

CODI

CRAFT CANNING SYSTEM

Seamer Timing

**This guide will assist you
in understanding the
timing of the seamer**

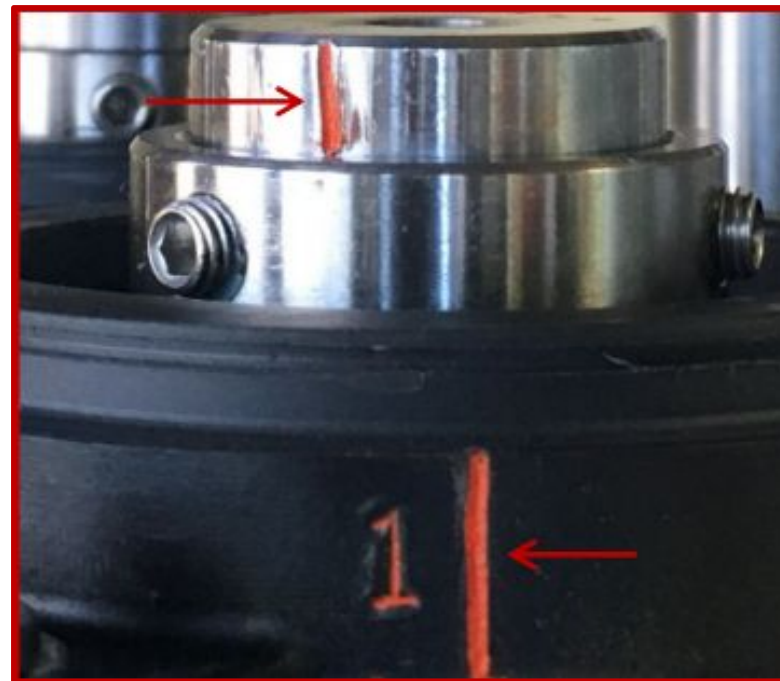
Timing the seamer is a relatively simple process after having some very basic understanding of how the process operates.

Before we begin, note whether your seamer is universally timed off of a “Home Position”, or off of the 3 timing marks noted on the Bearings/Shafts.

Universally Timed
Green Writing

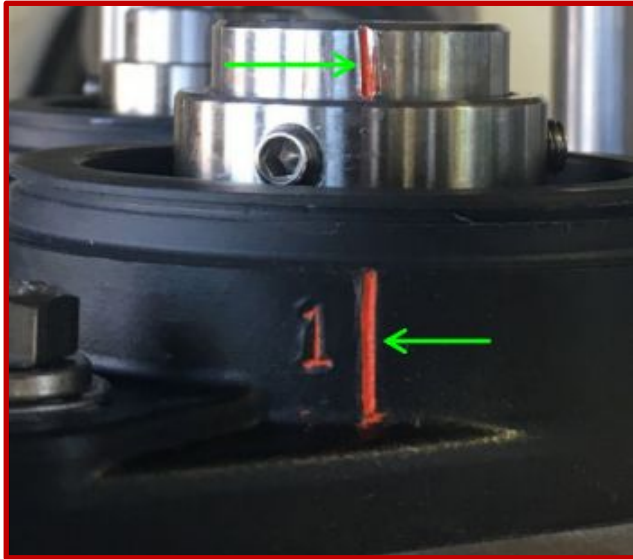


Not Universally Timed
(Any Color But Green)

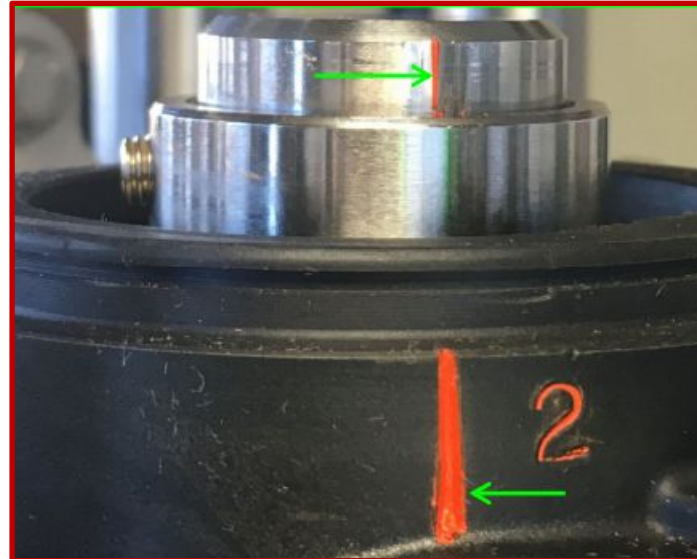


Reference Marks

There are 3 reference marks on the machine (only two if your lid dropper is not belt driven). With 1 and 3 bearing the most weight on overall machine functionality and being the only 2 an operator will reference.

