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Manual for Your Welker Cake Feeder
Pierce 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 and nuts or four 1/2" x 1-1/2" bolts with large surface washers and nuts. We recommend using four large fender washers on the bottom side of the flatbed to prevent the bolts from pulling through your 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, leave the bolts in place to keep the holes clean & dirt free.

Mounting Your Caker in the Bed of Your Pickup

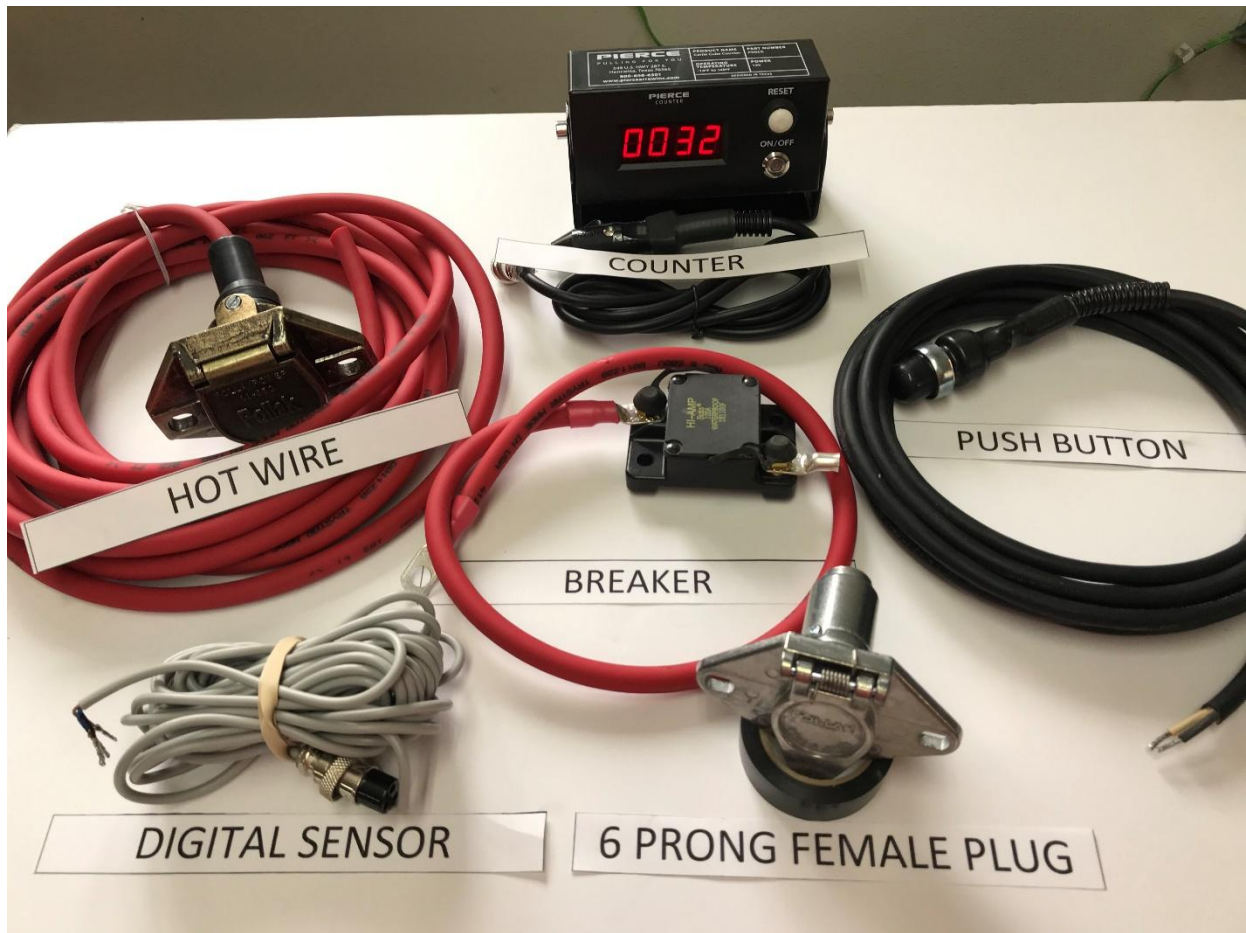
Over the Side Caker:

- You will need four 3/8" x 2" bolts with large surface/fender washers & nuts or four 1/2" x 2" bolts with large fender washers and nuts.
- We recommend using four large fender washers on the bottom side of the pickup box to prevent the bolts from pulling through.
- 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 inside of the pickup frame, attach a washer and nut to each bolt and tighten.

We have two styles of mounting brackets you can use to mount the plugs to your headache rack. A Plug Plate is included with the wiring harness. **Plug Boxes are available for purchase.**



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 either 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**

<u>Digital Sensor</u>	
Brown	TM or T
Black	GD or G
Blue	LT or L
<u>Push Button</u>	
BLACK	AS or S
White	RT or R

DIGITAL COUNTER



Our Pierce Digital Counter is a small box with a bracket that will be mounted in the cab of your pickup, typically on the dash. The digital read out display is simple and easy to read and operate, with an on/off button and a reset button. It includes a power cord that you will attach to the back of the counter box and plugged in to your pickup's power point/cigarette lighter. The sensor wire that is included will also plug into the back of your counter box.

