

Welder Manufacturing LLC

PO Box 28

Kilgore, NE 69216

Phone: (402) 966-2251

weldermanufacturing.com

Manual for Your UTV Welker Cake Feeder

Red Lion Digital Counter - Plug Kit



Mounting Your UTV Cake Feeder

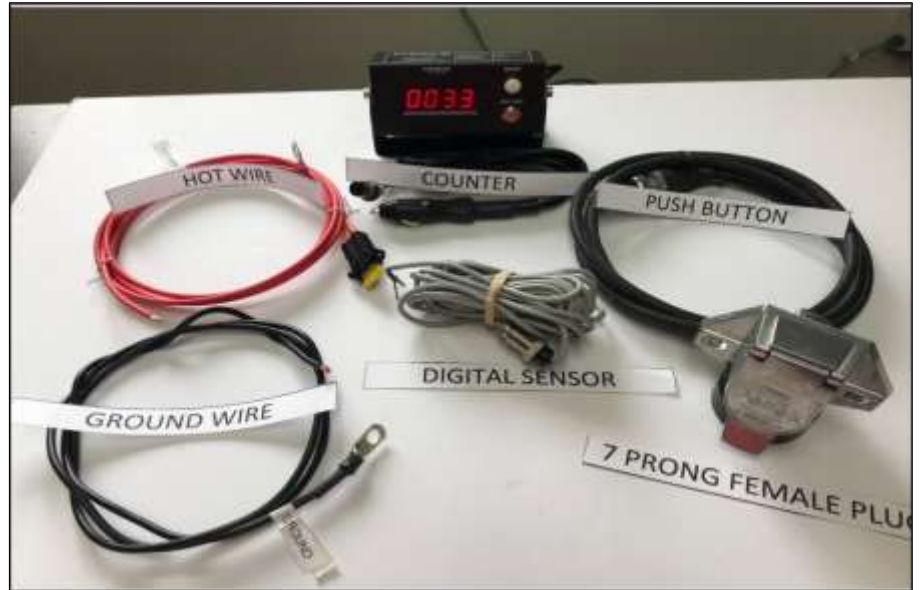
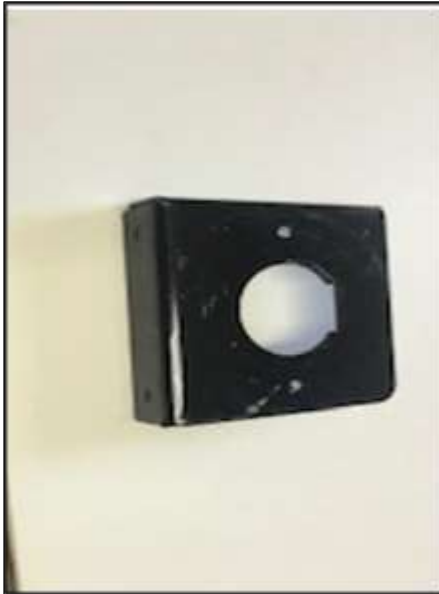


- You will need: four $\frac{3}{8}$ " $\times$ 3" eyelets, four $\frac{5}{16}$ " hook-to-hook turnbuckles, and eight nuts to match.
- Locate the tie-down hook points in your UTV box.
- Position the cake feeder in the UTV box.
- Screw the turnbuckles to their maximum length; attach the turnbuckle to the hook point in the UTV box and determine the height of your eyelet bolt. Now, drill a hole in the leg of the caker where the eyelet bolt will be attached.
- Place one nut on the eyelet, then place the eyelet through the hole in the caker leg (eyelet loop on the outside). Next, place a nut on the eyelet to tighten (this will have a sandwich effect on the leg of the cake feeder), hook the turnbuckles in, and tighten everything into place.

CAUTION!

UTV cake feeders **SHOULD NOT** be operated on uneven terrain!

UTV-Side Plug Kit with Digital Counter



You will only be wiring the UTV (female) side of your UTV cake feeder. When finished, all that will be needed in order to remove the cake feeder from your UTV is to unplug the male 7-prong trailer plug and lift it off the UTV.

To do this, first mount the plug plate to the bed of the UTV where the male 7-prong plug can easily reach and be easily plugged and unplugged.

Next, take the red hot wire and attach the eyelet that is connected to the in-line fuse holder to the positive terminal of the battery. Attach the black ground wire to the negative terminal of the battery. Then proceed to run both wires back to the plug mount plate.

Now, mount your counter monitor to the dash, roof, or wherever your ideal placement for easy reading is, and run the black push button cord and gray digital sensor wire to the plug plate. Make sure to tie up any excess wire so that it does not rub or catch anywhere.

Lastly, connect all the wires to the female 7-prong plug as shown in the wiring diagram on the next page.

