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Manual for Your Welker Cake Feeder

Red Lion Digital Counter - Plug Kit

Mounting Your Caker On Your Bed

Flatbed Model:

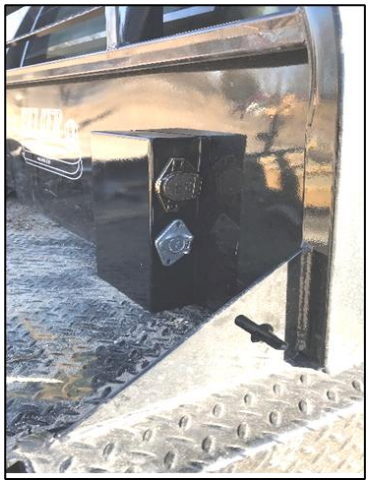
- You will need four 3/8" x 1-1/2" bolts with large surface/fender washers & nuts to match or four 1/2" x 1-1/2" bolts with large surface washers & nuts to match. We recommend using four large fender washers on the bottom side of the flatbed to prevent the bolts from pulling through the flatbed.
- Place the caker on the flatbed to determine the placement of the bolt holes.
- You will want your bolts to be on the inside of the caker's angle-iron runner. Mark hole placement accordingly.
- Drill four holes through your caker runner and the flatbed. Drop a bolt in each hole as you go to prevent the caker from moving as you drill.
- On the underside of the flatbed: attach the washers and nuts to each bolt, then tighten. (Washers and nuts can be tack welded to the flatbed frame to facilitate easy removal & re-installation of your caker in the future). When the caker is not on the flatbed, you can leave the bolts in place to help keep the holes clean & dirt free.

Mounting Your Caker in the Box of Your Pickup

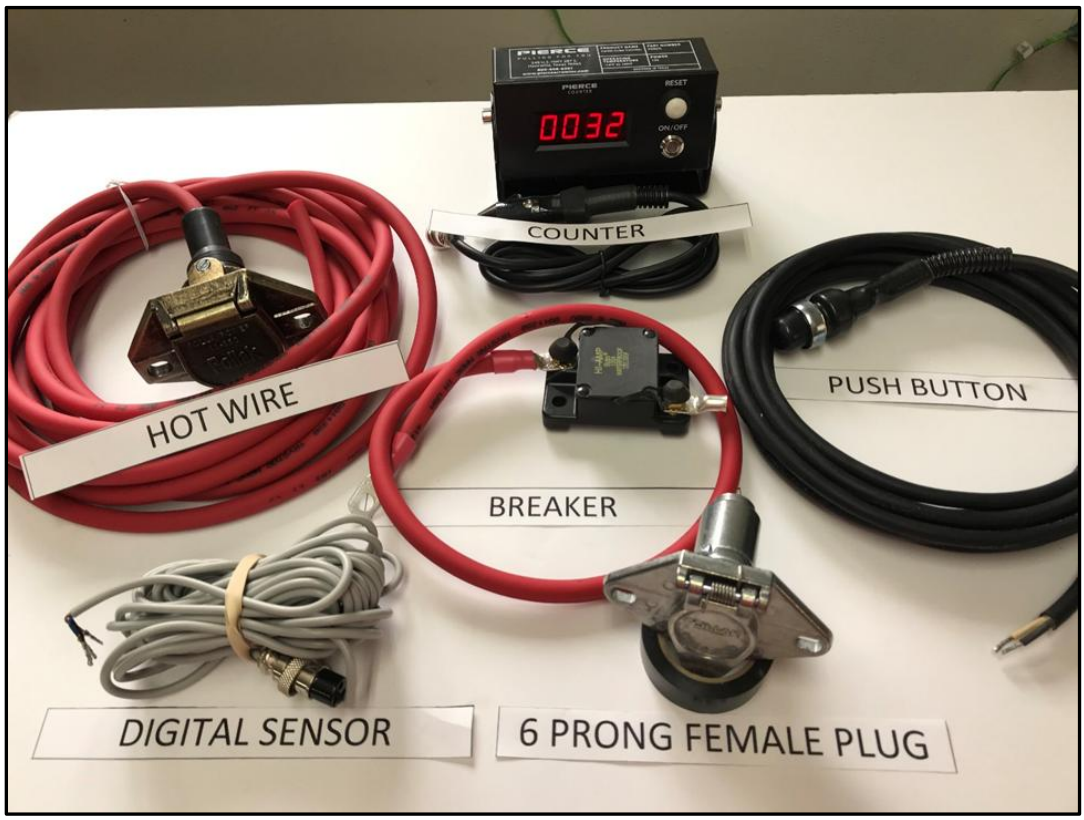
Over-The-Side Caker:

- You will need four 3/8" x 1-1/2" bolts with large surface/fender washers & nuts to match or four 1/2" x 1-1/2" bolts with large surface washers & nuts to match. We recommend using four large fender washers on the bottom side of the flatbed to prevent the bolts from pulling through the flatbed.
- Place your caker in the desired position to determine placement of your bolt holes.
- Drill the four holes through your caker runner, the pickup box, and into the pickup frame, drop a bolt into each hole as you go to prevent the caker from moving as you drill.
- On the underside of the flatbed: attach the washers and nuts to each bolt, then tighten. (Washers and nuts can be tack welded to the flatbed frame to facilitate easy removal & re-installation of your caker in the future). When the caker is not on the flatbed, you can leave the bolts in place to help keep the holes clean & dirt free.

We have two styles of mounting brackets available to mount the plugs to the headache rack or box.
A Plug Plate is included with the wiring harness for your new cake feeder. Plug Boxes are available for purchase from the office: (402) 966-2251.



Pickup-Side Big Plug Kit



You will only be wiring the pickup-side wiring when installing the cake feeder.

Mount the Plug Plate on your headache rack, in the vicinity of the motor-end of your caker where the male ends/trailer plugs on the caker plug will easily reach the plate. The plate can be ether welded or bolted on.

Run the Hot Wire along the frame of your pickup to the engine compartment, then secure it in place. Then strip back the Hot Wire 3/8 of an inch; then solder it to the eyelet that is attached to the breaker. Attach the eyelet back onto the breaker terminal marked "AUX". Proceed to attach the short wire bolted to the breaker terminal marked "BAT" to the pickup battery; mount the breaker in place under the hood in the engine compartment.

Run the push button cord & your counter sensor-wire from the front of the pickup cab back to the Plug Mount Plate. Connect the wires to the silver female 6-prong plug as shown in the wiring diagram provided on the next page. Finally; secure the female plugs in your Plug Plate.

Digital Counter - 6-Prong Male / Female Plug

Digital Sensor Wire	
Brown	**TM or T**
Black	**GD or G**
Blue	**LT or L**
Push Button Wire	
Black	**AS or S**
White	**RT or R**

DIGITAL COUNTER SECTION

Our Red Lion Counter is a small display with a bracket that will be mounted in the cab of your pickup, typically on the dash. The digital read-out display is easy to read with a reset button (the RST button on the right). The display can also be changed from red to green. It includes a power cord that will already be attached to the back of the counter box that will be plugged in to your pickup's cigarette lighter along with the sensor wire. You will take the other end of the sensor wire into the female 6-prong plug that is mounted back on the flatbed/box.
This counter will only count revolutions, so it will need calibrated it to your feed output.

CALIBRATING THE COUNTER

Press the button to run the caker until the 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 a similar container (tare).
3. Place the bucket/container so the cake feeder will dispense feed into it.
4. Press the button which runs the feeder and hold it until your bucket/container is full.
5. Weigh the bucket/container, then subtract the tare 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 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 at 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.

