a few times to clean the contacts.

Max and Min Adjustments

On most feeder controls, the maximum and minimum operating parameters can be adjusted to suit the application. The reason for this is to maintain a small output voltage if desired when the control is at its lowest setting and also to limit the voltage at its highest setting. This is done inside the enclosure via the MAX and MIN pots on the TB45 or TB23 Trigger Boards.

Before following the steps outlined below, the MIN pot should be dialed down to its lowest setting - full counterclockwise and the MAX pot should be set to the highest setting - full clockwise.

The MIN pot, which controls the output when the control knob is at "0" - full counterclockwise, should be set first. This is done by dialing the knob full CCW to the "0" mark, and adjusting the MIN pot on the trigger board to the desired setting.

The MAX pot, which controls the output when the control knob is at "10" - full clockwise, should be only be adjusted after the MIN pot is set. This is done by dialing the knob full CW to the "10" mark, and adjusting the MAX pot on the trigger board to the desired setting.