

## Replacing the Drive Wheel

(Electric Machine - refer to photos on page 3)

**This is a very complicated procedure that requires dismantling the machine. It is recommended that this procedure be done at our repair facility.**

**Please Note: Take care not to lose screws or other small parts you may encounter**

1. Make sure the machine is turned off and unplugged. Set the Coin Selector Knob to "C". Set the Coin Gauge Knob to the Dime setting.
2. Open the top Tray and remove the two screws holding the Tray/Spout assembly onto the machine. Set the Tray/Spout assembly and the screws aside.
3. The cover over the motor is attached with 4 screws, two on each side. Remove the screws and set them aside. Pull the motor cover off and set it aside. NOTE: For Models CECR1 & CECR4, there is a metal plate around the crimper. You need to remove this plate in order to remove the motor cover.
4. Next, you will be turning the machine upside down. When you do so, the weight of the machine will be on the Meter and the Coin Gauge Cover. On the front of the machine are the hooks where you hook your coin tubes on. Once you turn the machine over, take a wood block and set the machine so the hooks rest on the edge of the block. Choose a block high enough so the Meter and Coin Gauge are up off the surface of your work area.
5. With the machine upside down. Locate the Power Switch. There is a nut and an On/Off Plate on the outside of the Switch that holds it on. Remove the nut and Plate and slide the Switch out of its hole. Set the nut and Plate aside for later.
6. With the machine still upside down, you can see the 3 screws that hold the base of the machine onto the rest of it. These screws run through the base and into 3 metal rods, called the Frame Stands. Remove these 3 screws and set them aside.
7. The base (which includes the motor) should now lift off of the machine, and the Motor Belt should come loose. The rectangular metal Wrapper that surrounds the machine should lift off as well. Set the Base, Belt and Wrapper aside.
8. The machine should still be upside down. Look at the large metal pulley that the belt was looped around, as well as the old Drive Wheel, and the Drive Unit Bracket they are attached to. The bracket has a large bolt and nut in the end of it. The bolt is usually 5/8" and the nut is usually 11/16", though it can vary with older machines. Loosen the nut until you can easily loosen the bolt, and remove them from the bracket. Under the nut is a metal plate that connects to the Disc Bracket.
9. The nut on the Disc Bracket needs to be loosened. To do so, take a flat-head screwdriver and hold the screw in place, and turn the nut with a 3/8" wrench. You only need to loosen it, maybe 1 full turn. **Make sure you do not let the screw turn; it must stay in its exact orientation.** Rotate the metal plate out of the way for now.
10. Locate the large rubber Discharge Wheel. You'll see it's attached to a metal strap, and the strap is held onto a bracket by a large metal screw. Remove this screw. The Wheel has a spring on it, and it will pop up as the screw is loosened. Set the screw aside.
11. Next, locate the two screws holding the Drive Unit Bracket onto the machine. Remove these screws and the Drive Unit should come off of the machine. There may also be pins helping to hold the bracket in place. If so, don't lose them. As well, pay attention to the underside of the bracket as there may be plastic or metal shims under the bracket. If there are, you will need to make sure you take note of them and how they are positioned so you can put them back later. Set the screws (and/or shims) aside.

12. If you look at the Drive Unit, you'll see that the shaft of the Drive Wheel runs through the bracket, and may be held on by a Collar on the other side (newer machines may not have the collar). The Collar has a hexagonal set screw, so you'll need an Allen wrench to loosen it. Most of the time it is a 1/16" set screw, but some older models may be larger. Loosen the set screw, and once the Collar is loose the Drive Wheel should slide out of the bracket. Keep the Collar and discard the old Drive Wheel.

**13. Please Note: If your machine is old, dirty, or rusty, you may have difficulty removing the Collar and/or the Drive Wheel. It may be necessary to use a punch to tap the Drive Wheel shaft through the bracket. If necessary, use care not to damage the bracket or the Pulley.**

14. Take the new Drive Wheel, and apply a couple drops of oil along the shaft. The Drive Wheel should slide through the bracket. If you have difficulty, it may be necessary to take a round file and smooth out the inside of the bracket hole. As the end of the shaft comes through the other side of the bracket, slide the Collar on the shaft. Hold the Wheel so it's all the way through, and make sure the Collar is all the way on, and tighten the set screw on the Collar. Give the works a few turns to make sure it moves smoothly. Sometimes the Collar may be too tight against the bracket; adjust as necessary for both a snug fit and smooth turning.

15. Place the Drive Unit Bracket back on the machine, including any shims or pins that may have been present when you removed it. Make sure the gear teeth on the Disc Shaft Pinion Gear are aligned with the gear teeth on the Drive Wheel. Tighten the screws most of the way down, but leave just enough looseness so you can wiggle the Bracket. Take the large screw for the metal strap and screw it most of the way down, also leaving a little play in it so you can wiggle the strap back and forth.

16. Next, rotate the small metal plate back over the hole in the Drive Unit Bracket. At this point you may want to look into the hole in the bracket. There is wadding in the hole that holds oil for lubricating the shafts. If it seems to you that the wadding may be dry, you can add 10-12 drops of oil (3-in-1 will do). Pick up the bolt and nut that you removed earlier, and adjust the nut until it sits halfway along the length of the bolt. Re-insert the bolt and nut, and hand tighten the bolt until the nut is almost contacting the plate. The plate should be loose.

17. Next, you need to mesh the Drive Wheel with the Disc gear. Basically, they need to be snug together without binding. You can wiggle the Drive Unit Bracket back and forth while looking at the gear mesh, and once you have it where you think it looks good, hold the bracket in place while tightening the two screws. Leave everything else loose.

