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Calculator Counter



Owner: _____

Cake Feeder Serial Number: _____

Mounting Your Caker:

Flatbed Model:

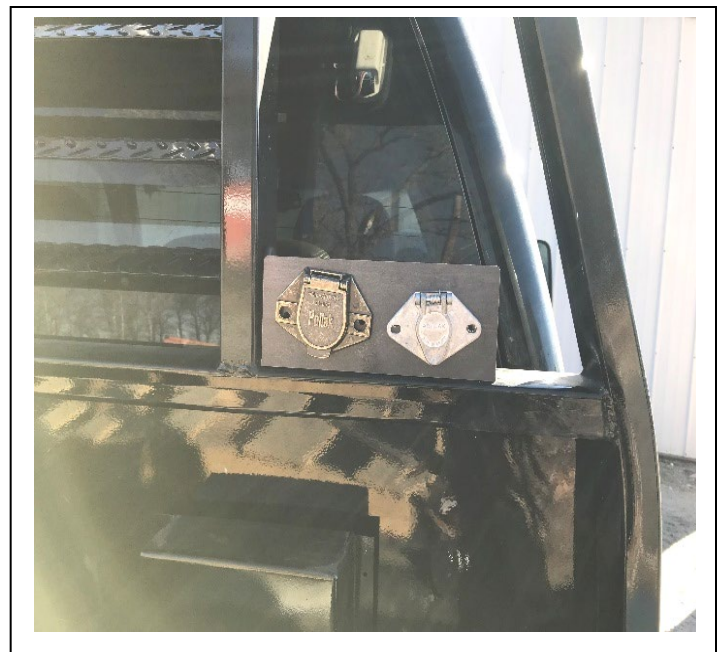
- You will need 4 - 3/8" x 1 1/2" Bolts with nuts or 4 - 1/2" x 1 1/2" bolts with nuts
- **We recommend using 4 large surface washers on the bottom side of the flatbed to prevent your bolts from pulling through (we have these washers for sale).*
- Place your caker on the flatbed to determine placement of your bolt holes.
- Mark your hole placement, (you will want the bolt to be on the inside of the cakers angle iron runner).
- Drill 4 holes through your caker runner and the flatbed. Drop a bolt in each hole as you go to prevent your caker from moving as you drill.
- On the underside of the flatbed, attach your washers and nuts to each bolt and tighten. (Washers and nuts can be tack welded to the flatbed frame to facilitate easy removal and reinstallation of your caker in the future.)

Over the Side Caker:

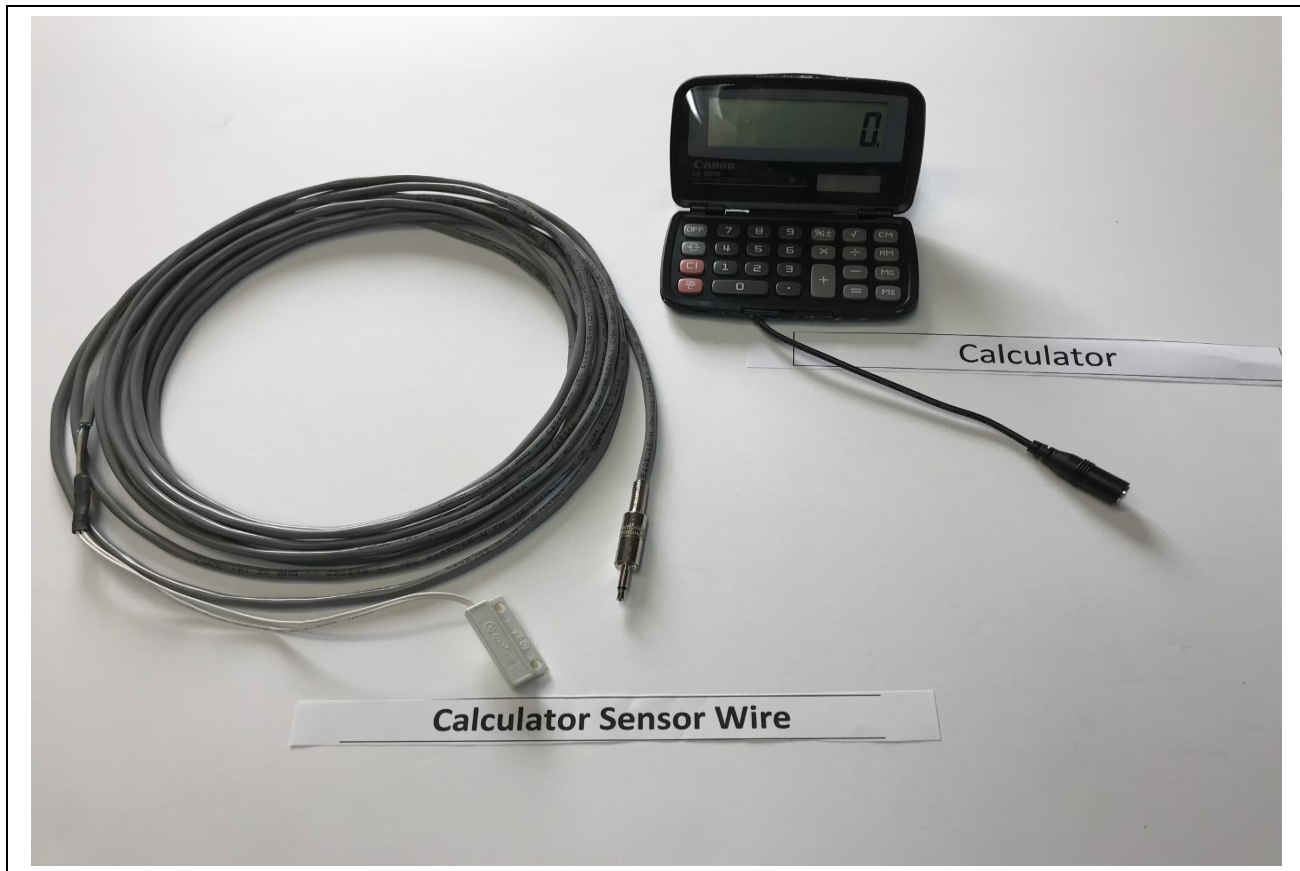
- You will need 4 - 3/8" or 1/2" bolts long enough to go through the caker frame and the pickup box, and through the pickup frame.
- Place your caker in position to determine placement of your bolt holes.
- Drill the 4 holes through your caker runner, the pickup box, and into the pickup frame, drop a bolt in each hole as you go to prevent your caker from moving as you drill.
- On the inside of the pickup frame, attach a washer and nut to each bolt and tighten.

With the plug kit, you will only need to unplug two plugs when you wish to take the feeder off the pickup, rather than unwiring the entire vehicle.

We have 2 styles of mounting brackets you can use to mount your plugs to your headache rack.



Calculator Counter



Our calculator counter is a system that counts revolutions and runs on a magnet reed switch. It is a cheaper alternative that we offer if you need a counter.

CALIBRATING THE COUNTER

Press the button to run the caker until feed begins to run down the spout.

1. Press the “reset” button on the counter. (Counter should read zero.)
2. Determine the empty weight of a 5 Gallon bucket, or similar container.
3. Place the bucket / container so the cake feeder will dispense feed into it.
4. Press 1+ on the calculator and push the button which runs the feeder and hold it until your bucket / container is full.
5. Weigh the bucket / container, then subtract the empty weight of the container to determine the weight of the feed dispensed.
6. Divide the weight (pounds) of the feed dispensed by the number displayed on the counter. The result will be the pounds of feed dispensed for every revolution of the counting mechanism.

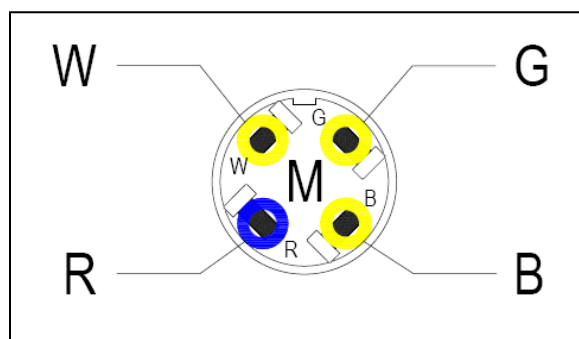
For example: You have 300 head of cows you wish to feed 2.5 pounds per head. (A total of 750 pounds of feed.) You have a 5-gallon bucket that weighs 3 pounds empty. After filling the bucket, you weigh it and determine the weight of the bucket to be 38 pounds. You subtract the empty weight of the bucket (3 pounds) and determine there are 35 pounds of feed in the bucket. The number displayed on the counter (the number of revolutions it took to fill the bucket) is 7. You divide 35 by 7 and determine the calibration number to be 5. (The feeder is dispensing 5 pounds of feed per revolution.) Therefore, to feed 750 pounds of feed, you will have to reset your counter to zero, and run the caker until the number displayed on the counter is 150.