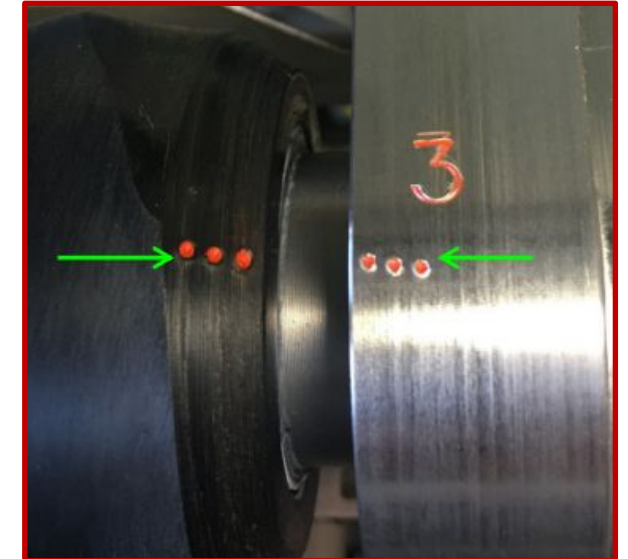


Op 1 Start



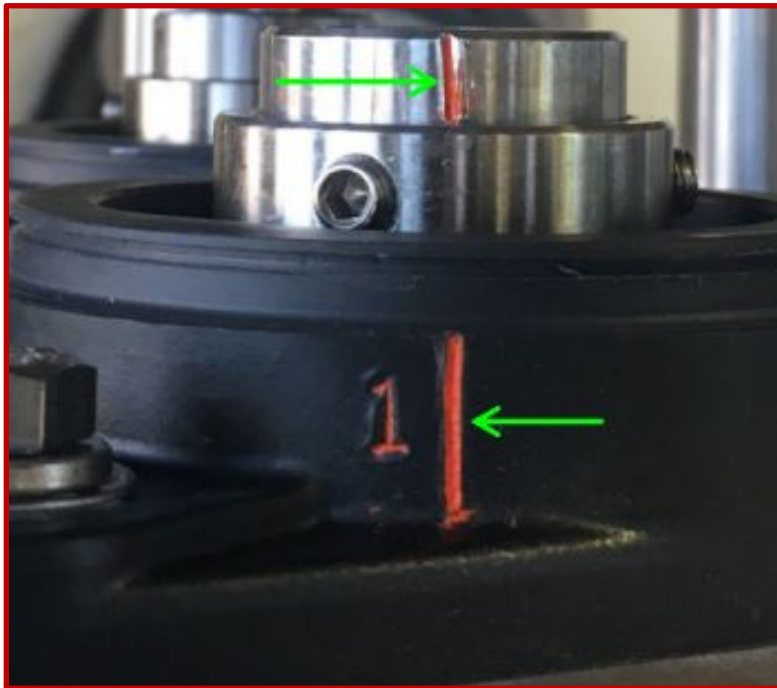
Lid Screw Cutting

This reference mark is for Codi Service only.



Can at Dwell Start

Op 1 Start



Op 1 Start

Op 1 Start is the most critical timing mark on the machine. If Op 1 start is off (because the machine is belt driven) the rest of the machine is off as well. “Op 1 Start” is an interchangeable term with the “Home Position” on newer machines.