18. Turn the machine right side up and turn the large pulley by hand to test the smoothness of the gears. If it feels too tight or too loose, turn the machine upside down and readjust. You may need to do this a few times to get it right.

19. Once you have the mesh right, turn the machine upside down again, and tighten the large screw on the strap by the Lower Wheel. Also tighten the nut around the bolt on the Drive Unit Bracket. Then, tighten the nut on the Disc Bracket, the one you loosened in step 9. **As before, make sure you hold the screw firmly in place with a screwdriver while tightening the nut.**

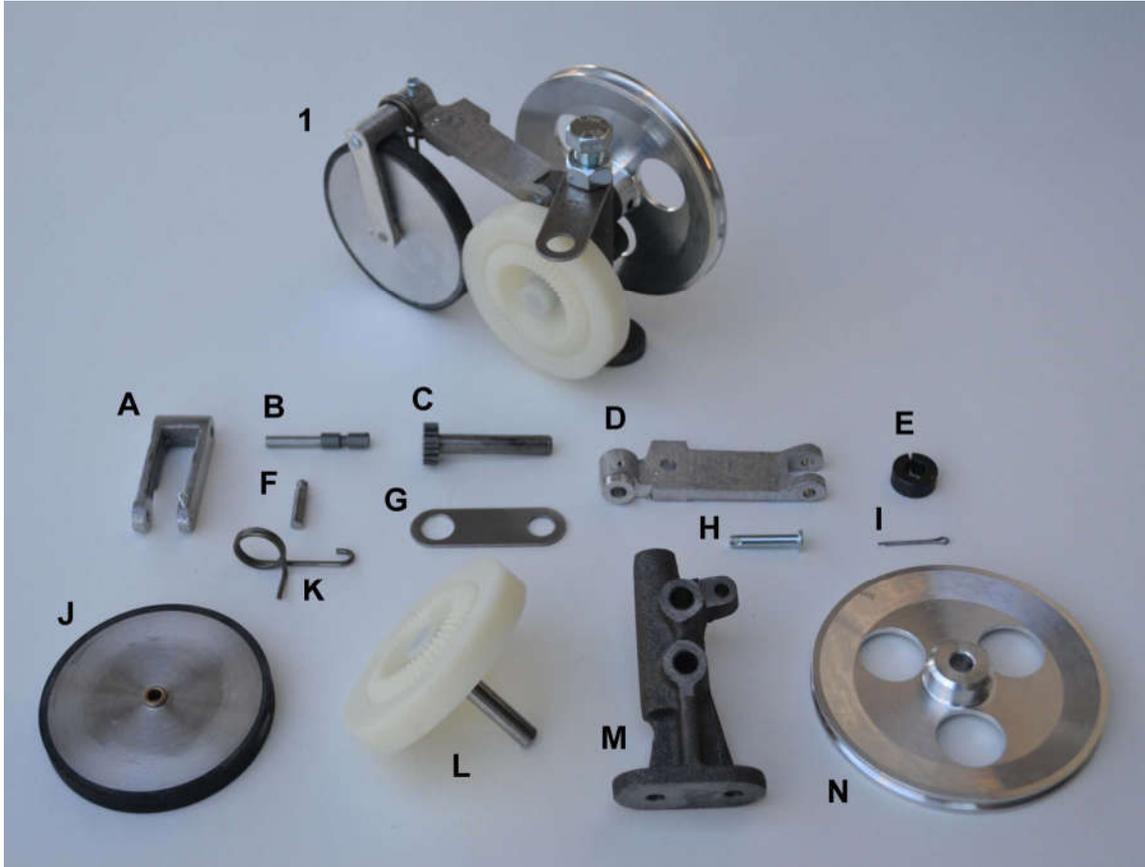
19. Once everything is in place, slide the Wrapper back on, and loop the Motor Belt around the Large Pulley. Slide the Power Switch back into its hole, and reattach the On/Off Plate and the nut.

20. Take the Base, and loop the Motor Belt around the small pulley on the Motor. The Belt should be seated in the grooves on both the Large Pulley and the Small Pulley. Put the base back on. Snug down the screws, but don't tighten them. The Wrapper fits into a groove around the perimeter of the machine. You'll need to make sure the Wrapper is properly seated in the groove all the way around, before you tighten the screws. You may need to work it in a bit at a time as you tighten the screws.

21. With the base secure, turn the machine right side up. Reattach the motor cover. NOTE: For models CECR1 & CECR4, reattach the metal plate around the crimper. Replace the Tray/Spout assembly with its 2 screws.

If all went well, the machine should be ready to test. Take a few (5-10) coins of your choice and set the Coin Gauge accordingly. Run the machine to verify operation. If you have any problems, we'll be happy to help, just give us a call.

## CE Drive Unit Assembly #94-2220



Item	Part #	Description	Price
1	#94-2220	CE Drive Unit	\$225.00
A	#3-22211	Lower Discharge Wheel Yoke	\$23.00
B	#3-22212	Eccentric Shaft	\$15.25
C	#94-2120	CE Spur Gear Assy	\$23.00
D	#4-2230	Discharge Wheel Strap	\$29.00
E	#4-2130	Drive Shaft Collar	\$4.00
F	#3-2225	Lower Discharge Wheel Shaft	\$3.00
G	#4-2920	Gear Brace	\$1.00
H	#4-2300	Clevis Pin	\$2.25
I	#278-384061075	Cotter Pin	\$0.50
J	#93-2210	Lower Discharge Wheel	\$45.00
K	#3-2223	Lower Discharge Wheel Spring	\$3.00
L	#4-2110	CE Drive Wheel	\$18.50
M	#4-2120	Drive Unit Bracket	\$39.00
N	#4-2500	CE Drive Belt Pulley	\$37.50