

Bulletin No	10	2020-01	Issued: 100220	Revised:	Page 1 of 5
Equipment	1 Gallon Bail-O-Matic				
Topic	New "WIRE CALIBRATE" feature for the DS Bail-O-Matic				

New Feature

A "Wire Calibrate" function has been added to the DS Bail-O-Matic "Setup Screen".

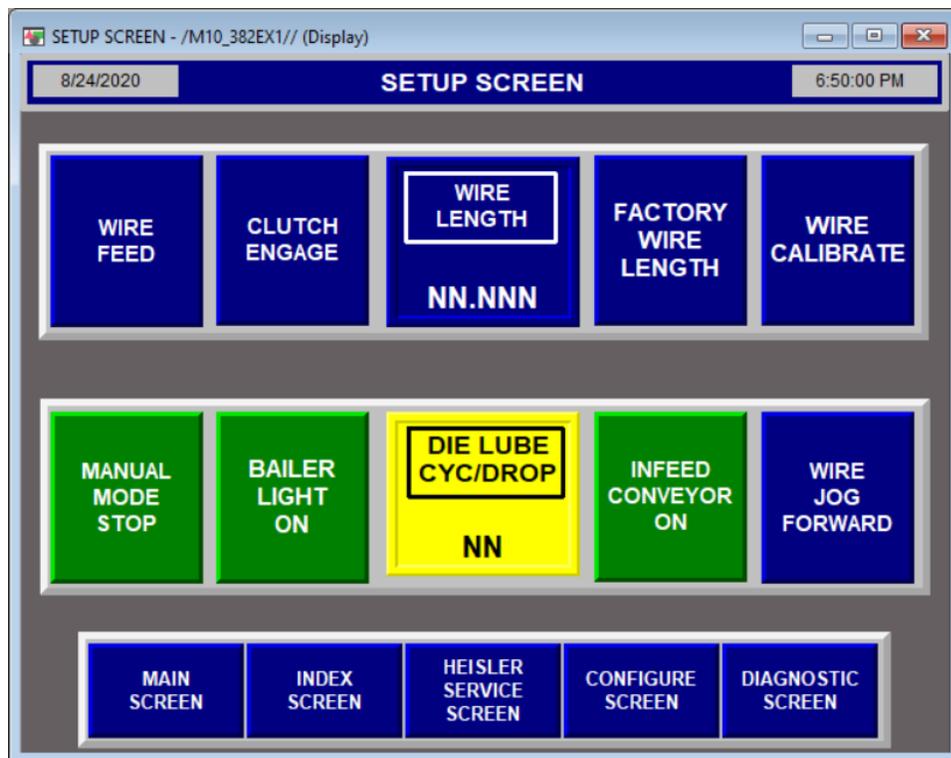
It gives access for the maintenance department to correct the servo wire feed's constant value, without requiring a laptop and programming software, as in the past.

The function is intended to re-calibrate the constant, so that the machine can deliver the exact 'Wire Length" that is set in the HMI.

This is especially important if a new servo digital drive, motor, gearbox, or a wire straightener has been installed.

It is also intended to be used only after all mechanical settings are verified, to correct for any excess part wear that might cause less wire length to be fed.

It can add missing wire length, or subtract extra wire length, from the actual delivered wire length, as compared to the desired screen setting of 14.550 inches of wire.



NOTE: To add the Wire Calibrate function to an existing Model DS Bail-O-Matic, that did not originally come with this function, please contact the Heisler Sales Department for a price quote.

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Proper Use of the "WIRE CALIBRATE" and the "FACTORY WIRE LENGTH" Functions in the 1 Gallon Model DS Bail-O-Matic SETUP SCREEN

NOTES:

1. It is important to operate the 1-Gallon Model-DS Bail-O-Matic with an actual wire length of 14.550 inches.
2. The wire must be centered in the machine. The Knife/Cut-Off Bushing & Stop Block positions are critical.
3. Utilizing the Loop Die Blocking Bar (# 101289), & the 1-Gallon Loop Gauge (# 101111-01) (See Tech Bulletin on Website), both bail loop tips must be between the minimum and maximum lines of the Loop Gauge.
If the loops are incorrect length but centered, with the proper wire length, then the eccentric adjuster screw is set incorrectly.
To adjust the length of both loops, loosen the lower RH-threaded and the upper LH-threaded jam nuts on the adjuster screw. To add to both loop lengths, increase the space between the eccentric strap and the lower connecting arm. To decrease both loop lengths, decrease the space between the eccentric strap and the lower connecting arm. One flat, or 1/6th of a turn of the screw, will yield approximately .040" addition, or subtraction, of length from each loop. Re-tighten the jam nuts.
4. BEFORE making any change to the wire length setting in the HMI, all mechanical settings must be optimal.
 - Wire Transfers correct. (spool and pulley alignment)
 - Straightening Rollers and Feed Rollers clean & dry.
 - Inlet Bushing, Horizontal Control Device, and Cut-off Bushing clean and not gummed up.
 - Knife and Cutoff Bushing gap correct, and Knife Arm free-returning.
 - Rear Hinge Spring set to 1-7/8".
 - Steering Rollers doing their jobs.
 - Wire must be straight, with settings in acceptable range for front feed roll, and horizontal bushing.
(Tiny in-bend, and tiny up-bend is desirable.) (No out-bend is allowed.) (Down-bend is un-desirable.)