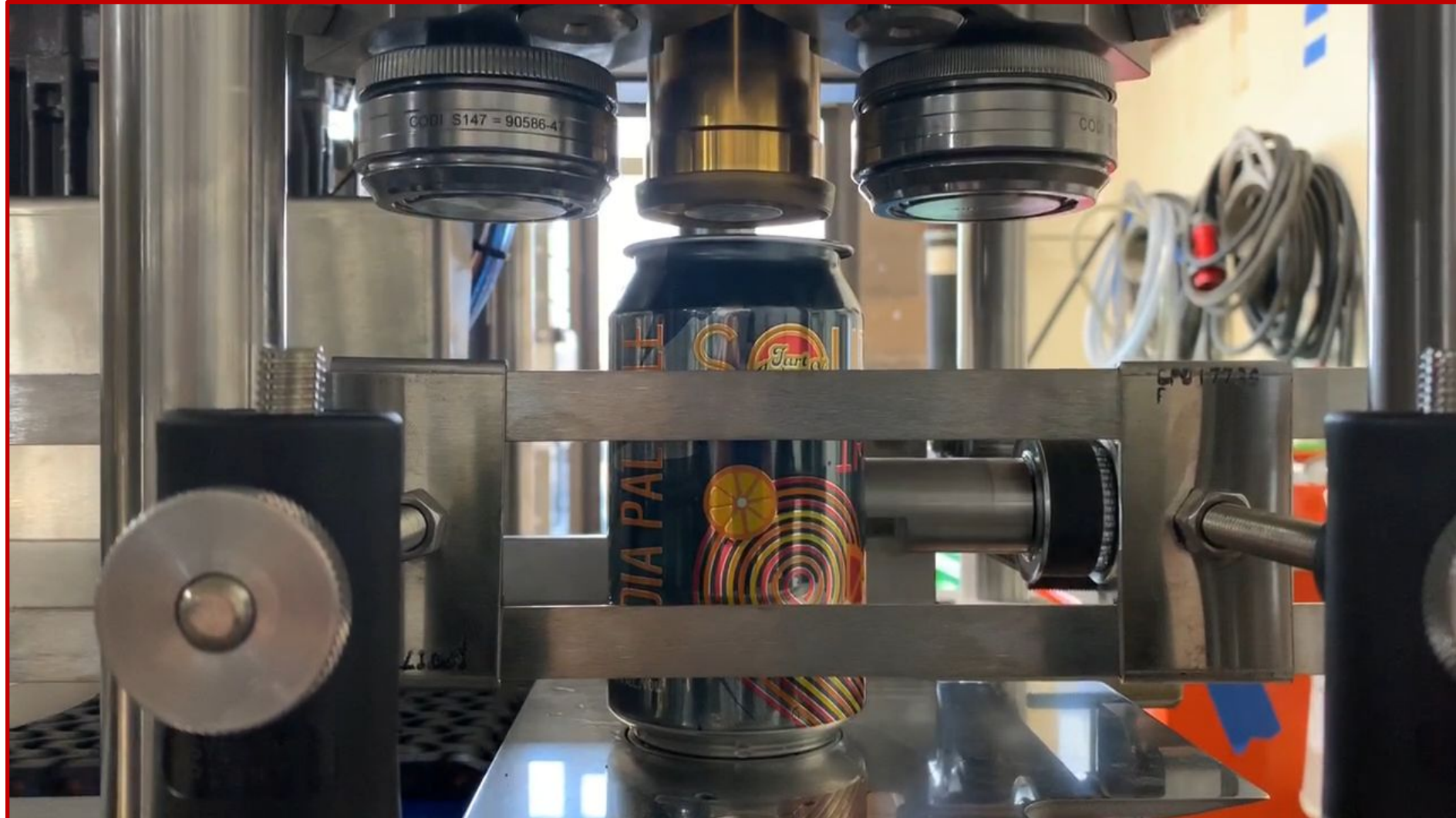
Jog To Home

Seam Op1 Start

38240

Jog To

Op 1 Start



Op 1 Start

Symptoms of Op 1 Start Being Off

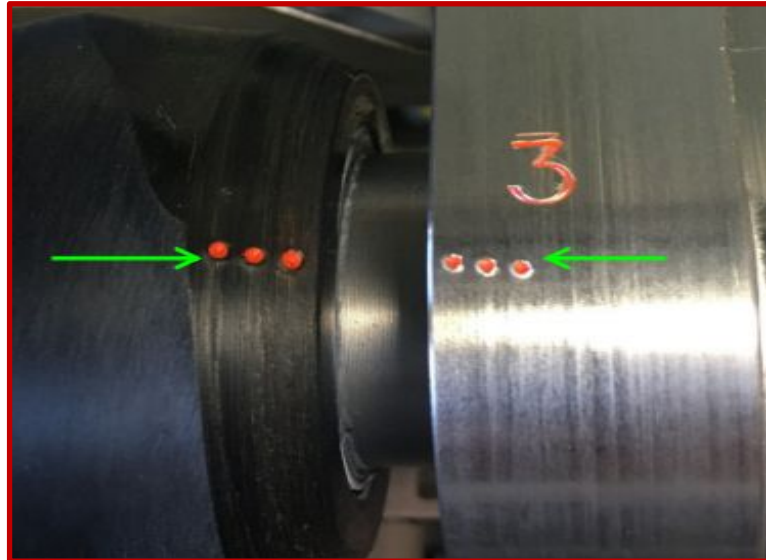
- Knocked down flanges
- Constant can jam
- Lifter coming up at the incorrect time
- You're gonna have a bad time



This is due to the can lifting after Op 1 has already engaged. The can is forced into the chuck, knocking down the flange and finishing the rest of the seam.

Note: this symptom can also appear for lack of air flow to the lifter or binding to the liter as well.