<u>Female 7-Prong Wiring Diagram</u>	<u>Red Lion Digital Counter</u>
Brown	RED 4
Black	YEL 3
Blue	BLK 2
Hot Wire	BLU 7
Push Button	
Black	BRN 6
White	GRN 5
Ground Wire	WHT 1



Our Red Lion Counter is a small display with a bracket that will be mounted in the cab of your UTV. 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 into your pickup's cigarette lighter along with the sensor wire. You will take the other end of the sensor wire to the female 7-prong plug that is mounted back on the flatbed/box.

This counter will only count revolutions, so it will need to be calibrated 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. (The 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 that 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 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 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.

Troubleshooting 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.

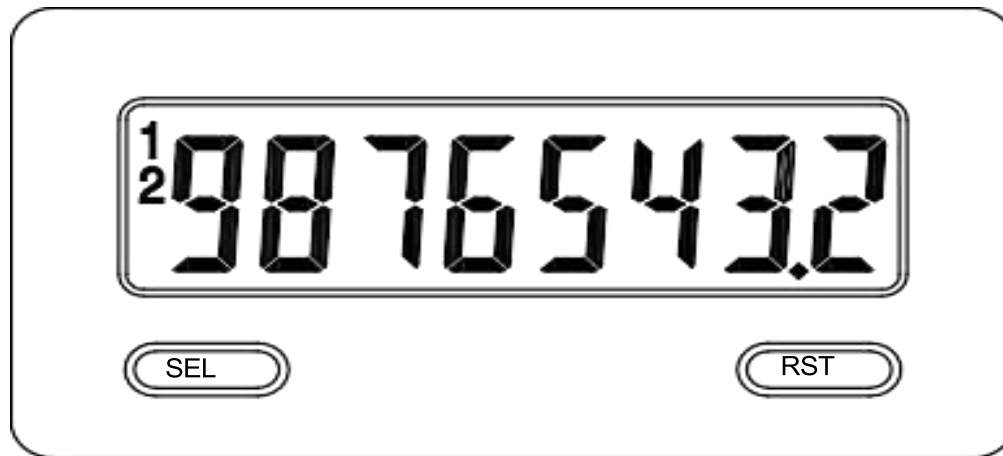
My counter display is fine but will not count

- 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 silver sensor on the cake feeder 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 toward 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 and cobwebs, and that 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

OPERATING MODE DISPLAY DESIGNATORS

- “K” - To the left of the display is the rate value.
- Counter A has no designator.

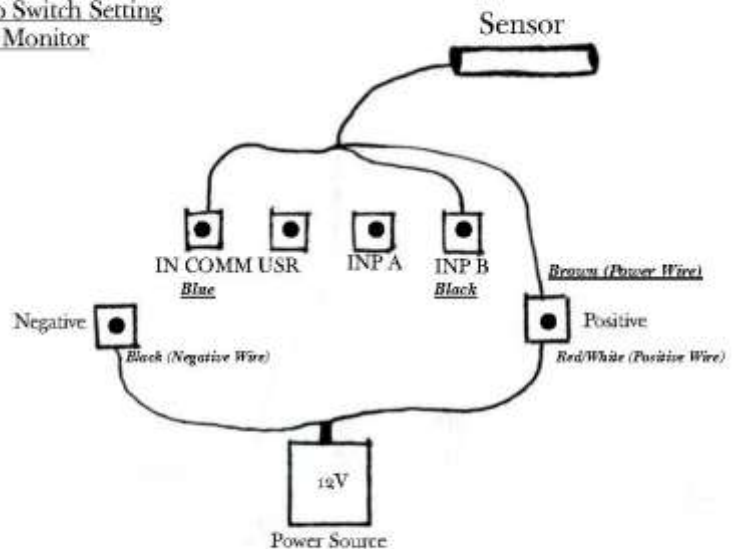
“b” - To the left of the display is the Counter B value (dual count or batch). “1” and “2” - Indicates setpoint 1 and 2 output status

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: weldermanufacturing.com

When your counter & rate indicator is powered up, it enters its display mode and is ready for work. If you need, or want, to make changes you must first enter the programming mode. To enter this mode: press & hold the "SEL" button for two seconds, or until the screen displays "NO". If you enter this mode by accident, and the screen still says "NO", pressing the "SEL" button will return the display to normal operation. If it does not say "NO" but instead a number followed by a word, press the "RST" button until the screen says "NO" again, then press the "SEL" button to return to normal operation.

To change the color of the backlit display:

1. Start by entering the programming mode by holding the "SEL" button for two seconds or until the screen displays "NO"
2. Enter the display menu by pressing the "RST" button three times or until the display reads "3-dsplay"
3. Navigate to the display backlight color setting. Press the "SEL" button four times or until the display reads "d-Color"
4. Select your desired backlight color for your display. Red will be displayed as "rEd" while green will be displayed as "Grn"
5. Press the "SEL" button until you exit the programming mode and return to normal operation.