You will only be wiring the female end to your pickup, when installing your Caker.

Mount both female receiving ends to the bed of your pickup, in the vicinity where the male ends will meet and easily plug in when the caker is in correct position. (Many people mount their receiving ends to the headache rack, directly behind the cab.) We also have weld-on plug mounting boxes or plates available for sale for these plugs.

1. Run your power cord along the frame of your pickup to the engine compartment, secure in place.
2. Attach the short wire bolted to the breaker terminal marked "BAT" to the pickup battery, and then mount the breaker in place under the hood in the engine compartment. Strip back the **Red Power Cord** a 3/8" and solder the included eyelet to the Red Power Cord, which runs rearward to the gold receptacle. Attach the eyelet breaker terminal marked "AUX"
1. Run your push button cord and the counter cord from the cab of the pickup to the silver plug. Connect the wires to the silver female 4 prong plug as shown in the wiring diagram provided.

CALCULATOR PLUG	4 PRONG MALE / FEMALE
Calculator Sensor	
BLACK	R
WHITE / CLEAR	W
Push Button	
BLACK	B
WHITE	G



Need a New Belt?

What we need to know before we can help you!!!

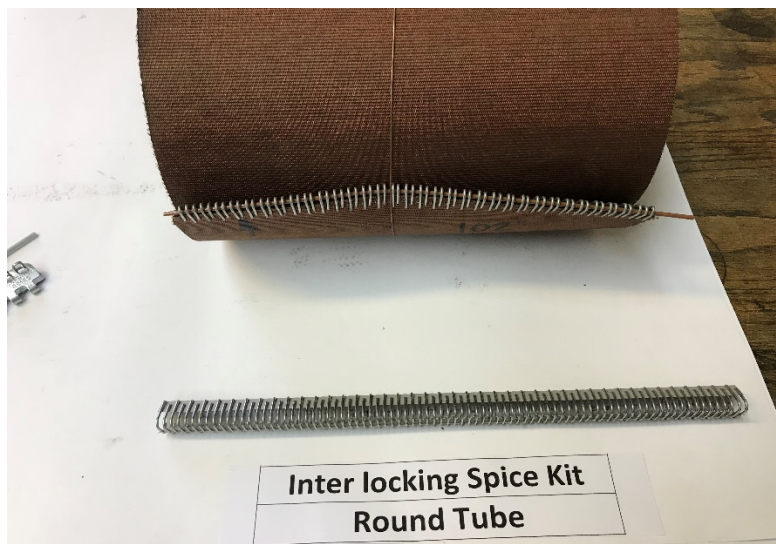
- Do You have a Flatbed Feeder, an Over the Side Feeder, or An ATV Feeder?
- Do You Have A Square Tube Feeder or A Round Tube Feeder?



Square Tube Feeder



Round Tube Feeder



- Over the side Caker's have a standard 102" belts that are cleated for the incline.
- Measure from the center-to-center on the rollers that the belt runs on.
- Formula for belt length is distance between rollers X 2 plus 6 inches.
- All Belts are 10" wide

- Can I splice my broken belt?
 - We do NOT recommend splicing your belt, you likely will not have enough length after you splice your belt to be able to use it in your feeder again.

My Feeder is full how can I change or fix a broken belt?

