Model W201 Rotary Fill-N-Seal
Preventive Maintenance

WILPACK PACKAGING
An A-American Company

Station	P/N	Description	Recommended Action
000-000-B000-A Drive Sub Assembly	009-0982 P00-0016	Indexer Chain	Lubricate as per Camco Indexer Manual. Inspect, Clean and Lube if necessary every 160 hours.
000-000-C000 Lift Cam Sub Assembly	P00-0003 P00-0005 P00-0019 P00-0020	Bearing - 4 Bolt Flange Flange Bearing Cam Follower Cam Follower	Inspect, Clean and Lube if necessary every 520 hours. Self Lubricating for oil free operation. Sealed Bearing. Sealed Bearing.
000-000-A001 Cup Load Sub Assembly	P00-0002 P00-0009	Bearing - 2 Bolt Fange Idler Shaft	Inspect, Clean and Lube if necessary every 520 hours. Inspect, Clean and Lube if necessary every 520 hours.
000-000-A004 Foil Place Sub Assembly	000-0641 000-0650 P00-0006 P00-0007 P00-0020 P00-0040	Lever Arm Cam Plate Flange Bearing Flange Bearing Cam Follower Thrust Bearing	Clean and light oil every 160 hours. Clean and light oil every 160 hours. Self Lubricating for oil free operation. Self Lubricating for oil free operation. Sealed Bearing. Self Lubricating for oil free operation.
000-000-A005 Heat Seal Sub Assembly	P00-0007 P00-0020 P00-0021	Flange Bearing Cam Follower Cam Follower	Self Lubricating for oil free operation. Sealed Bearing. Sealed Bearing.
000-000-A006 Unload Sub Assembly	000-0437 P00-0025 P00-0026	Drive Yolk Linear Bearing Linear Bearing	Inspect, Clean and Lube if necessary every 160 hours. Self Lubricating for oil free operation. Self Lubricating for oil free operation.
201-001-0006 Cup Load Assembly	P01-0005 P01-0006 P01-0023 P01-0021	Bearing Bearing #25 Stn. Stl. Chain Roller Clutch	Sealed Bearing. Sealed Bearing. Inspect, Clean and Lube if necessary every 160 hours. Inaccessable.
201-002-0005 Filler Assemblies	002-0973 P02-0029 002-0991 P02-0030	Pistons "O" Rings Valve Spools "O" Rings	Inspect, Clean and Lube after each use. Inspect, Clean and Lube or Replace and Lube after each use. Inspect, Clean and Lube after each use. Inspect, Clean and Lube or Replace and Lube after each use.

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201-004-0003	004-0445	Guide Shaft	Inspect, Clean and Lube if necessary every 160 hours.
Foil Place Assembly	P00-0025	Linear Bearing	Self Lubricating for oil free operation.
	P00-0026	Linear Bearing	Self Lubricating for oil free operation.
	P04-0004	Cam Follower	Sealed Bearing.
	P04-0009	Rotary Elbow	Inspect and replace as needed.
201-005-0002	005-0424	Cam Yoke Half	Clean and light oil every 160 hours.
Heat Seal Assembly	005-0425	Cam Yoke Half	Clean and light oil every 160 hours.
	005-1555	Wear Block	Check for wear, adjust as needed.
	005-1556	Wear Block	Check for wear, adjust as needed.
	P05-0007	Linear Bearing	Self Lubricating for oil free operation.
	P05-0008	Bushing	Self Lubricating for oil free operation.
	P05-0009	Thrust Bearing	Self Lubricating for oil free operation.
	P05-0013	Compression Spring	Inspect and replace as needed.
201-006-0004	006-0920	Bearing - Modified from Pacific	Self Lubricating for oil free operation.
Unload Assembly	P06-0004	Sleeve Bearing	Self Lubricating for oil free operation.
	P04-0006	Bearing - ½"	Sealed Bearing.
	P06-0006	Thrust Bearing	Self Lubricating for oil free operation.