I Need a New Belt! 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?

To obtain the correct length belt for your cake feeder: measure from the center of the roller bearing in the front to the center of the roller bearing in the back, on the left side of the feeder as shown above. The formula for the correct belt length

is: $\text{Distance Between Roller Bearings} \times 2 + 6 \text{ inches}$

The standard UTV belt is 6" wide & 78" long with a square-tube belt splice



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 at 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-cage adjustment nuts on opposite sides of your feeder to work your belt back into 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).

UTV Cake Feeder Gearmotor & Diode



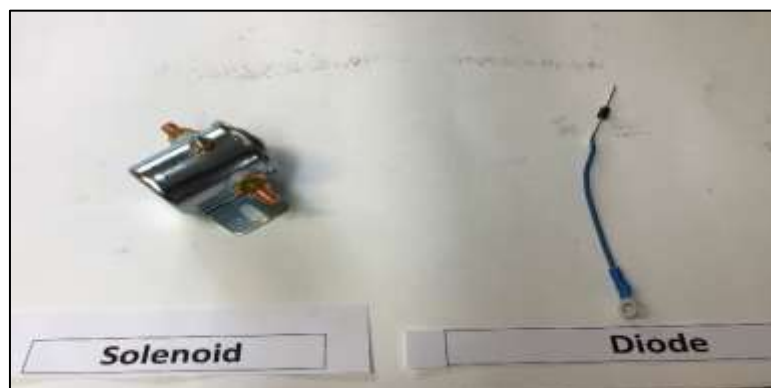
This unit runs on a 1/8 HP 12-volt motor/gearbox combo which is connected to the UTV by the hot wire and an inline fuse holder, with a 20-amp fuse.

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

Check your bearings on your rollers; they should be clear of any twine, wire, or dirt.

If they are turning freely, what are you using for a hot wire? Is it heavy enough to carry the correct amount of voltage back to the cake feeder?

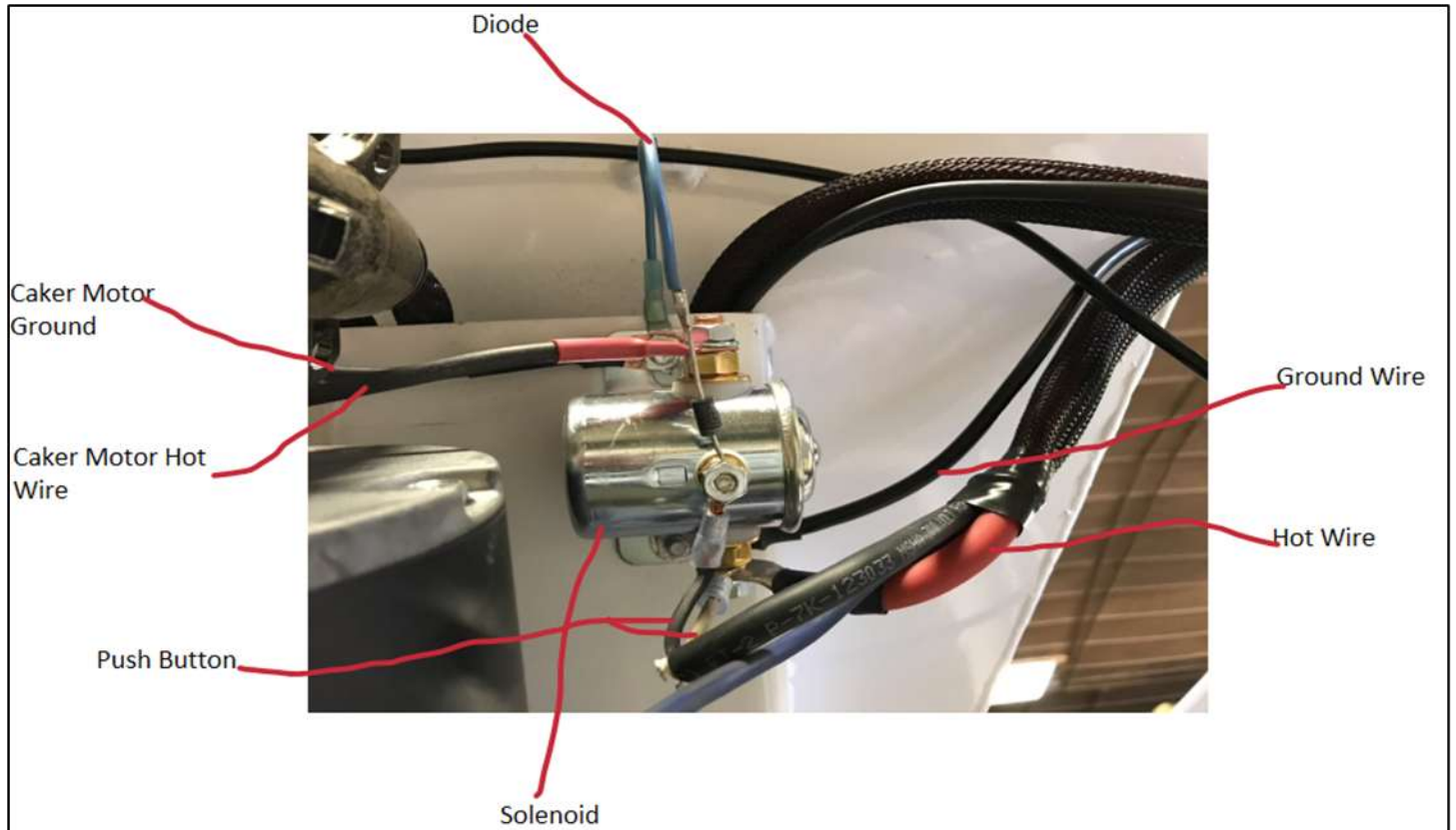
The diode is an electrical shock absorber and acts as a ground for the electrical system. We recommend all cake feeders have a diode. The diode is attached to the solenoid.