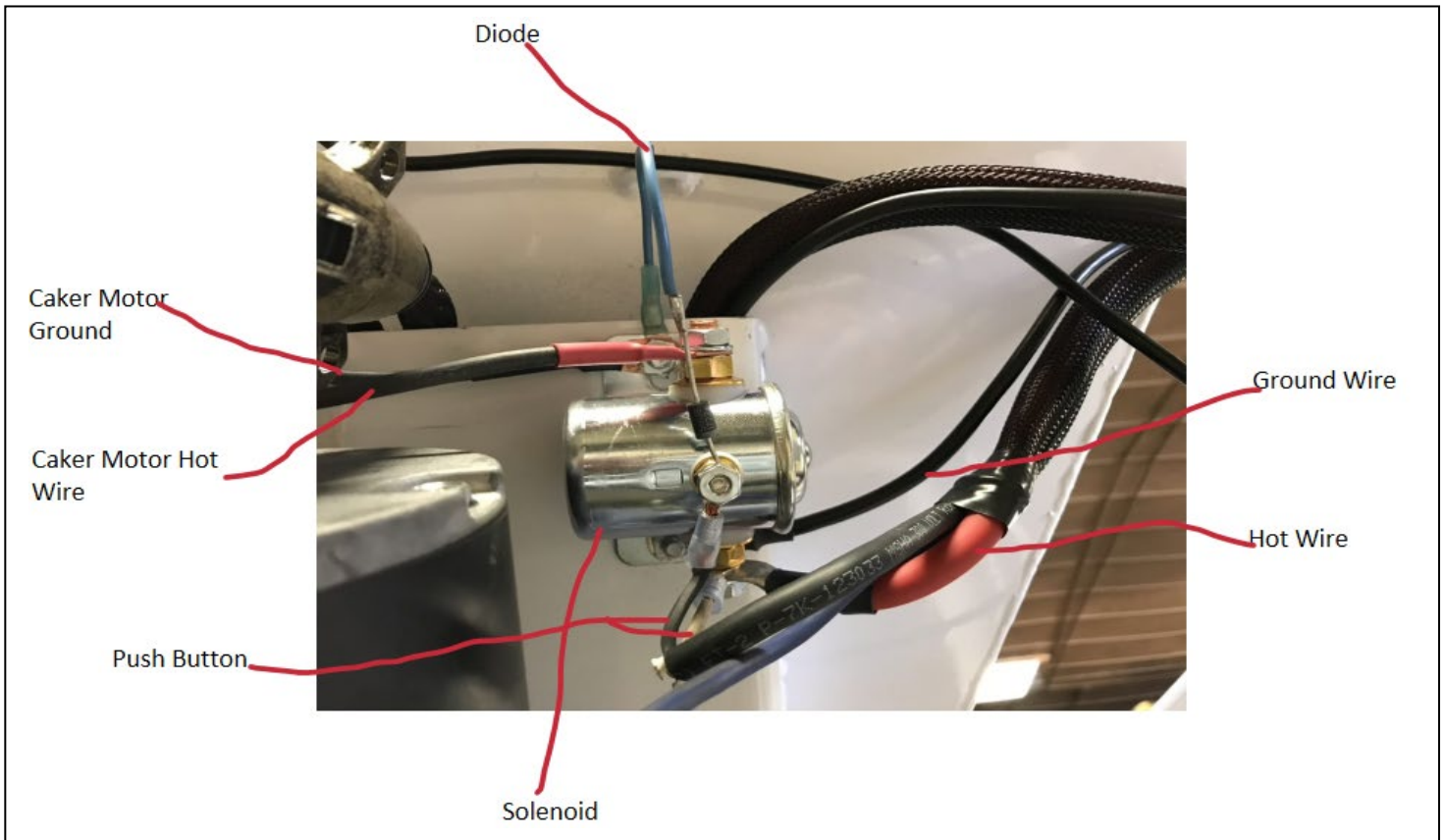
If you can get to the splice point, you can try attaching the new belt to the splice point and carefully feeding it through to the other side.

Belt shifted off kilter?

Make sure drive rollers are clear of any twine or other obstructions.

Take a 1 1/8" wrench to the 3/4" ready bolts on the bearing cages, loosen one end and tighten the opposite 3/4" bolts. This will cause the belt to shift in the tube. Belt will crawl away from tight side, you may need to move bearing cages back and forth to make the belt square in the tube again.

Trouble Shooting



The Diode is an electrical shock absorber. We recommend all Cakers have a diode.

I am Installing my caker for the season and I can't get it to run.

First test to make sure that the motor is in working condition.