Trouble Shooting for Digital Counter

The counter monitor will not light up

- The power cord to monitor might have a wire pulled loose. Check the connections on the back of the display to look for a loose / damaged wire. If this end is ok, a wire may be loose / damaged on the other end at the 6-prong plug.
- Your power point may not be getting power. Check the pickup fuses; also test your cigarette lighter with a test light or an OEM meter to make sure there is power.

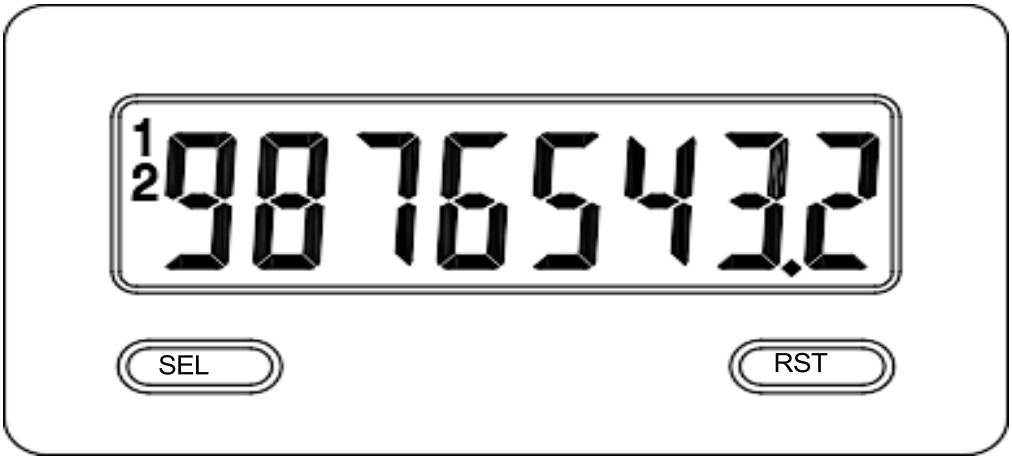
My counter display is fine but will not count

- The sensor needs to see the tab on the sprocket. The distance from the end of the sensor to the tab should be no more than the width of two (2) credit cards apart.

Does the light on the back of the sliver sensor on the caker side light up and blink each time the tab on the sprocket comes around?

- Constant Light: Means it is reading the sprocket instead of the tab on the sprocket. Adjust the Sensor Mount Bracket out towards the end of the sprocket so the sensor can see the tab but not the entire sprocket hub.
- No Light: No power. Take the silver plugs apart and make sure they are clean and free of dirt, cobwebs, and there are no bare wires touching. Then verify all your wires are connected. Also make sure you have no bare wires touching the metal outside casing.

Reviewing the Front Buttons & Display



KEY	DISPLAY MODE OPERATION	ENTERING PROGRAM MODE	PROGRAMMING MODE OPERATION
SEL	Index display through enabled values	Press and hold for 2 seconds to activate	Store selected parameter and index to next parameter
RST	Resets count display(s) and/or outputs		Advances through the program menu/ selected parameter value or selection Increments

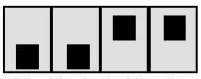
OPERATING MODE DISPLAY DESIGNATORS

"R" - To the left of the display is the rate value.

- Counter A has no designator.

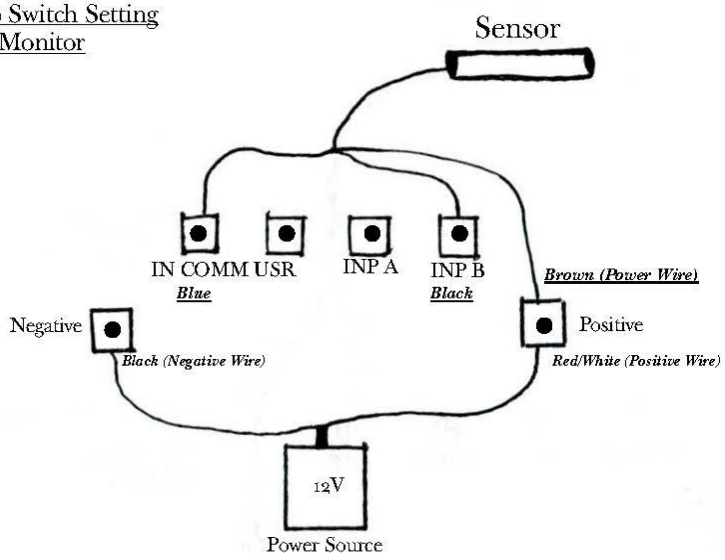
"b" - To the left of the display is the Counter B value (dual count or batch). "1" and "2" - Indicates setpoint 1 and 2 output status