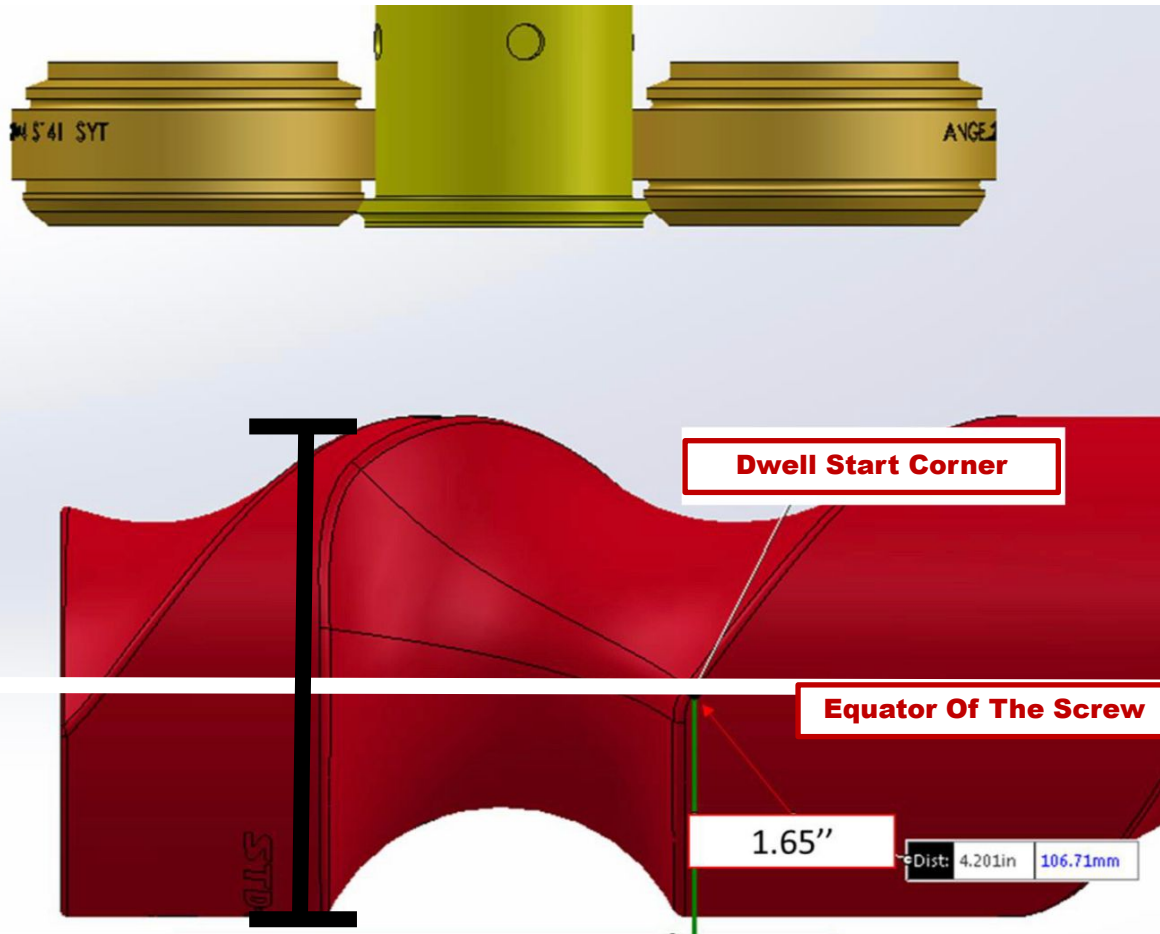
Can At Dwell Start



Dwell Start Dots

Can at dwell start is the second most critical timing mark (think 1a and 1b). This timing mark references where the can will be when it is lifted. Op 1 answers the question: when to lift, whereas Can at Dwell answers the question: where will the can be when it lifts? The dots of the Dwell Start position are a great reference point, with the more exact point being the physical position of the Dwell Start Corner of the screw over the lift pad.

Can At Dwell Start



When jogged to “Can At Dwell Start”, the Dwell Start Corner should be dead center in the rotation of the screw. If we were to draw an equator down the center of the screw, it should intersect the Dwell Start Corner. To adjust, loosen the bottom 4 allen bolts of the collar behind the screw and rotate the screw into position, tightening the bolts back down in a star pattern, ie: top left, bottom right, bottom left, and top right, giving small turns to each until all are completely tightened down. It is imperative that the collar be equally tightened down to retain its position hold on both shafts.

Can At Dwell Start

Symptoms of Can at Dwell Start Being Off

- Wavy can body damage
- General poor flow of cans into and out of the seamer
- Cans tipping back as they evacuate the seamer



Can damage occurring due to can at dwell start being off is caused by the screw not advancing the can to the correct point. If the can does not reach the center of the lifter pad in time the can will be raised sideways into the chuck, resulting in the following damage.

Can Present

The can present is another timing component that does not have reference marks. It typically lives butted up against the side rail adjustment bracket. This sensor is what starts the timing process for everything down stream. Telling the lid dropper that a can is on its way.



Adjusting Can Present Timing

If you are running a non standard can diameter and you have program v11.8 or v12.2 and before (depending on controller module) the can diameter setting can be changed in the seamer page and timing will change with it. If you do not have this program version you can simply select the 202 slim body option and move the bracket ~ 3/8”.

CODI FILLER CCL-45 v12.3

FILLING PAUSED **RUN ONE CYCLE** **FILL CYCLE AUTO CIP** **Reset Alarms & Faults**

TANK 65 °F **INLETS** AIR 112.6 psi CO2 50.1 psi

Can Diameter (highlighted in red box):
211 Std. Body
202 Slim Body
204 Sleek Body
203 Slender