To do this you need to disconnect the hot wire from the solenoid and touch it to the post where the motor hot wire is. If the motor runs the motor is fine and it could be the solenoid or the push button. Reconnect the hot wire to its original post.

Next test the push button by creating a jumper wire from the smallest post on the solenoid, to the post where the hot wire from the battery connects.

If motor runs Bad push button, or damaged push button cord

If Solenoid Clicks Bad Ground

If nothing happens Bad solenoid, Or no ground

Cake Feeder won't start? Especially if it won't run but you can hear the solenoid clicking?

You most likely have an incomplete or bad ground.

Test this by taking a set of jumper cables, and find a clean, rust, and paint-free spot on the Caker. Connect both clamps from one end of the cables here, and then connect the opposite end of the cables to your pickup frame. If your caker begins working normally, you have a bad ground.

Check to ensure that your plugs are bolted securely where you have chosen to mount them. If the plugs are not secure, an incomplete ground can occur.

Check for any ice or mud, or rust build-up that could be impeding the ground.

To alleviate your bad ground issue, you can install a quick jumper wire on your female gold plug, if you have a plug kit. Simply put a new ground on with an eyelet and bolt it with the mounted plug, and the other end of the wire to your pickup frame. Your plugs, when connected, will ground back to your pickup.

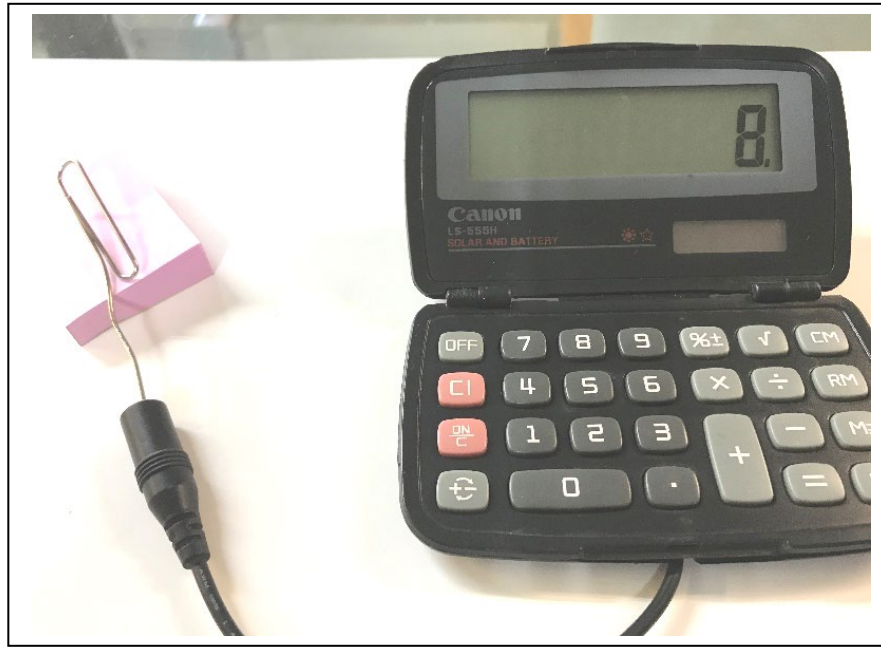
If these solutions do not help, give us a call and we can walk you through further troubleshooting.

Calculator and sensor wire Problem

1. All calculator systems must have two magnets, 1 with wires attached to the sensor wire, and one with no wires attached to the caker sprocket.
2. If on a plug kit make sure all points inside each plug are clean and free from any and all corrosion.

I cannot get my calculator to work, where do I look to find the problem?

First, we will need you to test your calculator to make sure the problem isn't the calculator itself. To do this you will need to unplug your calculator from your sensor wire and clear out any numbers that happen to be displayed on the screen. Next push 1 + and insert a small paper clip or screwdriver or a small metal object into the female pigtail attached to the calculator. Wiggle paper clip/ screwdriver/ metal object around, if calculator counts, calculator is good. If it does not count the calculator is bad.