Pressing the SEL button toggles the meter through the selected displays. If display scroll is enabled, the display will toggle automatically every four seconds between the rate and count values.



Dip Switch Setting for Monitor

Wiring Diagram for Red Lion Counters



Programming the Display

PLEASE NOTE:

We do not recommend doing this without reading through the entire guide. If a mistake is made while programming, especially if you are unsure of how to fix it, it is best to reset the counter settings then start fresh.

If you have a question or are unsure of how to change a setting; the email for the office is: *weldermanufacturing@gpccom.net*. The phone number for the office is: (402) 966-2251. You may also access the full programming guide on our website: *welkermanufacturing.com*

I Need a New Belt!

Standard Belt Lengths are: 102" & 126" and all belts are 9-7/8” wide.

Here’s what we need to know before we can help you!

Do You have a Flatbed Cake Feeder or an Over-The-Side Cake Feeder?
Do You Have a Square-Tube Cake Feeder or a Round-Tube Cake Feeder?

Square Tube Feeder

Round Tube Feeder

Over-the-Side (OTS) Feeder

Belt-Splicing

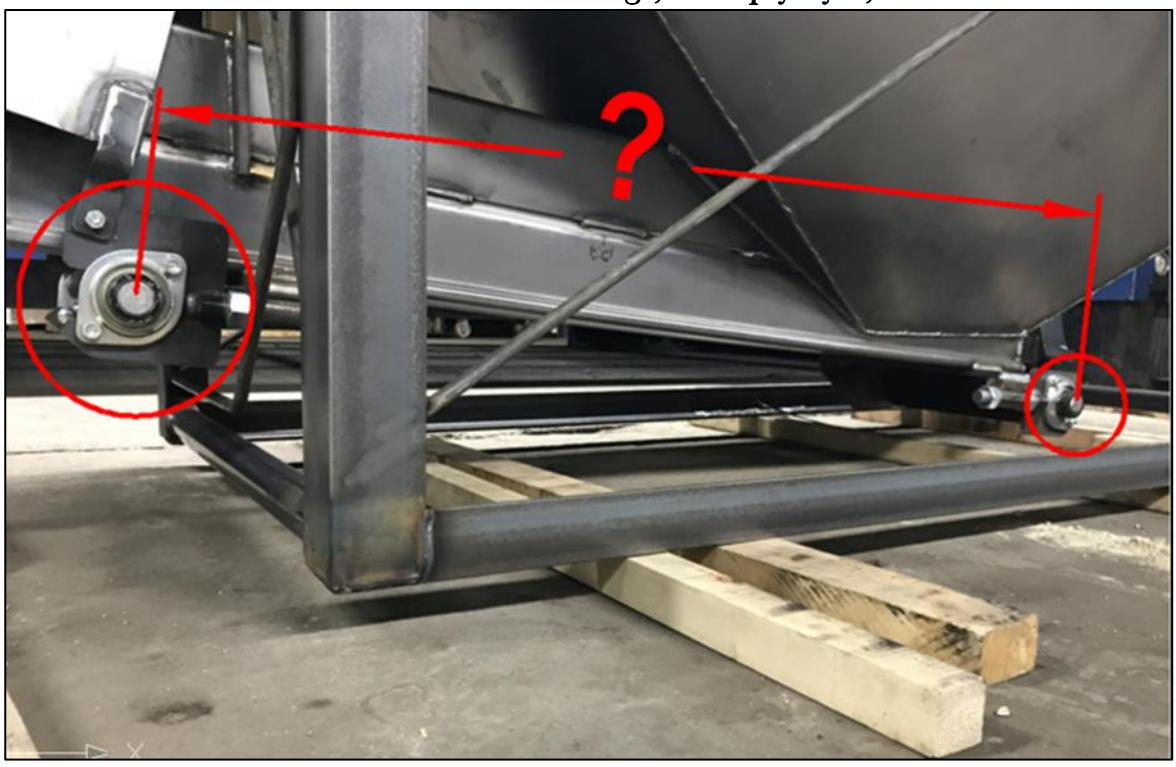
What size/type of belt do I need?

