PROCEDURE REF# A-IND-036

Automated single wrapper alignment process sequence explanation (2014-2019)

The alignment process purpose is for:

- The computer need to find what is the voltage requirement to open the spool of the proportional valve as over time, and over different weather condition, and with the wear of the internal hydraulic parts, the force to be apply on the spool vary.
- The computer will also during the alignment, determine in which position the rotation table is at, so it can positioned it in the right position to start to wrap.
- Validating the good working condition of most sensors and the solenoid connectivity vs the controller.

Before doing the alignment;

- Make sure you have unlock the wrapping table to it is free from rotating.
- Make sure your bale dumper/receiver at the back has been lowered down if your machine is a 780SB model
- **THERE SHOULD BE NO BALES ON THE WRAPPING TABLE**
- **THERE SHOULD BE NO FILM HOLDED OR ATTACH TO THE WRAPPING TABLE**

Step 1 – Activating the alignment process

- Activate the alignment process through the blue button of the controller (pressing 2 times) or via the remote control (pressing 2 times)

Step 2 – Ensure the wrapping table it's in position for the alignment validation.

- The controller will engage the solenoid of the dumping cylinder, which incline the wrapping table for dumping, in order to lower it down on the chassis during 5 second.
  - At the same time, the controller will engage the solenoid of the cut & hold mechanism in order to open it (ONLY on RB680 & 780SB model) during that same 5 second.
- Once the 5 second sequence delay is over, jump to Step 3

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Step 3 – Validate if the proportional valve is able to fully close when needed

- Controller will then send maximum voltage to the proportional valve in order to close it
- While keeping the proportional valve close:
  - The controller will engage the wrapping table rotation coil counter-clockwise
    - If the wrapping table rotate/move, the alignment process start over from Step #2 because the proportional valve has not stay closed at it should.
    - If the wrapping table do not rotate/mode, it mean the proportional valve remain closed and everything until now seem to be working properly.
- The Step 3 take 3 seconds to complete before going to Step #4

Step 4 – Find the voltage requirement to initiate the wrapping table rotation at low speed

- While keeping the solenoid of the wrapping table counter-clock wise rotation powered ON, the controller will slowly reduce the voltage sent to the proportional valve until the rotation sensor read 3 RPM.
- That voltage value registered when the table was rotating at 3 RPM is save into the controller.
  - That voltage value will be reuse several time during the wrapping process.
  - It determine the voltage to send to the proportional valve when:
    - Slowing down the wrapping table rotation before it stop for dumping
    - The wrapping table rotation had exceed the Zero point before dumping, it will use the same voltage to rotate the wrapping table clockwise back to the zero point in order to dump.
    - The wrapping table loose is stand-by position (Zero point or ¼ turn position) for example when the film pull too hard on the wrapping table.

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Step 5 – Validating the good working condition of the Zeroing sensor

- With the voltage value registered during Step 4, the controller will keep rotate the wrapping table clockwise until it reach the zero sensor plus 1 second.

Step 6 - Positioning the wrapping table to the stand-by position (Zero sensor + user pulse's setting in the remote)

- With the voltage value registered during Step 4, the controller will keep rotate the wrapping table counter-clockwise until the Zeroing sensor turn OFF after being turn ON, and then will position the wrapping table from that starting point
    - PLUS the zero adjustment parameter edited by the operator within the remote control setting
    - OR
    - If the user has set ON the ¼ turn mode in the remote, Zeroing sensor position +340 pulses in order to stretch the film, and reposition at Zeroing position + 240 pulses.

Step 7 - Alignment process is completed