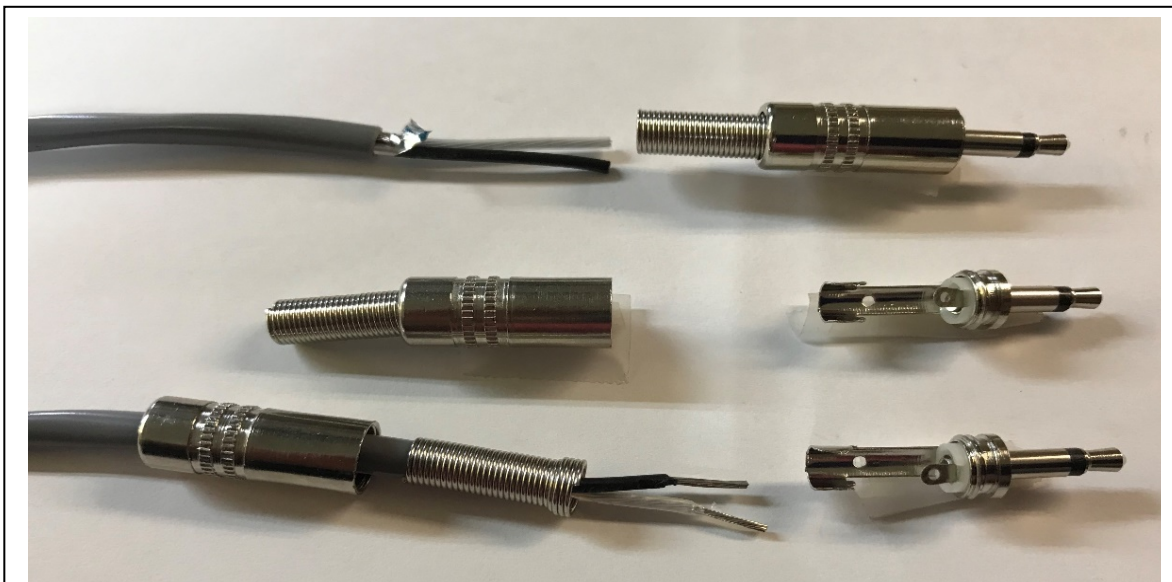


My calculator works fine, where do I look now?

Is your Calculator flashing when you run your caker?

If your calculator is flashing when your run your cake feeder you will need to unscrew the male plug on the grey sensor wire, and check to see if the two soldered points on the inside of the plug are touching. (Some of the soldered points maybe wrapped in black electrical tape, like shown below.)