This counter will only count revolutions, so you will need to calibrate 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.
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 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 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

Digital Counter

The counter monitor will not light up.

1. The power cord to monitor might have a wire pulled loose.

Open the silver connection on the cord to look for a loose wire,

If this end is ok, a wire could be off on the other end.

Both ends are replaceable. Call the Office at 402-966-2251

2. Your power point may not be getting power.

Check the pickup fuses.

You may have blown the fuse in the back of the box.

My Counter Box 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 2 credit card thickness.

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

1. **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 sprocket hub.

2. **No Light:** Means it is not getting power.

Take the silver plugs apart and make sure they are clean and free of dirt and cobwebs,

Verify all your wires are connected. Make sure you have no bare wires touching the metal outside case.

I Need a New Belt!

**Standard Belt Lengths are: 102", 126", & 150"
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 Feeder or an Over-The-Side Feeder?
Do You Have a Square Tube Feeder or a Round Tube Feeder?**



Square Tube Feeder



Round Tube Feeder



Over-the-Side (OTS) Feeder



Square Tube Belt



Round Tube Belt



Over-the-Side Belt

Belt-Splicing



What size belt do I need?

Do you have a flatbed caker or an over-the-side caker or UTV caker?

Do you have a square tube caker or round tube caker?

Over-the-side Square tube feeders have a standard 102" belt that is cleated for the incline.

Over-the-Side Round tube feeder should be a standard 102". But 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!

You will likely not have enough length after you splice your belt unless you add length into the belt & this would require setting 2 new splices.

My Feeder is full, how can 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 Tracking Off Center! (not running straight)

Your belt has been aligned correctly at installation.

As you use your feeder, your belt may start to shift to one side.

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, and tighten, the nut on the bearing cage, on the side the belt is moving away from. This will cause the belt to travel back into place.

Over-the-side Square Tube feeders have a standard 102" belt that is cleated for the incline.

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.

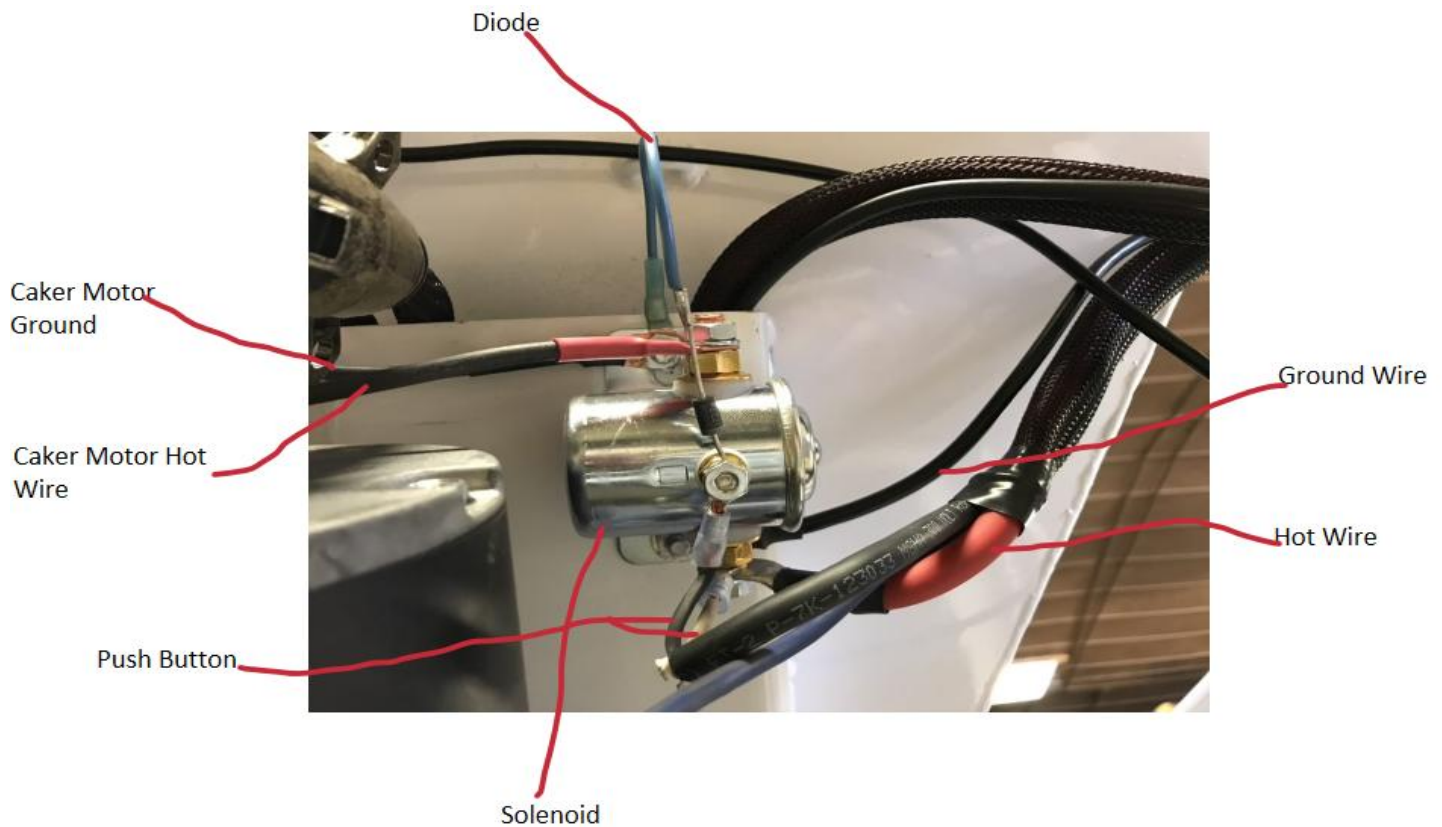
To do this you need to disconnect the **Hot Wire** on the caker from the solenoid and touch it to the Hot wire post on the motor.