Do you have a flatbed caker, an over-the-side caker, or a UTV caker? Do you have a square-tube caker or an older round-tube caker?

Over-The-Side square-tube feeders have a standard 102" belt that is cleated for the incline. An over-the-side round-tube feeder should be a standard 102". But be sure to measure anyway (see below).

Measure the center of roller bearing in the front to the center of the roller bearing in the back, on the left side of the feeder.

Formula is Distance between Roller Bearings, multiply by 2; & then add 6 inches.



Chute End to Motor End

Can I splice my broken belt?

We do not recommend splicing your belt.

Both square-tube and round-tube belt splices take a special tool to install properly! Plus; you would likely not have enough length after you splice your belt unless you add length into the belt when adding the new splice. This would require setting two new splices instead of just one.

My cake feeder is full; how do I change or fix a broken belt?

If you can get to the splice point, to the chute end of your feeder, you can try attaching the new belt to the splice point and carefully feed the new belt through to the other side.

Belt is Tracking Off-Center! (not running straight)

Your belt was aligned correctly at installation. However; as you use your feeder, the belt may start to shift to one side or the other.

Make sure the drive roller is clear of any twine or other obstructions to prevent shifting.

Determine which side your belt is moving toward. The belt will shift away from the tight side. You may need to loosen or tighten the bearing cages adjustment nuts on opposite sides of your feeder to work your belt back into to the center of your tube.

Take a 1-1/8" wrench to the 3/4" ready bolts on the bearing cages; loosen the nut on the bearing cage (on the side the belt is moving toward) then tighten the nut on the other bearing cage (on the side the belt is moving away from), this will help the belt travel back into place as well as run straight (if properly adjusted).

My motor is losing power and running slowly and lugging down.