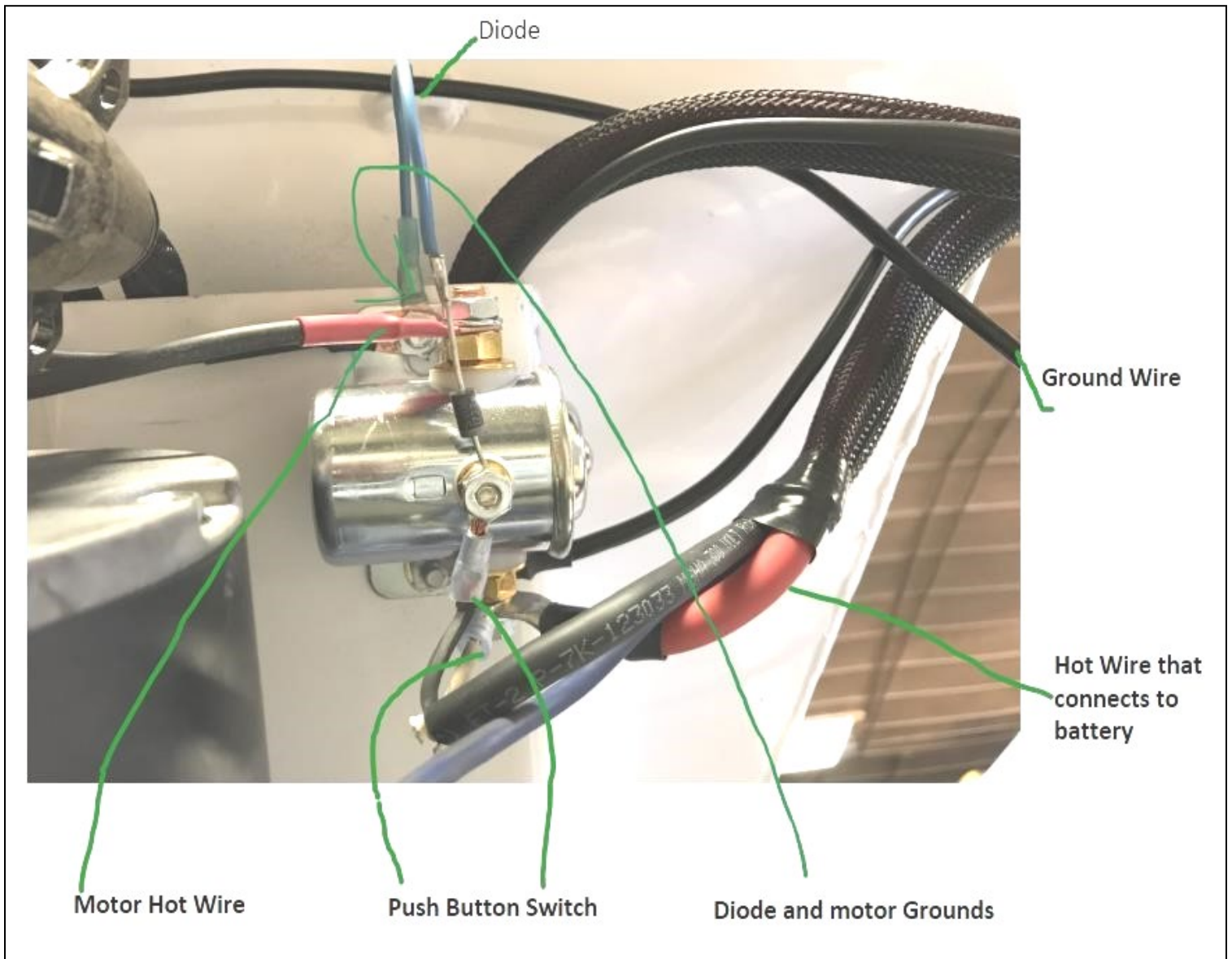
If touching separate and wrap with black electrical tape so they two different points can no longer make contact.



Does your calculator count for a while then throw a bunch of zeros or decimal points?

If this is happening to you, you will need a diode on your feeder

Depending on how old your feeder is, it may not have a diode, or if it does have a diode it may not be functioning properly and will need replaced. The purpose of the diode is to break up the electric magnetic current that the solenoid throws out when the feeder is turned on and off (causing the zeros). See below picture to see how the diode is attached to the solenoid.



4 Prong Plug Diagnosing

You can easily determine which end of your sensor wire has the problem
Have you determined the problem is with the sensor wire?

You can easily determine which end of your sensor wire has the problem by testing with a multimeter.

First, push the push button until the two magnets line up.

Insert your multimeter into the sliver insert and the gold insert directly to the right of the sliver insert on the male gold plug.



If the multimeter beeps this is a closed circuit. Now move the magnets away from each other and test again. If no beep is heard this is an open circuit.

If the above test fails, that tells you there is a short somewhere in your caker side sensor wire.