Seamer Lid Separate Man Retracted

Seamer Lid Drop Man Lowered

Underlid Gas Open

Encoder Position 10204 0 **Apply Value**

Can At Lid Drop 19550 **Jog To**

Lid Screw Cutting 43275 **Jog To**

Can At Dwell Start 33333 **Jog To**

Seam Op1 Start 38240 **Jog To**

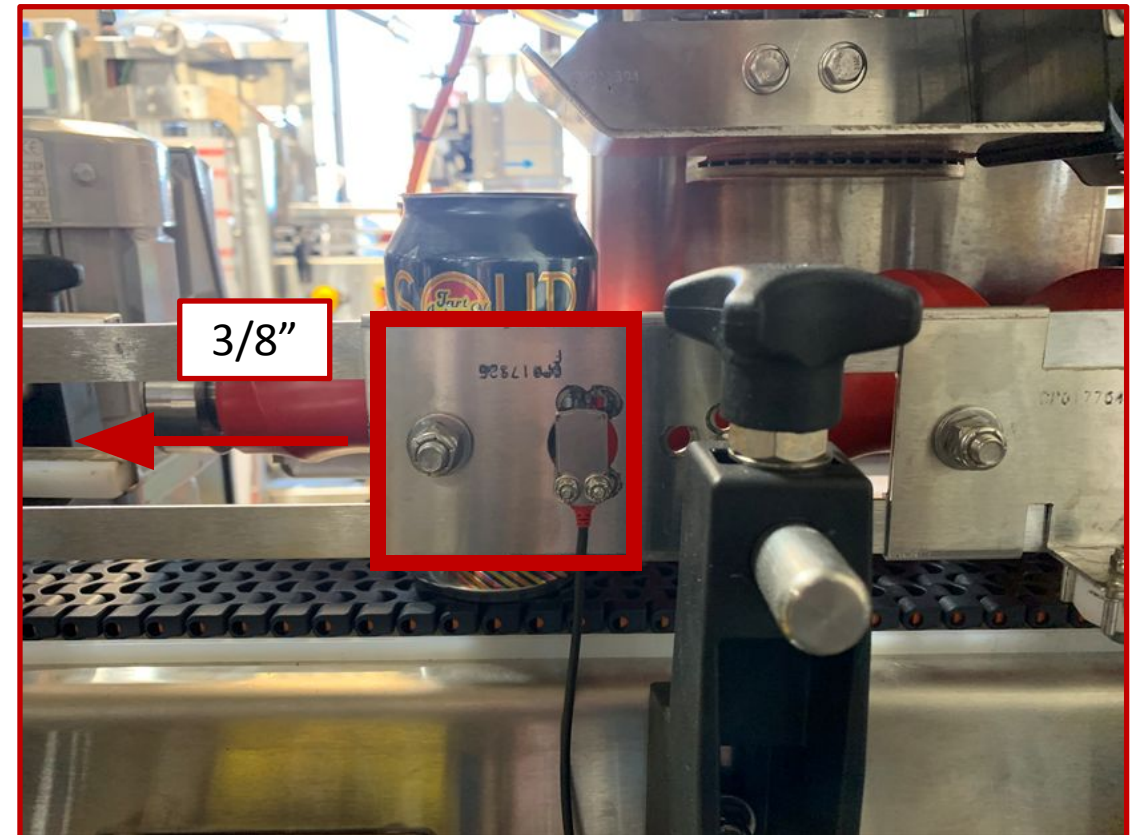
Seam Op1 Engage 47350 **Jog To**

Seam Op2 Engage 50000 **Jog To**

Hide Advanced Setup

Conveyor STOPPED
Man. (ft/min) 35
Act. (ft/min) 0

Seamer MAN STOPPED
JOG
Man. Set RPM 2
Actual RPM 0



Resetting Timing

For universally timed machines start by toggling the “Jog to Home” Button. If either of the reference marks are not lined up at the home position, then we know that the timing is off.

The screenshot displays the control interface for a Codi Filler CCL-45. At the top, the title bar reads "CODI V12.3 FILLER CCL-45". The interface is divided into several functional areas:

- Top Left:** "FILLING PAUSED" (yellow button) and "RUN ONE CYCLE" (blue button).
- Top Center:** "FILL CYCLE AUTO CIP" (green indicator) and "Reset Alarms & Faults" (blue button).
- Top Right:** "TANK" section with a temperature of 65 °F and a percentage selector (0% and 5% are visible). "INLETS" section shows "AIR" at 115.1 psi and "CO2" at 50.0 psi.
- Middle Left:** "Can Diameter" dropdown menu with options: 201 Std. Body, 202 Slim, 204 Sleek Body, 203 Slender.
- Middle Center:** "INDEX CANS" (green button), "Seamer Lid Separate" (Man/Retracted), "Seamer Lift" (Man/Lowered), and "E-Stop Okay" (green indicator).
- Middle Right:** "Lid Jam Detect" (OFF), "Lids Missed Retry" (OFF), and "Can In Pocket" (0-5 checkboxes).
- Bottom Left:** "Conveyor" section with "STOPPED" status and a speed setting of 35 ft/min.
- Bottom Center:** "Seamer" section with "MAN STOPPED" status and a "JOG" button.
- Bottom Right:** "Encoder Position" (10204) and "Jog To Home" (red button) / "Teach Home" (blue button) buttons.

A red arrow points from the text box on the left to the "Jog To Home" button in the bottom right corner of the control panel.