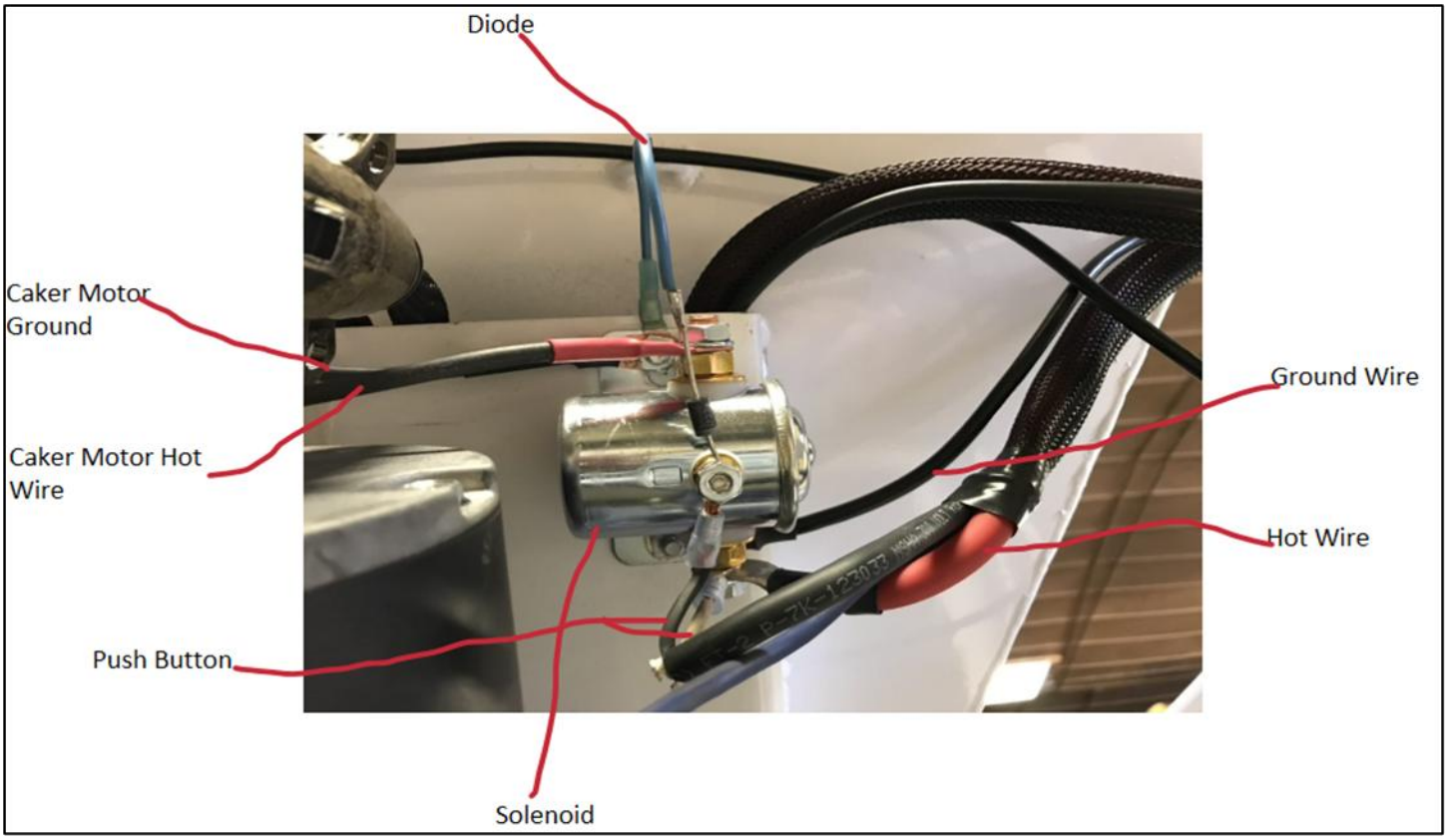
Check your bearings on your rollers, they should be clear of any twine, or wire or dirt. If they are turning freely, what are you using for a hotwire?
We have found you really do need the Heavy Welding Cable that was original to your caker to carry the proper voltage to the motor.

The Diode is an electrical shock absorber. We recommend all Cakers have a Diode. The Diode is attached to the solenoid.

Installing caker for the season & 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 on the caker from the solenoid and touch it to the Hot wire post on the motor. If the motor runs the motor is fine, it may 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 on the solenoid where the hot wire from the battery connects.