Grease zirks: **Use: Chemsearch MAXI-LUBE F.G.**
Food-Grade Aluminum-Complex Lubricant

Surface lubrication: **Maxi-Lube FG Non-Staining Food-Grade Aluminum-Complex Lubricant Aerosol**
or
Chemsearch MAXI-LUBE F.G.
Food-Grade Aluminum-Complex Lubricant

Camco Indexer: **Mobil SHC 634**

Troubleshooting Guide

Symptom	Cause	Solution
Machine won't turn On	Power cord not plugged in, fuses are bad, power cord wired incorrectly.	1. Check power cord 2. Check Fuses
Machine turns on but will not go to "powering up" after pressing E-Stop Reset.	Perimeter guard(s) is/are out of place. An E-Stop is depressed. Table is out of detent.	1. Ensure that all four perimeter guards are set. 2. Check both E-Stops 3. Ensure that there is air pressure for the table detent 4. Ensure that the table is in detent. 5. Ensure that Table Detent Sensor is reading properly
Machine only runs when cycle start is pushed and held down	You are in manual mode.	1. Switch to Automatic Mode
Pushing Cycle Stop does not stop the machine	The machine speed could be set too high and it will not allow the machine to stop with the heater head down. The Home position switch may be set so late that the machine has too much momentum to stop before the switch is no longer made. Another cause is if the machine is hesitating during cycling. Another cause is that the Home position switch is not being made at all.	1. Press E-Stop 2. Reset the machine 3. Verify that the Home position switch is making 4. Verify that the speed of the machine is not set beyond 45 cpm 5. Adjust machine speed and fill advance and return so that there is no hesitation. 6. IMPORTANT: IF THE MACHINE IS HESITATING BETWEEN CYCLES YOU MUST EITHER SPEED UP THE FILL SO THERE IS NO HESITATION OR YOU MUST SLOW DOWN THE CYCLE SPEED TO MATCH THE FILL SPEED. TO DO OTHERWISE CAN WEAR OUT THE DRIVE. 7. Check that the cam arm interacts with the home position switch.
Machine Cycle Stop does not stop heater in the "Up" position.	The Home position switch is not adjusted properly.	1. Cycle the machine in manual mode slowly until the Cam Arm makes the proximity switch located nearby. 2. When the switch first makes, check to see the position of the heater head. If it is not up far enough, move the position of the proximity switch further back. 3. Continue to do this until the heater head stops in the up position. 4. WARNING! If you move the Home Position switch, you will need to make sure that the cup drop station drops a cup in time for the cup drop sensor to read.

Symptom	Cause	Solution
Machine speeds up wildly and/or fills in the middle of a cycle	If the Home Position Switch is too far away from the cam arm and the sensor makes then goes off and then makes again, this fools the machine into believing that it has completed a cycle when it has not. The machine will jerk quickly and deposit product mid cycle.	1. Verify Home Position switch is the proper distance from the Cam Arm.
Machine cycle speed reads high but getting a much slower actual cycle rate – the machine hesitates after filling	The machine is set to run at one speed but the fill station cannot keep up. The filler could be slowing the operation down. Also, feel to see if the straight tube is warm.	1. Check the flow meters on the top and bottom of the piston air cylinder. These meters allow the piston to travel up and down with greater velocity. 2. Make sure the piston is not heating up the straight tube…if so then a. Clean straight tube b. Lubricate the piston and o-rings c. Replace the o-rings d. Replace the piston and o-rings and lubricate the piston and o-rings. e. Replace the straight tube 3. If you still have hesitation, your fill application may be too much for that machine speed – Slow it down. 4. IMPORTANT: IF THE MACHINE IS HESITATING BETWEEN CYCLES YOU MUST EITHER SPEED UP THE FILL SO THERE IS NO HESITATION OR YOU MUST SLOW DOWN THE CYCLE SPEED TO MATCH THE FILL SPEED. TO DO OTHERWISE CAN WEAR OUT THE DRIVE.
Cups are dropping crooked	Cup drop cams are out of sync.	1. Adjust the cup drop cams so that the cup drops level. 2. Make sure the cup drops into the pocket just after the table stops.
Double Filling Cups	Home Position Switch is not set properly	1. Verify Home Position switch is the proper distance from the Cam Arm.