Installing the cake feeder 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 will 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 and it may be the solenoid or push button. Be sure to reconnect the hot wire to its original post when finished.

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

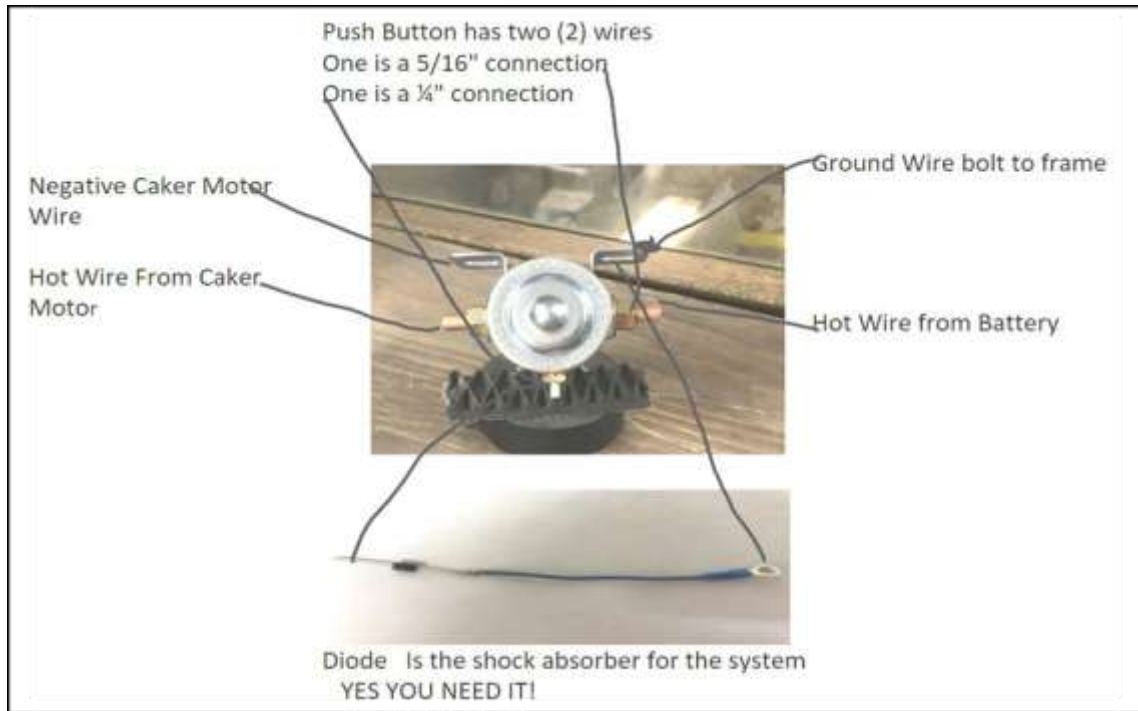
Cake Feeder won't start; solenoid only clicks!

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-free 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, mud, or rust buildup 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.

My push button gets hot when I use it! All the power for your system is going through your push button.



- Connect the Solenoid to the caker with two 1/4" 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 1/4" 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, feel free to call & order one anytime (we ship anywhere in the lower 48!). Please follow the suggested on / off intermittence in order to avoid burning your siren up.

See more of our troubleshooting, parts pictures, and other products that we stock on our website:

www.weldermanufacturing.com

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