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Measure the wire length using the Wire Gauge Block (# 101291), or a tape measure.

To add or subtract wire from the actual wire length measured, use the "WIRE CALIBRATE" button in the Setup Screen.

Example: If the wire measures only 14.500", but the wire length is set at 14.550" in the HMI, then the wire is missing .050" in length.

Add .050" to the wire length setting in the HMI, then once the new setting (14.600") is shown in the numeric display, press the WIRE CALIBRATE button.

(It is recommended to push and hold it for a second, to prevent accidentally double-tapping it.)

Afterward, press the FACTORY WIRE LENGTH button, and the wire length will revert to the standard 14.550" setting.

The wire feed will now deliver 14.550" wire, with a setting of 14.550" in the HMI.

NOTE: **This may need to be done more than once to get the desired result.**

Example: If the wire is .550" short, but the range limit in the HMI only allows adding another .250", you will need to ...

...add .250", press Wire Calibrate,
press Factory Wire Length

...add .250", press Wire Calibrate,
press Factory Wire Length

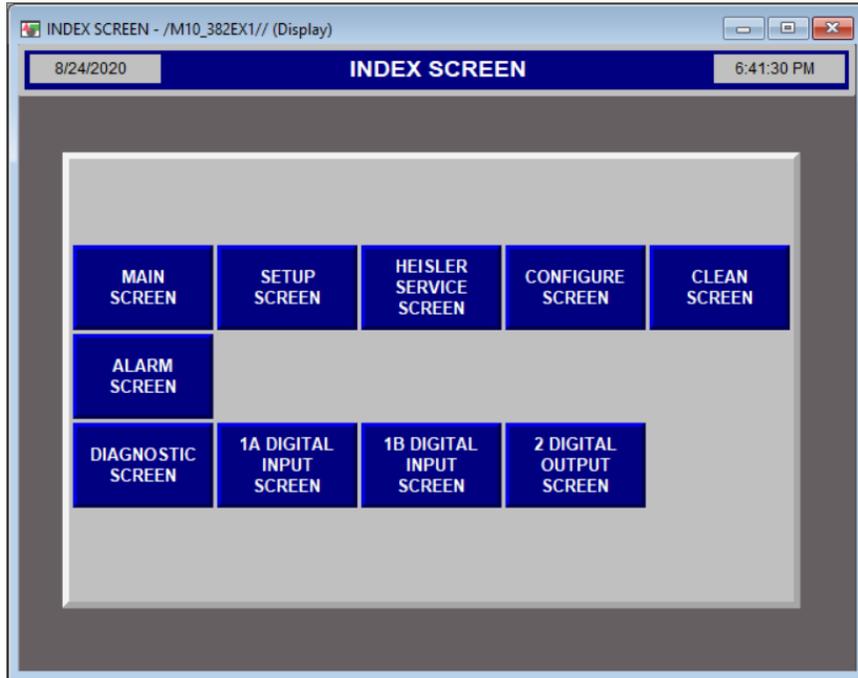
...add .050", press Wire Calibrate,
press Factory Wire Length

If the wire is longer than the setting in the screen, you would subtract the amount that the wire is over the 14.550", and perform the same steps.