Resetting Timing

For non universally timed machines hit “Jog To” Seam Op1 Start and check reference mark number 1. If it is off simply grab the chuck and rotate it until the lines match back up. Now, this will take time if it is more than 1/16th of a rotation off, so another option is to set seamer to 5 RPM and run it. As it comes around try and time it and hit the E-stop (if you miss it’s okay, if you’re close you can rotate the chuck from there). Lastly, enter 38240 in the blue box where it says encoder position and press and hold “Apply Value” – the value will save. For universally timed machines, simply press and hold “Teach Home” after the reference marks line up and the encoder will be adjusted.

NOTE 38240 should be the only value ever input to this box.

The screenshot shows the control panel for a Codi Filler CCL-45. The interface includes several sections:

- Top Bar:** Codi Filler CCL-45, V12.3
- Buttons:** FILLING PAUSED, RUN ONE CYCLE, FILL CYCLE AUTO CIP, Reset Alarms & Faults, Seamer Setup PDF, Seamer Timing PDF, INDEX CANS, Seamer Lid Separate (Man, Retracted), Seamer Lift (Man, Lowered), E-Stop Okay, Can At Lid Drop, Lid Missed, Lid Chute Jam, Conveyor (STOPPED), Seamer (MAN, STOPPED, JOG), Man. (ft/min) 35, Act. (ft/min) 0, Man. Set RPM 2, Actual RPM 0.
- TANK:** 65 °F, 0% (circled), 5%, 0.0 psi, 0.1 psi.
- INLETS:** AIR 112.6 psi, CO2 50.1 psi.
- Settings:** Lid Jam Detect OFF, Lids Missed Retry OFF, Can In Pocket (checkboxes 0-5), can Detect, Lid Drop Underlid CO2, Lid Apply, Seaming.
- Encoder Position:** 10204, 0 (highlighted in a red box), Apply Value button.
- Other Settings:** Can At Lid Drop 19550 (Jog To), Lid Screw Cutting 43275 (Jog To), Can At Dwell Start 33333 (Jog To), Seam Op1 Start 38240 (Jog To, highlighted in a red box), Seam Op1 Engage 47350 (Jog To), Seam Op2 Engage 50000 (Jog To), Hide Advanced Setup.

Resetting Timing

The screenshot shows the control panel for a CODI FILLER CCL-45 machine. The interface includes several sections:

- Top Bar:** CODI V12.3 FILLER CCL-45
- Status Indicators:** FILLING PAUSED, RUN ONE CYCLE, FILL CYCLE AUTO CIP, Reset Alarms & Faults.
- TANK:** 65 °F, 0% (circled), 5%, 0.0 psi, 0.1 psi.
- INLETS:** AIR 112.6 psi, CO2 50.1 psi.
- Can Diameter:** 211 Std. Body, 202 Slim Body, 204 Sleek Body, 203 Slender.
- Seamer Setup PDF** and **Seamer Timing PDF** buttons.
- Lid Jam Detect:** OFF.
- Lids Missed Retry:** OFF.
- Can In Pocket:** 0 1 2 3 4 5.
- Encoder Position:** 10204, 0, Apply Value button.
- Can At Lid Drop:** 19550, Jog To button.
- Lid Screw Cutting:** 43275, Jog To button.
- Can At Dwell Start:** 33333, Jog To button (highlighted with a red box).
- Seam Op1 Start:** 38240, Jog To button.
- Seam Op1 Engage:** 47350, Jog To button.
- Seam Op2 Engage:** 50000, Jog To button.
- Hide Advanced Setup** button.
- Seamer Lid Separate:** Man, Retracted.
- Seamer Lift:** Man, Lowered.
- Underlid Gas Open:** checkbox.
- Conveyor:** STOPPED, Man. (ft/min) 35, Act. (ft/min) 0.
- Seamer:** MAN, STOPPED, JOG button, Man. Set RPM 2, Actual RPM 0.

For both styles of machine: to adjust Can at Dwell Start “Jog To” the position. Next, loosen the bottom 4 bolts on the collar on the gearbox for the screw and rotate the screw until the reference marks line back up. What this is doing is separating the screw from the timing on the encoder allowing us to adjust the physical timing without affecting the encoder. When tightening these bolts be sure to tighten evenly and in a star pattern.





If you have any further questions, please email: service@codimfg.com or call (303) 277-1542.

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