Symptom	Cause	Solution
Foil place is not far enough up to be out of the way when the table is turning causing the table to go out of detent.	Timing issue	1. Manually index the machine until the cam arm stops in the up position. You can also verify this by watching for the eject puck to be in the top most position. 2. If not already loose, use a 1-1/2" wrench to loosen the trantorque bushing. 3. Now with the trantorque bushing loose rotate the eccentric drive until the lever and link are in the down position. 4. Now tighten the trantorque bushing as tight as you possibly can. As you tighten it, you must hold the lever and link in the correct position as the eccentric drive will want to rotate as you apply torque.
Table comes out of detent but the machine does not stop.	Table Detent Pressure switch not set properly. Not enough air pressure.	1. Table Detent Pressure Switch is on the pneumatic panel. 2. The hysteresis adjustment changes the pressure range that the switch can measure from. Since we are measuring in the 20-30 psi range then this should be set just slightly above the low end. 3. With the table in detent and 20-30 psi applied, adjust the pressure setting all the way to one end, then all the way to the other end (you should see the light go on at one end and off at the other end) and stop at the end with the light off. 4. Now, slowly turn the setting just until the light comes on, and then turn the opposite direction just till the light goes off, then back again just until the light comes on. 5. Now pull the table out of detent and verify that the light on the switch goes off.
Table Detent Fault is indicated when table is in detent, especially when starting the dial plate moving.	Table Detent Pressure switch not set properly. Not enough air pressure. Setting in the Variable Frequency Drive not set properly.	1. Make sure you have enough air pressure. On the pneumatic panel there is a regulator gage for the drive assembly set the pressure there. (Note: if you adjust the air pressure you will need to readjust the pressure sensor. Ideally, it should be 20-30 PSI) 2. One of the parameters in the Variable Frequency Drive (VFD) accommodates for acceleration. See the VFD settings in the Electrical Documentation and ensure the VFD has the correct parameter settings.

Symptom	Cause	Solution
Foil Place is dropping a foil too early.	Timing on the sensors below the table or sensitivity on the vacuum sensor or both.	1. Under the table beneath the foil place there are two proximity sensors. When the lower one is made then the vacuum shuts off. Check its position. (When both proximity sensors are UNMADE then the vacuum is turned back on to pick up the next foil.) 2. Check the foil place vacuum sensor on the pneumatic panel. If its sensitivity is not set correctly it could read a minute amount of air flow and when doing so, shuts off the vacuum. In some cases even though a foil is on the vacuum cup, if the vacuum sensor light goes off before the proximity sensors below the table tell the vacuum to turn off, then the machine will drop the foil early and our of place. To set see instructions in manual. 3. Check to make sure you have enough air pressure to create enough vacuum. On the pneumatic panel there is a regulator gage for the foil place air pressure. (Note: if you adjust the air pressure you must reset the sensitivity of the vacuum sensor as well.)
Foil Place is not picking up a foil or losing its vacuum and dropping the foil.	The valve could be worn out and need to be replaced.	1. On the Pneumatic panel there is a manifold with a bank of valves on it (see section 000-008-0005). The valve on the left side is the valve that operates the foil place on both a single lane and double lane machine. This valve may need to be replaced. 2. Also, check the filter regulator to see if it needs to be drained. The filter regulator traps moisture from your air lines, however if it is full that moisture will go through. That moisture can prematurely wear out the valves on the manifold.
Table will not run.	Table Detent Switch not on.	3. Check on the table detent pressure switch on the pneumatic panel to see if the light is on. If not check to see if you have air pressure. If you have air pressure, then re-adjust the sensitivity of the switch per instructions in manual. If light will not come on while in detent and with pressure replace the switch. To verify the switch is the problem, jumper the hot lead with the input on the PLC. IMPORTANT: DO NOT RUN THE MACHINE NORMALLY WITH THIS OR ANY SENSOR JUMPERED. IT COULD LEAD TO INJURY OR DAMAGE OF THE MACHINE.