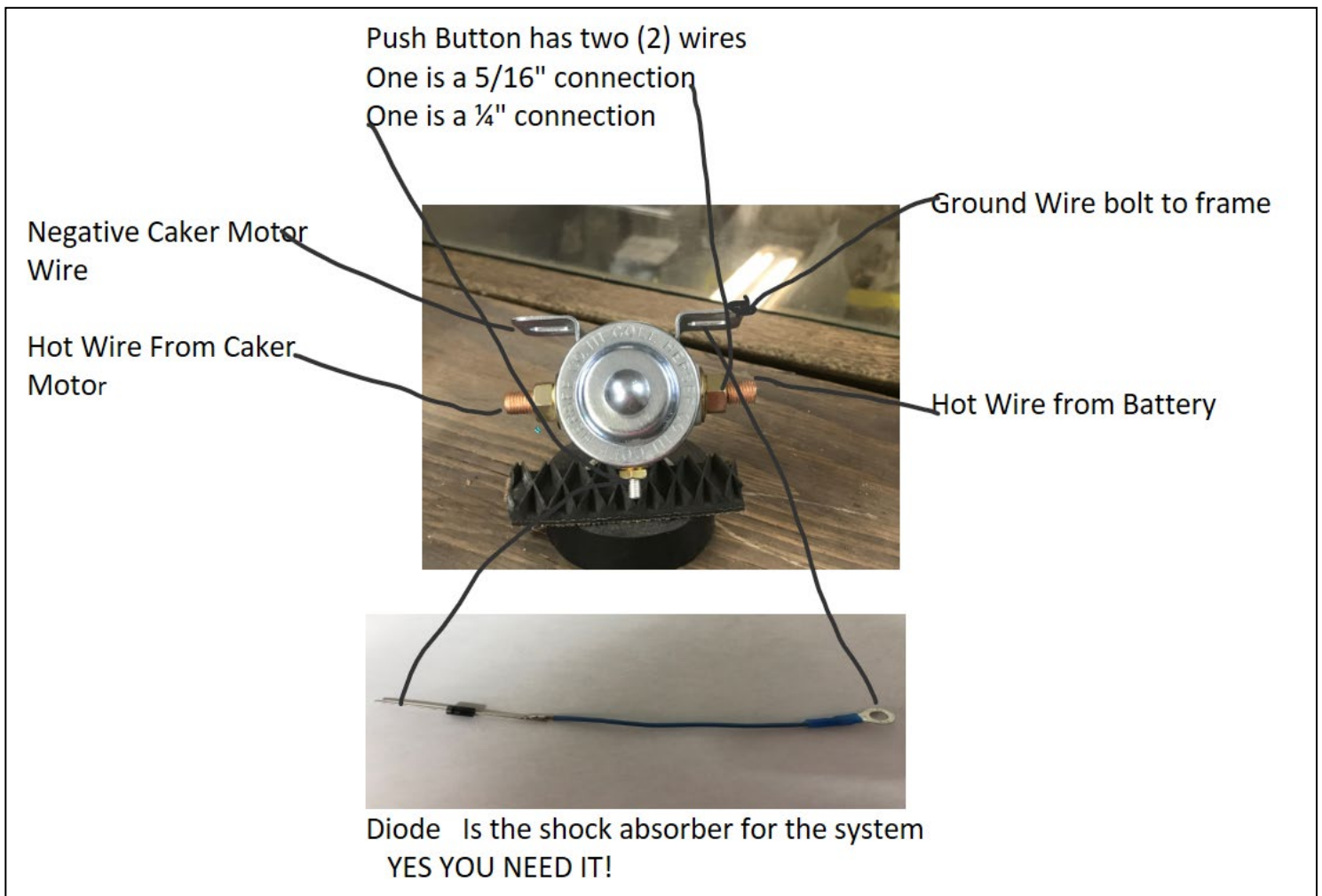
If it passes the test, that means you will need to test the pickup side to find the problem.

While your caker is still unplugged, push 1+ on the calculator, while it is plugged into the sensor wire. Then touch the sliver prong and a gold one right next to it, with pliers or something metal, to make the calculator count. If calculator doesn't count problem is on the pickup side sensor wire.

There could also be a moisture problem in your magnets, if all of these tests, test out, it could possibly be a magnet problem, or a direct short somewhere in the wire that is only triggered while the pickup is running or moving. With these other issues it is much easier just to replace the whole sensor wire.

Motor Lagging?

If your motor isn't running like it normally should be or is running slow, check chain and sprocket for any obstructions. Then check to make sure your belt is tracking straight. Most of the time these two things will be the cause of your problem.



Frequent Q/A:

- We use a 100AMP breaker for these feeders. We can send you the breaker itself, or the breaker including its 19" of jumper wiring, eyelets included.
- These feeders are not painted inside.
- Feeders run off a 3/4 HP 12-volt motor.
- We typically have them in stock, along with complete gear box and mounting plate kits with sprocket, motor brushes, springs, etc.
- Old models can run off the smaller winch motors. We keep a limited supply of these in stock as well.
- We keep a handful of sirens on hand in the office. Heed the suggested on/off duty cycle to avoid burning your siren up.

For any questions you may have, give us a call. Keep up with our website and Facebook page for details, deals, and other products we stock.

See more of our trouble shooting and parts pictures on our website:

www.welkermanufacturing.com

Thank you all for your business with our small-town operation! We work HARD for you!