Motor runs: Bad push button, or damaged push button cord

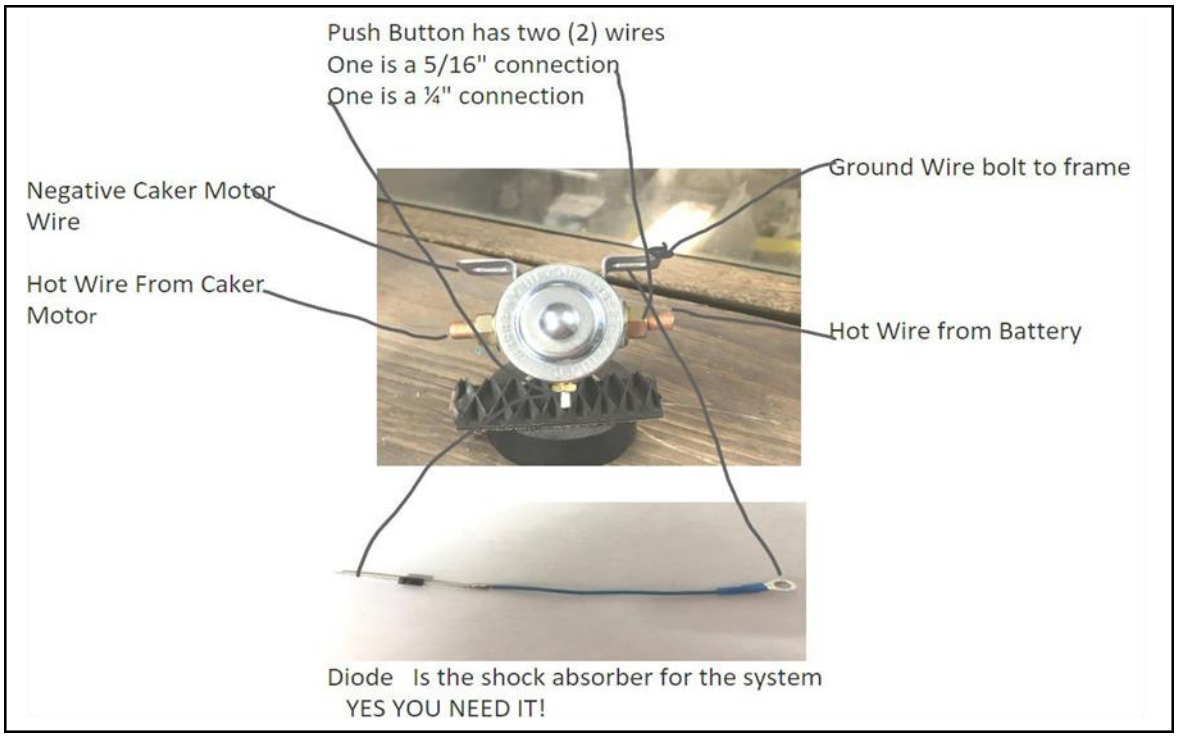
Solenoid clicks: Bad ground

Nothing happens: Bad Solenoid, or no ground

Cake Feeder won't start; solenoid only clicks!

You most likely have an incomplete or bad ground. Your first step is to test this by taking a set of jumper cables, then finding a clean, rust and paint-free spot on the caker. Connect both clamps from one end of the cables here, then connect the opposite end of the jumper cables to your pickup frame. If your caker then begins to work 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 as well. 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.



<u>My push button gets hot when I use it!:</u> All the power for your system is going through your push button!

- Connect the Solenoid to the caker with two ¼" bolts.
- To the top 5/16" bolt on the solenoid: connect the caker motor hot wire (RED HEAT SHRINK ON EYELET).
- To the bottom 5/16" bolt on the solenoid: connect Heavy Red Wire coming from the gold plug and the 5/16" eyelet from the push button wire.
- To the small ¼" connection on the Solenoid: connect the wire end of the diode and the small eyelet from the push button.
- To the top Solenoid frame bolt: connect the eyelet on the diode and the caker motor ground wire (BLACK HEAT SHRINK ON EYELET).

Frequent Q/A:

Our Cake Feeders are not painted on the inside.

We keep sirens on hand in the office. Please follow the suggested on/off intermittence in order to avoid burning your siren up.

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

My Breaker keeps tripping!:
This could mean you have a bare wire somewhere, in either the pickup wiring or in the caker wiring. We use a 100AMP breaker for these feeders. We can send you the breaker itself, or the breaker & 24" of wiring, eyelets included.

This is the Breaker we feel works the best!

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

www.welkermanufacturing.com

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