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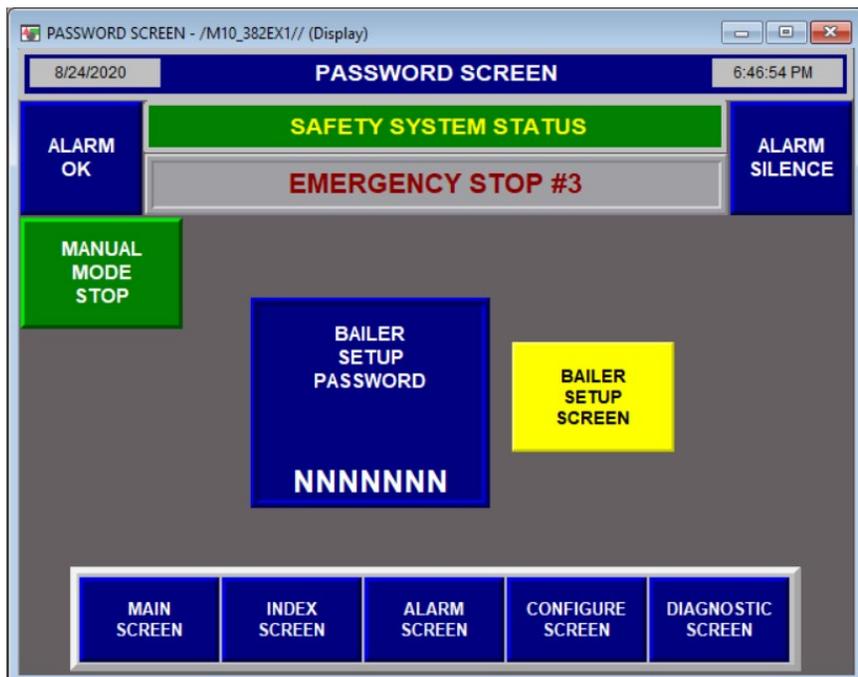
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In the INDEX SCREEN, press the SETUP SCREEN button.



In the PASSWORD SCREEN, Input the password.

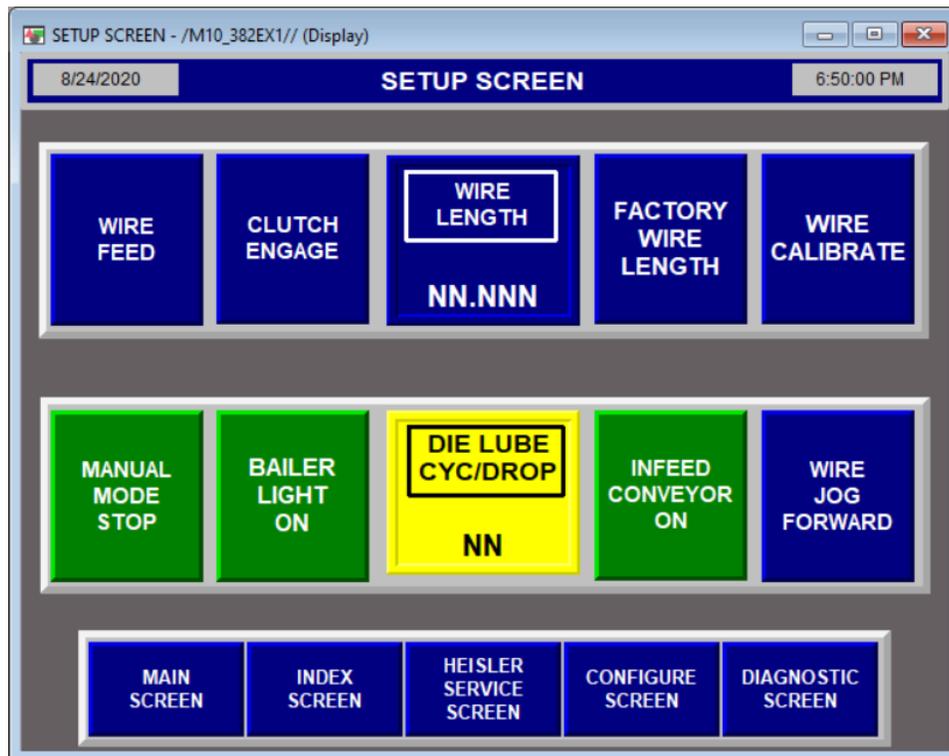
You may need to press and hold the BAILER SETUP SCREEN button until the screen changes on earlier program versions.



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In the SETUP SCREEN, use the WIRE LENGTH, WIRE CALIBRATE, and FACTORY WIRE LENGTH buttons to calibrate the wire feed servo constant, to deliver the desired 14.550" wire length to match the factory wire length screen setting of 14.550.



NOTES: Prior to the addition of this feature in 2019, the servo constant could only be calibrated with a laptop, by changing it in the PLC program.

This feature is intended to accommodate worn parts, or a change of the servo drive, motor, gearbox, or wire straightener.

It is not intended to accommodate incorrect machine setup. Incorrect machine setup will not deliver consistent wire drive, straightness, or length.