Symptom	Cause	Solution
Cups are getting jammed at the eject station.	Eject Shafts are out of detent. Detent Reset is set too low. Eject Pucks are not set high enough on their shafts.	1. Check to see if the eject shafts are out of detent. Below the table the cam are lifts an aluminum piece up and down along two shafts. Attached to that aluminum piece is a metal plate that the eject shafts protrude through at the bottom. There is a snap ring that holds the too shafts from coming off. On the metal plate there should be two set screws for each shaft. Those set screws are ball detented to interact with a groove on the shaft. Ensure that the shaft is snapped back into place. 2. Manually index the machine until the aluminum piece is all the way at the bottom of the stroke. There should be another metal plate that the bottom of the shafts should hit if they are out of detent and miss if they are in detent. Adjust upward to ensure it hits properly. 3. Under the eject pucks are two bolts for adjusting the height of the puck on the top of the shaft. Verify they are set high enough.
Foil Place is not depositing Seals or appears to be picking seals back up.	Foil Place Advanced Switch Set improperly. Timing of Foil Place issue. Vacuum Exhaust insufficient	1. There are two switches below the table reading the position of the foil place shaft. If the lower of the two switches is not set close enough to the shaft or set so low that the shaft cannot reach it then the vacuum will not shut off. Reposition as needed. 2. Timing Issue: a. The fillers and the foil place all work off of valves on the pneumatic manifold (located under the table). b. The larger the volume of dispensed product the longer the filler cylinders will work. As they are working they exhaust air. If they are exhausting air at the same time the foil place station is exhausting its vacuum, then the vacuum may not let go. c. Adjust the timing via the trantorque bushing that hold the eccentric to the camco indexer behind the main electrical cabinet. d. It should be adjusted so that the foil place comes down and releases the seal at the last possible moment (leaving enough time for the knock-off bell to clear the table as the table starts to move) 3. You may need to put an extra exhaust port on the valve manifold if it is not already there.

Symptom	Cause	Solution
Temperature Controller reads "SERR"	Input Error on the Temperature Controller	1. Check the input wires on the temperature controller for the thermocouple input. 2. Check the male/female plugs that connect the thermocouple to the thermocouple wire. 3. Check the thermocouple itself and replace as needed (this is the most likely fix) 4. Check all your fuses on the bank of fuses in the main electrical cabinet.
Temperature is far below normal, far above normal or fluctuating erratically.	Wiring may be loose or frayed. Temperature controller may be bad. Thermocouple may be bad. Solid State Relay may be bad. Heating element may be bad.	1. CAUTION—ALWAYS DISCONNECT POWER FROM THE MACHINE BEFORE WORKING ON ANYTHING ELECTRICAL!!! 2. Double check all wiring for loose connections or frays. This includes to the solid state relay, to the thermocouple, to the thermocouple wire, to the high temperature wire that supplies electricity to the heating element, to the temperature controller. 3. Switch out the temperature controller (P08-0018). If you have a double lane machine swap the leads on the back of each for testing. If you have a single lane machine connect to a spare temperature controller. 4. Switch out the Thermocouple (P05-0028). For testing you can take a spare and connect it above the heater head like normal and run it around the machine into the main cabinet before running the wires fully. 5. Switch out the solid state relay (P08-0028). If you have a double lane machine swap the leads on each for testing. If you have a single lane machine connect to a spare solid state relay. 6. Switch out the heating element (P05-0029). BE SURE NOT ATTEMPT TO TAKE THE HEATER HEAD ASSEMBLY APPART WHILE THE COMPONENTS ARE STILL HOT.