If the motor runs the motor is fine, it 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 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, my solenoid only clicks!!

You most likely have an incomplete or bad ground.

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, and 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.

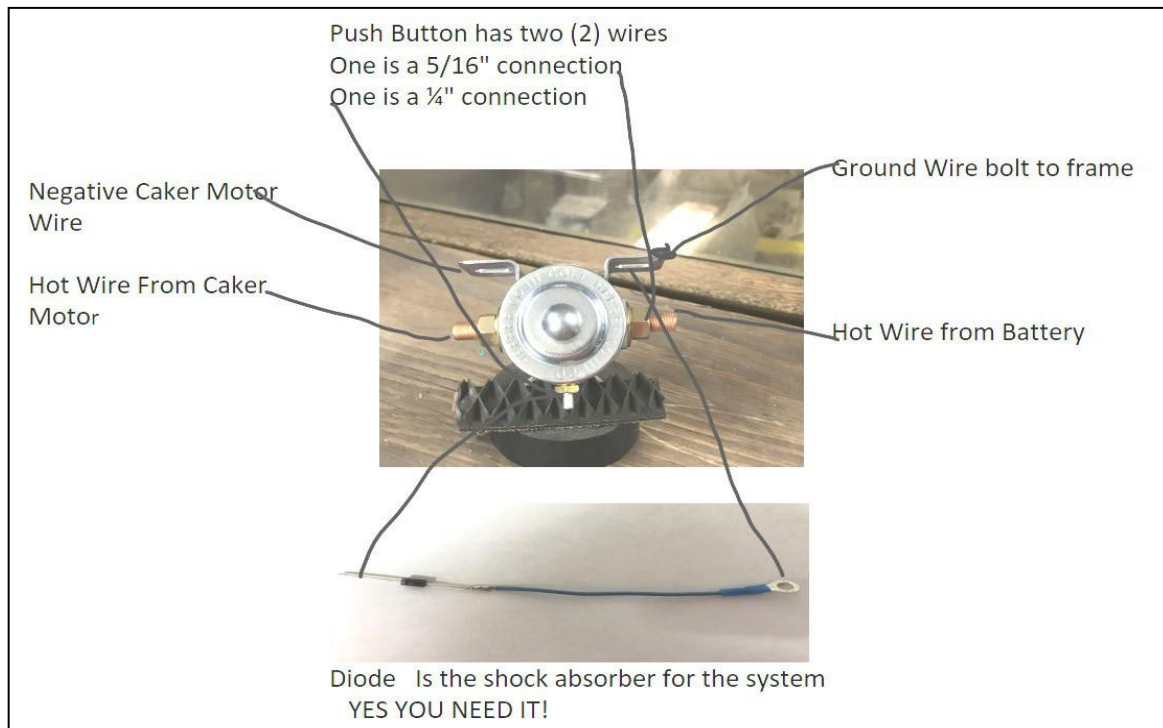
Check for any ice or mud, or rust build-up that could be impeding the ground.

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.

My Push Button gets hot when I use it:

All the power for your system is going through your push button!

You have your solenoid wired wrong.



Connect the Solenoid to the caker 2 1/4" bolts.

1. To the top 5/16" bolt on the solenoid connect the caker motor hot wire (**RED HEAT SHRINK ON EYELET**).
2. 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.
3. To the small 1/4" connection on the Solenoid connect the **wire end of the Diode** and the **small eyelet from the push button**.
4. To the top Solenoid frame bolt connect the **Diode Eyelet** and the Caker Motor Ground Wire (**Black Heat Shrink**).

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 including with the 24" of wiring, eyelets included.



This is the Breaker we feel works the best!

Frequent Q/A:

Our Cake Feeders are not painted on the inside.

Welker Cake Feeders run off a 3/4 HP 12-volt motor. We have them in stock, brushes, springs, etc.

The Ohio Motor will pull 67 Amps from your pickup system.

Older models can run off the smaller winch motors. They are no longer available you will need to convert your caker to the Ohio motor and gearbox.

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 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!**

